Word accent in Mongolian

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The subject of the investigation is standard Mongolian, the Halh dialect (see Svantesson et al 2005) spoken in Ulaanbaatar , the capital of Mongolia.

Halh belongs to Mongolic languages which constitute one of the three branches of the Altaic language family, the other two being Turkic and Tungusic languages.

Mongolic languages, their spoken area and estimated number of speakers

Language	*Area(s) where spoken*	*Number of speakers*
Mongolian	Republic of Mongolia	2.5 million
	Inner Mongolia	2.7 million
Buriad	Buriad Republic (Russia)	260 000
	Northern Mongolia	60 000
	Inner Mongolia	100 000
Oirad	Western Mongolia	200 000
	Inner Mongolia	210 000
	Kalmuck Republic (Russia)	140 000
Kamnigan	China	2 000
Dagur	China	79 000
Shira Yugur	China	4 000
Monguor	China	90 000
Santa	China	270 000
Bonan	China	9 000
Kangjia	China	300
Moghol	Afghanistan	almost extinct

Word intonation: three types of languages

The present investigation follows the prosodic typology that recognises three prosodic types of languages considering their use of intonation on the lexical level (some linguists recognise only two types, see e.g. Gussenhoven C. 2004 *The phonology of tone and intonation*).

- No lexical use of intonation (Russian, English)
- Tone languages (Vietnamese, Chinese, Thai)
- Word-accent languages (Swedish, Japanese, Lithuanian)

Some prosodic features of Halh Mongolian

Vowel harmony

No lexical stress (Karlsson 2003)

Phonemic length in vowels:

- long
- short
- epenthetic (non-phonemic) vowels (transcribed [ə] in the presentation)

Remarks:

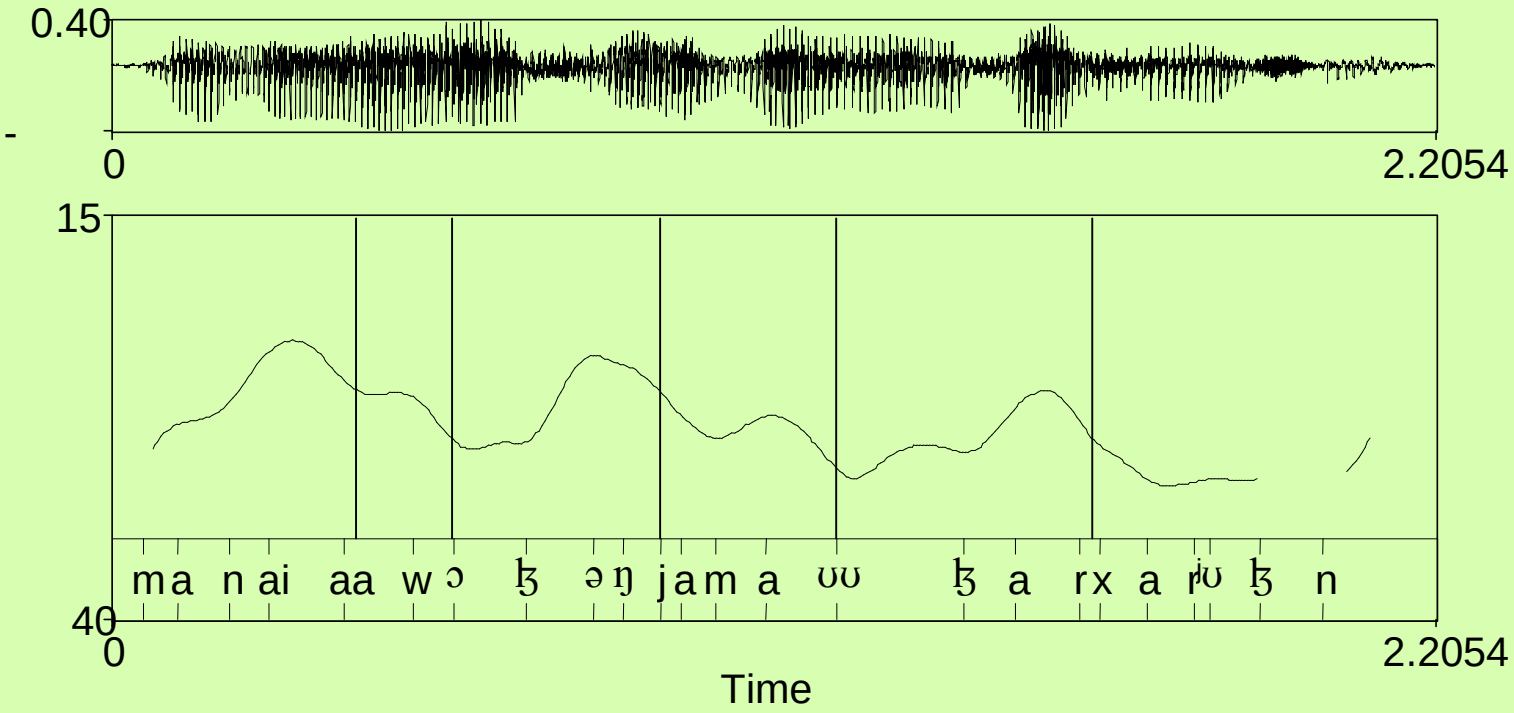
The opposition between long and short vowels occurs only in initial syllables.

