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AN ANALYSIS OF MUAK SA-AAK TONE

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Abstract
Muak Sa-aak is a tonal Angkuic language spoken in Eastern Shan state of Myanmar, belonging to the Austroasiatic family. It has three contrastive tones: a falling tone, a low tone, and a constricted tone with two allotones. Syllable structure and tone are closely linked, seen by restrictions on the occurrence of tones with certain syllable structures. Angkuic languages do not appear to develop tone through the loss of an initial consonant voicing distinction, as they instead underwent a shift where proto-voiceless initial tenuis stops became aspirated and proto-voiced consonants were devoiced (Svantesson 1988); it instead is connected with vowel length contrast (Svantesson 1988, Diffloth 1991). None the less, Muak Sa-aak preserves vowel length contrast despite the development of tone. It is argued that Muak Sa-aak tonogenesis is motivated by both vowel length and final consonants.

Keywords: Palaungic, Angkuic, tone, tonogenesis

ISO 639-3 codes: tlq, mqt, mmt, uuu, huo

1. Introduction
Muak Sa-aak is a tonal Austroasiatic language, belonging to the Angkuic subgroup of the Eastern branch of the Palaungic languages, a subgroup of Austroasiatic. Speakers of Muak Sa-aak are found in Eastern Shan State of Myanmar, and in China, with an estimated population total of over 4,000 (Hopple 2007). Angkuic also includes languages such as Hu, U, Mok, and Man Met. Other Angkuic languages are known only from early twentieth century wordlists. The group includes both tone and non-tone languages. Unlike the tonogenetic mechanisms described for other Austroasiatic languages, Angkuic tone development has been linked to a loss of vowel length contrast, rather than to a merger of initial consonant voicing distinctions.

The development of tone in Austroasiatic languages has been linked to both initial consonant voicing distinctions and to loss of final consonants (cf Haudricourt 1954, Matisoff 1973, Huffman 1976, Thurgood 2007, etc). In Khmu for example, the merging of voiced and voiceless initials has resulted in the development of a binary tone contrast in some varieties, and of a binary phonation contrast in others (Suwilai 1999, 2001, Svantesson 1989), where words with proto-voiced initials result in low tone or breathy voice. Proto-voiceless initials are reflected in high tone or modal voice.

In exploring the development of tone, Matisoff (1973), the first to use the term “tonogenesis,” bases a term “tense larynx syndrome” opposing a “lax larynx syndrome,” on a combination of particular features. Tense larynx features include high pitch or rising contour, final glottal stop, voicelessness, creaky voice, and reduced supraglottal cavity indicating a raised larynx. Lax larynx features comprise low pitch or falling contour, final glottal fricative, voicing, breathiness, and increased supraglottal cavity, indicating a lowered larynx (Matisoff 1973). Initial voicing distinctions tend to affect the actual pitch of the following vowels, and final consonants types appear to cause either rising or falling pitch contours. While these microprosodic effects are universal, Matisoff suggested they only produce tone in monosyllabic languages. This is a feasible explanation due to the tightly structured nature of the syllable in these languages, where the different parts of the syllable closely affect each other. Accordingly, Thurgood (2007) emphasizes laryngeal over segmental configuration in Vietnamese tonogenesis and argues that it is not directly the loss of onset voicing...
distinctions that leads to tonogenesis, but an intermediate stage of suprasegmental distinctions including phonation and pitch. The resultant pitches correspond to consonant features rather than to specific consonants, suggesting that it is the laryngeal configuration driving tonogenesis. He similarly links the development of tones not to just final stops but the accompanying glottal closure, since final voiceless stops in Southeast Asian languages are frequently glottalized. Therefore it is the accompanying laryngeal features of both that result in pitch distinctions. Since initial voiced sonorants do not seem to affect tone and phonation in the same way as voiced stops, the manner of articulation and accompanying aerodynamic properties rather than just the presence or absence of vocal fold vibration appear to have an impact on the development of contrastive pitch (Thurgood 2007). Phonetic explanations of tonogenesis support both the development of low tone from voiced initial plosives, and contours arising from final glottal stops and fricatives (Hombert et al. 1979, Henderson 1982).

The results of a shift from a former initial consonant voicing contrast to either phonation, tone, or a vowel split (Huffman 1976, Suwilai 1999, 2001, Thurgood 2007, Abramson 2004) in Austrasian languages is commonly referred to as register. This has also been observed in the Austronesian Chamic languages following their long contact with Austrasian (Thurgood 1996). A fourth and less well-known possible reflex of the Austrasian initial consonant voicing contrast is the development of contrastive aspiration found in the Angkuic sub-branch. These languages are also marked by retention of the proto-Austrasian distinction between initial *s and *h (Diffloth 1977, Svantesson 1988, 1989, 1991). As seen in Table 1, the former initial consonant voicing distinction is retained as an aspiration contrast for the Angkuic languages Muak Sa-aak, Hu, and Mok. Another Palaungic language, Lamet, reflects this contrast through phonation. Note that Lamet still displays the proto-Palaungic length distinction which led to the development of tone in Hu and U, as will be discussed later in depth. Accent marks denote tone in Muak Sa-aak, Hu and U but voice quality in Lamet.

### Table 1: Reflexes of former initial voicing distinction in five Palaungic languages (based on Hall 2010, Svantesson 1988, 1991)

<table>
<thead>
<tr>
<th>Muak Sa-aak¹</th>
<th>Hu</th>
<th>U</th>
<th>Mok</th>
<th>Lamet</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>pôl</td>
<td>pó</td>
<td>sópɔː</td>
<td>pô'r</td>
<td>'evening’</td>
<td></td>
</tr>
<tr>
<td>pʰɔ́n</td>
<td>phìn</td>
<td>phɔt</td>
<td>phɔn</td>
<td>'woman’</td>
<td></td>
</tr>
<tr>
<td>p.tʰàːk</td>
<td>phltàk</td>
<td>?atàːk²</td>
<td>pltà:k</td>
<td>'palm of hand’</td>
<td></td>
</tr>
<tr>
<td>tʰàːk</td>
<td>nthàk</td>
<td>nthǎʕ</td>
<td>thǎ:k</td>
<td>‘tongue’</td>
<td></td>
</tr>
<tr>
<td>kâːŋ</td>
<td>kàŋ</td>
<td>kàːŋ³</td>
<td>kàŋ</td>
<td>'house’</td>
<td></td>
</tr>
<tr>
<td>kʰɛ̂ŋ</td>
<td>kɛ̂ŋ</td>
<td>kə-kaːŋ</td>
<td>kəŋ</td>
<td>‘tooth’</td>
<td></td>
</tr>
</tbody>
</table>

¹ For ease of comparison, tones are marked with accents in this chart; elsewhere they are marked with numbers.
² /ʔ/ symbolizes a pharyngeal approximant rather than a fricative; it denotes the reflex of */-k/.
³ /ã/ symbolizes a nasalized vowel; it denotes the reflex of */-ŋ/.

If a former voicing distinction had been the driver of registrogenesis in Angkuic, the initial voiced and voiceless consonants in languages like Muak Sa-aak, U, Hu and Mok should have merged, and tone or phonation would contrast instead. Since the proto-voicing distinction led to aspiration contrast in Angkuic languages, tone must therefore be linked to a different mechanism, namely the loss of vowel length contrast attested for Hu and U. Tonal development in U is complex because it also involves consonant types, but Hu high and low tones directly correspond to historical vowel length, with low tone corresponding to historically long vowels, and high tone corresponding to historically short vowels (Svantesson 1988, 1991). Only the Angkuic languages which lack contrastive vowel length developed a pitch contrast, while the non-tonal language Mok retains vowel length contrast. Muak Sa-aak does not follow either pattern; it shares the Angkuic aspiration contrast seen in Hu, U, and Mok, but it developed tone like Hu and U while retaining contrastive vowel length like non-tonal Mok. The retention of both long and short vowels in Muak Sa-aak therefore results in a doubled vowel inventory of eighteen vowels compared to the other tonal Angkuic languages Hu and U with only nine vowels (Svantesson 1991, 1988). This phenomenon of vowel length retention in a tonal Angkuic language contradicts Svantesson’s proposed tonogenetic mechanism of vowel
length contrast turning into tonal contrast in Angkuic (1988, 1991). Other mechanisms for tonogenesis in Muak Sa-aak must therefore be explored.

A further puzzling feature of Muak Sa-aak is that its vowel length contrast is complete, even though length distinction for the high vowels /i, u/ appears to have been lost in proto-Angkuic (Svantesson 1988), because high vowels in both Hu and U have the same tone regardless of the historic vowel length. The non-tonal Angkuic language Mok also retains contrastive vowel length only in non-high vowels, and despite the development of tone, Muak Sa-aak appears to be more conservative in this respect. It may be possible that Muak Sa-aak represents another Angkuic subgroup: the development of tone cannot be linked to loss of vowel length contrast, and its fully retained vowel length contrast makes Muak Sa-aak even more conservative in this respect than the non-tonal Mok, with its reduced vowel length contrast. While this hypothesis cannot be explored in depth due to lack of data from related languages, this paper focuses on the Muak Sa-aak tonal system and its relationship to syllable structure and other possible mechanisms involved in the development of tone. Following an overview of the segmental phonology an analysis of tone and its relationship to syllable structure will be presented. This will reveal that tonogenesis appears to be influenced by final consonants and syllable structure, similarly to U, as well as to vowel length as reported for U and Hu. The resulting conclusions regarding tonogenesis and a summary will be given in the final part.

2. Muak Sa-aak phonology
Muak Sa-aak has 21 consonants and 18 vowels (Hall 2010). There are mono-and sesquisyllabic words and multi-syllabic compounds. Full-syllable onsets are comprised of single consonants and clusters formed by voiceless bilabial and velar stops followed by the rhotic or the labiovelar approximant /pr, kr, pʰr, kʰr, pw, kw, pʰw, kʰw/. Codas are limited to unreleased voiceless stops /p, t, k, /, nasals /m, n, ɲ, ŋ/, and the approximants /w, j, l/. As an isolating tone language, Muak Sa-aak does not show inflectional morphology, and has a limited number of derivational prefixes, which are realized as minor syllables with neutralized vowel contrast. Minor syllable initial consonants are limited to /p, t, k, pʰ, kʰ, m, s/ and the clusters / pʰr, kʰr/. Since there appears to be a link between tonal development and syllable structure, this paper will distinguish between smooth syllables, comprised of open and sonorant-final syllables, and checked syllables, referring to stop-final syllables.

The 21 consonant phonemes include four aspirated and four unaspirated voiceless stops, with voicing contrast for the bilabial and alveolar place of articulation, four nasals, three fricatives and four approximants.

<table>
<thead>
<tr>
<th>pʰ p b</th>
<th>tʰ t d</th>
<th>cʰ c</th>
<th>kʰ k</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>n</td>
<td>ɲ</td>
<td>η</td>
</tr>
<tr>
<td>f</td>
<td>s</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>w</td>
<td>r</td>
<td>l</td>
<td>j</td>
</tr>
</tbody>
</table>

Table 2: Muak Sa-aak consonant phonemes

Since Muak S-aak has developed an aspiration contrast from the proto-voicing contrast, the bilabial and alveolar voiced stops should not exist. Many of these words appear to be loans from Tai Lue and their presence may be due to language contact.

The 18 vowels include 16 monophthongs and two diphthongs. Vowel length is contrastive for monophthongs. Diphthongs, found only in closed syllables, do not occur in every dialect. In Wan Fai Muak Sa-aak they appear to have replaced the long open front and back monophthongs /ɛː, ɔː/ found in other Muak Sa-aak varieties that lack diphthongs. In the Wan Fai variety these long open monophthongs rarely occur and are allophones of the diphthongs in open syllables.

| i ɨː | u uː | u uː |
| e ɛː | ɤ ɤː | o oː |
| ɛ ia | a aː | ə ua |

Table 3: Muak Sa-aak vowel phonemes as spoken in the Wan Fai variety
A feature relating to syllable structure which will be further discussed below is that final sonorants are significantly lengthened following short vowels, such that regardless of vowel length, all sonorant-final syllables are phonetically long. Therefore, in this analysis, “long syllable” refers both to syllables containing a long vowel, with or without sonorant codas, and also to sonorant-final syllables with short vowels.

### 2.1 Tone
Tone in Muak Sa-aak does not seem to have a high functional load, as there are not many true minimal pairs found in the data. Only main syllables display tonal contrast. The four pitches may be grouped into three phonemic tones: a low level Tone 1, a constricted Tone 2 with high and high falling alltones, and a high-falling Tone 3. The term constricted follows Bradley’s usage for stop final or laryngealized syllables (1977), comprising both creaky phonation and final glottal closure as described below. Not all syllable types occur with all three tones; pitch and phonation type is nearly predictable based upon syllable structure. It is smooth syllables carrying all three tones that require interpretation as a tone language.

In Muak Sa-aak, phonation is an accompanying laryngeal feature of tone, especially in words with long syllables, and shows a high degree of both intra- and interspeaker variation. Low Tone 1 has accompanying stiff voice. Constricted Tone 2 is realized with modal voice in short syllables and creaky voice in long syllables. Both falling Tone 3 and the long allotone of Tone 2 share the same high-falling pitch and are distinguished only by phonation: Tone 3 has modal voice, whereas the long allotone of Tone 2 is creaky with final glottal closure. For the short high-pitch allotone of Tone 2, constriction is realized with either stop finals or a phonetic glottal stop following short vowels in open syllables. This glottal stop appears to be a non-contrastive phonetic feature since it does not occur as a final in any other environment. Examples for tone are shown in Table 4.

| Syllable type | Smooth | Checked |
|---------------|--------|
| Tone          | Phonetic realization | sonorant-final long vowel | sonorant-final short vowel | open long | open short | long | short |
| 1 low, stiff  | raːŋ¹ [rəːŋ] | abandoned’ | ray² [rəŋ] | ‘rich’ | ciː¹ [ciː] | ‘sap’ | kʰaːp¹ [kʰəːp] | ‘chin’ |
| 2 high modal (short) | raːŋ² [rəŋ] | ‘fallow field’ | ci² [ciʔ] | ‘do’ | kʰap² [kʰap] | ‘enough’ |
| 3 high-falling, modal | raːŋ² [rəŋ] | ‘separate’ | ci² [ciʔ] | ‘point’ |

**Table 4:** Minimal sets for Muak Sa-aak tone

The low tone marked as 1 occurs only in long syllables, with either long vowels or sonorant finals. Nasal finals are uncommon and the lateral approximant final is rare; these sonorants prefer the high-falling modal Tone 3. The palatal nasal final does not occur with this tone at all. Low Tone 1 is realized with stiff voice, a tight, tense phonation type which is in between modal and creaky voice⁴; the degree of tenseness varies. Examples for Tone 1 are tʰaːk¹ ‘tongue’, t.lɤː¹ ‘lizard’, cʰaːj¹ ‘sky’, liː¹ ‘come out’, rɤːm¹ ‘fade’.

Constricted tone 2 occurs on all syllable types except long checked. It has two alltones in complementary distribution: high pitch on short syllables (non-sonorant final), and high falling pitch with creaky phonation on long syllables, which are rare and tend to be loans from Tai Lue, the main Muak Sa-aak contact language (see section 5.2 for further discussion). In smooth syllables this tone is accompanied by final glottal closure. Long vowels with constricted Tone 2 are slightly shorter than long vowels with low

⁴ See Ladefoged and Maddieson (1996: 48-50) for further discussion of these voice quality types.

Modal high-falling Tone 3 occurs only on long smooth syllables. The final palatal nasal /ɲ/ is restricted to this tone, which is also preferred by final /l/. Examples for falling Tone 3 are kʰaːj³ ‘eat’, t.poːl³ ‘night’, p.sɤɲ³ ‘snake’, and tʰuː³ ‘apply’.

2.2 Correlation of syllable structure and tone

To summarize the above discussion of Muak Sa-aak tone, only smooth syllables display full tonal contrast. Low Tone 1 is limited to long smooth and checked syllables; falling Tone 3 occurs only with long smooth syllables. Constricted Tone 2 occurs with every syllable type and syllable length, except long checked syllables. For short open and checked syllables and for long checked syllables, pitch and phonation are predictable. These are clear distributional restrictions linked to syllable structure; the motivating factors appear to be syllable length and coda, as seen in Table 5. Under “Syllable type”, P denotes plosives, S denotes sonorants.

