

A PRELIMINARY TYPOLOGY OF TONE SHAPES  
AND TONAL SOUND CHANGES IN TAI: THE LĀN NĀ A-TONES<sup>1</sup>

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1. Introduction

In historical linguistics, there are two styles of reconstruction. In one style, the phonemes of the proto-language are regarded as mere formulas, without phonetic content. In the other style, the proto-language is regarded as a real language subject to the same phonological constraints as modern languages. One tries to reconstruct the actual pronunciation of the proto-phonemes and sees whether the resulting system looks reasonable and pronounceable in terms of what we know about the phonetics and phonology of living languages.

Now, most reconstructions of the tones of Proto-Tai have been of the formulaic type. Tai specialists such as William Gedney and Fang Kuei Li speak of the four Proto-Tai tones A, B, C, and D, but do not give any sort of phonetic content to these letters.

There is good reason for this. Whereas the phonetics of the vowel and consonant correspondences among Tai languages are--for the most part--fairly straightforward, the phonetics of the tonal correspondences are very diverse and puzzling. Take, for example, the word for "paddy field". In formulaic terms this word can be said to have the tone "A-voiced", that is, it has whatever tone in each particular dialect developed from Proto-Tai tone A after Proto-Tai voiced initial consonants. In scores of Tai dialects, extending from Assam to Kwangsi, from Kweichow to the Malay peninsula, this word invariably has the segmental shape [na:]. But what about the tone? Here we find great variety, for instance: (the name of the locality is given, followed by the name of the language in parentheses and capital letters)<sup>2</sup>

High falling, as in Mān Chong Kham (KHAMTI)

na: ʃ 52

High falling and glottalized, as in That-Khe (THO)

na: ʃ' 53'

Mid falling, as in Lungchow (THO)

na: ʃ 31

Mid rising, as in Chiengrāi (KAM MUANG)

na: 𠂆 334

High level, as in Hsi Paw (SHAN)

na: 𠂇 55

Fairly high level and followed by a glottal stop, as in Lai Chau (WHITE TAI)

na: 𠂈? 44?

Mid level, as in Xieng Khouang (lang. name not stated)

na: 𠂉 33

Low level, as in Lu-jung (PU-I)

na: 𠂊 11

and so forth.

It is relatively easy to argue that the Proto-Tai word for "paddy field" was probably pronounced something like \*[na:] as far as the segmentals go. But what sort of tone can we reconstruct to account for such a diverse set of reflexes as that given above? Not to mention the different reflexes of Proto-Tai tone A with non-voiced initials! It is no wonder that two generations of Tai scholars have constrained themselves to simply reconstructing the word thus: \*na:<sup>A</sup>

Nonetheless, this state of affairs can hardly be satisfying to Professor Henderson, who has enriched us all with her interest in the actual phonetic shapes of things, and in the interaction of these shapes in coherent systems. In this paper I hope to make a small contribution to the problem of assigning some phonetic content to Proto-Tai \*A, \*B, \*C and \*D.

## 2. Explanation of terms and concepts

Before going any further it will be necessary to say a few words about the Great Tone Split and about the relationship between consonant types and tones in Tai. Proto-Tai is reconstructed as having had three tones on syllables ending in a vowel, semi-vowel, or nasal. These tones are conventionally referred to as A, B, and C.

Syllables ending in a stop had no tonal contrasts, and it is convenient to refer to these as a fourth tonal class, conventionally called

tone D. Thus we can, for example, reconstruct minimal sets such as Proto-Tai.

- \*pan<sup>A</sup> 'to divide into shares'
- \*pan<sup>B</sup> 'to turn around, spin'
- \*pan<sup>C</sup> 'to mold (clay), clench, wring'
- \*pat<sup>D</sup> 'to brush off, wipe, sweep'

(Li 1977, pp. 61-62)

Syllables ending in a vowel, semi-vowel, or nasal (tones A, B, and C) are called kham pen or and syllables ending in a stop (tone D) are called kham ta:j or "dead syllables". In the present study I have only attempted to deal with live syllables, and shall not have anything more to say about tone D. (Eventually it will of course be necessary to deal with tone D, not only because of its intrinsic interest, but also because the reconstruction of tone D is relevant to the reconstruction of the live tones--perhaps especially tone B, since reflexes of tones B and D are very often phonetically similar in modern dialects.)

In each Tai dialect tones developed different allotones conditioned by the manner of articulation of the initial consonant of the syllable. Then certain consonants fell together so that these originally allophonic tonal distinctions became contrastive, as for example in the words for "thick" and "paddy field" in the dialect of Siamese spoken in Bangkok:

	Proto-Tai		Modern Bangkok
"thick"	*ŋa: <sup>A</sup>	> *ŋa: <sup>A'</sup>	na: ㄣ
"paddy field"	*na: <sup>A</sup>	> *na: <sup>A''</sup>	na: ㄤ

Notice that in Proto-Tai, "thick" and "paddy field" had the same tone but different initials, whereas in modern Bangkok they have the same initial but different tones. This sequence of events, which generally resulted in an increase in the number of tones and a decrease in the number of consonants is called the Great Tone Split and was an areal sound change affecting not only Tai, but also Chinese, many Tibeto-Burman languages, Hmong-Mien and Viet-Muong. In the non-tonal Mon-Khmer languages there was an analogous split producing what is called "register", a bundle of features involving such things as vowel quality and voice quality, the details varying from language to language. (See Matisoff 1973a for a useful review of the literature on the Great Tone Split.)

In order to account for the tonal developments in the various Tai languages it is necessary to divide the Proto-Tai initial consonant inventory into four classes (See Gedney 1964 pp. 25-26; 1967 pp. 12-19; 1970b; 1972; Li 1977 pp. 43-53) approximately as follows (scholars vary as to the exact details of the Proto-Tai initial consonant inventory:

given below is a fairly conservative reconstruction that will be adequate for present purposes):

1. \*ph    \*th            \*kh  
       \*f        \*s            \*x        \*h  
       \*ɱ        \*ŋ        \*ʈ        \*ʑ  
       \*w        \*l/\*ɾ
2. \*p        \*t        \*c        \*k
3. \*ʔb        \*ʔd        \*ʔj        \*ʔ
4. \*b        \*d        \*ʃ        \*g  
       \*v        \*z            \*ɣ  
       \*m        \*n        \*ɲ        \*ŋ  
       \*w        \*l/\*r    \*j

The effect of initial clusters on tones is determined by the first member of the cluster. For example, \*pl belongs to the same class as \*p. Since we will be referring to the above four classes of consonants frequently, it will be convenient to have some sort of shorthand device for doing so. I will let the labial stop member of each class stand as a representative for the whole class. Thus I will designate the four classes as the \*ph-class, the \*p-class, the \*ʔb-class, and the \*b-class respectively. The notation A-\*ph means the reflex, in a particular dialect, of tone A after initials of the \*ph-class; A-\*ph\*p means the reflex of tone A after initials of both the \*ph-class and the \*p-class; and so forth.

In many Tai dialects, each of the three Proto-Tai tones has split in exactly the same way, with one set of tones developing after the \*ph-, \*p-, and \*ʔb- classes, and another set developing after the \*b-class, resulting in six tones in all.<sup>3</sup> This situation may be diagrammed as follows:

		Proto-Tai tone		
		*A	*B	*C
Proto-Tai initial	*ph	1	2	3
	*p	1	2	3
	*ʔb	1	2	3
	*b	4	5	6

In many other dialects, however, one or more of the tones has split in a