Using native lexical resources to create technical neologisms for minority languages

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Several young Lahu speakers have been receiving graduate training in linguistics at Payap University in Chiang Mai, Thailand. However, the language of instruction in their linguistics courses is English or Thai, since like most other minority languages, Lahu lacks a technical vocabulary in which to discuss scientific subjects.

Faced with such a problem, languages typically resort to borrowing technical terminology from majority languages. In the case of Lahu, a language dispersed over several countries, borrowings have been flooding in from Chinese, Burmese, Shan, Northern Thai, Standard Thai, Lao, and Vietnamese. This makes it difficult to decide which languages to borrow technical terms from. It therefore seems to me that the best solution would be to invent such terms using native Lahu morphemes as much as possible.

In order to achieve this goal, I have been collaborating with a Lahu student at Payap to develop such a linguistic vocabulary. So far several hundred terms have been proposed, mostly in the realm of phonology. As this effort develops, we shall concentrate more on morphosyntactic and historical linguistic terminology. This paper discusses the issues involved in creating technical neologisms, and lists the terms so far proposed. [*]

近年來有好幾位拉祜族學生在泰國清邁西北大學(Payap University)進修語言學碩士。但由於拉祜語（像多數其他的少數民族語言）缺乏語言學的技術詞彙，討論語言學的時候通常用英語或泰語。

面對著這種問題，很多語言以借貸多數語言的技術詞彙為解決方法。分佈在好幾個國家的拉祜語已吸收了從漢、緬、撣、北泰、標準泰、老撾和越南語言的借詞。在這個複

習的情況之下，很難決定拉祜語究竟應該從那些語言借貸技術語，所以我認為最好的方法是盡量用拉祜語的固有詞根製作這種詞語。

為了實現這個目標，我最近與一位泰國西北大學的拉祜族學生合作，發展語言學方面的技術詞彙。到目前為止，我們已經提出了幾百個新詞語，這些詞語多數在語音學範圍裡面。我們往後將會集中精神於語法形態和歷史語言學方面。本文討論製作新技術詞語所涉及的問題，並列出至今提出的詞語。

1. INTRODUCTION. Twenty-three years of my life (1965–1988) were devoted largely to the compilation of my Lahu-English dictionary.[1] Whatever its merits, this dictionary has so far been of little use to the Lahu people themselves, to my increasing chagrin.[2] In my youthful puristic zeal, I had adopted a rigorously phonemic transcription quite different from the three preexisting romanizations of Lahu. I also thought it would be helpful to the Burmese/Thai Lahu whose language I was studying to use for my dictionary an Indic-inspired alphabetical order determined by the position of articulation of the initial consonant, proceeding from the back of the mouth to the front: that is, first the stops and nasals in the order uvulars, velars, palatals, dentals, labials; then the fricatives (from back to front), and finally the liquid. Across the bottom of each printed page were "running feet", listing the phonemes in alphabetical order,[3] first the tones (using the carrying-vowel <a>), then the vowels, then the consonants (cf. Figure 1).[4]

<INSERT FIGURE 1 ABOUT HERE>

This has made the dictionary virtually impenetrable, even for the minority of the Lahu population that is literate in one of the missionary transcriptions or the *pinyin*-based system used in China.[5] Relatively few Lahu are literate in Burmese or Thai. On the other hand, most literate Lahu in Burma and Thailand have learned the roman alphabet in missionary schools,[6] while

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[1] See 'History of the Lahu Dictionary project' (Matisoff 1988:1–8).

[2] It has evidently been respected, if not used, by this minority of the Lahu population, as witness the fact that in the 1990's I found it prominently displayed atop the TV set of *Cà-mɔ́*, the best consultant during my 1970 fieldtrip, who confessed that he used it mostly to look at the plates in the back.

[3] See Appendix A for for the Black Lahu phonemic inventory.

[4] Morphemes beginning with a vowel are alphabetized before all those that begin with consonants. This type of alphabetical order, loosely called *devanāgarī*, is used not only for Thai and Burmese, but also for all the other INDOSPHERIC literary languages of Southeast Asia, including Cham, Javanese, Mon, Khmer, and Tibetan, and is even reflected in Japanese *kana*.

[5] For a discussion of the four competing transcriptions of Lahu, see Appendix B.

[6] Lewis' valuable dictionary (1986) lists the Lahu entries in the roman alphabetical order, each accompanied by a Thai gloss as well as an English one.

Lahu children in China learn their ABC's during their first year of schooling, since the roman alphabet is necessary for the *pinyin* transcription of Chinese.

2. WHOSE ALPHABETICAL ORDER? And yet perhaps I should not be too hard on myself. The very concept of alphabetical order—ANY alphabetical order—has been impossible to convey. Realizing this, I attempted back in 1977 to compose a long introduction to the dictionary in Lahu, written in the standard Baptist transcription, justifying my own orthography and alphabetical order on linguistic grounds. Even with the patient help of *Yâ-pā-ɛ́*,[7] the chief consultant during my 1977 fieldtrip, this enterprise quickly foundered, largely due to the lack of a meta-linguistic vocabulary, and this introduction did not make it into the published dictionary.

It was not until very recently that I saw real hope that there could be rapid progress in creating metalinguistic terminology for Lahu. At the 42nd International Conference on Sino-Tibetan Languages and Linguistics (ICSTLL) in Chiang Mai (Oct. 2009), I was delighted to meet a group of Lahu graduate students in linguistics at Payap University. One of them, a young Yellow Lahu man named Aaron Tun, known familiarly by his Burmese nickname Maung Maung ('younger brother'), expressed special interest in making the dictionary more accessible. I was deeply impressed by his zeal, and ultimately was able to invite him to spend two and a half months as a Visiting Scholar at the STEDT project in Berkeley (March 15-May 31, 2011). During his stay at Berkeley, he not only computerized all the Lahu texts I had collected during my fieldtrips to Thailand in the 1960's and '70's, but he also worked with me on creating new Lahu metalinguistic terminology. This latter task was hugely enjoyable for both of us, as the rest of the STEDT staff can attest. A nearly complete list of these terms is provided in Appendix C.

3. NATIVE VS. BORROWED MORPHEMES IN NEOLOGISMS. One possible solution to the lack of technical vocabulary would be to borrow morphemes from a major literary language. After all, most technical linguistic terms in English are borrowings from Latin or Greek, while Burmese, Khmer, and Thai linguistic terminologies are largely of Pali/Sanskrit origin. Yet the geographical

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[7] See Matisoff 1988:1257.

dispersal of the Lahu people makes the choice of donor language difficult. [8] Should one use Burmese, Thai, or Chinese borrowings?

One advantage of using native material is the transparency of the compounds that result—unlike English terms opaque to most native speakers like *con-sonant* ('sounding with', *ad-ject-ive* ('thrown next to'), *ob-ject* ('thrown toward') *morph-eme* ('form + suffix')**.** Compare these with Maung Maung's transparent coinages in 1a-d:[9]

(1) a. tàn-khɔ̂

         begin-sound

              'consonant'

     b. phɔ̀ʔ-tɔ̂

         reveal-word

              'adjective'

     c. khān-pā

         undergo-NOM

              'object'

     d. tɔ̂-hòʔ

         word-form

              'morpheme'

However, there is no reason to exclude long-standing loanwords into Lahu from Chinese, Burmese, or Tai, items such as *ɔ̀-šɔ̌* 'color/phonetic value' (< Tai); *cû-yī* 'skill/-ology' (< Chinese); *tɔ(n)* 'segment/section' (< Tai); *pɔ̂(n)* 'add/put together' (< Burmese); *hê(n)* 'study/learn' (< Tai); *hòʔ* 'form/shape' (ult. < Pali); *lîʔ* 'something written/letter' (ult. < Pali). In fact, when appropriate I favor using the more conservative, less Lahuized, nasalized versions of these old loanwords, as a way to reduce Lahu's severe homophony problem, for example, *tɔn* 'segment' (as in *tɔ̂-tɔn* 'syllable') vs. *tɔ̄* 'boundary' (as in *tɔ̂-tɔ̄* 'syllable boundary') vs. *tɔ̂* 'word'.

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[8] This dispersal is actually a good thing from the point of view of retarding endangerment of the language.

[9] Gloss abbreviations: CIS = cisative particle, CLF = classifier, EXT = extentive, GEN = genitive, K = *khɔ̂*, LOC = locative, N = noun, NOM = nominalizer, Pv = verb particle, REL = relativizer, S = subject, V = verb, Vh = head verb, vV = pre-head versatile verb, Vv = post-head versatile verb.

