

Peculiarities of Georgian Pronunciation

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o. Some time ago, a native speaker (Nik D.) contacted us, proposing to update and complete the previous description of the pronunciation of Georgian (which appeared in our handbook *Natural Phonetics & Tonetics*, 2007), by adding usual transcriptions and intonation sentences. He sent us suggestions and useful material for working together, but now that we might proceed systematically, we can not get in touch with him anymore, in spite of a number of attempts on our part. In the meanwhile, we have decided to concentrate on just a few interesting ‘problems’ of this language: its functional transliteration and the ‘incredible’ length of consonant clusters, more peculiarly at the beginning of words, including its true (not approximate) vowel system.

1. The *transliteration* system we decided to use for Georgian here is rather simple and does not actually interfere with our transcriptions. Thus, we only have some letters with a diacritical mark: *š* and *ž*, for /ʃ, ʒ/ [ʃ, ʒ]; *č* and *ẓ̌*, for /tʃh, dʒ/ [tʃh, dʒ̣] (rather than *tš* and *dž*). Besides, we have *c* and *z*, for /tsh, dz/ [tsh, dz] (rather than *ts* and *dz*).

Notice that Georgian also has *t-s* and *t-š* /ths, thʃ/ [ths, thʃ], in addition to *t’s* and *t’š* /t’s, t’ʃ/ [t’s, t’ʃ], which are different. For *p, t, k, c, č*, we have the combinations /ph, th, kh, tsh, tʃh/, as well. All these, in unstressed syllables, are indicated as /C(h)/, because /h/ may be dropped, or weakened ([h]).

Besides, we use *k* and *g* for /χ, ɣ/ [χ, ɣ] (rather than ‘simpler’ *kh* and *gh*). In fact, a still ‘simpler’ system would use *sh* and *zh* (instead of *š* and *ž*), but heavier *tsh* and *dzh* (instead of *tš* and *dž*, seen above, for *č* and *ẓ̌*). In addition, we have more ‘regular’ *s, z, v, and q’*, for /s, z, v, q’/ (for the latter, someone might prefer a simple *q*, hurriedly, since it does not oppose a plain /q/, and not even any ‘qh/’!).

To complete this short survey, we have: *i, e, a, o, u* for /i, e, a, o, u/ [i, e, a, o, u]. But also /ə/ [ə] is conveniently necessary and useful for a scientific description of this language, free from the noxious influence of traditional spelling (and transliteration).

Unfortunately, all traditional spellings, for any language, have some more or less ‘tragic’ defects as far as pronunciation is concerned. Actually, also Spanish spelling is not quite perfect, although much better than so many others, because of its simpler phonemic system. To be true, even Esperanto spelling would be much better if reduced to 26 letters, also eliminating a couple of less useful and a bit more complicated phonemes: *ĥ, ĵ* /x, ʒ/ [x, ʒ].

