

Tonogenesis in Khmu dialects of SEA

SUWILAI Preamsirat
Mahidol University

This paper is a part of a larger on-going research project entitled "Thesaurus of Khmu Dialects in SEA". It is a three year project supported by SEASREP (Southeast Asian Studies Regional Exchange Program). The project covers the study of major Khmu dialects in Thailand, Laos, Vietnam and South China. Seven dialects have been selected to study. About 4000 words were collected including both basic and culturally specific words in Khmu, and were arranged into semantic fields that were sufficient to reflect the Khmu worldview. The major syntactic patterns and folktales of each dialect were also collected. This year is the last year of the project. Some findings are revealing, such as the development of tones or tonogenesis in Khmu.

Tonogenesis is one of the most outstanding linguistic phenomena in Southeast Asia today. It is quite obvious that most of the small minority languages in SEA are now undergoing prosodic changes toward the development of tones. Not only are the Sino-Tibetan and Tai-Kadai languages tone languages, as generally known, but languages in other language families such as Austroasiatic and Austronesian, languages that were originally non-tonal are also acquiring tones. A classic example is the tones in Vietnamese. Haudricourt (1954) demonstrated that Vietnamese belonged to the Austroasiatic language family though it is now a tone language. Another interesting example is Cham which was a non-tonal and non-register Austronesian language, and was found to have tone contrast in Eastern Cham (Blood 1967, Bui Khanh The 1981, and Phu Van Han and others 1997) and also register contrast in Western Cham (Friberg and Hor 1973). This paper attempts to investigate the prosodic features in Khmu dialects, in the wide area of SEA which demonstrates different stages of tonogenesis.¹ The data for investigation was drawn from the Thesaurus research project on Khmu Dialects in SEA. The field work for this project was done in the Khmu speaking areas in Thailand, Laos, Vietnam and South China.

¹This paper was presented at SEAL IX, 1999. It is a further development of a paper entitled "Phonological variation in Khmu of Northern Thailand" in *MKS* 29:57-69.

1. Background of Khmu

Khmu is a Mon-Khmer language of the Austroasiatic language family. It is spoken in a wide area of northern SEA which includes parts of Thailand, Laos, Vietnam and South China. In Thailand the Khmu are found mainly in Lampang, Nan and Chiangrai in the north, including also Kancanaburi and Uthaitani in the Central part. In Laos where the majority of the Khmu are, the Khmu are found in eight provinces (Luang Namtha, Udomsaj, Bokaew, Sayaburi, Phongsali, Luang Prabang, Hua phan, and Chiengkhwang). In Vietnam the Khmu are found in Dien Bien Phu, Sonla, Laichau, and Nghe-An provinces. In China the Khmu are found in Chiangrung and in Muang La, Sipsongpanna, Yunnan, China. The total population are more than 500,000. In all Khmu areas the Khmu people are found living together with the Tai-speaking groups. For example the Khmu in Thailand live in the same area as the Northern Thai speakers. In Laos, the Khmu live among the Tai Lue, Tai Daeng, Phuen and Lao people. The Khmu in Vietnam live in the same area as the Tai Dam and Tai Siang. And the Khmu in China live with the Tai Lue. Because of the contact with Tai languages which are tonal, the Khmu have unavoidably been exposed to tone influence. From my field work in various Khmu speaking areas, I have found that Khmu dialects in various parts of SEA have a similar basic structure though vocabulary and pronunciation vary. One of the most outstanding variations of Khmu dialects is the differences in the phonological system. Khmu dialects in SEA can be phonologically divided into two main dialects - which I prefer to call 'Western' and 'Eastern' Khmu instead of 'Northern' and 'Southern' Khmu as they are called by Svantesson (1984) and others because this corresponds more to the geographical reality as seen on the map provided below.

