

THE TYPOLOGY OF VOCALIC STRUCTURES OF THE WORD IN CHUKCHI-KAMCHATKAN LANGUAGES

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ABSTRACT

The paper deals with phonetic mechanisms of Chukchi, Koryak and Itelmen vocalic word structure. It presents a new interpretation of Chukchi-Koryak vowel harmony. The paper also describes an original type of morpheme interaction in Itelmen.

The languages of Chukchi-Kamchatkan group (Chukchi, Koryak, Itelmen) possess a common vocalic system of five elements and manifest the rise gradation that is traditionally termed "the vowel harmony". Following W.G. Bogoraz, the vowels are usually classified into 3 groups: strong vowels /a/, /e/, /o/, weak vowels /i/, /e/, /u/, and the neutral vowel /ə/. The strong vowels can co-occur within the word with strong ones: if there is in the word a morph (a prefix, a suffix, or a stem) that contains a strong vowel, all the weak vowels alternate with the strong ones. The neutral /ə/ is indifferent to synharmonic alternations.

The phonetic mechanism of the vowel rise alternation in the Chukchi-Kamchatkan languages was specified by the authors of the present paper as a result of field work. Some acoustic analysis data was also made use of. It allowed us to interpret the processes that take place in derivation and inflexion of the agglutinating language in the following way.

The three vocalic sub-systems have a common phonetic base, namely, the range of the phonetic variability of vowels. Strong vowels have minimal range of variability. The degree of variability of weak vowels is big enough for their synharmonic variants to approach or even coincide with the allophones of strong vowels. The neutral vowel /ə/ has maximum range of variability; it is completely dissolved in the phonetic structure of the word, is dependent on its vocalic structure and on surrounding vowels. The neutral vowel can realise as allophones

that are identical with allophones of any vowel of the systems.

The manifestation of the "vowel harmony" can be of two kinds: the synharmonic variants can be variants of one phoneme, or can belong to two different phonemes. For the neutral vowel the synharmonic variants are always its allophones. For the weak vowels in Chukchi their open allophones /i/ ~ /I/, /e/ ~ /E/, /u/ ~ /V/ are synharmonic variants. In Koryak and Itelmen the synharmonic variants represent corresponding strong vowels and are the alternants proper: /i/ ~ /e/; /e/ ~ /a/; /u/ ~ /o/.

The conditions for alternations can be of three types: phonetic context (where the morphemic structure of the word has no influence); morphonological context (where the phonetic structure of the morphemes that constitute the word is important); and morphological context (where the phonetic structure of the word and of the constituting morphemes loses its value). It is the second type, the morphonological context, that determines the synharmonic alternations: the rules of the vocalic word structure are deducible from the phonetic structure of morphemes that trigger phonetic alternations but do not include strong vowels, cf. Chukchi muri 'we' - more-kə 'us'. In Itelmen the synharmonic alternations ignore the phonetic structure of the morphological constituents. Alongside with cases like nič-enk 'in possession of the wife', wač=ank 'on the stone' (marker of localic case is represented by synharmonic variants =enk/ =ank that depend on the vocalism of the stem) and cases like neč=anke 'to the wife', wač=anke 'to the stone' (the vocalism of the stem depends on the vocalic type of a "strong" suffix of terminalis), there are cases like nič=kit 'because of the wife', wač=kit 'because of the stone' where the vocalism of causal case suffix seems to be independent of the vocalism of the stem, and cases like iw=lah 'long', ič=al 'birch grove', where "strong" suffixes =lah 'adjective marker' and =al 'generic number' do not trigger the vocalic alternation in the stem. Finally, there are stems like i'naq 'ermine' and

Table I

modifiers		strong		neutral		
		R	m	R	m	
		an'čp teach	anke terminalis	a'asx nest	al generic number	lah adjective
weak	R	ič' birch	eč'=anke to the birch		ič'=al birch grove	
	m	enk localis		a'asx=ank in the nest		
neutral		'in III infinitive	k'an'čp='an he taught him			
	R	iwl long				iw=lah long
	m	nič wife	neč=anke to the wife			
		miq I p.sg. Ob.	an'čp=miq he taught me			
		kit Causal case		a'asx=kit because of the nest		

iyag 'dreadful' where strong and weak vowels co-occur in our word. Morphemes of this kind evidently contradicts the notion of existence of vowel synharmonism in Itelmen.