Clearly the best way to use native Lahu lexical material is to coin new COMPOUNDS or COLLOCATIONS, since monosyllabic morphemes tend to be highly polysemous. As an extreme example, consider the morpheme *khɔ̂*, for which eight subsenses (2-9) are distinguishable, depending on the collocations in which it occurs:[10]

(2)   SOUND; NOISE

     a.   bɔ̂ʔ-khɔ̂

         shoot-K

            'sound of shooting'

     b.   phî-lɔ̀-khɔ̂

         dog-bark-K

            'sound of dogs barking'

(3)   VOICE

     a.   khɔ̂ šɨ́   ve

         K   hoarse NOM

            'be hoarse'

(4)   WORDS; A STRETCH OF SPEECH

     a.   qa-mɨ̀-khɔ̂

         sing-do-K

            'song/poem'

     b.   tɔ̂-pháy-khɔ̂

         speech-hide-K

            'riddle'

(5)   LANGUAGE; VARIETY OF SPEECH

     a.   Lâhū-khɔ̂

            'Lahu language'

     b.   šu-khɔ̂

         others-K

            'foreign language'

(6)   WORD; TURN OF PHRASE; SENTENCE

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[10] See Matisoff 1988:380-383.

a. khɔ̂ tê khɔ̂

      K   one   K

           'one word/one phrase/one sentence'

b. khɔ̂-ŋɛ

      K-short

           'short form (of a compound word)'

c. khɔ̂-yɨ

      K-long

           'long form (of a compound)'

(7) WORDS OF ADVICE

a. khɔ̂ na ve

      K   listen NOM

           'listen to advice'

b. chɔ-mɔ̂-khɔ̂

      person-old-K

           'wisdom of the elders/proverb/wise saying'

(8) PROBABLE REASON

a. yɔ̂ mâ šī ve khɔ̂

      3   not know/understand REL K

      'It's probably because he doesn't understand.'

(9) TONE (OF A TONE LANGUAGE) (neologism[11])

4. DIFFICULTY OF THE TASK, AND INDISPENSABILITY OF THE NATIVE SPEAKER. It is not problematic to use native Lahu NOUNS for the various vocal organs, for example:

(10) a. ɔ̀-tɔ̂ʔ-lɔ̂ʔ

           'palate'

b. ɔ̀-tɔ̂ʔ-lɔ̂ʔ hɛ ve

      palate   hard NOM

           'hard palate'

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[11] See §5 below.

  c. ɔ̀-tôʔ-lôʔ nû ve

     palate soft NOM

       'soft palate'

(11) a. ɔ̀-šá

       'air/breath'

  b. ɔ̀-šá mɔ̂ʔ ve

     breath blow NOM

       'blow breath; aspirate'

(12) qá-qə-lə 'larynx/glottis'

(13) cì 'tooth/teeth'

(14) nā-qhɔ̂ 'nose'

(15) mɔ̀ʔ-qɔ 'mouth'

(16) a. mɔ̂(-gɨ̀)

     mouth-skin

       'lip(s)'

  b. mɔ̂-gɨ̀-khɔ̂

       'a labial sound'

  c. mɔ̂-gɨ̀-mɛ̀ʔ-khɔ̂

       'labial stop'

(17) a. ha-tɛ̄

       'tongue'

  b. ha-tɛ̄-mɔ̂

     tongue-tip

       'tip of the tongue/apex'

  c. ha-tɛ̄ cɨ́-nɔ̂ʔ kɨ̀

     tongue attach place

       'tongue-root/dorsum'[12]

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[12] See 61a (Appendix C).

The seven Lahu tones are all conveniently nameable, using the simple words for 'middle' (ɔ̀-qɔ́-ji), 'high' (mu), 'low' (nɛ̀), 'long' (yɨ̀), and 'short' (ŋɛ).[13]

Several SPATIAL NOUNS can easily be used in articulatory descriptions, as for vowel frontness and backness: (ɔ̀-)g̈û-ši̵ 'front', (ɔ̀-)qɔ́-ji 'central', (ɔ̀-)qhɔ̀ʔ-nɔ́ 'back';[14] (ɔ̀-)g̈û-ši̵ ve bù-khɔ̂ 'front vowel'.

Many other phonetic terms are more difficult, but even harder are phonological terms like COMPLEMENTARY DISTRIBUTION, or grammatical concepts like RELATIVE CLAUSE, FINAL UNRESTRICTED PARTICLE.

For such difficult cases, it is absolutely indispensable to be guided by educated native speakers. I could never have thought up most of Maung Maung's creations, based as they often are on surprising metaphorical extensions of meaning. Only the native speaker has a sure sense of the 'polysemy potential' of common morphemes – that is, which metaphorical flights are instantly comprehensible to other speakers and which are obscure and unacceptable.

Among Maung Maung's most inspired neologisms are the following:

(18)   ADJECTIVE

phɔ̀ʔ-tɔ̂

unwrap/reveal-word

    'revealing word'

(19)   VERB

te-tɔ̂

do-word

    'doing word'

(20)   ADVERB

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[13] See 61e (Appendix C).

[14] For the dimension of vowel HEIGHT we can either use adjectival verbs, as with most of the names of the tones (e.g. *mu ve bù-khɔ̂* 'high vowel'), or spatial nouns (e.g. *ɔ̀-kā-lɛ́ ve bù-khɔ̂* 'mid vowel'). Both genitive and relative constructions are marked by *ve*. Note that the spatial nouns *(ɔ̀-)qɔ́-ji* and *(ɔ̀-)kā-lɛ́* both mean 'middle', but are here artificially repartitioned so that one refers to the front/back dimension and the other to the high/low one, just as the English terms MID and CENTRAL are arbitrarily assigned to a particular vocalic dimension.

te-tɔ̂   ga   pā

verb   help   NOM

'verb helper'

(21)   ALLOPHONE

ɔ̀-šɔ́   pa   khɔ̂

color   change   sound

'color-changed sound'

(22)   ASSIMILATED SOUND

g̈ɔ̀-nê-khɔ̂

pull/drag-be.near-sound

'drag-near sound'

(23)   COGNATE

tɔ̂-khɔ̂   ɔ̀-ví-ɔ̀-ni

word   siblings

'sibling words'

(24)   DISSIMILATE

bɨ̂ʔ-vɨ̂

push-be.far

'push-far'

(25)   SENTENCE (SPOKEN)

tɔ̂-cɔ̂ʔ

word-CLF.long.objects

'word-strip'

(26)   SENTENCE (WRITTEN)

lɨ̀ʔ-cɔ̂ʔ

something.written-CLF.long.objects

'written strip'

(27)   VOICELESS SOUND

gɔ̀-khɔ̂

be.cold-sound

'cold sound'

(28)   VOWEL

bù-khɔ̂

resound-sound

'resounding sound'

5. NEOLOGISTIC STRATEGIES.

5.1. TAKING ADVANTAGE OF PREEXISTING STRUCTURES: NEOLOGISTIC ELABORATE EXPRESSIONS. The eighth sense of *khɔ̂* (above) is actually a good example of a successful neologism introduced by a missionary.[15] The general word for 'tone' is now the widely accepted four-syllable expression *khɔ̂-mu-khɔ̂-nɛ̀* (lit. 'high-sounds-low-sounds'), which follows the ABAC pattern typical of hundreds of other Lahu ELABORATE EXPRESSIONS, containing both a repeated syllable and an ELABORATE COUPLET, that is, a pair of semantically correlative morphemes, usually antonymous (as here) or synonymous.[16]

The verbs *fɨ̄* 'make far; distinguish' and *pɛ̀* 'share; divide' form an elaborate couplet, in expressions like *fɨ̄-dàʔ-pɛ̀-dàʔ* 'discriminate; select the good from the bad'. Maung Maung pressed them into service in order to convey the concept 'phoneme', with three alternate possibilities:

(29)   PHONEME

a.   fɨ̄-khɔ̂-pɛ̀-khɔ̂

distinguish-sound-divide-sound

'distinguishing sounds'

b.   fɨ̄-tɔ̂-pɛ̀-tɔ̂

distinguish-word-divide-word

'distinguishing words'

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[15] Probably Paul Lewis, to whom also belongs the credit for coining Lahu equivalents of such musical terms as 'note', 'rest', 'soprano', which have enabled the Christian Lahu to sing hymns in four-part harmony.

[16] Other elaborate expressions are of the form ABCB, where it is the 2nd and 4th syllables that are identical. For a list of nearly a thousand of these elaborate couplets, see Appendix III of Matisoff 2006:403–448.

c.   fɨ̄-dàʔ-pὲ-dàʔ   khɔ̂

distinguish-RECIP-divide-RECIP   sound

'mutually distinguishing sounds'

The nominal morphemes *ú* 'head; beginning' and *mē* 'tail; end' participate in a large number of elaborate expressions, for example, *hɛ-ú-hɛ-mē* 'upper and lower parts of a swidden'; *qhɔ-ú-qhɔ-mē* 'top and bottom of a hill'; *ğâʔ-ú-ğâʔ-mē* 'a whole chicken'. These are convenient to express the morphological notions of 'prefix' and 'suffix': *tɔ̂-tɔn-ú* ('head-syllable') and *tɔ̂-tɔn-mē* ('tail-syllable').[17] (The neologism for 'syllable' itself consists of *tɔ̂* 'word' plus *tɔn* 'segment'.) Similarly, these morphemes may be combined with *khɔ̂* to form *khɔ̂-ú* 'initial (position/sound in a syllable)' and *khɔ̂-mē* 'final (position/sound in a syllable)'.

Maung Maung also suggests *tɔ̂-cɔ̂ʔ-ú* ('beginning sentence') for 'relative clause', since RC's usually precede their head in Lahu.

The bound nominal morpheme *vâ* occurs in many elaborate expressions as the couplet-partner of *chɔ* 'person', for example, *chɔ-hɛ-vâ-hɛ* 'stalwart people'; *chɔ-ha-vâ-ha* 'human souls'; *chɔ-lî-vâ-lî* 'human rules of conduct'. This last expression has been recruited to form the neologism for 'anthropologist': *chɔ-lî-vâ-lî hên pā* ('one who studies human rules of conduct').

