REGISTER IN BURMESE

David Bradley

0. INTRODUCTION[1]

It has been 'traditional' in Tibeto-Burman (TB) linguistics to describe languages in terms of a suprasegmental opposition of **tones** which have been talked about mainly or exclusively in terms of fundamental frequency (or pitch). The literature on the development of these tones refers to reconstructed characteristics of consonant segments in the syllable: initial consonants conditioning pitch height, and certain 'laryngeal' final consonants often conditioning the development of pitch contour.

To be exact, proto-voiced initials have been found to condition the development of a lower pitch, and proto-voiceless initials may condition the development of a higher pitch; there are also cases in which three categories of initials - such as voiceless aspirated, unaspirated, and voiced - may condition the development of three different relative pitches. A final -ʔ may condition the development of a rising contour, and a final -h, a falling contour. These proposals are discussed succinctly in Matisoff (1973); an example of the development of higher versus lower tones conditioned by *voiceless versus *voiced initials which subsequently themselves changed is seen in Matisoff (1972), and an example of a rising tone which developed in the environment of a recently-developed final glottal stop (as well as a difference in initial) is seen in Matisoff (1970). These two examples from Loloish are examples of excellent comparative work which demonstrate that recent developments in the suprasegmental systems of these languages have been conditioned by segmental differences.

In Austroasiatic (AA) linguistics, the focus of descriptive and comparative efforts has instead been on suprasegmentals of voice quality or phonation, which have been termed <u>register</u> by Henderson (1952).

These differences between breathy, 'normal', and creaky voicing have been the main parameter considered in many descriptions, though there are often other characteristics noted as well. The conditioning factor in the development of the register opposition, according to the usual reconstruction, is the voicing characteristic of the initial consonant in the syllable; if the initial was voiced, a breathy phonation might develop for the entire syllable; if voiceless, a creaky phonation might develop. It seems much less typical of AA languages to have more than two contrasting suprasegmentals of register than it is of TB languages to have more than two tones conditioned by initial characteristics. Moreover, it is often the case that Austroasiatic languages with a register contrast have only one 'marked' phonation; i.e. there are systems with breathy versus 'normal' register, or 'normal' versus creaky register, but it is less frequent to find a system with breathy vs. creaky register.

It is interesting to note that the principal conditioning factor adduced in many instances of tonogenesis or tone splitting in TB languages is identical to that for the development of register in AA languages: voiceless versus voiced initial consonants. Perhaps the differences in description are partly due to the fact that TB and AA linguists don't talk to each other enough.

As Henderson has also noted, it is hardly ever the case, in Southeast Asia at least, that a suprasegmental system can be described in terms of one parameter only. Fundamental frequency or pitch is one parameter only; so is phonation. Other parameters of suprasegmentals whose domain is the syllable (syllable prosodies) may include duration, intensity, and characteristics of the segments such as vowel quality. Gregerson (1976) suggests that the position of the tongue root may be a major factor in several of these parameters including especially voice quality overall, and vowel quality. Other articulatory characteristics involved would include larynx adjustments: raising or lowering as well as differences in vocal cord tension and so on; airstream differences (more or less subglottal pressure); pharynx shape differences, partly but not only related to the position of the tongue root; and possibly more. The principal differences in articulation involve the larynx, but the shape of the vocal tract above the larynx can also contribute significantly.

There have been a couple of studies within TB which propose to account for suprasegmental phenomena in terms of register; the earliest that I know of is Bradley (1969), which describes the Loloish TB language Akha in terms of a laryngealised versus 'normal' register which crosscuts the high versus mid versus low pitch tone system; the

laryngealised register occurs mainly with mid and low tones. It is a true syllable prosody in that initials are unaspirated in laryngealised register and aspirated (or slightly breathy if voiced) in 'normal' register; there is also variably a final glottal-stop in laryngealised register syllables. The diachronic sources of this prosidy are final stops: *-p, *-t, or *-k, which had probably merged to a final glottal stop whose characteristics spread into the preceding initial and vowel and produced the laryngealised register. For a further description of Akha register, see Thurgood (1980).

