Tone in Tamang and Tibetan, and the Advantages of Keeping Register-Based Tone Systems Separate from Contour-Based Tone Systems

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In a recent comparison of tone in Tibetan with tone in Tamang, I had hoped to use Tibetan, with its twelve centuries of orthographic history, to account for the notable discrepancy whereby Tibetan, or, more specifically, the reading style of pronunciation of Written Tibetan and the Lhasa dialect of spoken Tibetan, could be analyzed in terms of two tones, though Tamang seemed to need four tones.[1]

For both Tibetan and Tamang, the unit on which I based my analysis was the word. In accordance with such an analysis, therefore, each word in the reading style or in the Lhasa dialect is identified as either a tone-1 word or a tone-2 word; while correspondingly, Tamang words are identified as tone-1, tone-2, tone-3, or tone-4. In these two forms of Tibetan, at one end of the scale, a word may comprise a single syllable, equivalent to a single lexical item (or morpheme, in one use of that term), e.g., [ɕɔ:] *shog* 'come here', [dø:] *sdod* 'sit down', and, at the other end of the scale, in the verbal phrase at least, as many as six syllables, equivalent to seven lexical items, e.g., [ɕu:gɪ jɔ:jɪmbənɔ] *bzhugs-kyi-yod-pa-yin-pa-no* 'do they stay'.[2] My study of Tamang was limited to the verbal phrase; so, for the sake of grammatical comparability between the two languages, I shall restrict my Tibetan examples to the verbal phrase.

I. The Tibetan and the Tamang (word-based) tone systems and their pitch patterns

A. *Tibetan: two-term tone system (tone 1, tone 2)*

My examples of tone-1 and tone-2 words here are analyzable grammatically into a verb, [⁻ɕ1]/[`ɕ1] *shi* 'die' or [ˌsø:]/[ˌsɷ] *bzos/bzo* 'make', accompanied by the verbal particles [s5], [bə], [g1] and [ɹe:]/[ɹe], *song, ba/pa, gi,* and *red*:

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[1] "A comparison of tone classes in Tamang and Tibetan", a paper presented at the Ninth Annual Conference of the Linguistic Society of Nepal, at Tribhuvan University, Kathmandu, November, 1988.

[2] Cf. also, for a more detailed account, Sprigg 1954, 137.

	1 *shi-song*	2 *shi-ba-red*	3 *shi-gi-red*
Tone 1:	[﹨ ·]	[﹨ · ·]	[⁻ ﹨]
Tone 2:	[ˏ ·]	[ˏ · ·]	[_ ﹨]

	bzos-song	*bzos-pa-red*	*bzo-gi-red*
Tone 1:	(he) died	(he) died	(he) will die
Tone 2:	(he) made (it)	(he) made (it)	(he) will make (it)

The pitch distinction shown in each of the three pairs of words in columns 1, 2, and 3 is of the register type, between an upper range of pitches for tone-1 words and a lower range for tone-2 words. The pitch of the tone-1-word verb lexical item [ɕ1] is in the upper range; and the tone-2-word verb lexical item [sø:]/[sɑ] is in the lower range. In both the tone-1 word and the tone-2 word the verb lexical item has a falling pitch contour, [﹨] and [ˏ], when it is used in a word containing such particles as *song* and *ba/pa*, falling to the low pitch level appropriate to these two particle lexical items; but it has a level pitch contour, [⁻] and [_], when it appears in words containing the particle lexical item *gi*, which has high pitch (but low pitch when sentence-final; Sprigg 1968, 688-9). The two contour pitch features, falling contour and level contour, are, therefore, in complementary distribution with each other here; consequently, they could be regarded, if desired, as allotones of the same toneme, high toneme for *shi*, with allotones [﹨] and [⁻], and low toneme for *bzos/bzo*, with allotones [ˏ] and [_]. These contour pitch features do not distinguish morphemes; but the register pitch features do distinguish them.

With the particle lexical items *song*, *ba/pa*, *red*, and *gi*, the position as regards pitch behavior is quite different from that stated for the verb lexical items: *song* and *ba/pa* have the lower of the two pitch ranges. *gi* has the upper range (except when sentence-final), and *red* alternates between the two ranges, having the lower when it occurs in the two pitch patterns shown in column 2, in which it follows the low-pitch particle lexical item *ba/pa*, and the upper when it occurs in the pitch patterns shown in column 3, in which it follows the particle *gi*, before falling to the lower. The difference in register for the particle lexical item *red* is accompanied by a difference in contour and a difference in length, and, therefore, a difference in prominence: level contour, short vowel, and weak prominence ([ɹe]) in the types of word exemplified in column 2, but falling contour, long vowel, and strong prominence ([ɹe:]) in the types shown in column 3. In other words, the register and contour of *red*, its length, and its degree of prominence are all a function of the type of word in which it occurs, the column-2 type of word versus the column-3 type of word; and

the alternative register, contour, length, and prominence features are in complementary distribution by type of word.[3]

In the verbal phrase the verb lexical item *shi* occurs in, and only in, tone-1 words, whether polysyllabic, as in the above examples, or monosyllabic, as in the word *shi* ([ɕi 1]) in the verbal phrase *shi 'gro-ba-'dug* '(he) is nearly dead'; it can, therefore, be given a classification in relation to word tone, however many syllables the word may contain, as a tone-1-word (or tone-1) lexical item. Correspondingly, the verb lexical item *bzos/bzo*, which occurs in the polysyllabic tone-2 words (columns 1-3) above, and can also occur in the monosyllabic word *bzos* ([søː]) of the verbal phrase *bzos tshar 'gro-ba-'dug* '(he) has almost finished making (it)', can be classified as a tone-2-word (or tone-2) lexical item.[4] The particle lexical items *song, ba/pa, red,* and *gi* occur in words of either tone, and, if it were thought useful to give them a classification in relation to word tone at all, would have to be classified as tone-1/2-word lexical items.

