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ON THE RELATIVE CHRONOLOGY OF SLAVIC CONSONANTAL DEVELOPMENTS

The differentiation between simple palatalization and affrication allows a further specification of the relative chronology in the Slavic dialects. According to this chronology, the oldest isoglosses are between North Russian, West Slavic, and the other languages. The next layer of isoglosses separates Lechitic and Bulgarian from the others. Several peripheral South Slavic dialects have preserved archaisms.

In 2013 I presented an improved version of my earlier account of the Slavic consonantal developments at the 9th IWoBA in Pula (published as Kortlandt 2015), which is summarized here:

C1. First palatalization of velars: $*k > \check{c}$, $*g > \check{ž}$, $*x > \check{s}$ before $*e$, $*\bar{e}$, $*i$, $*\bar{i}$, $*j$.

C2. Spirantization of the voiced affricate: $*\check{ž} > \check{ž}$.

C3. Palatalization of dental fricatives: $*s > \check{s}$, $*z > \check{ž}$ before $*j$, $*\check{c}$, $*\check{ž}$.

C4. Second palatalization of velars: $*k > \acute{c}$, $*g > \acute{ž}$, $*x > \acute{s}$ before the new front vowels $*\bar{e}$ and $*\bar{i}$ which had arisen from the monophthongization of $*ai$ and $*oi$, and after the high front vowels $*i$, $*\bar{i}$, $*j$ unless followed by a consonant or by one of the high back vowels $*u$, $*\bar{u}$, $*u$. The clusters $*sk$ and $*zg$ became $\acute{s}\acute{c}$ and $\acute{ž}\acute{ž}$ before the new front vowels.

C5. Rise of geminated affricates: $*tj > *t\acute{c}j$, $*dj > *d\acute{ž}j$. The cluster $*kt$ yielded $*t\acute{c}$ before high front vowels, e.g. OCS *noštъ* 'night', S/Cr. *nôc*.

C6. First simplification of palatals: $*\acute{c} > c$, $*\acute{ž} > ž$, in South and East Slavic also $*\acute{s} > s$, $*\acute{s}\acute{c} > sc$, $*\acute{ž}\acute{ž} > zž$.

C7. Simplification of geminates: $*t\acute{c} > *s\acute{c}$, $*d\acute{z} > *z\acute{z}$, also $*st\acute{c} > *s\acute{c}$, $*zd\acute{z} > *z\acute{z}$. This development was limited to Bulgarian. In the other languages, the dental affricates were simply degeminated: $*t\acute{c} > *c$ and $*d\acute{z} > *z$.

C8. Spirantization of the ungeminated voiced affricate: $*z > z$. This development did not reach Lechitic and a part of the Bulgarian dialects. The spirantization of the velar stop $*g$ in the central dialects of Slavic was probably not much later than this development, perhaps even earlier.

C9. Van Wijk's law and loss of /j/. Postconsonantal $*j$ was assimilated to the following vowel, e.g. S/Cr. *pīšē* 'writes' < $*pīšje$, also $*wòlā$ 'will' < $*wòlja$.

C10. Merger of palatal fricatives: $*s > š$, also $*s\acute{c} > šc$, $*z\acute{z} > žž$.

C11. Merger of palatal clusters: $*šč > šc$, $*žž > žž$.

C12. Second simplification of palatals: $*c > c$, $*z > z$ in West Slavic, and subsequently $*z > z$ in Czech and Sorbian; $*c > č$, $*z > ž$ in East Slavic. The clusters $*šč$ and $*žž$ were reduced to $št$ and $žd$ in Bulgarian and the eastern dialects of Serbian/Croatian, and later in Czech and Slovak. Similarly, the clusters $*sc$ and $*zž$ became st and zd in a part of the Bulgarian dialects.

This improved version is based on the presupposition that the length of the thematic vowel in *ne*-presents is analogical after the corresponding *je*-presents (cf. in this connection Tedesco 1948) and that postconsonantal $*j$ was preserved until the operation of Van Wijk's law. It follows that my assimilation of $*j$ to a preceding consonant (e.g. 2011: 167, 302) must be abandoned.

At the same time, Willem Vermeer presented his version of the developments to the 15th ICS in Minsk (2013, published as Vermeer 2014). There are two major differences between his account and mine. First, he distinguishes between simple palatalization $*k > *k' > *t'$ and affrication $*t' > *c$ as two stages of my second palatalization (C4). Second, he collapses my first (C6) and second (C12) simplifications of palatals into a single process of depalatalization. As a result, he reconstructs the following system of obstruents for the stage between affrication and depalatalization (Vermeer 2014: 202):

lab	<i>p</i>	<i>b</i>		
alv	<i>t</i>	<i>d</i>	<i>s</i>	<i>z</i>
pal(2)	<i>ć, ćj</i>	<i>dž, džj</i>	<i>ś</i>	
pal(1)	<i>č, čj</i>		<i>š, šj</i>	<i>ž, žj</i>
vel	<i>k</i>	<i>g</i>	<i>x</i>	

This is a peculiar system, with two distinct palatal series but lacking alveolar affricates. Moreover, the palatals could be followed by a distinctive $*j$, unlike

the other series. It is unlikely that such a system could have persisted very long. Nevertheless, Vermeer dates a number of developments in the separate languages between affrication and depalatalization (2014: 201–209).

