

ON RECONSTRUCTING PHONOLOGICAL SYSTEMS AND PATTERNS  
OF THEIR DEVELOPMENT

K.V. Gorshkova

Moscow State University

ABSTRACT

In reconstructing phonological systems of Common Slavic dialects two types must be posited: one with the DF of palatalization, the other with the enriched palatal series. Eastern Slavic dialects belonged to the second type. The correlation of palatalized and non-palatalized consonants emerged there as a result of the secondary palatalization of consonants. This development characterized the system on which the Rostov-Suzdal' dialect was based and constituted the starting point of later phonetic processes. An archaic system was preserved in the Old Novgorodian dialect and its descendants. Relative and absolute chronology of these changes and of connected processes is discussed and some general assumptions concerning the reconstruction of phonological systems and the evaluation of its results are tested in this framework.

"In reconstructing... the basic linguistic patterns that must, in principle, correspond to the system of the initial common language there arise certain methodological problems: the probability of these reconstructions, the degree to which they conform to the system that actually existed in time and space and was the ancestor of a certain group of related dialects" (1). To resolve this methodological problem comparative linguistics must rely on linguistic typology and the study of language universals. The approach to more concrete questions of this kind depends on a number of details: on the level of linguistic structure to which the reconstructed and evaluated patterns belong; on how minutely this level is analyzed in synchronic descriptions of the related dialects under consideration; on the extent to which the historical sources are researched and worked out, etc. In this paper I shall try to evaluate various reconstructions of the Common Slavic phonological system in its dialectal variants (particularly, East Slavic) and to reconsider the course of its development on the basis of the historical and descriptive dialectology of the Russian language.

There has been a considerable progress in the study of the phonological system of the contemporary Russian dialectal language in relation to other Slavic languages, in the analysis of Old Russian written sources that reveals the phonological structures of the oral language, in constru-

cting models of the Common Slavic phonological system. Nevertheless, the following observation made by R.I. Avanesov retains its significance: "Our historical phonology, even in considering the whole, deals essentially with a mere sum of individual phonetic phenomena. On the contrary, it is necessary to consider individual linguistic phenomena as parts of the whole, of the entire phonetic system -- even in studying them individually. An adequate knowledge of an object may be obtained only by means of establishing correlation between general and particular" (2).

The evaluation of reconstructions -- generally accepted or resulting from recent studies -- is of particular importance in preparing university courses in comparative and historical linguistics. The character of proto-level reconstructions predetermines our account of dynamic processes underlying historical changes of the phonological system. In Slavistics, these considerations influence courses on the Old Church Slavonic language, Slavic comparative grammar, and historical grammar of individual Slavic languages. It is particularly important to discuss general outlines of these courses at the present time because the results of such discussion will define the standards of the higher philological education in the near future.

In examining phonological reconstructions I proceed from the general assumption that phonemes as units of the phonological system are represented by sets of distinctive (DF) and integrative (redundant, IF) features which are realized in the constitutive features of phonetic units (sounds of speech). At the same time, sounds of speech contain additional positionally-conditioned features that are imposed in their realization upon the phonemic features.

Phonemic features combine in different sets according to universally significant patterns of compatibility -- in "vertical" order (1). Besides this "vertical" order of features that are distributed between two main types of feature combinations -- "marked" and "unmarked", there exists evidently a "horizontal" compatibility of features: some features of different phonemes freely combine in phonemic systems; combinations of other features are greatly restricted; still other combinations are impossible. "Horizontal" compatibility of phoneme-forming features is subject to syntagmatic regularities, whereas "vertical" compatibility is subject to paradigmatic regularities. The general type of a linguistic system depends on the relation between paradigmatic regularities of sound alter-

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nations and syntagmatic regularities of sound combinations (3).

To assess the reconstructed phonological system of the later Common Slavic which is the basis of all historical Slavic languages one has to consider in the first place the results of Slavic palatalizations of consonants. The importance of palatalization in Slavic is based on the tendency to raise the tongue in the palatal region. This is one of the main features of the Slavic basis of articulation" (4).

