

## A QUESTION WITHOUT A CLEAR ANSWER

One aspect of the relations between Baltic and Slavic

In the study of the relationships between the Baltic and Slavic languages I propose that an attempt should be made to follow the gradual evolution of one system into another.

I suggest that one could compare the development of linguistic systems to the gradual changes in the relationships of chess men on a chess board. One could imagine, for example, that Proto-Indo-European is a chess board on which no chess men have been moved. Common Baltic is to be imagined as a second chess board on which a certain number of moves have been made and Common Slavic is a third chess board on which a certain number of moves have also been made. Now the problem then would be to compare the Common Baltic chess board with the Common Slavic chess board and to see how long the game on the Common Baltic board could have been the same as the game on the Common Slavic board. At some point, indeed, moves on the Common Baltic board and the Common Slavic board could have been the same. For example, white could have advanced the king's pawn two squares and moved out the king's knight, whereas black may have advanced his king's pawn two squares and moved out the queen's knight. But let us say that on the Common Baltic board the next move was for white to advance the queen's pawn, whereas on the Common Slavic board white moved out the queen's knight. The resulting states of the Common Baltic and the Common Slavic board would be different, but it would still be possible to reconstruct a possible, although not a necessary game for a certain period for the two resulting boards.

The purpose of this paper will be to sketch briefly those changes in the consonantal system which could have been common to Baltic and Slavic after the Proto-Indo-European period but before the split of Balto-Slavic into Baltic and Slavic.

Although there is much dispute about the nature of the Proto-Indo-European consonantal system, I assume the following consonant inventory :

Table I

Obstruents :

p	t	k̄	k	k <sup>w</sup>
ph	th	kh̄	kh	kh <sup>w</sup>
b	d	ḡ	g	g <sup>w</sup>
bh	dh	ḡh	gh	gh <sup>w</sup>
	s[s̄]			

Résonants :

j[i]	w[u]	l[l̄]	r[r̄]	m[m̄]	n[n̄]
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Laryngal :

h

The vocalic allophones of the resonants, viz.

[i, u, r̄, l̄, m̄, n̄]

were found between two consonants. In addition the resonants presumably had special allophonic variants when they followed a heavy syllable or were in pre-pause position. These variants consisted of the vocalic allophone immediately followed by the consonantal allophone, viz. [ij, uw, rr̄, ll̄, mm̄, nn̄]<sup>1</sup>.

The fricative /s/ undoubtedly had a high variant in position after /i,u,r,k/. This variant can be written as [s̄], but it only became phonemic separately later in Baltic and Slavic.

I realize that it is quite possible to dispute the existence of

the voiceless aspirates \*/ph, th, kh, kh̄ / and indeed they are not listed by Winfred P. Lehmann in his *Proto-Indo-European Phonology*<sup>1 2</sup>. On the other hand the assumed existence of a contrast of the type \*/dh/ vs \*/d/ and the existence of a \*/t/ implies the existence of a phoneme \*/th/. And in fact languages possessing a contrast of aspirate vs. non-aspirate usually possess an /h/<sup>3</sup>. On the other hand it is just as possible that the contrast which we take to be aspiration on the basis of the evidence of Greek and Sanskrit may have been of a somewhat different nature.

<sup>1</sup> Franklin P. Edgerton, *The Indo-European Semivowels*, in « Language », 19 (1943), pp. 83-124.

<sup>2</sup> Winfred P. Lehmann, *Proto-Indo-European Phonology*, Austin, Texas 1953, p. 8.

<sup>3</sup> Roman Jakobson, *Typological Studies*, in *Selected Writings*, Vol. I, The Hague 1962, p. 528.

Although at one time I was more inclined to accept the laryngeal theory than I am now, I should say that if there were any laryngals at all in Proto-Indo-European, then it seems to me that Oswald Szemerényi is correct in proposing a single laryngeal<sup>4</sup>.

