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SPECIFIC FEATURES OF RUSSIAN SEGMENTATION INTO SYLLABLES

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The Russian syllable is a phenomenon of speech. There are some rules of closed final syllables of sentence and conditions of the segmentation of the speech flow into syllables in case of consonant clusters within the word. The nature of these rules is mostly of psycholinguistic and extralinguistic origin. Thus the Russian syllable can be defined as a field of realization of consonants with a syllable-forming vowel as a peak. Perceptive and acoustic experiments have shown that the significant role in the process of forming of closed internal syllables belongs to the speeding up of speech tempo. The pronouncing of a sentence with an emotion of anger also contributes to the forming of closed internal syllables and, on the contrary, in the sentences highly marked by positive emotions there is a tendency to the openness of internal syllables with consonant clusters.

Numerous problems of applied linguistics depend on the solution of the controversial issue, that of the structure of the Russian syllable..There are various approaches to the problem. The most well-grounded, to our mind, is the approach by L.V.Shcherba and M.I.Matusevich [1]. However, those illustrious scholars just outlined a way to study the segmentation of the speech flow into syllables.

The current study aims at segmentation into syllables those words that have internal clusters as the most complicated case. The quality of the consonant was taken into consideration; sonant and noise-occlusive, sonant and sonant, noise-occlusive and noise-occlusive, noise-fricative and noise-fricative, etc.

To check the syllable boundaries a table was prepared that included 100 phrases devised from the word-list under consideration. Segmentation into syllables was considered in its relationship to: 1) character of consonant, 2) relative localization of the stressed syllable and the consonant cluster, 3) position of the word under analysis in the sentence, 4) tempo-of-phrase pronunciation, 5) emotional colouring of the utterance, i.e. psycho-physiological state of the speaker (special situations were designed).

The phrases were read by 70 speakers, aged from 17 to 22 years. The recorded material was processed with the software program WIN CECIL, where multiple acoustic parameters were analysed, such as: duration, intensity envelope, spectra of the vowels preceding the clusters and those that followed them, the juncture spectrum and the basic frequency.

The acoustic experiment was preceded by the perceptive one. All the material was read in such a way that the speakers were asked to speak as fast as possible whilst still remaining intelligible. It was observed that speeding up the tempo influenced the closeness of the syllable, while the emotional character of the pronunciation affected its openness, especially with emotions such as elation or anger.

The table shows some changes of syllable-boundaries whilst pronouncing phrases in different situations and with a different set.

	pon'ton		'tömnyi		'bryzgi		ra'zgar		'kapl'ya	
	/nt	n/t	/mn	m/n	/zg	z/g	/zg	z/g	/pl	p/l
neutral	73%	27%	20%	80%	20%	80%	80%	20%	30%	70%
joy	80%	20%	87%	13%	73%	27%	87%	13%	75%	25%
ecstasy	87%	13%	93%	7%	93%	7%	100%	-	82%	18%
displea-sure	73%	27%	13%	87%	14%	86%	83%	17%	77%	23%
anger	80%	20%	72%	28%	20%	80%	80%	20%	80%	20%
fast tempo	7%	93%	6%	94%	15%	85%	20%	80%	25%	75%

We observed a number of phenomena connected with the emotional rendering of a phrase: unusual duration of vowels and consonants constituting the stressed and prestressed syllables, the negative emotions lenghtening the consonants and shortening prestressed vowels.

The experiment also revealed the influence of the speakers individual tempo on openness vs. closeness of internal syllables. The faster the tempo, the greater the number of closed internal syllables. Differences were observed among average lengths of phrases pronounces without emotional load in male-subjects and in female-subjects. The durations were 75.1 ms in men and 67 ms in women. It is worth mentioning that boundaries between syllables depend to a certain degree on the morphological composition of the phrase [2].

Closed final syllables in a word concluding a phrase or a syntagma are typical in speech. Devoicing of noise voiced consonants at the end of words could serve as indirect proof of the closeness of the syllable, e.g. "stoit dub [dup], stoit stog [stok]". It is widely believed that final sonants are not devoiced at any time. However, in the above position the cluster: noise-voiceless and sonant [l, r] is realized as devoiced: "vopl', vepr'". A developing process of sonant devoicing can be also observed when the consonant follows a vowel: "dvor, dogo'vor". One can suggest that sonant devoicing happens due to a sociolinguistic reason – speeding up of speech tempo in connection with speeding up of tempo of life. Hence a simplification of articulation, namely absence of vocal cords vibrations. Acoustic analysis of the closed final syllables revealed similarity in their characteristic parameters and those of internal closed syllables.

Thus, syllable boundaries in Russian depend on a number of linguistic, psycholinguistic and sociolinguistic factors which may result in a different syllable boundary made by the same speaker – before or after the cluster – due to the above conditions. The experimental data suggest that a syllable-forming vowel in necessary for the existence of a syllable. There is no syllable without a syllable-forming vowel. In the connection with the above, it seems doubtful that there are syllable-forming consonants in Russian speech.

REFERENCES

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