Another proposal of register in TB is Glover (1971), who accounts for the suprasegmental systems of three related languages in Nepal (Gurung, Tamang, and Thakali) in terms of two crosscutting parameters: phonation, clear versus breathy; and effort, more versus less intense. The register contrast is related by Glover to a preliminary version of Gregerson's (1976) advanced tongue root hypothesis; Glover reports that vowels are sometimes higher in 'normal' than in breathy register in Gurung; and that pitch is affected by both suprasegmentals, with higher fundamental frequency in the more intense syllables, and lower in the less intense syllables; and relatively lower fundamental frequency overall in the breathy syllables. The three languages differ somewhat in the exact details of pitch characteristics, but there is an exact correspondence between them. This correspondence pattern has important implications for the reconstruction of Proto-TB suprasegmentals, as the three languages are genetically quite close to Tibetan. Shafer's argument against the reconstruction of tones is based on the secondary nature of Tibetan tones, but if the Gurung/Tamang/Thakali system shows regular correspondences to Benedict's Tones *A and *B, then it must be the case that Tibetan has **lost** the Proto-TB suprasegmental opposition relatively recently. Mazaudon (1977) discusses this and other factors in the history of Tamang and other TB languages.

Weidert (1979) proposes to reconstruct final laryngeal segments rather than tones for Proto-TB based on data from Kuki-Chin, Naga, Baris (Bodo-Garo), and Jinghpaw. What he is suggesting amounts to a claim that Tone *A was unmarked, Tone *B had a final glottal-stop, and that other secondary tones that developed within these subgroups of TB arose from finals *-h, *-s, and *-p/ *-t/ *-k. There is some evidence of -? in the tone which is the reflex of *B in Garo, Bodo, Lotha Naga, Mikir, Nocte, and Tangsa, especially in forms which occur in isolation; in fact this could also be related to a register difference. Unfortunately for those who would like to reconstruct register for Proto-TB, it is precisely the opposite phonation, **breathy**, which occurs in the Burmese reflex of TB Tone *B.

In an extremely important paper, Egerod (1971) proposes a similar segment-derived register origin for the tone system of Chinese; Chinese is of course the other major group within Sino-Tibetan (ST), along with TB. The even (ping) tone is reconstructed as 'normal' register, the rising (shang) tone is reconstructed as creaky in phonation, with a final *-ʔ which, in accord with the usual TB tonogenesis principles, had also a rising contour. Similarly the going (qu) tone is postulated as having had breathy phonation, developed from a final *-h which also conditioned a falling contour. The entering (ru) tone with final *-p/ *-t/ *-k was not opposed to the first three in earlier stages of Chinese when it was the only possibility in stop-final syllables; the ping, shang, and qu do not occur in stop-final syllables.

ST, and **a fortiori** TB, thus includes several subgroups which have, or have been reconstructed as formerly having, register-type systems. Sinitic, Bodic, Burmic, and Baric, all four of Shafer's major subgroups, include such cases. Within TB, it seems certain that one must reconstruct two suprasegmentals, *A and *B, based on widespread correspondence patterns; it is less clear what the possible realisations of the two may have been.

1. PROSODIES IN BURMESE

Burmese has been analysed as having up to five opposed suprasegmentals, realised as follows (data from personal observations; also Thein Tun (1982)):

name	pitch	contour	intensity	phonation	duration	vowel quality
'even'	low	level	low	normal	fairly long	intermediate
'creaky'	high	slight fall	very high	creaky	less long	higher,more fronted
'heavy'	fairly high	sharp fall	high	breathy	very long	lower,more backed
'killed'	very high	slight fall	high	normal	short	(different system)
(reduced)	variable	variable	very low	normal	very short	[ə] only

The 'reduced' possibility occurs with the so-called 'minor syllable' which is found in various Southeast Asian languages; it occurs only with the vowel [ə], which does not occur with the other suprasegmentals; so it is not opposed to the others and has been excluded from most analyses of Burmese 'tone'. For some details of the origins of this syllable type in Burmese, see Bradley (1980).

The 'killed' type occurs only with a final stop; glottal in isolation, and homorganic to the initial consonant of the following syllable in close juncture. Also, the following consonant is not voiced -