The antonymic pair of adjectival verbs *kὲ* 'clean; pure' and *tì* 'muddy; turbid' (as in *í-kâʔ-kὲ* 'pure water', *í-kâʔ-tì* 'muddy water'), may be combined with *bù-khɔ̂* 'vowel' to mean 'monophthong' *bù-khɔ̂-kὲ* vs. 'diphthong' *bù-khɔ̂-tì*.[18] This is reminiscent of the traditional Chinese terminology for a different conceptual opposition: *qīng* 清 'voiceless' (lit. 'clear') vs. *zhuó* 濁 'voiced' (lit. 'muddy').

The preexisting compound *tɔ̂-khɔ̂* 'words; speech' may be IONIZED as an elaborate couplet in new expressions like *tɔ̂-pɔ̂n-khɔ̂-pɔ̂n* 'compound' (*pɔ̂n* 'add'), and *tɔ̂-vêʔ-khɔ̂-vêʔ* 'elaborate expression' (*vêʔ* 'flower').

5.2. NEOLOGISTIC COMPOUNDS: LEXICO-SEMANTIC INNOVATIONS.

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[17] We might as well add *tɔ̂-tɔn-kā* 'infix' (*kā* 'space between'), since future Lahu linguists might want to work on Mon-Khmer languages!

[18] An expression meaning 'vowels in general; monophthongs and diphthongs' can be created via the elaborate expression *khɔ̂-kὲ-khɔ̂-tì*.

AGENTIVE NOMINALIZER. The agentive nominalizer *pā* has until now been restricted to animate agents. In a large number of Maung Maung's neologisms, this functor has been generalized to impersonal or abstract inanimates, that is, 'that which V's', rather than 'person who V's': 'object' *khān-pā* ('that which undergoes'); *ɔ̀-ti jûʔ pā* 'locative nominalizer' ('that which points to a place'); *tɔ̂-jûʔ-mâ pā* 'unrestricted particle' ('that which applies to many words').

DELETEION OF *ve*. The hard-working particle *ve* serves both as a genitivizer and as a relativizer. In both functions there are cases where the particle may be deleted, giving rise to structures which behave like lexical compounds. In our new metalinguistic terminology, such deletions are common:

(30)   DELETION OF GENITIVE *ve*

    a.   mɔ̂-gɨ̀ jê-khɔ̂   < mɔ̂-gɨ̀ ve jê-khɔ̂

          lip   stop   …

               'labial stop'

    b.   nā-qhɔ̂ bù-khɔ̂   < nā-qhɔ̂ ve bù-khɔ̂

          nose   vowel   …

               'nasalized vowel'

    c.   nā-qhɔ̂ khɔ̂-ú   < nā-qhɔ̂ ve khɔ̂-ú

          nose   first.sound   …

               'prenasalized initial'

(31)   DELETION OF RELATIVE *ve*

    a.   ɔ̀-cɔ̀ mɛ   khɔ̂   < ɔ̀-cɔ̀ mɛ ve khɔ̂

          thing name (v.) word   …

                  'noun'

    b.   cɨ́-kɨ̀   phûʔ   khɔ̂   < cɨ́-kɨ̀ phûʔ ve khɔ̂

          meaning overturn word   …

                  'antonym'

What is unusual is to have a deletion of both relative and genitive *ve* from the same structure. This is something I had never encountered before, but which occurs frequently in our terminology for specifying both the position and the manner of articulation of a consonant, for

example, *šá-mə̂ʔ mə̂-gɨ̀ jê-khɔ̂* 'aspirated labial stop. This large compound consists of three elements (32a-c):

(32)   DELETION OF BOTH GENITIVE AND RELATIVE *ve*

      a.   šá-mə̂ʔ

              breath-blow

              SUBJ + VERB

                     'aspirated'

      b.   mə̂-gɨ̀

              mouth-skin

                     'lip'

      c.   jê-khɔ̂

              stop(v.)-sound

              ATTRIBUTIVE VERB + HEAD NOUN

                     'a stop'

The underlying structure is:

      d.   šá-mə̂ʔ   ve   mə̂-gɨ̀   ve   jê-khɔ̂

              aspirated   REL   lip   GEN   stop(n.)

Similarly for *šá-chɨ̂ʔ ɔ̀-tô?-lô? jê-khɔ̂* 'unaspirated velar stop':

(33)   a.   šá-chɨ̂ʔ

              breath-be.blocked

                    'unaspirated'

      b.   ɔ̀-tô?-lô?

                    '(soft) palate'

The underlying structure is:

      c.   šá-chɨ̂ʔ   ve   ɔ̀-tô?-lô?   ve   jê-khɔ̂

              unaspirated REL (soft) palate   GEN   stop(n.)

CONJOINED ATTRIBUTIVE NOUNS. Another unusual construction involves two nouns conjoined by the suspensive particle *lɛ* which jointly modify a following noun:

(34)   mə̂-gɨ̀ lɛ   cì   khɔ̂

         lip   and   teeth   sound

abbreviated into a single morphological unit, sometimes of complex or unusual structure (see examples above).

Often several candidates for translating a given term will present themselves, some of them of the long-winded (but clear) explanatory type, and others more concise and LEXICALIZED, but rather more difficult to grasp on first hearing. A few examples:

(36)   CONSONANT

    a.   mɔ̀ʔ-qɔ mὲʔ khɔ̂

        mouth   shut sound

            'closed mouth sound'

        (This term is unsatisfactory, because it is more suitable to translate 'stop', below.)

    b.   tɛ-khɔ̂

        establish-sound

            'laid down/established sound'

    c.   tàn-khɔ̂

        begin-sound

            'beginning sound'

(37)   CONTINUANT

    a.   ɔ̀-šá mâ chêʔ lɛ tɔ̂ʔ   la   ve ɔ̀-khɔ̂

        breath not break and emerge CIS REL sound

            'sound emerging without cutting off the breath'

    b.   ɔ̀-khɔ̂   g̈ɔ̀ qay   pɨ́   ve khɔ̂

        voice pull go.on be.able REL sound

            'sound that the voice can continue pulling'

    c.   ɔ̀-šá lɔ́   ve cɛ ɔ̀-khɔ̂ bù   qay   phὲʔ   ve ɔ̀-khɔ̂

        breath remain REL EXT sound resound go.on be.able   REL sound

            'sound that can last as long as the breath holds out'

    d.   bù   qay pɨ́   ve ɔ̀-khɔ̂

        resound go.on be.able REL sound

            'sound that can continue resounding'

    e.   cá-g̈ɔ̀-khɔ̂

        continue-pull-sound

(38) NOUN

    a.   mɛ-khɔ̂

        be.named-word

            'naming word'

    b.   ɔ̀-cɔ̀   mɛ-khɔ̂

        thing   name-word

            'thing naming word'

    c.   ɔ̀-cɔ̀   ɔ̀-mɛ

        thing   name

            'thing name'

    d.   tɔ̂-mɛ

        word-name(n.)

            'word name'

(39) PARTICLE

    a.   tɔ̂   jûʔ   pā

        word point.out   NOM

            'word indicator'

    b.   tɔ̂   bêʔ   pā

        word scoop.up NOM

            'word scooper'

(40) STOP

    a.   mèʔ-khɔ̂

        shut-sound

            'occluded sound'

    b.   jê-khɔ̂

        stop-sound

            'stopped sound'

    c.   (ɔ̀-qhən) qha-pɔ̀ ní-tī   ve   khɔ̂

        organ   all   press.down REL sound

            'sound where the speech organs are all closed'

    d.   tɔ̂   yɔ   qhən mèʔ khɔ̂

word   speak   organ   shut   sound

'speech organs closed sound'

e.   mɔ̀ʔ-qɔ   mɛ̀ʔ   lɛ   ɔ̀-šá   chê̂ʔ   ve   ɔ̀-khɔ̂

mouth   shut   and   breath   cut.off   REL   sound

'a sound where the mouth is closed and the breath is cut off'

f.   ɔ̀-šá   lɔ́   thɔ̂   ɔ̀-khɔ̂   là̀ʔ-cɨ́-là̀ʔ-há   ğa   šɨ   ve

breath   remain   although   sound   immediately   must   die   NOM

'a sound which has to die abruptly even if the breath lasts'

g.   mɔ̀ʔ-qɔ   tê   khɨ   tí   mɛ̀ʔ   pɔ̀   ve   ɔ̀-khɔ̂

mouth   one   moment   only   shut   finish   REL   sound

'a sound where the mouth is completely closed for a while'

Which, if any, or these alternative terms will catch on remains to be seen.[20] Eventually semantic repartition may occur between closely resemblant items.

6. KEY VERBS IN OUR NEOLOGISMS. Particularly important is the recruitment of VERBS for metalinguistic duty. Table 1 contains a list of some of the most important ones (given in my Lahu alphabetical order!).

<INSERT TABLE 1 ABOUT HERE>

7. PUTTING THE NEW TERMINOLOGY TO WORK IN COMPLETE SENTENCES. The test of any terminological system is the ease and naturalness with which it can be used in complex

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[20] There remain a number of cases where it has been difficult to decide among alternatives:

(i)   Does Lahu *tɔ̂(-khɔ̂) ɔ̀-víɔ̀-ni* (lit. 'sibling words') work better for 'word family' or for 'cognate'?

(ii)   After some hesitation we decided that 'allophone' would be better translated by *ɔ̀-šɔ́ pa khɔ̂* (lit. 'color changed sound'), while *šū dàʔ khɔ̂* (lit. 'sounds which are the same as each other') should be reserved for 'variant sound'.