The differentiation between simple palatalization and affrication allows a further specification of the relative chronology in the dialects. There are four positions where the second palatalization did not yield the normal outcome *c*, *(d)z*, *s*. Firstly, the affrication did not affect the clusters **kn* and **gn*, which were palatalized before high front vowels, e.g. S/Cr. *knjǫga* ‘book’, *gnjǫti* ‘to rot’. Secondly, the affrication did not affect the clusters **kw* and **gw* in West Slavic, e.g. Polish *kwiat* ‘flower’, *gwiazda* ‘star’, Czech *květ*, *hvězda*, S/Cr. *cvǫjet*, *zviǫzda*. Thirdly, the depalatalization did not affect the reflex of the cluster **kt* before high front vowels except in West Slavic, e.g. Po. *noc* ‘night’, Cz. *noc*, S/Cr. *nōc*. Fourthly, the depalatalization did not affect the reflex of **x* in West Slavic, e.g. Po. *szary* ‘grey’, Cz. *šerý*, Ru. *séryj*. It appears that these exceptional treatments are interrelated and that West Slavic lagged behind in the development of the consonantal system.

The Bulgarian reflexes *št*, *žd* of original **tj*, **dj* point to earlier palatalized geminates **tʹtʹ*, **dʹdʹ* with dissimilation to **štʹ*, **ždʹ* before affrication of **tʹ*, **dʹ* to **č*, **ž* (cf. Vermeer 2014: 199). Since we find the same reflex in the case of the cluster **kt* before high front vowels, e.g. in OCS *noštъ* ‘night’, we may also reconstruct a geminate **tʹtʹ* before affrication here. As this gemination is not conditioned by a following **j*, we may also reconstruct a geminate **tt* from **kt* in other positions at this stage, e.g. in *letěti* ‘to fly’, Lith. *lėkti*, *lakstýti*. This eliminates the isolated character of the palatalized geminates. It is possible that gemination also affected the clusters **lj* and **nj*, for which we may reconstruct **llʹ* and **nnʹ* on a par with **tʹtʹ* and **dʹdʹ*. The corresponding development of the labials was the rise of an epenthetic **lʹ*, yielding clusters **plʹ*, **blʹ*, **mlʹ*. It appears that **j* was not lost after the geminates but vocalized and assimilated to the following vowel (Van Wijk’s law). Since the vocalization of **j* is more easily understood after a cluster than after a single consonant, I now think that Van Wijk’s law preceded the loss of geminates and reformulate the law as **j > *b*, followed by contraction with the following vowel in posttonic syllables (cf. Kortlandt 2011: 170). It is possible that the clusters **tl* and **dl* yielded a geminate **ll* except in West Slavic and North Russian. For OCS *kaměnbъ* ‘of stone’, ORu. *kamjanyj* it is reasonable to reconstruct **kamenno-* with a geminate **nn* and early degemination to **ēn* in South and West Slavic and **ēn* in East Slavic (cf. Kortlandt 2009: 108). In Slovene and Serbian/Croatian the suffix was largely replaced by **en* on the analogy of *zēlen* and *studen* (cf. Vaillant 1974: 459 on *vodēnica* replacing *voděnica* ‘water mill’ and Rigler 1964).

We now arrive at the following relative chronology (for additional information and references to the literature see Vermeer 2014):

C1. First palatalization of velars: $*k > \check{c}$, $*g > \check{z}$, $*x > \check{s}$.

C2. Spirantization of the voiced affricate $*\check{z} > \check{z}$.

C3. Palatalization of dental fricatives: $*s > \check{s}$, $*z > \check{z}$ before $*j$, $*\check{c}$, $*\check{z}$.

C4a. Second palatalization of velars (a): $*k > \acute{k}$, $*g > \acute{g}$, $*x > \acute{x}$, also $*kn > \acute{k}\acute{n}$, $*gn > \acute{g}\acute{n}$, $*kw > \acute{k}\acute{w}$, $*gw > \acute{g}\acute{w}$, perhaps also $*kl > \acute{k}\acute{l}$, $*gl > \acute{g}\acute{l}$ (cf. Vermeer 2014: 217).

C4b. Second palatalization of velars (b): $*\acute{k} > \acute{t}$, $*\acute{g} > \acute{d}$, $*\acute{x} > \acute{s}$. This development did not reach the North Russian dialect of Novgorod and Pskov, e.g. *kěle* ‘whole’, *xěri* ‘grey cloth’. It did not affect the clusters $*\acute{k}\acute{n}$, $*\acute{g}\acute{n}$, $*\acute{k}\acute{l}$, $*\acute{g}\acute{l}$, nor $*\acute{k}\acute{w}$, $*\acute{g}\acute{w}$ in West Slavic.

