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# Classical Armenian: Phonology

Part 1 – Segmental Phonology: Consonants



# Classical Armenian: Phonology 1

- Segmental phonology: consonants
- The stops and affricates
- Consonant alternations

## Segmental phonology: consonants

- Classical Armenian had 30 consonants:

- 9 **stops**:

- *p, b, p'* [p<sup>h</sup>]
- *t, d, t'* [t<sup>h</sup>]
- *k, g, k'* [k<sup>h</sup>]

- 6 **affricates**:

- *c* [tʰ], *j* [dʒ], *c'* [tʰʰ]
- *č* [tʃ], *ǰ* [dʒ], *č'* [tʃʰ]

## Segmental phonology: consonants

- 6 **fricatives**:
  - *x, h*
  - *s, z, š [ʃ], ž [ʒ]*
  
- 6 **sonorants**:
  - *m, n*
  - *r [r] (tap?), ř [r] (trilled?)*
  - *l, ł [ɬ]*
  
- and 2 (3?) **glides**: *w, v, y [j]*.

manner/ place	labial	dental	alveolar	post- alveolar	palatal	velar	glottal
stops and affricates: <i>voiceless</i> <i>voiced</i> <i>aspirate</i>	<b>p</b> <b>b</b> <b>p<sup>h</sup> &lt;p'&gt;</b>	<b>t</b> <b>d</b> <b>t<sup>h</sup> &lt;t'&gt;</b>	<b>ts &lt;c&gt;</b> <b>dz &lt;j&gt;</b> <b>ts<sup>h</sup> &lt;c'&gt;</b>	<b>tʃ &lt;č&gt;</b> <b>dʒ &lt;ǰ&gt;</b> <b>tʃ<sup>h</sup> &lt;č'&gt;</b>		<b>k</b> <b>g</b> <b>k<sup>h</sup> &lt;k'&gt;</b>	
fricatives						<b>x</b>	<b>h</b>
trill tap (?)			<b>r &lt;ṙ&gt;</b> <b>r &lt;r&gt;</b>				
sibilants: <i>voiceless</i> <i>voiced</i>			<b>s</b> <b>z</b>	<b>ʃ &lt;š&gt;</b> <b>ʒ &lt;ž&gt;</b>			
nasal	<b>m</b>		<b>n</b>				
lateral			<b>l</b>			<b>ɭ &lt;ɭ&gt;</b>	
glides	<b>w/v</b>				<b>j</b>		

## The stops and affricates

- A longstanding problem of Classical Armenian phonology is the realization of the stops and affricates. Traditionally they are transcribed as **voiceless**, **voiced**, and **voiceless aspirated**, e.g. *t*, *d*, *t'* [t<sup>h</sup>].
- Diachronically, they reflect a shift in manner of articulation similar to, but independent of, Grimm's Law in Germanic:

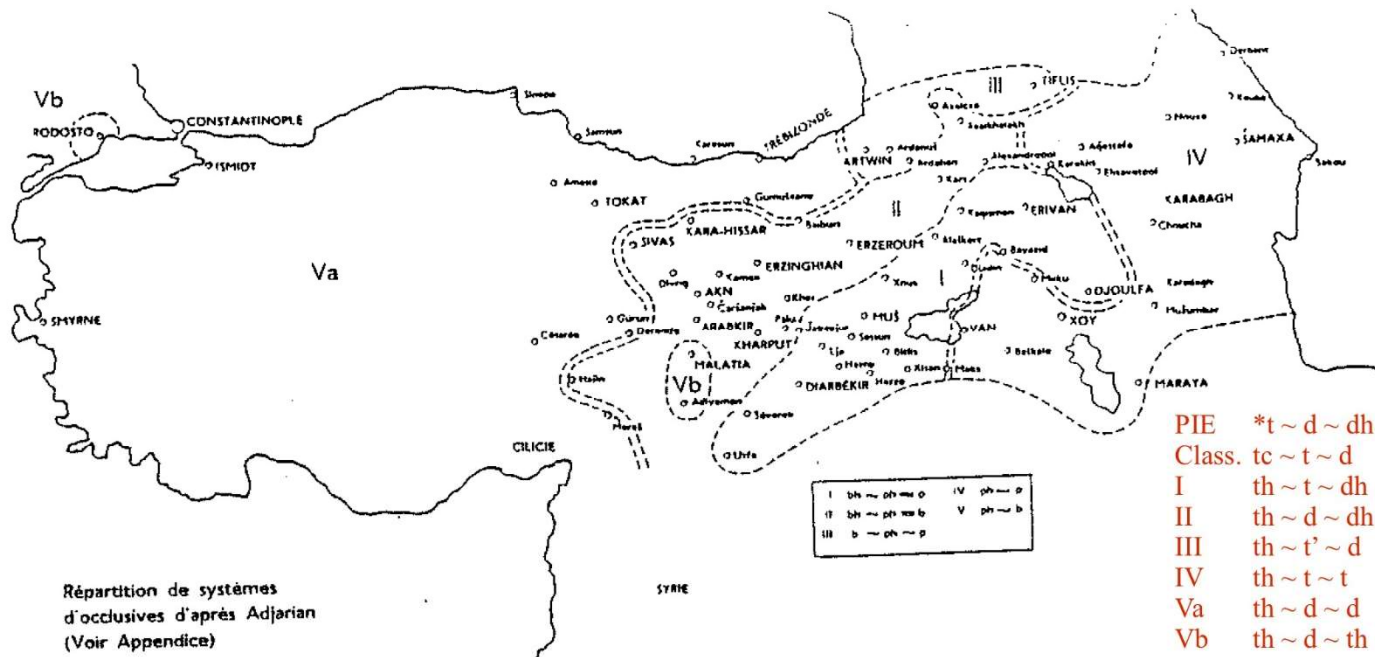
Proto-Indo-European	Armenian
* <i>t</i> (Tenues, voiceless)	<i>t'</i> [t <sup>h</sup> ]
* <i>d</i> (Mediae, voiced)	<i>t</i>
* <i>d</i> <sup>h</sup> (Mediae Aspiratae, voiced aspirated)	<i>d</i>

