Problems and Progress in Lolo-Burmese: Quo Vadimus?*

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1. Introduction. The Lolo-Burmese languages form one of the 7 or 8 primary divisions of the Tibeto-Burman (TB) family. It is also (in my admittedly prejudiced opinion) one of the most pleasant subgroups of TB to work with. Modern, copious, and reliable data exist for well over a dozen Loloish languages/dialects. For much of this new material we have first-rate Chinese scholars to thank. Much additional data has been collected by Japanese, European, and American scholars who have done recent fieldwork in Burma or Thailand. Besides, Lolo-Burmanists are fortunate in having the testimony of Written Burmese (WB) as a guide and check for their work on the Loloish side.

Many of the Loloish languages that are now best-known (Lahu, Lisu, Akha, Sani, Ahi) are quite close to each other on the genetic tree, with a very high percentage of cognacy in basic vocabulary. Others are more remotely related to these (the Bisi-Pyen-Phunoi group; the Nasu-Lu-ch'Uan group; the Moso-Nakhi group). These latter languages are in many ways more conservative phonologically than those of the "Lahoid" group. At any rate the "distances" among the various subparts of the Loloish family are great enough to provide considerable time-depth for reconstruction and the recovery of many archaic features at the Common Loloish stage, while at the same time being small enough so that there is no shortage of cognates common to all crannies of the family.

Besides the sheer volume of data available to work with, the data itself is uncommonly challenging and interesting. The rich consonantism of the Proto-TB (PTB) syllable has left ample traces in the modern Loloish languages, though the contrastive functions once performed by syllable-initial consonant clusters and syllable-final stops, nasals, and other consonants have had to be translated into drastically different phonetic terms, and assumed by different parts of the syllable. When one compares the complex structure of the PTB syllable,

\[(P_1)(P_2) C_1 (G) V (^\cdot) (C_f) (s),\]

where \(P\) = prefix, \(C_1\) = root-initial consonant, \(G\) = glide
\((-w-, -y-, -r-, -l-), V = \text{vowel}, \cdot = \text{vowel length}, C_f = \text{final consonant}, \text{and } s = \text{suffixed} \ -s\),

and compares it to the structure of a Loloish language like Lahu, where syllables have the canonical shape \((C_f) \ V \ T [T = \text{tone}]\), one's first impression is that the proto-syllable has decayed or degenerated beyond redemption. Yet the breakdown of the old prefixial system has led to a multiplication of paradigmatically opposed entities in the \(C_f\) slot; the glides, before disappearing, have differentially affected the position of articulation of the root-initial consonant and have caused a proliferation of new vocalic contrasts; final consonants have affected the preceding vowel's quality before departing the scene; and perturbations in the consonantal system of the old syllable have triggered the birth of elaborate tone-systems in the Loloish daughter languages. Thus, although the syllable canon of the typical Loloish language is simple in the extreme, the inventory of contrastive elements in the various syllable-positions tends to be highly complex: a language like San is typical, with 43 initial consonants, 19 vowels (on the surface phonetic level, at any rate), and 5 tones.

The Loloish languages are very inventive phonologically. They have tried everything -- back vs. front velar stops, retroflex affricates, syllabic nasals and spirants, labial and lateral affricates, voiceless laterals and nasals, front rounded vowels, back unrounded vowels, central superhigh buzzing vowels, laryngealized vowels, nasalized vowels -- you name it!

The mapping of the original PTB phonological segments onto the modern Loloish syllable is intricate. To take a few random examples, the Lahu vowel \(\text{a}\) may descend from PLB *uw or *an or *iy. The Lahu consonant \(\text{c}\) may descend from *ts, *ʔtš, *t̥s, *ʔt̥s, *ky, or *ʔky. Conversely, one and the same proto-phoneme may have multiple modern descendants. Thus, *a becomes Lahu \(\text{a}\) if it had been followed by *-m or *-p; but \(\text{a} > \text{Lh. e}\) if it had been followed by *-n or *-t; if the following consonant was *-n, \(\text{a} > \text{Lh. e}\) [see above]; but if *-k followed, \(\text{a} = \text{a}\).

As is always the case in any language family, some daughter languages are more useful than others in reconstructing any given feature of the proto-language. Lahu is excellent for distinguishing etyma that had the old nasal prefix, *N-; but, alas, it is totally useless for
distinguishing *s from *ʃ. For this latter task, Lisu and Akha are invaluable -- though neither one gives us any help in reconstructing the nasal prefix. As might be expected, Written Burmese is enormously important for reconstructing the PLB proto-form. Yet there are many cases where WB cannot do things that the humble Loloish tongues do with ease. Thus WB has suffered a merger of *s and *ʃ (they both appear as s), while almost all the Loloish languages distinguish them faithfully: e.g. *s > Lh. ʃ, but *ʃ > Lh. y.

The vertebrate palaeontologist's greatest satisfaction, I suppose, is to take something like the fragment of a femur and reconstruct from it an entire proto-animal from tip to tail. Similarly, the private pleasures of Lolo-Burmanists consist in taking little syllables like h̥i and showing how they come from *b-r-gyat 'eight'; or in comparing two variant forms in a daughter language that mean about the same thing and are similar to each other phonologically (say ʃɔ vs. ʃɛ 'tonsil') and deciding which one is the direct cognate of some form in a distantly related but more conservative language (say bṣnyogs).

Perhaps the most rewarding kind of experience is to discover a sound-correspondence that looks bizarre at first sight, but which proves to be entirely regular and supported by abundant examples. Thus a priori one would not think very highly of a putative cognate pair like WB 1e and Lahu ʒ 'four'. Yet further investigation turns up strikingly confirmatory parallel examples like the following: 'heavy' WB 1e / Lh. ʃ; 'wind (n.)' WB le / Lh. mə-hə; 'bow, sling' WB 1e / Lh. ʃ-mə; 'moon' WB la1 / Lh. ha-pa; 'grandchild' WB mə (vs. Insc. Bs. mliy) / Lh. ʃ-ə (vs. ʃ-ə); 'boat' WB hle / Lh. hə-1ə-qə; 'tongue' WB hlya ~ hra / Lh. ha-tə; 'god, image of a god' / WB hla 'handsome, pretty' / Lh. ʃ-hə 'soul, image'; 'penis' WT mə / Jinghpaw (Jg.) menə / WB lə / Atsi nə,yə / Maru nə,yə / Maru nə,yə / Lh. nə.

