

The Chang-Shefts tonal analysis,
and the pitch variation of the Lhasa-Tibetan tones¹

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I. 'Tone' variation

The Chang-Shefts tonal analysis has the great advantage of having become widely known, through the alphabetization in A manual of spoken Tibetan (1964) and Spoken Tibetan texts (1978), and through Goldstein and Nornang's Modern spoken Tibetan: Lhasa dialect (1970); but it has the disadvantage of showing considerable variation in 'tone' for the same lexical item; e.g. (h. = 'high', f. = 'falling', l. = 'low')

a. high 'tones'

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|----------------------|-------------------|-------------|-------------|
| i. h.-f., h.-h. | tsāā-, tsālā- | 'strain' | (1978, xxv) |
| ii. h.-f., h. | tūū, tūq- | 'lathe' | (1964, 66) |
| iii. h.-h., h. | sāā-, sār- | 'new' | (1978, xlv) |
| iv. h.-f., h.-h., h. | sūū, sūū, sōō, sū | 'who', etc. | (1964, 88) |

b. low 'tones'

- | | | | |
|----------------------|-------------------|-------------|--------------|
| i. l.-f., l.-l. | šāā-, šālā- | 'put down' | (1978, xxxi) |
| ii. l.-f., l. | tūū, tūq- | 'Bhutan' | (1964, 67) |
| iii. l.-l., l. | yīī, yī- | 'are', 'am' | (1964, 13) |
| iv. l.-f., l.-l., l. | ŋāā, ŋāā, ŋāā, ŋā | 'I', etc. | (1964, 87) |
| v. l.-f., toneless | reē, re- | 'is' | (1964, 13) |

c. high and low

- | | | | |
|---------------------|--------------------|---------|------------|
| i. l.-f., l., h.-f. | tūū, tūq-, -(ī)tūū | 'have', | |
| | | 'does' | (1964, 14) |
| ii. l.-l., h.-h. | qām, qām-, -qām | 'box' | (1978, |

xxxviii)

This disadvantage could be removed by taking account of two principles: complementary distribution, especially in relation to the 'tone' (or tonelessness) of a following syllable or a preceding syllable within the word (section II below), and grammatical comparability (section III).

II. Complementary distribution

A. 'Falling' and non-'falling' 'tones'

In (a.i) and (b.i) above, each of the two 'falling' 'tones' is, respectively, in complementary distribution with each of the non-'falling' 'tones':

| | <u>'high-falling'</u> | | <u>'high-high'</u> | |
|------|-----------------------|---------------|--------------------|-------------------|
| a.i. | tsāā(payīī) | 'I strained' | tsāā(qīyīī) | 'I will strain' |
| b.i. | šāā(parēē) | '(he) shaved' | šāā(qīrēē) | '(he) will shave' |
| | <u>'low-falling'</u> | | <u>'low-low'</u> | |

The 'falling' alternative precedes the toneless syllable -pā; the non-'falling' alternative precedes the 'high'-tone syllable -qī.

B. 'Single-vowel' 'tones' and 'geminate-vowel' 'tones' or '-ŋ/-m' 'tones'

Similarly, in (a.ii-iii) and (b.ii-iii) above, each of the two 'tones' appropriate to 'single vowels' ('high' and 'low') is in complementary distribution with one or other of the four 'tones' appropriate to 'geminate vowels and single vowels followed by ŋ or m': 'high' with 'high-high' or 'high-falling', and 'low' with 'low-low' or 'low-falling'; e.g.

| | <u>'high-falling'</u> | <u>'high-high'</u> | <u>'high'</u> | |
|--------|-----------------------|--------------------|---------------|------------------|
| a. ii. | tūū | | tūq(pā) | 'lathe-operator' |
| iii. | | sāā(pā) | sār(Λ) | 'newer' |

| | | | |
|-------------|----------------------|------------------|----------------|
| b. ii. t̥ù | | t̥uq(p̄) | 'Bhutanese' |
| iii. | yĩĩ | yĩ(p̄ n̄õõ) | 'are you' |
| | <u>'low-falling'</u> | <u>'low-low'</u> | <u>'low'</u> . |

The type of 'tone' alternation shown by the examples at (a) and (b) (ii)-(iii), and at (b.v), between the two-'tone' set and the four-'tone' set, results from the fact that any lexical item that has a form spelt with a final /q, r, p/ or a final single vowel (e.g. -ĩ, -e) is restricted to one or other of the two 'tones' 'high' or 'low' (or, alternatively, tonelessness), and if, further, that lexical item also has an alternative phonemic form with a 'geminate vowel', it must also alternate in 'tone' with one (or more) of the four 'tones' appropriate to 'geminate vowels': 'high-falling', 'high-high', 'low-falling', and 'low-low'; e.g. (a.ii) t̥ù and t̥uq-, (a.iii) s̄āā- and s̄ār-, (1978, xxxix) nup and nù 'west', (b.iii) yĩĩ and yĩ-, and (b.v) r̄ēē and re-.

C. Register variation

The verb lexical item shown at (c.i) above not only shows the alternation just referred to, between a 'low' 'tone' for its form in -q and a 'low-falling' 'tone' for its form in a 'geminate vowel' (-uu), but also shows a variation in register between the range of low 'tones' ('low', 'low-low', 'low-falling') and the high range of 'tones' ('high', 'high-high', and 'high-falling'); and the lexical item in (c.ii) also shows register variation, but for a noun lexical item:

| | | | |
|----------------|----------------------|--------------|-----------------------|
| | <u>'low-falling'</u> | <u>'low'</u> | <u>'high-falling'</u> |
| c. i. verb tù | tuq(ēē) | (mĩ)tù | |

'low-low''high-high'

c.ii. noun qām qām(cūū) 'small box' (yīī)qām 'letter box'

In these two examples the lexical items tuū/tuq/-/(ī)tuū and qām/qām/-qām owe their high-register 'tones' to their position as second syllable of the word (regardless of the 'tone' of the preceding syllable): 'the tone of the base after the prefix, and thus in a second syllable, has following a more general morphophonemic rule, the high tone' (1964, 24) [since the authors distinguish three high 'tones', their phrase 'the high tone' here would be better expressed as a high tone, or as one of the high tones; e.g. (c.i.) 'high-falling', (c.ii) 'high-high'].

All the above examples show variation in 'tone' for a given lexical item as a function of difference in tonemic environment or of difference of place within the word, such as: (a/b.i) preceding a toneless syllable versus preceding a 'high' syllable, (a/b.ii) monosyllabic word versus preceding a 'high' syllable, (a.iii) preceding a 'high' syllable v. preceding a toneless syllable, (b.iii) monosyllabic word v. preceding a toneless syllable, (c.i/ii) monosyllabic word v. first syllable of a polysyllabic word v. second syllable of a polysyllabic word. Where this difference in environment carries with it a difference in the phonemic form of the lexical item such that final /Vq/, /Vr/, /Vp/ or /V/ alternates with a final 'geminate vowel' (/VV/), there will be the matching alternation in 'tone' already referred to, between one of the two 'tones' appropriate to the former type of phonemic form as opposed to the four 'tones' appropriate to the latter type.