## The stops and affricates

- A major difficulty for this view is the realization of the stops and affricates in **Modern Armenian dialects**.
- Most Western Armenian dialects have voiced stops corresponding to Classical Armenian and Modern Eastern Armenian (MEA) voiceless stops, and voiceless (aspirated) stops for CA and MEA voiced stops.

	Western	Eastern
Պետրոս <i>Petros</i>	[bedros]	[petros]
Էմիաճին <i>Ējmiacin</i>	[etʃ <sup>(h)</sup> miadzin]	[edʒmiatʰsin]
բերեմ <i>berem</i>	[p <sup>(h)</sup> erem]	[berem]

# Armenian dialects (pre-1915): treatment of stops





## The stops and affricates

- As there is no support for a “flip-flop” rule in historical phonology whereby  $A > B$  but  $B > A$ , the only possible conclusion is that the voiceless series (T) and/or the voiced series (D) must have had some additional feature, e.g.
  - the voiceless stops were ejectives (as in some MEA dialects), or
  - the voiced stops were actually voiced aspirated.

## The stops and affricates

- Garrett (*BLS* 24 [1998]) interprets **Adjarian's Law**, by which back vowels in initial syllables are fronted after voiced stops in certain dialects, as an effect of **breathy voice**.

PIE	Classical	Kar-evan	Karabagh	
*b <sup>h</sup>	ban	ben	pen	'speech'
	baɾdʒɪ	bəɾdʒɪ	petʂəɪ	'high'
*d <sup>h</sup>	dalaɪ		telaɪ	'green'
*j	dʒuɪ	dʒɪɪ	tʃɪɪ	'water'
*w	garn	gʲərnɪ	gʲærnɪ	'lamb'
	garun	gʲərunk <sup>h</sup>	gʲærunk <sup>h</sup>	'spring'
	go <sup>2</sup>	gʲəx	kʲəx	'thief'

In that case, Armenian must have retained the PIE breathy-voiced stops as such, and the parallel with Germanic would be inexact.

## Consonant alternations: *r* ~ *ṛ*

- *r* and *ṛ* are separate phonemes. Minimal pairs are rare, but they do exist: cf. *lowr* ‘knowledge’ vs. *lowṛ* ‘silent’.
- *r* > *ṛ* / \_\_ *n*
- aor. *darj-ay* ~ pres. *daṛnam* (< \**darj-nam*) ‘turn (intr.)’
- *ayr* ‘man’, nom. pl. *ar-k’* ~ gen. sg. *aṛn*
- *learn* ‘mountain’ ~ gen. *lerin* ~ abl. *lernē* (< \**lerin-ē*)
  
- But the alternation is often leveled:
  - *gaṛn* ‘lamb’, gen. *gaṛin* (for \**garin*)
  - *garown* ‘spring’, gen. *garnan* (not †*gaṛnan*)

## Consonant alternations: / and ʔ

- / and ʔ are separate phonemes, though minimal pairs are rare: cf. *gol* ‘to be, exist’ vs. *goʔ* ‘thief’.
- The distribution of / and ʔ is partly complementary:
  - word-initially, only /- in native names (ʔ- in foreign names, e.g. *ʔazar*);
  - variation in some words, e.g. *gayl* ~ *gayʔ* ‘wolf’.
- Suggests that / and ʔ developed by phonemic split from pre-Arm. *\*l*, but exact conditions remain unclear.