2. The Western and Eastern Khmu

The Western Khmu is comprised of the Khmu dialects spoken in Udomsaj, Bokaew and Luang Namtha in Laos, Chiangrai and Nan in Thailand, and some villages in Sipsongpanna. The Eastern Khmu is comprised of the Khmu dialect spoken in Hua Phan, Phongsalee, Luang Prabang and Chiengkhwang in Laos, in Dien Bien Phu, Sonla, Nghe-An in North Vietnam and some villages in Sipsongpanna. In the homeland of the Khmu in Laos, different Khmu dialects have specific names. For Western Khmu they are the Khmu Yuan in Luang Namtha area near Chinese border, Khmu Lue in the north of Udomsaj, Khmu Rook in the central part of Udomsaj and Khmu Khroang in the southern part of Udomsaj or Parkbang area. For Eastern Khmu, they are Khmu Cuang or Khmu Uu. The names refer mainly to the names of the rivers in their settlement such as Maekhoang river, Rook and Uu rivers, or refers to the people the Khmu have special relationship with such as the Tai Lue people or Cuang, the Khmu hero. Remnants of all of these Khmu dialects are found in various parts of Thailand. On the border of Thailand and Laos the Khmu Khroang and Khmu Rook are found. In the Sipsongpanna area near Lao, both Western and Eastern Khmu are found.

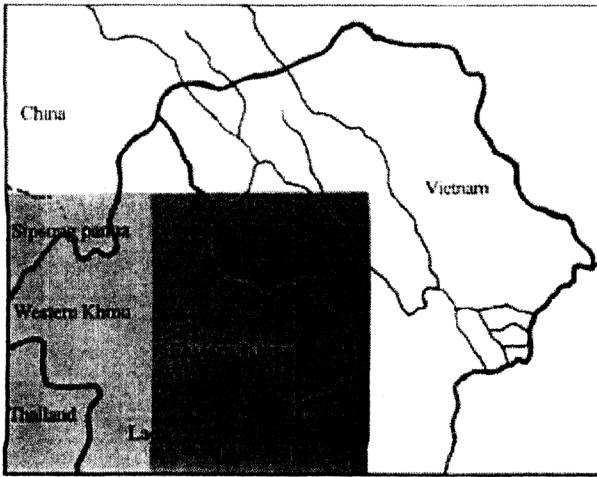


Figure 1. A map showing the Khmu speaking area including the Western and Eastern Khmu area.

Eastern Khmu dialects are phonologically uniform. They have no tone and no register but have a rich consonant inventory. They have a full set of voiced and voiceless consonants because words are distinguished from each other by the voiced/voiceless contrast of the initial consonants. The Western Khmu dialects vary in their prosodic features. They are an excellent example of tonogenesis. Some Western Khmu dialects have register contrast whereas some have tone contrast. The following are the phonological systems of the Western and Eastern Khmu. Each will be presented in terms of consonants, vowels and also suprasegmental phonemes in the case of Western dialects.

1. Initial consonants

The Western dialects have 21 initial consonants whereas the Eastern dialects have thirty three consonants.

1.1 Western Khmu consonant phonemes

p	t	c	k	ʔ
p ^h	t ^h	c ^h	k ^h	
b	d			h
	s			
m	n	ɲ	ŋ	
	l			
	r			
w		j		

1.2 Eastern Khmu consonant phonemes

p	t	c	k	ʔ
p ^h	t ^h	c ^h	k ^h	
b	d			h
	s			
m	n	ɲ	ŋ	
m ^h	n ^h	ɲ ^h	ŋ ^h	
ʔ ^m	ʔ ⁿ	ʔ ^ɲ		
	l			
	l ^h			
	r			
	r ^h			
w		j		
w ^h		j ^h		
		ʔ ^j		

The difference can be explained in terms of the suprasegmental system.

2. Final consonants

All Khmu dialects have the same system of final consonants. However in some dialects the phonetic final fricative alveolar can vary between *s*, *ç*, and *h*.

p	t	c	k	ʔ
	s			h
m	n	ɲ	ŋ	
	l			
	r			
w		j		

3. Vowel phonemes

All Khmu dialects the similar vowel phonemes. There are 19 single vowels and three diphthongs. Even though some Khmu dialects have developed voice quality, the vowels are still the same.

i	i:	ɨ	ɨ:	u	u:
e	e:	ə	ə:	o	o:
ɛ	ɛ:		ʌ:	ɔ	ɔ:
		a	a:		
iɔ		iə		uə	

4. Suprasegmental phonemes

The Eastern Khmu dialects have no tone or register whereas some Western Khmu dialects have registers and some have tones.

Eastern Khmu dialects (Dia 1) have the voiced/voiceless distinction of the initial consonant. Examples below illustrate the distinction of both initial stop and continuant consonants.

