

# Preaspiration in Old Mongolian?

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In this article, I present evidence that Old Mongolian had preaspirated stops and affricates, like modern Halh Mongolian. The evidence consists of a number of historical phonological processes where two consonants on either side of a vowel interact with each other, and which are best explained by the assumption that the preceding consonant is postaspirated and the following one is preaspirated.

## 1. Background

The Mongolic language group, usually regarded as a subgroup of the Altaic language family, consists of some ten languages spoken in Mongolia, China and Russia. The time depth is not so great, and the Proto-language is more or less identical to Old Mongolian, the language that can be reconstructed from the oldest Mongolian written documents from Chinggis Khan's time in the 13th century.

The first detailed description of Halh (Khalkha) Mongolian, the main language of the Republic of Mongolia, was made by the Finland-Swedish scholar John Ramstedt in 1902. Ramstedt described Halh as having 'weak' vs. 'strong' stops and affricates, the weak consonants being unaspirated and usually voiceless, and the strong ones being aspirated, having postaspiration in word-initial position and both post- and preaspiration (*gehauchter ausgang/eingang*) in medial position. Our acoustic investigation (Karlsson and Svantesson, 2002) has shown that present-day Ulaanbaatar Halh has postaspiration in word-initial position and preaspiration word-medially and finally. One major effect of preaspiration is the devoicing of at least the final part of vowels or sonorants preceding the aspirated consonant. Since the type of aspiration is not contrastive, I use the symbol  $C^h$  for both post- and preaspirated consonants.

Although it is, of course, impossible to make acoustic investigations of speakers of Old Mongolian, there are indications in the historical development to the modern Mongolic languages that this language in fact had preaspiration, perhaps with the same distribution of pre- and postaspiration as in modern Halh.

## 2. Deaspiration

Some Mongolian languages have eliminated the occurrence of two aspirated consonants in a word by deaspirating one of them in a way that reminds of Grassmann's law in Indo-European. In addition to the aspirated stops and affricates ( $*t^h$ ,  $*k^h$ ,  $*č^h$ ), the voiceless fricative  $*s$  also triggers deaspiration (although it is not changed by it).

In many dialects of Mongolian proper, an initial aspirated stop or affricate became unaspirated if the following syllable onset is an aspirated stop or affricate, or the voiceless fricative \*s. This is exemplified in (1) with the Chahar dialect (Dobo, 1983). Standard Halh forms, which have no deaspiration, are given for comparison. Deaspiration takes place only if the two aspirated consonants are close to each other, separated only by a short vowel; otherwise there is no deaspiration (1b). This suggests that Old Mongolian had preaspiration, similar to that in Halh, making it difficult to realize post- and preaspiration with devoicing of both the initial and the final part of one short vowel in words as \*/t<sup>h</sup>at<sup>h</sup>a/ [t<sup>h</sup>a<sup>h</sup>ta], so that deaspiration is more probable when only a short vowel separates the aspirated consonants.

(1) *Deaspiration in Mongolian dialects*

		<i>Old Mongolian</i>	<i>Chahar</i>	<i>Halh</i>
a.	‘to pull’	*t <sup>h</sup> at <sup>h</sup> a	tat <sup>h</sup>	t <sup>h</sup> at <sup>h</sup>
	‘hen’	*t <sup>h</sup> ak <sup>h</sup> iĵa	tex <sup>h</sup> a	t <sup>h</sup> ax <sup>h</sup> a
	‘fat’	*t <sup>h</sup> osun	tɔs	t <sup>h</sup> ɔs
	‘flower’	*č <sup>h</sup> eč <sup>h</sup> ek	čič <sup>h</sup> ək	c <sup>h</sup> ic <sup>h</sup> əg
	‘ear’	*č <sup>h</sup> ik <sup>h</sup> in	čix	č <sup>h</sup> ix
	‘snow’	*č <sup>h</sup> asun	čas	c <sup>h</sup> as
	‘town’	*k <sup>h</sup> ot <sup>h</sup> an	kɔt <sup>h</sup>	xɔt <sup>h</sup>
	‘to strive’	*k <sup>h</sup> ič <sup>h</sup> ihe	kič <sup>h</sup> ɣ	xič <sup>h</sup> e
b.	‘scissors’	*k <sup>h</sup> aič <sup>h</sup> i	xεεč <sup>h</sup>	xaič <sup>h</sup>
	‘cold’	*k <sup>h</sup> øit <sup>h</sup> en	xii <sup>h</sup> əŋ	xui <sup>h</sup> əŋ
	‘navel’	*k <sup>h</sup> øisyn	xiis	xuis
	‘together’	*k <sup>h</sup> amt <sup>h</sup> u	xamt <sup>h</sup>	xamt <sup>h</sup>
	‘nail’	*k <sup>h</sup> imusun	xums	xums
	‘paper’	*č <sup>h</sup> ahalsun	č <sup>h</sup> aas	c <sup>h</sup> aas

Some Mongolic languages spoken in Qinghai and Gansu provinces in China, including Monguor (Qasbagatur, 1986) and Santa (Böke, 1983), take the opposite way to Chahar and deaspirate the second of two aspirated consonants (2a). Here as well, \*s, and also \*h, trigger deaspiration (2b). The process is less regular in Santa than in Monguor.