(iii)   The terms coined for 'noun particle' (*tɔ̂-mɛ jûʔ pā* 'word-name indicator') and 'general nominalizer' (*mɛ-khɔ̂ jûʔ pā* 'naming-word indicator') are perhaps confusingly similar.

utterances. The following sentences are a representative sample of the kind of linguistic talk that might now be possible in Lahu:[21]

(41) Lâhū tɔ̂-khɔ̂ yè-qhâ ɔ̀-qhɔ lo tɔ̂-jûʔ-pā lè   a-yê   ɨ   jâ.
      Lahu   words use-way within LOC particle   TOPIC importance great very
            'In Lahu grammar the particles are very important.'

(42) fɨ-khɔ̂-pɛ̀-khɔ̂ tê khɔ̂ tí ɔ̀-qhɔ lo ɔ̀-šɔ́-pa-khɔ̂ láy khɔ̂ cɔ̀ ğa ve yɔ̀.
            'A single phoneme may have several allophones.'

(43) ɔ̀-šɔ́-pa-khɔ̂ chi tê phā, tê khɔ̂ lɛ tê khɔ̂ cá dàʔ ve ɔ̀-qhâ thàʔ 'chê-kɨ pa ğa ve
šū-dàʔ-khɔ̂'[22] phɛ̀ʔ ve tɛ̀ʔ qôʔ ve yɔ̀.
            'The relationship among the allophones of a phoneme is called "complementary
distribution".'

(44) Lâhū-khɔ̂ te-tɔ̂ phɛ̀ʔ ve qo, mâ-hêʔ-tɔ̂ phɛ̀ʔ ve 'mâ' thàʔ yù tɛ̂ʔ ni ğa[23] ve yɔ̀.
            'All Lahu verbs can be negated by *mâ*.'

(45) 'ó-qō-šī' qôʔ ve tɔ̂-khɔ̂ ɔ̀-qhɔ lo tɔ̂-hôʔ šêʔ cɛ̀ cɔ̀ ve yɔ̀.
            'The word *ó-qō-šī* contains three morphemes.'

(46) Lâhū-khɔ̂ mɛ̀ʔ-khɔ̂ šêʔ cɛ̀ cɔ̀ ve.
            'Lahu has three series of stops.'

(47) yɔ̂ ɔ̀-ší-pá Lâhū yâ àʔ šū dàʔ ve.
            'His accent is just like a Lahu's.'

(48) Kâlâ-phu khɔ̂ chi ɔ̀-ší-pá qhà-qhe phɛ̀ʔ ve le?
            'What's the pronunciation of this English word?'

(49) a.   tɔ̂-yɔ ɔ̀-qhən ɔ̀-qhâ-šɨ qay lɛ ɔ̀-khɔ̂ thàʔ qhà-qhe te pè dàʔ phɛ̀ʔ ve le?
      b.   tɔ̂-yɔ ɔ̀-qhən yù lɛ ɔ̀-khɔ̂ thàʔ qhà-qhe te pè dàʔ phɛ̀ʔ ve le?
                  'How can we classify sounds according to the vocal organs?'

---

[21] Space constraints preclude giving word-by-word glosses (except for the first example). For a list of all the words and morphemes used in the neologisms, sorted by form-class, see Appendix D.

[22] Lit., 'the same sound which has changed (*pa ğa ve*) in different places'.

[23] This is a four-verb concatenation: *yù têʔ ni ğa* (vV + Vh + Vv + Vv) 'take-measure-look-able.to'.

(50) dîʔšōnēli qhɔ qhà-qhe te lɛ tɔ̂-khɔ̂ ca mɔ̀ phὲʔ ve le?

  'How can we find a word in the dictionary?'

(51) a-lɔ́ ve lìʔ-mɛ̂ʔ tɛ-qhâ šɔ̄ lɛ tɔ̂-khɔ̂ ğa mɔ̀ ve.

  'You can find a word by alphabetizing by the first letter.'

(52) ɔ̀-khɔ̂ chi tê cɔ̀ lὲ ɔ̀-pâ-ɔ̀-kɨ chi ɔ̀-qhɔ lo yê phὲʔ ve mâ hêʔ.

  'This kind of sound cannot be used in this environment.'

(53) Lâhū-nâʔ ve tɔ̂-khɔ̂ ɔ̀-qhɔ lo q lɛ k lὲ pən dàʔ kɨ cɔ̀ ve yò.

  'In Black Lahu there is a phonemic contrast between *q* and *k*.'

Much remains to be done, even with respect to phonetic terminology, but the next step will be to proceed systematically to morphology and syntax. It is my fond hope that the new generation of Lahu linguists will soon feel comfortable discussing fine points of their language's structure in Lahu itself. If so, perhaps my academic approach to Lahu will have had a positive aspect after all.

APPENDIX A: LAHU PHONOLOGY. (M̂ɛnpùlón subdialect of Black Lahu)

Table 2 contains the phonemic inventory of Black Lahu:

<INSERT TABLE 2 ABOUT HERE>

(54)   NOTES ON PHONOLOGY

   a. Some diphthongs also occur, mostly in loanwords.

   b. *y* functions as the voiced homologue of *š*.

   c. *g̈* [ɣ] is historically the voiced homologue of *h*.[24]

   d. Lahu lacks a phoneme /s/.

   e. Vowel nasalization (symbolized by **<-n>**) in loanwords from Burmese, Tai,

Chinese, or English is always optional.

ALLOPHONY IN THE LABIAL AND PALATAL SERIES. The four labial phonemes /p ph b m/ are

affricated before /u/, which is itself unrounded to [ɯ] in this environment (Figure 2).

<INSERT FIGURE 2 ABOUT HERE>

The five palatal phonemes /c ch j š y/ become dentals before /ɨ/, which is itself raised to [ŋ] in

this environment (Figure 3).

<INSERT FIGURE 3 ABOUT HERE>

Finally, the /n/ phoneme has a palatal allophone before /i/: /ni/ → [ñi].

---

[24] /g̈/ derives from PLB **r-*, while /h/ comes from a number of glottalized or aspirated sonorants:

*/ʔr ʔl ʔy hr hl hy/.

APPENDIX B: ALTERNATIVE TRANSCRIPTIONS FOR LAHU.[25]

At least four writing systems have been devised for Lahu, two of them by Christian missionaries, one by Chinese linguists, and one by the present author (see Tables 3-5).

<INSERT TABLE 3 ABOUT HERE>

(55)   NOTES ON TABLE 3

a.   The missionary transcriptions use 10 phonemically unnecessary consonantal symbols: <pf, hpf, bv mv, ny, tc, ts, tz, s, z>. On the other hand, my transcription of the consonants requires three special symbols: <ŋ, š, g̈>.[26]

b.   While an accurate phonemic transcription is indispensable for historical/comparative work, it could be claimed that a practical orthography should not require the user to make complex deductions, such as interpreting <šɨ> as [sɻ], or <yɨ> as [zɻ].

c.   The Catholic transcription <gn> of the palatal allophone [ñ] of /n/ before /i/ reflects Franco-Italian influence.

<INSERT TABLE 4 ABOUT HERE>

(56)   NOTES ON TABLE 4

a.   The vowels /ɨ/ and /ə/ are correctly distinguished in the missionary orthographies, but are confounded in the Chinese spelling, which writes them both as <eu>.

b.   Both missionary transcriptions confuse the allophone of /u/ after labials (phonetically [ɯ]), with the somewhat similar allophone of /ɨ/ after palatals (phonetically [ɻ]), writing them both as <ö> (Catholic) or <uh> (Baptist).

c.   In the Catholic spelling, the mid vowels /ɛ/, /ɔ/ are written with grave accents <è>, <ò>, while the central vowels /ɨ/, /ə/ are written with diaereses <ü>, <ë>. The use of diacritics to indicate vowel qualities is also characteristic of standard Vietnamese orthography, invented by the French Catholic Alexandre de Rhodes in the 17th century. As in Vietnamese, this means that some vowels must carry two diacritics, one for the quality and one for the tone.

<INSERT TABLE 5 ABOUT HERE>

(57)   NOTES ON TABLE 5

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[25] For a fuller discussion, see Matisoff 1988:20–27.

[26] I would now have no objection to replacing them by <ng>, <sh>, and <gh>, respectively.

a.	In both missionary orthographies, the tonemarks are placed one space after the vowel, which makes it impossible to run syllables of the same word together, and unesthetic to join syllables within a word with hyphens, so that there is no way to tell where one word ends and the next one begins.

b.	In my orthography the tonemarks appear above the vowel. In the case of the two checked tones, part of the tonemark is a postvocalic glottal stop, but this offers no impediment to hyphenization. I regard the checked tones as forming a distinct subsystem from the open ones (they derive from protosyllables with final stops), so that no synchronic or diachronic connection is implied between the high falling and high checked tones, or between the low falling and low checked tones.

c.	The missionary systems use both superscript and subscript tonemarks, which makes them hard to type and easy to confuse with each other.

d.	The tonemarks in the Catholic system are particularly cumbersome, since several of them are not standard diacritics at all, but rather curved lines or hooks meant to suggest mnemonically the actual contours of the tones.

e.	The Chinese system of marking tones by arbitrary postvocalic consonants has much to recommend it. Such transcriptions were popular in the U.S. in the 1940's and 1950's for languages like Thai and Burmese, and similar romanizations are now in use for Hmong and Mien. It makes it possible to write polysyllabic words with no spaces between the syllables, usually without ambiguity as to the syllable boundary. It is eminently printable, typeable, and word-processible. In its earlier version it was seriously flawed by writing the low falling and very low tones with the same letter <-l>. This has now been rectified by using <-f> for the latter, as urged in Matisoff 1984.