Phonetically, the results of the three palatalizations and of the palatalization through jotation are generally treated as a replenishment by new sounds of the palatal series represented before the palatalizations only by [j] (5). On the contrary, phonological interpretations of these results greatly vary. A critical survey of different solutions that may be found in the literature is not the purpose of this paper.

One is justified, I think, in rejecting solutions based on the introduction of an additional (besides the phoneme) phonemic unit such as syllabeme, groupophoneme, etc. Theories that introduce these units deal with Proto-Slavic syllabic structure, they reflect the existence of intrasyllabic harmony but they have nothing to do with characteristics of the Proto-Slavic phonological system which is constituted (irrespective of concrete period) solely by means of phonemes as sets of relevant features. These theories are not in accord with the idea of the limited autonomy of the phonological system and its hierarchically structured relations with the morphological system, with the idea of interdependence of phonemes and morphemes. The morphemic structure of Proto-Slavic word-forms points to one phonemic unit only, the phoneme.

In considering the Later Common Slavic phonological system and its various developments it is especially important to determine the phonological character of palatal consonants, to realize what DF underlies their phonetic manifestation. During the Common Slavic period this domain of the phonological system presented considerable dialectal variation, primarily in respect of the quality of labials plus jod reflexes. The dialects of Common Slavic where palatalized labials emerged as a result of jotation (i.e. \*bj, \*pj, \*mj, \*vj changed into [b'], [p'], [m'], [v']) could form a timbre correlation of the type /t' - t/ already in the earliest possible period; in those dialects DF frontness-backness of the vocalic system lost its phonemic character and the sounds [i] and [y] were united in the phoneme /i/ as its positional realizations.

In those Common Slavic dialects where labials were not palatalized as a result of jotation but were supplied by an additional palatal element (i.e. \*bj, \*pj, \*mj, \*vj changed into [b'j], [p'j], [m'j], [v'j]) the newly arisen palatal consonants became the representatives of palatal phonemes. Eastern Slavic dialects belong to this second group. Thus, during this earlier period Eastern Slavic dialects of Common Slavic did not develop a timbre correlation of palatalized and non-palatalized consonants /t' - t/ but the palatal series (one of the series of consonants dif-

ferentiated by the place of articulation DF) was greatly enriched. Differences between Northern and Southern East Slavic dialects concerned only the choice of palatal phonemes: in the northern areas where the dialect of ancient Novgorod and Pskov would later emerge [k], [g], [x] belonged to the palatal series because \*k, \*g, \*x had not changed into \*c', \*z', \*s' before \*e, \*i of diphthongal origin.

An additional argument in favor of this solution may be seen in the syntagmatic properties of these phonemes. Palatal phonemes cannot combine with mid labialized vowels, and indeed combinations such as /to/, /te/, /tɔ/, /tɛ/, /tɔ/, /tɛ/ but only /t'e/, /t'ɛ/, and (on morpheme boundaries) /t'ɛ/ may occur. At the same time, the syntagmatic behaviour of vowels suggests that in the phonological system under consideration positions between /e/ and /o/, /ɛ/ and /ɔ/, as well as between /i/ and /y/ were based on the DF frontness-backness. The phonetic feature of labialization had no phonemic value, it functioned as a concomitant feature of frontness-backness DF. A vocalic system with this DF could not combine with a consonantal system including the DF of palatalization; on the other hand, it did not preclude the DF of the palatal place of articulation.

