

ON THE PHARYNGEALIZATION IN TUNGUS-MANCHU LANGUAGES

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ABSTRACT

The paper presents some results of the experimental study of the Nanay and Udehe phonetic systems. The obtained results concern the nature and the function of the pharyngeal/laryngeal phonemes and their influence on the vowel and consonant patterns. The proposed approach allows a simple solution of some disputable phonomorphological phenomena in Tungus-Manchu languages. The new interpretation of the vowel patterns of Nanay and Udehe languages is given. It is shown that pharyngeal/laryngeal phonemes are marked by functional ambiguity, serve as means of distinctive and delimitative function on segmental, supersegmental and phonomorphological levels. The presence of morphological constructive elements in the phonemic patterns of Tungus-Manchu languages is a feature typical of the syllabomorphemic language type.

INTRODUCTION

Pharyngealization has wide phonetic manifestation ranging from aspiration of consonants to pharyngealized accent in Tungus-Manchu languages. The pharyngeal /h/ was found in some Tungus-Manchu languages: Evenki, Even, Solon and some dialects of Oroch /1/. The occurrences of aspiration of voiceless stops were mentioned in certain dialects of Evenki and Even /2/. The aspirated and glottalized vowels with the glottal stop or expiration of breath in the middle of vowel phonation were described by E.R. Shneider /3/. But on the whole, references to the pharyngealization in Tungus-Manchu languages are scanty. The present paper concerns the phonetic nature, phonological status and function of the pharyngealization in Nanay and Udehe languages, which enter the southern group of Tungus-Manchu languages. The investigation is based on the data obtained experimentally. The list of 300 Nanay and Udehe words was read by 10 informants, about 45-50 years old

not phonetically trained, all of them unaware of the purpose of the experiment. Recordings of this material were made by means of oscillograph, intonograph, at 250 mm/sec and were also treated by spectrograph.

ACOUSTIC MANIFESTATION

It is traditionally accepted that there are voiced and voiceless stops in Tungus-Manchu languages. On the acoustic spectra of the Nanay and Udehe words the two sets /bdg/ and /ptk/ initially are produced with silent closure intervals and ought to be classified as voiceless whereas in medial position /bdg/ are voiced and /ptk/ are voiceless. The consonant spectra of /ptk/ are characterized by postaspiration which manifests itself as higher frequency noise /fig.1/. According to L.Lisker and A.S.Abramson the difference between voiced and voiceless consonants is in the timing of voice onset relative to release: /bdg/ are distinctively marked by low frequency harmonics preceding the burst of the release and /ptk/ are distinctively marked by an interval of higher frequency noise immediately following the burst/4/. For Tungus-Manchu languages this difference works only in part. In initial position /ptk/ and /bdg/ are voiceless and /ptk/ distinguishes from /bdg/ by an audible explosion and an interval of mid-higher frequency noise within the range corresponding to the frequency harmonics of the following vowel, i.e. aspiration /fig.2/.

The pharyngeal /h/ and the glottal /ʔ/ occur at the beginning of a stem-morpheme before a following vowel or at the morpheme boundary serving as a word boundary marker, e.g. Nanay: /ʔania/ 'mother', /ʔokoka/ 'small fish'; Udehe: /ʔasa/ 'bay', /ʔunah/ 'fingers', /naʔu/ 'cock and hen', /inahji/ 'dog'. On the spectra the glottal stop manifests itself in the delay of F₀ from the first and second formant frequencies /fig.3/. This is due to the delay in voice onset. In the weak position, i.e. between vowels

and as a finale of a syllable the pharyngeal /h/ and laryngeal /ʔ/ are realized as sonants: ʔ~h~w~ŋ~ɣ~j (e.g. Nanay: /wonemi~ŋonemi~ʔonemi/ 'long'; Evenki: /ala~alax~alak~alah/ 'motley'). These vocalized laryngeals are often omitted giving rise to long vowels and diphthongs: Negidal: /adaxu~adaku/ 'twin', Oroch: /adawu~adau/, Udehe: /adʔau/, Ulchi: /adau~adū/, Orok: /adaw~adau/, Nanay: /adao/. In Udehe language we observe the process of transition of /h/ and /ʔ/ from phonemic to prosodic level: the first or the last syllables of a stem are marked by the pharyngealized/laryngealized accents. These accents are characterized by the double peak fundamental tone (circumflex) which marks the consonant and the vowel of a syllable /fig. 4-8/. The experimental data have shown that the pharyngealization/laryngealization in Udehe language is the distinctive feature of a syllable but not of a vowel as it was stated on the basis of the auditory analysis by E.R. Shneider.