An interpretation of phonetic inconsistency of Itelmen synharmonism is given in Table I. The columns of the table contain modifier: stems and affixes that contain strong vowels and can synharmonically modify other morphemes in the word. Modifiers can be divided into strong and neutral according to whether they trigger obligatory synharmonic change of other morphemes. Horizontal lines in the table contain modifiables: stems and affixes that can be modified to change weak vocalism into strong one. Modifiables are also divided into strong and neutral according to whether their synharmonic change is obligatory or not. Points to intersection show obligatory, optional, and non-obligatory synharmonic modification of morphemes.

The following information about of morphemes that constitute an Itelmen word is necessary to determine whether the synharmonic alignment will take place:

- 1) phonetic structure
  - 2) class of the morpheme: stem or affix
  - 3) morphonological class
- The possibility of co-occurrence

within one word and even one morpheme of strong and weak vowels shows that for Itelmen it is more appropriate to speak morpheme harmony rather than of vowel harmony: the analysed alternation definitely take place on the morphological level.

An unusual phonetic mechanism was found out when we analysed the words that formerly were transcribed with o/a, i/u. In words <sup>o</sup>sis 'grass' [s<sup>o</sup>Ys<sup>o</sup>], <sup>o</sup>čelxčelx 'cowberry' [č<sup>o</sup>čelx<sup>o</sup>čelx<sup>o</sup>], <sup>o</sup>kic 'ox' [k<sup>o</sup>Yc<sup>o</sup>] etc. all vowels and consonants are labialized. These words have quasi-homonyms: sis 'needle' [sIs], čelxčelx 'fur' [čelxčelx], kic 'ladder' [kIc]. An interesting feature of the labialized words is that the marker of labialization can be placed "outside the bracket": all the sounds in the words are labialized, and labialization is their only distinction from the known Itelmen functional units.

Alongside with the cases when the word equals the stem, that were illustrated above, there are cases when labialized stems can modify the affixed part of the word: <sup>o</sup>sis=al 'thick grass' [s<sup>o</sup>Ys<sup>o</sup>=al<sup>o</sup>] - [<sup>o</sup>sIs=al], <sup>o</sup>sis=kit 'because of the grass' [s<sup>o</sup>Ys<sup>o</sup>=k<sup>o</sup>Yt<sup>o</sup>] - [<sup>o</sup>sIs=kIt], <sup>o</sup>ses=anke 'into the grass' [s<sup>o</sup>čes<sup>o</sup>=an<sup>o</sup>k<sup>o</sup>čelx<sup>o</sup>] - [<sup>o</sup>ses=ankel].

Affixes that are attached to a labialized stem become labialized too. No affixes were found that would show indifference to the influence of a labialized stem. On the other hand, there are two affixes that can labialize a non-labialized stem: =<sup>o</sup>pk'ul - a derivational marker of singleness, and =<sup>o</sup>lwin - suffix meaning 'himself etc.', cf. k'aač 'back' - <sup>o</sup>k'aa=pk'ul 'vertebra' [<sup>o</sup>k'oo=pk'ul], kamma 'I' - <sup>o</sup>kmi=lwin 'I myself' [<sup>o</sup>kmI=lBIn].

In isolated pronunciation, especially with high vowels, the lips of speaker visually move forward and stay round through the whole word, or, more precisely, they get round slightly before the beginning of the utterance and stay round a little bit after it has finished. This fact was noticed before but got no linguistic interpretation.

Tentative estimation gives about 20% of labialized stems of the total amount of Itelmen stems. No phonetic or lexical distribution was found.

The possibility of the Itelmen stems to labialize the affixal part of the word is, no doubt, unique for the Chukchi-Kamchatkan languages and distinguishes Itelmen sharply from the group. Alongside with other features, this fact prompts one to look for the genetic roots of Itelmen outside the Chukchi-Kamchatkan areal.