<table>
<thead>
<tr>
<th>Syllable type</th>
<th>Tone 1 Low stiff</th>
<th>Constricted Tone 2</th>
<th>Tone 3 High-falling modal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High modal</td>
<td>High-falling creaky</td>
</tr>
<tr>
<td>Short open (V)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short checked (VP)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long checked (VVP)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long smooth (VV, VS, VVS)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 5: Tones and allotones by syllable type

It is tempting to interpret the table above as Muak Sa-aak contrasting modal vs. constricted phonation, accompanied by high falling pitch in long smooth syllables; modal voice accompanied by high pitch in short syllables, and constricted stiff voice accompanied by low pitch in all types of long syllables. The problem here is that long smooth syllables have two different constricted realizations, one with low pitch and one with high-falling pitch. The next possible solution would be that Muak Sa-aak suprasegmentals might form a mixed, possibly transitional system, moving from phonation to tonal contrast with register contrast in long smooth syllables, and tonal contrast for all other syllables (cf Suwilai 1999, 2001, Huffman 1976). The fact that the high and low tone would be in complementary distribution, and smooth syllables have three laryngeal settings, namely low stiff or tense pitch, high or high-falling creaky pitch depending on syllable length, and high-falling modal pitch, favors the interpretation as a tonal system. Examples for the interaction between tone and syllable structure are seen in Table 6 below.
For previously described Angkuic languages, U and Hu with tonal contrast have lost phonemic vowel length, while Mok that has not developed tone retains vowel-length contrast. Tone contrast in Angkuic is therefore believed to have developed at least in part from an earlier vowel length contrast, which has subsequently been lost (Svantesson 1988, 1991). As a tonal Angkuic language, Muak Sa-aak consequently would not be expected to retain its vowel length contrast. Angkuic languages do not display phonation contrast, either, yet with the exception of a tonal contrast in long smooth syllables, Muak Sa-aak could be interpreted as having two contrastive voice qualities. Therefore, since Muak Sa-aak does not seem to fit the pattern described for other tonal Angkuic languages, the following section will investigate possible tonogenetic processes.

3. Angkuic tonogenesis

As argued before, it is unlikely for an Angkuic language to undergo tonogenesis involving loss of an initial voicing contrast, because instead of tone, they developed contrastive aspiration from an older voicing contrast (Svantesson 1988). As an Angkuic language, Muak Sa-aak also has undergone this shift towards aspiration of initials (Hall 2010), so that tonal distinctions would be expected to have developed from loss of contrastive vowel length as seen in Hu, or from a combination of vowel length contrast and syllable type displayed by U, for which accompanying laryngeal features of tone have been recorded (Svantesson 1991, 1988). However, unlike U and Hu, Muak Sa-aak preserves a vowel length contrast. As described below, the development of three tones in Muak Sa-aak appears to be linked to two other factors: loss of certain final consonants, as reported for U (Svantesson 1988), and possibly borrowing from Tai Lue (cf. Thurgood 1996).

Svantesson (1988) compared his U data to Lamet to investigate the loss of vowel length contrast in U, since Lamet, unlike many other Palaungic languages, retains the vowel length distinction. Next to vowel length, final consonant type influences tonogenesis in U, with the key factor being sonorant versus non-sonorant final. In order to find any similar patterns, these data from Muak Sa-aak are being compared with Svantesson’s Lamet data (1988).

Muak Sa-aak tonogenesis seems to be only partially affected by vowel length because unlike Hu or U, most sonorant-final words have retained their vowel length contrast and carry the same tone, falling Tone 3, regardless of vowel length. Table 7 indicates that vowel length in the Muak Sa-aak words with falling Tone 3 corresponds with Lamet vowel length. The respective Hu words display no length contrast but show two different tones instead; the high tone corresponds to the short vowels seen in Muak Sa-aak and Lamet; the low tone corresponds to the long vowels in Muak Sa-aak and Lamet. In U the situation is more complicated as there are more tones, and factors other than historical vowel length are also involved. Note that /ua/ in Muak Sa-aak is a long vowel, and that diacritics in Lamet indicate register.

### Table 6: Examples by syllable type

<table>
<thead>
<tr>
<th>Tone 1 (low)</th>
<th>Tone 2 (high constricted)</th>
<th>Tone 3 (high falling)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVS</td>
<td>pɤl¹ ‘fall’</td>
<td>kan² ‘be defeated’*</td>
</tr>
<tr>
<td>CCVS</td>
<td>kʰɯː³ kran¹ ‘lazy’</td>
<td>prɛŋ² ‘head’</td>
</tr>
<tr>
<td>CVVS</td>
<td>ks:n¹ ‘before’*</td>
<td>kʰuː³ ‘language’</td>
</tr>
<tr>
<td>CCVVS</td>
<td>kʳ:n¹ ‘lying down’</td>
<td>kʰuː³ ‘language’</td>
</tr>
<tr>
<td>CVP</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>CCVP</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>CVVP</td>
<td>kaː:t¹ ‘fasten’</td>
<td>--</td>
</tr>
<tr>
<td>CCVVP</td>
<td>t.pɾToWorld ‘swallow’</td>
<td>--</td>
</tr>
<tr>
<td>CVV</td>
<td>ke² ‘they (3PL)’</td>
<td>--</td>
</tr>
<tr>
<td>CCV</td>
<td>kra² ‘stir’</td>
<td>--</td>
</tr>
<tr>
<td>CVVV</td>
<td>keː¹ ‘pour’</td>
<td>pɔː¹ kaː² ‘trader’</td>
</tr>
<tr>
<td>CCVV</td>
<td>praː¹ ‘split open’</td>
<td>kraː³ ‘pack (v)’</td>
</tr>
</tbody>
</table>

For previously described Angkuic languages, U and Hu with tonal contrast have lost phonemic vowel length, while Mok that has not developed tone retains vowel-length contrast. Tone contrast in Angkuic is therefore believed to have developed at least in part from an earlier vowel length contrast, which has subsequently been lost (Svantesson 1988, 1991). As a tonal Angkuic language, Muak Sa-aak consequently would not be expected to retain its vowel length contrast. Angkuic languages do not display phonation contrast, either, yet with the exception of a tonal contrast in long smooth syllables, Muak Sa-aak could be interpreted as having two contrastive voice qualities. Therefore, since Muak Sa-aak does not seem to fit the pattern described for other tonal Angkuic languages, the following section will investigate possible tonogenetic processes.

3. Angkuic tonogenesis

As argued before, it is unlikely for an Angkuic language to undergo tonogenesis involving loss of an initial voicing contrast, because instead of tone, they developed contrastive aspiration from an older voicing contrast (Svantesson 1988). As an Angkuic language, Muak Sa-aak also has undergone this shift towards aspiration of initials (Hall 2010), so that tonal distinctions would be expected to have developed from loss of contrastive vowel length as seen in Hu, or from a combination of vowel length contrast and syllable type displayed by U, for which accompanying laryngeal features of tone have been recorded (Svantesson 1991, 1988). However, unlike U and Hu, Muak Sa-aak preserves a vowel length contrast. As described below, the development of three tones in Muak Sa-aak appears to be linked to two other factors: loss of certain final consonants, as reported for U (Svantesson 1988), and possibly borrowing from Tai Lue (cf. Thurgood 1996).

Svantesson (1988) compared his U data to Lamet to investigate the loss of vowel length contrast in U, since Lamet, unlike many other Palaungic languages, retains the vowel length distinction. Next to vowel length, final consonant type influences tonogenesis in U, with the key factor being sonorant versus non-sonorant final. In order to find any similar patterns, these data from Muak Sa-aak are being compared with Svantesson’s Lamet data (1988).

Muak Sa-aak tonogenesis seems to be only partially affected by vowel length because unlike Hu or U, most sonorant-final words have retained their vowel length contrast and carry the same tone, falling Tone 3, regardless of vowel length. Table 7 indicates that vowel length in the Muak Sa-aak words with falling Tone 3 corresponds with Lamet vowel length. The respective Hu words display no length contrast but show two different tones instead; the high tone corresponds to the short vowels seen in Muak Sa-aak and Lamet; the low tone corresponds to the long vowels in Muak Sa-aak and Lamet. In U the situation is more complicated as there are more tones, and factors other than historical vowel length are also involved. Note that /ua/ in Muak Sa-aak is a long vowel, and that diacritics in Lamet indicate register.
Table 7: Vowel length: Muak Sa-aak, Lamet, Hu
(Lamet, Hu and U from Svantesson 1988, 1991)

<table>
<thead>
<tr>
<th></th>
<th>Muak Sa-aak</th>
<th>Lamet (Lametic)</th>
<th>Hu (Angkuic)</th>
<th>U (Angkuic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘die’</td>
<td>jam³</td>
<td>jám</td>
<td>jàm</td>
<td>jàp</td>
</tr>
<tr>
<td>‘star’</td>
<td>s.mɤɲ³</td>
<td>krɱɛɲ</td>
<td>mɛɲ</td>
<td>samɛt</td>
</tr>
<tr>
<td>‘heavy’</td>
<td>k.ɛn³</td>
<td>kcɛn</td>
<td>ncɛn</td>
<td></td>
</tr>
<tr>
<td>‘cry’</td>
<td>jaːm³</td>
<td>jàːm</td>
<td>jàːm</td>
<td>jàːm</td>
</tr>
<tr>
<td>‘white’</td>
<td>s.pual³</td>
<td>pàːɲ</td>
<td>pàɲ</td>
<td>pàn</td>
</tr>
<tr>
<td>‘water’</td>
<td>ʔoːm³</td>
<td>ʔóːm</td>
<td>ʔɔ̀m</td>
<td></td>
</tr>
</tbody>
</table>

Although the majority of Muak Sa-aak sonorant-final words carry falling Tone 3, some do carry either low Tone 1 or the falling allotone of constricted Tone 2. Almost none of these words in the data set could be matched up with Lamet cognates, where vowel length is still contrastive, in Svantesson’s list. When comparing Muak Sa-aak with Tai Lue, however, many Muak Sa-aak constricted Tone 2 words with sonorant finals appear to be Tai Lue cognates (Tai Lue from Hanna 2012). Examples are: Muak Sa-aak ruan² versus Tai Lue hɔn⁶ ‘hot’; Muak Sa-aak raːj² versus Tai Lue haːj⁶ ‘bad’; Muak Sa-aak fuan² versus Tai Lue fɔn⁶ ‘dance’; Muak Sa-aak haːm² versus Tai Lue haam³ ‘forbid’. Note that tones 3 and 6 in Tai Lue are glottalized tones, directly correlating with Muak Sa-aak constricted Tone 2 here.

Short open Muak Sa-aak syllables with the short allotone of Tone 2, frequently realized phonetically with a glottal stop, correlate with Lamet syllables with final glottal stops, whether the Lamet vowel is long or short. A similar phenomenon is seen in the Angkuic language Hu, where the tone contrast appears to be neutralized before the glottal stop finals; only high tone is found in this environment (Svantesson 1991). Therefore it appears that in this environment, the vowel length contrast in Muak Sa-aak has been lost. It is not reflected in a tone contrast, either, resulting in a neutralization of an earlier length contrast. Examples are shown in Table 8 below.

Table 8: Reflexes of glottal stop finals and resulting tones in Muak Sa-aak
(Lamet and U taken from Svantesson 1988)

<table>
<thead>
<tr>
<th></th>
<th>Muak Sa-aak</th>
<th>Lamet (Lametic)</th>
<th>U (Angkuic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘rope, string’</td>
<td>p.cʰi²</td>
<td>plsíʔ</td>
<td>sí</td>
</tr>
<tr>
<td>‘dog’</td>
<td>cʰɔ²</td>
<td>sɔ̀</td>
<td>sò</td>
</tr>
<tr>
<td>‘wind’</td>
<td>s.ma²</td>
<td>ʔmáːʔ</td>
<td>samà</td>
</tr>
<tr>
<td>‘fish’</td>
<td>kʰa²</td>
<td>káːʔ</td>
<td>khà</td>
</tr>
</tbody>
</table>

Cognates to Muak Sa-aak long open syllables with the falling allotone of constricted Tone 2 do not occur in Svantesson’s Lamet vocabulary. As with the sonorant-final words carrying this tone, many appear to be borrowings from Tai Lue. It is hypothesized that the development of this allotone may be an outcome of language contact. Since these two finals do not occur in Tai Lue, words ending in those finals are unlikely to be loanwords. Syllables with nasal finals occur primarily with Tone 3. If they carry Tone 2, they tend to be Tai Lue borrowings. Examples: Muak Sa-aak naː² naːj⁴ versus Tai Lue naː³ ‘face’; Muak Sa-aak kʰaː² versus Tai Lue kʰaː⁴ ‘slave’; Muak Sa-aak t.ɲaː² versus Tai Lue ɲaː⁴ ‘sesame seed’; Muak Sa-aak ɲuː² versus Tai Lue ɲuː⁶ ‘push’ (Tai Lue from Hanna 2012).

The distribution of the final stops /p, t, c, k/ differs from that of the glottal stop in Muak Sa-aak; the final stops may be found with tone 1 or the high allotone of Tone 2, but the glottal stop occurs phonetically only with Tone 2, either the high or the falling allotone. This suggests that the glottal stop should be interpreted not as a phonemic segment but as a tone-related laryngeal feature of Tone 2. For short vowels,
final stops motivate the high allitone of constricted Tone 2 but long vowels with stop finals result in low Tone 1 where the glottal stop cannot occur. Low Tone 1 words have no short vowels occurring with stop finals; nor are there any Tone 2 words occurring with long vowel and stop finals. Muak Sa-aak vowel length fully corresponds with the Lamet data in this environment, so the development of tone may have been motivated by the vowel length contrast without neutralizing it. See Table 9 for comparison of the Muak Sa-aak to the U and Lamet data.

<table>
<thead>
<tr>
<th></th>
<th>Muak Sa-aak</th>
<th>Lamet</th>
<th>U (Angkuic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘rope, string’</td>
<td>p.cʰi²</td>
<td>plsíʔ</td>
<td>.si</td>
</tr>
<tr>
<td>‘dog’</td>
<td>cʰɔ²</td>
<td>s.ɔ́ʔ</td>
<td>s.ɔ</td>
</tr>
<tr>
<td>‘wind’</td>
<td>s.ma²</td>
<td>ʔmá.ʔ</td>
<td>samà</td>
</tr>
<tr>
<td>‘fish’</td>
<td>kʰa²</td>
<td>ká.ʔ</td>
<td>khà</td>
</tr>
<tr>
<td>‘bite’</td>
<td>kak²</td>
<td>kāk</td>
<td>kāʔ²</td>
</tr>
<tr>
<td>‘hair’</td>
<td>suk²</td>
<td>khúk</td>
<td>súʕ</td>
</tr>
<tr>
<td>‘pig’</td>
<td>le:k¹</td>
<td>li:k</td>
<td>liʔ</td>
</tr>
<tr>
<td>‘bow, crossbow’</td>
<td>ʔaːk¹</td>
<td>ʔáːk</td>
<td>ʔáʔ</td>
</tr>
</tbody>
</table>

Table 9: Stop finals and resulting tones in Muak Sa-aak (Lamet and U from Svantesson 1988)

There are few Muak Sa-aak open syllables occurring with Tone 1; these words correlate to Lamet data with final /-h/ or /-s/. It is unclear at what point in time these finals were lost. Table 10 shows some of these words in comparison with Lamet and U from Svantesson (1988). U, like Muak Sa-aak, has lost the final /-h/ and /-s/.

<table>
<thead>
<tr>
<th></th>
<th>Muak Sa-aak</th>
<th>Lamet</th>
<th>U (Angkuic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘wide’</td>
<td>waː¹</td>
<td>wàh</td>
<td>vâ</td>
</tr>
<tr>
<td>‘charcoal’</td>
<td>cʰeː¹</td>
<td>krsás</td>
<td>ʔé</td>
</tr>
<tr>
<td>‘bear’</td>
<td>kʰreː¹</td>
<td>kríːs</td>
<td>ʔχí</td>
</tr>
<tr>
<td>‘barking deer’</td>
<td>pʰoːj³</td>
<td>póːs</td>
<td>pó³</td>
</tr>
<tr>
<td><strong>However:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘begin’</td>
<td>kaw²</td>
<td>kɔːh</td>
<td>kɔ</td>
</tr>
</tbody>
</table>

Table 10: Tone 1 words in Muak Sa-aak which may come from proto *-h or *-s finals (Lamet and U from Svantesson 1988)

In the last item, the Muak Sa-aak word has Tone 2 but the other words with final Lamet -s or -h occur with a low tone. Drawing definite conclusions in this area would require more data, and the loss of final /-h/ and /-s/ possibly having an impact on tonal development is an area for further study.

