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From Serbo-Croatian to Indo-European

The history of Slavic accentuation is complex. As a result, the significance of the Slavic accentual evidence is not immediately obvious to the average Indo-Europeanist. In this contribution I intend to render the material more easily accessible to the non-specialist. I shall focus on the Serbo-Croatian dialectal area, where the Proto-Slavic accentual system is better preserved than elsewhere. The main point of reference will be the neo-Štokavian system which was codified in the 19th century as a basis for the standard languages.

As is well-known, the codified standard has the following properties:

1. There is either a falling tone on the initial syllable of a word or a rising tone on a non-final syllable. The rising tone resulted from the so-called neo-Štokavian retraction of the accent and points to earlier stress on the following syllable. Thus, a falling tone continues initial accent and a rising tone non-initial accent, irrespective of the Proto-Slavic tones.
2. Stressed and posttonic vowels can be either short or long. Pretonic vowels are always short. As a rule, the codified standard faithfully reflects Proto-Slavic quantity as can be reconstructed on the basis of the comparative Slavic evidence. It offers no clues for the Proto-Slavic tones, which have been preserved in some of the Croatian dialects, however.

We must now establish the correspondences between Serbo-Croatian, Proto-Slavic, Balto-Slavic, and Indo-European accent patterns and quantities. Taking the neo-Štokavian accent retraction into account, Serbo-Croatian and Proto-Slavic accents and quantities are in principle identical. The Proto-Slavic accent patterns differ from their Balto-Slavic counterparts as a result of the following accent shifts:

1. Rise of new accentual mobility as a result of Illič-Svityč's law (6.9), Pedersen's law (6.10), and Dolobko's law (7.2); see below for the details. As a result, the stress shifts to prefixes, prepositions and enclitic particles in original mobile accent patterns, corresponding to classes (3) and (4) in Lithuanian. Barytone forms of mobile accent patterns received a falling tone in Slavic.

2. Rise of new accentual mobility as a result of retraction of the stress from final jers (8.2), Dybo's law (8.7), and Stang's law (9.3), all of which eventually yielded rising tones in Proto-Slavic. As a result, we find accentual mobility between the original and the following syllable in paradigms which correspond to class (2) in Lithuanian. The stress did not shift from an acute (broken, glottalic) vowel, so that paradigms corresponding to class (1) in Lithuanian kept fixed stress in Slavic.

Thus, we have arrived at three major accent patterns for the end of the Proto-Slavic period (cf. Stang 1957: 179):

(a) Paradigms with fixed stress on an acute syllable, corresponding to Lith. class (1).
(b) Paradigms with accentual mobility between a rising tone on the stem and a short vowel in the following syllable, corresponding to Lith. class (2).
(c) Paradigms with accentual mobility between a falling tone on the initial syllable or proclitic element and a rising tone on the final syllable or enclitic particle, corresponding to Lith. classes (3) and (4).

We now turn to the correspondences between the Balto-Slavic accent patterns and their Indo-European origins. Slavic (a) and (b) and Lith. (1) and (2) represent original fixed stress on the stem whereas Slavic (c) and Lith. (3) and (4) arose from earlier mobile and end-stressed paradigms as a result of large-scale reshuffling of accentual mobility (cf. 3.1-3.4, 4.1, 4.4 below). Later developments include the retraction of the stress from a prevocalic **i* which caused metatony in East Baltic, the progressive accent shift known as Saussure's law in Lithuanian, and the fixation of the stress on the initial syllable in Latvian (cf. Kortlandt 1977).

The historical development of vocalic quantity in Slavic is more complicated than the emergence of the accent patterns because it is reflected partly in the timbre and partly in the quantity of the resulting vowels (cf. especially Vermeer 1992). We have to distinguish between the following types of Indo-European syllabic nucleus:

1 Long vowels from Indo-European lengthened grade *$\bar{e}$, *$\bar{o}$ < *V or early contractions *$\bar{e}$, *$\bar{a}$, *$\bar{o}$ < *VHV. These remain long in Slavic, e.g. SCr. *ije* < IE. **ē*.
2 Short vowels and diphthongs before an Indo-European laryngeal or glottalic consonant *V(R)H, *V(R)D. These are short in Slavic, e.g. SCr. *je* < IE. **e* before *H or *D.
3 Other Indo-European diphthongs *VR are long in Slavic, e.g. SCr. *ije* < IE. **oi*.
4 Other short vowels *V remain short in Slavic, e.g. SCr. *e* < IE. **e*.

Types **1** and **3** became rising (in paradigms with fixed stress) or falling (in paradigms with mobile stress) in Slavic and circumflex in Baltic (rising in Lithuanian and falling in Latvian and Prussian). Pretonic long vowels were shortened in Slavic (7.13). Rising and posttonic long vowels were preserved, but falling long vowels were shortened except in monosyllabic and disyllabic word forms in Serbo-Croatian and in monosyllables in Slovene (9.4).

Type **2** became acute (broken, glottalic) when the *i*- and *u*-diphthongs were monophthongized and nasal vowels before tautosyllabic stops arose (6.5). The same development took place in East Baltic (cf. Kortlandt 1977: 324). The acute lost its glottalic character first in posttonic syllables, where it yielded a short vowel (7.13), and later under the stress, where it merged with the earlier short rising tone (9.2). In pretonic and post-posttonic syllables, type **2** had already been lost, merging with **1** and **3** at an early stage (5.3), which was followed by the analogical extension of this development to stressed and posttonic syllables in barytone forms of paradigms with mobile stress (5.4). As a result, the acute tone never arose in the Slavic mobile accent pattern (c).

Type **4** became rising or falling in the same way as types **1** and **3**, depending on the fixed or mobile accent pattern of the paradigm. New posttonic long vowels arose from Van Wijk's law (7.15) and from early contractions (8.1), and new stressed long vowels from the retraction of the stress from final jers (8.2) and from the lengthening of short falling vowels in monosyllables (8.8). New short vowels arose from the loss of the acute tone (9.2) and from the shortening of long falling vowels (9.3, 9.4). After the end of the Proto-Slavic period, short vowels were lengthened under various conditions in Russian (10.4), Ukrainian (10.5), Czech and Upper Sorbian (10.6), Slovene (10.7-10.9 and 10.11), and most Serbo-Croatian dialects.

To summarize, Serbo-Croatian long vowels reflect types **1** and **3** in stressed and posttonic syllables except for initial syllables of barytone polysyllabic word forms in accent pattern (c), further type **2** in post-posttonic syllables and in barytone mono- and disyllabic word forms of paradigms with mobile stress, and type **4** in posttonic syllables continuing **CjV* or **VjV* and in monosyllabic word forms belonging to accent pattern (c). Serbo-Croatian short vowels reflect types **1** and **3** in pretonic syllables and in initial syllables of barytone polysyllabic word forms in accent pattern (c), further type **2** except for post-posttonic syllables and for barytone mono- and disyllabic word forms of paradigms with mobile stress, and type **4** except for monosyllabic word forms in accent pattern (c). At a later stage, short vowels were often lengthened before tautosyllabic resonants in most of the Serbo-Croatian dialects.

Elsewhere I have presented the following relative chronology of developments from Proto-Indo-European to Slavic (1989), which may now serve as a frame of reference here. For readability's sake I shall omit the asterisks in this survey. Any form which is not identified as belonging to an attested language should be read with an asterisk.

1. Proto-Indo-European. Several developments can be dated to the internal history of the Indo-European proto-language, e.g.:

1.1. Initial *b* became *p*, e.g. Vedic *píbati* 'drinks', OIr. *ibid.* The reduplication was restored in Latin *bibit*.

1.2. The opposition between the velar series was neutralized after *u*, e.g. Gr. *βουκόλος* 'cowherd', *θυγάτηρ* 'daughter'.

1.3. The opposition between the velar series was neutralized after *s*. The archiphoneme was palatovelar before *i* and plain velar elsewhere.

