

Xĕλōk Sound Changes:

A Cheat Sheet

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While Xĕλōk is distinct enough from its Esperanto ancestor to be reasonably considered a separate language at this juncture, its orthography does not reflect this. While syntactic and semantic changes are reflected to a fairly reasonable extent in the orthography, phonological changes are not accounted for. As a result, to reasonably approximate the pronunciation of a Xĕλōk word from how it is written, one must understand which sound changes have occurred from the ‘original’ (hereafter ‘Zamenhofian’) Esperanto.

Note that some sound changes listed apply only to the Lowlands dialect but not to the Highlands dialect, or vice-versa. This is indicated when it is the case.

Zamenhofian Esperanto Orthography

The Esperanto pronunciation of a word tends to be roughly equivalent to its spelling in IPA, with the following exceptions:

⟨c⟩	⟨ĉ⟩	⟨ĝ⟩	⟨ĥ⟩ ¹	⟨ĵ⟩	⟨ŝ⟩	⟨r⟩	⟨ŭ⟩	⟨v⟩
/ts/	/tʃ/	/dʒ/	/x/	/ʒ/	/ʃ/	/r/	/w/	/v/

¹ This phoneme is only retained in a very few words at this point (e.g., ‘*ĥo*’, ‘*ĥaoso*’) and is elsewhere generally replaced with variants with k or h.

Primary stress falls on the penultimate syllable, and secondary stress *tends* to fall on alternating syllables preceding it.

1 Sound Changes

0–100 AMC

/v/ becomes [w] when it would fit in the sonority hierarchy of a consonant cluster and [v] elsewhere

$$\begin{aligned} v &\rightarrow w / C_V \\ v &\rightarrow v / \textit{elsewhere} \end{aligned}$$

e.g., ‘*kvarto*’ [ˈkvar.to] → [ˈkwar.to], ‘*evakui*’ [e.vaˈku.i] → [e.vaˈku.i]

Stress moves to the last syllable of correlatives and finite forms of ‘*esti*’

e.g., ‘*tiel*’ /ˈti.el/ → /tiˈel/, ‘*estas*’ /e.stas/ → /eˈstas/, etc., but ‘*estu*’ remains /ˈe.stu/

/i/ and /u/ → /j/ and /w/ before a stressed vowel

e.g., ‘*duono*’ [duˈo.no] → [ˈdwo.no], ‘*tiel*’ [tiˈel] → [tjel], etc.

Nasals assimilate in place of articulation to a following obstruent

$N \rightarrow m / _ \{p, b, f\}$

$N \rightarrow n / _ \{t, d, \widehat{t}, \widehat{d}, s, z, \mathfrak{t}, \mathfrak{z}\}$

$N \rightarrow \eta / _ \{k, g\}$

e.g., 'enblövi' [en'blöwi] → [em'blo.wi]

Obstruents assimilate in voicing to a following obstruent

e.g., 'absolute' [ab.so'lu.te] → [ap.so'lu.te]

Clusters of mixed sibilants assimilate to the last sibilant

e.g., 'disjeti' [dis'ʒe.ti] → [diʒ'ʒe.ti]

Vowel hiatuses are broken up by epenthetic consonants

- If both consonants are the same, the epenthetic consonant is a glottal stop.

[a.a] → [aʔa] [e.e] → [eʔe] [i.i] → [iʔi] [o.o] → [oʔo] [u.u] → [uʔu]

- If the first non-low vowel is front, the epenthetic consonant is [j]

[i.e] → [ije] [i.a] → [ija] [i.o] → [ijo] [i.u] → [iju]
[e.i] → [eji] [e.a] → [eja] [e.o] → [ejo] [e.u] → [eju]
[a.i] → [aji] [a.e] → [aje]

- If the first non-low vowel is back, the epenthetic consonant is [w]

[o.i] → [owi] [o.e] → [owe] [o.a] → [owa] [o.u] → [owu]
[u.i] → [uwi] [u.e] → [uwe] [u.a] → [uwa] [u.o] → [uwo]
[a.o] → [awo] [a.u] → [awu]

Velar obstruents become palatal before front vowels/glides

$k \ g \rightarrow \text{c } \mathfrak{j} / _ \{i, e, j\}$

e.g., 'kilogramo' [ki.lo'gra.mo] → [ci.lo'gra.mo]

Vowels shift closer to glides when they precede them

Back vowels are fronted before /j/, and front vowels are rounded before /w/. Low vowels are raised to mid prior to either glide and are fronted before /j/ and backed and rounded before /w/.