4. Summary

As discussed in this paper, even though Muak Sa-aak preserved its vowel length distinction, it developed three tones with accompanying phonatory features. For example, minimal pairs may be found for Tone 2 versus Tone 3 that differ only in phonation. The tonal system may almost be analyzed as having only two tones or registers, except for the long smooth syllables occurring with all three tones that make the interpretation as a three-tone language necessary.

In summary, sonorant-final Muak Sa-aak syllables have retained their vowel length contrast, and most take Tone 3. Of those that take a different tone, many appear to be borrowed words. Most open syllables

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Svantesson describes /ʕ/ as a voiced pharyngeal approximant. It is the reflex of historical final *k (1988).

These are the only items for which data on both Muak Sa-aak and Lamet were available.
likewise take Tone 3; those that take Tone 2 include many apparent borrowed words from Tai Lue, and there is some evidence that Tone 1 open syllables may result in words that historically had final /-s, -h/. For stop-final syllables, historically long vowels result in Tone 1, and historically short vowels result in the high allotone of constricted Tone 2; this vowel length contrast remains but has been doubled in a tone contrast. For historical glottal stop final syllables, neutralization appears to have taken place, such that whether the vowel was historically short or long, it is now short; these syllables all take the short allotone of Tone 2. The occurrence of the three tones is closely correlated to syllable structure, particularly final consonant type and vowel length. Tone is partially but not fully predictable based upon syllable structure. The clear restrictions on the occurrence of tones depending upon syllable type suggest that syllable structure had an impact on tonogenesis. Borrowing may have had an effect on the development of some of the tones, in particular the low stiff tone and the falling allotone of constricted Tone 2.

While previous studies of Angkuic languages have emphasized that tonogenesis resulted primarily from a loss of phonemic vowel length, Muak Sa-aak tonogenesis seems to be the result of a combination of the effects of vowel length and syllable codas. Vowel length contrast appears to contribute to tonogenesis without being replaced. Final consonant types involved in tonogenesis are sonorants and obstruents.

The distribution of Muak Sa-aak tones suggests that overall syllable structure is the primary motivating factor for tonogenesis in Angkuic. One remaining question is how tone and vowel length will continue to develop.

Another area for further research is the place of Muak Sa-aak within the Angkuic subgroup of the Palaungic languages. The presence or absence of tone and the retention or loss of the proto vowel length contrast in the various Angkuic languages might be used for subgrouping, as shown in Figure 1. Muak Sa-aak, like some Angkuic languages, has developed tone, but unlike the other tonal Angkuic languages, it has retained a full vowel length contrast. It has also retained a more complete vowel length contrast than Mok, which has been documented as retaining length contrast but which has not developed tone.

Figure 1: Angkuic languages by vowel length and tone

Suprasegmental features in Muak Sa-aak include pitch, voice quality, and vowel length. Within the Angkuic context of languages like U, Hu, and Mok, where tone and vowel length do not co-occur, this is evidence of the need for further studies of the relationships among languages of this branch. More data from other Angkuic languages is needed to provide a clearer picture.
References


Hopple, Paulette. 2007. Notes re: the visit of Plang from Mong Yawng. ms. (Unpublished)


PROTO-KUKI-CHIN INITIALS
ACCORDING TO TORU OHNO AND KENNETH VANBIK

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Abstract
Relying on the legacy of Ohno (1965), several scholars have made more recent forays into the reconstruction of Kuki-Chin initials (Khoi 2001, VanBik 2009, Button 2011). A comparison of Ohno’s and VanBik’s systems permits an overview of progress made so far. VanBik accepts all of Ohno’s correspondences, adding a few of his own. Mizo provides a convenient language to contrast their proposals in detail. As the source of Mizo *f-, Löffler’s *dz- has advantages over Ohno’s *ź- [ʒ-] and VanBik’s *θ-. VanBik’s is right to distinguish *s- and *sʰ, although the phonetic value of *sʰ is not clear. The evidence for his *pr- and *phr- is unsatisfactory. In light of their importance, I propose to name two sound laws (*kr, *kl > ṭ- [ʈ], tl- ‘Ohno’s law’ and *r > g- ‘Shafer’s law’). Considering proposals not known to VanBik, there is good evidence for Peterson’s *yh- [j̥] (2000), but little for Button’s (2011) labio-velars. A number of splits, especially of *r-, require further attention.

Keywords: Kuki-Chin, Trans-Himalayan, historical phonology, reconstruction
ISO 639-3 codes: lus, dao, mwq, mya, bod, csh, ctd, cnk, cnw, cmr, cnh

1 Introduction
The In the opening lines of his study of Proto-Kuki-Chin initials Toru Ohno writes that “所謂「クキ・チン語諸方言」は、チベット・ビルマ系諸言語の比較研究を進めるに当り、重要な資料を提供すると考えられるにも拘らず、その研究は未だ充分とは言い難い [although the so-called ‘Kuki-Chin languages’ may be thought to furnish important materials for the advancement of comparative research on the Trans-Himalayan language family, it is difficult to say that research on them is as yet sufficient]” (1965: 8). Despite Ohno’s own efforts, the remaining decades of the 20th century failed to witness an amelioration in the paucity of research on comparative Kuki-Chin. This situation changed in the opening decade of the 21st century, with the completion of an M.A. thesis (Khoi 2001), and two PhD dissertations (VanBik 2009, Button 2011) treating comparative Kuki-Chin reconstruction. Because VanBik’s study is of wider scope and incorporates evidence from a larger range of languages than either Khoi (2001) or Button (2011), a comparison of Ohno’s and VanBik’s reconstructions, with due reference to the works of others, provides a convenient assessment of the status quaestionis.
2 Toru Ohno
Ohno (1965) bases his study of Proto-Kuki-Chin initials on the following eight languages: Tedim, Ngawn, Hakha Lai, Falam Lai, Anal, Zotung, Khumi-O,4 Chinbok. He provides a detailed bibliography of the primary sources that formed the basis for his study. Because these resources are not widely known or easily available, this list is reproduced here as an appendix.

In those cases when all languages preserve the inherited value of an initial the segment of proto-Kuki-Chin is uncontroversial (k, kh, ŋ, t, th, d, n, p, ph, b, m, l, h, ?). In addition to these obvious retentions Ohno identifies the following sound changes:

1. *hŋ- > ŋ- in Tedim and Ngawn
2. *hn- > n- in Tedim and Ngawn
3. *hm- > m- in Tedim and Ngawn
4. *hl- > l- in Tedim and Ngawn
5. *ts-6 > t- in Tedim and Anal, tsh- in Khumi-O
7. *y- [j-] > y- [j-] retained in Khumi-O, z- elsewhere
8. *r- > Tedim g-, Ngawn γ- (~ l-), Chinbok g- (with some complications)
9. *hr- > h- in Tedim, Ngawn, Zotung, Khumi-O
10. *š- [ʃ] > h- in Chinbok, elsewhere s-.

Table 1 presents the Proto-Kuki-Chin initials resulting from these proposals. For changes 1 through 9 at least one of the languages used in Ohno’s study retains the value that he reconstructs for the Ursprache. Hakha Lai is particularly conservative, maintaining hŋ-, hm-, hmr-, ts-, tsh-, r-, hr-, and hl- unchanged.

<table>
<thead>
<tr>
<th>k-</th>
<th>kh-</th>
<th>ŋ-</th>
<th>hŋ-</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-</td>
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<td>d-</td>
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<tr>
<td>p-</td>
<td>ph-</td>
<td>b-</td>
<td>m-</td>
</tr>
<tr>
<td>ts-</td>
<td>tsh-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>w-</td>
<td>y- [j]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>r-</td>
<td>l-</td>
<td>hr-</td>
<td>hl-</td>
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<tr>
<td>š- [ʃ]</td>
<td>ž- [ʒ]</td>
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</tr>
<tr>
<td>h-</td>
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<td>kl-</td>
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</tr>
<tr>
<td>kr-</td>
<td>khr-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4 Because there are disagreements about the developments in Khumi, I note Khumi differently for each author, i.e. Khumi-O (Ohno 1965), Khumi-V (VanBik 2009).
5 Where the outcome in a particular language is not mentioned either it retains the proto-form or the outcome in that languages is not known; the unknown outcomes are: *r- in Khumi-O, *hl- in Khumi-O and Zotung, *tsh- in Zotung, Khumi-O and Chinbok, *kl in Anal and Khumi-O, *khl- in Ngawn, *khr- in Zotung, Khumi-O, and Chinbok.
6 In order to facilitate the comparison of his work to the work of others I have substituted Ohno’s <č> with <ts>. Although this substitution has phonetic implications, to belabor the difference between *č- and *ts- would draw distracting attention to a minor point.
Kenneth VanBik

VanBik’s study relies on eleven languages: Mizo, Hakha Lai, Falam Lai, Tedim, Thado Kuki, Sizang, Mara, Mindat Cho, Daai, Asho, Khumi-V. In addition, on occasion he also gives Paite forms, but does not include Paite in the tables of correspondences; he treats Paite as close to Tedim. The exclusion of any presentation of these twelve languages in turn, together with the existing scholarly literature devoted to each, renders his work cumbersome in non-specialist hands, as does his near total silence regarding primary sources. A perusal of his bibliography allows one to speculate that he relied on the following sources: Mizo (J. H. Lorrain 1940), Mara (R. A. Lorrain 1951), Tedim (Bhaskararao 1976, Henderson 1965), Thado (Hodson 1905, Krishan 1980, Shaw 1929, Thirumalai n.d.), Sizang (Naylor 1925), Daai (Hartmann-So 1985, 1988, 1999), Mindat Cho (Jordan 1969 ms.), Asho (Houghton 1892), Khumi-V (Peterson 2003 ms.), Paite (Kamkhenthang 1972). VanBik is himself a native speaker of Hakha Lai; it is possible that he provides Hakha Lai forms from his own knowledge.

VanBik tacitly accepts all of Ohno’s proposals, in two cases altering the reconstruction: he changes *ź- to *θ- and *ś- to *sʰ-.

1. *hŋ- > ŋ in Tedim, Thado Kuki, Sizang, Mara, Daai, and Khumi-V;  
2. *hn- > n in Tedim, Thado Kuki, Sizang, Daai, and Khumi-V  
3. *hm- > m in Tedim, Thado Kuki, Sizang, Daai, and Khumi-V  
4. *hl- > l in Tedim, Thado Kuki, Sizang, and Khumi-V  
5. *ts- > t in Tedim, Thado Kuki, Sizang, and Khumi-V  
8. *r- > g- in Tedim, Thado Kuki, and Mindat Cho, y- (~ l-) in Sizang, y- in Daai, r- ~ v in Khumi-V  
9. *hr- > h in Tedim, Thado Kuki, Sizang, Asho, and Khumi, x- in Daai, gh- in Mindat Cho  
10. *sʰ-: sʰ- preserved in Daai, hl- in Mindat Cho, s- elsewhere  

VanBik proposes four additional correspondences, together with their concomitant proto-segments, not offered by Ohno.

16. *s- : s- preserved in all languages  
17. *pl- > tl- in Mizo, t- in Tedim, pl- in Mindat Cho, pl- in Asho  

Table 2 presents the Proto-Kuki-Chin initials resulting from these proposals.

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7. Despite the appearance of Ohno (1965) in VanBik’s bibliography, he appears to have made little profit of Ohno’s study, citing it only once with reference to Ohno’s discomfort about a lack of *g- in Proto-Kuki-Chin (VanBik 2009: 62).

8. When the outcome in a particular language is not mentioned either it retains the proto-form or the outcome in that language is not known; the unknown outcomes are: *hn- in Asho, *hl-, *kl-, *kr- , and *khr- in Daai.
Table 2: Proto-Kuki-Chin initials according to VanBik (2009: 59).

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<tr>
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<td>khr-</td>
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</tr>
</tbody>
</table>

4 Comparison of Ohno and VanBik

In addition to the obvious correspondences for which all languages preserve the inherited values (viz. k, kh, η, t, th, d, n, p, ph, b, m, l, h, ?), Ohno and VanBik agree on the reconstructions reflected in correspondences 1-9 (*ηŋ-, *hn-, *hm-, *hl-, *tʰ-, *tsh-, *y- [j], *r-, *hr-) and 12-15 (*kl-, *khl-, *kr-, *khr-). Ohno and VanBik’s presentations of correspondences 10 and 11 are compatible but the two authors suggest different proto-segments; the disagreements pertain to fricatives. Ohno proposes voiceless and voiced palatal fricatives (*ś- [ʃ] and *ź- [ʒ]), whereas VanBik advocates a three term inventory of fricatives identical to that of (a conservative idiolect of) Rangoon Burmese, namely *s- (a new proposal), *θ- (Ohno’s *ź-), and *sʰ- (Ohno’s *ś-). Ohno offers no motivation for his choices. VanBik chooses *sʰ- because Hartmann-So describes the attested reflex in Daai as a “aspirated voiceless alveolar fricative” (VanBik 2009: 186); VanBik also speculates that orthographic *hl- in Mindat Cho may reflect phonetic [sʰ-] (2009: 186). VanBik reconstructs four clusters (*pl-, *phl-, *pr-, and *phr-), which Ohno omits.

5 A close look at Mizo developments

The comparison of the reconstructed proto-Kuki-Chin’s initials proposed by these two authors, does not of itself clarify the history of the Kuki-Chin languages. In cases where Ohno and VanBik disagree either one of the two is mistaken or both are. In those cases where Ohno and VanBik agree, either both are correct or both are mistaken. The historical phonology of Mizo, the best studied and one of the phonologically more conservative languages of the family, provides a convenient window through which to explore the agreements and disagreements between Ohno and VanBik in greater detail, and, in the context of the views of other researchers, to draw some conclusions about those areas of the proto-phonology which are relatively secure, and those areas in need of further exploration.

5.1 The source of Mizo z-

Ohno (1965: 15), VanBik (2009: 271), and Button (2009: 99-101, 2011: 23) reconstruct *y- as the source of Mizo z-. Ohno does not explain his reasoning for reconstructing *y-. At face value the agreement of the overwhelming majority of languages on z- would favor a reconstruction *z-, the fact that Khoi employs (2001: 69). Perhaps it is the coincidence of Khumi y- with y- in languages outside of Kuki-Chin inspires Ohno’s reconstruction. Shafer proposes that Mizo z- corresponds to y- in more distantly related languages, but provides no supporting examples (1940: 310). Benedict affirms the correspondence, comparing Mizo

9 VanBik reconstructs d- and b- rather than d- and b-, because he believes a missing *d is less odd than a missing *g- and because the voiced stops are pronounced as imploed in Daai and Mindat Cho (2009: 64-65). Button rejects this proposal (2011: 23-24).

10 VanBik here paraphrases Hatmann-So table of initial consonants, expanding her use of abbreviations (1985:179).

11 Khoi’s study does not include data from Chinbok (showing hl-), Mindat Cho (showing hl-), or Daai (showing sʰ-); faced with the unanimous testimony of s- he naturally reconstructs correspondence 10 as *s- (2001: 69); similarly, Button does not include languages that would allow for the distinction between VanBik’s *sʰ- versus *s- (2011: 23).
The reconstruction *y- [j] implicitly suggests that all languages showing z- form a subgroup. Peterson recognizes but rejects this implication, suggesting that the change *y > z- originated in the Central Chin languages and spread north through diffusion rather than shared inheritance (2000: 80); he suggests that “in the north [the change is] fairly recent: cf. the pronunciation of Sizang as Si-yāng, Zahao as Yaho form approximately 100 years ago” (2000: 94 note 12). Button sees Peterson’s proposal of diffusion as “supported by the fact that Thado, as the language furthest north, still retains a post-alveolar articulation ʒ- which appears to be slipping towards the alveolar z-” (2011: 26). The recent or ongoing transition in Thado of *y- to z- is further confirmed by Benedict’s claim that Thado is one of the Kuki-Chin languages to “preserve *y” (1972: 33-34) contrasted with VanBik’s report of z- as the outcome of *y- in this language (2009: 280). As yet more evidence of the recent nature of the change from *y- to z-, VanBik (2009: 280) cites Naylor’s comment that in Sizang “these two letters are interchangeable in most words” (1925: 2).