The epenthetic vowels serve to build syllables at the surface level.

Tonal features

Every word (except the last one) in an utterance receives a rising pitch accent.

(in Figure below boundaries between words are shown with straight lines)



manai aaw ɔɬəŋ jama ʊʊɬar xarʲʊɬən ‘Our father herds many goats in the mountains.’

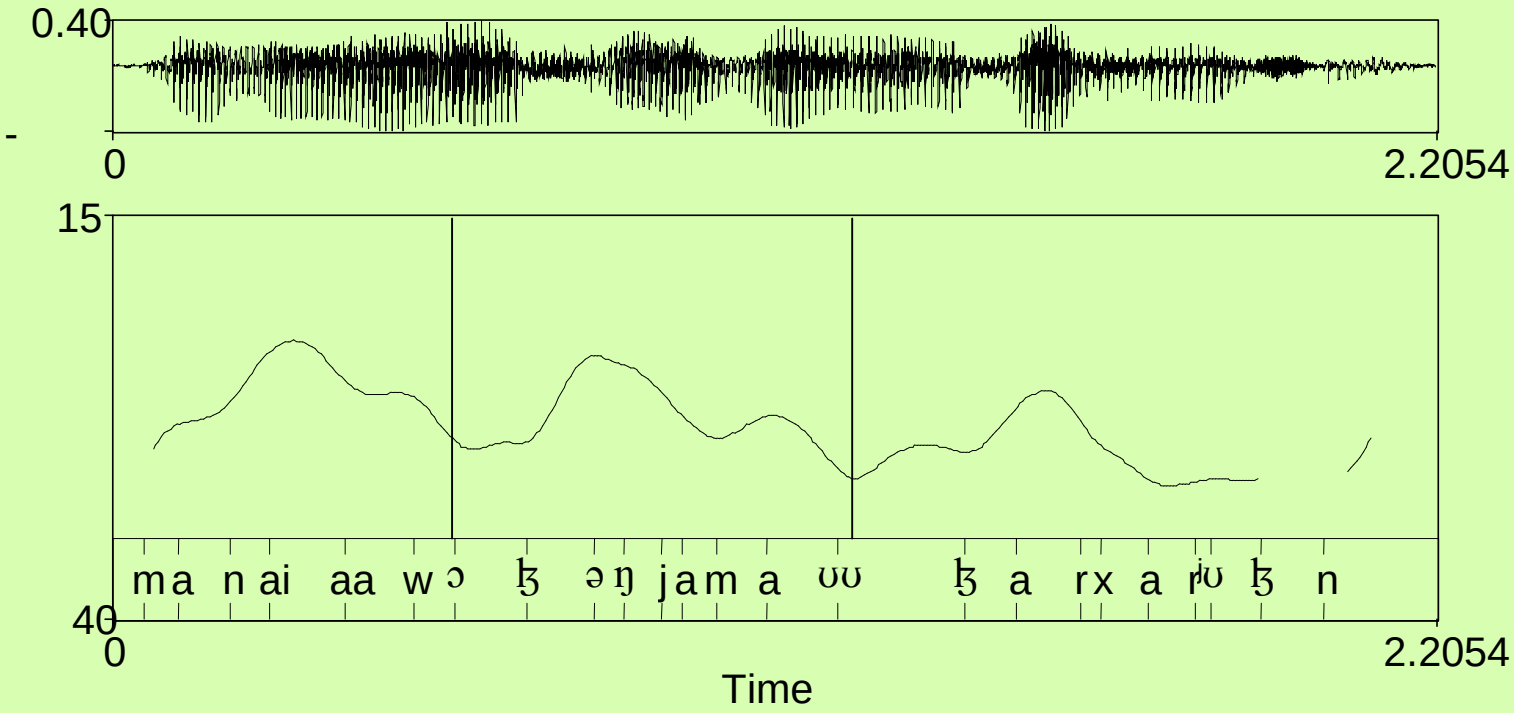
Functions of the rising gesture

1. Boundary tone (of the prosodic phrase):

   the utterance below is divided into three prosodic phrases (boundaries between them are shown with straight lines). Prosodic phrases are signalled by rising pitch accents in the beginning of each phrase.

2. Focal accent

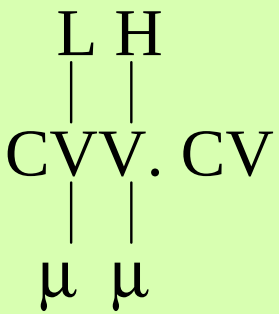
3. There are still other rising gestures with neither of these two functions: analysed as word accents (for more details see Karlsson 2005)

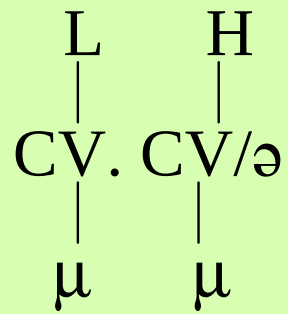


Representation of the word accent in terms of the AM theory: LH

Association: two first morae.