$u \rightarrow y / _ j$
 $o \rightarrow \emptyset / _ j$
 $a \rightarrow e / _ j$
 $a \rightarrow o / _ w$
 $e \rightarrow \emptyset / _ w$

e.g., 'kajto' ['kaj.to] → ['kej.to], 'abelujo' [a.be'lu.jo] → [a.be'ly.jo], 'vojo' ['vo.jo] → ['vø.jo], 'ambaŭ' ['am.baw] → ['am.bow], 'eŭropa' [ew'ro.pa] → [øw'ro.pa]

100–200 AMC

When glides occur as the lone onset of a syllable, they become fricatives

Based on the maximum onset principle, this generally only occurs intervocalically or word-initially.

$$j \ w \rightarrow \text{ɹ} \ v \ / \ \$_V$$

e.g., ‘*ejakuli*’ [e.ja'ku.li] → [e.ɹa'ku.li] but ‘*ajna*’ [aj.na] → [ej.na] but ‘*antaŭa*’ [an'to.wa] → [an'to.va]

Glides disappear after vowels but provide compensatory lengthening

$$\begin{aligned} V^{+front}j &\rightarrow V: \\ V^{+round}w &\rightarrow V: \end{aligned}$$

Note that this change *only* occurs when the glide part of the same syllable as the vowel in question—if the glide is instead the lone onset of the following syllable, it is affected by the previous sound change instead.

e.g., ‘*kajto*’ [kej.to] → [ke:.to], ‘*tuj*’ [tyj] → [ty:], ‘*vojmontrilo*’ [vøj.mon'tri.lo] → [vø:.mon'tri.lo], ‘*ambaŭ*’ [am.bow] → [am.bo:], ‘*eŭropa*’ [øw'ro.pa] → [ø:'ro.pa]

Glottal stop and glottal fricative merge

$$/?/ \rightarrow /h/$$

e.g., ‘*heroo*’ [he'ro.ʔo] → [he'ro.ho]

LOWLANDS: Standalone obstruents are voiced intervocalically

$$p \ t \ k \ \widehat{ts} \ \widehat{tʃ} \ f \ s \ ʃ \ h \rightarrow \ b \ d \ ɟ \ g \ \widehat{dʒ} \ \widehat{dʒ} \ v \ z \ ʒ \ fi \ / \ V_V$$

e.g., ‘*šipo*’ [ʃi.po] → [ʃi.bo]

Intervocalic geminates become single occurrences of the consonant in question

$$C^1C^2 \rightarrow C^1 / C^1 = C^2$$

e.g., ‘*disšuti*’ [diʃʃu.di] → [diʃu.di]

LOWLANDS: Non-glottal fricatives are affricativized after nasal consonants

$$f \ s \ ʃ \ v \ z \ ʒ \rightarrow \ \widehat{pf} \ \widehat{ts} \ \widehat{tʃ} \ \widehat{bv} \ \widehat{dz} \ \widehat{dʒ} \ / \ N_$$

e.g., ‘*komforti*’ [kom'for.ti] → [kom'p̄for.ti], ‘*bronzā*’ [b̄ɾon.za] → [b̄ɾon.d̄za]

Vowels are nasalized before nasal consonants

$$V \rightarrow \tilde{V} \ / \ _N$$

e.g., ‘*ankaŭ*’ [ʌn.ko:] → [ʌ̃n.ko:]

200–300 AMC

LOWLANDS: Nasal consonants are deleted when they precede obstruents

Ablaut

If the last vowel in a word is rounded, the preceding vowel is rounded (regardless of intervening consonants).
e.g., *'kato'* ['ka.to] → ['kɔ.to], *'iros'* ['i.ros] → ['y.ros], *'ekzemplo'* [ek'sēm.plo] → [ek'søm.plo]