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[3] Cf. also Sprigg 1954, 141-6 and 150-2, which also give alternative pitch patterns in use in sentences with emphatic intonation: a sequence of low and level pitches.

I have not used the five-point "tone letters" devised by Chao for symbolizing the pitch-level distinctions 1-5, going from low to high (Chao 1930, 24-7; cf. also Yu and Jaw (Chao) 1930, 27), because I believe five levels to be excessive for Tibetan and Tamang. For the tonal and intonational needs of Tibetan and Tamang (and also Burmese, for that matter) a four-level scale, lower and upper low and lower and upper high, should be sufficient; and, in attempting to impose a five-point scale on languages such as these phoneticians run the risk of making it difficult for their readers to see the phonological wood for the phonetic trees.

[4] The tone-2 lexical item *bzos/bzo* 'make' can also occur in tone-1 words, though not in the verbal phrase and not as the first lexical item of the word; e.g., the nominal-phrase noun tone-1 word [ˉŋɔpsɔː] *dngo-bzo-ba* 'shoemaker', in which it occurs as the second lexical item of the compound.

B. *Tamang: (revised) four-term system (tones 1, 2, 3, and 4)* [5]

My examples of tones 1, 2, 3, and 4 here correspond to those given in (A) above for Lhasa Tibetan in that they are analyzable grammatically into verb and particle; these Tamang words are, however, disyllabic, the second syllable being the particle lexical item *ji* ([dʑi]), the past-tense particle; but the difference in number of syllables between the Tamang words and some of the Tibetan words has no significance for the tonal analysis; e.g., (each word has alternative pitch patterns, the former being appropriate to final, and the latter to continuative, sentence intonation):

tone 1	tone 2	tone 3	tone 4
[ˋ ˏ]/[ˋ ⁄]	[⁻ ˋ]/[⁻ ⁻]	[˄ ˏ]/[˄ ⁄]	[ˍ ˋ]/[ˍ ⁻]
shi-ji	*khru-ji*	*so-ji*	*drup-ji*
he died	he washed	he prepared	he sewed.

In addition to the alternative pitch patterns shown above for words of each of the four tones in accordance with a twofold difference in sentence intonation, I have noted variations in pitch and prominence for three of

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[5] This four-term system has been referred to as 'revised' here because it replaces my earlier three-term system. I revised it to a four-term system after Mazaudon had pointed out to me, in correspondence, that the pitch transcriptions in my phonetic data, collected in Rishingo, east-central Nepal, in 1956, were better suited to a four-term than a three-term analysis (cf. Mazaudon 1973, 72, n. 61). I had mistakenly merged members of my current tone-2 category with those of my current tone-1 in a category that I at that time termed 'tone-1', having assumed, incorrectly, that their pitch patterns were merely free variants of a single tone category.

For this confusion, my working method was largely to blame: in order to study the junction relationships of the final part of verb lexical items with the initial part of a following particle (suffix), I had been obliged to alternate particles, e.g., *-ji, -ba, -la, -sai*; as a consequence of this, I have since come to suspect that there were occasions when my informant used contrastive stress while alternating particle lexical items, rendering them more prominent than the preceding verb lexical item, in something like the way in which, as a schoolboy, I used to chant the present tense of first-conjugation verbs in Latin as *amō, amās, amat*, etc., giving contrastive stress to the inflexion syllable, the ultimate syllable, instead of to the penultimate · syllable. Correspondingly, in my phonetic transcription of pitch in Tamang I had noted the pitch pattern [⁻ ˋ] for the tone-1 word *choi-ji* '(he) ate/drank' (hon.), in which contrastive stress is given to the past-particle lexical item *-ji*, as well as [ˋ ˏ], the more usual pattern for this word, and had then gone on to accept both patterns as tone-1 variants, which indeed they are. Observing, further, that *tsung-ji* '(she) sold' and a number of other such words also had the [⁻ ˋ] pattern, or a pattern closely resembling it, I classified them too as tone-1. In doing so, I overlooked two important considerations: (i) for *tsung-ji* the [⁻ ˋ] pattern is the more usual pattern, and therefore in contrast with the tone-1 [ˋ ˏ]; and (ii) the tone-1 pattern [ˋ ˏ] is unsuitable for *tsung-ji* and other such words; they never have it.

On the difficulty of distinguishing tones 1 and 2, cf. Mazaudon 1973, 72 (n. 61) and 70-2. 'fluctuations entre /1/ et /2/'; for a similar difficulty in the analysis of high-register forms in a closely-related language, Thakali, cf. Hari 1970, 134.