We also have *m* /m/ [m], *n* /n/, [n; m, ɱ, ɲ, ɳ, ɶ, ɷ, ɸ, ɹ, ʀ, ʁ, ʂ, ʃ, ʣ, ʤ, ʥ, ʦ, ʧ, ʨ, ʻ, ʼ, ʽ, ʾ, ʿ, ʿ̣, ʿ̤, ʿ̥, ʿ̦, ʿ̧, ʿ̨, ʿ̩, ʿ̪, ʿ̫, ʿ̬, ʿ̭, ʿ̮, ʿ̯, ʿ̰, ʿ̱, ʿ̲, ʿ̳, ʿ̴, ʿ̵, ʿ̶, ʿ̷, ʿ̸, ʿ̹, ʿ̺, ʿ̻, ʿ̼, ʿ̽, ʿ̾, ʿ̿, ʿ̀, ʿ́, ʿ̂, ʿ̃, ʿ̄, ʿ̅, ʿ̆, ʿ̇, ʿ̈, ʿ̉, ʿ̊, ʿ̋, ʿ̌, ʿ̍, ʿ̎, ʿ̏, ʿ̐, ʿ̑, ʿ̒, ʿ̓, ʿ̔, ʿ̕, ʿ̖, ʿ̗, ʿ̘, ʿ̙, ʿ̚, ʿ̛, ʿ̜, ʿ̝, ʿ̞, ʿ̟, ʿ̠, ʿ̡, ʿ̢, ʿ̣, ʿ̤, ʿ̥, ʿ̦, ʿ̧, ʿ̨, ʿ̩, ʿ̪, ʿ̫, ʿ̬, ʿ̭, ʿ̮, ʿ̯, ʿ̰, ʿ̱, ʿ̲, ʿ̳, ʿ̴, ʿ̵, ʿ̶, ʿ̷, ʿ̸, ʿ̹, ʿ̺, ʿ̻, ʿ̼, ʿ̽, ʿ̾, ʿ̿, ʿ̀, ʿ́, ʿ̂, ʿ̃, ʿ̄, ʿ̅, ʿ̆, ʿ̇, ʿ̈, ʿ̉, ʿ̊, ʿ̋, ʿ̌, ʿ̍, ʿ̎, ʿ̏, ʿ̐, ʿ̑, ʿ̒, ʿ̓, ʿ̔, ʿ̕, ʿ̖, ʿ̗, ʿ̘, ʿ̙, ʿ̚, ʿ̛, ʿ̜, ʿ̝, ʿ̞, ʿ̟, ʿ̠, ʿ̡, ʿ̢, ʿ̣, ʿ̤, ʿ̥, ʿ̦, ʿ̧, ʿ̨, ʿ̩, ʿ̪, ʿ̫, ʿ̬, ʿ̭, ʿ̮, ʿ̯, ʿ̰, ʿ̱, ʿ̲, ʿ̳, ʿ̴, ʿ̵, ʿ̶, ʿ̷, ʿ̸, ʿ̹, ʿ̺, ʿ̻, ʿ̼, ʿ̽, ʿ̾, ʿ̿, ʿ̀, ʿ́, ʿ̂, ʿ̃, ʿ̄, ʿ̅, ʿ̆, ʿ̇, ʿ̈, ʿ̉, ʿ̊, ʿ̋, ʿ̌, ʿ̍, ʿ̎, ʿ̏, ʿ̐, ʿ̑, ʿ̒, ʿ̓, ʿ̔, ʿ̕, ʿ̖, ʿ̗, ʿ̘, ʿ̙, ʿ̚, ʿ̛, ʿ̜, ʿ̝, ʿ̞, ʿ̟, ʿ̠, ʿ̡, ʿ̢, ʿ̣, ʿ̤, ʿ̥, ʿ̦, ʿ̧, ʿ̨, ʿ̩, ʿ̪, ʿ̫, ʿ̬, ʿ̭, ʿ̮, ʿ̯, ʿ̰, ʿ̱, ʿ̲, ʿ̳, ʿ̴, ʿ̵, ʿ̶, ʿ̷, ʿ̸, ʿ̹, ʿ̺, ʿ̻, ʿ̼, ʿ̽, ʿ̾, ʿ̿, ʿ̀, ʿ́, 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phonemic transcription, we necessarily use our own *canIPA* phonotonic transcription, which accurately shows the real pronunciation of modern Georgian (rather than with a too simple and generic *offIPA* transcription, perhaps full of complicated diacritics).

2. Georgian is a Caucasian language which has *six* vocoids, although currently available descriptions (too heavily based on spelling) posit only five vowel *phonemes*, although a /ə/ is inserted between highly complex consonant sequences, but with quite different taxophones, as we will see. Actually, instead of using simple [Cə], or [C^ə], some consonants (especially sonants, /N/, ie /m, n; r; l/) may be alternatively realized as intense (or ‘syllabic’) [Ç], ie [N̥].

Georgian presents opposition between ‘voiced’ non-continuant consonants, /C/, ie /b, d, g; dz, dʒ/ [b, d, g, g; dz, dʒ], and voiceless *espirated* ones (avoiding the traditional term ‘aspirated’, which is highly unscientific), /Ch/, ie /ph, th, kh; tsh, tʃh/ [pʰ, tʰ, kʰ, kʰ; tʃʰ, tʃʰ] (including [-h, -h̥, -h̥]), or ejective ones, /Cʰ/, ie /pʰ, tʰ, kʰ, qʰ; tsʰ, tʃʰ/ [pʰ, tʰ, kʰ, qʰ; tsʰ, tʃʰ]. However, we will see that voice is only a taxophonic possibility, both for /b, d, g; dz, dʒ/ [b, d, g, g; dz, dʒ], and /m, n; v; s, z, ʃ, ʒ; ʋ; r; l/ [m, n; v; s, z, ʃ, ʒ; ʋ; r, z; l, l̥], as well, including the taxophones of /n/ [m, n̥, n̥, ɱ, n̥, n̥, n̥, n̥].