1.4. Double *ss* was simplified to *s*, e.g. Vedic *ási* 'thou art', Gr. *εἶ*.

1.5. The opposition between the laryngeals was neutralized before and after *o*.

1.6. The vowels *e* and *o* were lengthened in monosyllabic word forms and before word-final resonants. This is the origin of the PIE. lengthened grade.

2. Dialectal Indo-European. Balto-Slavic shares several developments with its Indo-European neighbors, e.g.:

2.1. The opposition between PIE. fortes and lenes stops was rephonemicized as an opposition of voiceless vs. voiced. This was a shared innovation of Germanic, Balto-Slavic, Albanian, Armenian, Indo-Iranian, and probably Celtic.

2.2. PIE. *s* was retracted to *ṣ* after *i*, *u*, *r* and *k* in Balto-Slavic, Albanian, Armenian, and Indo-Iranian.

2.3. The PIE. palatovelars were depalatalized before resonants unless the latter were followed by a front vowel, e.g. OCS. *slovo* 'word', Gr. *κλέος*, but Lith. *klausýti* 'to listen'. This development was common to Balto-Slavic and Albanian.

3. Early Balto-Slavic. During this period, the characteristic lateral mobility of Balto-Slavic accent patterns came into existence.

3.1. Loss of PIE. accentual mobility. The final stress of Lith. *duktẽ* 'daughter' originated at this stage, cf. Gr. *θυγάτηρ* with non-final stress, gen.sg. *θυγατρός*. Athematic verb forms received final stress, e.g. Čak. (Novi) *dá* 'gives', with neo-acute pointing to a late retraction of the stress from a final jer (see 8.2 below), 1pl. *dāmȏ*, Lith. *duodą̃s* 'giving', cf. Vedic *dádāti*, *dadmáḥ*, *dádat-*.

3.2. Pedersen's law: the stress was retracted from inner syllables in accentually mobile paradigms, e.g. acc.sg. Lith. *dùkterį* 'daughter', *piemenį* 'shepherd', Gr. *θυγατέρα*, *ποιμένα*.

3.3. Barytonesis: the retraction of the stress spread analogically to vocalic stems in the case forms where Pedersen's law applied, e.g. acc.sg. Lith. *ãvį* 'sheep', *sū́nų* 'son', *diẽvą* 'god', *žiẽmą* 'winter'.

3.4. Oxytonesis: the stress shifted from an inner syllable to the end of the word in paradigms with end-stressed forms, e.g. Lith. inst.sg. *sūnumì*, inst.pl. *žiemomìs*.

3.5. The nom.acc.sg. ending of oxytone neuter *o*-stems *-om* was replaced with the corresponding pronominal ending *-od*. The bifurcation of the neuter paradigm subsequently led to the merger of the barytone neuters with the masculines.

3.6. Final *-om* was narrowed to *-um*.

3.7. Final *t/d* was lost.

4. Late Balto-Slavic. During this period the Balto-Slavic accent patterns obtained their final shape.

4.1. Hirt's law: the stress was retracted if the vowel of the pretonic syllable was immediately followed by a laryngeal, e.g. Lith. *dúona* 'bread', *výras* 'man', *dū́mai* 'smoke', Vedic *dhānā́ḥ*, *vīráḥ*, *dhūmáḥ*, also Slovene dat.pl. *gorȁm* 'mountains', loc.pl. *gorȁh*, where the stress was retracted from the ending to the vowel before the stem-final laryngeal. These endings had received the stress as a result of the oxytonesis (3.4) and kept it in the non-laryngeal flexion classes.

The stress was not retracted if the laryngeal followed the second component of a diphthong, as in Latvian *tiêvs* 'thin' < *tenHuós*, or preceded the syllabic nucleus, as in Russian *pilá* '(she) drank' < *pHiláH*. The stress was not retracted to a lengthened grade vowel, as is clear from the sigmatic aorist, which has final stress in Slavic, and from *vṛddhi* formations, e.g. SCr. *mêso* 'meat' < *mēmsóm*, *jâje* 'egg' < *Hōuióm*. It follows that the laryngeals were still segmental phonemes at this stage. The retraction under discussion was posterior to the oxytonesis (3.4) because the preservation of accentual mobility in the type SCr. *sîn* 'son', Ve-

dic *sūnúḥ*, presupposes that the trisyllabic case forms of the *u*-stems had received final stress before Hirt's law operated. It was also posterior to the substitution of the pronominal ending in the oxytone neuter *o*-stems (3.5) because neuters with retracted stress did not join the masculine gender, e.g. SCr. *jâto* 'flock', Vedic *yātám*.

4.2. The syllabic resonants dissolved into a vocalic and a consonantal part, the former of which merged with *u* after the labiovelar stops and with *i* elsewhere. This distribution was reshuffled under the influence of apophonic relationships. The labiovelars subsequently lost their labialization. The loss of the syllabic resonants was posterior to Hirt's law (4.1) because the stress was retracted in Latvian *ĩlgs* 'long', *pĩlns* 'full', SCr. *dȕg*, *pȕn*, Vedic *dīrgháḥ*, *pūrṇáḥ*. The ending of Lith. acc.sg. *rañką* 'hand' suggests that it was also posterior to the loss of the laryngeals before word-final nasals.

4.3. Winter's law: the PIE. glottalic stops dissolved into a laryngeal and a buccal part. The former merged with the reflex of the PIE. laryngeals and the latter with the reflex of the lenes stops. Winter's law was apparently posterior to the loss of final *d* (3.7) in view of the Slavic neuter pronoun *to* < *tod*. It was posterior to Hirt's law (4.1) because the stress was not retracted in Latvian *pę̃ds* 'footstep' < *pedóm*, *nuôgs* 'naked' < *nog^{w}ós*, *duômu* '(I) give' < *dodHmí*, where the broken tone reflects final stress. It was posterior to the loss of the syllabic resonants (4.2) because it was blocked in the clusters *ngn* and *ndn*, which arose as a result of the latter development in OCS. *ognь*, Lith. *ugnìs* 'fire' < *ṇg^{w}nis*, OCS. *voda* 'water' < *undn-*.

4.4. The stress was retracted from final open syllables of disyllabic word forms unless the preceding syllable was closed by an obstruent. This retraction was posterior to the loss of final *t/d* (3.7), as is clear from Lith. gen.sg. *vĩlko* 'wolf' and SCr. aor. 3sg. *nȅse* 'carried'. The stress was regularly retracted from final vowels, as in Ru. *pílo* '(it) drank', and diphthongs, as in Lith. dat.sg. *vĩlkui* 'wolf', *gálvai* 'head', but not from syllables which ended in a fricative, a nasal, or a laryngeal, e.g. Lith. gen.sg. *aviẽs* 'sheep', gen.pl. *vilkų̃* 'wolf', nom.sg. *galvà* 'head', Ru. *pilá* '(she) drank'. It follows that word-final nasals and laryngeals were still ordinary consonants at this stage.

This retraction was posterior to Hirt's law (4.1) because the accentual mobility in Ru. *dalá*, *dálo* '(she, it) gave', which must have arisen at this stage, presupposes an earlier end-stressed paradigm. If the word contained a full grade root vowel at the time of Hirt's law, retraction of the stress would have prevented the rise of accentual mobility. Thus, we have to assume that the full grade replaced earlier zero grade at a stage between 4.1 and 4.4. The retraction was apparently posterior to the loss of the syllabic resonants (4.2) because the stress was not retracted in the 1sg. and 3pl. forms of the sigmatic aorist, e.g. SCr. 3pl. *klȅše* 'cursed', where the rising tone points to a late (neo-Štokavian) retraction of the stress, or Posavian 1sg. *zaklẽ*, with neo-acute indicating retraction of the stress from a final jer (see 8.2 below).

