

RULES OF INTERACTION BETWEEN SEGMENTAL AND SUPRASEGMENTAL
FEATURES IN THE ORGANIZATION OF SPOKEN TEXT

L.V. Zlatoustova, Laboratory of Structural and Applied
Linguistics, Moscow University, USSR

An acoustic and auditive analysis of artistic prose and spontaneous colloquial Russian speech revealed the following regularities:

The most important suprasegmental characteristics of the stressed syllable of a phonetic word are a relative increase in duration, in particular of the vowel, and a close approximation of the formant frequencies of the vowels to their ideal or target values. A Russian phrase consists, on the average, of 2.2 - 3.2 phonetic words, and the stressed syllables show a marked F_0 movement at the beginning and, in particular, at the end of the phrase. Thus, for phrase initial and phrase final phonetic words, F_0 is a third parameter which helps identifying both the placement of stress and the placement of phrase boundaries.

The next level of suprasegmental organization is the phrase level. The partitioning of continuous speech into phrases manifests itself by phrase stresses and pauses. Note that the pause has a linguistic status: logical and emotional emphasis, statements, consequence and result can be signified by filled pauses. A filled pause is manifested in a phrase final vowel or consonant; thus, segmental units have a suprasegmental function in these cases.

Phrase stresses are superimposed on the stressed syllables of phonetic words. According to their function, phrase stresses belong to either of two classes:

The first class is formed by those phrase stresses whose function is to organize the phonetic words in the phrase. Their most important acoustic parameter is F_0 .

The second class comprises emotional and logical stress. The function of these types of stress is to emphasize certain parts of the speech chain. The acoustic characteristics of such types of stress interact to a high degree with those of the segmental units: Emotional stresses are marked by a change in the spectral pattern of the vowels, by an increase in duration of the stressed syllable, etc.