Rhotics, Jers and Schwa in the History of Bulgarian

Georgi Jetchev

Scuola Normale Superiore, Pisa, Italy & University Sv. Kliment Ohridskt, Sofia, Bulgaria

ABSTRACT

Three phonological contexts of early Slavic involving rhotics and jers, which gave different outcomes in the various Slavic languages, are explored. The Modern Bulgarian reflexes of these contexts are explained by a change in the way the listener corrected the acoustic signal: the tendency to over-correct it (which had given rise to syllabic rhotics) reversed into a tendency to under-correct it (which resulted in a later insertion of anaptyctic schwas next to rhotics).

DESCRIPTION OF THREE EARLY SLAVIC CONTEXTS

In the period of dialectal disintegration of Proto-Slavic, the two-level vowel system that characterized Early Slavic 2 [1, 2] was restructured in a four-level system through a shift from quantitative (fig.1) to qualitative contrasts (fig.2). The latter is the system used as the starting-point in the historical phonology of the individual Slavic languages. The mid vowels in it (levels 2 and 3) shared the feature [+ lax]. The high lax vowels (i and u), traditionally called jers, demonstrated a tendency to reduction in some specific contexts: word-finally and before a syllable with a ‘full vowel’ and word-finally. This is the so-called weak position where jers were generally subject to loss. They are referred to as weak jers.

Context A

CirC, CtrC before a syllable with a ‘full vowel’ and word-finally.

This is the so-called weak position where jers were generally subject to loss. They are referred to as weak jers.

Context B1

CirC, CtrC before a syllable with another j.

This is the so-called strong position where jers were subject to lowering. They are referred to as strong jers.

PRESENTATION OF DATA FOR CONTEXTS A, B1 AND B2

Early Slavic 1 & 2 (reconstructed forms in IPA transcription):

A: /gurdal/ “throat”, /Arifu/ “top”
B1: /druva/ “wood”, /kristi:ti:/ “christen”
B2: /krui/ “blood”, /kristu/ “cross”

Old Church Slavonic (attested written forms):

A: golo, verh (горло, верх)
B1: drava, kresti “(древа, крест)”

Russian

A: gorlo, verb (горло, верх)
B1: drava, kresti “(древа, крест)”

Table 1. Reflexes of contexts A, B1 and B2 in the modern Slavic languages

<table>
<thead>
<tr>
<th>Language</th>
<th>Context A</th>
<th>Context B1</th>
<th>Context B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian</td>
<td>V left to /h/</td>
<td>V right to /h/</td>
<td>V right to /h/</td>
</tr>
<tr>
<td>Polish</td>
<td>V left to /h/</td>
<td>no V</td>
<td>V right to /h/</td>
</tr>
<tr>
<td>Czech</td>
<td>no V</td>
<td>no V</td>
<td>V right to /h/</td>
</tr>
<tr>
<td>Serbo-Croatian</td>
<td>V left to /h/</td>
<td>no V</td>
<td>V right to /h/</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>V either left or right to /h/</td>
<td>V either left or right to /h/</td>
<td>V either left or right to /h/</td>
</tr>
</tbody>
</table>

ACOUSTIC CHARACTERISTICS OF RHOTICS IN SOME SLAVIC LANGUAGES

Bulgarian post- and pre-consonantal rhotics

Modern Bulgarian rhotics are apical taps and are typically realized as "an (almost) empty space on a spectrogram without any formants" [5:165-6], but only in intervocalic position. When they are preceded or followed by another consonant, a schwa-like vocoid element appears necessarily on oscillograms and spectrograms. In Bulgarian these svarabhakti vocoids (the term has been introduced by [6:298] in his description of

Spanish rhotics) possess a formant structure very similar to that of a reduced vowel (schwa). The average duration of svarabhakti elements is about 30 ms.