The retraction was probably posterior to Winter's law (4.3) because the laryngeal feature of the PIE. glottalic stops seems to have merged with the reflex of the PIE. laryngeals at a stage between 4.1 and 4.4. This can be deduced from the retracted stress of Ru. *éla* '(she) ate', *séla* '(she) sat down', which must have arisen from an analogical extension of Hirt's law, cf. *grýzla* 'gnawed', *strígla* 'cut', present 3pl. *edját*, *gryzút*, *strigút*. The stress was not retracted in the latter forms because they were trisyllabic and had final stress at the stage under consideration. This retraction cannot have been phonetic in view of Lith. *ėdą̃s* 'eating', *duodą̃s* 'giving'. The analogical development must have been anterior to the retraction under discussion because the stress was not retracted in Ru. *pilá* 'drank', *dalá* 'gave'. In particular, it must have been anterior to the introduction of full grade in the root syllable of the latter form.

4.5. The merger of the original barytone neuter *o*-stems with the masculines in the singular must be dated to the Balto-Slavic period in view of the agreement between Slavic and Old Prussian. New barytone neuters arose as a result of the retractions at stages 4.1 and 4.4.

These developments yielded the following phonological system:

p	b		m				
t	d	s	n	l	r		
ć	ǵ						
k	g						
H				j	w		
		i	ī			u	ū
		e	ē			o	ō
				a	ā		

5. E a r l y S l a v i c. During this period Slavic developed along similar lines as its West and East Baltic sister languages.

5.1. Raising of *ē* and *ō* before a final resonant, e.g. OCS. *mati* 'mother', *kamy* 'stone', Lith. *mótė*, *akmuõ*, Gr. *μήτηρ*, *ἄκμων*. The final resonant was lost after the raising. The acc.sg. ending of the *ā*-stems was shortened to *-am*, perhaps in Balto-Slavic times already.

5.2. Labialization of *a*, *ā* and merger with *o*, *ō*. This development was posterior to the shortening of the acc.sg. ending of the *ā*-stems to *-am*, OCS. *-ǫ*, because the latter did not merge with the reflex of *-ōn*, OCS. *-y*.

5.3. Loss of the laryngeals in pretonic and post-posttonic syllables with compensatory lengthening of an adjacent vowel, e.g. *golwòH* < *golHwàH* 'head', inst.sg. *sūnumì* < *suHnumì* 'son', *pīlòH* < *pHilàH* '(she) drank', *òpsnowō* < *òpsnowaH* 'base', inst.pl. *gènoHmīs̨* < *gènaHmiHs̨* 'women'. The long vowel in the final syllable of the latter words is reflected by the neo-circumflex tone of Slovene *osnôva* < *osnòvā*, *ženâmi* < *ženàmī*, where the middle syllable received the stress as a result of Dybo's law (see 8.7 and 10.9 below).

5.4. Meillet's law: on the analogy of the end-stressed forms, the laryngeals were eliminated from the barytone forms of paradigms with mobile stress, e.g. SCr. acc.sg. *glâvu* 'head', *sîn* 'son', where the circumflex points to the absence of a laryngeal, cf. Lith. *gálvą*, *sūnų*, where the acute tone reflects its original presence.

5.5. Rise of nasal vowels, which I shall write *iN*, *eN*, *oN*, *uN*. This development was blocked before a tautosyllabic stop, where the rise of nasal vowels can be dated to stage 6.5 (see below).

5.6. The loss of final *s* cannot be dated with precision. A comparison with the development of *s* in Indo-Iranian, Armenian, Greek and Celtic suggests that final *s* became *h* in Early Slavic. It was lost at a later stage (see 6.8 below).

5.7. Rise of *x* from dialectal Indo-European *s̨* (see 2.2 above). This development may have been simultaneous with 5.6.

5.8. Rise of *s*, *z* from earlier *ć*, *ǵ*, which had developed from the PIE. palatovelar stops *k'*, *ǵ*, *ǵ^h*. This development may have been simultaneous with 5.6 and 5.7.

5.9. Raising before final *-h*. The raising affected *-oih*, *-ōih*, and *-oNh*, cf. OCS. 2sg. imp. (opt.) *nesi* 'carry', inst.pl. *raby* 'slaves', acc.pl. *raby*, *ženy* 'women', for which I assume an intermediate stage *-uih*, *-ūih*, *-uNh*. It affected neither *-oh*, which yielded *-o* in the neuter *s*-stems, nor *-ōh*. It was anterior to the loss of the dental stop in *-onts*, e.g. ORu. *nesa* 'carrying', cf. *ženy* 'wives'.

5.10. Lowering of *un* to *on* before a tautosyllabic stop.

5.11. Depalatalization and rounding of nonsyllabic *i* to *u* in dat.sg. *-ōi* and inst.pl. *-ūih*, which subsequently became *-ou* and *-ūh*. This development was posterior to the raising in the latter ending at stage 5.9 because the raising did not affect the gen.sg. ending *-ouh* of the *u*-stems.

5.12. Delabialization of *o*, *ō* to *a*, *ā*. It did not affect the nasal vowel *oN*.

These developments yielded the following phonological system:

p	b			m					
t	d	s	z	n	l	r			
k	g	x							
H					j	w			
		i	ī	iN			u	ū	uN
		e	ē	eN					oN
					a	ā			

6. Early Middle Slavic. The developments of this period form part of the trend toward rising sonority and synharmonism within the syllable.

6.1. Umlaut. The back vowels *a, ā, oN, u, ū, uN* had fronted variants *ä, ā̈, öN, ü, ṻ, üN* after a preceding *j*. Now *e* and *ē* merged with *ä* and *ā̈*, respectively. The nasal vowels *eN* and *öN* remained distinct, cf. OCS. *znajǫ* 'I know', where the rounding was preserved. The other rounded front vowels also remained phonetically conditioned variants of the corresponding back vowels, e.g. *jüga* 'yoke'.

6.2. First palatalization of velars: *k* > *č*, *g* > *ǰ*, *x* > *š* before *e, ē, i, ī, j*. The velar obstruents had fronted variants before front vowels. When *e, ē* merged with the fronted variants of *a, ā* after *j* (6.1), the sequences *ke, kē, ge, gē, xe, xē* were rephonemicized as *čä, čā̈, ǰä, ǰā̈, šä, šā̈*, where *ä, ā̈* are the archiphonemes of *e, ē* and *a, ā* after palatals.

6.3. Spirantization of the voiced affricate *ǰ* > *ž*. This development was blocked by a preceding *z*.

6.4. Palatalization of the dental fricatives: *s* > *š*, *z* > *ž* before *j, č, ǰ*.

6.5. Monophthongization of diphthongs: *ai* > *ē*, *ei* > *ę̄*, *ui* > *ṻ*, *au* > *ō*. PIE. *eu* had changed into *iou* in Balto-Slavic times and into *jau* at stage 5.12. The occurrence of the diphthong *ui* was limited to the position before final *h*, where it had arisen at stage 5.9. After palatal consonants the diphthongs *äi, üi, äu* changed into *ę̄, ṻ, ō̈*, the latter of which is the phonetically conditioned variant of *ō*. The rise of nasal vowels before a tautosyllabic stop can be dated to the same stage. It yielded a new nasal vowel *aN* in the participial ending PIE. *-onts*, which had been subject to the delabialization at stage 5.12, e.g. ORu. *nesa* 'carrying', cf. *nesu* < *-oN* 'I carry'. The surviving laryngeals had developed into glottal stops by this time: I shall write *i*ʔ, *ę*ʔ, *e*ʔ, *a*ʔ, *o*ʔ, *u*ʔ. These sequences had the timbre of the corresponding long vowels.

