Are Megrelian q’ and ? Phonemes?

Marine Ivanishvili, Ivane Lezhava

marine.ivanishvili@tsu.ge; ilejava@gmail.com

Ivane Javakhishvili Tbilisi State University

“ʔ sound has the same origin as q’, however, the former is half weaker than the latter qualitatively, as well as quantitatively. In particular, while pronouncing this sound, it is not necessary to press the organs, participating in its pronunciation, against each other strongly. The root of tongue, rising, slightly touches the end of the soft palate. The air stream, overcoming this obstruction, emits sound ʔ, which is less intensive by its pitch and length than sound q’.”
Кипшидзе І., Грамматика мингрельского (иверского) языка съ хрестоматией и словаремъ, Типографія Императорской Академіи Наукъ, С.-Петербургъ, 1914:

“q’ is characterized as glottal, complex, voiceless glottalized stop, and ʔ – as glottal, simple, voiced glottalized stop consonant, though, on the same page the author mentions ʔ among spirants, too. It is also interesting that the consonants, meant in “spirants” (h, ?, w, j) in reality are approximants.”
S. Zhghenti, *Chan-Megrelian Phonetics*, TSU, Tbilisi 1953:

“q’ is different from ʔ from the point of view of quantity, as well as quality. It is not correct to consider ʔ as a voiceless spirant, neither is it an ejective stop of full value. But it is more closer to ejective one because of momentaneous shut of glottis and plosion.”
T. Gudava, *Special Course in Megrelian, TSU, 1973-74:*

“ʔ is characterized as voiceless, ejective consonant, which is produced by clicking of vocal cords. In Megrelian it is a secondary sound, its apparition is connected to the sound q’. q’ → ʔ - this transition is explained by disfunction of pharyngeal triple (-, q, q’), though in Megrelian together with ʔ is represented q’, too. He notes that we can consider ʔ as a glottal stop in diverse positons.”
“q’ combines two positional variants q’ and ئ.”

Sh. Gaprindashvili, *For the Classification of Stop Consonants in Kartvelian Languages*, XIII, 1962:

“؟ is a sound of the similar translaryngeal phonation. For pronouncing ئ, considered as a stop of vocal cords, is necessary a phonatory stream, rising from the lungs. It is produced not among the vocal cords, but much higher, in the lower part of the pharyngeal cavity.”
“q’ is a pharyngeal consonant; during its articulation, the back part of the tongue approaches the back pharyngeal wall. At one glance, it seems that we deal with a fricative consonant. ʔ consonant is formed precisely like laryngeal fricative h consonant.”
Distributive Analysis

ʔ

• #-V - Initial position of a word before a vowel. In the initial position ʔ is attested before all five vowels:
  • ʔa – “branch”, “spray”
  • ʔert’i – “twig”
  • ʔilo – “tiger”
  • ʔotua – “lamentations”
  • ʔude – “house”
V-V — intervocal position:

• a-a: laʔapi – “play”
• e-e: šeʔeri – “vine shoot”
• i-i: goriʔinapa – “crane the neck”
• o-o: noʔori – “throat”
• u-u: nuʔu – “log”
In the complex composition (only before v):

ʔva – “forehead”
ʔvali – “cheese”
ʔvere – “blind”
ʔaʔvapi – “to bang”
bikʔvali – “bloated”
reʔvini – “to fidget”
poʔvinapa – “shrive”
cimʔva, cəmʔva – “strawberry”

Thus: #-V, V-V, #ʔv-, -Sʔv-.
q’
#—V:

• q’anc’i – “silk moth”
• q’eburi – “hearth”
• q’iari – “double-yoke”
• q’orq’eli – “throat, larynx”
• q’ursua – “to fall silent”
V-V:

raq’ale – “complaint”
vaq’a – “horse”
žabaq’ula – “middle decoration”, “wrapped around a pillow”
buq’uni – “wooden vessel barrel”
#q’v-:

q’vabua – “to feed”
q’vižali, q’vižili – “bluish”
q’vandgini – “to reproach”, “protest”, “grumble”
q’varili – “sterilized cock”
q’varani – “raven”

Thus: #-V, V-V, #q’v-. 
Regularities

• In Megrelian q’ is not changing in the case, if it is a member of a harmonic complex: e.g., Georg. t’ q’ avi (“leather”) : Megr. – t’q’ebi, Georg. mc’q’eri (“quail”) : Megr. – mč’q’ori, Georg. c’q’aloba (“mercy”, “favor”) : Megr. č’q’olopua, Georg. mc’q’emsi (“shepherd”) : Megr. č’q’iši, Georg. c’q’vet’a (“interruption”) : Megr. č’q’vad, etc.