To continue our palaeontological metaphor, another almost painfully sweet delight for Lolo-Burmanists is to find in a modern daughter language a "living fossil" -- i.e. an isolated survival of a very archaic feature that had almost totally disappeared at a much earlier stage. Thus the word for 'four' is reconstructed at the PTB level with prefixial b- on the basis of such extra-
-LB forms as WT bzi and Jg. məlf. So far as is now known, the prefix survives nowhere in LB except in the Maru (Burmish branch) form bit. Similarly, we set up a causative prefix *g- for TB on the basis of Tibetan, Jinghpaw, and other extra-LB evidence. In all cases but one, this old prefix shows up in Burmese as aspiration of the initial consonant -- but in one form, sip 'put to sleep' (vs. ʔip 'sleep'), the original *g- survives due to an exceptionally favorable phonological environment. As a final example we may take the etymon 'lick'. This had been reconstructed [STC, No. 211] as *s-lyak ~ *m-lyak, with the nasally prefixed variant justified exclusively on the basis of extra-LB evidence: Tangkhul Naga məlek ~ mərek, Ao Naga məzak, Jg. matǎ?. But recently discovered forms provide direct evidence for the prefix within Loloish itself: Akha myeuæ, Bisu bɛ.13

Even though Lolo-Burmese is one of the relatively best-known branches of Tibeto-Burman, there still remains a huge amount of work to be done. Not only is there much unmined and undigested material remaining in already published sources, but new data are coming in all the time from fresh fieldwork. So abundant are the materials that "micro-linguistic" work is now possible,14 detailed research into fine points and minutiae of reconstruction. It is at first discouraging to increase the power of magnification when doing comparative work: things which had appeared regular in their broad outlines are shown to have irregularities and exceptions. But as always, these difficulties are precisely the harbingers of future progress -- identifying something as a problem is in itself a contribution to that problem's solution.

The historical phonology of Loloish still presents many problems of detail in all three "areas of the syllable": initial consonants (including prefixes), rhymes, and tones. If that is true of phonology, how much greater is our area of ignorance in the domains of historical morphology and syntax! In the realm of pure lexicon, hundreds of new cognates are awaiting identification. As far as taxonomy goes, the internal relationships of the Loloish languages are still not completely clear,15 let alone their external relationships to other TB groups like Nungish and Kachin.16

Lolo-Burmese studies are potentially important also from a broader theoretical point of view. Such general
issues as the mechanism of tonogenesis, grammatical effects on sound-change, proto-variation and the notion of "cognacy" -- to mention only a few -- cannot help but be clarified as fringe benefits to painstaking comparative work in this family.

Last spring it was my pleasure to conduct a class in Lolo-Burmese historical phonology at Berkeley. The eight students in that class each worked with primary Loloish materials, and each of them produced a term-paper that was a genuine contribution to the field. The distribution of labor was as follows: Robert S. Bauer -- Akha (Lewis, Nishida); Steven P. Baron -- Sani (Ma Hsüeh-liang); Edward J. Hillard -- Lahu (Matisoff); Chiu-chung Liao (Ch'iang -- Wen Yu) 18; Marc Okrand -- Nakhî (Rock); Graham Thurgood -- Lisu (Burling, Fraser, Hope, Anonymous); Stella Ting -- Bisu (Nishida); and Julian K. Wheatley -- Lu-ch'ulan (Ma Hsüeh-liang). Many of these findings of these investigators have been incorporated into this paper (see footnotes). Most of the students intend to pursue their work further, as their time permits. *(spring of 1973)*

This paper is a brief outline of ongoing research into seven Loloish languages: Lahu, Lisu, Akha, Sani, Bisu, Lu-ch'ulan, and Nakhî.

After some remarks on the PLB phonological system [Section 2], we go on to discuss PLB syllable-onsets (prefixes, root-initial consonants, medial glides), and their repercussions on the manners and positions of articulation of initial stops in the daughter languages [Section 3]. In Section 4, the proto-tones of Lolo-Burmese are examined in relation to the syllable-onset, and the tonal reflexes in the daughter languages are presented in a chart.

2. The **PLB phonological system.** We must set up quite a rich proto-system for PLB to account for the complex sound-correspondences we find in the daughter languages. The PLB syllable had the general canonical shape,

\[(P) C_i (G) V (\cdot) (C_f),\]

where \(P\) = prefix, \(C_i\) = initial consonant, \(G\) = glide, \(V\) = vowel, \(\cdot\) = vowel length, \(C_f\) = final consonant, and \(T\) = tone.

2.1 **Prefixes.** For the PLB stage, we must reconstruct prefixes of three basic types. The first type we write ab-
structly as *C-. This is a cover-symbol for the five voiced non-nasal prefixes of Proto Tibeto-Burman, /b-, d-, g-, r-, l-/r, which are reflected faintly in PLB by their effects on the tone of syllables with stopped finals, as demonstrated in TSR.19 It remains to be seen whether these prefixes left any other traces in the daughter languages.

Secondly, there is ironclad evidence for a nasal prefix, *N- (realized presumably as a nasal homorganic to the following C-i). This prefix survives as such in several Loloish languages (Lu-ch'ulan, Nakhî, Moso, etc.) and has left distinctive manner-traces on the initial consonants of several more (Lahu, Nasu), causing the C-i to voice.

The third type of prefix we may term "glottogenic". These two prefixes, *s- and *ʔ-, both had the power to glottalize the root-initial consonant, typically causing it to unvoice and usually affecting the tone of the syllable as well (typically leading to a rising effect on the pitch). The evidence [summarized in TSR, pp. 23-24] is that the two glottogenic prefixes had largely merged to *ʔ- before stops and resonants by the Proto-Loloish stage, but that they were still kept apart before nasal initials in stopped syllables, with *s- causing the syllable to join the HIGH-stopped class, and *ʔ- causing it to join the LOW-stopped class.20

We shall have some more to say about prefixes, below 3.1.

2.2 Root-initial consonants. The PLB root-initial position could be occupied by any of the following:

- p t ts t̥ k ʔ
- b d dz d̥ g
- m n n̥
- s ŋ (h)
- z (ɔ)
- w l r y

2.3 Medial glides and consonant clusters. We certainly have to set up medial *r- and *y- for PLB. They could occur after labial and velar stops and nasals, as well as after the voiceless spirants *s and *ŋ. Medial -w- must be set up after velars, (with the locus classicus being the set for 'dog' [see Fig. 2, below]); after dentals; and maybe after labials as well.21 Medial -l- is a feature of Common Tibeto-Burman, and is still attested in Archaic or Inscriptional Burmese. It appears in modern Bisu, but since Bisu has no medial -r-, its medial
-1- could be a secondary development, *-r- > -1-. It is still an open question whether we need -1- at the Proto-Loloish stage. Much proto-variation between -1- and -r-, and between -1- and -y- must have occurred [see STC, p.41].

The glides exerted profound influence both on the preceding C, and on the following vocalic nucleus. Clusters of velars plus -r- or -y- typically developed into affricates (palatal or retroflexed) in the daughter languages, with either glide capable of leading to either kind of affricate [see Fig. 2]. The presence of *-r- could also inhibit the backing of a preceding velar to a post-velar (Lahu, Sani). After labials, a glide could lead to a retroflex stop (Lu-Ch'ulan) or even to a lateral affricate (Sani). Medial -y- typically raised or fronted a following vowel, -r- often had a centralizing effect, while -w- often led to a lowering or backing of the vowel: PLB *bya 'bee' > Lh. pê; PLB *kriy 'foot' > Lh. khy; PLB *Ntwak ~ *?twak 'emerge' > Lh. tâ?.

For more about syllable-onset developments, see Sec. 3.

2.4 Vowels. In open syllables (for the moment we are defining "open" to include syllables with -w and -y), we reconstruct the following vowels for PLB:

\[
i\quad iy\quad u\quad uw
\]

\[
ay\quad a\quad aw
\]

Instead of "iy" and "uw", we might just as well reconstruct long vowels *i- and *u-, since we also posit a length-contrast in closed syllables.

