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INITIAL CONSONANT CLUSTERS IN PRUSSIAN

Although a considerable amount of work has been done on the Prussian language, so far comparatively little attention has been paid to its phonotactics[1]. The linguists' analysis has been mostly concentrated on the presentation of some distributional consonant patterns not characteristic of other Baltic languages. In the present paper an attempt is made to investigate different ways of combining Prussian consonant phonemes and compare them with those of Lithuanian.

The evidence was drawn from the works on Prussian consonant clusters by V. Mažiulis[2], G. Gerullis[3], R. Trautmann's[4] works as well as from the works by M. Strimaitienė[5].

The list of utterance-initial consonant clusters in Prussian is as follows:

/bl/ *blufne* „spleen", /br/ *brewinnimai* „we help", /dr/ *druwētei* „you believe", /dv/ *dwigubbus* „double", /gl/ *glandint* „to comfort", /gn/ *gnode* „bread trough", /gr/ *grīkan* „sin", /kl/ *klumftinai* „(they) knock", /kn/ *knaiftis* „charred log", /kn/

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[1] The studies on Prussian include Būga K. Aistiški studijai. Peterburgas, 1908; Gerullis G. Die altpreussischen Ortsnamen. Berlin; Leipzig, 1922; Būga K. Aisčių praeitis vietų vardų šviesoje. K., 1924; Trautmann R. Die altpreußischen Personennamen. Göttingen, 1925; Łowmiański M. The Ancient Prussians. Toruń, 1936; Endzelynas J. Baltų kalbų garsai ir formos. V., 1957; Иванов В. В., Топоров В. Н. К постановке вопроса о древнейших отношениях балтийских и славянских языков. М., 1958; Непокупный А. П. Ареальные аспекты балтославянских отношений. Киев, 1964; Kuzavinis K. Prūsų kalba. V., 1964; Mažiulis V. Prūsų kalbos paminklai. V., 1966; Levin J. F. Slavic Elements in the Old Prussian Elbing Vocabulary. Berkeley; Los Angeles, L., 1974; Schmalstieg W. R. An Old Prussian Grammar. The Pennsylvania State University Press, 1974; Schmalstieg W. R. Studies in Old Prussian. The Pennsylvania State University Press, 1976; Топоров В. Н. Прусский язык. М., 1975; Mažiulis V. Prūsų kalbos paminklai II. V., 1981; Girdenis A. Fonologija. V., 1981. The Prussian consonant phoneme sequences are more closely examined only in D. Bikelytė's graduation thesis: Bikelytė D. Prūsų kalbos priebalsių junginiai: Graduation thesis. V., 1984.

[2] Mažiulis V. Prūsų kalbos paminklai II.

[3] Gerullis G. Op. cit.

[4] Trautmann R. Op. cit.

[5] Strimaitienė M. Lietuvių kalbos priebalsių fonotaktika (lyginant su anglų): Cand's thesis. V., 1976. P. 40—49.

kniēipe „(they) draw", /kr/ *krawian* „blood", /kv/ *quāits* „will", /pj/ *piuclan* „sickle", /pl/ *platies* „pay", /pr/ *preiwackē* „call", /sk/ *scalenix* „hound", /sl/ *slaune* „thigh", /sn/ *ʃneko* „snow", /sm/ *smicuto* „swallow", /sp/ *spenis* „teat", *schpartina* „strengthen", /st/ *ʃtai* „that", /sv/ *swints* „sacred", /tr/ *trinie* „(they) threaten", /tv/ *twaiā* „yours", /zm/ *ʃmūneniʃku* „human", /zv/ *ʃwirins* „beast"[6].

In the addition to the above mentioned Prussian consonant phoneme sequences, Lithuanian has /gv/, /km/, /sr/, /šl/, /šm/, /šn/, /šp/, /št/, /šv/, /zl/, /žl/, /žm/, /žn/, /žv/, e. g. *gvazdikas* „pink", *kmynas* „caraway", *šlamėti* „rustle", *šmaikštus* „flexible", *šniokšti* „roar", *špūlė* „spool", *štai* „here", *švarus* „clean", *zliaukti* „stream", *žlugtas* „soaked washing", *žmogus* „man", *žnaibyti* „pinch", *žvalgyti* „reconnoitre". Table 1 lists all clusters to be found in Lithuanian, the examples are presented in a candidate's thesis by M. Strimaitienė[7].