Actually, instead of positing the following *voiced* consonantal phonemes /b, d, g; dz, dʒ; z, ʒ, ʋ/ [b, d, g, g; dz, dʒ; z, ʒ, ʋ], we might (even better) introduce simple /p, t, k; ts, tʃ; s, ʃ, χ/ [p, t, k, k; ts, tʃ; s, ʃ, χ].

Thus, for the non-continuant consonants, we would only need /p, t, k, q; ts, tʃ/ [p, t, k, k, q, q; ts, tʃ], which occur in the typical Georgian sequences with peculiar laryngeal devices, represented by the ‘addition’ of /h/ or /ʰ/, respectively, for *espiration* and *glottalization*: [Ch] and [Cʰ]; notice that [C] is different from both [Ch] and [Cʰ].

3. The sonants, /N/ (nasal, ‘rhotic’, lateral) may be devoiced, even completely, in voiceless contexts. As already seen, /n/ is homorganic to a following consonant, /n≡C/, [m, n̥, n̥, n̥, ɱ, n̥, n̥, n̥, n̥]; /l/ is [l̥] (semi-velarized), but [l] + /i, e/; /r/ is [r] (or [z], mainly in less careful colloquial or non-emphatic speech).

The labiodental ‘/v/’ is an approximant (rather than a real constrictive, [v]), and labialized, [v̥], in addition to its voiceless taxophone, [v̥].

The laryngeal approximant /h/ [h] rarely occurs on its own; it mostly occurs in /ChV/ contexts, often also realized as a semi-approximant, [h̥], or even completely dropped, becoming ‘zero’ [∅], especially in unstressed syllables. In addition, when actually present, it may be ‘colored’ by a following vocoid, becoming [hi, ha, hu]. The most important ‘function’ of /h/ is in *espirated consonants*, /Ch/.

Ejective /qʰ/ [qʰ, qʰ] has some possible variants (mainly in colloquial speech), as [kʰkʰ] (voiceless trilled uvular stopconstrictive), [kʰ] (voiceless trilled uvular constrictive), opposing /χ, ʋ/ [χ, ʋ] (uvular constrictive taps).

Georgian is well-known for its ‘incredible’ *consonant clusters* (mainly for traditional spelling). In actual fact, they are often either interrupted by [.] , or by intense (‘syllabic’) consonants.

4. *Important concluding remarks* on the real nature of so many written consonants occurring in clusters. They are generally realized as articulatory semi-weak syllables, mainly corresponding to /Cə/, but *not* as full true '[Cə]', rhythmically alternating between half-stressed and unstressed syllables.

The three vocograms (for neutral, mediatic and colloquial Georgian) show them as their main 'semi-vocalic' phones. Let us remark that the term 'semi-vocalic' has nothing to do with the unscientific yet ubiquitous one of 'semi-vowel' (or semi-consonant') for *approximant* phones like [j, w], which are nothing but plain consonants (even in their weaker forms: as *semi-approximant*, [j, w], and *demi-approximant*, [ɟ, w]).

In addition, the fourth vocogram presents the area in which six taxophones occur, practically used at random, and independently from assimilatory contexts, for the three accents shown.

In unstressed /Cə/ syllables with voiceless consonants, instead of [.] (realized with voice), we find [◌] (realized without voice) but rather clearly perceptible as that, also after [h, ʔ] (perhaps, rather difficult to admit, for non-Georgian people).

5. What can be said about such a peculiar way of both writing (in transliteration, too) and pronouncing such a language, is that spelling (as in many other languages, unfortunately) is less representative than actual utterances (also due to less friendly etymology 'rules').

However, it must be said that Georgian native speakers succeed in producing a kind of half-way 'thing' between two (more 'natural') possibilities: a 'poor' spelling and a 'compromise' pronunciation.

Even phonemically, we should posit sequences of /Cə/ (including /C'ə/ and /Chə/), adding /v(ə), s(ə), l(ə)/, because, in certain 'easier' contexts, they may be realized simply as /v, s, l/, since they are produced as continuous with no interruption, not even partial as, instead, for the nasals.