In closed syllables, there is pretty good evidence for reconstructing three mid vowels as well:

\[
e-\quad ù-\quad o-
\]

In TB as a whole (and perhaps as a general tendency in all languages) there are more vocalic contrasts in closed than in open syllables -- undoubtedly due to the differential breaking effects on the vowel by the various syllable-final consonants.

2.5. Final consonants and proto-rhymes. There is solid evidence for 8 C's at the PLB stage -- 3 stops, 3 nasals, and 2 semivowels:

\[
-p\quad -t\quad -k
\]

\[
-m\quad -n\quad -ŋ
\]

\[
-w\quad -y
\]

PTB had three more final consonants: *-r, *-l, *-s.
These seem all to have disappeared without trace by the Proto-Loloish stage, though there is some slight evidence that they could trigger the development of Lahu high-rising tone in the manner of a final stop.\textsuperscript{22} *-s seems to have merged with *-t in Burmish: 'seven' PTB *s-nis > WB hnač; 'eight' PTB *b-r-gyat > PLB *riót > WB hrac. There is one case where an older *-s may conceivably have caused the development of WB creaky tone: 'know' WT šes, WB ši'.

Lolo-Burmese shows many cases of variation between homorganic final stops and nasals. Examples cited in TSR include: 'draw water' (No. 144); 'swell up/swollen' (No. 92); 'tree/wood' (No. 118); 'spirit' (No. 136); 'dream' (No. 144); 'heart' (No. 146); 'step on' (No. 149); 'back' (No. 155); 'maggot' (No. 186); and 'stone' (No. 190).

Other variational patterns involving C\textsubscript{f}'s include alternations in position of articulation of stops and nasals, alternations between final stops and semivowels, and between final stops and open vowels. These phenomena are more appropriately discussed in the context of "word-families" in general [see Matisoff 1978].

There seem to be more vocalic contrasts before final velar stops than before any other C\textsubscript{f}'s, which again seems reasonable in view of the large region of the hard and soft palate available for dorso-velar and lamino-palatal articulation. The following rhymes are so far attested for PLB (the list includes all those set up with final stops in TSR):

\begin{verbatim}
  am an an ap at ak
  im in in ip it ik
  i-t
  um (un) uŋ up ut uk23
  et ek
  ok23
  ŭk
\end{verbatim}

As might be expected, the rhymes differ greatly in their relative lexical frequency. Thus, *-ak is super-abundantly attested, but we have to scour the bottom of the barrel to come up with, e.g., *-ut rhymes. *-am and *-an are both much better attested than *-an, etc. This should be no more surprising than the fact that ETAOINSHRDLU are more common word-initial letters in English than are
Why should language always be symmetrical in all its subparts, in view of the fact that it is changing constantly?

Under favorable circumstances we may reconstruct contrastive vowel length before a final consonant. Perhaps the best example is 'reap', WB *rit. The Lushai cognate, 'hoe', has a long vowel: rlit [Wm. Bright, "An English-Lushai vocabulary"]. Furthermore, even in the absence of extra-LB evidence, we are perhaps justified in setting up PLB *i:t whenever WB has -it, since the short PLB rhyme *it seems regularly to have merged with *lk to become WB -ac ('eight' PLB *?rit > WB brac).

2.6 Tones. In non-stopped syllables we reconstruct three tones for PLB, called, poetically enough, proto-tone 1, proto-tone 2, and proto-tone 3 (or *1, *2, and *3 for short). *1 and *2 are vastly more common than *3, and there is every reason to believe that *3 is a "younger", more secondary tone than the others.24 *1, *2, and *3 give rise to the "low", "high", and "creaky" tones of Burmese, respectively.25

Tones *1 and *2 correspond regularly to tones in the distantly related Karen languages [STC, pp. 150-152], but curiously enough do not correspond in any simple way to the three non-stopped tones of the relatively much more closely related Jinghpaw, at least as far as I have been able to discover.26

Some Loloish languages preserve the original three-way tonal distinction one-for-one (Akha, Bisu, Phunoi -- see Fig. 3, below). Many others show a tonal split in one or both of tones *1 and *2, according to the manner of articulation of the syllable-initial consonant. Many of the daughter languages show a mid-tone reflex for tone *3 (Lahu, Akha, Sani, Bisu, Nakh, Phunoi), and it is the creaky tone (>Tone *3) which is unmarked in the Burmese writing system with the three basic vowels a, i, u. This suggests to me that *3 may have been neither very high nor very low, but probably mid level. But was *1 higher than *2, or was *2 higher than *1? The daughter languages are split down the middle on this point. Although sometimes a daughter language will have both a high and a low tone as the reflex of a given proto-tone (see, e.g. the Lahu reflexes of *2), we can generally determine overall whether the "average" pitches of the reflexes of *1 are higher or lower than those of *2. On that (admittedly somewhat impressionistic) basis, the reflexes of *1 are higher than those of *2 in Lisu, Akha, Sani, Bisu, and Phunoi; but the reflexes of *2 are higher
than those of *l in Modern Burmese, Lahu, Lu-Ch'ulan, and Nakhi.  

In stopped syllables, I have shown in detail elsewhere (TSR) how a two-way tone contrast must be set up for the proto-Loloish stage. This contrast, which is not to be found in the Burmish branch, can be shown to have arisen as a result of the complex interactions of voiced vs. voiceless syllable-initial consonants with the various prefixes that were preposable to the root at the PLB stage. To my surprise, I later found that the Loloish tonal split can be closely correlated to the two-way tone distinction in Jinghpaw stopped syllables.27 (This is all the more striking in view of the fact that it is so difficult to correlate the Jinghpaw tone system to that of LB in non-stopped syllables.) Perhaps this relationship is evidence for setting up a higher-order taxonomic nucleus in TB to include both Jinghpaw and LB. For this nucleus I have suggested the name "Ji-bur-ish" [ibid.].

3.0 PLB syllable onsets: prefixes, root-initial consonants, medial glides. As an anchor for the following discussion, it might be well to present a capsulized inventory of the sound-systems of our 7 principal daughter Loloish languages. In most cases we may regard the phonological statements in the sources as highly accurate, though Rock's transcription of Nakhi is certainly overdifferentiated. At the moment we do not know enough to phonemicize Rock's system adequately, so that the soundcorrespondences between Nakhi and the other languages are still obscure on many points. Except for Nakhi, where we retain Rock's spellings, the transcriptions have been normalized somewhat to conform to standard American usage. Here are the seven sound-systems [see following three pages]:

3.1. Proto-prefixes and the manners of articulation in the daughter languages. There are few things in LB phonology to match the prefixes for sheer interest and complexity of behavior. As I have detailed elsewhere, the prefixes could react with the root-initial consonant in a bewildering variety of ways (Matisoff 1972b). This is especially true when the C was a resonant /w y r l/. Taking a hypothetical etymon *g-ya, where the root-initial was y and the prefix was *g-, any one of a number of fates could befall the syllable onset in one or another daughter
### A. LAHU PHONEMES [Matisoff 1973b, p. 1]

$C_1$: p t c k q  
ph th ch kh qh  
b d j g  
m n q  
f s h  
v y g  
l
$V_1$: i å u  
$T_1$: [unmarked]  