6.6. Second palatalization of velars: *k* > *ć*, *g* > *ǵ*, *x* > *ś* before the new front vowels *ē* and *ṻ* which had arisen from the monophthongization of *ai, ui* (6.5), and after the high front vowels *i, ī, iN* unless followed by a consonant or by one of the high back vowels *u, ū, uN*. The clusters *sk* and *zg* became *ść* and *źǵ* before the new front vowels. The sequences *ika, iga, ixa* were rephonemicized as *ićä, iǵä, išä*, etc. The development restored the opposition between *ē* and *ā* after palatals, e.g. OCS. *vьsь* 'all', f.sg./n.pl. *vьsa*, gen.loc.pl. *vьsěxъ*. Thus, the long vowel *ā̈* lost the status of an archiphoneme and came to be the fronted variant of *ā* after a palatal consonant.

6.7. Rise of geminated affricates: *tj* > *tć*, *dj* > *dǵ*, also *stj* > *śtć*, *zdj* > *źdǵ*. This development has a modern parallel in Ukrainian, e.g. *žyttjá* 'life'. The cluster *kt* yielded *tć* before high front vowels, e.g. OCS. *noštь* 'night', Ru. *noč'*, SCr. *nôć*.

6.8. Loss of final *h* from *s*. I date its ultimate loss toward the end of the Early Middle Slavic period because most probably it was only slightly anterior to the rise of prothetic glides (7.1).

6.9. Illič-Svityč's law. Accentual mobility was generalized in the masc. *o*-stems which did not have an acute root vowel, e.g. SCr. *zûb* 'tooth', cf. Gr. *γόμφος* 'bolt'. The original accentuation seems to have been retained in the Čakavian dialects of Susak and Istria.

6.10. Pedersen's law and rise of distinctive tone. The stress was retracted from inner syllables in accentually mobile paradigms (cf. 3.2 above), e.g. Ru. *ná vodu* 'onto the water', *né*

byl 'was not', *pródal* 'sold', *póvod* 'rein'. The stress was also retracted within the initial syllable of barytone forms in paradigms with mobile stress, yielding a falling tone. All other stressed vowels became rising by opposition. This development was posterior to Illič-Svityč's law (6.9) because it eliminated the identity of the two accentual paradigms in the barytone case forms on which the generalization of accentual mobility was based.

These developments yielded the following phonological system:

p	b			m				
t	d	s	z	n	l	r		
ć	ʒ́	ś						
č		š	ž					
k	g	x						
ʔ					j	w		
		i	ī	iN	ǔ	u	ū	uN
			ę̄				ō	oN
		e	ē	eN		a	ā	aN

and rising vs. falling tone

7. Late Middle Slavic. This was the time when the trend toward simplification of the syllable structure reached its culmination and the major dialect divisions established themselves.

7.1. Prothesis. The hiatus between a word-final and a word-initial vowel was filled with a glide, which was *j* if at least one of the vowels was front and *w* if the preceding vowel was back and the following vowel was rounded. As a consequence of this development, which was apparently posterior to 6.8, initial *j* lost the status of a phoneme before unrounded vowels. Initial *jä-* and *jā-* were rephonemicized as *e-* and *ē-*, e.g. *e^{ʔ}xa^{ʔ}tę̄* < *ja^{ʔ}xa^{ʔ}tę̄* 'to ride', Lith. *jóti*, now with the same initial as *e^{ʔ}stę̄* 'to eat', Lith. *ėsti*. The twofold glide before a rounded vowel gave rise to doublets, e.g. OCS. *utro* and *jutro* 'morning', *ajce* and *jajce* 'egg'.

7.2. Dolobko's law. Barytone forms of accentually mobile paradigms lost the stress to an enclitic particle, e.g. Slovene *lahkî* 'light', gen.sg. *lahkegà*, dat.sg. *lahkemù*. This development was probably posterior to the rise of distinctive tone (6.10).

7.3. First simplification of palatals: *ć* > *c*, *ʒ́* > *ʒ*, in South and East Slavic also *ś* > *s*, *ść* > *sc*, *źʒ́* > *zʒ*. The resulting dentals continued to be palatalized for some time.

7.4. The clusters *k'w*, *ǵw*, *x́w* which had arisen before front vowels as a result of the second palatalization (6.6) shared the development of 7.3 in South and East Slavic, but were depalatalized in West Slavic. The clusters *k'n* and *ǵn* preserved the palatalization in the nasal.

7.5. Loss of *t* and *d* before *l* in South and East Slavic. As in the case of *ść* (7.3) and *kw* (7.4), West Slavic preserved the original cluster.

7.6. Simplification of geminated affricates: *tć* > *ść*, *dʒ́* > *źʒ́*, also *śtć* > *ść*, *źdʒ́* > *źʒ́*. This development was limited to Bulgarian. For the other languages I assume that length shifted from the first, occlusive element of the geminate to its second, fricative element: *tć* > *ćś*, *dʒ́* > *ʒ́ź*. This development can be identified with the general assimilation of *j* to a preceding consonant: *čj* > *čš*, *šj* > *šš*, *žj* > *žž*, *nj* > *ṇṇ*, *lj* > *ļļ*, also *pj* > *pļ*, *bj* > *bļ*, *mj* > *mļ*. The assimilation did not change the phonemic make-up of the clusters because their second components can be regarded as the realizations of the phoneme /j/ in the respective environments.

7.7. Spirantization of the ungeminated voiced affricate *ʒ* > *z*. This development did not reach Lekhitic and a part of the Bulgarian dialects.

7.8. Delabialization of *u*, *ū*, *uN*, *ü*, *ǖ*, *üN*. This development yielded *y*, *ȳ*, *yN*, *i*, *ī*, *iN*, e.g. *wy^{ʔ}dra^{ʔ}* 'otter', *lyN^{ʔ}ka* 'bast', *iga* 'yoke', 2sg. imp. *nesī* 'carry', acc.pl. *arbyN* 'slaves', *kaṇiN* 'horses'. As a result of the delabialization, the prothetic *w* before *y*, *ȳ* received the status

of a phoneme. The new *iN* from *üN* did not merge with earlier *iN*, which had apparently merged with *eN* at this stage, e.g. *xwāleN* 'praising'.

7.9. Raising of *ę̄* and *ō*. The empty hole which the delabialization had left was filled by raising the remaining rounded vowel *ō* to *ū*. The corresponding front vowel *ę̄* < PIE. *ei* was raised to merge with *ī*. The phonetically complex unrounded nasal back vowel *yN* lost its nasal feature, e.g. *ly$^{?}$ka* 'bast', *syta* 'hundred'. The corresponding nasal front vowel *iN* was lowered to *ęN* while *eN* was lowered to *äN*.

7.10. Retraction of initial *e*, *ī̆* to *a*, *ū* in East Slavic, e.g. Ru. *ózero* 'lake', *útro* 'morning', cf. SCr. *jȅzero*, *jûtro*.

7.11. Dissimilation of /j/ in the word for 'foreign' in South Slavic, e.g. SCr. *tûđ*, Ru. *čužój*.

7.12. Metathesis of liquids in South Slavic and Czecho-Slovak. The metathesis was often accompanied by lengthening. The timbre of the vowel shows that the metathesis was anterior to the rise of the new timbre distinctions (7.13) in Czecho-Slovak and South Slavic, but posterior to that development in Lekhitic and Sorbian. The metathesis did not reach East Slavic except in word-initial position, where it was early in the entire Slavic area, e.g. Ru. *rálo* 'plough', Cz. *rádlo* < *ar$^{?}$dla*.

7.13. Rise of the new timbre distinctions. In posttonic syllables the glottal stop was lost without compensatory lengthening, whereas in stressed syllables it became a feature of the preceding vowel, comparable to the Latvian broken tone. As a result, the timbre distinctions between the short vowels and the acute "long" vowels became phonemically relevant, e.g. *wŷdra* 'otter', *sъ̂to* 'hundred'.