The number of phonemically contrastive velar consonants is again a very much disputed matter. Many contemporary Indo-Europeanists accept only two kinds of velars for Proto-Indo-European, either pure velars opposing palato-velars or pure velars opposing labio-velars. Kurylowicz, for example, espouses the view that the satem languages reflect the original situation with the pure velars opposing the palato-velars and that the labio-velars of the centum languages result from the phonemic identification of the pure velar before front vowel with the pure velar plus /w/ of other positions<sup>5</sup>. Differently from Kurylowicz, Lehmann supposes that the centum situation is original and that the satem situation derives from it<sup>6</sup>.

Possibly the first common step in the consonantism was the merger of the aspirates with the non-aspirates. I do not share Meillet's opinion that Proto-Indo-European \*/kh/ is represented by Slavic /x/ <sup>7</sup>. Meillet supposes that Skt. *kakhati* 'laughs' is cognate with Slavic *xoxotati* 'to laugh'; I suspect that both of these words are onomatopoeic in origin. Assuming that there ever was a laryngeal it may well have been lost at the same time when the distinction between the aspirates and non-aspirates was lost. Any long diphthongs created by the loss of laryngals were shortened in the Balto-Slavic period.

Another common Balto-Slavic development is the assibilation of the first dental stop in a series of two dental stops such that \*/dt. tt/ merge as \*/st/. Presumably if the sequences \*/dd, td/ existed they merged as \*/sd/ (with automatic voicing of the \*/s/ before \*/d/, since presumably there was no \*/z/ contrasting with \*/s/ at this time). Later, of course, the contrast was realized and we do indeed find /z/ in such words as Li *lizardas* 'nest', Slavic *gnězdo* 'id.' in which the sequence /zd/ apparently represents the zero grade of the root *\*sed-* 'sit'.

<sup>4</sup> *The New Look of Indo-European: Reconstruction and Typology*, in « Phonetics », 17 (1967), pp. 65-99.

<sup>6</sup> Jerzy Kurylowicz, *L'apophonie en indo-européen*, Wrocław, Kraków 1956, pp. 356-366.

<sup>6</sup> Op. cit., p. 8. A similar opinion is expressed by V. Georgiev, *Balto-slavjanskij i toxarskij jazyki*, in « Voprosy jazykoznanija », 7, vi (1958), p. 5.

<sup>7</sup> Antoine Meillet, *Le slave commun*, Paris 1965, p. 23.

Also common to Balto-Slavic is the action of Liden's law according to which initial \*/vr-/ and \*/vl/, lose the initial \*/v-/, cf. Lat *vulp* s'fox', Li *lāpe*, Slavic *lisa*, etc.<sup>8</sup>

Whether the simplification of the velar series, if indeed such took place, or the loss of the aspirates was first there seems to be no way of knowing. The new system is presented below in

Table 2

Obstruents :

p	t	k	k		
b	d	ǵ	g		
	s[š]				
Resonants :					
j[i]	w[u]	r[r]	l[l]	m[m]	n[n]

The passage of the Proto-Indo-European \*/K,g/ to /s,z/ respectively created the following system :

Table 3

Obstruents :					
p	t	š	k		
b	d	ž	g		
	s[š]				
Resonants :					
j[i]	w[u]	r[r]	l[l]	m[m]	n[n]

The next common step was the creation of phonemically palatalized consonants by the fusion of \*/j/ with a preceding consonant. This created the opposition of palatalized vs. unpalatalized consonants<sup>9</sup>. A problem connected with the realization of the resonants may, however, have some significance for the question of palatalization. According to Edgerton's rules, a sequence of two resonants flanked on each side by a vowel should yield the consonantal allophones of both resonants<sup>10</sup>. Thus the sequence

<sup>8</sup> George Y. Shevelov, *A Prehistory of Slavic*, New York 1965, pp. 196-197.

<sup>9</sup> Jerzy Kurylowicz, *op. cit.*, p. 239.

<sup>10</sup> Edgerton, *op. cit.*, p. 108.

\*/awja/ should be rendered by /avja/. The etymologically correct form would be represented, e. g. by Skt. *navya*- 'new'.

