



Language Specific Peculiarities Document for Halh Mongolian as Spoken in MONGOLIA

Halh Mongolian, also known as Khalkha (or Xalxa) Mongolian, is a Mongolic language spoken in Mongolia. It has approximately 3 million speakers.

1. Special handling of dialects

There are several Mongolic languages or dialects which are mutually intelligible. These include Chakhar and Ordos Mongol, both spoken in the Inner Mongolia region of China. Their status as separate languages is a matter of dispute (Rybatzki 2003). Halh Mongolian is the only Mongolian dialect spoken by the ethnic Mongolian majority in Mongolia.

Mongolian speakers from outside Mongolia were not included in this data collection; only Halh Mongolian was collected.

2. Deviation from native-speaker principle

No deviation, only native speakers of Halh Mongolian in Mongolia were collected.

3. Special handling of spelling

None.

4. Description of character set used for orthographic transcription

Mongolian has historically been written in a large variety of scripts. A Latin alphabet was introduced in 1941, but is no longer current (Grenoble, 2003). Today, the classic Mongolian script is still used in Inner Mongolia, but the official standard spelling of Halh Mongolian uses Mongolian Cyrillic. This is also the script used for all educational purposes in Mongolia, and therefore the script which was used for this project. It consists of the standard Cyrillic range (Ux0410-Ux044F, Ux0401, and Ux0451) plus two extra characters, Ux04E8/Ux04E9 and Ux04AE/Ux04AF (see also the table in Section 5.1).

5. Description of Romanization scheme

The table in Section 5.1 shows Appen's Mongolian Romanization scheme, which is fully reversible. Transcription work was done by Halh Mongolian speakers working with the Mongolian Cyrillic script only (i.e., no Romanization); the Romanization scheme is primarily used as a reference for those unfamiliar with the Mongolian Cyrillic script.

Appen's scheme is based on the standard Romanization for Mongolian Cyrillic, but has been altered to be reversible.



5.1 Mongolian Cyrillic Romanization Scheme

Unicode	Mongolian Cyrillic	Roman	Description	Comments
0x401	Ё	yO	CYRILLIC CAPITAL LETTER IO	
0x410	А	A	CYRILLIC CAPITAL LETTER A	
0x411	Б	B	CYRILLIC CAPITAL LETTER BE	
0x412	В	V	CYRILLIC CAPITAL LETTER VE	
0x413	Г	G	CYRILLIC CAPITAL LETTER GHE	
0x414	Д	D	CYRILLIC CAPITAL LETTER DE	
0x415	Е	yE	CYRILLIC CAPITAL LETTER IE	
0x416	Ж	J	CYRILLIC CAPITAL LETTER ZHE	
0x417	З	Z	CYRILLIC CAPITAL LETTER ZE	
0x418	И	I	CYRILLIC CAPITAL LETTER I	
0x419	Й	I1	CYRILLIC CAPITAL LETTER SHORT I	
0x41a	К	K	CYRILLIC CAPITAL LETTER KA	Foreign
0x41b	Л	L	CYRILLIC CAPITAL LETTER EL	
0x41c	М	M	CYRILLIC CAPITAL LETTER EM	
0x41d	Н	N	CYRILLIC CAPITAL LETTER EN	
0x41e	О	O	CYRILLIC CAPITAL LETTER O	
0x41f	П	P	CYRILLIC CAPITAL LETTER PE	Foreign
0x420	Р	R	CYRILLIC CAPITAL LETTER ER	
0x421	С	S	CYRILLIC CAPITAL LETTER ES	
0x422	Т	T	CYRILLIC CAPITAL LETTER TE	
0x423	У	U	CYRILLIC CAPITAL LETTER U	
0x424	Ф	F	CYRILLIC CAPITAL LETTER EF	Foreign
0x425	Х	Kh	CYRILLIC CAPITAL LETTER HA	
0x426	Ц	Ts1	CYRILLIC CAPITAL LETTER TSE	
0x427	Ч	Ch	CYRILLIC CAPITAL LETTER CHE	
0x428	Ш	Sh	CYRILLIC CAPITAL LETTER SHA	
0x429	Щ	Sh1	CYRILLIC CAPITAL LETTER SHCHA	Foreign