Table 6 presents a sample sentence in all four orthographies.
<INSERT TABLE 6 ABOUT HERE>

APPENDIX C: SOME SUGGESTED LINGUISTIC TERMINOLOGY FOR LAHU, ARRANGED BY CATEGORY. (MM = Maung Maung, JAM = Matisoff)

(58)   GENERAL

abbreviation	tô-ŋɛ
alphabet	kâʔ-khâʔ-ŋâʔ; lìʔ-ma-pɔ̄
alphabetical order	tê tɔ pɔ̀ tê tɔ qhà-qhe te qay le;
	lìʔ-ma-pə tɛ-qhâ; tô-mêʔ ve tɛ-qhâ
anthropologist	chɔ-lî-vâ-lî hên-pā
boundary/border	ɔ̀-tɔ̄
classification	pɛ̀ dàʔ ve ɔ̀-qhâ
continue/keep on	g̈ɔ̀ ve; cá ve
cut off/not continue (sound)	chêʔ ve
dictionary	cɨ́-kɨ̀ yù tôʔ ve lìʔ; tô-khɔ̂ cɨ́-kɨ̀ lìʔ; dîʔšōnēli
environment	ɔ̀-pâ-ɔ̀-kɨ; ɔ̀-jâ-phɔ̂
exception	tô-khɔ̂ ɔ̀-lî yàʔ ve
gloss (short definition)	cɨ́-kɨ̀-ŋɛ
hyphen	tô-tɔ̄ ɔ̀-máy [MM]; tô-tɔ̄ ɔ̀-hêʔ [JAM]
double hyphen	tô-tɔ̄ nî mà
triple hyphen	tô-tɔ̄ šêʔ mà
interpret/elicit/translate	cɨ́-kɨ̀ yù tôʔ ve
irregular	g̈a mɔ̀ hā ve ɔ̀-lî; mɔ̀ mɨ̀ mâ hêʔ ve ɔ̀-lî
language	tô-khɔ̂
last (in a series)	ɔ̀-lɛ-mɔ̂
letter (of an alphabet)	lìʔ-mē̄
linguist	tô-khɔ̂ cû-yī hên-pā ('one who studies linguistics');
	tô-khɔ̂ cû-yī cɔ̀-pa ('one who knows linguistics')[27]
linguistics	tô-khɔ̂ cû-yī

---

[27] Perhaps one might make a whimsical repartition here, reserving the second term for those who already have their Ph.D.!

list	câlân
middle	ɔ̀-kā; ɔ̀-qɔ́-ji
optional	lɔ̂ʔ-kə-lɔ̂ʔ-bà; lɔ̂ʔ-g̈a-bà-g̈a
order (of things in series)	tɛ-qhâ; là ve ɔ̀-qhâ
press/force/occlude	ní ve
pronunciation/accent	tɔ̂ʔ-khɔ̂; ɔ̀-ší-pá
regular	te-mɨ̀-te-cɨ́
regular rule	g̈a mɔ̀ mɨ̀ ve ɔ̀-lî
represent	ɔ̀-tan te ve
sound	khɔ̂; ɔ̀-khɔ̂
speak	yɔ ve
take out/delete	yù tɔ̂ʔ ve; yù bà ve
text	bùʔ tā ve lìʔ; lìʔ-tɔn
utterance	yɔ tɔ̂ʔ la ve tɔ̂
writing system	lìʔ-mɛ̂ʔ

(59) PHONETICS

a. VOCAL ORGANS

alveolar ridge	cì-tɛ̂
breath	šá; ɔ̀-šá
larynx/glottis	qá-qə-lə
lip	mɔ̂-gɨ
upper lip	mɔ̂-gɨ ɔ̀-na-pá ve
lower lip	mɔ̂-gɨ ɔ̀-hɔ́-pá ve
lungs	ɔ̀-chɨ̂-phɔ̂ʔ
mouth	mɔ̀ʔ-qɔ
nose	nā-qhɔ̂
organ; tool	ɔ̀-qhən
outstretched/protruded	che pə tā ve
palate	mɔ̀ʔ-qɔ ɔ̀-tɔ̂ʔ-lɔ̂ʔ; mɔ̀ʔ-qɔ ɔ̀-tɔ̀-nɔ̂ʔ; mɔ̀ʔ-qɔ mû-phe

hard palate	ɔ̀-tôʔ-lôʔ hɛ ve
soft palate/velum	ɔ̀-tôʔ-lôʔ nû ve
rounded	mɔ̂ cú ve
spread	ŋá ve
tongue	ha-tɛ̄
tip of the tongue	ha-tɛ̄-mɔ̂
tooth/teeth	cì
vocal organs	tɔ̂ yɔ pɨ́ tù ɔ̀-qhən; tɔ̂ yɔ ɔ̀-qhən

b.　　POSITIONS OF ARTICULATION

alveolar sound	cì-tɛ̂-khɔ̂
apico-dentals	ha-tɛ̄-mɔ̂ (cɛ) mὲʔ/yɛ̂ khɔ̂
bilabials	mɔ̂-dɔ̀ʔ-khɔ̂; mɔ̂-gɨ̀-khɔ̂
glottal stop	qá-qə-lə (cɛ) mὲʔ khɔ̂; qá-qə-lə šá jɛ̂ khɔ̂
labials	mɔ̂-gɨ̀ (cɛ) mὲʔ/yɛ̂ khɔ̂
labial stop	mɔ̂-gɨ̀ jɛ̂-khɔ̂
labiodentals	mɔ̂-cì-khɔ̂; mɔ̂-gɨ̀ lɛ cì mὲʔ (dàʔ) ve khɔ̂
lamino-palatals	ha-tɛ̄ ɔ̀-qɔ́-ji (cɛ) mὲʔ/yɛ̂ khɔ̂; ha-tɛ̄ ɔ̀-qɔ-ji khɔ̂; ɔ̀-tôʔ-lôʔ khɔ̂
laryngeal/haitch [h]	šá g̈ɔ̀ khɔ̂ (tὲʔ-chí mâ mὲʔ)
laterals	ha-tɛ̄ ɔ̀-jâ khɔ̂; ha-tɛ̄ ɔ̀-jâ-phɔ̂ tɔ̂ʔ khɔ̂; chɔ̀-phɔ̂-ô-phɔ̂ tɔ̂ʔ la ve khɔ̂
pharyngeal	qhɔ̀ʔ-khɔ̂; qhɔ̀ʔ-qhɔ-khɔ̂
pharyngealized	qɔ̄-khɔ̂ ɔ̀-cɨ́-kā khɔ̂
point of occlusion/articulation	ní-tī kɨ̀; mὲʔ dàʔ kɨ̀
post-velars/uvulars	ha-tɛ̄ cɨ́-nɔ̀ʔ kɨ̀ (cɛ) mὲʔ khɔ̂; qɔ̄-khɔ̂; ha-tɛ̄ ɔ̀-cɨ́-pɨ̄ ɔ̀-qhɔ̀ʔ-nɔ́ khɔ̂
touch (as articulator)	dɔ̀ʔ (dàʔ) ve
uvular	ha-cu-ni khɔ̂
velars	ha-tɛ̄ ɔ̀-cɨ́-pɨ̄ (cɛ) mὲʔ/yɛ̂ khɔ̂; ha-tɛ̄ ɔ̀-khɨ́-pɨ̄ (cɛ) mὲʔ khɔ̂; ɔ̀-tôʔ-lôʔ nû ve khɔ̂; ɔ̀-tôʔ-lôʔ nû ve khɔ̂

c.　　MANNERS OF ARTICULATION

affricate	khán-tɔ̂ʔ-chɨ̂ʔ-khɔ̂
approximant	ha-tē̄ ɔ̀-jâ khɔ̂
aspirate (v.)	mɔ̂ʔ ve
aspirated stop	ɔ̀-šá mɔ̂ʔ ve ní-tī ve khɔ̂
aspirated sound	ɔ̀-šá mɔ̂ʔ ve khɔ̂; šá-mɔ̂ʔ-khɔ̂
aspirated labial stop	šá-mɔ̂ʔ mɔ̂-gɨ̀ jê khɔ̂
consonant	mɔ̀ʔ-qɔ mèʔ khɔ̂; tɛ-khɔ̂; tàn-khɔ̂
continuant	ɔ̀-šá mâ chêʔ lɛ tɔ̂ʔ la ve ɔ̀-khɔ̂;
	ɔ̀-khɔ̂ ğɔ̀ qay pɨ́ ve khɔ̂;
	ɔ̀-šá lɔ́ ve cɛ ɔ̀-khɔ̂ bù qay phɛ̀ʔ ve ɔ̀-khɔ̂;
	bù qay pɨ́ ve ɔ̀-khɔ̂; cá-ğɔ̀-khɔ̂
fricative	khán-tɔ̂ʔ-khɔ̂ [MM]; šɔ̂ʔ-bù ve khɔ̂ [JAM]
voiced fricative	qá-qə-lə dɨ̂ʔ lɛ šɔ̂ʔ-bù ve khɔ̂
voiceless fricative	qá-qə-lə mâ dɨ̂ʔ lɛ šɔ̂ʔ-bù ve khɔ̂
manner series (of obstruents)	cɔ̀ 'kind' (Clf.)
nasal sound	nā-qhɔ̂ cɛ tɔ̂ʔ ve khɔ̂
noncontinuant	tê pɔ̂ʔ tí jê ve ɔ̀-khɔ̂̂; jê-chêʔ-khɔ̂
occlude	ní-tī ve; mèʔ dàʔ ve
plosive	pɔ̂ʔ-khɔ̂
prenasalized consonant	nā-qhɔ̂ khɔ̂-ú
stop/obstruent	mèʔ-khɔ̂; jê-khɔ̂;
	(ɔ̀-qhən) qha-pɔ̀ ní-tī ve khɔ̂;
	tɔ̂ yɔ qhən mèʔ khɔ̂;
	mɔ̀ʔ-qɔ mèʔ lɛ ɔ̀-šá chêʔ ve ɔ̀-khɔ̂;
	ɔ̀-šá lɔ́ thɔ̂ ɔ̀-khɔ̂ làʔ-cɨ́-làʔ-há ğa šɨ ve;
	mɔ̀ʔ-qɔ tê khɨ tí mèʔ pɔ̀ ve ɔ̀-khɔ̂
plain stop (v'less unasp.)	à-qhe-lê ve ní-tī ve khɔ̂
unaspirated	šá-chɨ̂ʔ-khɔ̂
unaspirated stop	ɔ̀-šá mâ mɔ̂ʔ ve ní-tī ve khɔ̂
unaspirated labial stop	šá-chɨ̂ʔ mɔ̂-gɨ̀ jê-khɔ̂