### B. LISU PHONEMES [Hope 1972]

$C_1$: pt t' ts c k  
ph th tsh ch kh  
b d dz j g  
f s š x h  
v z y g  
m n ŋ y  
l  
$V_1$: i å u  
$T_1$: [unmarked]  

### C. AKHA PHONOLOGY [Lewis 1968, pp. viii-xii]

$C_1$: p py t t' s c k  
b by d dz j g  
m my n ŋ y  
s š x h  
z y g  
l  
Vowels:

[vowels in parentheses do not occur laryngealized]

(1) standard phonetic symbols:

- (i) 1 
- (e) ə ə 
- (ə) a (ö)

(2) Lewis' orthography:

- i (oi) ui u  
- (e) oe eu o  
- eh aw  
- (ə) a (ah)

The following consonants are aspirated when followed by non-laryngealized vowels:

| p | py | t | t' | s | š | x |

Tones: (a) with oral vowels:

- □ high
- □ mid
- □ low

(b) with laryngeal vowels:

- □ high
- □ low
### D. Sani Phonology

- **Consonants:**
  - `p t ts tl tŋ tɕ tʂ k kʷ q`  
  - `pʰ tʰ tsʰ tʃʰ kʰ kʷ qʰ`
  - `b d dz dl dʒ g`
  - `m n ŋ n̩ q`
  - `f s ɻ ʂ ʃ x xʷ ɕ h`
  - `v z ɭ ɣ γ`

- **Tones:**
  - `† 55`
  - `† 44`
  - `† 33`
  - `† 11`
  - `† 22`

### Vowels:

1. **Non-Constricted**
   - `I ě u û ũ ũ̌ ũ̌̌`
   - `e o ə`
   - `æ ð ɐ æ ɐ̃ æ̃`  

2. **Constricted**
   - `i u ɥ y`

3. **Syllabic Nasals**
   - `t ň y`

### E. Bigu Phonology

- **Consonants:**
  - `p pʰ pl t ts tʃ k ky kl ?`
  - `ph phy plh th tʃh tʃh kh kʰ khl`
  - `b bl d g`
  - `m my n ŋ n̩ q`
  - `hm hmy hn h̩n hŋ`

- **Vowels:**
  - `i u ɥ u bo o`
  - `e ɤ o e a o`

- **Rhymes (in native syllables):**
  - `a i ɛ e ɯ ɣ u o o`
  - `an ɨŋ ɛŋ ɯŋ ɣŋ uŋ oŋ on`
  - `am um`
  - `an ɛn ɯn ɣn un on`

- **Tones:**
  - (1) `<PLB *non-stopped`
    - 55 high level
  - 11 low level
  - 33 mid level (constricted)
  - (2) `<PLB *stopped`
    - 33 mid level (constricted)
    - 11 low level

- `† occur mostly in loans < Thai`
### F. LU-CH'ÜAN PHONOLOGY [Ma 1948]

<table>
<thead>
<tr>
<th>Sounds</th>
<th>Tones</th>
</tr>
</thead>
<tbody>
<tr>
<td>p t ts t t s t s' t k k' k' w</td>
<td>55 high level</td>
</tr>
<tr>
<td>p' t' ts' t' t s' t s' k' k' w</td>
<td>33 mid level</td>
</tr>
<tr>
<td>d dz d d' d' g g' g' w</td>
<td>11 low level</td>
</tr>
<tr>
<td>m n n m n n w</td>
<td>99 low stopped</td>
</tr>
<tr>
<td>f l s s s x x w</td>
<td></td>
</tr>
<tr>
<td>v l z (z) y y y w</td>
<td></td>
</tr>
</tbody>
</table>

**Vowels:** [commonly occurring vowels are circled]

<table>
<thead>
<tr>
<th>i</th>
<th>ü</th>
<th>u</th>
<th>w</th>
<th>y</th>
<th>syllabic spirants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| e | ə | ə | | All vowels may also occur |
|---|---|---|---|laryngealized (indicated by |
| | | | |underlining: 1, ü, etc.). |

### G. NAKHI SOUNDS [Rock 1963] (left in his original transcription)

<table>
<thead>
<tr>
<th>Sounds</th>
<th>Tones</th>
</tr>
</thead>
<tbody>
<tr>
<td>p' t' ts' ch' t'ky(y) k' ø</td>
<td>1 low falling</td>
</tr>
<tr>
<td></td>
<td>2 mid level</td>
</tr>
<tr>
<td>bp dt dty ts (ch) gky gk</td>
<td></td>
</tr>
<tr>
<td>ds</td>
<td></td>
</tr>
<tr>
<td>b d tz dsh g y g</td>
<td>3 high,</td>
</tr>
<tr>
<td></td>
<td>short</td>
</tr>
<tr>
<td>bb dd dz dzh g</td>
<td>4 rising—</td>
</tr>
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**Vowels:**

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-language. To these possible fates it is convenient to assign names:
(a) prefix-preservation. Here the presumably original prefix remains in roughly its original phonetic shape, perhaps "protected" from the C₁ by a shwa: ḡeya, ḍeya. (b) prefix-loss or prefix-absence. Here the daughter language reflects the simple root-initial, and must be deemed either never to have had the prefix or to have lost it without trace: yā.28
(c) prefix-substitution or prefix-alternation. Here the daughter language has what is clearly a prefix, but the prefix is different from those in its sister-languages: pēya, tēya, mēya. In these cases we must assume either that the given root already admitted of alternative prefixes at the proto-stage, or else that the given daughter-language has innovated by substituting a new prefix for the old one.
(d) prefix-fusion. Here the prefix has united with the root-initial consonant to form a single consonantal segment which incorporates phonetic features both of the original prefix and of the original C₁: dža, ṭša, ḍža, etc. This "strategy" is especially characteristic of the LB family.
(e) prefix-preemption. Here the prefix was so "powerful" that it drove out the root-initial consonant altogether: ga, ka. This interesting kind of prefixial presumptuousness is well attested in LB. Thus 'seven' [PLB *s-nit] loses its nasal C₁ throughout Loloish, so that the daughter languages show initial s- or ṭ- (e.g. Lahu ši). The word for 'penis' [PTB *m-ley, WT mje, Jg. menē] undergoes simple loss of the nasal prefix in WB it, but in Atsi, Maru, and Lahu (n̪y, n̪y, n̪ respectively) the prefix has become the C₁. In 'needle' [PLB *rap, *k-rap, *ʔ-rap], the glottal prefix seems to have driven out the C₁ in WB (ʔap)... The "fossil survivals" of prefixes mentioned above in the Introduction may also be viewed as instances of prefix preemption ("survival by preemption!"): *m-lyak 'lick' > Akha myeu; *b-liy 'four' > Maru b newPath; *s-yip 'put to sleep' > WB sip.
(f) prefixial metanalysis of an intrinsic cluster. Occasionally it happens that a language will take an original sequence of C₁ + C, and reinterpret the original root-initial consonant as a prefix, so that the original glide then gets reanalyzed as the C₁. When this happens the old root-initial may then drop. A con-
vincing case has been found by Okrand (p. 74): the Nakhi word for 'monkey' is \textit{ly[u]}, with initial y-, even though the PLB root certainly must be reconstructed with a root-initial m: \textit{myok~s-myok} [TSR 133].\textsuperscript{29} (The usual Nakhi reflex of \textit{my-} is my- or ny-, as in 'eye', PLB \textit{*(s-)myak > NK miu ~ niu}.)