If the last vowel in a word is front, the preceding vowel is fronted (regardless of intervening consonants).
e.g., *'havis'* ['ha.vis] → ['hæ.vis], *'ofte'* ['of.te] → ['øf.te], *'seksumi'* [sek'sũ.mi] → [sek'sỹ.mi]

$$\begin{aligned} V^{-front} &\rightarrow V^{+front} / _ (C(C)) \$ (C(C(C))) V^{+front} \# \\ V^{-round} &\rightarrow V^{+round} / _ (C(C)) \$ (C(C(C))) V^{+round} \# \end{aligned}$$

$$\begin{aligned} /i/^{+round} &= [y] \\ /e/^{+round} &= [\emptyset] \\ /a/^{+round} &= [\text{ɒ}] \\ /a/^{+front} &= [\text{æ}] \\ /o/^{+front} &= [\emptyset] \\ /u/^{+front} &= [y] \end{aligned}$$

HIGHLANDS: Word-initial syllables consisting of an obstruent or nasal, a vowel, and then a continuant in the syllable coda undergo metathesis of the schwa and continuant

$$\begin{aligned} C_1VC_2 &\rightarrow C_1C_2V / \# _ (C) \$ \\ C_1 &= \text{obstruent or nasal}, C_2 = \text{continuant} \end{aligned}$$

e.g. *'forkuri'* [for'ku.ri] → [fro'ku.ri]

300–400 AMC

/r/ disappears in the coda and the preceding vowel, if short, undergoes compensatory lengthening

$$Vr \rightarrow V: / _ (C) \$$$

e.g., *'forkuri'* (Lowlands) [for'ku.ri] → [fo:'ku.ri]

l-vocalization occurs when l occurs in the coda of a syllable

$$l \rightarrow w / V _ (C) \$$$

e.g., *'bulbo'* ['bul.bo] → ['buw.bo]

HIGHLANDS: Standalone obstruents are voiced intervocalically

$$p \ t \ c \ k \ \text{ts} \ \text{tʃ} \ f \ s \ ʃ \rightarrow b \ d \ ɟ \ g \ dz \ dʒ \ v \ z \ ʒ / V _ V$$

e.g., *'šipo'* ['ʃy.po] → ['ʃy.bo] (identical in Lowlands), *'disšuti'* [di'ʃy.ti] → [di'zy.di] (cf. Lowlands [di'ʃu.di]),
'ankaŭ' ['b̥.ko:] → ['b̥.go:] (cf. Lowlands ['b̥.ko:])

Unstressed short vowels become schwa

e.g., *'Esperanto'* [e.spe'rɔ̃.to] → [e.spə'rɔ̃.tə], *'tajfuno'* [te:'fu.no] → [te:'fu.nə]

LOWLANDS: After a nasal vowel, voiced stops become nasal stops

$b \ d \ ɟ \ g \rightarrow m \ n \ ɲ \ ŋ \ / \ \tilde{V} _$

e.g., ‘*embrio*’ [əˈbry.jə] → [əˈmryjə]

400–500 AMC

500–600 AMC

600–700 AMC

700–800 AMC

800–900 AMC

900–1000 AMC

2 Sparky’s Transcription

I’ll probably make an in-world orthography later, but regardless of whether I do, I need a roughly phonetic or phonemic transcription which I can use to not have to constantly write in IPA. That’ll go here once I actually make it lol.

3 Pronunciation Example

The following is the Zamenhofian Esperanto text of the Lord's Prayer. Given that the text is highly ritualized, it has not been affected by the grammatical and lexical changes to the language, but it remains pronounced differently in the different dialects due to the sound changes that have occurred.

Zamenhofican Esperanto c. 0 AMC

*Patro nia, kiu estas en la ĉielo,
sanktigata estu Via Nomo.
Venu Via regno.
Fariĝu Via volo,
kiel en la ĉielo, tiel ankaŭ sur la tero.*

*Nian panon ĉiutagan donu al ni hodiaŭ.
Kaj pardonu al ni niajn ŝuldojn,
kiel ankaŭ ni pardonas al niaj ŝuldantoj.
Kaj ne konduku nin en tenton,
sed liberigu nin de la malbono.*

*Ĉar Via estas la regno kaj la potenco
kaj la gloro eterne.*

Amen.