Unicode	Mongolian Cyrillic	Roman	Description	Comments
0x42a	Ъ	I2	CYRILLIC CAPITAL LETTER HARD SIGN	Foreign (except when indicating voluntative)
0x42b	Ы	Y1	CYRILLIC CAPITAL LETTER YERU	
0x42c	Ь	I3	CYRILLIC CAPITAL LETTER SOFT SIGN	
0x42d	Э	E	CYRILLIC CAPITAL LETTER E	
0x42e	Ю	yU	CYRILLIC CAPITAL LETTER YU	
0x42f	Я	yA	CYRILLIC CAPITAL LETTER YA	
0x430	а	a	CYRILLIC SMALL LETTER A	
0x431	б	b	CYRILLIC SMALL LETTER BE	
0x432	в	v	CYRILLIC SMALL LETTER VE	
0x433	г	g	CYRILLIC SMALL LETTER GHE	
0x434	д	d	CYRILLIC SMALL LETTER DE	
0x435	е	ye	CYRILLIC SMALL LETTER IE	
0x436	ж	j	CYRILLIC SMALL LETTER ZHE	
0x437	з	z	CYRILLIC SMALL LETTER ZE	
0x438	и	i	CYRILLIC SMALL LETTER I	
0x439	й	i1	CYRILLIC SMALL LETTER SHORT I	
0x43a	к	k	CYRILLIC SMALL LETTER KA	Foreign
0x43b	л	l	CYRILLIC SMALL LETTER EL	
0x43c	м	m	CYRILLIC SMALL LETTER EM	
0x43d	н	n	CYRILLIC SMALL LETTER EN	
0x43e	о	o	CYRILLIC SMALL LETTER O	
0x43f	п	p	CYRILLIC SMALL LETTER PE	Foreign
0x440	р	r	CYRILLIC SMALL LETTER ER	
0x441	с	s	CYRILLIC SMALL LETTER ES	
0x442	т	t	CYRILLIC SMALL LETTER TE	
0x443	у	u	CYRILLIC SMALL LETTER U	

Unicode	Mongolian Cyrillic	Roman	Description	Comments
0x444	ф	f	CYRILLIC SMALL LETTER EF	Foreign
0x445	х	kh	CYRILLIC SMALL LETTER HA	
0x446	ц	ts1	CYRILLIC SMALL LETTER TSE	
0x447	ч	ch	CYRILLIC SMALL LETTER CHE	
0x448	ш	sh	CYRILLIC SMALL LETTER SHA	
0x449	щ	sh1	CYRILLIC SMALL LETTER SHCHA	Foreign
0x44a	ъ	i2	CYRILLIC SMALL LETTER HARD SIGN	Foreign
0x44b	ы	y1	CYRILLIC SMALL LETTER YERU	
0x44c	ь	i3	CYRILLIC SMALL LETTER SOFT SIGN	
0x44d	э	e	CYRILLIC SMALL LETTER E	
0x44e	ю	yu	CYRILLIC SMALL LETTER YU	
0x44f	я	ya	CYRILLIC SMALL LETTER YA	
0x451	ё	yo	CYRILLIC SMALL LETTER IO	
0x4ae	У	U1	CYRILLIC CAPITAL LETTER STRAIGHT U	
0x4af	у	u1	CYRILLIC SMALL LETTER STRAIGHT U	
0x4e8	Ө	O1	CYRILLIC CAPITAL LETTER BARRED O	
0x4e9	ө	o1	CYRILLIC SMALL LETTER BARRED O	

6. Description of method for word boundary detection

Halh Mongolian words are delimited by whitespace. There is no special word boundary detection needed for this language. Mongolian is an agglutinative language, however, and as such has many word affixes.