Long vowels are counted as two morae, short and epenthetic as one mora

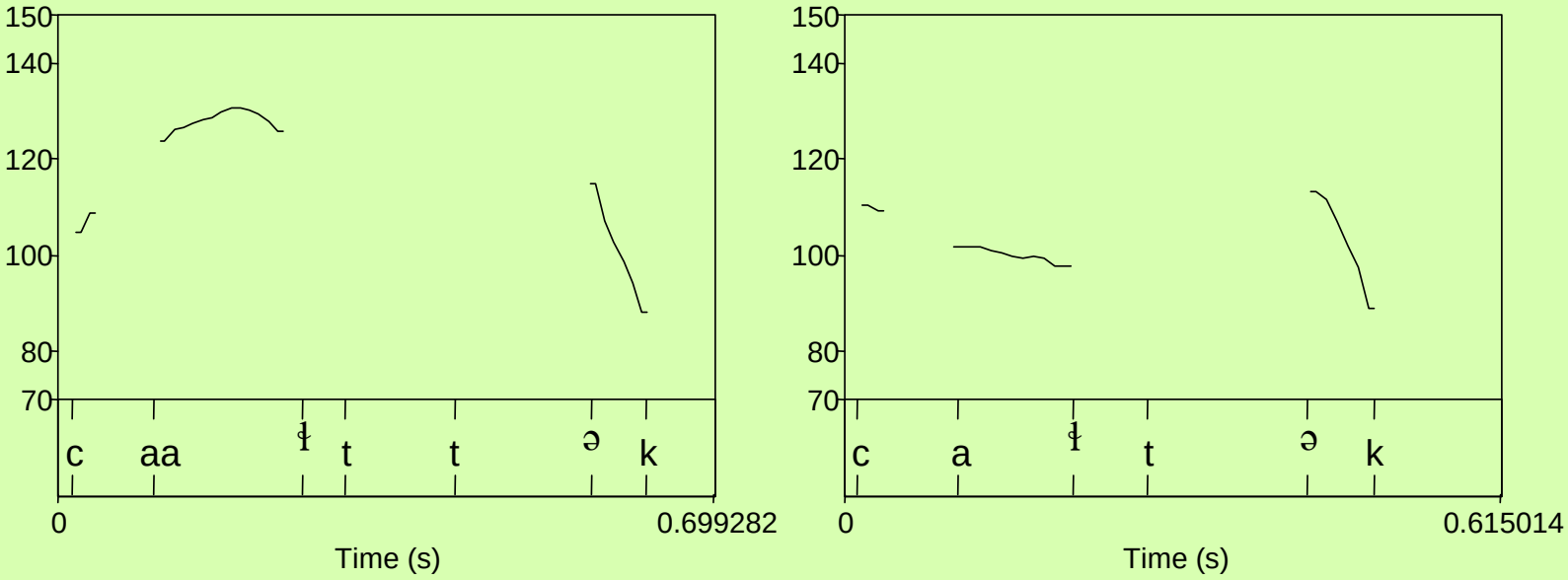




Word accent in Mongolian: functions

1. Word accent signals phonological quantity relations within a word:

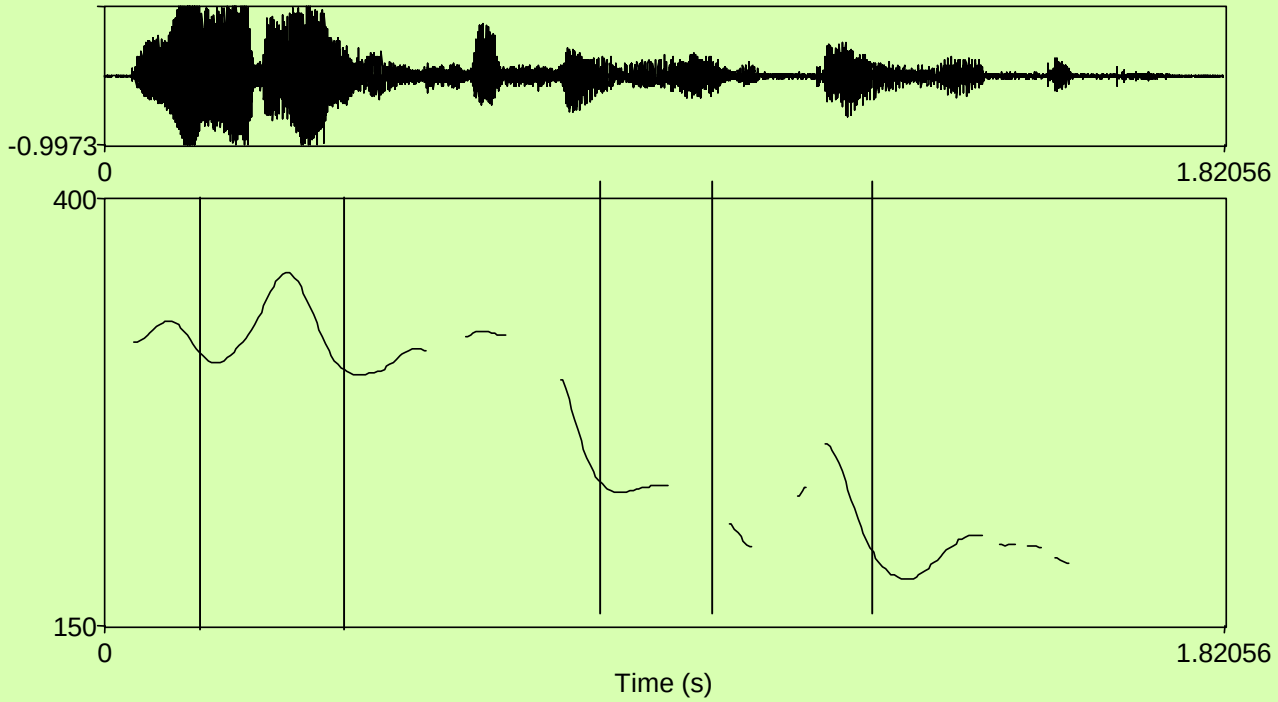
   long (initial) vowel is signalled by a tonal rise (LH), while short (initial) vowel only receives the low tone of the word accent's LH gesture.



Word accent in Mongolian: functions

2. Word accents signal boundaries between words: every prosodic word starts with lowering of the F0 values, as shown in the Figure below.

   (Boundaries between words are shown with straight lines)



[pii ɔrɔi ʊnt^{h}x̂inxa omn šute ʊgatəg]
I brush my teeth in the evening before I go to sleep

Synchronisation of the word accent with word structure in speech.

One of the questions is how the second mora position is realised in speech.