The retention of *y- in Mindat Cho, Asho, Daai, and Khumi, together with the evidence of the change from *y- to z- in Thado and Sizang during attested history, and cognates outside of Kuki-Chin, ensure the correctness of Ohno’s reconstruction *y-.

5.2 The source of Mizo f-

Although the ultimate origin of Mizo f- in the Trans-Himalayan Ursprache has no direct bearing on the origin of this segment in Proto-Kuki-Chin, i.e. the latter could have *θ- or *ź- [ʒ] even if Benedict is correct that the former had *dz-. Nonetheless, because the idea of *dz- as the source of Mizo f- finds its origin in Benedict, his reasons for suggesting *dz- as the ultimate origin of Mizo f- deserve renewed consideration.14

Benedict presents the following comparisons in favor of his reconstruction (1940: 123).

Mizo fāḥ ‘to feed with the mouth’: Bur. ʃə: cāh ‘eat’, Tib. ߊ za < *dza (Schiefner’s law), Ch. ߒ dzoʃ < *dza? (0046u)
Mizo fūal ‘to sag, to hang low’: WBur. ӂ chwai ‘hang’ < OBur. ʃoy, Tib. ߒ hļol, Chi. ߒ dzywe < *djol (0031a)15
Mizo fāwp-I, fāwh-II ‘to kiss, suck’; Bur. ʃʷ cup ‘suck’, Tib. ʃjb < *tsap (0606f) ‘sting and suck (mosquito)’

In his 1940 article Benedict does not remark on his reasons for positing both *dz- and *z- as origins of Mizo f-. However, recourse to his 1972 publication (written in 1942-1943) clarifies the correspondences he has in mind, viz. Trans-Himalayan *z- > Tibetan z-, Burmese s-, Mizo f- and Trans-Himalayan *dz > Tibetan dz-, Burmese c-, Mizo f- (Benedict 1972: 18).17 Not quite in accordance with these correspondences he reconstructs *dza ‘eat’ (Ben.66), *dʒual ‘hang’ (Ben.87), *dʒop ‘suck’ (Ben.69), and *za ‘child’ (Ben.59).

12 Peterson does not provide an authority for these early attestations.
13 Benedict does not specify his source for Thado.
14 In the name clarity and consistency Mizo forms derived from VanBik (2009) replace Benedict’s original Mizo forms and Burmese, Tibetan, and Chinese data appear newly transcribed, expanded, and where appropriate supplied with reconstructions.
16 Benedict (1940: 123) also gives Mizo fāl ‘apart’, cognate to Moshang Naga ɗ-dzāl ‘far’, Kachin tsan ‘be far, distant’ and Garo ɬel-a ‘far’, but VanBik 2009 does not cite this Mizo word. In addition, Benedict compares Mizo far-nu ‘sister’ with Kachin dzan. VanBik mentions Hakha Lai fār ‘sister’ (2009: 16), but does not note its cognates in other Kuki-Chin languages or reconstruct it to Proto-Kuki-Chin.
17 The full correspondences he gives are Trans-Himalayan *z- > Tibetan z-, Kachin z- ~ ʃ-, Burmese s-, Garo s-, Mizo f- and Trans-Himalayan *dz > Tibetan dz-, Kachin dz- ~ ts- ~ ʃ-, Burmese c-, Garo t(h)-, Mizo f-, but he (Benedict
According to Schiefner’s law all cases of Tibetan *z-* originate from *dz* (Hill 2014). Thus, even if a distinction between *z-* and *dz-* in the Trans-Himalayan Ursprache is a correct suggestion, Tibetan evidence does not bear on the question. Consequently, the distinction between Benedict’s *z-* versus *dz* rests almost (cf. note 16) exclusively on Burmese *s-* versus *c-*. The further comparison of Burmese सङ्ग ‘son’ शान्ति ‘daughter’ with the (presumably) distantly related cognates Thangmi *ca* ‘son’ and camāi ‘daughter’ (Turin 2012: 777-779) strengthens the suspicion that these divergent outcomes in Burmese are not of the significance that Benedict ascribes to them. In tacit agreement with this supposition, Löffler (2002: 128-129) and Button (2011: 25) affirm only *dz-, and not also *z-, as the Proto-Kuki-Chin origin for correspondence 11.

More important than the evidence for its origin as *dz* in Trans-Himalayan, there are grounds internal to Kuki-Chin to favor *dz-. Weighing against Ohno’s *ź-, correspondence 11 parallels the correspondences underpinning *ts- and *tsh- (i.e. 5 and 6) much more so than it parallels the correspondence which Ohno reconstructs *š- (i.e. 11). No language offers the same reflex of both *ź- and *š-, but Ngawn, Tedim, Anal, Zoutung, and Khumi-O merge Ohno’s *ź- with *ts- (cf. Table 3).

Substituting *ź* with *dz* has the distributional benefit for the proto-phonology of drawing the affricate series (*dz-, *ts-, *tsh-) into parallel with the labials (*p, *ph, *b) and dentals (*t, *th, *d), but at the cost of withdrawing a voiced partner for *š-.

**Table 3: Correspondences supporting Ohno’s *ź-, *ts-, *tsh-, and *š-.

<table>
<thead>
<tr>
<th>Language</th>
<th>*ź-</th>
<th>*ts-</th>
<th>*tsh-</th>
<th>*š-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mizo</td>
<td>*f-</td>
<td>*ts-</td>
<td>*tsh-</td>
<td>*s-</td>
</tr>
<tr>
<td>H. Lai</td>
<td>*f-</td>
<td>*ts-</td>
<td>*tsh-</td>
<td>*s-</td>
</tr>
<tr>
<td>F. Lai</td>
<td>*f-</td>
<td>*ts-</td>
<td>*s-</td>
<td>*s-</td>
</tr>
<tr>
<td>Ngawn</td>
<td>*ts-</td>
<td>*ts-</td>
<td>*s-</td>
<td>*s-</td>
</tr>
<tr>
<td>Thado Kuki</td>
<td>*ts-</td>
<td>*t-</td>
<td>*s-</td>
<td>*s-</td>
</tr>
<tr>
<td>Tedim</td>
<td>*t-</td>
<td>*t-</td>
<td>*s-</td>
<td>*s-</td>
</tr>
<tr>
<td>Sizang</td>
<td>*t-</td>
<td>*s-</td>
<td>*s-</td>
<td>*s-</td>
</tr>
<tr>
<td>Anal</td>
<td>*t-</td>
<td>*th-</td>
<td>*s-</td>
<td>*s-</td>
</tr>
<tr>
<td>Zoutung</td>
<td>*ts-</td>
<td>*ts-</td>
<td>*tsh-</td>
<td>*s-</td>
</tr>
<tr>
<td>Khumi-O</td>
<td>*tsh-</td>
<td>*tsh-</td>
<td>*tsh-</td>
<td>*s-</td>
</tr>
<tr>
<td>Khumi-V</td>
<td>*ts-</td>
<td>*t-</td>
<td>*th-</td>
<td>*s-</td>
</tr>
<tr>
<td>Mara</td>
<td>*s-</td>
<td>*ts-</td>
<td>*tsh-</td>
<td>*s-</td>
</tr>
<tr>
<td>Chimbok</td>
<td>*th-</td>
<td>*ts-</td>
<td>*tsh-</td>
<td>*hl-</td>
</tr>
<tr>
<td>M. Cho</td>
<td>*ht-</td>
<td>*ts-</td>
<td>*s-</td>
<td>*hl-</td>
</tr>
<tr>
<td>Daai</td>
<td>*s-</td>
<td>*ts-</td>
<td>*sʰ-</td>
<td>*sʰ-</td>
</tr>
<tr>
<td>Asho</td>
<td>*s-</td>
<td>*ts-</td>
<td>*sʰ-</td>
<td>*sʰ-</td>
</tr>
</tbody>
</table>

With the knowledge in hand that the choice of *dz- as the origin of Mizo *f-* has advantages over Ohno’s *ź-, VanBik’s suggestion of *θ requires further consideration. VanBik’s *θ implies the changes *θ -> *f-, *θ -> *ts-, *θ -> *t-, and *θ -> *s- (cf. Table 3). These four changes are all attested. The change *θ -> *f- is well known in various dialects of English (Schleef and Ramsamy 2013). Several dialects of Moroccan Arabic have undergone an unconditioned change *θ -> *t -> ts, leading to a merger of *θ and *t (Marçais 1902: 13-14, Heath 1987: 17). Syriac changes *θ- to *t- (Moscati et al. 1969: 28). The Ethiopic languages change proto-Semitic *θ- to *s- (Moscati et al. 1969: 28). However, the changes necessary if one starts with 1972: 18). As these correspondences show, Benedict is rather unsure of developments in Kachin and Garo. The relevant forms as he cites them are Kacin *śa*, Garo *bisa* ‘son’, Kachin *śa* ‘eat’, Garo *ṭšha* ‘eat’ (Benedict 1972: 27-28). According to his own correspondences Kachin is ambiguous between *z- and *dz- in both words, but Garo, like Burmese, supports *z- for ‘son’ and *dz- for ‘eat’.

18 I have also included VanBik’s findings in this table.
*dz- instead of *θ are nearly as plausible. The change *dz- > ts- is simple devoicing. The change *ts- to s- is attested in Burmese (Jones 1988: 209). Keeping in mind that Castilian Spanish θ- develops from *dz- (Harris 1969: 544), the changes *dz- > f- and *dz- > t- are reached via *θ- (i.e. *dz- > *θ- > f- and *dz- > *θ- > t-).

Although both *dz- and *θ- are viable as origins of Mizo f-, VanBik’s suggestion of *θ carries none of the distributional advantages of *dz-; the inclusion of *θ in VanBik’s inventory of proto-Kuki-Chin initials (cf. Table 2) adds no symmetry or elegance to his system. Although present in the Rangoon Burmese of today, [θ] is a typologically rare sound in this part of Asia generally. Overall, *dz- is a better candidate for the origin of Mizo f-.

5.3 The source of Mizo s-

Whereas Ohno reconstructs *ś- as the only source of Mizo s- (1965: 15), VanBik posits a merger of *sʰ- and *s- on the way to Mizo s- (2009: 179, 186). Because VanBik reconstructs *s- as a default, in the absence of data from Mindat Cho or Daai, his *s- conflates secure examples of correspondence 16 (*s-) with examples that could belong either to correspondence 16 (*s-) or correspondence 10 (*sʰ-).

Table 4 presents the correspondences which allow for the separation of *sʰ- and *s- and thereby presents the secure examples of both correspondences. In addition, these correspondences reveal that two words, which VanBik reconstructs with initial *s- merit reassignment to initial *sʰ-. First, Ohno’s Chinbok cognate hlou permits VanBik’s reconstruction of Proto-Kuki-Chin *saa-I, *sat-II (VnB.653) to take the form *sʰaa-I, *sʰat-II. Second, VanBik’s own citation of Mindat Cho ai-hli ‘star’, which he apparently overlooks, compels the emendation of his reconstruction *ʔaar-θii~*-sii ‘star’ to *ʔaar-θii~*-sʰii ‘star’ (VnB.507).

Table 4: VanBik’s distinction between *sʰ- and *s-.

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Mizo</th>
<th>M. Cho</th>
<th>Chinbok</th>
<th>Daai</th>
</tr>
</thead>
<tbody>
<tr>
<td>*(VnB.507) star</td>
<td>āar sì</td>
<td>ai-hli</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.653) hot</td>
<td>sā-I, sāt-II</td>
<td>---</td>
<td>hlou</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.686) meat</td>
<td>sā</td>
<td>hla</td>
<td>hla</td>
<td>sʰa</td>
</tr>
<tr>
<td>*(VnB.687) cold</td>
<td>sīk</td>
<td>hlik</td>
<td>hlik</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.688) hair</td>
<td>sām</td>
<td>---</td>
<td>---</td>
<td>sʰam</td>
</tr>
<tr>
<td>*(VnB.689) be high</td>
<td>sāang-I, sāan-II</td>
<td>hlüng</td>
<td>hluy</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.690) long</td>
<td>sēi</td>
<td>hlei</td>
<td>hla</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.691) mortar</td>
<td>sūm</td>
<td>hluŋ</td>
<td>---</td>
<td>sʰum</td>
</tr>
<tr>
<td>*(VnB.692) red</td>
<td>sēn</td>
<td>a hlen</td>
<td>hlen</td>
<td>sʰen</td>
</tr>
<tr>
<td>*(VnB.694) pour</td>
<td>sūur</td>
<td>hlu</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.693) scoop</td>
<td>sūak-I, sūaʔ-II</td>
<td>hlawk</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.681) wash</td>
<td>sī</td>
<td>m-sī</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.669) probe</td>
<td>soʔ-INV (H. Lai)</td>
<td>---</td>
<td>---</td>
<td>soʔ</td>
</tr>
<tr>
<td>*(VnB.667) pound</td>
<td>sūr-I, suk-II (H. Lai)</td>
<td>suk</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.661) long</td>
<td>sāu</td>
<td>so</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>*(VnB.645) cut, chip</td>
<td>sāat rēek-I, sāh rēek-II</td>
<td>sāt</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

For the word ‘seven’, Mindat Cho (khih) and Chinbok (kheit) show neither s- nor hl- but rather kh-. VanBik speculates that the “initial reflex kh- has perhaps resulted from a fusion of the prefix sa- and the

---

19 Houghton’s observation that Burmese s- corresponds to both s- and th- in Asho (1892: 10), presages the distinction that VanBik draws. The first of Houghton’s two correspondences is the one that VanBik reconstructs as *sʰ-.

20 A more explicit notation, such as the use of ambiguous *H alongside secure *h₁, *h₂, *h₃ known from Indo-European studies, would have resolved this ambiguity; *s, *sʰ, and *s(h) is one possibility.
initial g- (which itself derives from Proto-[R]K[u]C[h]in *r-), i.e. *s- + r- > **s- + g- > kh-.” (2009: 184). Only further work on languages related to Mindat Cho is likely to elucidate this example.  

VanBik’s reconstruction *sʰ- is not phonetically plausible. Languages which distinguish aspirated and non-aspirated fricatives are typologically rare (cf. Jacques 2011). More significantly, the Kuki-Chin reconstruction *sʰ- begs the question of what the origin of this segment may have been further up in the Trans-Himalayan Stammbaum. Jacques (2011) points to the following origins of sʰ-: *s- (Mdzod-dge and Cone Tibetan, Korean), *tsʰ- (Rangoon Burmese, Yanghao), *xʔ (Ofo), *stʰ- (Shuiluo Pumi). A simple Trans-Himalayan *s- can be ruled out as the origin of VanBik’s *sʰ-, since he himself posits a change of Trans-Himalayan *s- to Kuki-Chin *tʰ (VanBik 2009: 16-18). The possibilities that Trans-Himalayan *tsʰ-, *xʔ, or *stʰ- gave rise to Kuki-Chin *sʰ- are not as easily dismissed. Nonetheless, the reconstruction of any one of these three possibilities would itself be a bold hypothesis on the weak motivation of the Daai Chin reflex sʰ-. More secure knowledge of the sounds represented by <hl-> in Mindat Cho and Chinbok is a clear desideratum for further consideration of how best to reconstruct the correspondence which VanBik treats as *sʰ-. Trans-Himalayan cognates outside of Kuki-Chin do not confirm VanBik’s distinction between *sʰ- and *s- in a straightforward manner. Nonetheless, there is some evidence that his *sʰ- corresponds to Tibetan ʂ- (cf. Table 5). Consequently, there is a small advantage to representing this correspondence, as Ohno does, with *ʂ- rather than with VanBik’s *sʰ-.

**Table 5: Kuki-Chin external cognates of VanBik’s *sʰ- and *s-.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*sʰ-</td>
<td>(VnB.653) hot hlou (Chinbok) --- ̩f isha</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.686) meat hla sŏːː sāḥ ̩f sa</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.688) hair sʰam (Daai) ŋ̩ cham- ̩fši ̴ sam ‘fringe’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.691) mortar hlum ŋ̩ chum ---</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.692) red a hlen --- shindi (Bumthang)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.694) pour hlui sŏːː ̴ swanh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*s-</td>
<td>(VnB.681) wash m-si sŏːːː ̴ chih ̴</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.667) pound suk sŏːːːː ̴ chok ̴</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(VnB.645) cut, chip sʰat sŏːː ̴ chat ̴</td>
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</tbody>
</table>

5.3 The source of Mizo t- and tl-

Houghton points out that the Mizo “also use an initial tl where the [Asho] Chins have kl” (1892: 6). Shafer comes close to the same discovery with his formulation Mizo t- < *Cr-, tl- < *Cl- (1940: 309-310). Without making use of a language that directly preserves kl- or kr-, Ohno reconstructs *kl, *khl, *kr, and *khr on the basis of correspondences 12-15. David Solnit repeats these findings with an explicit acknowledgement of his debt to Ohno (1979: 119). Nonetheless, VanBik mistakenly claims that changes 14 and 15 were “first observed by David Solnit (1979)” (2009: 42).