'pa.tro 'ni.a
'ki.u 'e.stas en la tŝi'e.lo
'sank.ti'ga.ta 'e.stu 'vi.a 'no.mo
've.nu 'vi.a 're.gno
fa'ri.dʒu 'vi.a 'vo.lo
'ki.el en la tŝi'e.lo
'ti.el 'an.kaw sur la 'te.ro
'ni.an 'pa.non tŝi.u'ta.gan
'do.nu al ni ho'di.aw
kaj par'don.u al ni 'ni.ajn 'ŝul.dojn
'ki.el 'an.kaw ni par'do.nas
al 'ni.aj ŝul'dan.toj
kaj ne kon'du.ku nin en 'ten.ton
sed li.be'ri.gu nin de la mal'bo.no
tŝar 'vi.a 'e.stas la 're.gno
kaj la po'ten.tso
kaj la 'glo.ro e'ter.ne
'a.men

c. 100 AMC

'pa.tro 'ni.ja
'cju e'stas en la 'tʃje.lo
,sɔŋk.ti'ga.ta 'e.stu 'vi.ja 'no.mo
've.nu 'vi.ja 're.gno
fa'ri.ɖʒu 'vi.ja 'vo.lo
cjel en la 'tʃje.lo
tjel 'aŋ.kow sur la 'te.ro

'ni.jan 'pa.non 'tʃju'ta.gan
'do.nu al ni ho'di.jow
kej par'don.u al ni 'ni.jejn 'ʃul.døjn
cjel 'aŋ.kow ni par'do.nas
al 'ni.jej ʃul'dan.tøj
kej ne kon'du.ku nin en 'ten.ton
sed ʃli.be'ri.gu nin de la mal'bo.no

tʃar 'vi.ja e'stas la 're.gno
kej la po'ten.tso
kej la 'glo.ro e'ter.ne

'a.men

c. 200 AMC

LOWLANDS

'pa.tro 'ni.ja
'cju e'stas ɛn la 'tʃje.lo
,sɔŋk.ti'ga.ɖa 'e.stu 'vi.ja 'no.mo
'vɛ.nu 'vi.ja 're.gno
fa'ri.ɖʒu 'vi.ja 'vo.lo
cjel ɛn la 'tʃje.lo
tjel 'ãŋ.ko: sur la 'te.ro

'ni.jãn 'pã.nõn 'tʃju'ta.gãn
'dõ.nu al ni ho'di.jo:
ke: par'dõn.u al ni 'ni.jẽ:n 'ʃul.dõ:n
cjel 'ãŋ.ko: ni par'dõ.nas
al 'ni.je: ʃul'dãn.tø:
ke: ne kõn'du.gu nĩn en 'tẽn.tõn
sed ʃli.be'ri.gu nĩn de la mal'bõ.no

tʃar 'vi.ja e'stas la 're.gno
ke: la po'dẽn.ɖzo
ke: la 'glo.ro e'ter.ne

'ã.mẽn

HIGHLANDS

'pa.tro 'ni.ja
'cju e'stas ɛn la 'tʃje.lo
,sɔŋk.ti'ga.ta 'e.stu 'vi.ja 'no.mo
'vɛ.nu 'vi.ja 're.gno
fa'ri.ɖʒu 'vi.ja 'vo.lo
cjel ɛn la 'tʃje.lo
tjel 'ãŋ.ko: sur la 'te.ro

'ni.jãn 'pã.nõn 'tʃju'ta.gãn
'dõ.nu al ni ho'di.jo:
ke: par'dõn.u al ni 'ni.jẽ:n 'ʃul.dõ:n
cjel 'ãŋ.ko: ni par'dõ.nas
al 'ni.je: ʃul'dãn.tø:
ke: ne kõn'du.ku nĩn ɛn 'tẽn.tõn
sed ʃli.be'ri.gu nĩn de la mal'bõ.no

tʃar 'vi.ja e'stas la 're.gno
ke: la po'tẽn.tso
ke: la 'glo.ro e'ter.ne

'ã.mẽn

- c. 300 AMC**
- c. 400 AMC**
- c. 500 AMC**
- c. 600 AMC**
- c. 700 AMC**
- c. 800 AMC**
- c. 900 AMC**
- c. 1000 AMC**