In the investigation, a distinction is made between formal and casual speech. Formal speech is characterised by careful and clear pronunciation.

There is a number of prosodic differences between the two speech styles. One of them are different rules for syllabification.

Syllabification in formal speech:

coda must have decreasing sonority, otherwise vowel insertion is needed

$(C^{\text{-voice}}\ C^{\text{–voice}})_{\text{coda}} \rightarrow (C^{\text{–voice}}\ ə\ C^{\text{–voice}})_{\text{coda}}$

/xamr/	‘nose’	[xa.mər]
/pʊst/	‘other’	[pʊ.sət]
/atg/	‘end’	[a.təg]
/pugt/	‘all’	[pugt]

Casual speech:
coda can not have increasing sonority

$(C^{\text{-voice}}\ C^{\text{–voice}})_{\text{coda}} \rightarrow (C^{\text{–voice}}\ C^{\text{–voice}})_{\text{coda}}$

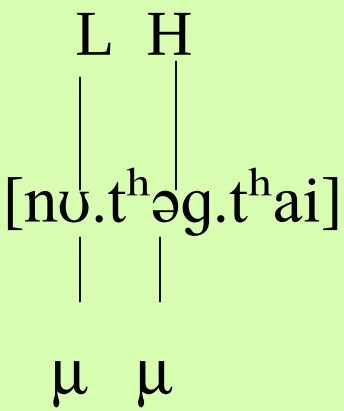
$(C^{\text{-voice}}\ C^{\text{+voice}})_{\text{coda}} \rightarrow (C^{\text{–voice}}\ ə\ C^{\text{+voice}})_{\text{coda}}$

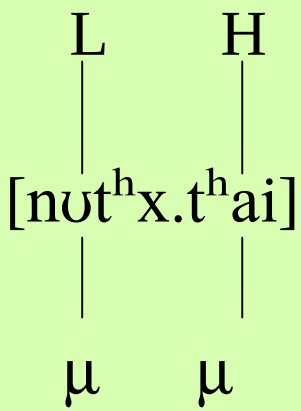
Casual speech

Regressive devoicing: frequent but not obligatory (not found in formal speech style).

Consequence: as a result of whether devoicing took place a consonantal cluster either can build a coda or can not (and the schwa insertion is triggered). Thus, the same word can be realised differently e.g. as tri- or disyllabic:

/nʊtʰgtʰai/ ‘homeland-com’