Whereas the kl- clusters are preserved in Asho (cf. Table 6), Kaang preserves *kr- (Khoi 2001: 72-74, cf. Table 7).

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22 Another example of Solnit receiving undue credit is Button’s reference to correspondence 8 as “Solnit’s (1979:115-6) suggestion” (2011: 24). Even before Ohno, Shafer implicitly identifies correspondence 8 via the proposal that Khimi go, goh ‘(dead) body’ is cognate with Mizo ro ‘id.’ (1944: 416).

23 Nonetheless, the initial ky- in the Asho word ‘mountain’ is irregular and requires explanation.

24 As VanBik notes Kaang changes *kl- into kr- yielding a merger of inherited *kl and *kr- (2009: 297); *kl- : Mizo tlâ-I, tlâak-II, Kaang krat³⁵ ‘fall down’ (VnB.1256); *klh- : Mizo tlâ, Kaang khraa³⁵ ‘moon’ (VnB.1295), Mizo tlâuk, Kaang khrook³⁵ ‘brain’ (VnB.1279), Mizo tlân, Kaang khran³⁵ ‘sweat’ (VnB.1304).
Table 6: The preservation of kl- and khl- in Asho.

<table>
<thead>
<tr>
<th>Table 6: The preservation of kl- and khl- in Asho.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gloss</strong></td>
</tr>
<tr>
<td><em>kl-</em></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><em>khl-</em></td>
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<tr>
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<td></td>
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</tbody>
</table>

Table 7: The preservation of kr- and khr- in Kaang.

<table>
<thead>
<tr>
<th>Table 7: The preservation of kr- and khr- in Kaang.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gloss</strong></td>
</tr>
<tr>
<td><em>kr-</em></td>
</tr>
<tr>
<td><em>khr-</em></td>
</tr>
</tbody>
</table>

The reconstruction of *pl- clusters originates with proposals of David Solnit (1979), who suggests the following two correspondences.

20. *pl- > t- [t] in Mizo, p- in Tedim

Solnit cites the evidence repeated in Table 8 in support of these proposals. VanBik rejects the comparison of Tedim pü:k¹ and Mizo tlù-I, tlûuk-II ‘to fall down’; instead comparing the Tedim form to Hakka Lai pûur-I, pûur-II ‘to fall over, collapse, uproot’, and related forms in other languages (VnB.144). In an exactly parallel manner, VanBik compares Tedim phu:k¹ ‘cause to fall’ with Hakha Lai phûur-I, phûur-II ‘fell, uproot’ (VnB.339) and not with Mizo thlù-I, thlùuk-II ‘down, over, so as to cause to fall’ (VnB.1286). Button suggests these same corrections to Solnit (Button 2011: i, 24). The red-vented burbul makes no appearance in VanBik’s study; Button accepts this comparison, but sees it as an exception case “resulting from external influence via a bilabial pre-syllable” (2011: i, 24).

Table 8: Solnit’s reconstruction of *pl and *phl-.

<table>
<thead>
<tr>
<th>Table 8: Solnit’s reconstruction of *pl and *phl-.</th>
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<tbody>
<tr>
<td><strong>Gloss</strong></td>
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<tr>
<td><em>pl-</em></td>
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<tr>
<td></td>
</tr>
<tr>
<td><em>phl-</em></td>
</tr>
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</table>

Instead of relying on Tedim for evidence of *pl- clusters, VanBik reconstructs *pl on the basis of Mindat Cho and Asho, which have distinct reflexes of *kl and *pl (VanBik 2009: 300, cf. Table 9). In
VanBik’s presentation Tedim merges *kl- and *pl as t-. The striking coincidence of kl- and pl- in both Asho and Burmese lends credence to VanBik’s suggestion (cf. Table 9).

Table 9: VanBik’s reconstruction of *pl-.

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Mizo</th>
<th>Tedim</th>
<th>M. Cho</th>
<th>Asho</th>
</tr>
</thead>
<tbody>
<tr>
<td>*kl-</td>
<td>(VnB.1256) fall down</td>
<td>tl-</td>
<td>t-</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(VnB.1259) fall, set</td>
<td>tl-</td>
<td>k-</td>
<td>ki-</td>
</tr>
<tr>
<td></td>
<td>(VnB.1274) shine</td>
<td>tl- (H. Lai)</td>
<td>---</td>
<td>ki-</td>
</tr>
<tr>
<td></td>
<td>(VnB.1262) graze</td>
<td>tl-</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(VnB.1263) mountain</td>
<td>tl-</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(VnB.1265) lump</td>
<td>tl-</td>
<td>t-</td>
<td>ki-</td>
</tr>
<tr>
<td>*pl-</td>
<td>(VnB.1247) anthill</td>
<td>tl- (H. Lai)</td>
<td>t-</td>
<td>pl-</td>
</tr>
<tr>
<td></td>
<td>(VnB.1248) boil</td>
<td>tl- (H. Lai)</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(VnB.1249) fill (intr.)</td>
<td>tl-</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(VnB.1250) be piled up</td>
<td>tl-</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(VnB.1251) run</td>
<td>tl- (H. Lai)</td>
<td>---</td>
<td>pl-</td>
</tr>
<tr>
<td></td>
<td>(VnB.1252) slip out</td>
<td>tl- (H. Lai)</td>
<td>---</td>
<td>pl-</td>
</tr>
<tr>
<td></td>
<td>(VnB.1253) travel, move</td>
<td>tl- (H. Lai)</td>
<td>t- (Paite)</td>
<td>pl-</td>
</tr>
</tbody>
</table>

Because VanBik reconstructs *kl- as a default, in the absence of data from Mindat Cho or Asho, his *kl- conflates secure examples of correspondence 12 (*kl-) with examples that could belong either to correspondence 12 (*kl-) or correspondence 17 (*pl-). A more explicit notation, such as *kl-, *k(l), and *l would resolve this ambiguity.


A final piece of potential evidence for Proto-Kuki-Chin *phr- is the comparison of Mizo thlá ‘wing’ with Kaang phraa ‘wing’ (Khoi 2001: 73, cf. VnB.1309). If VanBik is correct to suggest that Mizo thlá ‘soul’ and its cognates (VnB.1300) are “allofamically related to” ‘wing’ (2009: 302), then Trans-Himalayan cognates evincing labial initials are relevant: Old Tibetan སྲ་ brlaḥ ‘soul’, Written Burmese ὑ prā ‘soul’

Since Tedim t- is the standard counterpart of Mizo tl-, in principle there is no need to consult the Tedim cognates. Nonetheless, the inclusion of Tedim data in Table 9 is useful for showing that Tedim does not have p- in these words as Solnit may have predicted.

VanBik compares Asho klóng ‘herd, graze’ to WBur. ကြားချက် kyōṅḥ ‘to tend, to feed (as cattle)’, but I am unable to confirm this Burmese word (VnB.1262); because OBur. kl- becomes WBur. ky- (cf. Nishi 1999: 1), if it can be confirmed, this example strengthens rather than weakens the correspondence. On the other hand, the absence of a lateral in both Asho kyan ‘mountain’ and Burmese ὑ khan ‘mountain ridge’ suggests that VanBik is mistaken either to compare these words to Mizo tláang ‘mountain’, or to reconstruct an initial *kl- in the proto-form (VnB.1263).

The writer of these lines is uncertain how the presumption of a cluster differs conceptually form the presumption of a morphologically meaningless ‘prefix’, whether in Proto-Kuki-Chin or in Trans-Himalayan.

Tibetan བྲུ་ dpun-pa ‘shoulder’ merits mention in this context, but it diverges rather widely from Kuki-Chin words for ‘shoulder’.

---

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26 VanBik compares Asho klóng ‘herd, graze’ to WBur. ကြားချက် kyōṅḥ ‘to tend, to feed (as cattle)’, but I am unable to confirm this Burmese word (VnB.1262); because OBur. kl- becomes WBur. ky- (cf. Nishi 1999: 1), if it can be confirmed, this example strengthens rather than weakens the correspondence. On the other hand, the absence of a lateral in both Asho kyan ‘mountain’ and Burmese ὑ khan ‘mountain ridge’ suggests that VanBik is mistaken either to compare these words to Mizo tláang ‘mountain’, or to reconstruct an initial *kl- in the proto-form (VnB.1263).

27 The writer of these lines is uncertain how the presumption of a cluster differs conceptually from the presumption of a morphologically meaningless ‘prefix’, whether in Proto-Kuki-Chin or in Trans-Himalayan.

28 Tibetan བྲུ་ dpun-pa ‘shoulder’ merits mention in this context, but it diverges rather widely from Kuki-Chin words for ‘shoulder’.

The proposal for *phr- in Proto-Kuki-Chin also originates from Solnit (1979: 117), who presents 19 as the correspondence of *th- in Mizo with *ph- in Tedim. His proposal rests on the comparison of Mizo ṭhà-I, ṭhàt-II ‘be good’ and ṭhàal ‘the dry season’ respectively with Tedim pha:³ > phat³ ‘be good’ and Tedim phal³ bi³ ‘winter’ (Solnit 1979: 117).29 Both VanBik (2009: 313) and Button (2011: i, 24) reject the latter comparison, preferring to associate Mizo ṭhàal ‘the dry season’ with Tedim kha:F ‘summer’ (Vn.B.1355). Although Button accepts that Mizo and Tedim have cognate words for ‘good’, he does not accept a *phr- for the proto-language, but rather suggests the labial is due to the “external influence via a bilabial pre-syllable” (2011: i, 24).30 VanBik also accepts the comparison of Mizo ṭhà-I, ṭhàt-II ‘be good’ and Tedim pha:³ > phat³ ‘be good’ (Vn.B.1338), accepting Solnit’s proposal for its explanation, which he buttresses with three further examples; he also puts forward two examples for *pr- (cf. Table 11). In VanBik’s hands the correspondences in support of *pr- and *phr- are as follows:

22. *pr- > t- in Mizo, Hakha Lai, and Falam Lai, pr- in Tedim, pr- in Khumi

| Table 10: the correspondence of lateral clusters in Asho and Burmese. |
|---|---|---|---|

| *kl- | **Gloss** (Vn.B.1256) fall, break | Klük | ʔkluiwḥ |
| (Vn.B.1259) fall, set | Klō-I, klaug-II | kla |
| *pl- | **Gloss** (Vn.B.1249) fill (intr.) | Plé ~ plí | plañʔ |
| (Vn.B.1251) run | Plí (M. Cho) | pliyh |
| (Vn.B.1253) travel, move | Pló’ng-é | plónh |

| Table 11: VanBik’s evidence for *pr- and *phr-. |
|---|---|---|---|---|

| *pr- | **Gloss** (Vn.B.1310) begin | Tán | Pan (Paite) | --- | --- |
| (Vn.B.1311) uncle | Trâŋ (H. Lai) | --- | --- | praáng |
| *phr- | **Gloss** (Vn.B.923) brave | -thrǎa-I, ñ-thrat-II (H. Lai) | Rìa-pha (Mara) | --- | --- |
| (Vn.B.1337) ant-eater | Sa-phú | --- | --- | sphruu |
| (Vn.B.1338) good | Thà-I, thàt-II | Pha:³ > phat³ | P’oi | --- |
| (Vn.B.1339) needle | Thrım (H. Lai) | Phim² | A p’ye m | --- |

The evidence for *pr- and *phr- is weak. Of the only two examples of *pr-, ‘uncle’ (Vn.B.1311) is problematic; Falam Lai rǎŋ and Tedim gang² point to initial *r-. In light of these irregularities VanBik reconstructs *(p)rǎŋ rather than *praŋ. A focus specifically on Mara, Tedim, and Khumi reveals a rhotic correspondence in ‘uncle’ that is parallel to the lateral correspondence in ‘four’ (‘uncle’: Mara pā-rā, Tedim gang² < *r-, Khumi praáng [Vn.B.1311]; ‘four’: Mara sá-pā-li, Tedim li², Khumi plíee ‘four’ [Vn.B.1022]). Of the four examples of *phr- in Mizo sa-phú ‘ant-eater’ (Vn.B.1337) has initial ph- whereas the correspondence predicts ṭh-. This irregular word is the only one with a Kuki cognate.

The Asho reflex p’oi ‘good’ (Vn.B.1338) also disobeys the correspondence; since it is one of only two Asho cognates, p’yèm ‘needle’ being the ‘regular’ other, the most prudent course is to enshrine neither of the two in the statement of the correspondence.

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29 For the sake of consistency I use the transcriptions seen in VanBik (2009).
30 The influence of a bilabial pre-syllable is also Button’s explanation for Zahau thim¹, Tedim phim² ‘needle’, Mizo tô, Tedim pou² ‘sprout (v)’ (Button 2009: 79-80; 2011: i, 24).
Button draws attention to “the lack of a voiced retroflex in Mizo” as “further evidence that the original clusters were uniquely velar in origin” (2009: 80). To paraphrase, the absence of *g- in Proto-Kuki-Chin makes *gr- unavailable as a potential source for Mizo *ḍ-[ɖ], but since *b- occurs in Proto-Kuki-Chin *br- should have resulted in Mizo *ḍ-, but does not. VanBik’s examples of *pr- do not have cognates outside of Kuki-Chin known to me; conversely, the words outside of Kuki-Chin with secure examples of *pr- tend not to correspond to the cases that VanBik reconstructs with *pr- clusters. For example, he reconstructs *yaa ‘hundred’ (VnB.1207) and *riat ‘eight’ (VnB.935) without *pr-, but the cognates in Tibetan and Chinese point toward *pr- (“hundred”: OTib. ལྷ་brgyaḥ < *bryaḥ, Chi. 百 paek < *pˤrak [0781a]; ‘eight’: Tib. ཟིབ་brgyad < *bryat ‘eight’, Chi. 八 peat < *pˤret [0281a]). Nonetheless, forms such as Asho *pʻyā ‘hundred’ and Mizo *pà-riat ‘eight’ do point to a labial element in these words.

Table 12 presents the initials of Proto-Kuki-Chin proposed here.

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<tr>
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<tbody>
<tr>
<td>k-</td>
<td>kh-</td>
<td>n-</td>
<td>hn-</td>
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<tr>
<td>t-</td>
<td>th-</td>
<td>d-</td>
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<td>p-</td>
<td>ph-</td>
<td>b-</td>
<td>m-</td>
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<td>ts-</td>
<td>tsh-</td>
<td>dz-</td>
<td></td>
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<tr>
<td>w-</td>
<td>y- [j]</td>
<td>hr-</td>
<td>hl-</td>
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<td>r-</td>
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<td>s-</td>
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<td>h-</td>
<td>p-</td>
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<tr>
<td>kl-</td>
<td>khl-</td>
<td>pl-</td>
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<tr>
<td>kr-</td>
<td>khr-</td>
<td>(pr-)</td>
<td></td>
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</tbody>
</table>

6 Archaic languages and named sound laws

Historical linguistics is not a democracy. Although the historical phonology of any one language is of great interest per se, for the purposes of reconstruction some languages count more than others. Homeric Greek is more important than Albanian, Sanskrit more important than Tregami. The two factors that make a language significant are the conservativeness of its grammar, often correlated with an early attestation, and extensive attestation.

Work on Trans-Himalayan languages often overlooks the principle of emphasizing conservative and well attested languages. For example, Matisoff (2003) gives much attention Lahu, although as a highly innovative language it has much less to contribute than Old Tibetan, Tangut or Newar, languages that make almost no appearance in his study. The lack of appreciation for the importance of some languages over others facilitates an over-reliance on tabular presentations of data, a destructive deference for previous reconstructions, and a disinterest in named sound laws.

Ohno, VanBik, and Button, like many researchers in Trans-Himalayan linguistics (cf. Bradley 1979, Matisoff 2003), display comparisons primarily in tabular form. In a tabular presentation a reader cannot immediately recognize the relative innovativeness of different languages. The more languages a table includes the harder it is to recognize the significance of any one language.

