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APPROACH TO PHONETIC CHANGES IN COMMON ISOGLOSSES OF CHECHEN AND BATS LANGUAGES

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Abstract

Chechen and Bats languages. Due to the fact that the vowel system of the Chechen language is more complex in comparison to that of Ingush and Bats thanks to secondary vowels, it was a common concept in the Nakh linguistics to believe that the Bats language kept the ancient state of the language better. However, as our research has shown, many phonetic features of the Bats language are relatively recent, at that, some phonetic discrepancies between it and Chechen/Ingush are not only results of independent development of the language, but were also caused by a strong influence of Georgian onto Bats. The research allows us to conclude that it was the Bats language, where the following phonetic shifts took place: Gradual shift of rounded vowels to approximants and than to bilabial consonants [o/u/ou/uo >w/v >p/b], substitution – appearance and vanishing of phonemes, changes in the syllabic structure of root morphemes, ejectivation of consonants. In comparison to the Bats language, the Chechen language underwent such changes as palatalization and gemination of consonants, consonant shift (vocalization and glottalization of unvoiced pharyngeal spirant [h'>'']), shift of back-velar glottocclusive q' to the laryngeal occlusive (q'>'-glottal plosive).

Keywords: Nakh languages, isoglosses, consonantism system, glottalization of consonants.

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1. Introduction

Bats language has no written form and is a part of the Nakh branch of Ibero-Caucasian family, however, according to available historical data, Batsbi people (Ts'ova-Tushetians) inhabited the territory of Georgia since the 15th century and had not contacts with either Chechens or Ingushs for the several recent centuries. According to Chrelashvili (1999), "The Bats language is used for day-to-day communication inside family" (p. 198). Nowadays, the Bats language is endangered, as only elderly people use it. Despite strong influence from Georgian, all the primordial vocabulary of Bats tracing its origin to the Proto-Nakh language have been preserved and comprises at least 70% of the main vocabulary, only names of new objects of material culture underwent changes.

Phonetic processes of this type reflect divergent processes and usually draw attention from comparative linguists. At the same time, as our research has shown, there is a certain number of sporadic facts of this type that were not reflected in previous descriptions of Chechen or Bats languages. Until now, the topical literature emphasized data supporting a common opinion that the Bats language better preserved initial archaic forms of Proto-Nakh language, and thus may fill the gap of absent most ancient monuments of the Nakh languages.

Work of Ireziev (2013) are dedicated to such phonetic phenomena of the Nakh languages as transformation of root vowels under the influence of following vowels. According to Ireziev (2013), "forms of Present in Ingush are formed from archaic Bats stems: ing.. lawa>low>luw "(he) wants"; dawa>dow>duw "(he) sows" (p. 342).

The scientific foundation of this research has been formed by "principles of linguistic change" (Labov, 2001) and "sociology of language" of Labov (2007); it "studies social factors with a wide range of actions and their interactions with languages and dialects" (p. 353). His other concept, that of "transmission of language from adults to children, inter-penetration and increment" (Labov, 2007, p. 356) is also relevant.

2. Problem Statement

This work contains analysis of those phonetic discrepancies in consonant systems of the Chechen and Bats languages, which were not covered in depth in the work of Desheriev (1953) or where the authors disagree with his conclusions.

In the preface to his monograph *Bats Language*, Desheriev (1953) humbly notes: "However, it would be wrong to state that reader will find here a comprehensive cross-light of all the issues in grammar, vocabulary, phonetics" (p. 83).

Desheriev's (1953) *Bats Language* reflects the most regular transformations in the phonetic system of the Bats language:

- devocalization of voiced consonants preceding devoiced fricatives in the beginning of a word (meaning preservation of grammatic class [b] marker) in front of Bats words pšel "cold", pst'u "woman, psarlo "evening", contradicting our conclusions);

- devoicing of voiced sibilants and their transformation into devoiced affricative supraglottal sibilants;

- transformation of g and k in the end of the word into supraglottal k' sound;

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- reduction, especially that of final vowels;
- nasalization of vowels by means of weakening final open syllable with with *n*;
- loss of sounds.