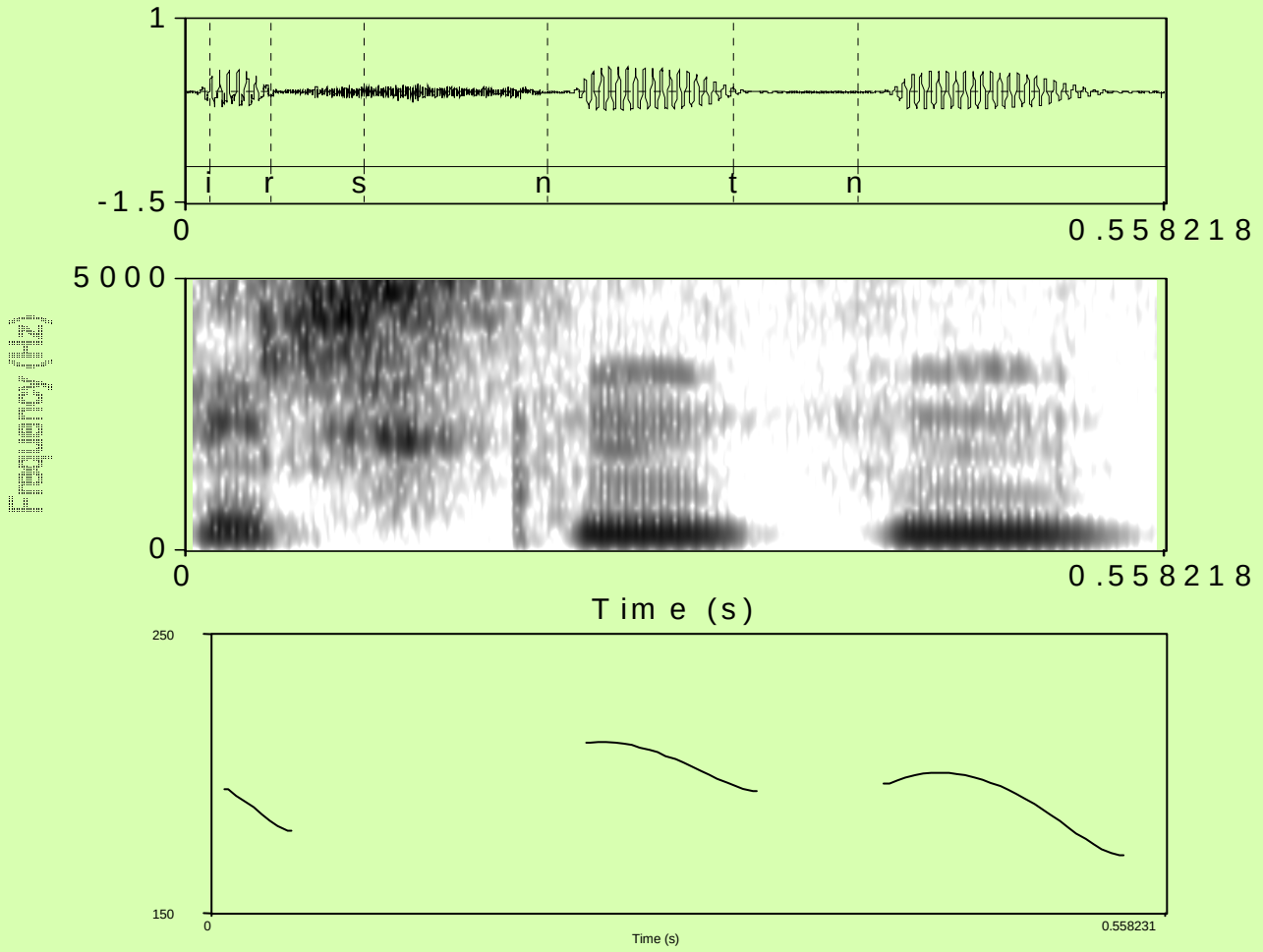


Moraic status at segments in Mongolian

Segments in (syllable) nucleus position are moraic

Differences between formal and casual speech styles:
in formal speech nuclei are vowels
In casual speech nuclei are vowels, nasals and /ɮ/.

/ɻʒ/ and /n, ŋ/ are syllabic in casual speech: illustration



A realisation of *ir.sənt^{h} +n* ‘to come-pstp’ as [ir.sn.tn] (formal:[ir.sən.t^{h}ən]) with both nasals as nuclei.