As a result of the rise of the new timbre distinctions, the quantitative oppositions in pretonic syllables were rephonemicized as timbre differences. All pretonic vowels of this stage are reflected as short vowels in the historical languages, e.g. Czech *ruka* 'hand' < *roNkâ*, SCr. *màlina* 'raspberry' < *malî̆na*. The length in SCr. *rúka* was introduced from the barytone forms such as acc.sg. *rûku*, while the original short vowel was preserved in the oblique plural form *rùkama*. Long vowels in posttonic syllables were not shortened, e.g. *òsnowā* 'base', inst.pl. *žènamī* 'women', where the long final vowel is reflected by the neo-circumflex tone of Slovene *osnôva*, *ženâmi* (see 10.9 below). The alternation between short pretonic and long posttonic vowels in paradigms with mobile stress was removed by the generalization of the long vowel in Serbo-Croatian and the short vowel in Czech and Polish, e.g. SCr. *gȍlūb* 'pigeon', *žȅlūd* 'acorn', *lȁbūd* 'swan', *ôblāst* 'region', Cz. *holub*, *žalud*, *labuť*, *oblast*. The long vowel was retained everywhere if it did not alternate with a short vowel, e.g. SCr. *mjȅsēc* 'month', *pȅnēz* 'coin', *jàstrēb* 'hawk', *pȁūk* 'spider', Cz. *měsíc*, *peníz*, *jestřáb*, *pavouk*. These words had fixed stress on the laryngealized vowel of the first syllable. Both Czech and Serbo-Croatian have a short vowel in a suffix which contained a laryngeal, e.g. SCr. *bògat* 'rich', *sŕdit* 'angry'.

7.14. Raising of the low nasal vowels *aN*, *äN* to *yN*, *eN* in South Slavic, e.g. OCS. *nesy$_{(ˌ}$* 'carrying', *xvalę* 'praising', ORu. *nesa*, *xvalja*.

7.15. Van Wijk's law and loss of /j/. Long consonants (see 7.6 above) were shortened with compensatory lengthening of the following vowel, e.g. SCr. *pîšē* 'writes' < *pīšše* < *pę̄šjä* < *peisje*. This development was evidently posterior to 7.11 and 7.13, cf. *wòl̨ā* < *wòl̨l̨a* < *wàlja$^{?}$* 'will'. New *ē* did not merge with earlier *ē*, which had become *ĕ* at stage 7.13.

After the loss of the glottal stop in posttonic syllables and the rise of new long vowels as a result of Van Wijk's law, case endings could have three different quantities. For example, the nom.sg. ending of the *a*-stems was short in *žèna* 'woman', long in *wòl̨ā* 'will' and *òsnowā* 'base', and indifferent with respect to length in *gorâ* 'mountain'. The same distribution holds for the neuter nom.acc.pl. ending. At this stage several levelings took place. Endings which did not occur under the stress were shortened in the whole Slavic territory. Length was generalized in the unstressed nom.acc.pl. ending in Slovene *lę̑ta* 'years', but not under the stress, cf.

drvà 'firewood'. Conversely, the distinction between a short unstressed nasal vowel and a long nasal vowel under the stress was preserved in Slovene gen.sg. *lípe* 'lime-tree', *gorę́* 'mountain', and in SCr. nom.acc.pl. *glâve* 'heads', gen.sg. *glávē*. This difference became phonemic as a result of Dybo's law (see 8.7 below), which reintroduced long unstressed nasal vowels and short nasal vowels under the stress.

These developments yielded the following phonological system:

p	b			m	w					
t	d									
c	ʒ	s	z	n	l	r				
ć	ʒ́	ś		ṇ	ļ	ŗ				
č		š	ž							
k	g	x								
i	ī		ü	ū̃		y	ȳ		u	ū
e	ē	ęN		ь	öN	ъ			o	oN
ä	ā̃	äN				a	ā	aN		

and acute vs. rising vs. falling tone

8. Young Proto-Slavic. The redundancies which the trend toward rising sonority had created evoked a reaction, which eventually led to the disintegration of the prosodic system and to the rise of new closed syllables.

8.1. Contractions in posttonic syllables, e.g. Čak. (Novi) *pítā* 'asks', Bulg. *píta*, cf. Čak. *kopâ* < *kopā̂(j)e* 'digs', Bulg. *kopáe*, Old Polish *kopaje*. This development was posterior to the rise of the new timbre distinctions (7.13) because new *ē* did not merge with earlier *ē*, which became *ě*, cf. Czech gen.sg. *nového* 'new'.

8.2. Retraction of the stress from final jers, e.g. Slovene gen.pl. *gọ́r* < *gorъ* 'mountains'. Pretonic jers in inner syllables could not receive the stress, e.g. Slovene gen.pl. *ọ́vəc* < *owьcъ* 'sheep', Ru. dat.pl. *détjam* < *dětьmъ* 'children' (with *-jam* for ORu. *-em*). This development gave rise to new long vowels, which subsequently spread to the gen.pl. forms of other accent types.

8.3. Raising of *ě* from *ä* to *ie* in Slovene, Sorbian, Czecho-Slovak, and East Slavic. This development can be dated to approximately the same stage as the retraction of the stress from final jers (8.2) because *ě* became the counterpart of *ō* in these languages. It also affected Serbo-Croatian, though perhaps slightly later and not to the same extent, cf. Čak. (Rab) *gnjāzdȏ* 'nest'.

8.4. Merger of palatal fricatives: *ś* > *š*, also *ść* > *šć*, *źʒ́* > *žʒ́*.

8.5. Merger of palatal clusters: *šč* > *šć*, *žǯ́* > *žʒ́*.

8.6. Second simplification of palatals: *ć* > *c*, *ʒ́* > *ʒ* in West Slavic, and subsequently *ʒ* > *z* in Czech and Sorbian; *ć* > *č*, *ʒ́* > *ǯ́* > *ž* in East Slavic. The clusters *šć* and *žʒ́* were reduced to *št* and *žd* in Bulgarian and the eastern dialects of Serbo-Croatian, and later in Czecho-Slovak. Similarly, the clusters *sc* and *zʒ* became *st* and *zd* in a part of the Bulgarian dialects.

8.7. Dybo's law: rising vowels lost the stress to the following syllable, if there was one, e.g. *žena* 'woman', *osnòwā* 'base'. Newly stressed long vowels received a falling tone, e.g. *woļâ* 'will'. Final jers had lost their stressability (8.2) and therefore could not receive the stress, e.g. Slovene *kònj* < *kòŋь* 'horse'. Acute (broken, glottalized) vowels did not lose the stress, e.g. *wy̋dra* 'otter', *dy̋mъ* 'smoke', which kept fixed stress throughout the paradigm. Dybo's law restored distinctive vowel length in pretonic syllables, e.g. *nāròdъ* 'people', *ōN-tròbā* 'liver'.

8.8. Lengthening of short falling vowels in monosyllables, e.g. SCr. *bôg* 'god', *kôst* 'bone', *dân* 'day'. This development, which was apparently Common Slavic, eliminated the

pitch opposition on short vowels, which had become confined to monosyllables (not counting final jers) as a result of Dybo's law (8.7).

8.9. The inst.sg. ending *-ъmь* of the *u*-stems was generalized in the paradigm of the *o*-stems in North Slavic. It replaced *-a*, which has been preserved in OCS. *vьčera* 'yesterday' and can be identified with Lith. *-ù* < *-oH*. The development was motivated by the merger with the gen.sg. ending *-ā* in soft stems as a result of Van Wijk's law (7.15) and can therefore be dated to the Young Proto-Slavic period. The rise of the South Slavic ending *-omь* requires the continued existence of the nom.sg. ending *-os* and must therefore be dated to an earlier stage.

These developments yielded the following phonological system:

p	b			m	w				
t	d								
c	ʒ	s	z	n	l	r			
(ć)	(ʒ́)			ɳ	ɭ	ɽ			
č		š	ž						
k	g	x							
		i		ü		y		u	
		e	eN	ь	öN	ъ	(yN)	o	oN
		(ä)	(äN)			a	(aN)		
and either acute									
or long vs. short and rising vs. falling tone									

9. Late Proto-Slavic. This is the last period of common innovations.

9.1. Pleophony in East Slavic, e.g. Ru. *ogoród* 'kitchen-garden', *pozolóta* 'gilding'. The development was evidently posterior to Dybo's law (8.7), according to which the prefix lost the stress to the root in these words.