(g) We may view the phenomenon discussed in the last paragraph as a process of creating two new morphemes out of one. The contrary process also occurs, whereby two original morphemes become fused into one. This happens especially to original two-syllable compounds or "binomes", whose first member becomes phonologically reduced through destressing, so that its final consonant becomes attached to the \textit{C}_1 of the second syllable in the manner of a prefix. Consider the following examples, all of which look good, and the last one of which I am especially proud:

(1) 'RIGHT (hand)'. WB lak-ya (intact binome "hand-right"), Lh. \textit{là?-ya} (with fusional influence on the \textit{C}_1; plain \textit{y} > Lh. y, not \textit{g}), Jinchinmaw \textit{lékré}, khré (\textit{lékré} shows weakened stress on first member, \textit{khré} shows the metanalysis carried to completion).

(2) 'PICK UP'. PLB \textit{**k-rok} \textit{< **lak-rok} "hand-pick up". WB kok, Maru \textit{kyuk}, Lh. \textit{gôô} \textit{~ vôô}, Ak. \textit{g'o}, Li. \textit{gawj}. The prefix preempted the \textit{C}_1 in WB and Lisu, but was retained along with the \textit{C}_1 in Maru. In Lahu and Akha the prefix dropped without trace (or, more accurately, no preceding morpheme may ever have developed into a prefix in those languages). It seems plausible that the \textit{k}-prefix we set up in this root [see TSR 187] derives, as in the previous example, from the word for 'hand'. The Tibeto-Burman languages typically have "instrumental verb-with-tied-noun" constructions like "to hand-pick up" "to foot-kick", "to water-bathe", etc., wherein the meaning of a verb root is specified by a preceding noun of instrument.\textsuperscript{30}

(3) 'DOVE'. The word for 'dove' is now reconstructed with prefixial \textit{m-} even for the PLB stage, largely on the basis of Lahu evidence [STC, p. 38]: \textit{m-kruw, m-krew}. Bradley 1973 reports a Phuonoi form \textit{khaon-khaw} which holds the key to the origin of the nasal prefix in this root in Loloish.
The khôn- seems clearly to be the Mon-Khmer "animal prefix" that usually diffused into LB in the shape of a velar stop\(^\text{31}\). In this root, however, it was not the rhyme of the first syllable that weakened (to yield the "velar prefix") but rather the first part of the syllable that dropped, leaving only the final -n. If this explanation is correct, we shall have to assume that the Mon-Khmer prefix also diffused into Kuki-Chin-Naga, since those languages also reflect a nasal prefix here (Khâmi mækhru, Angâmi Nâga mekru).

In STC (p. 43, n. 139), Benedict surmises that the Jinghpaw word for 'horse', gûm-rà \(\sim\) gûm-rân (Hkaurei khàm-ràn) comes from a double prefixation of the root *raŋ, *k-m-raŋ (cf. WB mhràŋ), and speculates that the nasal prefix derives from the root for 'high' (WB mraŋ', Lh. mu). Perhaps an equally likely explanation might be that the Jg. syllable gûm- \(\sim\) khûm is a direct reflection of the Mon-Khmer prefix just mentioned.

(4) 'ELDER SIBLING'. In a note to set 172 in TSR (p. 72), Benedict convincingly suggests a bisyllabic prototype *?u-(y)ik as the underlying form of the root for 'elder sibling' that I had reconstructed with the unique initial cluster *?wy- (*?wyik). The first morpheme is the TB root for 'head' *(d-)bu, frequently occurring in kinship names referring to elder relatives.

(5) 'MIND, SOUL'. It seems to me likely that WT yâd 'mind, soul, seat of the emotions' is directly related to Jinghpaw myît 'id.'\(^\text{32}\) The initial m- in the Jg form, which now behaves like a C (if it now behaved as a prefix a shwa would intervene before the y, *mâyît), could derive from a roughly synonymous root represented by WT sem 'mind': *sem-yît > *semûyît > myît.

The weakening and dropping of unstressed syllables goes on apace in LB. In my Lahu Grammar I mention the widespread dropping of initial consonants in function words of abstract grammatical function; p. 38). Similar things are happening in Burmese: me-hou'hpu:la: 'isn't that so?' > hmou'la: , etc.\(^\text{33}\)
With all the above in mind, we are now ready to consider the manner-correspondences presented in Fig. 1 (next page), where the prefixes' effects on the manner of the root-initial consonant are tabulated for the eight languages in our study. For the purposes of the chart, we do not consider the possibilities of prefix preemption, substitution, or fusion, since we are considering syllables with obstruental rather than resonantal root-initial consonants.

3.11 Comments on Figure 1.
(a) *b, *p, *C-b, *C-p. The old *voiced series is retained as such in Lisu, Akha, and Lu-ch'üan, but is reduced to voiceless unaspirates in WB, Lahu, and Bisu. The threefold Nakh reflexes of voiceless unaspirated "bp", plain voiced "b", and "fortis" voiced "bb" are hard to evaluate, and seem to involve subphonemic overtranscription on Rock's part. The Sani developments are curious. On the basis of the forms assembled by Baron from Ma's data, I have found what appears to be a systematically different treatment of the old *voiced series according to whether the syllable was under Tone *1 or Tone *2. Thus the following Tone *1 words reconstruct with *voiced initials, and come out as voiceless unaspirates in Sani:

    ty 'wing', tkI 'to fly', kw 'body', tsa 'rice',
    tsô 'bridge', tsô 'liquor' (all Sani mid-tone);

whereas the following Tone *2 words, which also reconstruct with *voiced initials, come out as voiced in Sani:

    ba 'thiin', bô 'give', by 'bug, insect', do 'speech', dixo 'bee', ga 'hear', dzo 'eat',
    dzo 'copper', dzô 'raw' (all Sani low tone).

If the Sani developments have been correctly interpreted, they are a striking example of the tone influencing the manner of initial consonants -- a little bit like a man biting a dog, since we usually expect things to happen the other way around (with the manner of initial consonants influencing the tone).

The old *voiceless series everywhere became voiceless aspirated, except in Akha, where there is
**Figure 1. LOLO-BURMESE MANNERS OF ARTICULATION**

<table>
<thead>
<tr>
<th>C = /d- g- r- l-/</th>
<th>Proto-Lolo-Burmes</th>
<th>Matisoff</th>
<th>Fraser</th>
<th>Hope</th>
<th>Lahu</th>
<th>Lisu</th>
<th>Akha</th>
<th>Sani</th>
<th>Eisu</th>
<th>Lu-yan</th>
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complementary distribution between aspirated and non-aspirated voiceless stops, with the former occurring only in originally non-stopped syllables and the latter only in originally stopped ones. (Put another way, one could say that you cannot simultaneously have aspiration and laryngealization in an Akha syllable.)

The old C-prefixes did not have the power to affect the manner of the root-initial, and left their traces only in the tonal reflexes in stopped syllables, as detailed in TSR (pp. 14-15, 23).