(2) *Monguor type deaspiration*

		<i>Old Mongolian</i>	<i>Monguor</i>	<i>Santa</i>
a.	‘to pull’	*t <sup>h</sup> at <sup>h</sup> a	t <sup>h</sup> ita	sta
	‘cold’	*k <sup>h</sup> øit <sup>h</sup> en	k <sup>h</sup> uiten	k <sup>h</sup> uit <sup>h</sup> ien
	‘together’	*k <sup>h</sup> amt <sup>h</sup> u	xamti	xant <sup>h</sup> u
	‘China’	*k <sup>h</sup> it <sup>h</sup> at	č <sup>h</sup> itar	q <sup>h</sup> utei
	‘to bark’	*k <sup>h</sup> uč <sup>h</sup> a	xoča	q <sup>h</sup> uča
	‘old’	*k <sup>h</sup> auč <sup>h</sup> in	xauč <sup>h</sup> in	q <sup>h</sup> uaič <sup>h</sup> eŋ
	‘ear’	*č <sup>h</sup> ik <sup>h</sup> in	č <sup>h</sup> iki	č <sup>h</sup> iqeŋ
	‘blue’	*k <sup>h</sup> øk <sup>h</sup> e	k <sup>h</sup> uko	k <sup>h</sup> ukie
b.	‘axe’	*syk <sup>h</sup> e	suko	sukie
	‘to protect’	*sak <sup>h</sup> i	ski	saqi
	‘ox’	*hyk <sup>h</sup> er	xukor	xukie
	‘ashamed’	*hič <sup>h</sup> e	šče	šiče
	‘bag’	*huhut <sup>h</sup> a	xuuta	xuta

### 3. Aspiration flip-flop

A similar process is aspiration flip-flop, which occurs regularly in Monguor and Santa. This process converts an unaspirated–aspirated consonant sequence to an aspirated–unaspirated sequence (3). In this case as well, the existence of preaspiration is a possible explanation. For example, the preaspiration of the second consonant in \*/tot<sup>h</sup>ara/ \*[to<sup>h</sup>tara], realized as devoicing of the final part of the vowel, may have spread through the vowel and was then reinterpreted as postaspiration of the initial consonant, \*[t<sup>h</sup>otara].

(3)		<i>Old Mongolian</i>	<i>Monguor</i>	<i>Santa</i>
	‘inside’	*tot <sup>h</sup> ara	t <sup>h</sup> utor	sutoro
	‘forty’	*tøč <sup>h</sup> in	t <sup>h</sup> ič <sup>h</sup> in	
	‘thirty’	*kuč <sup>h</sup> in	xoč <sup>h</sup> in	
	‘pig’	*kak <sup>h</sup> ai	xqai	q <sup>h</sup> uqei
	‘to fit’	*čok <sup>h</sup> i	č <sup>h</sup> uqu	

In some words, aspiration flip-flop created an aspirated stop phoneme *p<sup>h</sup>* (4). This consonant did not exist in Old Mongolian and is only a marginal phoneme in most Mongolic languages.

(4)		<i>Old Mongolian</i>	<i>Monguor</i>	<i>Santa</i>
	‘firm’	*pat <sup>h</sup> u	p <sup>h</sup> ati	p <sup>h</sup> utu
	‘to write’	*pič <sup>h</sup> i	p <sup>h</sup> uč <sup>h</sup> i	p <sup>h</sup> ič <sup>h</sup> i
	‘belt’	*pyse	p <sup>h</sup> usee	p <sup>h</sup> isie

### 4. Moving aspiration

In some words beginning with a vowel, aspiration apparently moved from a medial consonant to the beginning of the word, appearing as an initial fricative *x* in Monguor, and sometimes in Santa (cf. Helimskij, 1984). Here as well, preaspiration may have spread through the vowel and became interpreted as a word-initial fricative.

(5)		<i>Old Mongolian</i>	<i>Monguor</i>	<i>Santa</i>
	‘to die’	*yk <sup>h</sup> y	xuku	xuku
	‘gold’	*alt <sup>h</sup> an	xaltan	ant <sup>h</sup> aŋ
	‘girl’	*øk <sup>h</sup> in	ščun	ot <sup>h</sup> in

### 5. Conclusion

The phonological processes illustrated in different Mongolic languages above have the common property that they involve the interaction of aspirated consonants (or voiceless fricatives) on either side of an intermediate vowel. The fact that interaction takes place through a vowel suggests that the consonant preceding the vowel is postaspirated and the consonant following it is preaspirated, so that the devoicing effects of the aspirations are directed towards both the beginning and the end of the vowel between them. Especially if the intermediate vowel is short, these effects may overlap and cause one of the consonants to become unaspirated to prevent the vowel from becoming completely voiceless. If only the

consonant after the vowel is aspirated, its preaspiration can be reinterpreted as postaspiration of the consonant preceding the vowel, leading to aspiration flip-flop, or to the aspiration being reinterpreted as an initial fricative. The assumption that old Mongolian had pre- and postaspiration with the same distribution as in modern Halh thus provides a plausible explanation for the existence of these processes.

## 6. References

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