

**Tone, intonation, and sound symbolism in Lahu: loading the syllable canon**

**James A. Matisoff**

University of California, Berkeley\*

**1. Feature shuffling and tonogenesis in Sinospheric languages.**

The development of full-fledged tonal systems of the 'omnisyllabic' type seems to be unique to East and Southeast Asia. In a language with an omnisyllabic tone system, virtually every syllable occurs with a distinctive tone that is not predictable either in terms of the syntactic structure of its phrase or phonotactically in terms of neighboring syllables. These tones are not just oppositions of higher vs. lower pitch, but are complex bundles of prosodic features including pitch, contour, vowel length, and 'phonation type' (clear, creaky, breathy voice). Omnisyllabic tone languages usually have a minimum of three distinctive tones, and some have as many as 10 or 12.<sup>1</sup>

There appears to be a necessary connection between omnisyllabic tone and monosyllabic morphemes. The stronghold of these tone systems is precisely the monosyllabic languages that are typologically similar to Chinese: what I have called the 'tone-prone' or 'toniferous' languages of the 'Sinosphere'.<sup>2</sup> Some of these languages are genetically related to Chinese (those of the Tibeto-Burman family), but others (Tai, Hmong-Mien [Miao-Yao], Vietnamese) have developed their tones — and indeed their monosyllabicity — secondarily, through contact influence from Chinese.

Diachronically, the development of tonal contrasts — *tonogenesis* — has been shown to result compensatorily from losses or mergers in the

\* This paper was originally prepared for a general audience, and was presented at the Conference on Sound Symbolism at U.C. Berkeley, January 16-17, 1986. We publish it in LTBA by permission of the editors of the forthcoming Proceedings of that Conference (Leanne Hinton, Johanna Nichols, and John Ohala).

<sup>1</sup> Tone systems elsewhere in the world — e.g. Africa or Mesoamerica — are generally much more rudimentary, in the sense that there are fewer contrasts (often just a two-way high vs. low opposition), a high degree of predictability in terms of neighboring syllables or position in the syntactic phrase, and/or a low functional load in distinguishing utterances. ('Pitch-accent' systems like that of Japanese are a limiting case.) Some Tibeto-Burman languages have intermediate systems, where the domain of tone is not the individual syllable but the dissyllabic word, i.e. there are fewer tone-pattern possibilities in dissyllables than the product of the possibilities in two separate monosyllabic words. One such language is Kham of Nepal (Watters 1985).

<sup>2</sup> The terms *omnisyllabic*, *toniferous*, *Sinosphere*, and *Indosphere* are introduced in Matisoff (in prep.).

consonantal system. Loss of a voicing contrast in prevocalic consonants can be transphonologized into a contrast between higher and lower tones; while loss of a postvocalic laryngeal ( $-ʔ$  or  $-h$ ) can lead to a phonemic contrast between rising vs. falling tone.<sup>3</sup> There is something about the tightly structured nature of the syllable in monosyllabic languages which favors the shift in contrastive function from one phonological feature of the syllable to another,<sup>4</sup> and the birth of tones is only the most spectacular of these 'feature shufflings'.<sup>5</sup>

Lahu is a typical omnisyllabic tonal language of the Loloish subgroup of the Tibeto-Burman branch of the great Sino-Tibetan family. The standard Black Lahu dialect has seven tones, five of them synchronically 'open' and 2 of them 'checked', i.e. accompanied by a glottal stop:

OPEN			CHECKED
ca	33	[mid level]	'look for'
cá	35	[high rising]	'to boil'
câ	53	[high falling]	'eat'
cà	21	[low falling]	'ferocious'
cā	11(2)	[very low]	'feed'
			c âʔ [high] 'string'
			c àʔ [low] 'push'

(The numbers 33, 35 etc. indicate relative pitch on a scale from 1 (lowest) to 5 (highest), with the first number representing the beginning, and the second the end, of the tonal contour. Note that the very low tone has a slight 'allotonic' rise in phrase-final position.)

Syllables under the checked tones derive historically from syllables with final stops  $*/-p -t -k/$ , though synchronically it is far preferable to regard the glottal stops as tonal (prosodic, suprasegmental) features rather than as postvocalic consonants. (For one thing,  $-ʔ$  disappears in *stngng*, as do all other tonal features.) In fact it is best to consider the open versus checked tones as two quite independent subsystems. The symbols  $/^{ʔ}/$  and  $/^{ʔʔ}/$  are to be regarded as unitary digraphs, with no connection implied between them and the open-tone marks  $/^{}/$  and  $/^{}/$ .<sup>6</sup>

<sup>3</sup> The first coherent explanation of these phenomena is due to Haudricourt 1954. The term *tonogenesis* itself was coined by Matisoff, and first appeared in print in 1970.

<sup>4</sup> Matisoff 1973, p. 78.

<sup>5</sup> The term 'feature shuffling' was introduced in Henderson 1985.