7. Table containing all phonemes in the stipulated notation

The phonemic transcription of the words in this database uses X-SAMPA symbols, which can be found at <http://www.phon.ucl.ac.uk/home/sampa/x-sampa.htm>. The total number of native phonemes is 47. There are 27 consonants, 2 semi-vowels, and 18 vowels (13 monophthongs and 5 diphthongs).

MONGOLIAN PHONE CHART

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
CONSONANTS					
Б б	Ux0411	B b	p	p	
	Ux0431		pʲ	p_j	Rare.
П п	Ux041f	P p	p ^h	p_h	Foreign phone (particularly in Chinese loans).
	Ux043f		p ^{hj}	p_hj	Rare, foreign phone (particularly in Chinese loans).
Г г	Ux0413 Ux0433	G g	g	g	
			gʲ	g_j	
			ᠭ	G\	Allophone of /g/ and /g_j/ in –ATR words (note: the phone remains [g] or [g_j] in morpheme-final position, except when followed by a single vowel, indicating realization as /G\ and a mute vowel. The phone also remains [g] or [g_j] in the suffix <гий>). /G\ does not take palatalization.
Д д	Ux0414	D d	t	t	
	Ux0434		tʲ	t_j	Rare.
Т т	Ux0422	T t	t ^h	t_h	
	Ux0442		t ^{hj}	t_hj	Rare.
Ж ж	Ux0416 Ux0436	J j	tʃ	tS	/tS/ does not take palatalization.
Ч ч	Ux0427	Ch ch	tʃ ^h	tS_h	/tS_h/ does not take palatalization.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
	Ux0447				
З з	Ux0417 Ux0437	Z z	ts	ts	/ts/ does not take palatalization.
Ц ц	Ux0426 Ux0446	Ts1 ts1	ts ^h	ts_h	/ts_h/ does not take palatalization.
Ш ш	Ux0428 Ux0448	Sh sh	ʃ	s	/s/ does not take palatalization.
Щ щ	Ux0429 Ux0449	Sh1 sh1	ʃ	s	Russian letter, pronounced /S/ in Halh. /S/ does not take palatalization.
С с	Ux0421 Ux0441	S s	s	s	/s/ does not take palatalization.
Ф ф	Ux0424 Ux0444	F f	f	f	Rare, foreign phone. /f/ does not take palatalization.
			p ^h	p_h	Foreign phone. Alternative (naïve) pronunciation of /f/ in foreign words.
К к	Ux041a Ux043a	K k	k ^h	k_h	Foreign phone.
			k ^{hj}	k_hj	Rare, foreign phone.
			x	x	Naïve Halh pronunciation corresponding to /k_h/.
			x ^j	x_j	Naïve Halh pronunciation corresponding to /k_hj/.
Х х	Ux0425 Ux0445	Kh kh	x	x	
			x ^j	x_j	
Л л	Ux041b Ux043b	L l	ʙ	k\	
			ʙ ^j	k_j	

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
М м	Ux041c	M m	m	m	
	Ux043c		m ^j	m _j	Rare.
Н н	Ux041d Ux043d	N n	n	n	
			n ^j	n _j	
			ŋ	N	Syllable final realization (except when followed by a single vowel, indicating realization as /n/ and a mute vowel, or when followed by a dental consonant). /N/ does not take palatalization.
P p	Ux0420	R r	r	r	
	Ux0440		r ^j	r _j	
В в	Ux0412	V v	w̥	w_c	
	Ux0432		w̥ ^j	w_cj	Rare.
Ъ ъ	Ux042a Ux044a	l2 i2	∅	∅	Default (naïve) realization.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
Ь ь	Ux042c	I3 i3	j	ɟ	soft sign ² .
	Ux044c		i	i ¹	
Ю ю	Ux042e Ux044e	yU yu	∅	∅	Realization when followed by a soft vowel.
			j u	j u ³	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. Realization in +ATR environments.
			j u	ɟ u	Realization after a consonant that takes palatalization. Realization in +ATR environments.
			j u:	j u:	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. This pronunciation corresponds to orthographic <юү> or <иү> following a consonant. Realization in +ATR environments.
			j u:	ɟ u:	Realization after a consonant that takes palatalization. Realization in +ATR environments.
			j ʊ	j U	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or