T a b l e 1[8]. **Utterance-initial consonant clusters in Prussian and Lithuanian**

Cl.	L.	Pr.	Cl.	L.	Pr.	Cl.	L.	Pr.	Cl.	L.	Pr.	Cl.	L.	Pr.
		*												
bj	+	(−)	kl	+	+	sl	+	+	šn	+	−	zv	+	+
bl	+	+	km	+	−	sn	+	+	šp	+	−	žl	+	−
br	+	+	kn	+	+	sm	+	+	št	+	−	žm	+	−
dr	+	+	kr	+	+	sp	+	+	šv	+	−	žn	+	−
dv	+	+	kv	+	+	sr	+	−	tl	−	(+)	žv	+	−
gl	+	+	pj	+	+	st	+	+	tr	+	+			
gn	+	+	pl	+	+	sv	+	+	tv	+	+			
gv	+	(+)	pr	+	+	šl	+	−	zl	+	−			
gr	+	+	sk	+	+	šm	+	−	zm	+	+			

Though Table 1 lists /pj/ it is not clear whether the Prussians had consonant combinations with /j/. The letters *i, y, g* were used to indicate the palatalization of a preceding consonant; yet /j/, when followed by labial consonants, may have

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[6] All the examples were drawn from the Third Catechism and clusters /bl/, /gn/, /sm/, /sl/ were taken from the Elbing Vocabulary. /šk/ *schūdan* „harm", /šl/ *schlūsitwei* „to serve" presented in the Third Catechism were excluded since they occurred only in foreign words.

[7] Strimaitienė M. Op. cit., p. 40.

[8] Analysing the consonant clusters attention was not paid to palatalization. The letter L. signifies a Lithuanian cluster and the letters Pr. — a Prussian cluster. The plus sign + means that the cluster occurs; the minus sign means that the cluster does not occur. An asterisk in parenthesis shows the phoneme sequence which is supposed to have existed in the language. The plus sign in parentheses (+) shows that the combination is found only in G. Gerullis' and R. Trautmann's works.

also been pronounced[9]. J. Levin claims that clusters with /j/ occurred before back vowels[10]. Therefore /bj/ must have been pronounced, but since the extant Prussian texts are rather scarce, /bj/ has not been found in them. Besides, all Prussian clusters consisting of a voiceless stop and a liquid have counterparts with a voiced consonant and a liquid. /pj/ is the only exception in this pattern (see Table 1).

Spoken Prussian must have had cluster /gv/ because, as R. Trautmann points out, it could be found in names of persons, e.g. *Gvyres*[11]. The cluster is congenial to Prussian structure and is supported by phoneme sequences consisting of a stop and a liquid (see /bl/, /br/, /dr/, /dv/, /gl/, /gn/, /gr/, /kl/, /pl/, /pr/).

As mentioned above, /šl/, /šm/, /šn/, /šp/, /št/, /šv/, /žl/, /žm/, /žn/, /žv/ do not occur in Prussian. The Lettish and Prussian /š/ derived from */sj/, and /ž/ from */zj/[12]. As */sj/ and */zj/ were pronounced only before vowels, clusters with /š/ and /ž/ do not occur in Prussian. K. Būga writes that the Lithuanian /š/, /ž/ have changed to /s/, /z/ in Selian, Semigallian, Curonian and Prussian[13]. That is why Lithuanian clusters with /ž/ (viz. /žm/, /žv/) and /š/ (viz. /šm/, /šn/, /šp/, /št/, /šv/) have counterparts with /z/ and /s/ in Prussian (see Table 1). Only /zl/ does not occur in the Prussian texts and Vocabularies evidently because they are not numerous[14].