In a case where archetypes of cognate Dagestani languages do not match Nakh forms, we extend the reconstruction of the initial word form by involving comparison with common, in our opinion, roots from various branches of the **Indo-European** family. Thanks to the latest developments in comparative studies, many researchers acknowledge a possibility of prolonged contact with speakers of IE languages, in particular, a well-known archaeologist Anthony (2008) localizes "Indo-European Urheimat in Pont-Caspian steppes between 4500 and 2500 BCE" (p. 19).

3. Research Questions

When describing the noted phonetic transition **s(š)>ps/pš (bats. p**st'u 'woman, female' - chech. stiee 'woman, female', ing. se-sag 'wife'), Desheriev (1953) comes to the following conclusion: "Thus, the Bats language reflects a more ancient composition of the words in question in comparison with other Vainakh languages" (p. 45). Our conclusions contradict this thesis, as the p does not appear as a result of devoicing the class indicator **b**. In the Chechen language, class prefixes appear only in some nouns that reflect the geneder of a denoted person, namely, in words vo'' 'son', jo'' 'daughter', vaša 'brother' jiša 'sister'. On the contrary, this research leads us to the conclusion that these changes took place in the Bats language, while the Chechen language has kept the ancient morphemic structure.

Appearance of occlusive labial phonemes **p/b** in the Bats language in place of labialized vowels **o, u**, diphthongs **ou/uo,** and sonorant **w** is a new or secondary phenomenon that took place after dissolution of the Proto-Nakh language. It is a common knowledge that labio-velar approximant **w** is a semi-vowel, thus, in a syllabic position it transforms into a vowel, while in a non-syllabic it transforms into a consonant. Bernshtein (2005) observed that "sonorant [u] in the beginning of syllable in front of a vowel changed into a bilabial [w]" (p. 202), which is an initial stage of this phonetic process. In this case, it is the Bats language that undergoes changes uncharacteristic of both Chechen and Ingush languages. Chrelashvili (1999) confirms, that "under the influence of Georgian, the Bats language had got new consonant complexes" (p. 199). Serebrennikov (2005) gives multiple facts on instability of the **w** approximant in various linguistic families and notes that "consonant forms of sonorants are more and more shifting to real consonants, unable to vocalize, thus **w** becomes **v, b, (gw) g"**. Even Meillet (2008) emphasized "vowel and consonant nature of **j** and **w"** (p. 98). Prokosch (2010) wrote that "**j** and **w** may be defined as vowels (i, u), performing the consonant function" (p. 69). Wenhua (2012) is studying the modern state of the **/y/** in the Korean language in China where is underwent a complete diphthongization and transformation to **/wi/**. It is widely known that a **v>b** phonetic shift is a linguistic universalia: eng. have, germ. haben, eng. seven, germ. sieben.

Besides, a confirmation of the noted fact of the phonetic shift is a presence of variant pronunciation of the noted words in the Bats language, which reflect the situation without phonetic changes and closer to Chechen stems by their morphological structure (cf.: "bats. **eb**lar/oləar 'hang, throw upon' < chech. uollan [uo>eb]; bats. t**ep**lar/til'ar 'go down' < chech. t**i**lan [i>ep]; q**ep**sar/qosar 'throw' < chech. qwossan [wo>ep]" (Tokaeva, 2017, p. 90)).

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A feature of the Chechen language is predominance of the **uo** diphthong in the first syllable of verbal stems and nouns, which is an evidence of past labialized consonants (kuor, muor, huord, tuolan/twuolan, duoxdan/dwoxdan, duožan, uozan). It is the words with the **ou/uo** diphthong and the labial sonorant **w,** where the following phonetic shifts are most common in the Bats language (cf.: 'they' - chech. ***üš***>Chebarloish dialect ***owš***> ing. ***už***> bats. ***obi***).