<sup>6</sup> The transmutation of syllable-final stops into tonal features is a gradual and ongoing process in the Loloish languages. An original final oral stop may decay until it has even less occlusion than a glottal stop, becoming merely constriction or 'creakiness' on the vowel; or it may ultimately leave no overt trace of its former stoppitude at all. This is what happened in the case of the Lahu high-rising tone, e.g. cá <sup>35</sup>, which is now totally open, with no

Since Lahu has no initial consonant clusters (syllables can also begin with no consonant at all), and no final consonants by this analysis, we are left with an extremely simple *CORE syllable canon*:

$$\begin{array}{c} \text{T} \\ \text{(C)} \quad \text{V} \end{array}$$

## 2. Intonation in an omnisyllabic tone language.

Even in languages with elaborate omnisyllabic tone systems, *intonation* certainly exists as a phenomenon independent of tone. Since intonational contours usually extend over a much larger stretch than a single syllable, and in any case are determined by 'fortuitous' syntactic structure rather than any inherent property of particular lexical items, the effect of intonation is to overarch the tones of the individual syllables in an utterance. In Y.R. Chao's felicitous metaphor, intonations are like ripples on the surface of the tone-waves.<sup>7</sup>

Still, there may also be highly perceptible intonational effects even on single syllables. Chao describes e.g. how Mandarin syllables under the fourth tone /˥˥/, which in 'neutral' intonation has a simple falling contour like 51, can acquire a complex rise-fall at the end under 'exasperated intonation':

qù 51 'go' / bù qù-ú-ù 5121 'I'm not going, dammit!'

Similarly, a Lahu syllable under one of the high tones /˥/ or /˥˥/ may acquire a lengthened vowel and a superhigh contour for special emphasis, which for male speakers may mean lapsing into falsetto:

ô 54 5 112 'over there'

ôôô 66 5 112 'wa-a-ay over there'.

In Lahu humorous or emotional conversation, in the incantatory style of animist prayers, and especially in women's speech, a special tripartite intonation is often encountered. Starting with the high-falling contour, it

glottalization, but derives historically from syllables with final \*/-p -t -k/ under special conditions where 'glottal dissimilation' applied (Matisoff 1970).

<sup>7</sup> Chao did pioneering work in comparing intonational phenomena in tonal and non-tonal languages (cf. Chao 1932). A recent contrastive study by Shen Xiaonan (1985) compares Chinese and French interrogative intonation.

rapidly descends to the very low tone, whence it rises again to the mid range:

pò-thô-ō-o 'Good grief!'<sup>8</sup>

For us non-native speakers of tone languages, dramatic cases of interference can arise between the tones of the target language and the ingrained intonational habits of one's own, non-tonal language. On the simplest level, anyone who has tried inserting a Chinese word into an English sentence quickly runs into trouble — e.g. when ending an English yes-no question with a quoted word in the Mandarin falling tone:

'Did you say qù ??'

Lahu has an interjection under an intonationally exaggerated high-falling tone *hâi*<sup>51</sup>, whose function is to indicate that one has not understood the previous utterance, and that a repetition is desired, much like English *huh?*. To American ears (or at any rate to mine) this interjection creates a bizarre first impression, simply because the falling tone of the particle sounds so positive or asseverative, not at all like the rise in pitch that we habitually associate with uncertainty or a request for repetition. (The strangeness of this word is accentuated by the allophonic nasalization of its vowel [*hâin*<sup>51</sup>], characteristic of syllables with initial *h-*, a phenomenon I have called *rhynoglottophilia*. See 6e, below.)<sup>9</sup>

### 3. Non-prosodic 'canonical' strategies for conveying affect in tone languages.

Although intonation certainly exists in tone languages, it seems clear that tonality favors the use of something else besides mere pitch or contour to help perform the communicative jobs that intonation handles in non-tone languages. Thus Lahu does not need to have a special intonation for interrogative sentences, since it has a set of sentence-final particles whose sole function is to signal various kinds of questions: *l â* 'yes-no question', *l e* 'substance (WH-) question', *nã* 'indirect or rhetorical question'. More

<sup>8</sup> This interjection is borrowed from Thai *phút-thôo* 'by the Buddha!' See Matisoff 1973 (GL), pp. 37-8.

<sup>9</sup> The mastery of this particle had an immediate payoff during my first period of fieldwork on Lahu in 1965. Before that time I had wondered why people were constantly barking [*hâin*<sup>51</sup>] at me whenever I tried to say anything! When I wanted to ask for a repetition myself I would painfully say something like [*â-thô?-ma qô? ve le*], literally 'What are you saying?' which was so unidiomatic that people usually gave up, or at any rate resorted to a simpler paraphrase. Once I learned [*hâin*<sup>51</sup>], however, people automatically repeated what they had just said, in exactly the same words. This marked the beginning of the end of my intonational dependence on English.