VARIABILITY OF PHONEMES IN SPOKEN RUSSIAN

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Abstract.

The segmental characteristics of Conversa-
tional Literary Russian are reviewed. Var-
ious modifications of different classes of
phonemes caused by the loosening of
their articulation and their acoustic cor-
relates are described. The positions fa-
vourable to the modifications are analysed.
Modifications of phonemes in 3 varieties
of Spoken Russian /territorial dialects,
urban popular speech and Conversational
Russian/ are compared. There exists in
them a number of spontaneity-due modific-
atious common for these varieties. Thus we
conclude that the difference between Con-
versational Literary Russian and Standard
/Literary/ Russian proper is caused by
spontaneous character of the former and
not by the difference in their phonetic
systems.

Introduction.

There existed 3 main varieties of Spoken
Russian /SpR/ up to now used as sponsa-
taneous communication means: 1/ substan-
tard territorial dialects, 2/ substandard
urban popular speech, 3/ Standard /Lit-
ary/ Conversational Russian /CR/. Nowa-
days the latter is rapidly expanding owing
to general secondary education, the expan-
sion of mass-media means and the growth of
the cultural level of various strata of
society.

That is why CR should be studied
properly and with great care. Firstly, such a study could help us to see the main
tendencies of the Russian language deve-
development because it is through CR that dia-
lectal and urban popular speech forms pen-
etrate into Standard/Literary/ Russian
/SpR/. Secondly, the comparison of CR with
the two other varieties of SpR on one
hand, and with SR on the other, would
enable us to discover spontaneous traits
proper and to decide whether the system
of linguistic units of CR is independent
on that of SR. The phonetic study and the
study of segmental units in particular
may be of great importance because it is
these units that when pronounced are mi-
nimally controlled by a speaker and it is
in the field of segmental phonetics that
substandard and common spontaneous traits
can be most apparent.

The phonetic systems of territorial
dialects have been explored for decades.
There recently appeared a number of works
on urban popular speech. As to the phone-
tic characterisitics of CR, they remain
beyond the scope of experimental studies.
That is why the present investigation has
been undertaken.

Discussion of investigation.

The inventory of linguistic materials co-
mprised of 3 sections. 1/ 15 fully trans-
scribed spontaneous dialogues which made
up 3 hours /60,000 phonemes/ used for the
investigation of various modifications of
segmental units in CR. 2/ Oscillogrammes
and spectrogrammes of the fragments of
the dialogues /37-min. duration, more
than 10,000 phonemes/ containing the most
distinctly pronounced modifications used
for the study of their acoustic correla-
tes. 3/ 16 fully transcribed monologue
fragments /1-1,5 min/ each/ extracted from
the dialogues performed by the speakers of
all the 3 varieties of SpR used to dis-
cover spontaneous features common to them.

The results of the investigation of
the segmental characteristics of CR des-
cribed earlier /1/ showed that 18% of
consonants and 5% of vowels /in the most
frequently used words of CR 30 and 20% respectively/ are subjected to various
modifications, i.e. pronounced not as
specified by SR pronunciation rules. 5% of consonants and 3% of vowels /18 and 7% in frequent words/ are elided. 1

The analysis of stability of various
phonemes and classes of phonemes has
shown that more "lax" voiced consonants
are modified and elided more often than
the voiceless ones, soft or palatalized
/marked/ more often than hard or velar-
ized, more frequently used non-sonorants
more often than sonorants. Affricates
and liquids are the two most unstable

1 Note that the terms "modification", "de-
viation", "ellipses" are used here for the
sake of convenience as it is SR that is
used for reference, CR having pronuncia-
tion rules of its own.
groups, 40 and 40% of them modified respectively in CI. Nasals and vibrates are modified only in CI. Fricatives are modified more often than fricatives, and nasals are frequently ciliated. Dorsals are modified more often than following consonants, palatals are most frequently ciliated. Nasals and fricatives are most frequently ciliated.

The existing links between the stability of information load and perception of consonant classes: the more informative classes are more stable in terms of their frequency of occurrence in speech. The more stable classes tend to be better perceived in noise/2/.

There exists a certain correlation between the stability of sounds and frequency of occurrence: the phonemes /ʃ/, /ʒ/, /ŋ/ are the most frequent ones in Russian /3/ - the former being one of the most unstable among vowels and the latter among consonants. The high frequency of occurrence of the schwa in a morpheme or a word containing a given phoneme is a characteristic of its modification or loss.

In terms of the number of syllable units, the hierarchy of segmental units is hierarchically organized: more frequent linguistic units /phonemes, mor- phonemes, words/ have less information load due to their frequent usage in speech. They are modified or elided more often by a speaker without any consequence for speech understanding. The process of speech perception is carried out in immediate cognitive processes. Words are regarded as such due to the large quantity of information contained in them. In this case, a certain distortion of segmental units is possible. The classification of the number of syllable units is the most significant for the perception of sounds.