4. Purpose of the Study

The propose of the study is to identify and compare those regular phonetic discrepancies in the common roots of the Chechen and Bats languages, which were left outside of the scope of previous works on the subject, or where the authors disagree with previous analysis.

5. Research Methods

The phonetic processes in cognate languages are identified and analyzed with a comparative method. The empirical part of the work uses the inductive analysis.

6. Findings

6.1. Phonetic changes in Chechen-Bats isoglosses, typical of the Bats language

6.1.1. Substitution or appearance of occlusive labial phonemes **p/b** in the Bats language in the place of labialized vowels **o**, **u**, diphthongs **ou/uo,** as well as labivelar approximant **w**:

chech. [ou/uo/ow/ov> bats. op/ep/ob/eb]

bats. jo**p'**q' 'ash' < chech. j**u**q';[1]

bats. q**abc'**dar/qac'dar 'to hang' < chech. q**uoz**a-dan;

bats. te**bl**dar/toldar 'to win in struggle' < t**uo**lan;

qe**b**sar/qosar 'to throw' < qw**o**ssan;

qeblar/qoləar 'to throw over' < q**uo**llan;

l**ab**c'ar 'to play' < l**ou**zan;

q**op'**tar/qovdar 'to stretch out' < q**ou**dan;

do**p**sar 'inflate' < chech. d**wu**san/ ing. dijsa;

de**p**c'ar 'to braid' < chech. d**wu**can/ing. duvsa;

e**p**c'ar 'to pull' < chech. **uo**zan – ing. **uv**za/**uv**za-de (Kadagidze & Kadagidze, 1984).

In the following words the phonetic changes followed the analogy principle, while their initial forms lack labialized vowels that are transformed to bilabial occlusive consonants, .

bats. de**b**lar/diləar 'to put' < chech. dillan/ing.dilla;

bats. te**b**lar/tiləar "to call; to pluck" < chech. tillan.

[1] Apostrophe is used as a marker of glottal plosivity after a consonant and as a glottal stop after before a vowel.

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6.1.2. Phonetic shift [l>t] of occlusive-fricative frontal sonorant l to the dental t took place in the Bats language as a new or secondary phenomenon after dissolution of the Proto-Nakh language into separate languages, as in all the Nakh-Dagestani languages for the root name *malx* "sun", the archetipe ***m(b)Vlx(γ)** may be reconstructed. The **l>t** transition was described by Desheriev (1953), however, he believes the Bats form to be the initial one.

[l>t]

bats. matx 'sun' < chech.malx/ing. malx (Dag. *bargh);

bats **.**detx 'cry (imperative)' < chech.delx 'cry (imperative)';

jetx 'six' < jalx/ ing. jalx (Dag. *ar(l)g);

ditx 'meat' < chech. dilx 'body'/ing. dulx (dux) 'meat' (Dag. *ilgh);

letxar 'to jump' < chech. lelxan/ ing. lelxa;

bats. botx 'work' < chech. buolx 'work' (cf.: fr. *labourer* [*laboγe*] 'to plow', *aγable* 'arable', spa. *arar, labrar* 'to plow', ita. *arare,* chech. *axa*^{n} (dial. *aγa*^{n}) 'to plow' [r>γ>x].

6.1.3. Appearance of labial p before unvoiced dental and back-sibillant spirants s(š)>ps/pš may be explained as a result of the law of analogy in pronunciation of words and as a result of pressure from the phonetic system of the Georgian language:

s(š)>ps/pš

bats. pst'u 'woman, female' - chech. stiee 'woman, female', ing. sesag 'wife', (PrNakh. *stie>stie>se-sag>sesag (stag>sag 'human, man'; Dag.*humš);

bats. pst'uin 'feminine' < chech. stiẽn/ing. sesaga/qal-näxa;

bats. ni**p**s-dar 'to level' < ni**s**dan;

bats. **ps**arlo 'evening' < chech. süire 'evening', ing. saire (PrN *sV(a)r; PrDag.: [*juš], georgian. seri 'evening; feast', sero-ba 'have supper'. Indeed, a closer match of morphemic structure between Nakh and Romance languages first seems being contradicting all the achievements of comparative linguistics (med. f. *soir, soirée* 'evening time' [oi>ui]. Lat. serus 1) 'twilight'; serum 2) 'late' ita.. sera 'evening', spa. sarao 'evening').

bats. pšeldar 'to cool' < chech. šel-dan.

bats. pšel 'cold' < chech. šieluo/šijla, ing. šijla ([PrN.*šel] cf.: Dag.: [*mVl(r)k].