## Consonant alternations: $h \sim \emptyset$

- Initial  $h$ - is deleted when it comes to stand word-internal, e.g. after a preposition or in a compound.
- *hat-anem* 'cut' ~ *lezow-at* (<  $*\text{-hat}$ ) 'with split tongue',
- *hatanem* 'cut' ~ *zatanem* 'split' (<  $*\text{z-hatanem}$ )
- *het* 'trace' ~ *yet* (<  $*\text{y-het}$ ) 'after'

## Consonant alternations: $y \sim \emptyset$

- Word-final  $-y$  is deleted after  $i$  and  $u$  in the PRS.3SG and PRS.2PL. After  $e$ , the sequence  $-e-y$  is realized as  $-\bar{e}$ .

prs.1sg.	prs.3sg.
<i>kam</i> 'stand'	<i>ka-y</i>
<i>sirem</i> 'love'	<i>sirē</i> < $*-e-y$
<i>nstim</i> 'sit (down)'	<i>nsti</i> < $*-i-y$
<i>(gom)</i> 'am (there)'	<i>go-y</i>
<i>hełowm</i> 'pour'	<i>hełow</i> < $*-u-y$

## Consonant alternations: $y \sim \emptyset$

- In the imperfect, the -y- before the endings of *a*- and *o*-conjugation verbs disappears after stems ending in -e- and -u-.

prs.1sg.	imperfect 1sg.
<i>kam</i> 'stand'	<i>ka-y-i</i>
<i>sirem</i> 'love'	<i>sire-<del>ø</del>-i</i>
<i>nstim</i> 'sit (down)'	<i>nste-<del>ø</del>-i</i>
<i>(gom)</i> 'am (there)'	3pl. <i>go-y-in</i>
<i>hełowm</i> 'pour'	<i>hełow-<del>ø</del>-i</i>

## Consonant alternations (morphophonemic)

- Several other alternations are restricted to particular morphemes.
- $c' \sim s$ : if the aorist stem is weak (i.e. ends in  $-c'$ ) and polysyllabic, the sequence  $*-c'c'-$  ( $*-c'j-$ )  $>$   $-sc'-$  ( $-sj-$ ) in the aor.subj. outside the 1sg.

Aorist indicative	Aorist subjunctive
<i>bac'-i</i> 'opened'	1sg. <i>ba</i> <b><i>c'</i></b> - <i>ic'</i> , 3sg. <i>ba</i> <b><i>c'</i></b> - <i>c'-ē</i>
<i>sirec'-i</i> 'loved'	1sg. <i>sire</i> <b><i>c'</i></b> - <i>ic'</i> , 3sg. <i>sire</i> <b><i>s</i></b> - <i>c'-ē</i>
<i>darjowc'-i</i> 'turned (tr.)'	1sg. <i>darjow</i> <b><i>c'</i></b> - <i>ic'</i> , 3sg. <i>darjow</i> <b><i>s</i></b> - <i>c'-ē</i>
[ <i>arar-i</i> 'made']	1sg. <i>arar-ic'</i> , 3sg. <i>ara</i> <b><i>s</i></b> - <i>c'-ē</i> (!)



## Consonant alternations (morphophonemic)

- $b \sim w \sim \emptyset$  in the ins.sg. and ins.pl.:

Ending	Examples
- $b(k')$ after sonorants	<i>har-<b>b</b></i> ‘with father’, <i>anjam-<b>b</b></i> ( $< * -an-b >$ ‘with the person’)
- $w(k')$ after vowels except <i>u</i>	<i>azga-<b>w</b></i> ‘with the people’, <i>jio-<b>v</b></i> ‘with the horse’, <i>bayi-<b>w</b></i> ‘with the word’
- $\emptyset(k')$ after <i>u</i>	<i>kovow-<b>∅</b></i> ‘with the cow’

N.B. /w/ written as <v> after o, since <ow> = /u/.

## Consonant alternations (morphophonemic)

- $y \sim w$  in the inflection of *wo*- and *ea*-class nouns:  $*y > w / \_\_ o$

	Sg.	Pl.	Sg.	Pl.
Nom.	<i>ordi</i> 'son'	<i>ordik'</i>	<i>teṭi</i> 'place'	<i>teṭik'</i>
Acc.	<i>ordi</i>	<i>ordis</i>	<i>teṭi</i>	<i>teṭis</i>
Gen./Dat.	<i>ordwoy</i>	<i>ordwoc'</i>	<i>teṭwoy</i>	<i>teṭeac'</i>
Loc.	<i>ordi, ordwoy</i>	<i>ordis</i>	<i>teṭwoj</i>	<i>teṭis</i>
Abl.	<i>ordwoj</i>	<i>ordwoc'</i>	<i>teṭwoy, teṭwojē</i>	<i>teṭeac'</i>
Ins.	<i>ordwov</i>	<i>ordwovk'</i>	<i>teṭeaw</i>	<i>teṭeawk'</i>

շնորհակալութիւն

Thank you for your attention!