(b) *mb, *mp. The nasal prefix has left distinctive reflexes in several Loloish languages. In Lu-Chüan and Nakhī a nasal component survives as such. In Nasu (not included in our survey) the nasal prefix has engendered a special series of voiced aspirated stops, b', d', etc. In Lahu, *prenasalized initials also have a distinctive manner of articulation, appearing as simple voiced stops and affricates /b d j g/, contrasting with the reflexes of the original *voiced series which lost its voicing.

Okrand has identified several cases where Nakhī has a prenasalized initial which is unmatched (as far as is now known) in the other Loloish languages. These may be Nakhī innovations, or may reflect genuine word-family alternants current at the PLB stage.

In Lisu, Akha, Sai, and Bisu, the *prenasalized obstruents have merged with the simple *voiced series. The same is true, by and large, of Burmese, though there is at least one good case where an old prenasalized word, 'dove' *m-kruw, is now pronounced with a voiced initial (Mod. Bo. /jšu/), even though it is spelled "khrūi".

The two prenasalized series, *mb and *mp, have merged throughout Loloish, as far as the manner of articulation of the daughter initials is concerned. The voicing difference of the C had left its trace, however, in the tonal reflexes in stopped syllables: syllables of type *N-bak have joined the LOW-stopped class, while syllables of type *N-pak now belong to the HIGH-stopped class (see the chart in TSR, p. 23). I also believe that Lahu maintains distinctive tonal reflexes for *mb and *mp in old Tone *1 words, with *mb giving Lh. low-falling tone (bā) and *mp giving mid-tone (ba).

(c) *?b, *?p. The glottal prefix typically has the effect of unvoicing the root-initial consonant in Loloish. This is true for Lahu, Lisu, Akha, Sai, and Lu-Chüan. In Burmese (and apparently in Bisu, though the evidence is scant), the glottal prefix led
rather to the aspiration of the C₁. In all these languages both glottalized series have merged in manner of articulation in the daughter languages. Only Nakhī seems to reflect a manner-difference in its reflexes, with *ʔb becoming voiceless unaspirated ("bp") while *ʔp acquires aspiration ("ph"). 37 En revanche, Nakhi shows no tonal difference in the reflexes of the two series.

(d) **Interrelationships between prenasalization and preglottalization.**

I have discussed this question repeatedly (perhaps ad nauseam) in earlier papers. 38 To what has already been said I shall only add a couple of remarks here:

(1) Still another root showing *N- - *ʔ- is 'house', with Akha p-yu, Lh. yê, WB ?im, WT khyim. We may set up the root for LB as *ʔyim - *Nyim.

(2) The ubiquitous TB noun-prefix represented by WB *ʔo-, Lh. ʔ, Bisu ʔan-, and Jg. ʔ is also reflected in Phunol, where Bradley reports the prefix ʔa- (which is, gratifyingly enough, both nasal and glottal simultaneously).

(3) It seems entirely reasonable that the two major prefixes in LB should have been exploited by opposing them to each other in morphological alternations, especially in view of the fact that they tended to produce opposite effects on the manner of the C₁, with *N- leading to voicing and *ʔ- leading to unvoicing.

3.2 **Proto-glides and obstruental positions of articulation.**

It is now time to consider the chart in Fig. 2 (next page). In the chart as well as in the following discussion, the voiceless unaspirated symbols are intended to stand for all manners of initials at the given position of articulation.

(a) **Labials:** *p, *pr, *pl, *py. Plain *p is everywhere maintained as such. The evidence for *pl in LB is scanty with the best example being the set for 'white, silver' (Ins. Ba, phlu). Bisu apparently preserves separate reflexes for *pr, *pl, and *py. Lahu and Nakhī have merged all three of these clusters to p. 39 Sani has, interestingly enough, merged all three clusters to lateral affricates of the type t±-. This development is well-established, occurring in such key roots as 'fill', 'bee', 'flee', 'flat', and 'to fly'. A similar thing happens to *my- in Sani, where the reflex in n-("aye" *(s-)*myak > Sa. ne 44; 'monkey' *(s-)*myak > Sa. nu 55). In Lu-Ch'un all three clusters have merged to retroflexed stops, with this development also being paralleled when the labial C₁ was a nasal; 'monkey' > IC nu 55 [constricted].
<table>
<thead>
<tr>
<th>Proto Lolo-Burmese</th>
<th>Written Burmese</th>
<th>Lahu</th>
<th>Lisu</th>
<th>Akha</th>
<th>Sani</th>
<th>Bisu</th>
<th>Liu-Ch'üan</th>
<th>Nakhí</th>
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Lisu and Akha both seem to preserve the contrast between *pr and *py, with *pr > p, and *py remaining py. There is excellent evidence for *pw- clusters in TB (cf. *bwat 'flower', *pwak 'pig', *pwa 'sole'). The usual treatment of these clusters in LB is to metanalyze the labial stop as a prefix, which then drops, leaving the w- in root-initial position (cf. WB wat 'stamen', wak 'pig', khwa 'hoof'—with substitution by the velar animal-prefix in the latter). In Nakh, however, as Okrand has shown (pp. 26-27), the labial stop remains in these words, while the medial -w- drops: 1ba-1baw 'flower', 1bu 'pig', 2boa 'sole'. It now looks, therefore, as if we shall have to set up *pw clusters for the PLB stage.

(b) **Dentals:** *t everywhere remains t.

(c) **Dental and palatal affricates, and their confusion with velar clusters:** The distinction between affricates of the *ts and *tă type has disappeared in Burmese, Bisu, Lu-Ch'uan, Nakh, and Lahu. Sani seems to preserve it marginally, but it looks as if the distinction is about to disappear there too. The best languages for keeping them apart are Lisu and Akha (but even in Akha there is much dialectical variation and hesitation in this area—see the papers of David Bradley cited in the Bibliography).

Many of our languages have suffered a merger of *tă and *ky (Lahu, Lisu, Akha, and probably Bisu and Nakh). Lahu, I am ashamed to say, has undergone a threefold merger of *ts, *tă, and *ky, in favor of the palatal affricates. Sani and Nakh show particularly messy reflexes in this area, which remains one of the important terrae incognitae in the LB consonantal picture. Only Lu-Ch'uan seems to maintain a clearcut distinction between *tă (> LC ts) and *ky (> LC ts).

(d) **Velars:** *k, *kw, *kr, *kl, *ky. The velars occupy one of the most interesting domains in the LB initial system. Simple velar initials are retained as such in Burmese, Lisu, Bisu, and Nakh. In Lu-Ch'uan the velars are allophonically labialized before the vowel -ɔ (from whatever source). The simple velars are retracted to post-velar stops in Lahu and Sani. In Akha, the unvoiced *k has spirantized to x, but the voiced homologue *g remains g.