9.2. Loss of the acute (broken, glottalic) tone, which yielded a short rising contour, e.g. *dȳmъ* 'smoke', *gorà* 'mountain'. This development was posterior to the East Slavic pleophony (9.1) because the distinction between the acute and the earlier rising tone was preserved in Ukrainian, e.g. *moróz* < *-orò-* 'frost', gen.pl. *holív* < *-oló-* 'heads'.

9.3. Stang's law: the stress was retracted from long falling vowels in final syllables, e.g. *w"òļa* 'will', Ru. dial. *vôlja*, Cz. *vůle*, Slovak *vôľa*, Slovene *vólja*, SCr. *vôlja*. The long vowel was shortened, except in Lekhitic, where traces of length remain, e.g. Old Polish *wolå*. The newly stressed vowel received a rising tone. Pretonic jers in inner syllables would not receive the stress, and final jers did not count as syllables with respect to Stang's law. The development was posterior to the loss of the acute tone (9.2), as is clear from SCr. gen.pl. *jȅzīkā* 'tongues'. The short vowel in the first syllable of Cz. *jazyk* and SCr. *jèzik* shows that this word had fixed stress on the second syllable before Dybo's law operated: *(j)eNzŷkъ*. The retraction in the gen.pl. form points to earlier *jeNzŷkъ* from *jeNzỳkъ* with analogical lengthening after the loss of the acute tone. If Stang's law had been anterior to the loss of the acute tone, the lengthening would have been impossible and the retraction of the stress would not have taken place in this form. Note that the lengthening was indeed posterior to Stang's law in Čak. (Novi) gen.pl. *susêd* 'neighbors', *kolên* 'knees'.

9.4. Shortening of long falling vowels, e.g. Czech *mladost* 'youth', acc.sg. *ruku* 'hand', SCr. *mlâdōst* 'youth', gen.sg. *prâseta* 'sucking-pig'. The shortening did not affect monosyllables in Slovene and Serbo-Croatian and the first syllable of disyllabic word forms in the latter language, e.g. SCr. *bôg* 'god', *prâse* 'sucking-pig', acc.sg. *rûku* 'hand'. The dialect of the Kiev Leaflets sides with Serbo-Croatian in this respect.

9.5. Proto-Slavic *u* was fronted to *ü* in the northern dialects of Serbo-Croatian.

9.6. The rounded nasal vowels *oN*, *öN* were raised to *uN*, *üN* in Serbo-Croatian, Sorbian, Czecho-Slovak, and East Slavic. This development was apparently posterior to the fronting of *u* (9.5).

9.7. Denasalization of the nasal vowels in East Slavic, and subsequently in Czecho-Slovak.

9.8. Rise of the palatalization correlation in Lekhitic, and subsequently in the other North Slavic languages.

9.9. Merger of the jers in Serbo-Croatian, Slovene, and Czech, and subsequently in Lekhitic.

10. Disintegrating Slavic. This is the period of parallel but not identical developments in the separate languages.

10.1. The denasalization spread to affect all Slavic languages. The nasal vowels are best preserved in modern Polish.

10.2. The rise of the palatalization correlation affected the languages differently. The correlation is especially characteristic of modern Russian.

10.3. The jers were lost or merged with other vowels under various conditions in the separate languages. They have been preserved as a separate phoneme in Slovene.

10.4. Short rising vowels were lengthened in Russian, e.g. dial. *kôn'* < *kōn̥* < *kòn̥ъ* 'horse', cf. *bog* < *bôgъ* 'god', where the vowel had been shortened (9.4). The length has been preserved in Baltic and Fennic loan words from Russian, e.g. Latvian *grāmata* 'book', Estonian *raamat* < *gràmotā*.

10.5. Short vowels were lengthened in monosyllables in Ukrainian, e.g. *kin'* < *kōn̥* 'horse'. Other new long vowels originated from compensatory lengthening before a lost jer in inner syllables.

10.6. Short rising vowels in open first syllables of disyllabic words were lengthened in Czech and Upper Sorbian unless the following syllable contained a long vowel, e.g. Cz. *kráva* < *kràva* 'cow', *vůle* < *võl̥a* < *w"òl̥a* 'will', *psáti* < *pьsàti* 'to write', USo. *kruwa* < *krōwa* 'cow', Cz. gen.pl. *krav*, inst.pl. *kravami*. This development was evidently posterior to the loss of pretonic jers.

10.7. Falling vowels lost the stress to the following syllable in Slovene, e.g. *okọ̑* 'eye', *mladọ̑st* 'youth', acc.sg. *rokọ̑* 'hand'. The newly stressed vowel received a long falling tone. This development was evidently posterior to Stang's law (9.3) and anterior to the loss of the nasal vowels. Indeed, the Freising Fragments can be dated between Stang's law and the progressive accent shift. The accent shift probably originated from the spread of the falling tone over two syllables as a result of the shortening (9.4).

10.8. Stressed short vowels were lengthened and received a falling tone before a non-final lost jer in Slovene, e.g. *bîtka* 'battle'. This development was evidently posterior to the progressive accent shift (10.7).

10.9. Stressed short vowels were lengthened and received a falling tone in Slovene if the following syllable contained a long vowel, which was shortened, e.g. *lẹ̑ta* 'years', *osnọ̑va* 'base', inst.pl. *ženâmi* 'women'. The development was evidently posterior to the progressive accent shift (10.7).

10.10. The stress was retracted from a final syllable to a preceding long vowel in Lekhitic, Slovene, and dialects of Serbo-Croatian, where the retraction yielded a rising tone.

10.11. Stressed short vowels in non-final syllables were lengthened and received a rising tone in Slovene, e.g. *lẹ́to* 'year', *vọ́lja* 'will'. This development, which was posterior to the rise of the neo-circumflex (10.8, 10.9) and to the retraction of the stress to a preceding long vowel (10.10), did not reach the easternmost dialects of the language.

10.12. The stress was retracted from a final short vowel in Lekhitic, the Pannonian dialect of the Kiev Leaflets, dialects of Slovene and Serbo-Croatian, and Bulgarian. This retraction,

which generally yielded a rising tone, was followed by others in various dialectal areas. In literary Serbo-Croatian, a rising tone points to a retraction of the stress from the following syllable because the Proto-Slavic rising tones have become falling. Czech and Slovak have fixed stress on the initial syllable, and the same can be assumed for Old Polish.

Against this background, it may be useful to specify the differences between my view and the more traditional approach taken by Mate Kapović in an unpublished article (2004)* which the author has kindly put at my disposal. His conclusions about the preservation and loss of vocalic quantity will be compared with mine.

Kapović maintains that long vowels in final open syllables were shortened in Proto-Slavic, thereby disregarding the evidence from all South and West Slavic languages. This deprives him of the possibility to explain different quantities in many endings and forces him to assume massive analogical spread of vowel length under obscure conditions, as in the case of the alleged pronominal ending in SCr. gen.sg. *žènē* 'woman' but not in other case forms of the same paradigm such as acc.sg. *-u* and nom.acc.pl. *-e*, nor in other flexion classes. Since he does not go into the details, I shall leave the matter out of discussion here.