/tl/ is not characteristic of Lithuanian though it is found in Prussian toponyms such as *Tlokowe*, *Tlokunpelk*[15] and in names of persons such as *Tloke* and *Tlokote*[16]. The absence of the Lithuanian /tl/ may be accounted for by the fact that Lithuanians and Latvians replace it by /kl/[17], e.g. Pr. *absentliuns* „having marked" : L. *ženklas* „mark"; Pr. *Tloke* „bear" : L. lokys „bear". The Elbing Vocabulary[18], however, presents the word clokis „bear" with the initial /kl/. R. Schmalstieg, supporting V. Kiparski's point of view that /kl/ and /tl/ in the above-mentioned words are allophones having a minimal possible difference, points out that Prussians might

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[9] Mažiulis V. Prūsų kalbos paminklai, p. 55.

[10] Levin J. F. Op. cit., p. 16—17.

[11] Trautmann R. Op. cit., p. 37.

[12] Endzelynas J. Op. cit., p. 39; Schmalstieg W. R. An Old Prussian Grammar, p. 27; Schmalstieg W. R. Studies in Old Prussian, p. 117.

[13] Būga K. Aisčių praeities vietų vardų šviesoje, p. 10.

[14] This apparently accounts for the fact why in Prussionized Lithuanian place names to be found in German documents only /s/, /z/ occur but not /š/, /ž/, e. g. *Birsten* „Birštonas", *Seymen* „Žeimiai" (see Steponavičienė I. Dėl lietuviškų vietovardžių prūsinimo kryžiuočių ordino raštuose // Baltica, 1974, vol. 10(2), p. 166—167). Similarly /š/, /ž/ are changed in Slavonic loan-words (see Levin J. F. Op. cit., p. 44).

[15] Gerullis G. Op. cit., p. 183.

[16] Trautmann R. Op. cit. p. 107.

[17] Kuzavinis K. Op. cit., p. 20.

[18] Mažiulis V. Prūsų kalbos paminklai II, p. 40.

have pronounced the words in one way, only Germans failed to perceive them and recorded two different clusters[19].

For convenience's sake let us indicate the first member of the cluster by the symbol C_1 and the second member by C_2. We see that in both languages /b/, /d/, /g/, /k/, /p/, /s/, /t/, /z/ (in Lithuanian /š/ and /ž/ as well) can be only as C_1; /l/, /r/, /v/, /n/, /m/ (and L. /j/) can occur only as C_2; and /k/, /p/, /t/ may be both as C_1 and C_2.

In Prussian as well as in Lithuanian the phonemes entering into the position of C_1 are predominantly fricatives and stops (e.g. Pr. /s/ occurs in 7 clusters, /k/ is found in 5 combinations, L. /s/ is recorded in 8, /š/ in 6, /k/ in 5, /ž/ in 4, /b/ in 3 clusters), liquids, however, are not used in this position at all. Inversely, it is to be noted that most often liquids are as second members of C_1C_2 clusters (Pr. /r/ in 6, /n/ in 3 clusters, /v/, /l/ form 5 combinations each, L. /l/, /v/ are found in 8, /r/ in 7, /m/, /n/ in 5 clusters each), stops are very rare (Pr. /k/, /p/, /t/ form 1, L. /p/, /t/ 2 combinations each, L. /k/ occurs only in 1 cluster), fricatives are not used at all (see Table 1). Both languages are similar in this respect.

The analysis of the frequency of the cluster shows that the most common combination in Elbing's and Simon Grunau's Vocabularies is /kr/ (12.5% of all initial clusters); in Lithuanian it is /pr/ (11.1%; in the connected texts predominate Pr. /st/ (38.9% and L. /pr/ (22.5%)[20]. The most frequent member entering into the position C_1 and found in the dictionaries in both languages is /s/ (Pr. 40.1%, L. 23.4%); in the connected texts predominate Pr. /s/ (53.2%) and L. /p/ (26.2%). The most frequent second member of the cluster in the dictionaries is Prussian and Lithuanian /r/ (Pr. 30.5%, L. 30.7%) and Prussian /t/ (38.9%), L. /r/ (43.4%) in the texts.

According to their frequency, consonant clusters in both languages can be classified in the following way:

a) combinations consisting of a stop and a liquid (Pr. 58.6%, L. 58.9% in the dictionaries, Pr. 44.6%, L. 61.6% in the connected texts);

b) Prussian clusters involving a fricative and a stop (in the Vocabularies they make up 26.3% and 44.2% in the texts) and Lithuanian combinations made of a fricative and a liquid (20.3% in the dictionary 20.0% in the texts)[21];

c) clusters consisting of a fricative and a liquid in Prussian (14.3% in the Voca-

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[19] Schmalstieg W. R. Studies in Old Prussian, p. 122.