¹ Ideally, Halh orthography has <ь> when there is palatalization but no /i/ vowel, and <и> when there is /i/. However, the two can interchange when certain suffixes are added, depending on phonotactics: тавь ~ тавин '5'; тавь 'place it!' ~ тавиад 'having placed.' In addition, certain speakers with non-standard phonotactics may sometimes produce /i/ where <ь> is written. Finally, in certain cases the two letters serve to distinguish homophones: e.g. аньс 'aniseed' ~ анис 'bilberry.' In general, however, the rule is followed that the soft sign indicates no vowel and <и> indicates a vowel.

² The soft sign occurs in -ATR words (and in occasional ad hoc spellings in +ATR words), where it indicates the reflex of Middle Mongolian *i in weak prosodic position and MM *j. It is realized as fronting and raising of the vowel of the preceding syllable and some degree of palatalization of the preceding consonant.

³ These sequences are glide + vowel sequences, not unitary phonemes.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
					preceded by a consonant that doesn't take palatalization. Realization in -ATR environments.
			ᠵ	ᠵ	Realization after a consonant that takes palatalization. Realization in -ATR environments.
			ᠵ:	ᠵ:	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. This pronunciation corresponds to orthographic <юү> or <иү> following a consonant. Realization in -ATR environments.
			ᠵ:	ᠵ:	Realization after a consonant that takes palatalization. Realization in -ATR environments.
Я я	Ux042f Ux044f	yA ya	ja	ja	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. Doubled letter <яя> indicates the diphthong /jaj/.
			ᠵa	ᠵa	Realization after a consonant that takes palatalization.
			ja:	ja:	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. Written <яа> and after a consonant <иа>; also <еэ> and possibly (in rare cases) <иэ>.
			ᠵa:	ᠵa:	Realization after a consonant that takes palatalization.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
Ë ë	Ux0401 Ux0451	yO yo	j ɔ	j O	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. Doubled letter <ëë> indicates the diphthong /jOj/.
			ʲ ɔ	ʲ O	Realization after a consonant that takes palatalization.
			j ɔ:	j O:	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. Written <ëo> or <иo> following a consonant.
			ʲ ɔ:	ʲ O:	Realization after a consonant that takes palatalization.
E e	Ux0415 Ux0435	yE ye	j i	j i	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. /i/ can be lengthened, if the syllable is stressed Doubled letter <ee> indicates the diphthong /jij/.
			ʲ i	ʲ i	Realization after a consonant that takes palatalization. /i/ can be lengthened, if the syllable is stressed.
			j ε:	j E:	Realization when in word-initial position, preceded by another vowel, preceded by the hard sign, or preceded by a consonant that doesn't take palatalization. Written <eэ>.
			ʲ ε:	ʲ E:	Realization after a consonant that takes palatalization.
			o j	o j	A possible realization of the voluntative suffix after a vowel (After