Palatalized labials [b'], [p'], [m'], [v'], as well as palatalized dentals [t'], [d'] might have originated in the phonetic system of Eastern Slavic dialects in the process of secondary palatalization of consonants, i.e. the palatalization of semipalatalized consonants before front vowels. Recent studies in Eastern Slavic dialectology support the view that the secondary palatalization of consonants was not a process common to all Eastern Slavic dialects. This process was consistently represented in those Eastern Slavic dialects that later formed part of the Rostov-Suzdal' dialect of Old Russian. The emergence of palatalized labials [b'], [p'], [m'], [v'] in Eastern Slavic dialects that underwent the secondary palatalization made possible the subsequent phonologization of these sounds which resulted in the establishment of timbre correlation between /p/ - /p'/, /b/ - /b'/, /m/ - /m'/, /v/ - /v'/. The outcome of these changes was a system with /t - t'/ correlation that could not preserve DF of "palatality". The consonants [s'], [z'], [l'], [n'], [r'] and [t'], [d'] found new places in binary oppositions with [s], [z], [l], [n], [r], [t], [d] forming correlative series of phonemes differentiated by DF palatalized -- non-palatalized: /s'/ - /s/, /z'/ - /z/, /l'/ - /l/, /n'/ - /n/, /r'/ - /r/, /t'/ - /t/, /d'/ - /d/.

The timbre correlation of palatalized and non-palatalized consonants began before the fall of jers. The fall of jers revealed new tendencies in the development of the phonological system and at the same time created new strong positions and new weak positions (positions of neutralization). Among the strong positions were word-final position (/kon/ - /kon'/) and position before consonants (/banka/ - /ban'ka/), among the weak positions were positions of assimilative palatalization or dispalatalization of consonants.

At the same time, evaluation of reconstructed phonemic systems involves considerations of dia-

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chronic character since reconstructed elements take part in the sequence of phonetic changes and phonological transformations.

From this point of view, it is important to decide on the relative chronology of the secondary palatalization of consonants and the loss of the nasal vowels (i.e. the change \*o → \*u and \*ę → \*a). The secondary palatalization of consonants testify to an active intrasyllabic harmony, whereas the loss of nasal vowels demonstrates the considerable autonomy of vowels and consonants within the syllable; it is reasonable, therefore, to date secondary palatalization of consonants before the loss of nasal vowels.

This sequence of phonetic changes promoted the development of a phonological system with /t' - t/ since the change t'ę → t'ę → t'a created a strong position for /t' - t/ (position before /a/) and transformed the [a] - [ã] opposition into a positional variation. During approximately the same period, there emerged a strong position for labials and dentals /t/ - /t'/, /d/ - /d'/, namely, the position before /u/; this was the result of historical changes in \*T-stem noun declension.

As stated above, the hypothesis that the secondary palatalization of consonants gave rise to a special phonemic unit -- a syllabeme (together with the phoneme) -- is ungrounded. The morphemic structure of word-forms such as \*plod-z, \*kon'-b, \*gos't'-b makes it impossible to posit syllabemes /dz/, /n'b/, /s't'b/ as units of phonemic order in these cases.

The formation of the consonant system with DF "palatalized -- non-palatalized" precluded the existence of the opposition of front and back vowels in the same phonological system. Vowels differentiated by frontness became allophones of one and the same phoneme. At first, allophonic relations took shape for /u/ ([u]//[ũ]) and for /a/ ([a]//[ã]), then for /i/ ([i]//[y]) and for /o/ ([e]//[o]). In this system, reduced vowels [ɨ] and [ɛ] do not merge but are vocalized in different ways: 'ɨ → 'e, z → o.

The phonetic change t'et → t'ot and the analogical formation of syllables of the type t'o and t'ot created the possibility of a new phonemic structure: a new vocalic subsystem (/e/ - /o/) with a new DF "labialized -- non-labialized" arose. This DF is easily combined with a consonantal DF "palatalized -- non-palatalized".

The emergence of the binary opposition of palatalized and non-palatalized consonants and of the vocalic system /i/ - /u/, /e/ - /o/ with DF "labialized -- non-labialized" prepared the ground for the development of /ē/ into /e/ and of /ō/ into /o/, i.e. for the transformation of a seven-member vocalic system into a five-member one. This development characterized the Rostov-Suzdal' dialect which was the main component of the Center dialectal zone and later the source of the Standard Russian pronunciation norm (based on the central Moscow dialect) (7).