The archetype of the word 'cold' ([PrN.*šel], reconstructed for Dagestani languages may be traced to another synonymic formation [*mil(r)k]; this root morpheme is preserved in the Chechen language in a collocation milla vallan 'to freeze to death, to be frozen stiff'. ([PrN.*šel], cf.: fr. *cailler* 'to feel cold', old eng. *celan* 'cold', mod.eng *cool, cold , chill*, Roma shilalo, rus. 'kholod', arab. *jiludun,* lat. *alsiōsus/alsus* 'chilly, sensitive to cold'. For example, in the Chechen language the "period of the strongest dry cold" is called *chill,* just like in English, while in the Old English *celan* 'cold' the [k] sound after palatalization before frontal vowels [e, i, y] shall transform into one of the following sounds ([č, ž, s, š]: *celan*>šijla 'cold'< šel-jan 'to cool').

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6.1.4. Transformation of a voiced dental occlusive phoneme d into an unvoiced ejective (non-ejective) phoneme t' (t) of the same location and manner of production:

[t' (t)>d]

bats. k'ort'ar 'to annoy' < chech. k'orda-dan [t'<d];

bats. as vui**t'**as 'I go' < chech. so voedu (Present (cf. Old eng. he ēode 'he went' – chech. i voedar)) [uit'<oed];

bats. t'at-dar 'to get wet' <chech. t'ada-dan [t'<d]/ing. t'oadade;

šwet' 'lash' < chech. šadd/ing. šodd [wet'<dd];

k'at'dar 'to soften' < chech. k'addan/ing. k'ädde [t'>d];

k'at'en 'soft' <chech. k'edan/ing. k'äda [t'>d];

bot' 'dough' < chech. buod/ing. bod [t'>d] *(*cf. fr. *pâte* [*pa*:t] 'dough');

vat'ar 'to run' < vadan.

6.1.5. Loss of initial laryngeal unvoiced spirant h in the Bats language:

[h>ɵ]

chech. **h**uottan/huotta-dan [h>; tə>tt] 'to stand, to put' > bats. **o**təar/etədar; imp. ott, ing. otta-de;

chech. **h**inc 'now' - bats. inc, ing. hanz;

chech. **h**incalera/hinclera 'current, present' - bats. inclu^{n} 'current, present', ing. hanzara.

6.1.6. Simplification of Bats word stem in comparison to Chechen isoglosses:

bats. xk'o 'summer' – chech. **ä**xkiee/ ing. axka;

bats. txa 'today' – chech. tax**an**;

bats. qā 'tomorrow' – chech. qā**na/** ing. qoana;

bats. qa 'pig' – chech. **h'a**qa;

bats. barg 'things' – chech. barg**al**;

k'nat (metathesis) 'boy' – chech. k'ant/ing. k'**ä**nk (cp.: old eng. cniht 'boy, adolescent').

6.1.7. Acquired ejectivity of Bats language sounds where there is no ejectivity in Chechen isoglosses:

[t' >t (k'>k)]

bats. best'ar/dest'ar 'to swell' < chech. bestan/destan;

bats. joxk'ar/axk'ar 'to sell' < chech. joxkan/doxkan;

mot't' 'tongue' < muott;

jexk' 'crest' < jexk;

daxk' 'mouse' < daxk.

6.1.8. Loss of dorsal sonorant [j] in the beginning of a word where the sound is intact in the Chechen language [jiš>iš].