• In Megrelian q’ is conserved even when in the same word are represented two q’-s. E.g., Georgian q’i q’inebs (“it croaks”) : Megr. q’aq’ alans, Georg. q’urq’uri (“curmurring”) : Megr. q’urq’ini, etc.

• q’ is also evidenced in the words, recently borrowed from Georgian, e.g., Georg. q’ avari (“shriendle”) : Megr. q’ ambari, ĵaq’va (“pen-knife”), briq’vi (“stupid”), niq’vi (“sort of mushrooms”), sit’q’va (“word”), etc.
Conclusion of Distributive Analysis

$q'$ and $ʔ$ are two independent phonemes in the consonant structure of Megrelian language. $ʔ$ is a secondary sound, derived from $q'$, $q' \rightarrow ʔ$, at the first stage of the shift we had free alternation of $q' \parallel ʔ$ variants, and after, finding themselves in contrast positions, were formed as independent phonemes. Typologically, in the languages, where glottalization is represented, phoneme /ʔ/ is also evidenced – i.e., as we have in Megrelian.
Acoustic Analysis

• The digital acoustic analysis of Megrelian speech was made by the following computer programs: Praat and WaveSurfer.

• The graphic pictures of the analyzed Megrelian audio material (waveform, pitch contour, power plot and spectrogram) were visualized by WaveSurfer.
Figure 1. ყია [q’ia] (stop) – “abdomen” (G. Sh. male)
Figure 2. ქალანს [q’a χ’alans] (initial stop, intervocalic spirantoid) – “it croaks” (G. Sh. – male)
Figure 3. ყავა [q’ava] (stop+ spirant) – “coffee” (N. K. – female)
Figure 4. ქართული [χ’a χ’un] (initial and intervocalic fricative) – “he would eat much” (P. Ts. – male)
Figure 5. ყვითელი [q’vintəli] (stop) – “yellow” (R. A. – male)
Figure 6. ტყობაშე [t'q'ebaʃe] (stop) – “secretly” (T. A. – female)
Figure 7. ᶜგჰჳო [t’χ’ap’i] (fricative) – “dried plum juice” (L. G. – male)
Figure 8. წყობისა [ts’χ’irt’u] (fricative) – “hen’s illness” (R. A. – male)
Figure 9. ჭერთენი [ʔurdzɛni] (glottal stop with noise) – “grape” (G. A. – male)
Figure 10. გორჯო [ʔilua] (glottal stop) – “croak” (G. Sh. – male)
Figure 11. გუჯი [ʻudʒi] (glottal stop) – “ear”
(N. K. – female)
Figure 12. ’alifbā’ [ʔalifbaː?] (’ - glottal stop, “hamza”) – “alphabet” (Egyptian Arab)
Figure 13. ‘aba’a [ʔabaʔa] (‘ – pharyngeal approximant, “ayn”; ’ - glottal stop, “hamza”) – “to pay attention” (Egyptian Arab)
Figure 14. tabiʿa [tabiʕa] (ʿ – pharyngeal approximant, “ayn” – “to follow” (Egyptian Arab)}
Figure 15. ნოღე [nɔɛna] (voiced approximant) – “they have had” (L. G. – female)
Figure 16. ფიდე [ɕide] (voiced approximant) – “to be bought” (L. D. – male)
Conclusion of the Acoustic Analysis

• According to the acoustic picture, sound ʔ in Megrelian can be phonetically characterized as follows: in initial position as a glottal stop, and in intervocalic position – as voiced pharyngeal approximant with laryngealization. The voicing should be promoted by the fact that for the pronunciation of this sound a moderate and not extreme medial compression of the vocal folds is typical. Exactly such complicated nature of sound ʔ should be the reason of various, sometimes even contradictory, descriptions (Tsagareli, Kipshidze).
References

• N. Imnadze, Zanuri enis megruli dialektis bgeriti shedgeniloba, Tbilisi 1981.
• S. Zhghenti, Chanur-megrulis phonetika, TSU gamomtsemloba, Tbilisi, 1953.
• N. Penrikhi, Z. Sarjveladze, Kartvelur enata etimologiuri leksikoni, Tbilisi 2000.
• И. Кипшидзе, Грамматика мингрельского (иверского) языка съ хрестоматией и словаремъ, Типографія Императорской Академіи Наукъ, С.-Петербургъ.
• Arn. Chikobava, Sakhelis pudzis udzvelesi agebuleba kartvelur enebshi, Tbilisi, 1942.
• A. Цагарели, Мингрельские этюды, II, С.-Петербург 1880.
• P. Charaia, Megrul-kartuli leksikoni, Tbilisi 1997.
• M. Khubua, Megruli tekstebi, Tbilisi 1937.