The goal of comparative linguistics is the explanation of systematic relationships among attested languages; progress in reconstruction is a by-product of increasingly precise statements of such relationships. To use the reconstructions of another scholar is to rest content with the statement of relationships this scholar knew; this practice precludes the possibility of progress and is largely responsible for the ponderous pace of Trans-Himalayan comparative research. To pick an arbitrary example, in his discussion of the Trans-

31 Although he explains it otherwise, Button draws attention to the comparison of Mizo jō with Tedim pou² ’sprout (v)’ (2011: i, 24), which for VanBik would be a third example of *pr-.
Himalayan origins of the Thangmi lexicon, Turin compares Thangmi *naru ‘horn’ with Matisoff’s unkempt reconstruction "**krew=krovw or *ruŋ=rwan’" (2012: 20). A direct comparison with Tibetan *ru ‘horn’ is more indicative. Turin is not to blame; Matisoff nowhere explains his methods and his reconstructions do not predict attested forms in any language. A scholar like Turin has no choice except to ignore Matisoff’s work altogether or to accept his reconstructions at face value, unable to verify their validity.

The comparison of reconstructed languages cannot substitute for the direct comparison of the earliest attested languages of the family. Any reconstruction is provisional, and a reconstruction based upon reconstructions incorporates all the errors made in the constituent reconstructions. Rather than presenting correspondences up front and shuffling the data into an appendix (like Matisoff 1972 or Button 2011), it is more helpful and more honest to provide a recipe for reconstruction together with the necessary ingredients. A possible Indo-European recipe is. 1. Start with Sanskrit. 2. Undo the well known changes (Bartholomae’s law, Grassman’s law, ruki-rule, thorn clusters, etc.). 3. Supply the vowels and laryngeals with reference to Greek. This recipe often succeeds: (steps 1 and 2) Skt. *mādhū ‘honey’, (step 3) *medhū (cf. Grk. méthu ‘wine’); (steps 1 and 2) Skt. *nār ‘man’, (step 3) < *h₂neř (cf. Grk. anēr ‘man’); (step 1) Skt. *jkṣas ‘bear’, (step 2) < *ṛtkas, (step 3) < *h₂ṛtkos (cf. Grk. arktos). For the purpose of arriving at the Indo-European reconstruction, one does not need to consult the evidence of Gothic, Old Church Slavonic, or Albanian in such cases.

Linguists working on Trans-Himalayan should search for languages such as Sanskrit, which serve as good stand-ins for an entire branch. Rather than reconstructing a word from the ground up it suffices to start from the attested form of a single archaic language and to undo the few changes this language is known to have undergone. To pursue the kitchen metaphor further, before cooking a recipe you lay out the necessary ingredients on the counter. The ingredients that are not called for in the recipe can be left in the cupboard. Because Mizo “is the most studied and best known among Kuki-Chin languages” (VanBik 2009: 39) and is quite conservative, as a Central Chin languages avoiding the many mergers seen in other branches (VanBik 2009: 5-56), this language serves as a useful representative of the Kuki-Chin family as a whole. Ten changes derive Mizo from proto-Kuki-Chin to Mizo.

7: *y- [j] > z-
10: *ś- [ʃ] > s-
11: *dz > f-
12: *kl- > tl-
13: *khl- > thl-
14: *kr- > t-
15: *xhr- > th-
17: *pl- > tl-
18: *tr- > t-
19: *phr- > th-

Scholars of Indo-European historical linguistics have long found it convenient to refer to well known sound changes by the name of the researcher who first noticed the correspondences the sound change accounts for. Because of the proven utility of such named sound laws in Indo-European linguistics, the explicit listing and naming of sound laws in the Trans-Himalayan family could be expected to bring similar benefits.

Changes 12-19 all account for the origin of t(h)- and tl(h)- in Mizo; if one considers them together as sub-cases of a single sound law, the total number of changes from Proto-Kuki-Chin to Mizo reduces to four. Three of these changes (7: *y- [j] > z-, 10: *ś- [ʃ] > s-, 11: *dz > f-) imply neither splits nor mergers. Although Mizo has changed the phonetic value of the proto-segment it has lost no information; one could say that these changes do not affect phonemes, but merely their articulation. In contrast, the single change reflected by 12-19 is important; this change destroys information and must be carefully undone with reference to languages other than Mizo. Because of its importance in reconstructing Kuki-Chin, this change merits a name; in light of Ohno’s discovery, ‘Ohno’s law’ is an appropriate name.

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As I have done here with Bartholomae’s law and Grassman’s law.
Ohno’s law: *kl-, *pl-, *khl-, (*phl-) > tl-; *kr-, (*pr-), *khr-, (*phr-) > t-, th-

Although little is gained by naming the remaining changes (7: *y- > z-, 10: *sʰ- > s-, and 11: *dz > f-) their respective discoverers deserve mention. Shafer first pointed out change 7 (1940: 310); Houghton first noticed the correspondences underlying change 10 (1892: 10, cf. note 19 above), but VanBik first explicitly formulated it as a change (2009: 186). Benedict first drew attention to change 11 (1940: 123 note 13).

Named sound laws are convenient not only for the work of reconstruction, but also to facilitate the discussion of sub-grouping. Among several changes which David Solnit (1979) reiterates from among Ohno’s proposals (viz. 8, 9, 12, 13, 14, 15), he draws special attention to 8 (i.e. *r- > Tedim, Chinbok g-, Sizang g-), remarking that a “shift from *r to g is somewhat out of the ordinary” (1979: 115). Solnit further points out that Tedim has final -k corresponding to Mizo -r (1979: 112), which, because Tedim lacks a voicing contrast for Auslauts, may be seen as a direct result of *r > g viewed as an unconditioned change. In order to rid the change of its implausible air, Solnit reasonably posits the series of steps *r > *ɣ > g (1979: 115-116). Another factor that likely helped this change along is the lack of *g- in proto-Kuki-Chin (Ohno 1965: 16, VanBik 2009: 62-64), providing *r with a convenient vacancy to wander into.

Peterson (2000) suggests that the participation of both Northern Chin languages (such as Tedim) and Southern Chin languages (such as Chinbok and Mindat Cho) in this change requires, along with evidence of shared morphological changes, that these two branches be united as one ‘peripheral Chin’ branch; VanBik accepts this proposal (2009: 23-24). As addition evidence among the Southern Chin languages Peterson points out that Khimi also shows g- corresponding to Mizo r- (2000: 84-85), that Hyow -k corresponds to Mizo -r (2000: 83), and that reflexes in various Southern Chin languages may well descend from *g- (including *ɣ- in Daai, Ngmüün, and Mkaang, kh- in Kharni, and *j- in Nghmoye and Chinpon (2000: 82, 84-85). In a recent article, Peterson further notes the correspondence of Mizo r- with Rengmitca kh- as consistent with his sub-grouping proposal (2013: 323, cf. Table 16 below). The maintenance of archaic r in the Central Chin languages coupled with the innovation of g in the periphery, contradicts Bártoli generalization that “le isole sono di norma piú conservative che i continenti … e piú certe aree laterali che le aree di mezzo” [islands are generally more conservative than continents … and certain marginal areas more so than central areas] (1925: 4). Thus, the change *r > g is typologically odd both in its substance and in its geographic distribution.

Because Mizo does not undergo this change, for the goal of Proto-Kuki-Chin reconstruction, the change is irrelevant. Nonetheless, because of its significance in the sub-grouping of the Chin languages, the sound change *r > g is of sufficient interest to merit a name. Shafer first discovered the change (1944: 416, and cf. note 22 above), so ‘Shafer’s law’ is an appropriate name for it.33

7 Proposals not considered by Ohno or VanBik

The comparison of the copula in Kuki-Chin languages provides further provocation to posit an initial *hy- in the proto-language. Ohno compares hi in Tedim and Ngawn with si Hakha and Falam Lai, and isi-Zotung and Chinbok (1965: 5), seeing this word as an irregular example of his initial *š- (VanBik’s *sʰ-).

33 I propose ‘Houghton’s law’ and ‘Benedict’s law’ as names for the Tibetan changes *ŋʲ < ē- and *lʲ > ž- respectively (2011: 444-445).
34 I have previously used ‘Shafer’s law’ to refer to the change *iŋ, *-ik > -aŋã, -ac in Burmese (e.g. Hill 2013: 198). However, because Wolfenden noted this change in Burmese earlier than Shafer (Wolfenden 1938: 167), it is more sensible to refer to it at ‘Wolfenden’s law’, leaving open ‘Shafer’s law’ to refer to the change *r > g in Chin.
35 Without examples of correspondence between Mizo z- and Hyow y- examples of Mizo z- and Hyow yh- do not conclusively point toward *hy- rather than simply *y-.
Peterson draws attention to the Thado equational copula *ahi*, Sizang *ahiibale* ‘if it is not’, and Hyow *hyaʔ* ‘it is not’, remarking that

it does not seem likely that this copula is related to the Central Chin equational copula *siː*. If these are from a single source, then they demonstrate a highly idiosyncratic change shared by Hyow, Thadou, and Sizang which can probably not be attributed to parallel development. The change *s* > *h* does not otherwise occur in these languages (Peterson 2000: 93).

Comparison with the Old Burmese existential copula *śiʔhi*, which, treated as having initial *y*-h-, becomes *śiʔ* in modern Burmese (Nishi 1999: 38 note 4 on p. 65), makes clear that the direction of change was not *s*- > *h*- as Peterson supposes, but instead *hiy > si* in Central Chin, a change that exactly parallels *y* > *z*- in these languages. The coincidence of the Old Burmese and (non-Central) Chin forms guarantees the correctness of *hy-* in Proto-Kuki-Chin. The voiced initials in ‘follow’ and the autonym appear to undermine the suggestion of *hy-* > *s*- in Mizo, although perhaps not irrevocably. Initial *ts*- in Zotung and Chinbok is more of a problem, but potentially Ohno’s orthography *či* instead reflects something like [ç] in these languages. The evidence for *hy-* and its development in the various Kuki-Chin languages requires further investigation.

Button tentatively proposes labio-velars in Proto-Kuki-Chin, with the following remark “in Northern Chin *kʷ*- remained distinct from *kw*- long enough to allow vowel lowering of *ə* to *a* in spite of the labial environment” (2011: 65). The formulation of his observation is influenced by Pulleyblank’s understanding of the Old Chinese and Old Burmese vowel systems (1963). If one attempts to reformulate the same claim using the six-vowel theory for Old Chinese and recognizing the origin of Written Burmese -*wa*- in Old Burmese -*a*- (cf. Hill 2012), the result is “Northern Chin *kʷ*- is reflected in the distinction of *Ko*- < *ko-* and *Kua*- < *Kʷa-*. "Because Button does not reconstruct labio-velars for specific lexical items, his proposal is difficult to confirm with the data he provides. The phonotactic distribution of -*y*- in these languages appears not to distinguish velars for special treatment.

8 Remaining mysteries
The Ausnahmezusagen der Lautgesetze compels a researcher in historical linguistics to draw particular attention to the apparent exceptions to regular patterns in the hope that future researchers will see the more subtle patterns these anomalies conceal. When the reflexes of a single proto-phoneme exhibit multiple outcomes in a single language, the split must either be conditioned or the proto-inventory revised to include two separate units.

Irregular developments of *r*- have received most discussion so far. In an unexplained split noted by VanBik, Sizang and Ngawn have both *l*- and *ŋ*- as reflexes of *r* (Ohno 1965: 12-13, VanBik 2009: 30-31, cf. Table 13).

Table 13: The split of *r*- into *ŋ*- and *l*- in Sizang and Ngawn.

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Mizo</th>
<th>Sizang</th>
<th>Ngawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>(VnB.919) bamboo</td>
<td>rúa</td>
<td>ngūa</td>
<td>---</td>
</tr>
<tr>
<td>(VnB.922) bone</td>
<td>rūh</td>
<td>a-ngū</td>
<td>ŋuʔ</td>
</tr>
<tr>
<td>(VnB.953) land, country</td>
<td>rám</td>
<td>ngam</td>
<td>ŋam</td>
</tr>
<tr>
<td>(VnB.964) rain</td>
<td>rūiah</td>
<td>ngua</td>
<td>---</td>
</tr>
<tr>
<td>(VnB.975) snake</td>
<td>rūul</td>
<td>ngūl</td>
<td>ŋul</td>
</tr>
<tr>
<td>(VnB.939) fast</td>
<td>rāng-I, rān-II</td>
<td>man-lāng</td>
<td>---</td>
</tr>
<tr>
<td>(VnB.974) six</td>
<td>rūk</td>
<td>luk</td>
<td>luk</td>
</tr>
<tr>
<td>(VnB.672) seven</td>
<td>pā-sā-rīh</td>
<td>sa ī</td>
<td>---</td>
</tr>
<tr>
<td>(VnB.935) eight</td>
<td>pā-rīt</td>
<td>līt</td>
<td>---</td>
</tr>
</tbody>
</table>
Without explicit discussion Button projects this distinction back into the proto-language, representing the segment which lead to l- in Sizang as ʟ. However, Button also uses ʟ to index other problems such as Mizo ḷliitᴵᴵᴮ compared to Zahau: ḷniitᴵᴵᴮ ‘leech (n.)’. Ohno identifies g- as the regular reflex of proto-Kuki-Chin *r- in Chinbok. Nonetheless, in his data a number of words display other outcomes (cf. Table 14). It will not be possible to find a pattern until further data on Chinbok become available. Khumi offers a third case of irregular developments for *r-. According to VanBik the outcome of v- versus h- in Khumi-V can largely explained as conditioned change (2009: 232). He suggests that “In Khumi PKC *r- became a voiced labiodental fricative v- before a high back vowel” (2009: 232). Nonetheless, he acknowledges that this is not the whole story.

There are two etyma (SHEATH, SIX) which did not follow the above rule. Note that these two etyma have prefixes in Khumi. These prefixes might have helped to preserve the proto-rhotic initial in Khumi.

(VanBik 2009: 232 emphasis in original).

Peterson has a different explanation for Khumi v- versus h- as reflexes of *r-: in his account h- is the regular reflex, whereas v- is conditioned by the presence of a pre-syllable, still maintained in Rengmitca (Peterson 2013: 323, cf. Table 15). In sum, the divergent reflexes of *r- in various Kuki-Chin languages still require explanation.

Other so far unexplained splits which have yet to receive any explicit discussion are the split of *kh r- into both ch- and kh- in Mindat Cho (cf. correspondence 15), the split of *s- (< *s-, *sʰ-) into both s- and ‘s- in Asho (cf. Table 16), and the split of *kl- into both kl- and ky- in Asho (cf. kyan ‘mountain’ and note 26 above). These and other complications, such as all those which Button reconstructs using capital letters, must receive an explanation before one can regard the inventory of initials in Proto-Kuki-Chin as incontrovertibly secure. These mysteries and yet unasked questions in comparative Kuki-Chin phonology are likely to yield up their secrets once the pre-syllables in Southern-Plains Chin languages receive more scrutiny.

| Table 14: The outcomes of *r- in Chinbok. |
|-----------------|-------|-------|
| **Meaning**    | **Mizo** | **Chinbok** |
| (Vnb.937) enemy | ráal  | ga    |
| (Vnb.947) heavy | rišt-I, rišt-II | giʔ    |
| (Vnb.922) bone  | rûh   | guʔ   |
| (Vnb.978) steal Mizo | rû-I, rûuk-II | am-guk |
| (Vnb.935) eight | pâ-riat | ra    |
| (Vnb.975) snake | rûul  | phiu  |
| (Vnb.974) six   | rûk   | tshuk |

| Table 15: Correspondences for PKC *r- in languages of the Khumi-cluster. |
|-----------------|-------|-------|-------|-------|
| **Meaning**    | **Mizo** | **Khumi** | **Mro (Wakung)** | **Rengmitca** |
| a. ‘bone’      | rûh   | hiw³  | xuʔ | khu   |
| ‘ten’          | pa-hràa (H. Lai) | ho⁵ | xasʰʔ | khatō  |
| ‘louse’        | hrik  | höj²  | xi  | khik  |
| b. ‘snake’     | rûul  | p’vuj⁵ | m’xuiʔ | m’khuj |
| ‘cry’          | ŭap ~ ŭâh | vo² | xaʔ  | i’kha |
### Table 16: Hakha Lai s- corresponding to Asho s- and ‘s-.