[jiš>iš]

chech. jiš 'voice, song' > bats. iš 'voice, motif';

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chech.jiš alan ‘to sing a song’ > bats. iš jaqar ‘to make a sound; voice’;

chech.jiš xalan ‘to lose one's voice’ > bats. iš xalar ‘to lose one's voice’;

chech. stomma az ‘bass’ > bats. stamin iš ‘bass’.

6.2. Phonetic processes in the consonant system of the Chechen language:

6.1.2. Palatalization of velar occlusive g before n, j [g>j] and its transformation to j:

bats. sa**g** ‘deer’ > chech. sa**j** [g>j];

bats. dža**g**no ‘book’ - chech. dža**j**n ‘book’ / ing. dže**j** [g>j];

bats. c’e**g**en ‘red’ > chech. c’**i**en ‘red’/ ing. c’e [g>j];

bats. c’e**g**dar ‘to make red’ > chech. c**ij**dan ‘to make red’ [g>j];

bats. gaga’o ‘belly’ > gaj ‘belly’/ing. gijg [g>j];

bats. ta**g**ijar ‘to repair’ > chech. taaj-jan [g>j].

6.2.2. Transformation of back-velar occlusive ejective q’ to laryngeal voiced occlusive in the Chechen language (’ - glottal stop):

[q’ >’]

bats. daq’ar ‘food’ – chech. da’ar (cp.: arab. دقيق daq'iiq'un ‘flour’);

bats. toq’ar ‘to grab’ - chech. to’an;

bats. toq’-ditar ‘to content, settle for’ - chech. to’ijtan.

6.2.3. Pharyngeal fricative unvoiced phoneme h’ is transformed to a voiced pharyngeal ejective phoneme [’’][2]:

[h’> ‘’]

bats. voh’ ‘son’ - chech. vuo’’ (ing. vuo’’);

bats. joh’ ‘daughter’ - chech. juo’’(ing. juo’’);

bats. bah’o ‘nick, barb’ - chech. ba’’;

bats. dah’ar ‘to castrate’ - chech. da’’ar.

6.2.4. Loss of initial dental occlusive sound t in iterative verbs or verbs of repeated action:

bats. tet’ar ‘to cut, tear’ > ‘iet’an/ ing. teda.

6.2.5. Gemination of consonants in some infinitives of Chechen verbs, unlike those of the Bats language ”. This phonetic process the authors have already described in another work (Tokaeva, 2014):

bats. detəar ‘to pour’ – chech. duottan; bats. diblar/diləar ‘to put’ – chech. dillan; motəar ‘to seem, to think’ – chech. muottan; bats. qeblar/qaləar "to cover, to dress" - chech. quollan [eb<uo].

[2] [’’] Double apostrophe denotes a voiced pharyngeal ejective phoneme.

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7. Conclusion

Consequently, this research identified significant phonetic changes that mostly consider groups of consonant phonemes and sonorants and that happened in the Chechen and Bats languages as a result of their independent development.

1. In the phonetic system of the Bats language, the following phonetic changes dominate: transition of phonemes **u/o,** diphthongs **ou/uo** into bilabial **w/v** as a result of labializaton, with subsequent transition to **p/b,** substitution – replacement, loss or appearance of sounds, changes in syllabic structure of morphemes, ejectivation of consonants, prolonged parallel existence of variant forms.

2. The Chechen language underwent small changes in consonant system in comparison to the Bats language: palatalization and gemination of consonants, consonant shift (voicing and ejectivation of unvoiced pharyngeal spirant), loss of initial dental t,. Transformation of back-velar ejective q' into laryngeal occlusive (q'>'- glottal stop).

The languages in question also have less regular or one-off phonetic shifts, study of which is beyond the scope of this article.

The cause of most of the observed phonetic process is largely the influence from the Georgian language that resulted in changes in stress and other prosodic parameters, such as melodics, rhythm, intensity, tempo.

The authors hope that this humble work will spark interest in young scientists and thus facilitate further research into the endangered Bats language that lacks a written form.

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