The phonological system of the dialects of ancient Novgorod and Pskov developed in another direction. The Old Novgorodian dialect has been studied in detail by A.A.Zaliznjak (8). In retracing its historical development it is important to take into account modern Northern Russian and particularly North-Eastern Russian peripheral dia-

lects which still retain archaic phonetic features. The validity of the opposition of central and peripheral dialects has been clearly demonstrated by the study of the Russian linguistic landscape (9). Initially, no linguistic significance has been attached to the notion of "peripheral dialects". Later historical and dialectological research (10) provided evidence that phonological systems of the peripheral dialects are of the vocalic type and differ in this respect from the central dialect which is consonantal. The system of the peripheral dialects is characterized by a seven-member vowel set, by the possibility of the vocalic DF "frontness - backness", by the presence of palatal consonants, by the opposition (in certain dialects) of tense and lax consonants that makes the voiced -- voiceless distinction a redundant phonetic feature, by vocalicity of sonorants, by the predominance of vocalic elements in phonetic sequences (11, 12).

Studies of the historical development of phonological systems demonstrate their relative stability. Apart from the fact that constant elements prevail over changing ones at every stage of development of a phonological system, it should be noted that a single phonological system can serve as a means of expression for semantic units for many generations of people that use the respective language or dialect in their communication. One may assume that important changes in phonological systems occur as a result of the interaction between dialects or languages.

History of phonological systems as well as their reconstructions deals with the notion of relative chronology (linguistic time proper). A language historian can raise the problem of absolute chronology only after establishing a relative one. This transition from relative to absolute chronology requires special methods and in some cases cannot be carried out. At the same time, rearrangements of relative chronology necessitate respective rearrangements of absolute one. Thus, if one dates the loss of nasal vowels before the secondary palatalization of consonants the latter process may be dated from the 10th or 11th century; if, however, the relative chronology of these two processes is reversed the secondary palatalization of consonants must be posited before the 9th century.

In the Rostov-Suzdal' dialect, the change of *e* into *o* ceased to operate at the turn of the 16th century. This event may be dated on the basis of depalatalization of the affricate [c'] since *e* does not change into *o* before this phoneme; at the same time, the depalatalization of [c'] is clearly reflected in datable written sources. The transformation of a seven-member vowel system into a five-member one presupposes as a necessary condition the suspension of the *e* → *o* change and the subsequent phonologization of /e - o/ distinction; it is reasonable therefore to attribute this transformation to the late 16th or the early 17th century. The reconstruction of dialectal phonological systems and corresponding chrono-topoisoglosses as well as their evaluation applies both to the pre-literate and later periods.

#### References

1. Гамкрелидзе Т.В., Иванов Вяч.Ес. Индо-европейский язык и индоевропейцы. I. Введение. Тбилиси, 1934.

2. Аванесов Р.И. Русская литературная и диалектная фонетика. М., 1974.
3. Панов М.В. О двух типах фонетических систем. - В кн.: Проблемы лингвистической типологии и структуры языка. Л., 1977.
4. Мейе А. Общеславянский язык. М., 1951.
5. Бернштейн С.Б. Очерк сравнительной грамматики славянских языков. М., 1961.
6. Komaček M. Historická mluvnice česká. Praha, 1958.
7. Горшкова К.В., Хабургаев Г.А. Историческая грамматика русского языка. М., 1981.

8. Зализняк А.А. Новгородские берестяные грамоты с лингвистической точки зрения. - В кн.: Янин В.Л., Зализняк А.А. Новгородские грамоты на бересте. М., 1983.
9. Захарова К.Ф., Орлова В.Г. Диалектное членение русского языка. М., 1970.
10. Горшкова К.В. Историческая диалектология русского языка. М., 1972.
11. Касаткин Л.Л. Русский диалектный консонантизм как источник истории русского языка. М., 1984.
12. Бромлей С.В. Различия в степени вокализации сонорных и их роль в противопоставлении центральных и периферийных говоров. - В кн.: Диалектография русского языка. М., 1985.