voiced, be/vibrate	dîʔ ve
voiced sound	dîʔ-khɔ̂; qá-qə-lə dîʔ khɔ̂
voiced fricative	qá-qə-lə dîʔ lɛ šôʔ-bù ve khɔ̂
voiced stop	qá-qə-lə dîʔ lɛ ní-tī ve khɔ̂; qá-qə-lə dîʔ jê-khɔ̂
voiceless, be	gɔ̀ ve ('be cold')
voiceless sound	gɔ̀-khɔ̂
voiceless fricative	qá-qə-lə mâ dîʔ lɛ šôʔ-bù ve khɔ̂
voiceless stop	qá-qə-lə mâ dîʔ lɛ ní-tī ve khɔ̂
voiceless unaspirated stop	qá-qə-lə mâ dîʔ lɛ ɔ̀-šá mâ mɔ̂ʔ ve ní-tī ve khɔ̂
voiceless aspirated sound	mɔ̂ʔ-khɔ̂

d.   VOWELS

vowel	bù-khɔ̂; šálâʔ (< Thai)
simple vowel/pure vowel	bù-khɔ̂-kɛ̀ (ɔ̀-khɔ̂ tê khɔ̂ tí cɔ̀ ve)
diphthong/complex vowel	bù-khɔ̂-tì (ɔ̀-khɔ̂ nî khɔ̂ khɔ̀ʔ dàʔ ve); bù-khɔ̂-pɔ̂n
fused vowels	bù-khɔ̂ nî mà kɨ̀ dàʔ á ve
nasalized vowel	nā-qhɔ̂ bù-khɔ̂
long (as a vowel)	yɨ̀ ve
short (as a vowel)	ŋɛ ve
high (as a vowel)	mu ve
low (as a vowel)	nɛ̀ ve
open (i.e. low, as a vowel)	phɔ-khɔ̂
front vowel	ha-tɛ̄ ɔ̀-mɔ̂ ğa yê ve bù-khɔ̂
central vowel	ha-tɛ̄ ɔ̀-qɔ́-ji ğa yê ve bù-khɔ̂
back vowel	ha-tɛ̄ ɔ̀-cɨ́-pɨ̄ ğa yê ve bù-khɔ̂; ha-tɛ̄ ɔ̀-cɨ́-pɨ̄ mu ve bù-khɔ̂
rounded vowel	mɔ̂ ğɔ́ bù-khɔ̂; mɔ̀ʔ-qɔ cú ɛ̀ phɛ̀ʔ ve bù-khɔ̂
unrounded vowel	(mɔ̂) phī khɔ̂; mɔ̀ʔ-qɔ phī ɛ̀ phɛ̀ʔ ve bù-khɔ̂
high vowel	(ha-tɛ̄) mu ve bù-khɔ̂
high front vowel	(ha-tɛ̄) ɔ̀-mɔ̂ mu ve bù-khɔ̂

high central vowel	(ha-tɛ̄) ɔ̀-qɔ́-ji mu ve bù-khɔ̂
high back vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ mu ve bù-khɔ̂
high back rounded vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ mu ve mɔ̂ cú khɔ̂
high back unrounded vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ mu ve phī-khɔ̂
high central unrounded vowel	(ha-tɛ̄) ɔ̀-kā mu ve mɔ̂ phī-khɔ̂
high front unrounded vowel	(ha-tɛ̄) ɔ̀-mɔ̂ mu ve phī-khɔ̂

mid (half open, as vowel)	tê khô phɔ-khɔ̂; (ha-tɛ̄) a-cí mu ve bù-khɔ̂; (ha-tɛ̄) ɔ̀-kā-lɛ́ mu ve bù-khɔ̂
mid front vowel	(ha-tɛ̄) ɔ̀-mɔ̂ ɔ̀-kā-lɛ́ mu ve bù-khɔ̂
mid front unrounded vowel	(ha-tɛ̄) ɔ̀-mɔ̂ ɔ̀-qɔ-ji phī-khɔ̂
mid central vowel	(ha-tɛ̄) ɔ̀-qɔ́-ji ɔ̀-kā-lɛ́ mu ve bù-khɔ̂
mid back vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ ɔ̀-kā-lɛ́ mu ve bù-khɔ̂
mid back rounded vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ ɔ̀-qɔ-ji mɔ̂-ǧɔ́ khɔ̂

low vowel	(ha-tɛ̄) nɛ̀ ve bù-khɔ̂
low front vowel	(ha-tɛ̄) ɔ̀-mɔ̂ nɛ̀ ve bù-khɔ̂
low front unrounded vowel	(ha-tɛ̄) ǧû-šɨ̄ nɛ̀ ve mɔ̂-phī-khɔ̂
low central vowel	(ha-tɛ̄) ɔ̀-qɔ́-ji nɛ̀ ve bù-khɔ̂
low central unrounded vowel	(ha-tɛ̄) ɔ̀-kā nɛ̀ ve phī-khɔ̂
low back vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ nɛ̀ ve bù-khɔ̂
low back rounded vowel	(ha-tɛ̄) ɔ̀-cɨ́-pɨ̄ nɛ̀ ve ǧɔ́-khɔ̂

e.   TONES

tone order (in dictionary)	ɔ̀-khɔ̂ tɛ-qhâ	
tones	khɔ̂-mu-khɔ̂-nɛ̀	
tone marks	khɔ̂-mu-khɔ̂-nɛ̀ ve ɔ̀-hê ʔ/ɔ̀-máy	
mid-tone (33)	khɔ̂ ɔ̀-qɔ́-ji	
high-rising tone (35)	khɔ̂-mu-yɨ̀	('long high tone')
high-falling tone (53)	khɔ̂-mu	('high tone')
low-falling tone (21)	khɔ̂-nɛ̀	('low tone')

very low tone (11[2])	khɔ̂-nὲ-yɨ̀	('long low tone')
high stopped tone (54s)	khɔ̂-mu-ŋɛ	('short high tone')
low stopped tone (21s)	khɔ̂-nὲ-ŋɛ	('short low tone')

(60) PHONOLOGY AND MORPHOPHONEMICS

allophone	ɔ̀-šɔ́-pa khɔ̂
assimilate	g̈ɔ̀-nê (la) ve
assimilated sounds	g̈ɔ̀-nê-khɔ̂; g̈ɔ̀-yù nê dàʔ khɔ̂
complementary distribution (sounds in)	ɔ̀-pâ-nê pa khɔ̂; ɔ̀-šɔ́ pa khɔ̂
contrast	pən dàʔ kɨ̀
dissimilate/dissimilation	bɨ̂ʔ-vɨ̂ ve
dissimilated sounds	bɨ̂ʔ-vɨ̂-khɔ̂
minimal pair	i ve khɔ̂-cɛ
phoneme	fɨ̄-khɔ̂-pὲ-khɔ̂; fɨ̄-tɔ̂-pὲ-tɔ̂; fɨ̄-dàʔ-pὲ-dàʔ khɔ̂
variant sound	šū-dàʔ-khɔ̂