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
					a consonant, it is usually realized as / <i>(j)i/</i> or / <i>(j)i:/</i>).
VOWELS					
А а	Ux0410 Ux0430	А а	a	a	
			a:	a:	Written <aa> except in certain monosyllables such as <та> ‘you (pl./sg.form.)’ (see footnote 4).
			∅	∅	Possible realization in word-final position, especially after <г>, <л>, and <н>, but see footnote 6. Exceptions to this occur, particularly for loan words.
Э э	Ux042d Ux044d	Э э	ε	E	
			ε:	E:	Written <ээ>.
			∅	∅	Realization in word-final position (except for monosyllables – see footnote 6). Exceptions to this occur, particularly for loan words.
О о	Ux041e Ux043e	О о	ɔ	O	
			ɔ:	O:	Written <оо>.
			∅	∅	Possible realization in word-final position, especially after <г>, <л>, and <н>, but see footnote 6. Exceptions to this occur, particularly for loan words.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
И и	Ux0418 Ux0438	I i	i ⁴	i	In both + and –ATR words. However, in multisyllabic –ATR words, <и> word-finally indicates palatalization rather than the vowel /i/. <и> also indicates palatalization, rather than the vowel /i/, after any consonant in a –ATR word.
			j	ɨ	Realization following any consonant and word-finally in –ATR words.
Й й	Ux0419 Ux0439	I2 i2	i:	i:	/i:/ is written <ий> in words containing +ATR ⁵ vowels (that is, it indicates length).
			j	j	In some foreign loans (e.g. йог 'yoga,' йогурт 'yogurt') and a few historic diphthongs, now tending to monophthongize).
Ы ы	Ux042b Ux044b	Y1 y1	i:	i:	<ы> regularly corresponds to /i:/ in –ATR words, though this correspondence is rare in stems – it is mostly used in case endings.
Ө ө	Ux04e8 Ux04e9	O1 o1	o	o	
			o:	o:	Written <өө>.
			∅	∅	Realization in word-final position, except in monosyllables (see footnote 4).

⁴ In monosyllables such as би 'I', чи 'you (sg. inform.)', and та 'you (pl./sg. form.)', the vowel is pronounced long (due to lengthening of final short vowels in monosyllables which occurred about two centuries ago), but is written with the historic value. Also, word-final vowel letters <a>, <э>, <o>, <ө>, which sometimes are silent in polysyllables, are always pronounced (never silent) in a monosyllable word (since they are the only vowel in the word).

⁵ Please see Notes below regarding the +/- ATR (non-pharyngeal/pharyngeal) distinction.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
У у	Ux0423	U u	ʊ	U	Written <yy>.
	Ux0443		ʊ:	U:	
Ү ү	Ux04ae	U1 u1	u	u	Written <yy>.
	Ux04af		u:	u:	
VOWEL + GLIDE SEQUENCES					
үя	Ux0443 Ux044f	u ya	ʊ j	U j	
үе	Ux04af Ux0435	u1ye	u j	u j	
оө	Ux043e Ux0451	o yo	ɔ j	O j	
ее	Ux04e9 Ux0435	o1 ye	o j	o j	Rare. Can also be realized as /i(:)/ in cases of the voluntative suffix after consonant-final verb stems.
ая	Ux0430 Ux044f	a ya	a j	a j	
эе	Ux044d Ux0435	e ye	ɛ j	E j	
DIPHTHONGS⁶					
үй	Ux0443 Ux0439	u i2	ʊi	Ui	Rare.

⁶ We note that there is variation across speakers in the realization of these phones. Mildly diphthongal pronunciations appear to be more common among the older generations. The weak diphthongs ai and Oi are usually monophthongized, Ei is also usually monophthongized to E:, and Ui is monophthongized by some speakers. Monophthongization of ui appears to be much less common. In all cases, we have observed that the pronunciation of what we have called 'vowel + glide' sequences is phonetically distinct from the pronunciation of the 'diphthongs'.

TYPICAL MONGOLIAN CORRESPONDENCE	UNICODE	ROMAN	IPA	SAMPA	COMMENTS
үй	Ux04af Ux0439	u1 i2	ui	ui	
ой	Ux043e Ux0439	o i2	ɔi	Oi	
ай	Ux0430 Ux0439	a i2	ai	ai	
эй	Ux044d Ux0439	e	ɛi	Ei	

OTHER SYMBOLS	
.	syllable break
#	word boundary

Notes

1. Aspirated Consonants

Consonant aspiration is a distinctive property of Halh phonology that can occur only with voiceless stops and affricates (Svantesson et al., 2005:13). This includes the native phones /t_h/, /t_hj/, /tʃ_h/ and /ts_h/, as well as the foreign phones /p_h/, /p_hj/, /k_h/ and /k_hj/.