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Hakha Lai</th>
<th>Asho</th>
</tr>
</thead>
<tbody>
<tr>
<td>(VnB.644) carve</td>
<td>sâay-I, sayʔ-II</td>
<td>saih</td>
</tr>
<tr>
<td>(VnB.692) red</td>
<td>sên-I, sên-II</td>
<td>sèn</td>
</tr>
<tr>
<td>(VnB.453) pestle</td>
<td>sûm-khâl</td>
<td>‘sûn -k’o”</td>
</tr>
<tr>
<td>(VnB.655) insert</td>
<td>sanʔ-INV</td>
<td>‘sán</td>
</tr>
<tr>
<td>(VnB.661) long</td>
<td>sàaw-I, sàaw-II</td>
<td>‘sauh”</td>
</tr>
<tr>
<td>(VnB.666) pinch</td>
<td>sik-I, siʔ-II</td>
<td>‘sik</td>
</tr>
<tr>
<td>(VnB.672) seven</td>
<td>pa-sa-řiʔ</td>
<td>‘si</td>
</tr>
<tr>
<td>(VnB.691) mortar</td>
<td>sûm</td>
<td>‘sûn</td>
</tr>
</tbody>
</table>

### References


**Appendix: primary sources used by Ohno (1965)**

I have checked all titles in WorldCat, expanding records when possible. When a record was available, a library holding the item is mentioned, otherwise the apparent absence of the relevant record in WorldCat is noted.

1) Tedim (Kamhau)


*Lai Sinna Lai Bu* (Tedim Kam) Tan III, Rangoon, 1955 (not in WorldCat)

*Ganhai Le Nati Bu* (Tedim Kam) Tan I, II, Rangoon, 1933 (not in WorldCat)


2) Ngawn dialect

*Mark ii Lungdam nak Thu*. [the gospel according to St. Mark in Ngawn Chin] British & Foreign Bible Society, 1951. (British Library)

3) Hakha Lai

*Ca relawk Cauk* (Lai Haka dialect) Nambat I, Rangoon, 1954 (not in WorldCat)

*Ca relawk Cauk* (Lai Haka dialect) Nambat II, Rangoon, 1954 (not in WorldCat)

*Ca relnak Cauk* (Haka dialect) Nambat III, Rangoon, 1949 (not in WorldCat)

*Ca relnak Cauk* (Haka dialect) Nambat IV, Rangoon, 1931 (not in WorldCat)

*Vawlei le Lai thlang ram le Kawl ram cauk* (Halkha hol) Rangoon, 1936 (not in WorldCat)


4) Falam Lai


*Ca siar cauk* (Laizo dialect) Nambat I, Rangoon, 1952 (not in WorldCat)

*Ca siar cauk* (Laizo tong) Nambat II, Rangoon, 1949 (not in WorldCat)

36 Although unable to locate the third and fourth items on this list per se, I did notice the following similarly titled work: L. E. Burne, *Ca relnak cauk, Lai thlang acozah Siang inn hmanawk a si* [Chin reader in the Haka dialect of Chin, for use in the government schools of the Chin Hills District]. Rangoon: Supdt., Govt. Print. and Stationery, Burma, 2nd rev. ed. 1939, which is held at the National Library of Australia.

37 Although unable to locate the second, third, or fourth items on this list per se, I did notice the following similarly titled work: *Ca siar cauk: Laizo tong: lai thlangah tlawng innah hmannak ding a si* [Reader no. 2 in the Laizo dialect
Ca siar cauk (Laizo tong) Nambat III, Rangoon, 1938 (not in WorldCat)
Tsa siarnak tsauk (Laizo dialect) Nambat IV, Rangoon, 1949 (not in WorldCat)
Thilri tsu-uk (Laizo tong) Tan III, IV, Rangoon, 1932 (not in WorldCat)

Leilung le Lai Klang le Kawl ramih thu (Laizo tong) Rangoon, 1932 (not in WorldCat)
Khur le ram thu (Laizo dialect) Rangoon, 1941 (not in WorldCat)

5) Anal dialect
*Mark itha pena*, The British & Foreign Bible Society Burma Agency, 1949 (British Library)

6) Zotung dialect

7) Khumi dialect

Chinbok dialect
Cheizah ca-uk (Chinbok dialect) Nampat II, Rangoon, 1935 (not in WorldCat)
Cheizah ca ca-uk (Chinbok dialect) Tan thum, Rangoon, 1935 (not in WorldCat)
Cheizah ca-uk (Chinbok dialect) Nampat IV, Rangoon, 1936 (not in WorldCat)


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of Chin: for use in the government schools.] Rangoon, 2nd ed., rev, 1939, which is held at the National Library of Australia.
ACQUISITION OF REQUEST MODIFIERS IN VIETNAMESE AS A SECOND LANGUAGE

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Abstract
This study examines the acquisition of request modifiers by learners of L2 Vietnamese, with a view to expanding the range of target languages under inquiry and contributing to the field of L2 pragmatics acquisition. Data were collected from nine Vietnamese native speakers and 18 learners from various language backgrounds, using open role-plays in six scenarios with differing social power and imposition levels. An analysis was made of the learners’ use of request modifiers in relation to their proficiency levels in Vietnamese and their lengths of residency in the target language environment. Findings supported claims in the literature that learning pragmatics is particularly challenging for low-proficiency learners, and provided some evidence of pragmatic development in the case of high-proficiency learners who had stayed in the target language culture for an extended period.

Key words: request modifiers, second language acquisition, pragmatic competence

ISO 639-3 language codes: vie.

1. Introduction
The present study examines the effects of proficiency and length of residence in the target language (TL) environment on the acquisition of request modifiers by a group of learners of Vietnamese as a second language (L2) with different language learning profiles. The question that is addressed in the present study is important in at least three ways: (1) it analyses two variables that are of interest to the field of L2 pragmatic development (see Kasper and Rose, 2002; Schauer, 2009); (2) it focuses on an understudied L2; and (3) it investigates a diverse group of L2 learner population that are under-represented in the literature. First, as opposed to a bulk of studies examining L2 pragmatic performance, developmental issues have received comparatively little attention (see Bardovi-Harlig, 2010). Further, although there are quite a number of recent studies that have examined the impact of the study abroad context on the development of L2 pragmatic abilities, relatively few studies have actually addressed the effects of different lengths of stay (see Schauer, 2009 for a full review). Given its important implication for language teaching, this question is worth further investigations. The rationale for the present study also lies in the relative shortage of studies on requests in an Asian language as a L2 (e.g. Byron, 2004; Hassall, 2001; 2003; Ishihara & Tarone 2009; Nguyen & Basturkmen, 2013) as opposed to the substantial body of research on requests in an Asian language as a native language (e.g. Byron, 2006; Nguyen & Ho, 2013; Rue & Zhang, 2008; Upadhyay, 2003) and requests in an European language as a L2 (e.g. Hendriks, 2008; Otçu & Zeyrek, 2008; Shively, 2011; Woodfield, 2008). Particularly, request modifiers in Vietnamese as a L2 have not yet been reported in any previous studies. By looking at this under-researched language, we aim to expand the range of languages under inquiry and contribute to the existing interlanguage pragmatic literature. In addition, this study focuses on an understudied population of L2 learners in the field. Most research on L2 learners who spend time abroad focuses on university-age students who go abroad for one semester or one academic year to study (see Schauer, 2009 for a review). The current study includes not only students in a study abroad program, but also expatriates who need to learn the L2 for communication in the workplace. They constitute a learner sample with much more diverse backgrounds that has not been typically investigated in the literature.
Before we review the relevant literature on L2 pragmatic development, particularly in the study abroad context, it is helpful to define important terms and concepts. A request is a directive act performed to get the hearer to do something that is to the speaker’s benefit and at the cost of the hearer (Searle 1969). Modifiers are defined as linguistic devices that are employed to reduce the offence of a face-threatening act (see Brown and Levinson, 1987). In this way modifiers are important for expressing “adresssee-oriented meaning” and maintaining good social relationships (Coates, 1987: 120-121). Modifiers are often categorized into two broad groups according to their relative locations within the speech act. Internal modifiers occur within and make up an integral part of the head act while external modifiers occur in the immediate linguistic context of the head act as supportive moves. Internal modifiers can be of two types. Syntactic downgraders include conditional structures, negation, or use of past tenses with present time reference. Lexico-phrasal downgraders include such linguistic means as politeness markers, hedges, and understaters (see Blum-Kulka, House and Kasper, 1989).

According to Brown and Levinson (1987), since requests may pose a threat to the hearer’s negative face, i.e. the freedom of action and freedom from imposition, the speaker has to mitigate the illocutionary force of his or her utterance to protect the hearer’s autonomy. In European languages modifiers commonly used for this purpose may include syntactic modification such as negative or modal structures as distancing elements and hedging devices (see Blum-Kulka and Olshtain 1984). Nonetheless, Brown and Levinson’s concept of negative face has not been supported by data from non-European languages and cultures that lack an individualistic orientation (e.g. Gu, 1990; Ide 1989; Mao, 1994; Matsumoto 1988; Nguyen & Ho, 2013; Vu, 1997, 1999; Wierzbicka, 1985). For instance, several researchers have argued that given the preference for involvement and sincerity over personal distance in Vietnamese culture, negative face seems to be of little importance and does not adequately account for verbal interaction by Vietnamese speakers. Face-saving may not also be the main driving factor that explains an individual’s social behaviour in this culture where emphasis is placed more on marking social standing in relation to others in the community (Nguyen & Ho, 2013; N. Pham, 2008; Vu, 1997, 1999). In a recent study we found that request modifiers are used not so much to save negative face as to show conformity to social expectations (Nguyen & Ho, 2013). In particular, since Vietnamese culture underscores both hierarchical social structure and social harmony, address terms, honorifics and modal particles serve as important mitigating devices. On the other hand, distancing elements such as disarmers and imposition minimizers were scarcely used. Indeed, Vu (1997, 1999) has argued that a politeness theory that may effectively account for verbal behaviour in Vietnamese must consider how language is used to both index social relationships (i.e. a normative view of politeness) and achieve the interlocutors’ communicative goal in the specific speech event (i.e. a strategic view of politeness) (see Hill et al. 1986 for a similar discussion of discernment and volition in Japanese culture).

Previous studies have shown that the appropriate use of speech act modifiers in the L2 may be daunting to learners regardless of their proficiency levels and first language (L1) backgrounds. Compared to native speakers (NS), they tend to underuse internal modifiers (Biesenbach-Lucas, 2007; Hassall, 2001; Hendriks, 2008; House & Kasper, 1987; Kasper, 1981; 1982; Nguyen, 2008; Olshtain & Cohen, 1983; Otçu & Zeyrek, 2006; Rintell, 1981; Trosborg, 1995; Woodfield, 2008). According to Hassall (2001), internal modifiers tend to contribute only minimal propositional meaning to the speech act; hence, they are less likely to be attended to by learners. Adding internal modifiers may also increase the structural complexity of the speech act, thus requiring more processing effort on the part of learners (Hassall, 2001; Nguyen, 2008). This may cause considerable difficulty to lower proficiency learners who do not develop a complete control over complex structures.

Several studies have also shown that high proficiency learners tend to overuse external modifiers, thus producing verbose speech acts (Blum-Kulka, 1991; Blum-Kulka & Olshtain, 1986; Cenoz & Valencia, 1996; Edmondson & House, 1991; Faerch & Kasper, 1989; Hassall, 2001; House, 1988; House & Kasper, 1987; Warga, 2004; Yu, 1999) while others found the contrary (Hill, 1997; Hutz, 2006; Nguyen, 2008; Otçu & Zeyrek, 2008; Trosborg, 1995). Interestingly, this verbosity is more evident in high-intermediate learners than in advanced learners (Ellis, 2008). Various explanations for this phenomenon have been attempted. House and Kasper (1987: 1283) consider this as a sign of learners reacting “sensitively to face-threatening situations” due to “being unsure of their linguistic and social competence” in English. Ellis (2008), on the other hand, assumes that verbosity may either reflect a desire on the part of learners to display their linguistic competence as now an adequate proficiency level makes it possible for them to do so, or their desire to mark a foreigner role in certain situations. Compared to internal modifiers, external modifiers carry more explicit propositional meaning and thus are more noticeable to learners. They also do not form an integral part of the
Concerning pragmatic development, research has found that higher proficiency learners tend to mitigate their requests more frequently as compared to their lower proficiency peers thanks to a greater degree of control over the L2 (Felix-Brasdefer, 2007; Hill, 1997; Otçu & Zeyrek, 2006; 2008; Rose, 2000; Trosborg, 1995; Warga, 2004). For example, Felix-Brasdefer (2007) found that advanced learners of Spanish displayed a more native-like use of conditional forms to internally modify their requests than their intermediate and beginner counterparts. Similar findings were reported in Otçu & Zeyrek (2006) who found that higher proficiency Turkish learners of English employed internal modifiers more frequently than the lower proficiency group. A steady increase in the use of external modifiers by higher proficiency Austrian learners of French as compared to the less proficient learners was also found in Warga (2004), mirroring the findings of Hill (1997) and Rose (2000).

As learners become more proficient in the L2, they also tend to improve their use of lexico-phrasal modifiers. Otçu and Zeyrek (2008) examined requests by Turkish lower intermediate and upper intermediate learners of English. They found a greater use of lexico-phrasal downgraders among the more proficient learners, similarly to the NSs. Syntactic modifiers, on the other hand, may be acquired later than lexico-phrasal modifiers. For example, Woodfield (2008) found that her German learners of English employed syntactic means considerably less frequently than lexical means when modifying their requests. The fact that lexicalized modifiers were abundant in the learners’ data whereas grammaticalized modifiers were rare suggests that the latter might be more difficult to acquire. These findings are congruent with findings from studies on other speech acts such as disagreements (Salsbury, 2000; Salsbury & Bardovi-Harlig, 2000) and criticism (Nguyen, 2008). Overall, these studies support Meisel, Clahsen and Pienemann’s (1981) Complexification Hypothesis, which holds that the order of acquisition of L2 forms is dependent on their structural complexity and the processing demands involved. Since syntactically complex structures are more cognitively demanding, they are usually acquired later than simpler structures, which require a minimum of processing capacity.

Other studies suggest that pragmatic development may not always be linear towards the native speaker norms. Otçu and Zeyrek (2008) found that their lower intermediate learners approximated NS use of external modifiers more closely than the upper intermediate group. These findings are supported by those of studies on other speech acts. For example, Nguyen (2008) found a higher frequency of use of external modifiers for criticism by intermediate learners, which brought them closer to the target group than their high beginning and advanced peers. Hassall (2006), observing his own use of leave-taking formulas in Indonesian, found that his use of the strategy permisi (“Excuse me!”) and dulu statement changed non-linearly as his knowledge of Indonesian pragmatics was reconstructed. For instance, his initial avoidance of dulu was replaced by his infrequent use of this feature after two weeks in the TL environment, followed by subsequent avoidance in the following 4 weeks and finally by more increasing use.

Recently, a growing number of studies have focused on the impact of the sojourn in the TL community on learners’ pragmatic ability (Barron, 2003; 2006; Bataller, 2010; Bella, 2012; Cohen & Shively, 2007; Felix-Brasdefer, 2004; Hassall, 2006; Schauer, 2004; 2007; 2008; 2009; Shively, 2011). Findings of these studies have shown that learners generally become more aware of native pragmatic norms over their course of sojourn. Barron (2003; 2006) reported an increased use of request modifiers for 33 Irish learners of German after studying for one year in Germany. Particularly, they employed a greater number of both syntactic and lexico-phrasal downgraders. Although some aspects of their use of mitigation still fell short of native-speaker competence, this study shows that the study abroad program had positive impacts on learners’ pragmatic development. Cohen and Shively (2007) examined the effects of speech act strategy instruction on study-abroad students who spent one semester in a Spanish or French speaking community. It was found that although the instructed learners still lagged behind the NSs in their frequency of use of “query preparatory with verbal downgrading,” they demonstrated an increased awareness of mitigating requests over time. Similar findings were reported in Schauer (2007; 2009) who found that study-abroad German learners of English developed a much broader repertoire of downgraders as compared to at-home learners.