Any supporting evidence for mora structure?

Mongolian lateral phoneme /ɮ/ is realised as [ɮ] or [ɬ] in casual speech depending on the regressive devoicing (which is non obligatory).

Interesting case:

Focus in Mongolian can be signalled by a post particle -/ɮ/ :

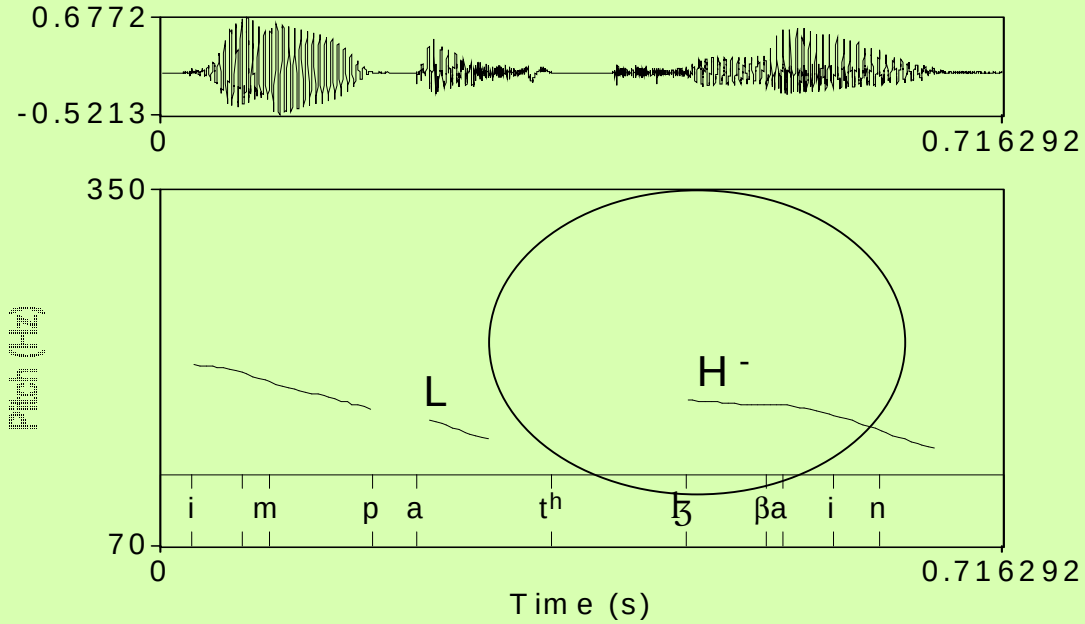
word + focal particle -/ɮ/ (the combination is realised as one prosodic word).