2. ATR and vowel harmony

There is a distinction in Mongolian between pharyngeal or -ATR and non-pharyngeal or +ATR vowels. Vowels classified as +ATR include /E/, /E:/, /o/, /o:/, /u/ and /u:/, while those considered -ATR are /a/, /a:/, /O/, /O:/, /U/ and /U:/. /i/ and /i:/ are neither classified as +ATR or -ATR, but are neutral.

These distinctions inform the conventions of vowel harmony in Mongolian, such that all vowels in a single word must be either +ATR or -ATR, but generally not a mixture of both (except in some names). In terms of vowel harmony, /i/ and /i:/ can occur in both +ATR and -ATR words, though in cases where they are the first vowel in the word, they act as triggers for +ATR vowel harmony only (i.e. /i/ and /i:/ can follow +ATR and -ATR vowels, but they may only be followed by +ATR vowels, except in compound



words following a word boundary) (van der Hulst et al., 1987:82; *Lingua Mongolia*, 2012).

Note that the orthographic representation of /i:/ varies depending on whether it occurs in a +ATR or –ATR environment. In +ATR environments, <ий> occurs. In –ATR environments, <ий> occurs when preceding a palatalized or alveopalatal consonant, and <ы> occurs when the preceding consonant is not palatalized.

3. Vowel Length

Vowel length is distinctive for all vowels. In most cases vowel length is indicated by a double vowel in the orthography. However, in some exceptional cases the orthography contains only a single vowel. This can occur both in foreign and native words.

For example:

Шанэл /S a . n E: K\

Батка /p a t_h . k_h a:/

мама /m a: . m a:/

4. Palatalization

Historically, palatalized consonants were conditioned by a following /i/, which has since disappeared in most cases (Svantesson et al., 2005:28). According to Svantesson et al. (2005, pp. 8, 38) and Janhunen (2012, pp. 43-4), consonant palatalization in Halh Mongolian is phonemic only in pharyngeal (–ATR) words, i.e. it occurs in words containing short or long /U/, /O/, and /a/. Consonant palatalization does not occur in non-pharyngeal (+ATR) words.

5. Stress

Syllabic stress is not phonemic in Mongolian, and is not represented in the orthography (Svantesson et al., 2005). We therefore didn't mark it for this project.

7.1 List of rare phonemes

Known rare phonemes are: /f/, /p_j/, /p_hj/, /m_j/, /t_j/, /t_hj/, /k_hj/, /w_cj/ and /Ui/.

7.2 List of foreign phones

The following phones are found only in loan words from other languages. The most common loan words in Halh Mongolian are from Russian and English.

Known foreign phones are: /p_h/, /p_hj/, /k_h/, /k_hj /, and /f/.

8. Other language items

8.1 Table of Digits, with attributive/combining forms where applicable

Number	Forms (including variants)	Attributive/combining form	Romanization(s)
0	тэг	тэг*	teg
	ноль ⁷	ноль*	noli3
	нойл	нойл*	noi1l
1	нэг	нэгэн	neg, negen
2	хоёр	хоёр, хоёрон, хоёрны	khoyor, khoyoron, khoyorny1
3	гурав	гурван	gurav, gurban
4	дөрөв	дөрвөн	do1ro1v, do1rvo1n
5	тав	таван	tav, tavan
6	зургаа	зургаан	zurgaa, zurgaan
7	долоо	долоон	doloo, doloon
8	найм	найман	nai1m, nai1man
9	ес	есөн	yes, yeso1n

Note

* The forms for zero do not take the attributive/combining suffix <н>.

Most Mongolian numerals have two forms: a simple one and a second one with an attributive suffix -н. The simple form is used predicatively or as a noun (and occasionally as a conjunction).

The form with a final <н> is used attributively, and is also used when combining numerals in longer number words. In some cases, addition of the final н causes resyllabification of the root.

For zero, тэг (Tibetan for 'dot') is generally used. It also has the meaning 'point' when reading decimal numbers. The forms нойл/ноль (both common colloquial pronunciations, from Russian ноль, zero or null) are chiefly mathematical. As noted above, we standardize to ноль but include variant pronunciations in the lexicon.

