A BRIEF ENCOUNTER WITH LAHU TONES

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The Lahu tone system has been extensively described by Matisoff (1973 and references therein). Standard Lahu has five open (non-checked) tones (Mid, High rising, High falling, Low falling, Low) and two checked tones (High checked and Low checked). All 49 combinations of these seven tones are found as illustrated in the table below (adapted from Matisoff 1973:27).

Two repetitions of each one of these 49 tonal sequences were recorded from one Lahu speaker. These data were analyzed with a hardware pitch extractor in the Phonology Laboratory of the University of California at Berkeley. The tones were measured at the beginning and the end of each vowel except for high checked tones where a third value - the highest point in the fundamental frequency curve - was also considered. Then the values of each tone were averaged together across the seven tonal environments. The fundamental frequency values in Hertz are indicated on the vertical axis - the time axis is only used to distinguish between smooth and checked tones - duration differences within each category were not considered. The results of these measurements are presented in two graphs in order to show the differences between the same tone in initial as opposed to final positions. Each tone presented in these graphs is the average of 14 tokens (2 repetitions x 7 tonal environments). Notice that in final position the end point of most tones are significantly lower and that the mid and low-checked tones are realized as falling tones. We obviously have to be extremely cautious about making generalizations based on such limited data (only one speaker and two repetitions per tonal sequence). Furthermore since these data were not collected for the purpose of an acoustic analysis there was no attempt to control for fundamental frequency variations caused by differences in vowel quality or consonantal environment and finally no carrier-phrase was used.
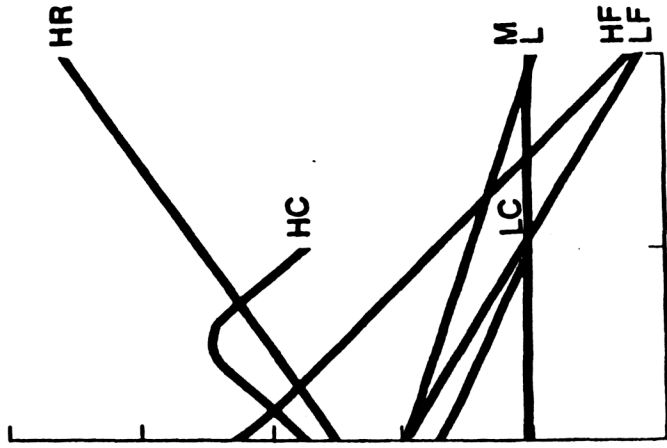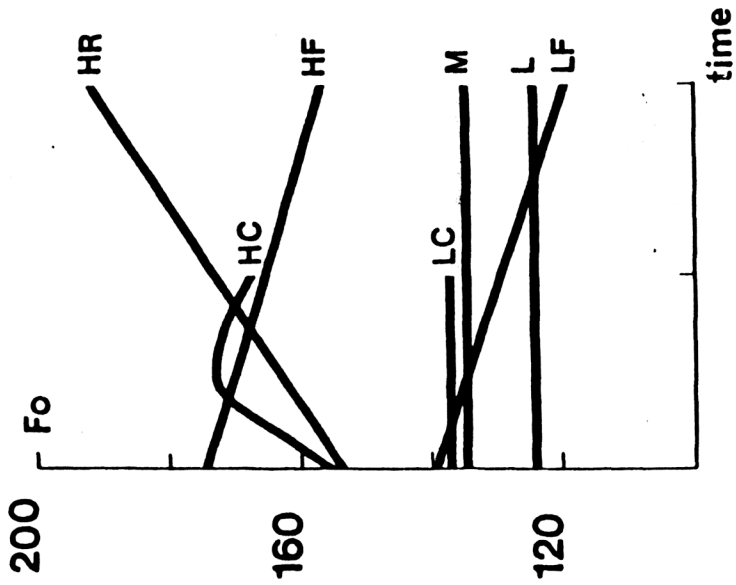
We hope that in spite of all these shortcomings these data will give a first approximation of the fundamental frequency values of the Lahu tones.

Reference: Matisoff, J.A. (1973) The Grammar of Lahu. University of California
            Publications, Linguistics 75.

2nd tone → 1st tone ↓	Mid 33 (unmarked)	High-rising 45 /´/	High-falling 54 /ˆ/	Low-falling 21 /`/	Low 11 /-/	High-checked 54 /ˆʔ/	Low-checked 21 /`ʔ/
Mid 33 (unmarked)	thɛ-du 'skirt'	a-kɛ́ 'more'	chɔ-mɔ̂ 'adult'	qha pɛ̀ 'all done'	chɔ-qā 'fool'	chɔ-nâʔ 'bandit'	chi bɛ̀ʔ 'now'
gh-rising 45 /´/	á-ni 'yesterday'	kɔ́lɔ́ 'northern Thai'	hí gâ 'eight people'	á-tà 'stick'	há-qɔ̄ 'cave'	khɨ́-nû? 'shoes'	cá dàʔ 'be related'
gh-falling 54 /ˆ/	chɛ̂-šɛ̰ 'healthy'	nû-cú 'cow's milk'	jɔ̂-mɔ̂ 'master'	mû-yɛ̀ 'rain'	mâ ši 'do not know'	tɛ̂ pɔ̂? 'once'	nô kàʔ 'up there'
w-falling 21 /`/	cà-qha 'paddy'	mì-cɛ́ 'boundary'	ɡì-phɛ̂ 'otter'	mì-ɡɨ̀ 'ground'	à-mì 'fire'	ɡhà-thâ? 'always'	chò kàʔ 'here'
Low 11 /-/	ši ve 'know'	ši pɛ́ 'be knowledgeable'	ši lâ 'knows much'	ši tù 'will know'	ši šɔ̄ 'still knows'	ši hâ? 'dares to know'	ši kàʔ 'even if one knows'
gh-checked 54 /ˆʔ/	ɡhâʔ-šɛ̰ 'headman'	nâʔ-tɔ́ 'jet-black'	hâ? lâ 'very fast'	šɨ́ʔ-cɛ̀ 'tree'	jûʔ pɛ̄ 'stab to death'	hâ?-hâ? 'quickly'	fâ?-châ? 'rat'
w-checked 21 /`ʔ/	yàʔ-qɔ 'road'	yàʔ-pɨ́ 'tonight'	yàʔ-qhâ 'but'	yàʔ kɨ̀ 'landing-place'	chɔ̀-ši 'barley'	yàʔ-khɔ́? 'pigpen'	yàʔ dàʔ 'quarrel with each other'

Table 1. The 49 Possible Tonal Sequences in Lahu

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