*kr and *ky are kept apart in Lahu, Akha, and Lu-Ch'uan. Curiously enough, *kr > LC palatal affricates, while *ky > LC retroflex affricates, the opposite of what one might have predicted a priori. The two proto-clusters have merged in Lisu, and the distinction is not clearly maintained in Nakh, Bisu, or Sani. *kl is distinctly maintained in Bisu, which is a help.
*kw* is well-established in one very important root, 'dog' (where the k- may ultimately be prefixial). Lahu here has a labial stop reflex, ph\(\text{(WB } \text{khw}\text{)} < \text{PLB } *\text{kwi} \text{)}, and Sani also has a distinctive dental affricate, ts'\text{hi} \text{. Unfortunately the Lisu cognate is lacking, since } \text{s\{-na} \text{ 'dog' is unrelated to forms in the other languages. A more hypothetical possibility for a } *\text{kw-} \text{ root is 'branch', where all the Loloish languages except Akha point to } *\text{?kak}, \text{ but Akha has } a\text{ 'pya-}. \text{ (The medial } -y- \text{ is a problem, however.)} \text{ }

3.3 Nasal, spirantal, and resonantal initials. There is no space to go into these developments in detail, and we shall have to content ourselves with hitting a few high spots.

(a) Bisu nasal reflexes. The regular Bisu reflex of a simple *nasal initial is a voiced stop, 'fire' Bi. bi, Lh. mi; 'girl' Bi. bi, Lh. mi; 'black' Bi. da 33c, Lh. na; 'spirit' Bi. dat, WB nat, 'I' Bi. ca, Lh. nd; 'soft' Bi. dɔ, Lh. nu; 'hungry' Bi. bɛ, Lh. mɛ, etc. Stella Ting has gone on to show that the modern Bisu nasals descend from PLB syllables where prefixial *s- preceded the C: *bean* *s-nok > Bi. nu; *heart* *s-nik - *s-niŋ > Bi. nʊŋ-ba; *eye* *s-myak > Bi. mɛ-hnua. Since the Bisu form for 'you' is naŋ, that in itself would be grounds for setting up an otherwise unattested *s- in this root too. The Bisu aspirated nasals (hm, hn, etc.), presumably descend from PLB *glottalized nasals, but there is no evidence yet on this point.

The most interesting of the words where Bisu has a simple nasal is 'monkey' (Bi. mjö). We must now set up this root as *s-myok, with the sibilant animal prefix so well-attested in many other TB roots. As a fringe benefit we can now explain the tonal irregularities noted in this set in Ahi, Sani, and Nasu (TSR, No. 133) as due to the influence of this prefix.

(b) Nakhi reflexes of *mr and *mr-. Okrand has shown (pp. 24-25) that PLB *mr > NK "zh", while *mr > NK "sh". The most convincing pair of examples are 'horse' *mræŋ > NK 2 \text{zhwua}, and 'high' *mræŋ (Atsi m\text{?ræŋ} > NK 1 \text{shwua}.

(c) Prefixed-sonorant proveniences of Lu-Ch'üan n. Wheatley has shown (pp. 25-26) how the LC retroflexed nasal descends from a variety of initial clusters where a prefix precedes a nasal or liquid, or where a nasal is followed by a glide. Thus, 'moon' LC nu\text{< } *\text{s-la}; 'wind' LC nu\text{< } *\text{s-li}; 'soul' LC nu\text{< } *\text{s-la}; 'brains' LC na\text{< } *\text{(?nok - *(?nuw}; 'rip' LC ns\text{< } *\text{s-min}; 'monkey' LC nu\text{< } *\text{s-myok}; 'many' LC nu\text{< } *\text{ma}; 'neck' LC ns\text{< } *\text{m-li}.}
(d) Glottalized nasals becoming voiceless spirants in Nakhi.

We have long been used to the idea of glottalized resonants becoming spirants in Loloish. Thus "γ, *η, *θ, *ι > Lh. h, and *ω > Lh. f". Okrand has now demonstrated that glottalized nasals have yielded voiceless spirants in Nakhi: 'feather, body hair' *μων > NK ɹfú, 'deep' *νακ > NK ɹho, 'drive along' *ναν > NK ɹho, 'ear' *ναν > NK ɹha, 'red' *νιν > NK ɹhór, 'rib' *ναμ > NK ɹho.

Since s-prefixed nasals seem to have developed into simple nasals in Nakhi ('bean' *σ-νοκ > NK ɹmu, 'eye' *σ-μγακ > NK ɹmiu, etc), this is excellent evidence that the *s- and *η- prefixes were indeed still distinct before nasals at the PLB stage, as claimed in TSR (pp. 24-25).

(e) Spirant reflexes in Lisu. The spirants are a disaster area in comparative LB phonology, due to massive mergers of proto-contrasts and much internal variation within the daughter languages. Thurgood 1973b has now clarified the spirantal picture in Lisu considerably. In particular he has shown that *γ > Li. š before front vowels, but > Li. h/hh before back vowels. Thus 'new' *γ-σικ > Li. ṣik, 'seven' *σι(t) > Li. ṣišt, but 'meat' *μα > Li. hwa, 'iron' *καμ > Li. haw, 'pluck' *κακ > Li. hwa, and 'pour' *κα-ματ > Li. haw.

4. The proto-tones in their relationship to the syllable onset.

Space is running out, and we cannot here discuss the LB tonal developments in detail. The charts in Fig. 3 present the results of our most recent work in this area. The tonal reflexes in Lahu, Lisu, and Akha non-stopped syllables have been quite clear since Burling 1967 and Matisoff 1970. The developments in Nakhi and Bisu are very straightforward, since *1 and *2 did not undergo any splitting in these languages. The conditioning of the tonal reflexes in Sani and Lu-Ch’uan have been provisionally worked out by me as indicated in Fig. 3, on the basis of the new and convenient organization of the data in Ma Haush-liang’s books by Baron and Wheatley.
Figure 2a. TOLU-BURENSE (1)
Figure 3b. LOLO-BURMESE TONAL REFLEXES (II)

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Note: Unexplained shift of '1' > '2' in some words; Okrand, p. 28.
FOOTNOTES

1. See Benedict 1972, pp. 4-11. We cite this work henceforth as STC. For an attempt to work out the details of the relationship of LB to other subfamilies of TB, see Matisoff 1978.

2. See Bibliography.

3. The earliest WB inscriptions date from the early 12th century, making WB second only to Written Tibetan (WT) itself in antiquity of attestation.

4. I would informally estimate this percentage to be over 90%, though I have not yet made actual calculations on the basis of a core-vocabulary Swadesh-type list. Such a list, of perhaps 300 etyma chosen for their cultural appropriateness to Southeast Asia, is now in preparation.

5. For a much fuller discussion, see Matisoff 1973a, especially section 1.2 ("Monosyllabicity, intersegmental feature-sharing, and compensatory tone").

6. See below 3.0 for the phonemic inventories of the seven principal Loloish languages we are discussing in this survey.

7. Students of the Chinese dialects of Yunnan report similar phonetic developments in those languages. (Personal communications, Stephen P. Baron.) Is this to be interpreted as the result of contact influence from TB? At any rate it would seem to make sense to speak of a "Yunnanese Sprachbund."

8. Hypothetical data.

9. The Lahu form must descend from the variant without medial -y-, since -ya regularly gives Lh. e (e.g., *s-myak 'eye' > Lh. më; *bya2 'bee' > Lh. pë).

10. These sets have already been discussed several times by the writer (Matisoff 1968; 1969 [pp. 19-28, 44-51]; 1970 [p.27]. The details of the reconstructions do not concern us here, but the proto-initials all reconstruct as lateral clusters of various kinds: *š₁, *ʔ₁, *m₁, *b₁.