However, it must be very clear that what we indicate just as '/ə/' is *never* actually realized as a true [ə], as is shown in our vocograms, including the fourth one, which presents frequent variants. Those symbols are superscript in order not to make anybody think that they should actually be realized fully.

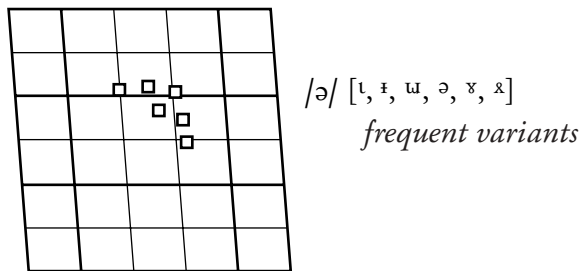
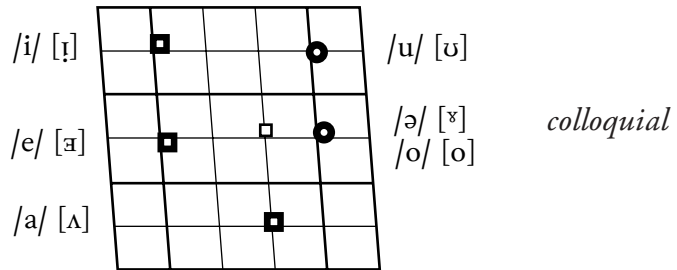
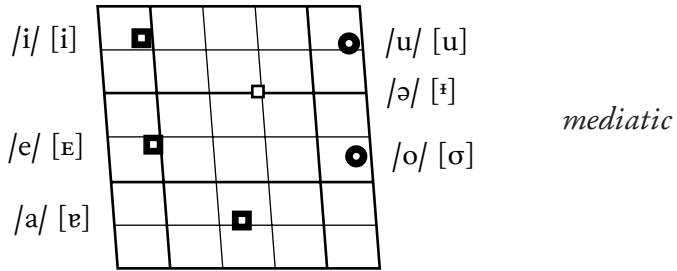
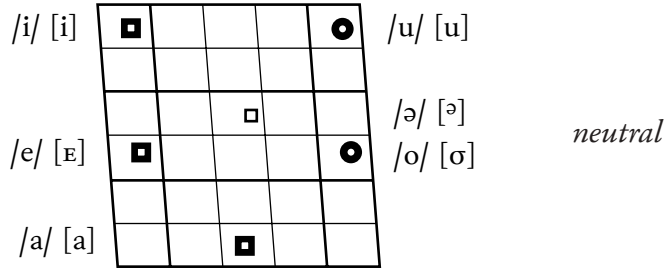
In phonetic transcriptions, it is not really necessary to use any superscript symbol. Certainly, it is sufficient to use [◌] and [◌], as already said.

6. Here are some examples:

c'q'ali, sc'ori, rze, tma, mta, cveni, tkven, tkviri, tk'bili, prtkili, čq'vlep's, c'vrtnis, prckvnis;

/ts'əq'ali, s'ts'ori, rə'dze, thə'ma, mə'tha, tshə'veni, thəkhə'ven, thəxə'viri, thək'ə-bili, phrəthə'χili, tʃhəq'əvə'lep's, ts'əvr(ə)thə'nis, phrətshəkhəvə'nis/;

[ts'◌q'ali; s'ts'◌ori; r◌dZE, r'◌dZE; t(h)◌ma; m◌'tha, m'◌tha; ts(h)◌'ŪENi; t◌k(h)◌'ŪEN; t(h)◌'χ'Ūiri; t◌k'◌bili; phr◌t(h)◌'χ'i'li; tʃ◌h'q'◌Ū'lep's; ts'◌'Ūr◌t(h)◌'nis; phr◌ts(h)◌'kh'◌Ū'nis, p(h)◌'t-].



m [m]	[n]	n	[ɲ]	[ŋ]	[ŋ]	[ɳ]	[N]
p ^(ʔ) b	t ^(ʔ) d			[k ^(ʔ) g]	k ^(ʔ) g	[qʔ]	qʔ (kʔ) (kʔ) X ʔ
	ts ^(ʔ) dz		tʃ ^(ʔ) dʒ				
	s z		ʃ ʒ				
ʊ [ʃ]		[z]					h
		r					
		[l]	ɫ				

