TONOGENESIS IN NORTHERN MON-KHMER

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ABSTRACT

Tonogenesis in the Northern Mon-Khmer languages Kammu, Hu and U is described. Each of these languages has acquired tones in its own way, and mechanisms other than those generally used to explain the origin of tones are involved. The fact that these languages have undergone different types of tonogenesis, while other closely related languages have not acquired tones shows that presence or absence of tones cannot be taken as an indicator of genetic relationship between languages.

INTRODUCTION

In this paper, tonogenesis in the three languages (Northern) Kammu, Hu and U will be described. These languages are spoken in northern Laos, Thailand and Burma, and in Southwest China. This area is dominated by tone languages belonging to the Tai and Sino-Tibetan language families, and there is a strong tendency for languages in this area to acquire tones.

The places of these languages within the Kammuc and Palaungic branches of Mon-Khmer are as follows (boldface indicates tone languages):

Kammuc:

Kammu

Northern Kammu

Southern Kammu

Mlabri

Mol

Palaungic:

Lamet

Waic

Pareuk

Blang

......

Angkuic

Hu

U

Mok

......

Danew

Riang

Rumai

This language has two tones, which are rather level, and can be described as high (') and low ('), although the difference between them is rather small. (See Gårding and Lindell 1977 and Svantesson 1983 for Kammu tones.)

Fundamental frequency contours of the two tones are shown in Figure 1.

Tonogenesis is simple: voiceless and voiced initial consonants have merged, and given rise to high and low tone, respectively. This type of tonogenesis is expected and phonetically motivated, since numerous investigations have shown that voiceless consonants increase and voiced consonants decrease F0 in the following vowel. Nevertheless, this type of tonogenesis is not encountered very often in actual languages (see Hombert 1978:78).

The Kammu tone system is an innovation which has started in a central area, in northern Laos. Dialects to the south of this area have not developed tones, so Kammu is an example of a language in the process of acquiring tones. Examples of Kammu tonogenesis:

Kammu | S Kammu | K
------|--------|---
htä | hñta | "tail"
htä | hñda | "thin"
räŋ | çñŋ | "tooth"
räŋ | raŋ | "flower"

HU

This language (Svantesson forth.c.a.) belongs to the Angkuic branch of Palaungic. Like Kammu it has a two-tone system, with high (') and low (') tones, illustrated in Figure 2.

In the Angkuic languages, including Hu and U, initial voiceless and voiced stops have not merged, but have been retained as aspirated and unaspirated voiceless stops, respectively. The tones do not depend on voicing in initial consonants. Instead, Hu has combined two areal trends, loss of vowel length and acquisition of tones, so that words with an originally
The tones are illustrated in Figure 3.
Proto-Anguic lacked tones, and tones have developed independently in Hu and Lamet to the corresponding short stops after originally short vowels in U but not in Hu. This process, which took place after U and Hu separated, must have preceded loss of vowel length in U. Since syllables with originally short vowel followed by a stop and a nasal have different tones, tone development must have started before vowel length disappeared in U. In Hu, however, tones developed in connection with loss of vowel length. The Anguic consonant shift, which has taken place already in Proto-Anguic (thus before tonogenesis) made all obstruents in the language voiceless, so that the oppositions voiceless/voiced and obstruent/sonorant are equivalent in the Anguic consonant system. For this reason, a Lamet type of tonogenesis is impossible in Anguic.

Based on these observations, the following scenario for U tonogenesis can be given. This is somewhat speculative, but each step can be motivated phonetically, and it is accompanied by segmental changes which transfer from the nasal load from segments to tones.

(1) A final consonant or open syllable lengthens a voiceless or voiceless-obstruent, raises F2 in the final part of the preceding vowel. It is well-known that voiceless consonants raise, and voiced consonants lower F2 in the following vowel, and in some of the investigations cited by Hombert 1978.92 a similar smaller effect on the vowel preceding a consonant was found.

The tones created by this rule become phonemic when final nasals were nasalized after short vowels, resulting in minimal pairs in the short high tones.

The falling tone was further changed in the following ways:

(3) When a vowel with a falling tone was preceded by a voiceless consonant (obstruent) or a cluster containing a voiceless consonant, it became a high level tone. There was probably an allophonic variation between a high falling and a low falling tone, conditioned by voiceless and voiced initial clusters. Some words from another U language given by Zhong and Yan 1985 seem to confirm this. Reduction of initial clusters led to phonemization of the tone allophones, and the high falling tone then became high level.

(4) In open syllables corresponding to final glottal stop in Hu and Lamet, the high level tone split into high and low tones, depending on vowel height, so that high vowels got high tone and non-high vowels got low tone.
low tone. This rule is phonetically well motivated, since high vowels have higher intrinsic pitch than non-high vowels, but this mechanism is seldom used to generate tones in actual languages (see Hombert 1976:96). Examples from U:

*high vowel:  U  Hu  Lame
    qī  pēi?  prī?  "nature"
    sī  pasā?  plēs?  "rope"
    gkū  ngkū?  "skin"
    nṭhū  nṭū?  "hole"

*non-high vowel:  khā  kā?  "fish"
    salē  salē?  slēc?  "rain"
    sī  sē?  khē?  "tree"
    sō  sō?  sō?  "dog"
    ngkū  ngkā?  "rice"

Under certain conditions, mid vowels have become high, so that the oppositions i/ê and u/û have been partially replaced by tone oppositions i/ï and u/û (cf. the pairs si/sì and ngkû/ngkā).

CONCLUSION

Tones have developed independently in the three closely related languages Kammu, Hu and U, showing that presence or absence of tones in a language cannot be taken as an indicator of genetic relationship. Each of these languages has acquired tones in its own way, which shows that at least in areas where there is a strong areal pressure on languages to acquire tones, this can be done by other mechanisms than those generally used to explain the origin of tones.

REFERENCES


Svantesson, Jan-Olof. Forthc.b. "U". Unpublished manuscript.

Se 31.1.4

272