The acute tone was lost and yielded a short rising tone in Late Proto-Slavic (see 9.2 above). It was later lengthened under various conditions in Russian (10.4), Czech and Upper Sorbian (10.6), and Slovene (10.8, 10.9, 10.11). Kapović thinks that the acute was preserved as a long vowel in Czech and Upper Sorbian in mono- and disyllabic word forms. This cannot be correct for four reasons. First, we find a quantitative alternation in the paradigm of Czech *kráva* 'cow', which has a short root vowel in inst.sg. *kravou*, gen.pl. *krav*, dat.pl. *kravám*, inst.pl. *kravami*, loc.pl. *kravách*. This rather suggests lengthening of Proto-Slavic short rising **à* in an open first syllable of disyllabic word forms which was blocked by a long vowel in the following syllable. Second, the same lengthening is found in *kůže* 'skin', *koží*, *koží*, *kožím*, *kožemi*, *kožích*, also *můžeš* 'you can', which never had an acute root vowel. Third, the same lengthening is found in trisyllabic word forms where a jer was lost in the initial syllable, e.g. *lžíce* 'spoon', *lžicí*, *lžic*, *lžicím*, *lžicemi*, *lžicích*, also *psáti* 'to write', *psal* 'wrote', *psaní* 'writing', *spáti* 'to sleep', supine *jdi spat* 'go to sleep'. This puts the lengthening after the loss of pretonic jers. Fourth, the Czech lengthening cannot be separated from the one in Upper Sorbian *kruwa* < *krówa* 'cow', which shows that it was more recent than the metathesis of liquids. Kapović's argument that original length is preserved in Hungarian loanwords such as *beszéd* 'talk' is mistaken because the long vowel reflects the timbre rather than the quantity of Proto-Slavic *besę̀dā*, Slovene *besę̑da* 'word'. The short "long" vowel originated when the new timbre distinctions arose (7.13).

Long falling vowels (traditionally called "circumflex") were shortened in Late Proto-Slavic (see 9.4 above) except in mono- and disyllabic word forms in Serbo-Croatian and in Slovene monosyllables, not counting final jers. Medial jers still counted as syllables at this stage, e.g. SCr. *sr̂ce* 'heart' < **sъrdьce* with falling tone

* This article is now published in a revised version in this volume, pp. 73-111 (editor's note).

on the initial syllable, Slovene *srcę̑*, and SCr. acc.sg. *djȅcu* 'children' < **dętьcǫ*. The short vowel of SCr. *mlȁdōst* 'youth' was taken from the oblique cases. The short vowel of dialectal SCr. *hlàdnī* 'cold', *tèškī* 'heavy', Czech *chladný*, *těžký* was pretonic and therefore shortened when the new timbre distinctions arose (7.13), and the same holds for SCr. *mùškī* 'man's', also *mùškī*, Čak. (Hvar, Vrgada, Susak) *muškî*. I shall not discuss the special rules and analogies which Kapović invokes in order to explain different vowel quantities in originally trisyllabic word forms.

Rising vowels lost the stress to the following syllable unless the latter contained a final jer (Dybo's law: 8.7). This development gave rise to new pretonic long vowels and to long falling vowels in non-initial syllables. The stress was subsequently retracted from long falling vowels in final syllables (not counting final jers) to the preceding syllable (skipping weak jers), giving rise to new rising vowels which are traditionally called "neo-acute" (Stang's law: 9.3). Long falling vowels in non-initial syllables were shortened in the process, except final long vowels in Lekhitic. As a result, we find an alternation between a rising tone and stress on a short vowel in the following syllable. The quantity of the original rising vowel (before Dybo's law) is usually preserved (after Stang's law), except for the lengthening of **o* in the Kajkavian dialects of Croatia (cf. Vermeer 1979: 359 f.). The earlier retraction of the stress from final jers (8.2) always yielded long vowels.

Kapović maintains that the long rising tone in accent pattern (b) arose from retraction of the stress from a final or medial jer in e.g. SCr. *kût* 'angle', *pûtnīk* 'traveler', *dùžnīk* 'debtor', dial. *kũt*, *pũtnīk*, *dužnīk*, Czech *kout*, *poutník*, *dlužník*. This requires massive analogical lengthening in the oblique cases. Moreover, it does not explain the quantitative and timbre alternations in the Slovene paradigm of the word *kònj* 'horse' (cf. Kortlandt 1975: 13-19). Kapović accepts Van Wijk's law in SCr. *kȍljēš* 'you slay' < **koľêšь* < **-lj-* but thinks that the length is secondary in *tȏnēš* 'you sink', whereas I assume a phonetically regular development in **tonêšь* < **tòpnešь*, with vowel length from the preceding cluster: **-nē-* < **-nne-* < **-pne-*. Kapović suggests a tendency to preserve the formal distinction between accent patterns (b) and (c) in the present tense of the verb for which I see absolutely no reasonable motivation. The retraction of the stress in **neseš̀* 'you carry' yielded a long vowel in **neséšь*, Slovak *nesieš*, whereas SCr. *mȍžeš* 'you can' adopted the length of the *je*-flexion in **možêšь* and lost it as a result of Stang's law, cf. Czech *můžeš*. In a similar vein, Kapović assumes the creation of a new formal distinction between **bę̑lȁjь* 'white' and **sūxȁjь* 'dry' in order to keep the accent patterns (b) and (c) in the adjective apart whereas I reconstruct **bę́ly* < **bę̑lŷ* < **bę́lȳ* versus **suxýj* < **suxъjȁ̀*.

Pretonic long vowels were shortened when the new timbre distinctions arose (7.13). New pretonic long vowels originated as a result of Dybo's law (8.7). The latter were never shortened in Proto-Slavic. In Serbo-Croatian, pretonic length was restored in disyllabic word forms of accent pattern (c), e.g. nom.sg. *rúka* 'hand' on the analogy of acc.sg. *rûku*, nom.acc.pl. *rûke*, but not in polysyllabic word forms

such as obl.pl. *rùkama*, similarly Čak. (Hvar) *rūkȁ*, *rûku*, dat.loc.sg. *rūcȉ*, but gen.sg. *ruké*, inst.sg. *rukón*, pl. *rûke*, *rúk*, *rukȉma*, cf. Czech *ruka* with a short vowel throughout the paradigm. The accent pattern remained distinct from that of SCr. *trúba* 'trumpet' (b), which has a long vowel throughout, like Czech *trouba*.

Kapović thinks on the basis of limited evidence from Serbo-Croatian that pretonic length was preserved in accent pattern (c) and is thereby forced to assume massive analogical shortening in Czech, Slovak, Polish, Slovincian and Slovene, none of which shows any traces of length in this position. Moreover, he assumes for all of these languages massive analogical lengthening in accent pattern (b), where he posits phonetic shortening in polysyllabic word forms. Here again, it remains quite unclear why accent patterns (b) and (c) must everywhere be kept apart by large-scale analogical developments when they merged phonetically in the majority of case forms. There simply is no plausible motivation for maintaining the redundant formal distinction between the accent patterns (b) and (c). Similarly, Kapović assumes phonetic length in SCr. *gúmno* 'threshing-floor', *súkno* 'cloth', *kŕzno* 'fur' but finds himself unable to explain the short vowel in the variant *kȓzno* and in the Czech cognates *humno* and *sukno*, Slovak *humno* but *súkno*. In fact, the long vowel resulted from the retraction of the stress according to Stang's law in the plural **súkъna* < **sukъnâ* (9.3) whereas the root vowel remained short in the singular **sukъnò* < **sukȍno* (8.7). The short root vowel had originated from the shortening of pretonic long vowels at an earlier stage (7.13), at the same time as the short vowels in the initial syllables of SCr. *màlina* 'raspberry', *jèzik* 'tongue', *svjèdok* 'witness', *dùžnīk* 'debtor', *mȕškī* 'man's'. Kapović's postulate of a general phonetic shortening in polysyllabic word forms brings him into major difficulties in the case of infinitives in *-ati* and *-iti*, where we usually find a long root vowel in accent pattern (b) and a short root vowel in accent pattern (c). Here again, he is forced to posit massive analogical lengthenings in all South and West Slavic languages and is unable to explain the distribution which is actually attested. The issue is complicated by the fact that *i*-verbs of accent pattern (c) had compounds with initial stress, e.g. SCr. *lòmīm* 'I break' versus *pòlomīm*, *slȍmīm*, where the root vowel received the stress from the prefix as a result of Dybo's law (8.7). The Old Polish flexion type with a short root vowel in the infinitive alternating with a long vowel in the present tense which is attested in *sędzić* 'to judge' versus *sądzi-* originated from an alternation between stressed short **-ìti* < **-îti* < **-ь̀jiti* in the infinitive and retraction of the stress from long **-î-* < **-ьjī-* < **-ь̀jī-* in the present tense, cf. *sędzia* 'judge' < **sǫdьjà* < **sǫdь̀ja*, as opposed to *sąd* 'court' < **sǫ́dъ*. The Old Polish type of *przystępić* 'to approach', *przystąpi-* preserves the quantitative alternation which existed in the simplex in accent pattern (c) between the shortening of pretonic long vowels (7.13) and the general shortening of long falling vowels (9.4), which together eliminated the long vowel outside posttonic syllables. The alternation between acute tone and mobile stress in SCr. *krȁsti* 'to steal', *krádē-*, Czech *krásti*, *kradl*, *krade-* resulted from Hirt's law (4.1) and the alternation between desinential and mobile stress in SCr. *trésti* 'to