[20] Here we present the joint data of the frequency of the Prussian cluster as found in Simon Grunau's and Elbing's Vocabularies as well as the combined evidence drawn from the three Catechisms and fragmentary texts.

[21] The Prussian pronoun *stas* „that", „those", used as a definite article, must account for the great frequency of /st/.

bularies, 1.5% in the texts) and Lithuanian combinations made of a fricative and a stop (14,9% in the dictionaries, 15.7% in the texts).

Prussian and Lithuanian initial-consonant clusters involving three consonants ($C_1C_2C_3$-) are comparatively limited in number as compared with those consisting of two consonants. Only /skl/[22] *Schlāit* „but", /skr/ *ſkriſits* „crucified", /str/ *ſtreipſtan* „once", /stv/ *ſtwi* „here" are found in Prussian and /skr/ *skradžiai* „through", /skv/ *skvarbus* „piercing", /spj/ *spjauti* „spit", /spr/ *sprogti* „burst", /str/ *strypas* „club", /stv/ *stverti* „snatch" occur in Lithuanian.

Prussian must have had /skv/, /spr/ − see R. Trautmann and G. Gerullis who present proper names and localities such as *Skwabe, Spraude*[23]. /spj/ was evidently used as well, but owing to the scarcity of extant Prussian texts it was not attested.

The analysis of the two-member and three-member clusters in both languages reveals the fact that $C_1C_2C_3$- combinations are made of C_1C_2- clusters consisting of a stop and a liquid and the preceding /s/ (see Table 1). All three-member clusters may be dissolved into two-member groups; in other words, whenever a particular $C_1C_2C_3$- cluster occurs, both the C_1C_2- and C_2C_3- sequences which occur in it also occur as two-consonant clusters. Hence, three-member clusters are possible only when two-member pairs having the same member (i.e. the second member of the first sequence and the first member of the second cluster − C_1C_2- and C_2C_3- exist in the language. But not all possible $C_1C_2C_3$- clusters, however, made in this way actually occur, e.g. Prussian has /sp/ : /pl/, /sp/ : /pj/, but /spl/, /spj/ do not exist[24].

The most frequent sequence in the Prussian Vocabularies is /skr/ (2.8% of all initial clusters) and /skl/ in the connected texts (2.6%). In Lithuanian predominates /skr/ (1.4% in the dictionary, 0.8% in the texts).

The analysis has shown that the structural relations in Prussian are similar to those of Lithuanian, i.e. they are of STR type[25], which means that R never precedes T and S; T never occurs before S (see Table 1).

The analysis of initial consonant clusters in Prussian and Lithuanian has revealed the greatest similarity within the systems of two-member and three-member clusters. The similarity manifests itself both in patterning and individual clusters, the difference being observed only in sequences with /š/ and /ž/ (characteristic of Lithuanian) and /tl/ (found in Prussian toponyms).

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[22] Under the influence of the German language the word is sometimes transcribed with /šl/.

[23] Trautmann R. Op. cit., p. 95, 97. Gerullis G. Op. cit., p. 171.

[24] See the non-existent but possible Lithuanian $C_1C_2C_3$- clusters in Strimaitienė M. Op. cit., p. 47.

[25] S indicates a fricative, T − a stop and R − a liquid. Lithuanian syntagmic relations are described in Strimaitienė M. Op. cit., p. 113.

PRŪSŲ KALBOS PRADINIŲ PRIEBALSIŲ JUNGINIAI

Reziumė

Prūsų ir lietuvių pradinių priebalsių junginių analizė parodė, kad abiejų kalbų junginių sistemos panašios. Jos skiriasi tik junginiais su /š/ ir /ž/, būdingais lietuvių kalbai, ir /tl/, randamu prūsiškuose toponimuose. Abiejų kalbų struktūriniai ryšiai yra STR tipo, t. y. R niekada nebūna prieš T ir S, o T — prieš S (S — pučiamasis, T — sprogstamasis, R — sklandusis).