On the other hand Balto-Slavic shows two different reflexes of the above mentioned sequence. Curiously enough it is apparently the older reflex which does not agree with Edgerton's rules ; thus the verbs of the type (Li) *-auti*, (Slavic) *-ovati* are conjugated (Li) *-au-|ju*, *-au-|ji*, *-au-|ja*, etc. (Slavic) *-u-|jŃ*, *-u-|jebi*, *-u-|jet* where the stem ends with a vocalic rather than a consonantal element. But in the Baltic verbs with a present stem in *-i* and in the Slavic verbs with a present stem in *\*f-* we find the etymological phonemic sequence \*/wj/ rendered by \*/v/ (i. e. apparently according to Edgerton's formula). Thus we encounter Slavic *stavio* 'I put' (< *\*stavjo*) and Li *stóviu* 'I stand' (< *\*st vj*).

One might suppose, however, that the Proto-Indo-European sequence \*/awja/ followed a different route in Balto-Slavic than in Sanskrit and that the expected Balto-Slavic development is indeed \*/auja/. One might then imagine that a phonemic sequence \*/vj/ never actually existed in Balto-Slavic. The attested phoneme \*/v/ is then a completely new Balto-Slavic phoneme created merely to serve as a pair to the unpalatalized consonant /v/, which, otherwise, would be the only consonant (other than /j/, of course) not to participate in the opposition of palatalized versus unpalatalized. The palatalized \*/v/ of Slavic *stavio*, Lithuanian *stóviu* is then

completely new on the basis of such words as Slavic *l ubl ų* 'I love', Lithuanian *žymiù* 'I note'. This could perhaps be taken as evidence that the palatalization of consonants took place in Balto-Slavic times.

After this palatalization the consonantal system took on the following aspect:

TABLE 4						
Obstruents :						
p	p̃ < *pj	t	t̃ < *tj	š	š̃ < *šj	k < *kj
						k
						and k before front vowel
b	b̃ < *bj	d	d̃ < *dj	ž	ž̃ < *žj	ǵ < *gj
						g
						and g before front vowel
	s	s̃ < *sj				
	[s̃]	after /i,u,r,k/				

Resonants : j			
v	v̇ < *vj [ ? ]	n	ṅ < *nj
	or analogy		
m	ṁ < *mj	l	l̇ < *lj
		r	ṙ < *rj

(One could, of course, propose a merger of [ ] before consonant with /š/ at this stage. The best examples from Lithuanian seem to be *ieškóti* 'to search', [cf. Slavic *iskati*], *yškus* 'clear' [= *ýskus* ], *laiškas* 'leaf', *miškas* 'forest', the suffix *-iškas*, cf. Gothic *-isks*.)

The merger of \*/kj/ and \*/gj/ with \*/k/ and \*/g/ in position before front vowel led to their phonemic identification as \*/k/ and \*/g/ respectively. This particularly phonemic merger is common to Baltic as well as Slavic. In Slavic it is known as the 'first palatalization', although the phonemic mergers of the first palatalization are known in Baltic as well as Slavic.

Possibly it was at this moment that the vocalic allophones of \*/r, l, m, n/ were vocalized to /il, im, in, ir/ or /ul, um, un, ur/ respectively. Kurylowicz suggests that the vocalization with the *u* arises when a velar precedes the resonant. Kurylowicz connects this event with the loss of palatalization of non-velar consonants before front vowels, a loss which he ascribes to Balto-Slavic<sup>11</sup>. I have no idea as to whether this was true for Slavic. In Baltic it is apparently true because the old vocative of the etymological \*/o-stem shows no \*/j/- palatalization of the stem consonant, thus the old vocative of Li *sv ias* 'guest' is *svetė* (from *\*svetje*)<sup>12</sup>. On the other hand it can be pointed out that this same dispalatalization has taken place in the East Baltic etymological sequence \*/Cjai/ when the diphthong /ai/ passed to \*/<sub>2</sub>/ (probably under stress) > /ie/. Thus we find \*/jo-stem nominative plurals which lack this palatalization in Lithuanian, e. g. *tušti* (< *\*tušt-j-ai*). It would probably be most economical to suppose that the loss of \*/j/- palatalization before front vowels was a specifically East Baltic phenomenon dating after the monophthongizations of certain of the sequences \*/ei, ai/. Otherwise one must posit two successive dispalatalizations in the history of Balto-Slavic, one Common to Balto-Slavic and a second one specifically to take care of the sequence \*/Cjai/. Still it must be admitted that successive dispalatalizations are not impossible, because there

<sup>11</sup> Kurylowicz, *op. cit.*, p. 238.