Table 1. Voiced/voiceless contrast in Eastern Khmu (Dia 1)

1. Stop consonants	
bak	'to ride'
pak	'to break (wood)'
buzɛ	'rice wine'
pu:ɛ	'to take off clothes'
bok	'to cut down a tree'
pok	'to take a bite'
bum	'to chew'
pu:m	'to fart'
glaŋ	'eagle'
klaŋ	'stone'
jaŋ	'to weigh'
caŋ	'astringent'
2. Continuant consonants	
ŋɔʔ	'to fear'
hŋɔʔ	'paddy rice'
məh	'to be'
hməh	'what'
raŋ	'flower'
hraŋ	'tooth'
laʔ	'to go out'
hlaʔ	'leaf'
waʔ	'to chase'
hwaʔ	'monkey'
jaŋ	'animal basket'
hjaŋ	'female animal'

In Western Khmu dialects the prosodic features become significant instead of voiced/voiceless initial consonant contrast as in Eastern Khmu, the Western Khmu can be divided into three types.

1. Western Khmu with register contrast (Dia 2.1)
2. Western Khmu with tone contrast and with aspirated stop as initial consonant (Dia 2.2)
3. Western Khmu dialect with tone contrast (Dia 2.3)

The Western Khmu dialects with register contrast (Dia 2.1) comprise the Khmu dialects spoken in the northern part of Udomsaj which is called Khmu Lue and the Khmu dialect spoken in the southern part of Udomsaj which is called Khmu Khroang. This type of Western Khmu includes the Khmu varieties spoken in Chiengrai (Suwilai 1993) and in Nan (Cholthisa 1988). In this dialect, a word with voiced initial consonant in Dia 1 has become a word with lower pitch and lax/breathy voice quality whereas a word with voiceless initial consonant in Dia 1 has higher pitch and clear tense voice quality as shown in the first column of table 2. Even though the lax register here does not have the strong breathy voice quality as in other Mon-Khmer languages such as Mon, Chong, Kuy or Iduh yet it is quite distinctive for the native speakers. My Khmu informants from Chiengrai explain the differences between lax and tense registers as the difference between "big voice" and "small voice". They always criticize my Khmu as being too clearly voiced when I use mainly the low/high pitch contrast. They can guess the meaning but it is not correct. It is also obvious that when the initial consonant is a stop consonant the breathy voice quality is quite clear. The correct tense register especially in a variety of Khmu Khroang spoken in Chiengrai is very loud and tense. I guess that if the environment allows it this sound may be developed into a creaky voice quality as shown in Iduh, a Khmuic language spoken in the same area as the Khmu in Laos and Vietnam. However my informant told me that very often, especially in front of outsiders, they do not make the correct harsh and tense voice because they do not want to be different from Thai speakers. The Western Khmu with tone contrast (Dia 2.3) are found in Luang Namtha (Laos) Sipsongpanna (China) and some villages in Thailand, whereas the tone contrast with voiceless aspirated stop initial (Dia 2.2) is believed to be a step developed after the register contrast. Instead of having voice quality it has the aspiration. According to my own observation and Preedaporn (1987) a Khmu dialect of this type in Thailand had the voice quality before but now the voice quality has disappeared, and has become pure tone contrast.

Table 2. Western Khmu dialects

Gloss	Dia 2.1	Dia 2.2	Dia 2.3
'rice wine'	p̄u:c	ph̄u:c	p̄u:c
'to take off clothes'	p̄u:c	p̄u:c	p̄u:c
'to cut down a tree'	p̄ok	ph̄ok	p̄ok
'to take a bite'	p̄ók	p̄ók	p̄ók
'to chew'	p̄u:m	ph̄u:m	p̄u:m
'to fart'	p̄u:m	p̄u:m	p̄u:m
'eagle'	kl̄a:ŋ	kh̄l̄a:ŋ	kl̄a:ŋ
'stone'	kl̄a:ŋ	kh̄l̄a:ŋ	kl̄a:ŋ
'to weigh'	c̄a:ŋ	ch̄a:ŋ	c̄a:ŋ
'astringent'	c̄a:ŋ	c̄a:ŋ	c̄a:ŋ

'to fear'	ŋəʔ	ŋəʔ	ŋəʔ
'paddy rice'	ŋɔʔ	ŋɔʔ	ŋɔʔ
'to chase'	wəʔ	wəʔ	wəʔ
'monkey'	wáʔ	wáʔ	wáʔ
'flower'	rəŋ	rəŋ	rəŋ
'tooth'	râŋ	râŋ	râŋ
'to be'	məh	məh	məh
'what'	məh	məh	məh