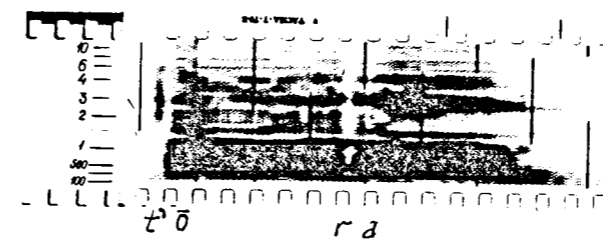


Fig. 1. Spectrogram of the Nanay word /tora/ 'he goes hunting'

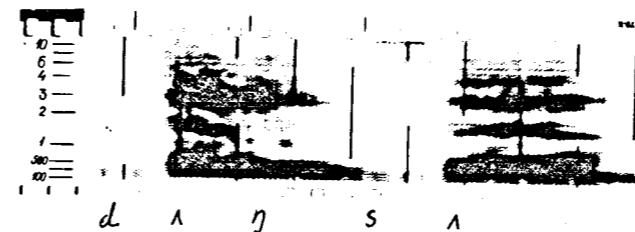


Fig. 2. Spectrogram of the Nanay word /dʌŋsa/ 'balance'



Fig. 3. Spectrogram of the Nanay word /exon/ 'settlement'

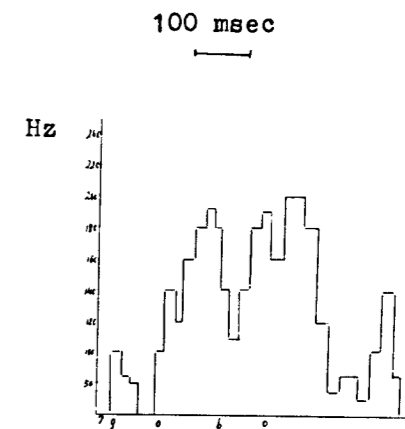


Fig. 4. F₀-curve of the Udehe word /gobo/ 'fly'

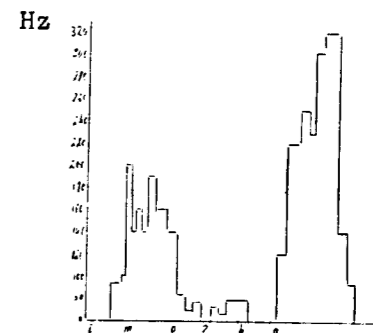


Fig. 5. F₀-curve of the Udehe word /imoho/ 'fat'

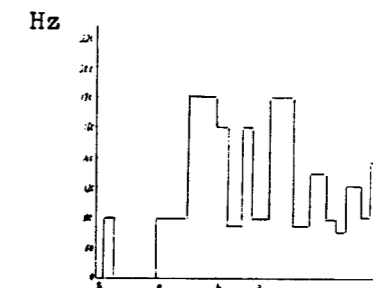


Fig. 6. F₀-curve of the Udehe word /hobo/ 'hard'

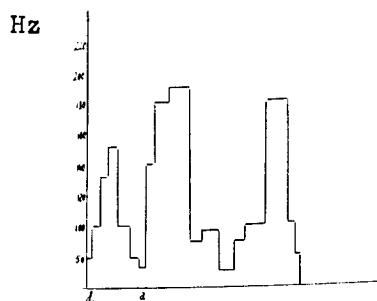


Fig. 7. F_0 -curve of the Udehe word /da/ 'cotton wool'

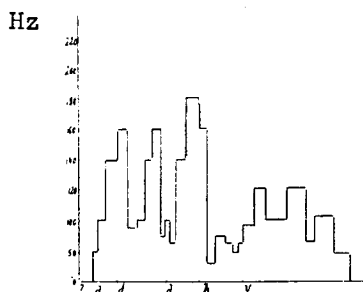


Fig. 8. F_0 -curve of the Udehe word /adahu/ 'twin'

FUNCTION

The pharyngeal and laryngeal phonemes function as boundary markers between two morphemes, one ending with a vowel and the other starting with a vowel. These phonemes may be considered as morphological constructive elements, serving to link a stem and a suffix. For example, the initial glide /w/ of many verbal/noun suffixes in Nanay may be omitted. Its presence depends on the syllable structure of a stem. If the syllable of a stem has a long vowel or a diphthong which are always marked by the double peak accent, the morpheme and syllable metanalysis is not possible. If the syllable of a stem is not stressed the morpheme metanalysis is possible, e.g. Nanay: /būwuri/ 'to give', /xolaori/ 'to read'. In Udehe the unstressed syllable of a stem form a fusion with the vowel of the following suffix. In this case the pharyngeal /h/ and the laryngeal /ʔ/ which are the markers of the Past Indefinite and the Past Perfect correspondingly, are manifested as pharyngealized/laryngealized accents linking the stem with the suffix: Udehe: /wāʔtbi/ 'they had killed',

/ʒawʔa/ 'he had taken'. In conclusion it should be stated that /h/ and /ʔ/ became isolated in the pattern of consonant phonemes. This isolation was due to the functional ambiguity as these phonemes serve both as means of distinctive and delimitative function. The presence of such morphophonemic elements in the language is a feature typical of the syllabomorphemic language type.

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