11. Cf. the stir in evolutionary circles when a living Coelacanth was discovered in the Indian Ocean in 1938—an archaic fish that had been thought extinct since the Mesozoic era. See Herald, pp. 286-288.

See Matisoff 1972, set No. 179. For the regular correspondence of Bisu voiced stops to nasals in other languages, see Nishida 1966a, 1966b, 1967; and Ting 1973. We henceforth refer to The Loloish Tonal Split Revisited as "TSR".

We may distinguish roughly among three types of comparative linguistic work: micro-linguistic (appropriate to LB or, say, the Romance languages); macro-linguistic (appropriate for TB as a whole, or for Indo-European); megalico-linguistic (appropriate for Sino-Tibetan as a whole -- or, a fortiori, for "Austro-Thai"). Different species of maniacs are attracted to the three types of work. Needless to say, all three types are equally valid and equally essential for progress.

For a start in this direction see Matisoff 1972, pp. 5-26.

For an attempt to relate the tone-systems of LB to that of Jinghpaw, see Matisoff 1974.

See the Bibliography, where their papers are marked with an asterisk.

The object of Liao's paper was to decide whether Ch'iang was a Loloish language or not. His conclusion -- in which I concur -- was negative.

If the C₁ of a syllable was a voiceless obstruent, the voicedness of the "C-prefix had the power to force the syllable to join the "LOW-stopped tone class instead of the "HIGH-stopped one.

Before resonantal C₁'s we must recognize a fourth prefix-type: a voiceless stop (p- t- k-) that typically arose through the reduction of the first syllable in a compound word, and which had the power to force a resonant-initial stop-finalled syllable into the "HIGH-stopped class. See TSR, pp. 25-26, 68-70.

Cf. the Lu-Chüan doublet for 'pig', [wak] and [pwak] respectively (Wheatley, op. cit.).

See the following sets in Matisoff 1970: 'hang up' (#18), 'spittle' (#32), 'conversation' (#69).

For some of the evidence for setting up PLB *ok (> WB auk, Lh. o?) vs. *uk (> WB auk, Lh. u?) see my note 232 in STG, p. 76.

For some discussion of "primary" vs. "secondary" tones with respect to Jinghpaw and LB see Matisoff 1974.
25 The creaky tone is extensively exploited for morphological purposes in Burmese to this day (Okell, pp. 18-21), which suggests that "3 may have arisen in the first place as a "sandhi tone" sometime before the break-up of Common LB.

26 See Matisoff 1974.

27 Ibid, section 9: "Jinghpaw/Lolo-Burmese relationships in stopped syllables."

28 This is a typical Burmish treatment of prefixes. John Okell (personal communication) informs me that modern Tavoyan dialect continues this same process by dropping many initial atomic syllables that occur in Standard Burmese: 'paddy' WB capâ, Tav. pá; 'cooked rice' WB sêmân, Tav. hmn; 'banana' WB hêk-pyâ-sî > Mod. Stand. Bs. hëpêyôôî, Tav. byô.

29 This metanalysis, I now realize, has occurred elsewhere in TB as well. Cf. Kham (Nepal) yuih 'monkey'. David Watters, personal communication.

30 See Okell, pp. 36 ff. Also Matisoff 1973b, section 4.5 "Transhemistichial relations; the adverbiality of the 'oblique' cases," pp. 306-314.

31 For discussions of the "velar animal prefix" in LB see STC, p. 107, and (for LB and Jinghpaw) Matisoff 1969, pp. 190-199. Shorto 1973 posits the Mon-Khmer root "kën/ kuen 'child' as the source of the TB prefix. Smith 1973 investigates in detail the traces of this prefix in Sedang, and goes on to study 16 other Mon-Khmer languages of Vietnam with a view to this question. It seems likely that the Burmese classifier for animals, kông (Mod. Bs. kaun) is a direct borrowing from Mon-Khmer. This was first suggested to me by Alton L. Becker (Aug. 1973) and then independently by John Okell (Oct. 1973).

Further news on the animal-prefix front includes the following list of Akha words for animals having the first syllable k'a- (Lewis, pp. 157-159): k'a-boo- 'white bamboo grub', k'a-dze* 'falcon, hawk, eagle (generic)', k'a-gu- 'generic for pigeons and doves' k'a-hm- 'bear', k'a-ja- 'white-rumped munia', k'a-je- 'parakeet', k'a-lâ- 'tiger', k'a-pa- 'frog', k'a-tseh 'sambar deer', k'a-yeh- 'wolf', k'a-zui- 'leopard', k'a-k'oe- 'generic for doves'.

32 Benedict disagrees: but now see Matisoff 1978, pp. 185, 211.

33 See Cornyn and Roop, 1968, p. 372. Also note 28 above. Okell reports that in Tavoyan the unstressed numeral prefix te- is normally omitted before classifiers (a construction impossible in Standard Burmese, but normal in Thai).
See Lewis 1968 (Introduction) and Egerod 1971.

See Kao 1958, and TSR.

Op. cit., pp. 16-17. The words include 'bee', 'bridge', 'eat', 'to fly', 'lac', 'nine', 'tooth', and 'tree'.

See Okrand, pp. 17-21.

"Lahu and PLB", pp. 22-23; "Glottal dissimilation", pp. 41-43; Tonal Split Revisited, pp. 48-52. In TSR I set up no fewer than 13 roots (¿'s 98-110) showing alternations between the nasal and glottal prefixes. In the case of verbal roots, the nasal prefix seems to have indicated stativity, as opposed to the glottal prefix's meaning of directionality or causativity. (A similar alternation between *w- (stative) and *p- (causative) is set up for Austro-Thai [Benedict, forthcoming], though this is perhaps only a coincidence.) I have argued that the WT letter "a-chung", transcribed "h", represented a complex sound with both glottal and nasal components ([ʔ₃]- or [ʔp-]). See TSR p. 16. Also TSR p. 55, footnote 36.

One possible survival of *pl in Lahu is 'lightning', mű-ti-pwet, where Lh. has pw- corresponding to Bisu bi-(mũŋ-blap). Cf. Jg. myiʔ-hprap.

In Lahu affricates of both types occur phonetically, but this is automatically conditioned, with [ts] appearing only before /i/, and [tʃ] appearing everywhere else.

The same is true in other areas of TB. See the discussion of velar clusters in Tangkhul Naga in Matisoff 1972b.

For a discussion of the Nakhi problem, see Okrand, pp. 21-23. Bisu has plain k < *kr in 'fence', 'foot', 'star', and 'fear', but kV < *kr in 'between', 'hear', and 'horn'. Sani has k < *kr in 'fear', 'hear', 'nine', 'six', 'grind', and 'sound'; but tɕ < *kr in 'sweat', 'star', and 'cold'; and tɕ < *kr in 'foot' and 'copper'.

See STC, p. 26 (note 83).

In TSR (pp. 10, 60) I opined (for tonal reasons) that it was the second syllable of the Bisu form that was cognate to the forms in the other languages, but now I'm not so sure.

See STC, pp. 106-107. Chang's attack on the reality of this prefix in his review of the Conaspectus is unconvincing.

Bibliography of Works Cited


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