Phonetically Bulgarian pre-consonantal rhotics represent a sequence of a tap and a svarabhakti vocoid (fig.3) whereas post-consonantal rhotics are a combination of a svarabhakti vocoid followed by a tap (fig.4). Compared to preceding (fig.3) or following schwa (fig.4), svarabhakti vocoids are shorter and of lower intensity.

Czech syllabic rhotics

The acoustic image of inter-consonantal rhotics in Czech is very similar to the
sequences "schwa + tap + svarabhakti vocoid" and "svarabhakti vocoid + tap + schwa" in Bulgarian. Czech syllabic rhotics represent a tap both preceded and followed by a svarabhakti vocoid (fig. 5). The two svarabhakti vocoids are roughly of equal duration and intensity. Thus the acoustic image of Czech syllabic rhotics is symmetrical unlike that of the Bulgarian sequences "schwa + rhotic + consonant" or "consonant + rhotic + schwa", characterized by asymmetry.

Under-correction of svarabhakti vocoids. Anaptyxis.

If the listener inappropriately corrects the signal, he can misperceive a reduced vowel as a svarabhakti vocoid, erroneously attributing it to the adjacent rhotic. He will over-correct the signal. The resulting sound change will be an anaptyxis.

Over-correction of reduced vowels. Vowel loss.

If the listener inappropriately corrects the signal, he can misperceive a reduced vowel as a svarabhakti vocoid, erroneously attributing it to the adjacent rhotic. He will over-correct the signal. The resulting sound change will be a vowel loss.

A POSSIBLE SCENARIO FOR BULGARIAN

Merger of contexts A, B1 and B2

In context A, the jers in the Old Church Slavonic sequences ru, ri, li did not denote real jers. Even in strong position they were not subject to lowering. Words as vrhu, prvu, skrubi never appear with e, o in the place of strong jers (i.e. in their first syllable).

In the manuscripts [8:139-140] there is often confusion between the hard and the soft jer in these sequences: prvu instead of prv, srdice instead of srdin, zrino instead of zrino, etc.

By contrast, lowering of the jer in strong position does occur occasionally in the manuscripts where the sequences ru, ri, are found in context B2: krestu for krístu 'cross', krví for krví 'blood'.

Hence Old Church Slavonic used the same spelling ru, ri (ps, pě) for two different phonetic and phonological realities:

i. "svarabhakti vocoid + rhotic + svarabhakti vocoid" (phonetically), "syllabic rhotic" (phonologically);

ii. "svarabhakti vocoid + rhotic + reduced vowel (jer)" (phonetically), "non-syllabic rhotic + reduced vowel" (phonologically).

The merger between contexts (i.) and (ii.) took place later: at the end of the Old Bulgarian period, that is, at the end of the 11th century.

The merger resulted from the reanalysis of the jer in context B as a svarabhakti vocoid, i.e. as part of a syllabic rhotic. This was a process of dephonologization. The perceptual mechanism which produced the sound change was that of over-correction. Listeners erroneously analyzed the jer as part of a syllabic rhotic. Then speakers began producing /tʃ/ with symmetrically distributed svarabhakti elements (cf. fig. 5) at the place of the earlier asymmetrical acoustic image corresponding to "rhotic + reduced vowel (jer)" (cf. fig. 4).

Schwa anaptyxis

In a later period, a new tendency towards undercorrection of the acoustic signal arose. The Bulgarians then started perceiving either the leftward or the rightward svarabhakti vocoid of syllabic rhotics as a reduced vowel (schwa). This resulted in schwa anaptyxis. One of the svarabhakti vocoids was thus phonologized. Acoustically, this meant a return to asymmetry. The direction of the anaptyxis (leftward or rightward) depended upon the syllable structure. Apparently a constraint prohibiting "liquid + obstruent" codas was at work at that time. That is why "ăr" is admitted before one consonant when a vowel follows (i.e. in polysyllables), but not in monosyllables where the following consonant is word-final and hence it cannot be resyllabified as the onset of another syllable.

REFERENCES