C5. Rise of gemination: $*tj > \acute{t}\acute{t}j$, $*dj > \acute{d}\acute{d}j$, $*kt > \acute{t}\acute{t}$ before high front vowels, $*kt > \acute{t}\acute{t}$ elsewhere, $*lj > \acute{l}\acute{l}j$, $*nj > \acute{n}\acute{n}j$, $*pj > \acute{p}\acute{p}j$, $*bj > \acute{b}\acute{b}j$, $*mj > \acute{m}\acute{m}j$, perhaps $*tl > \acute{t}\acute{t}l$, $*dl > \acute{d}\acute{d}l$, also $*ngn > \acute{n}\acute{n}n$ (cf. Kortlandt 2009: 108).

C6a. Affrication: $*\acute{t} > \acute{c}$, $*\acute{d} > \acute{z}$. In the North Russian dialect of Novgorod and Pskov we find $*\acute{k} > \acute{c}$ between front vowels, e.g. *otbce* ‘father’ (with umlaut of the ending *-os* after $*\acute{k}$, cf. Kortlandt 2011: 300), but *vbxo* ‘all’ (with the regular neuter ending).

C6b. First simplification of palatals: $*\acute{c} > c$, $*\acute{z} > z$, in South and East Slavic also $*\acute{s} > s$, $*\acute{š} > š$, $*\acute{ž} > ž$.

C7. Simplification of geminates: $*\acute{t}\acute{t} > \acute{t}$, $*\acute{d}\acute{d} > \acute{d}$. This development was limited to Bulgarian.

C8. Spirantization of the voiced affricate $*\check{z} > z$. This development did not reach Lechitic and a part of the Bulgarian dialects.

C9a. Van Wijk’s law: postconsonantal $*j > *b$, followed by assimilation of $*b$ to the following vowel in posttonic syllables yielding a long vowel.

C9b. Loss of gemination: $*\acute{t}\acute{t} > \acute{t}$, $*\acute{d}\acute{d} > \acute{d}$, $*\acute{t}\acute{t} > \acute{t}$, $*\acute{l}\acute{l} > \acute{l}$, $*\acute{n}\acute{n} > \acute{n}$, $*\acute{l}\acute{l} > \acute{l}$.

C9c. Affrication: $*\acute{t} > \acute{c}$, $*\acute{d} > \acute{z}$. This development did not reach peripheral South Slavic dialects, including those of the Freising documents and the original glagolitic alphabet (cf. Vermeer 2014: 198, 213).

C10. Merger of palatal fricatives: $*\acute{s} > \acute{s}$, also $*\acute{š} > \acute{š}$, $*\acute{ž} > \acute{ž}$.

C11. Merger of palatal clusters: $*\acute{š}\acute{c} > \acute{š}\acute{c}$, $*\acute{ž}\acute{z} > \acute{ž}\acute{z}$.

C12. Second simplification of palatals: $*\acute{c} > c$, $*\acute{z} > z$ in West Slavic, and subsequently $*\check{z} > z$ in Czech and Sorbian; $*\acute{c} > \check{c}$, $*\acute{z} > \check{z} > \check{z}$ in East Slavic. The clusters $\acute{š}\acute{c}$ and $\acute{ž}\acute{z}$ were reduced to $\acute{s}\acute{t}$ and $\acute{z}\acute{d}$ in Bulgarian and the eastern dia-

lects of Serbian/Croatian, and later in Czech and Slovak. Similarly, the clusters *sc* and *zʒ* became *st* and *zd* in a part of the Bulgarian dialects.

According to this relative chronology, the oldest isoglosses are between North Russian, West Slavic, and the other languages. The next layer of isoglosses separated Lechitic and Bulgarian from the others. Several peripheral South Slavic dialects have preserved archaisms. All this variation developed in what I have called the Middle Slavic period (2011: 150–153, 164–169, 251–254, 300–304).

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O relativnoj kronologiji razvoja slavenskoga suglasničkog sustava

Sažetak

Razlikovanje jednostavne palatalizacije od afrikacije omogućuje detaljniju relativnu kronologiju fonetskoga razvoja slavenskih dijalekata. Prema toj kronologiji, najstarije se izoglose nalaze između sjevernoruskoga, zapadnoslavenskoga i ostalih jezika. Potonji sloj izoglosa odvaja lehitske jezike i bugarski od ostalih slavenskih jezika. Nekoliko rubnih južnoslavenskih govora čuva arhaizme.

Ključne riječi: relativna kronologija, palatalizacija, afrikacija, najstarije izoglose

Keywords: relative chronology, palatalization, affrication, oldest isoglosses