Correlation of the rates of acoustic correlates of the consonants modifications has shown that regularity of occurrence of the /ʃ/, /ʒ/, /ŋ/ phonemes is characterized. Spirantized consonants in CI differ from their counterparts in SH as more than 90% of them are in intervocalic position only and have spirant-phonate duration up to 50% of their entire duration. In SH, this rate can be reached in any position and mostly have no stop at all /1/ of spirantized plosives and 80% of spirantized /ʃ/ turn into full spirants in SH.

Noise resistance weakens the sounds of consonants. Sprantized spirants are realized as a substitution of /ʃ/, /ʒ/, /ŋ/, /tʃ/, /dʒ/, /n/ with different and quite complex consonants. Spirantized /ʃ/ have been exposed to second /back/ focus parried by facial muscle. This leads to the lowering of variability limits.

The comparison of phoneme modifications in different types of CI has shown the availability of the phonetic realization which explains 60% of the consonant changes and 70% of the changes in vowels. Acoustic correlates of contextualization lead to the condensation of steps /10% of steps in the case of CI/. The contextualization is partially abolished by spirantization, weakening of nasal resonance of nasals /ŋ/ and rounding of labialization of /m, n, ʒ, ʃ/. This means that the identity of the inventory of allophonic and vocalic features is lost. Vocalic and palatalized consonants are /ŋ/ in medial position 25-50, 00 of the "normal" ones - 25-50, 00 of that of the spirantized ones. In CI and SH, the back- round of peak intensity of vocalized and non-vocalized consonants becomes smaller. The phonetic positions of CI have demonstrated that /ŋ/ - /ʃ/ - /ʒ/ - /tʃ/ - /dʒ/ - /n/ have in CI statistically significant number of cases less than that of the corresponding CI vowels. For vowels these are "unnormal" allophones, characterized by high intensity peaks /4/ and those of the unrounded /e, i/ and /ɪ/ instead of /e, i, ɪ/.

Conclusion

The analysis of isomeric units' modifications in CI has demonstrated that the difference between CI and SH manifests itself through the extension of the limits of allomorphic variance in the former, which is explained not only by their acoustic distinction but by the spontaneous character of CI. This assumption is supported by the existence of the inventory of allophones and mainly by the inventory of segmental units, the phonemic and even the phonetic identification of the inventory of allophones, in CI and SH. CI is not the particular case of SH in the sense of the particularization of the realization of sounds. CI is the particular type of SH which is revealed in the specific inventory of units and the specific features of their realization that are related to SH within the limits of Lipatovian /5/.

Vowel reduction, pronunciation of /ə/ in front of words, pronouncements of consonants and vowels and reduced forms of frequent consonants and vowels.

If for dialectal speech the presence of the only certain sounds is more characteristic, CI is marked by a number of pronunciation peculiarities each appearing sporadically. Being of common spontaneous origin, they can coincide with the most versatile dialects' traits. But the phonetic system of CI being based on that of SH, these peculiarities can not be realized consistently. The appearance of common allophonic traits gives way for another traits to penetrate into CI /evidence/or direct or through urban popular speech and then into literary SH proper. That is how spontaneous /ə/ pronunciation has penetrated /penetrated/ into SH within the limits of Lipatovian /5/.
nunciation segments." Generally, there is no necessity for a listener to produce their phoneme identification at all because "using redundancy he can recognize a word by its very general contour that is created by its rhythmic structure and by some cue sounds of its entire sound structure... A word can be even fully reconstructed from the context." Therefore "it is a profound error to suppose that each segment which can be singled out of the word should be directly attributed to a definite phoneme" (11). The recognition of the word performed, the phoneme identification, if necessary, is easily accomplished by a listener because "a human being when working as a recognizing mechanism can identify punctually one and the same sound stimulus as different phonemes and various sound stimuli - as one phoneme" (12). The impossibility to recognize a strongly "destructed" word, i.e. the word with distorted rhythmic structure or the word with the stressed vowel reduction etc., leads to mishearing or asking for repetition. These two can also be caused by homophony that can not be solved by the context, a word having become homophonous to another word as a result of distortion. Asking for repetition appears only when a communicatively significant word can not be recognized. Both the "distortion" of non-informative words and their homophony are paid no attention to by a listener. The cases when communicatively significant words cannot be recognized are extremely rare: in the 10 dialogues analysed from that point of view there were found only one mishearing and nor askings for repetition. This shows that in spontaneous speech the loosened control of a speaker over the outer form of expression is differential: strongly distorted are uninformative /frequent/ units /phonemes, morphemes, words/. As for the number and degree of distortions of communicatively significant parts of the text, they should stay within definite limits which a speaker would never trespass in fear of disturbing successful communication.

1 "The full type of pronunciation provides a possibility all the more to determine the phoneme structure of a word. Non-full type vice versa requires for this purpose proper context or situation" (10).

References.