(61) MORPHOLOGY AND FORM CLASSES

adjective	phɔ̀ʔ-tɔ̂
adjectival verb	phɔ̀ʔ-tɔ̂-te-tɔ̂
adverb	te-tɔ̂ ga pā
affix	tɔ̂-tɔn-cá
classifier	ɔ̀-cɔ̀ pὲ tɔ̂
compound	tɔ̂-pɔ̂n-khɔ̂-pɔ̂n
elaborate couplet	tɔ̂-vêʔ ɔ̀-cɛ
elaborate expression	tɔ̂-vêʔ; tɔ̂-vêʔ-khɔ̂-vêʔ
final (position in syllable)	khɔ̂-mē
form class/part of speech	tɔ̂-cɔ̀
infix	tɔ̂-tɔn-kā
initial consonant	khɔ̂-ú; khɔ̂ ɔ̀-tàn kɨ̀
long form (of a compound)	khɔ̂-yɨ̀

morpheme	tɔ̂-hɔ̀ʔ
noun	mɛ-khɔ̂; tɔ̂-mɛ; ɔ̀-cɔ̀ mɛ-khɔ̂; ɔ̀-cɔ̀ ɔ̀-mɛ
noun particle[28]	tɔ̂-mɛ jûʔ pā
particle	tɔ̂-jûʔ-pā; tɔ̂-bêʔ-pā; tɔ̂ láy mà jûʔ pā
prefix	tɔ̂-tɔn-ú
short form (of a compound)	khɔ̂-ŋɛ
suffix	tɔ̂-tɔn-mɛ̄
syllable	tɔ̂-tɔn; tɔ̂-khɔ̂ ɔ̀-tɔn
syllable boundary	tɔ̂-tɔ̄
unrestricted particle	tɔ̂-jûʔ mâ pā
final unrestricted particle	tɔ̂-mɛ̄ jûʔ mâ pā; tɔ̂-lɛ jûʔ mâ pā
nonfinal unrestricted particle	tɔ̂-kā jûʔ mâ pā
verb	te-tɔ̂; te-tɔ̂-phɛ̀ʔ-tɔ̂; te-khɔ̂; te-khɔ̂-phɛ̀ʔ-khɔ̂
verb particle	te-khɔ̂ jûʔ pā

(62)   SYNTAX/GRAMMAR

grammar	tɔ̂-khɔ̂ yê-qhâ
intransitive	khān-pā mâ yù (pɨ) ve te-tɔ̂
locative	ɔ̀-ti jûʔ ve
locative noun	ɔ̀-ti jûʔ ve mɛ-khɔ̂
negative	mâ-hêʔ-tɔ̂
nominalizer	mɛ-khɔ̂ phɛ̀ʔ cɨ pā; tɔ̂-mɛ-pā
agentive nominalizer	te-šɛ̄-phâ jûʔ pā
general nominalizer	à-la-qhe ve tɔ̂-mɛ-pā; mɛ-khɔ̂ jûʔ pā; tɔ̂-cɔ̀ jûʔ pā
locative nominalizer	ɔ̀-ti jûʔ pā
purposive nominalizer	dɔ̂-ti jûʔ pā
temporal nominalizer	ɔ̀-yân jûʔ pā
object	khān-pā
particle	tɔ̂ jûʔ pā; tɔ̂ bêʔ pā

---

[28] See also 'general nominalizer'.

sound correspondence   ɔ̂-khɔ̂ ɔ̀-lî thàʔ g̈àʔ pa ve

word family   tɔ̂-khô-yâ tê phā

APPENDIX D: WORDS AND MORPHEMES IN THE NEOLOGISMS, SORTED BY FORM-CLASS.

(65) NOUNS

a-yê	importance (< Burmese)
a-lɔ́	first
(ɔ̀-)ú	head
ó-qō(-šɨ̄)	head
qá-qə-lə	larynx
(ɔ̀-)qɔ́-ji	middle
qɔ̄	neck
(ɔ̀-)qhâ	way; path
(ɔ̀-)qhâ-šɨ̄	tracks; trail
(ɔ̀-)qhɔ	inside
qhɔ̀ʔ-qhɔ	throat
(ɔ̀-)qhɔ̀ʔ-nɔ́	behind; after
(ɔ̀-)qhən	tool; organ
kâʔ-khâʔ-ŋâʔ	alphabet
Kâlâ-phu	white person; Caucasian
(ɔ̀-)kā(-lɛ́)	between; middle
(ɔ̀-)khɔ̂	sound; noise; voice; words; language; phrase; sentence; advice; reason
(ɔ̀-)khɨ́-pɨ̄	base; source
câlân	list
cì	tooth, teeth
cì-tê	gums; alveolar ridge
cû-yì	knowledge; skill
(ɔ̀-)cɛ	pair; couple
(ɔ̀-)cɔ̂ʔ	strip; length of sthg
cɨ́-kɨ̀	meaning
(ɔ̀-)cɨ́-kā	boundary; border
(ɔ̀-)cɨ́-pɨ̄	foundation; base
(ɔ̀-)cə̀	thing; kind; sort

chi	this; these
chɔ	person
(ɔ̀-)chɨ̂-phô?	lungs
(ɔ̀-)jâ(-phɔ̂)	edge; border
ɔ̀-tan	substitute; symbol
ɔ̀-tàn	beginning
(ɔ̀-)ti	place
ɔ̀-tô?-lô?	palate
(ɔ̀-)tɔn	section (of long object)
tɔ̂(-khɔ̂)	word
(ɔ̀-)tɔ̀-nɔ̂?	step; ledge; ridge
(ɔ̀-)na-pá	upper; above
nā-qhɔ̂	nose
(ɔ̀-)pâ-nê	near; vicinity; environs
(ɔ̀-)pī	sthg old
(ɔ̀-)ma-pɔ̄	mother of; most important part
mû-phe	upper part; place above
ɔ̀-mɛ	a name
(ɔ̀-)mɛ̄	tail
mɛ̂?(-šī)	eye
mɔ̀?-qɔ	mouth
(ɔ̀-)mɔ̂	tip
mɔ̂(-gɨ)	lip
(ɔ̀-)máy	mark; symbol (< Tai)
ha-cu-ni	uvula (lit. 'tongue-clitoris')
ha-tɛ̄	tongue
ɔ̀-hê?	sign; augury; symbol
(ɔ̀-)hɔ̀?	form; shape; image (ult. < Pali/Sanskrit)
ɔ̀-hɔ́-pá	underneath; part below
(ɔ̀-)g̈û-šɨ̄	front; part before; time before
(ɔ̀-)šá	air; breath; spirit; effluvium

šálâʔ	vowel (< Thai)
ɔ̀-ší-pá	pronunciation
(ɔ̀-)šɛ̄-phâ	owner; doer of an action
ɔ̀-šɔ̂(-pa)	color
ɔ̀-yân	time
(ɔ̀-)vêʔ	flower; decorative object
(ɔ̀-)lî	custom; rule
làʔ-ša	right hand
lîʔ	sthg written
ɔ̀-lɛ(-mɔ̂)	last one; end
ɔ̀-lɔn	story; matter; thing

(66)   VERBS[29]

qôʔ	say
qay	go
kɔ̄	pile up
kə	put in; insert
khɔ̀ʔ	mix
ga	help
gu	prepare; fix
ŋá	open wide
cú	pucker
cɔ̀	have; be there
cɨ́-nɔ̂ʔ	be connected; tightly attached to
che	protrude; stick out
chêʔ	break; sever
tàn	begin; start
tī	fix in place; restrain
te	do; make

---

[29] Those listed in Table 1 are not repeated here.

têʔ ni	test; measure and see
də̂	think; plan
ní	press; squeeze
pa	change
pā	turn around; switch position
pə	send
pə̀	finish[30]
phὲʔ	be; become
phɔ	open
phə̀ʔ	reveal; unwrap
bà	throw away
bùʔ	write
bɨ̂ʔ	push; jostle
mā	teach
mɛ	name (v.)
mɔ̀	see
mɨ̀	do; work
hên	study (< Tai)
hêʔ	be the case
ğa	get; obtain
ğàʔ	chase; drive
šɔ̄	consider; arrange; select
šɨ	die
yàʔ	violate; do wrong
yù	take
yê	use
yɔ	speak
là	come
lɛ	come last; be the last; be late

---

[30] This verb occurs in the construction *tê* + CLF + *pə̀* + *tê* + CLF 'one Clf after another'.

ló	be extra; left over (< Tai)
lə̂ʔ	choose (< Tai)

(67)　ADJECTIVAL VERBS

i	little
ɨ̄	big
kɛ̀	pure
gɔ̀	cold
ŋɛ	short
tì	turbid
nâʔ	black
nû	soft
nê	near; close to
nɛ̀	low
pī	old (of objects)
phī	flat
mâ	many; numerous
mu	high
mɔ̂	old (of people)
hɛ	hard
g̈ɔ́	round
yɨ̀	long
vɨ̂	far

(68)　VERSATILE VERBS

　　a.　PRE-HEAD

qɔ̀ʔ	V again; V back
tàn	begin to V
g̈a	must V; get to V
yù	take and V; cause to V

　　b.　POST-HEAD

qay	keep on V'ing
cɨ	cause to V
cɨ́	V so it sticks; continue to V
chê?	V once and for all
tɔ̂?	V out
pɨ́	able to V (intrinsic ability)
pə	send V'ing
phɛ̀?	able to V (favorable circumstances)
bà	V away; get rid of by V'ing
mā	teach to V
mɨ̀	V habitually; have used to V
hā	difficult to V
g̈a	able to V (by dint of effort)
g̈à?	chase and V; chase in order to V

(69)   ELABORATE EXPRESSIONS

    a.   NOMINAL

ɔ̀-khɔ̂-ɔ̀-lî	correspondence
ɔ̀-pâ-ɔ̀-kɨ	environment
ɔ̀-ví-ɔ̀-ni	siblings
khɔ̂-mu-khɔ̂-nɛ̀	tones
chò-phɔ̂-ô-phɔ̂	here and there; everywhere
chɔ-lî-vâ-lî	people's customs
te-khɔ̂-phɛ̀?-khɔ̂	verb
te-tɔ̂-phɛ̀?-tɔ̂	verb
tɔ̂-pī-tɔ̂-mɔ̂	protolanguage
tɔ̂-pɔ̂n-khɔ̂-pɔ̂n	compound
tɔ̂-vê?-khɔ̂-vê?	elaborate expression
phɔ̀?-tɔ̂-te-tɔ̂	adjectival verb
fɨ̄-khɔ̂-pɛ̀-khɔ̂	phoneme
fɨ̄-tɔ̂-pɛ̀-tɔ̂	phoneme

b.   VERBAL

te-mì-te-cɨ́   regular

fɨ̃-dàʔ-pὲ-dàʔ   distinguish

lə̂ʔ-kə-lə̂ʔ-bà   optional

lə̂ʔ-ǧa-bà-ǧa   optional

c.   ADVERBIAL

làʔ-cɨ́-làʔ-há   immediately

(70)   ADVERBS

a-cɨ́   a little bit

à-qhe-lê   for nothing; for free

qha-pə̀   completely

qhà-qhe   how

cú ὲ   puckered; pointed

tὲʔ-chí   nothing

phī ὲ   flat

mâ   not

(71)   NUMERALS

tê   one

nî   two

šɛ̂ʔ   three

láy   several (< Tai)