<sup>12</sup> Janis Endzelins, *Baltu valodu skanas un formas*, Riga 1948, p. 42.

has been a second dispalatalization in Samogitian where the Balto-Slavic sequence \*/tja/ > \*/tje/ > /te/.

In sum then Table 4 presents the last possible common Balto-Slavic consonantal system. It is interesting to point out here that the proposed Balto-Slavic consonantal system of Table 4 does not differ very much from that of contemporary standard Lithuanian. The differences are as follows :

1. In standard Lithuanian, but not in Samogitian dialects, \*/t, d'/ passed to the affricates /,dž/. In addition \*/p, b'/ in the sequences \*/pau, b'au/ have reverted to \*/pjau, bjau/, thus *biaurūs* 'ugly' is pronounced [bjaurūs].

2. In standard Lithuanian, consonants before front vowels have been palatalized. Perhaps standard Latvian, in which there is no palatalization of consonants before front vowels, preserves the Balto-Slavic situation better in this respect. In the Lithuanian area the degree of assimilative softening increases the farther east one travels<sup>13</sup>.

3. The high variant of the phoneme \*/s/, i. e. \*[s ] which was found after \*/i,u,r,k/ merged with the \*/š/ which derives from \*/k/. According to S. Karali nas, those cases where /s/ does exist in modern standard Lithuanian where we might otherwise expect a \*/š/ (cf., e. g. Lithuanian *sau sas* 'dry ') are the result of analogical replacement of \*/š/ by /s/<sup>14</sup>.

4. Contemporary standard Lithuanian also has a certain number of borrowed consonant phonemes, such as /h, x, f/ and their palatalized counterparts.

An interesting possibility presents itself for Slavic if one starts from the consonantal system as given in Table 4. One could

assume that \*/š, ž/ (as in *pišet*, *ližet*) never went through an intermediate stage of \*/ , / respectively, but rather that the \*/ /

of Table 4 merged directly with \*/š/. One might imagine also

that \*[s] before front vowel passed directly to \*/š/. When the \*/š/ on the other hand merged with \*/s/, the \*[s] before non-front vowel was phonologized to \*/x/.<sup>\*11</sup>

<sup>13</sup> Zigmas Zinkevi ius, *Lietuvi dialektologija*, Vilnius 1966, p. 157.

<sup>11</sup> S. Karali nas, *K voprosu ob i.-e. \*s poste i, u v litovskom jazyke*, in « Baltistica », 1 (1966), pp. 113-126. See also Henning Andersen, *IE \*s after i, u, r, k in Baltic and Slavic*, in « Aeta Linguistica Hafniensia », 12 (1968), pp. 171-190.

Table 5, given below, presents a hypothetical Slavic develop-

p	p̄	t	t̄		k̄	k
b	b̄	d	d̄		ǵ	g
		z		ž		
		s		š		x (<*[š] before non-front vowel)

Such a hypothesis seems improbable to me since in the proposed Table 5 \*/s, z/ respectively are differentiated from \*/š, ž/ both by place of articulation and type of articulation. One would more easily imagine that it was either place of articulation or type of articulation distinguishing these consonants, not both.

Although the ideas presented above are perhaps of some hypothetical interest, I would prefer to stick to the traditional explanations, although I am favorably impressed by Henning Andersen's analysis of the Slavic palatalizations as a series of lenitions<sup>15</sup>. In general, it seems that Table 4 presents the latest possible common Balto-Slavic consonantal system and that any further changes were specific Baltic or Slavic developments. The further Baltic developments as exemplified by modern Lithuanian were relatively minor. The further Slavic developments were wide-ranging and complex and even the earliest of the attested documents in Old Church Slavic testify to a consonantal system which is significantly different from that of Table 4.

In conclusion, then, one can say that it is possible that Baltic and Slavic shared a certain period of common development in the consonantal system. On the other hand such an assumption is not absolutely necessary and the entire question of Balto-Slavic unity remains hanging in the air just as much today as it did one hundred years ago.

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<sup>16</sup> *Lenition in Common Slavic*, in « Language », 45 (1969), pp. 553-574.