The prosodic situation in Khmu dialects supports Haudricourt's hypothesis on the development of Vietnamese tones (1954). Khmu is an example of a live language that shows different stages of tone development from the conservative to the innovative stage. The development of tones in Khmu originated when the voiced/voiceless consonantal system (Dia 1) had decayed and the languages were forced to exploit prosodic differences for contrastive purposes (Dia 2.1, 2.2, 2.3). The syllable-initial consonant conditions the pitch height. However in the case of Khmu not only does the voiced syllable-initial consonant provoke a low pitch, in some dialects it also causes a lax/breathy voice quality (Dia 2.1). But the voiceless syllable-initial consonants provoke higher pitch.

3. Different stages of tonogenesis in Khmu

In summary the Eastern Khmu (Dia 1) represents the conservative stage. It has the voiced/voiceless distinction in the syllable-initial consonants. The Western Khmu (Dia 2.1) represents the stage where the voiced syllable-initial has lost its quality and become a voiceless initial with lower pitch and distinctive lax voice quality. The Western Khmu (Dia 2.2) also represents the stage where the voiced syllable initial has lost its quality and become a voiceless initial with aspiration when the initial consonant is a stop consonant. It has lower pitch and distinctive tone. At the same time the Western Khmu (Dia 2.3) has the voiceless syllable initial and distinctive lower pitch. On the other hand a voiceless syllable-initial consonant still keeps the same voiceless syllable-initial but with higher pitch (high rising or high falling). Examples of different Khmu dialects that show different stages of tonogenesis are provided below.

1) Words with syllable-initial stops (Vd_{st} --> Vl_{st} ʔ / Vl_{asp} ʔ̤ / Vl_{st} ʔ̤ and Vl_{st} --> Vl_{st} ʔ̤)

Gloss	Dia 2			
	Dia 1	Dia 2.1	Dia 2.2	Dia 2.3
'rice vine'	bɯc	pɯc	phɯc	p̄ɯc
'to take off clothes'	pɯc	p̄ɯc	p̄ɯc	p̄ɯc
'to cut down a tree'	bok	pok	phok	pok
'to take a bite'	pok	pok	pok	pok
'to chew'	bu:m	pɯ:m	phɯ:m	p̄u:m
'to fart'	pu:m	p̄u:m	p̄u:m	p̄u:m
'to weigh'	jaŋ	caŋ	chàŋ	càŋ
'astringent'	caŋ	càŋ	càŋ	càŋ
'eagle'	glaŋ	klaŋ	khlàŋ	klàŋ
'stone'	klaŋ	klàŋ	klàŋ	klàŋ

2) Words with syllable-initial continuants (Vd_{cn} --> Vl_{cn} ʔ̤ and Vl_{cn} --> Vl_{cn} ʔ̤)

'to fear'	ŋɔ̄ʔ̤	ŋɔ̄ʔ̤	ŋɔ̄ʔ̤
'paddy rice'	ŋɔ̄ʔ̤	ŋɔ̄ʔ̤	ŋɔ̄ʔ̤
'to chase'	waʔ̤	wàʔ̤	wàʔ̤
'monkey'	waʔ̤	wáʔ̤	wáʔ̤
'flower'	raŋ	ràŋ	ràŋ
'tooth'	raŋ	râŋ	râŋ

4. Conclusion

Khmu in various part of SEA still has the same basic structure. However, because of contact and relationships with other languages in the same area Khmu may look different in different places. Tonogenesis in Western Khmu dialects provides a good example. Different dialects show different stages of tonogenesis. The phenomena prove that Haudricourt's theory of tone development is still valid. However Khmu adds a stage, the register contrast (Dia 2.1), between the first stage which is voiced/voiceless contrast (Dia 1) and the third stage which is tone contrast (Dia 2.2 and 2.3). Moreover the dialect 2.2 also has aspiration at the initial consonant, and shows a remnant of the voice quality in Dia 2.1. The phenomenon observed in Khmu also happens in some other Mon-Khmer languages.

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Institute of Language and Culture
for Rural Development
Mahidol University
Phutta Monthon Sai 4, Salaya
Nakhon Pathom 73170
THAILAND
<lespm@mahidol.ac.th>