(72)   CLASSIFIERS

khô   for halves

khɨ   for moments

cɔ̂ʔ   for strips

cə̀   for things, kinds

tɔ   for sections

phā   for totalities

    mà   (general)

(73)   PARTICLES

    a.   NOUN PARTICLES

          thàʔ   accusative

          lo   locative

    b.   VERB PARTICLES

          á   perfective

          kɨ̀   locative nominalizer

          tā   perfective

          tù   irrealis

          dàʔ   reciprocal; mutual

          pā   agentive nominalizer

    c.   UNRESTRICTED PARTICLES

          cɛ   only; to the extent that

          tí   only

          tὲʔ   quotative

          thɔ̂   even; also; although

          yὸ   affirmative; declarative

          le   substance interrogative (WH- question marker)

          lɛ   conjunctive; suspensive

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SPECIAL MATTER

a á â à ā âʔ àʔ a i u e o ɛ ɔ ɨ ə q qh k kh g ŋ c ch j t th d n p ph b m h ğ š y f v l

FIGURE 1. Lahu phonemes as listed in *The Dictionary of Lahu*.

VERB	GLOSS	EXAMPLE NEOLOGISM
kɨ	'melt'	*bù-khɔ̂ nî mà kɨ dàʔ á ve* 'fused vowels'
khán	'be clogged; blocked up'	***khán**-tɔ̂ʔ-khɔ̂* 'fricative'
khān	'undergo; receive'	***khān**-pā* 'object'
gu	'prepare; fix'	***gu**-kɔ̄* 'reconstruct' (*kɔ̄* 'pile up')
cá	'join; connect; continue'	***cá**-ğɔ̀-khɔ̂* 'continuant'
cɨ	'be joined to; depend on'	***cɨ**-kɨ* 'meaning'
cú	'close tightly; pucker up'	*bù-khɔ̂ mɔ̂ʔ-qɔ **cú** ɛ̀ ve* 'rounded vowel'
chêʔ	'break; sever; snap in two'	*ɔ̀-šá **chêʔ** ve ɔ̀-khɔ̂* 'obstruent'
chɨ̂ʔ	'crumple up; squeeze'	*ɔ̀-šá **chɨ̂ʔ** ve* 'unaspirated'
jûʔ	'stab; point at; indicate'	*ɔ̀-tí **jûʔ** ve* 'locative'
jê	'stop; cease'	***jê**-khɔ̂* 'stop'
tɛ	'put down/set on/establish'	***tɛ**-khɔ̂* 'consonant'
tɔ̂ʔ	'emerge'	*nā-qhɔ̂ cɛ **tɔ̂ʔ** khɔ̂* 'nasal sound' (lit. 'nose only emerge sound')
tɔ̄	'dam up; demarcate'	*tɔ̂-**tɔ̄*** 'syllable boundary'
dɨ̂ʔ	'vibrate'	*qá-qə-lə **dɨ̂ʔ** ve* 'larynx vibrates; voicing'
dɔ̀ʔ	'be close together'	***dɔ̀ʔ** dàʔ ve* 'touch (as articulator)'
ní-tī	'immobilize by pressing'	***ní-tī** kɨ* 'point of occlusion'
pa-e	'be changed' (V + Pv)	*tɔ̂ **pa-e** khɔ̂* 'idiom'
pā	'turn around; switch position'	*cɨ-kɨ **pā** khɔ̂* 'antonym'
pè	'share; divide up'	*fɨ̄-khɔ̂-**pè**-khɔ̂* 'phoneme'
pôʔ	'pop'	***pôʔ**-khɔ̂* 'plosive'
pɔ̂n	'add'	*tɔ̂-**pɔ̂n**-khɔ̂-**pɔ̂n*** 'compound'
pən	'be different'	*cɨ-**pən**-šū-khɔ̂* 'homonym'
phī	'flat; level; even'	***phī**-khɔ̂* 'unrounded vowel'
phûʔ	'turn over; turn upside down'	*cɨ-kɨ-**phûʔ**-khɔ̂* 'antonym'
bù	'make a sound/resound'	***bù**-khɔ̂* 'vowel'
bêʔ	'scoop out; scoop up'	*tɔ̂-**bêʔ**-pā* 'particle'
mèʔ	'close abruptly'	*qá-qə-lə **mèʔ** khɔ̂* 'glottal stop'
mɔ̂ʔ	'blow'	*ɔ̀-šá **mɔ̂ʔ** ve khɔ̂* 'an aspirate'
ğɔ́	'round'	*mɔ̂-**ğɔ́** bù-khɔ̂* 'rounded vowel'
ğɔ̀	'drag; continue'	*cá **ğɔ̀** khɔ̂* 'continuant'

šū	'be the same'	cɨ́-šū-pən-khɔ̂ 'synonym'
šô?	'rub/stroke'	šô? bù ve khɔ̂ 'fricative'
vɛ	'lay claim to'	vɛ pā 'genitive'

TABLE 1. Key verbs in neologisms.

CONSONANTS

p	t	c	k	q
ph	th	ch	kh	qh
b	d	j	g	
m	n		ŋ	
f		š		h
v		y		g̈
	l			

VOWELS

i	ɨ	u
e	ə	o
ɛ	a	ɔ

TONES

mid [unmarked]	33	○
high rising	35	○́
high falling	53	○̂
low falling	21	○̀
very low	11(2)	○̄
high checked	4-?	○̂?
low checked	2-?	○̀?

Syllable canon: (C) V T

TABLE 2. Lahu phonemic inventory.

/pu/ → [pfɯ]   /phu/ → [pfʰɯ]   /bu/ → [bvɯ]   /mu/ → [mvɯ] or [mɣ̩]

FIGURE 2. Labial allophony.

/cɨ/ → [tsɻ̩]   /chɨ/ → [tsʰɻ̩]   /jɨ/ → [dzɻ̩]   /šɨ/ → [sɻ̩]   /yɨ/→ [zɻ̩]

FIGURE 3. Palatal allophony.

CATHOLIC	BAPTIST	CHINESE	MATISOFF
q	k'	q	q
qh	hk'	qh	qh
k	k	k	k
kh	hk	kh	kh
g	g	g	g
ng	ng	ng	ŋ
c / tc	c / tc	c / z	c
ch / ts	ch / ts	ch / zh	ch

CATHOLIC	BAPTIST	CHINESE	MATISOFF
j / dz	j / dz	j / dz	j
t	t	t	t
th	ht	th	th
d	d	d	d
n / gn	n / ny	n	n
p / pf	p / pf	p	p
ph / phf	hp / hpf	ph	ph
b / bv	b / bv	b	b
m / mv	m / mv	m	m
h	h	h	h
gh	g'	x	g̈
sh / s	sh / s	sh / s	š
y / z	y / z	y / r	y
f	f	f	f
v	v	v	v
l	l	l	l

TABLE 3. Consonant equivalences in Lahu orthographies.

CATHOLIC	BAPTIST	CHINESE	MATISOFF
a	a	a	a
i	i	i	i
u / ö	u / uh	u	u
e	e	e	e
o	o	o	o
è	eh	ie	ɛ
ò	aw	aw	ɔ
ü / ö	ui / uh	eu	ɨ
ë	eu	eu	ə

TABLE 4. Vowel equivalences in Lahu orthographies.

	CATHOLIC	BAPTIST	CHINESE	MATISOFF
mid	ca‗	ca	ca	ca
high rising	caˇ	ca¯	caq	cá
high falling	ca˒	caˇ	cad	câ
low falling	ca�	ca˵	cal	cà
very low	ca	ca‗	cal	cā
high checked	caˆ	caˆ	cat	câʔ
low checked	ca˄	ca˄	car	càʔ

TABLE 5. Tone equivalences in Lahu orthographies.

CATHOLIC
ya˄ gni‗ ò   nga˵ hü‗ te˒ qha ˆ   qhò˵ phò˒   sha   ca‗ ghaˆ e tu˵ le

BAPTIST
ya˄ nyi aw‗   nga˵ hui te ˇ hk'aˆ   hk'aw˵ hpawˇ   sha‗   ca g'a˄ e tu˵ le

CHINESE
yar ni awl   ngal heu ted qhat   qhawl phawd   shal   ca xar e tul le

MATISOFF
yàʔ-ni ɔ̄   ŋà-hɨ tê qhâʔ   qhɔ̀-phɔ̂   šā   ca ga̋ʔ e tù le

today   our village   where   game   go and hunt
NP[1]   NP[2]   NP[3]   NP[4]   VP

'Where shall our village go to hunt today?'

TABLE 6. Sample sentence in four orthographies.