⁷ When нойл and ноль occur in the data, we standardize to <ноль> but include variant pronunciations in the lexicon.

8.2 Other Numbers, with attributive/combining forms where applicable

Number	Forms (including variants)	Attributive/combining form	Romanization(s)
10	арав	арван	arav, arvan
100	зуу	зуун	zuu, zuun
1,000	мянга	мянган	myanga, myangan
10,000	түм	түмэн	tu1m, tu1men
	арван мянга	арван мянган	arvan myanga, arvan myangan
100,000	зуун мянга	зуун мянган	zuun myanga, zuun myangan
	бум	буман	bum, buman
1 million	сая	сая	saya
10 million	арван сая	арван сая	arvan saya
	живаа	живаа	jivaa
1 billion	тэрбум	тэрбум	terbum
	мянган сая	мянган сая	myangan saya
20	хорь	хорин	khori3, khorin
30	гуч	гучин	guch, guchin
40	дөч	дөчин	do1ch, do1chin
50	тавь	тавин	tavi3, tavin
60	жар	жаран	jar, jaran
70	дал	далан	dal, dalan
80	ная	наян	naya, nayan
90	ер	ерэн	yer, yeren

8.3 Spelling Alphabet

Orthography	Usual Pronunciation	Orthography	Usual Pronunciation
А а	a	Р р	E r
Б б	p E	С с	E s
В в	w_c E	Т т	t_h E
Г г	g E	У у	U
Д д	t E	Ү ү	u
Е е	j E	Ф ф	f E
Ё ё	j O	Х х	x E
Ж ж	tS E	Ц ц	ts_h E
З з	ts E	Ч ч	tS_h E
И и	i	Ш ш	i S
Й й	x a . G \ a s # i	Щ щ	E S . tS_h E
К к	k_h a	Ъ ъ	x a . t_h U : . g_j i : N # t_h E m . t E g
Л л	E K \	Ы ы	i :
М м	E m	Ь ь	ts o : K \ . n_j i : # t_h E m . t E g
Н н	E n	Э э	E
О о	O	Ю ю	j u
Ө ө	o	Я я	j a
П п	p_h E		



9. References

- Goldsmith, J. 1985. *Vowel harmony in Khalka Mongolian, Yaka, Finnish and Hungarian*. *Phonology (Yearbook)* 2.253-275.
- Grenoble, L. A. 2003. *Language policy in the Soviet Union*. Kluwer, Dordrecht.
- Index Mundi. 2013. http://www.indexmundi.com/mongolia/demographics_profile.html, retrieved May 27th, 2014.
- Janhunen, J. A. 2012. *Mongolian*. John Benjamins Publishing, Amsterdam.
- Lingua Mongolia. 2012. <http://www.linguamongolia.com/vhar1.html>, retrieved July 16th, 2014.
- Luvsanvandan, S. 1964. *The Khalkha-Mongolian phonemic system*. *Acta Orientalia (Academiae Scientiarum Hungaricae)* 17. 175-185.
- Poppe, N. 1970. *Mongolian Language. Handbook Series, 4. 4*. The Center for Applied Linguistics, Washington D.C.
- Rybatzki, V. 2003. *Intra-Mongolic taxonomy*. *The Mongolic Languages*, 362-390. Routledge, London and New York.
- Svantesson, J-O, Tsendina, A., Karlsson, A., and Franzén, V., 2005. *The Phonology of Mongolian*. Oxford University Press, New York.
- Van der Hulst, H. and Smith, N. 1987. 'Vowel harmony in Khalkha and Buriat (East Mongolian).' In F. Beukema and P. Coopmans (eds.), *Linguistics in the Netherlands 1987*, pp.81-9. Dordrecht: Foris Publications. <http://www.ai.mit.edu/projects/dm/featgeom/vdHSmith-KhalkhaBuriat-87.pdf>, retrieved July 16th, 2014.