When the focused word has the CVC structure (monosyllabic with a short vowel), the particle -/ɮ/ is systematically realised as:

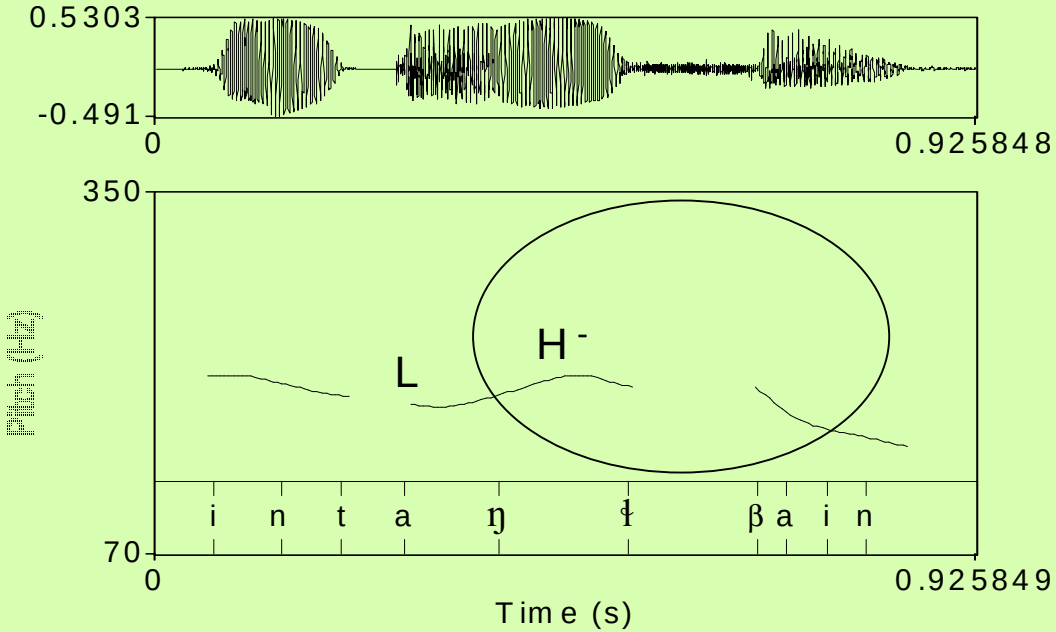
a voiced [ɮ] after voiceless consonants [pat^{h} ɮ]

a voiceless [ɬ] after voiced consonants [taŋ ɬ]

The voice dissimilation in this case can be analysed as a result of the syllable structure and satisfaction of the second mora position.



in pat^{h} ɬʒ pain
‘This is Bat.’
realised as
[im pat^{h}ɬʒ βain]



in taŋ ɬʒ pain
‘This is one.’
realised as
[in taŋɬ βain]

Summary:

- Mongolian is a word-accent language
- Word accent is a tonal rise (LH)
- Functions of the word accent: signalling of word boundaries in speech; signalling of phonological quantity of vowels
- Mora is a relevant unit for Mongolian prosody
- Mora is a TBU in Mongolian

References:

Karlsson, A. 2003. Rhythmical and accentual structure of Mongolian. In Solé, M-J.et al. (eds.) *Proceedings of the 15th International congress of phonetic sciences, 2465-67. Barcelona.*

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Svantesson, J-O., Tsendina, A., Karlsson, A. and Franzén. 2005. *The Phonology of Mongolian*. Oxford: University Press.

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