shake', *trésē-*, Czech *třásti*, *třásl*, *třese-* from the absence of retraction from final open syllables to a preceding closed syllable (4.4). The matter cannot further be pursued here. Kapović also assumes massive analogical lengthening in trisyllabic deverbal nouns of the type SCr. *zábava* 'fun, party', Slovene *zabâva*, Czech *zábava* and in the similar type of *národ* 'people', *zákon* 'law', but shortening in Polish compounds with *roz-*. Since I have discussed the origin of these types elsewhere (1979), I shall not return to the problem here.

Unlike pretonic long vowels, posttonic long vowels were never phonetically shortened in Proto-Slavic. When the loss of the glottal stop in posttonic syllables gave rise to the new timbre distinctions (7.13), case endings could have three different quantities, e.g. short *-a* in **žèna* 'woman', long *-ā* in **òsnowā* 'base', and neutral *å* in **gorå* 'mountain'. New posttonic long vowels originated from Van Wijk's law (7.15) and from early contractions (8.1), which again gave rise to new quantitative alternations in endings of nominal and verbal paradigms. Further complications which resulted from the retraction of the stress from final jers (8.2), Dybo's law (8.7), the loss of the acute tone (9.2) and Stang's law (9.3) induced many different types of analogical leveling and eventually led to disintegration of the system of accent patterns.

Kapović thinks that in West Slavic, posttonic length was shortened in accent pattern (c) but not in accent pattern (a), e.g. Czech *holub* 'pidgeon' versus *měsíc* 'month', SCr. *gȍlūb*, *mjȅsēc*. This does not explain the long vowel of Czech *jeřáb* 'partridge' and *ovád* 'gadfly', SCr. *jȁrēb*, *ȍbād*, which belong to accent pattern (c), nor the short vowel of Czech *havran* 'raven', *labuť* 'swan', *paměť* 'mind', *kapraď* 'fern', SCr. *gȁvrān*, *lȁbūd*, *pȁmēt*, *pȁprāt*, which Kapović assigns to accent pattern (a), cf. also the shortening of the posttonic long vowel in the paradigm of Czech *peníz* 'coin', pl. *peníze* 'money', gen. *peněz*, dat. *penězům*, inst. *penězi*, loc. *penězích*, Polish *pieniądz*, *pieniądze*, gen. *pieniędzy*, inst. *pieniędzmi*, which I attribute to an original long vowel in the following syllable, gen.pl. **-ī*, inst.pl. **-ȳ*. I agree with Kapović that Czech *havran*, *labuť*, *paměť*, *kapraď*, also *jabloň* 'apple-tree' originally belonged to accent pattern (a) but think that they adopted mobile stress at an early stage. This is clearly proven by Russian *lébedʹ* 'swan' < **lo-* < **ol-*, with *-e-* < **-o-* before a soft labial as in dat.loc. *tebé* < *tobě* 'you' and *tepérʹ* < *topьrvo* 'now' and with loss of the glottal stop in the pretonic reflex of **ol-* as in Czech *role* 'field' < **rolьjà* < **rolȅja*, as opposed to *rádlo* 'plough' < **òrHdlo*, cf. Ukr. *rilljá* versus *rálo*. The accentual mobility in this word is evidently older than the early metathesis of liquids (7.12), after which long vowels in pretonic syllables were shortened (7.13), e.g. in the oxytone case forms of Czech *labuť* and *paměť*. The rise of accentual mobility was more recent than the rise of distinctive tone (6.10) because we would otherwise expect *lo-* in Czech, as in *loket* 'elbow'. I am inclined to think that medial *-lo-* is also the phonetic reflex of **-ol-* in pretonic syllables in view of Czech *jabloň* and Slovene *práprot* (also *práprat*) 'fern', SCr. *pȁprāt*. When posttonic **-rā-* was substituted for pretonic **-ro-* in the oxytone case forms of Czech *havran* and

kaprad', the pretonic long vowel was automatically shortened because new pretonic long vowels did not arise before Dybo's law (8.7). Slovene preserved the original accent pattern (a) in *gâvran* (see 10.9, also accent pattern (c) in *gavrân*, cf. 10.7) and lost the accentual mobility in *pámet*, *práprot* and *jáblan*, probably under the influence of derivatives where the mobility never arose. Serbo-Croatian has preserved a trace of the original shortening of pretonic long vowels (7.13) in the numerals *dȅvet* 'nine' and *dȅset* 'ten' and generalized posttonic length elsewhere. My view that pretonic long vowels were shortened while posttonic long vowels were preserved in Proto-Slavic is corroborated by such derivatives as Czech *pekař* 'baker' versus *rybář* 'fisherman', which Kapović dismisses without discussion. Note that Serbo-Croatian has preserved the quantitative distinction between different vowels in suffixes, e.g. *-at*, *-av*, *-ica*, *-ina* versus *-ār*, *-īk*, *-īn*, *-īna* (cf. Dybo 1968), which is in contradiction with Kapović's position. The medial short vowel of *ràtnica* 'female warrior' as distinct from *ràtnīk* '(male) warrior' is not analogical after *mjȅsečnica* 'menstruation' (thus Kapović) but contains suffixal **-niH-kaH* as opposed to **-neiko-* (cf. 6.5, 6.6, 7.3, 7.9). The shortening of the medial long vowel in *dvòrište* 'yard' but not in *blȁtīšte* 'mud-pit' is regular (9.3). The medial short vowel in *stȁrica* 'old woman' and *mȉsliti* 'to think' is not analogical but phonetically regular. The long vowel in Čak. (Novi) *ȕčīl*, *učīlȁ*, *ȕčīlo* 'studied' is the regular posttonic long vowel in the mobile accent pattern. The shortening in the suffix of *potēgnȕt* 'to pull' but not in *dvȉgnūt* 'to lift' is regular before the lost *-i* (9.3).

To conclude, the main deficiency of Kapović's approach appears to be the lack of a proper chronological perspective. This prevents him from distinguishing between original pretonic long vowels, which were shortened (7.13), and new pretonic long vowels which arose as a result of Dybo's law (8.7), and between (old and young) posttonic long vowels, which were never shortened, and new short vowels which arose from the loss of a glottal stop (7.13). Moreover, his heavy reliance on his mother tongue creates a bias against the West Slavic and Slovene evidence and incites him to propose massive analogical developments in pretonic and posttonic syllables. A more cautious approach requires a balanced view of the evidence against the background of a chronological perspective. It also requires a proper assessment of earlier scholars' opinions. The history of Slavic accentuation is complex and has occupied the minds of some of our greatest predecessors. Their work must not be brushed aside without careful examination of their findings.

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