One of the determinants of learners’ pragmatic improvement is the length of residence in the TL environment (Barron, 2003; 2006; Felix-Brasdefer, 2004; Schauer, 2004; 2006). In Barron’s studies (2003, 2006), some pragmatic elements were not acquired until very late in the learners’ course of study abroad, suggesting that pragmatic awareness increased with time spent in the host country. Schauer (2004) was among the few studies that have directly measured the effects of length of stay. She observed the pragmatic
development of German learners of English over a course of one academic year at a British university. Comparing data collected shortly after the learners’ arrival, in the middle of their stay and shortly before they returned home, Schauer found a link between the learners’ acquisitional sequence of downgraders and their lengths of stay in the TL community. Felix-Brasdefer (2004) compared four groups of learners of Spanish with lengths of residence in the target context varying from one to 30 months. His study revealed that an approximation to NS pragmatic norms could only be achieved after a minimum of 9 months spent in the host community. These findings are supported by Schauer (2006) who found that after 9 months in Great Britain, her learners had achieved the same error recognition scores for pragmatic infelicities as the NSs.

A study by Bella (2012), however, raised the question of the relative effects of length of residence and intensity of interaction with the NS. Bella compared two groups of advanced learners of Greek: one with extended length of residence in the L2 environment but limited opportunities for interaction with NS and one with more frequent opportunities for interaction but limited length of residence. The results showed that the latter group exhibited a more native-like behavior with regards to external modification and some aspects of internal modification of requests. This study suggests that the relative effects of quantity and quality of exposure on pragmatic development remain a question for further investigation (also see Kasper & Rose, 2002 for similar discussion).

Overall, the few available studies to date have indicated that although learners’ pragmatic competence may improve after a relatively short time in the study-abroad country (e.g. after 3 months of sojourn as reported in Hassall, 2006), a sojourn of at least 9 months is critical for achieving considerable improvement. Given the limited evidence, however, this question deserves future research attention.

Informed by the literature on the acquisition of L2 request modifiers above, this study addresses the three following research questions:

In what way do the learners differ from the NSs in their use of request modifiers?
What effect does proficiency have on the learners’ use of request modifiers?
What effect does length of stay have on the learners’ use of request modifiers?

2. Methodology

2.1. Participants

Eighteen learners of L2 Vietnamese at low and high proficiency levels participated in this study. At the time of data collection, the learners were taking Vietnamese courses in language schools in Hanoi. They were randomly selected from a larger pool of learners who responded to the researchers’ advertisement for recruitment of research participants. The low proficiency group (hereafter referred to as “Low Group”) comprised eight learners who were learning Vietnamese at the pre-intermediate and intermediate levels. The high proficiency group (hereafter referred to as “High Group”) included 10 learners who were enrolled in the upper-intermediate and advanced courses of Vietnamese. Since there were no standardized tests of Vietnamese as L2, the learners’ proficiency levels were determined on the basis of the levels of the courses of Vietnamese they were undertaking and by their self-ratings. Eleven of the learners were female and seven were male, whose ages ranged from 19 to 44.

The learners came from various first language (L1) backgrounds, with five Polish NSs, three Russian NSs, one French NS, one Laotian NS, four NSs of different dialects of Chinese and four NSs of different varieties of English. The learners varied greatly in their lengths of study of Vietnamese. Two had been learning Vietnamese for less than one year, 11 had been learning the language between one and three years, and five had been learning it from three years onward. The learners’ lengths of residence in Vietnam also varied greatly, since they came with different purposes. Eight of them were language exchange students who were in the country for a short stay, ranging between six and eight months, to enhance their language skills. On the other hand, three of them had been living in Vietnam for a relatively extended period, ranging between three and four years, for tertiary education. Seven came to work with their lengths of stay varying between two years and 11 years.
The learners’ bio-data revealed that although the learners were not living with Vietnamese families or friends, many of them had had substantial exposure to Vietnamese use outside the classroom, mostly via interaction with Vietnamese NS friends and mass media such as Vietnamese TV programs and newspapers. Informal communication with the learners revealed that many of them were not explicitly taught how Vietnamese NSs make requests in different scenarios. Table 1 presents general bio-data of the learners in aggregate while Table 2 (overleaf) presents details about individual learners’ lengths of residence and proficiency levels. Eight learners who had been staying in the host country between six and twelve months were streamed into the ‘Short-stay’ group and 10 who had been staying from two years and above were placed into the ‘Long-stay’ group. It should be noted, however, that length of stay overlaps to some extent with proficiency. Therefore, the results reported with regard to these two variables in the subsequent sections should be treated with caution.

In addition to the learners, nine NSs of Vietnamese were conveniently sampled to provide baseline data. At the time of data collection, they were full time English language major students of a university in Hanoi. Eight of them were female and one was male. Their ages ranged between 21 and 22. They were originally from various parts in Northern Vietnam.

### 2.2. Data collection

Six role-play scenarios were designed to elicit requests and the informants’ performance was audio-recorded. Some of the scenarios were adapted from Blum-Kulka and Olshtain (1984) and Hassall (2003). The role-play was selected because it allows for impromptu speech production in conversational sequences, thus sharing a number of similarities with natural speech production (Kasper, 2008). The scenarios varied in the relative power between the speaker and the hearer but not in the social distance between them. They include: (1) borrowing a computer from an older friend, (2) borrowing lecture notes from a classmate, (3) asking a roommate to return a book to the library, (4) asking a teacher to write a letter of recommendation, (5) asking a teacher for a deadline extension, and (6) asking a supervisor to change the date of an upcoming meeting. Scenarios 1 through 3 described an equal power relationship (request directed at a friend), while the relationship described in Scenarios 4 through 6 is characteristic of an unequal power (request directed at a lecturer/ supervisor). The social distance, however, was kept constant: all the scenarios described a close relationship between the speaker and the hearer. The scenarios also varied in their degrees of imposition. However, due to space constraints, this contextual variable is not addressed in the present paper.
Table 2: Individual learners’ length of stay and proficiency level

<table>
<thead>
<tr>
<th>Participants</th>
<th>Actual length of stay (in month)</th>
<th>Group</th>
<th>Level of proficiency</th>
<th>Purpose of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>P6</td>
<td>6</td>
<td>Short stay</td>
<td>Low</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P7</td>
<td>6</td>
<td>Short stay</td>
<td>Low</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P9</td>
<td>6</td>
<td>Short stay</td>
<td>Low</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P1</td>
<td>8</td>
<td>Short stay</td>
<td>High</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P10</td>
<td>8</td>
<td>Short stay</td>
<td>High</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P14</td>
<td>8</td>
<td>Short stay</td>
<td>Low</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P15</td>
<td>8</td>
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<td>Low</td>
<td>Language exchange</td>
</tr>
<tr>
<td>P5</td>
<td>12</td>
<td>Long stay</td>
<td>High</td>
<td>Working</td>
</tr>
<tr>
<td>P16</td>
<td>24</td>
<td>Long stay</td>
<td>High</td>
<td>Working</td>
</tr>
<tr>
<td>P17</td>
<td>24</td>
<td>Long stay</td>
<td>Low</td>
<td>Working</td>
</tr>
<tr>
<td>P18</td>
<td>27</td>
<td>Long stay</td>
<td>High</td>
<td>Working</td>
</tr>
<tr>
<td>P3</td>
<td>36</td>
<td>Long stay</td>
<td>High</td>
<td>Attending university</td>
</tr>
<tr>
<td>P4</td>
<td>36</td>
<td>Long stay</td>
<td>High</td>
<td>Attending university</td>
</tr>
<tr>
<td>P8</td>
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<td>P11</td>
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<td>High</td>
<td>Working</td>
</tr>
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<td>P13</td>
<td>48</td>
<td>Long stay</td>
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<td>Attending university</td>
</tr>
<tr>
<td>P2</td>
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</tr>
<tr>
<td>P12</td>
<td>132</td>
<td>Long stay</td>
<td>High</td>
<td>Working</td>
</tr>
</tbody>
</table>

Before being used for the present study, the role-plays were piloted with another group of native speakers of Vietnamese. Adjustments were then made to the instruction and scenario descriptions to enhance their comprehensibility. Also, because participants may find it difficult to perform in a role-play if the tasks are not realistic (see Bonikowska, 1988; Kasper, 2008), before the role-plays took place, the participants were asked to rate the extent to which they felt they were able to imagine themselves in each scenario, using a Likert 5-point scale. Results indicated that the informants scored quite high on all scenarios (means varying from 4.2 to 4.7), suggesting that they were familiar enough with the scenarios. Based on this result, all scenarios were kept for data collection. Each informant then role-played in Vietnamese for approximately one hour with one of the authors.

2.3. Data analysis

The role-play conversations were transcribed and data were then coded, using Blum-Kulka et al.’s (1989) taxonomy with slight adaptations to fit the data of this study. The revised taxonomy of request modifiers is presented in the Appendix with illustrative examples taken from the NS data of the current study. The two authors coded the data independently and then cross-checked their coding until a full agreement was achieved.

3. Results and discussion

To answer the research questions, comparisons were made between (1) the learners as a whole group and the NSs and (2) between the two proficiency groups of learners with reference to the NS baseline group to examine the extent to which each proficiency group approximated or deviated from the TL norms. The statistical procedures employed in the present study included the independent t test and one-way ANOVA. Where a significant difference was found among the three groups of participants, LSD post hoc ANOVA was also used to find in which comparison the difference lay.

3.1. Research Question 1: In what way do the learners differ from the NSs in their use of request modifiers?

Results of independent t tests show that the NS and NNS groups differed only in their use of internal modifiers but not external modifiers, with the NSs far exceeding the NNSs [t(25) =2.27, p =.032]. When looking at individual external modifier types, it was found that the NSs produced considerably more steers (i.e. supportive moves for checking the hearer’s availability) [t(25) =2.30, p =.047] and committers (i.e. expression of compromise with the hearer’s condition) [t(25) =2.50, p =.019], whereas the NNSs used significantly more pre-sequences (i.e. announcement of intention) [t(25) = 3.58, p =.001] and disarmers (i.e. acknowledgement of imposition on the hearer’s) [t(25) = 2.49, p =.020]. Concerning internal modifiers, the
NSs outperformed the NNSs in their use of politeness markers (including address terms and honorifics) \([t(25) = 3.48, p = 0.002]\) and appealers (such as alignment markers and tag questions) \([t(25) = 5.48, p < 0.001]\). The NNSs, on the other hand, made use of internal modifiers which were absent in the NS data, such as past tenses, progressive aspect, negation and conditional clauses. For example, one learner employed past tense and another used progressive aspect to modify the illocutionary force of her requests. Four other learners employed conditional clauses. Table 3 summarizes descriptive statistics for means of selected modifiers as used by the two groups.

The fact that the NSs used more steers while the learners used more pre-sequences showed that the NS requests were less abrupt as they had taken into consideration the hearer’s availability before addressing the request to them. In comparison, the learners only made announcement that they wished to make a request.

### Table 3: Descriptive statistics for means of selected modifiers as used by the NSs and NNSs

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External modifiers</strong></td>
<td></td>
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</tr>
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<td>NS</td>
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<td>NNS</td>
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<td>Steers</td>
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<td>NNS</td>
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<td>.14</td>
<td>.11</td>
<td></td>
</tr>
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<td>Pre-sequences</td>
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<tr>
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</tr>
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<td><strong>Internal modifiers</strong></td>
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<td>Politeness markers</td>
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<td>NNS</td>
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<tr>
<td>Appealers</td>
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<td>NNS</td>
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<td>.09</td>
<td></td>
</tr>
<tr>
<td><strong>Total use</strong></td>
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</tr>
<tr>
<td>NS</td>
<td>9</td>
<td>3.29</td>
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</tr>
<tr>
<td>NNS</td>
<td>18</td>
<td>2.90</td>
<td>.73</td>
<td></td>
</tr>
</tbody>
</table>

Since requests are at the cost of the hearer, they are considered dispreferred actions and are often delayed by means of hesitations or supportive moves (Al-Gahtani & Röver, 2012; Taleghani-Nikazm & Huth, 2010). The learners’ infrequent use of steers, therefore, did not allow them to successfully lay the groundwork for projecting the upcoming request. For example, the learner below failed to perform check on the interlocutor’s availability before producing a request, leading to a rejection from the latter (Scenario 1).

(1)

L:  Chị ơi, em có thể sử dụng máy tính chị mấy tiếng không?
    Elder sister vocative younger.sib can use computer elder sister few hours no

‘Can I borrow your computer for a few hours?’
Máy tính em bị hỏng
‘Mine broke down.’

I: Nhưng mà chị đang dùng máy tính em không thấy à?
‘But I’m using it, don’t you know?’

The NSs greater use of committers showed that they were more willing to compromise with the hearer’s condition, making it easier for the hearer to perform their request. On the other hand, the learners’ preference for disambers showed their acknowledgement of the cost to the hearer. It should be noted, however, that disambers were almost absent in the NS data. This can be explained by the lack of concern for personal space in the Vietnamese culture (Nguyen, 2008; Nguyen & Ho, 2013). The Vietnamese culture is characterized by a collective orientation that emphasizes involvement, interference, interdependence and a strong sense of familial duties (see Tran, 1995; 2001). Therefore, in this culture the act of requesting may not necessarily always be seen as imposing on the hearer’s autonomy (see the introduction section). The learners’ preference for disambers suggests that they may not be fully aware of this Vietnamese pragmatic norm.

With respect to internal modifiers, the learners also lagged far behind the NSs. This finding echoed the findings of many earlier studies, showing that internal modifiers might cause learners considerable difficulty (e.g. Hendriks, 2008; Otçu & Zeyrek, 2006; Woodfield, 2008). As suggested in previous studies, this is because internal modifiers lack transparent pragmatic meanings and possibly add more structural complexity to the speech act (Hassall, 2001; Nguyen, 2008). The finding of the present study indicates that internal modifiers may be challenging not only for learners of inflected languages such as English and German (as reported in Hendriks, 2008; Otçu & Zeyrek, 2006; Woodfield, 2008), but also for learners of an isolating language like Vietnamese, in which the addition of internal modifiers does not result in morphological changes to the structure and increase its complexity. The difficulty in the latter case may stem from the fact that internal modifiers do not operate, both formally and functionally, in the same way in the learners’ L1 and the TL (see Hassall, 2001, for further discussion).

Indeed, this was evident in the learners’ inappropriate use of such modifier types that are characteristic of the Vietnamese language and culture. For example, the learners underused politeness markers (including address terms and honorifics) and appealers whereas many of them relied on verb tenses, negation and conditional clauses to internally modify their requests. This is because verb tenses (e.g. past tense with present time reference) typically function as internal modifiers in English (Blum-Kulka et al., 1989). However, this is not the case for Vietnamese, in which verb tenses only indicate or emphasize the time factor. As Vũ (1997, 1999) pointed out, Vietnamese NS requests are more typically ‘internally’ modified by means of politeness markers such as address terms, verbs implying the speaker’s modesty and humility such as làm ơn [do a favour], xin [beg], cho [give], họ [help], the honorific ạ. Another commonly used internal modifiers type includes appealers that are alignment markers (e.g., nhé, với, cái, đi). In comparison, the use of the above linguistic devices might not be the case for English requests. The learners’ infrequent use of politeness markers in the present study is incongruent with findings of some previous studies that indicate an inclination for L2 learners to favour this modifier type over other types of internal modification (e.g. Faerch & Kasper, 1989). Presumably, this incongruence results from the fact that the politeness markers that are discussed in the above studies are limited to the single phrase please in English or its equivalents in other languages (such as bitte in German). In contrast, politeness markers in the present study refer to a wider variety of linguistic devices (see above), the use of which is governed by socio-cultural norms of the Vietnamese society. In particular, address terms indicate social roles and status in relation to other people, which is an important aspect of a collectivism-oriented society. Honorifics reflect the high value that the Vietnamese people place on modesty, humility and respect (T. Pham 1995). Modal particles that are alignment markers are an important means for solidarity building (Vu 1997, 1999).

In sum, as competent L1 users, the learners may enjoy a great deal of knowledge of pragmatic universals (Kasper, 1992) and thus may already be very well aware that a speech act should be modified.
However, the different operations of modifiers and the different form-function mappings in their L1 and the L2 might pose certain challenges to them.

3.2. Research Question 2: What effect does proficiency have on the learners’ use of request modifiers?

Table 4 summarizes descriptive statistics for means of selected modifiers as used by the NSs, Low and High groups. First, results of a one-way ANOVA show a significant difference among the three groups in their total use of modifiers \[F(2, 26) = 4.78, \ p = .018\]. Posthoc with LSD analysis shows that this difference lay between the NS group with the Low group (\(p = .011\)) and between the two learner groups (\(p = .013\)) whereas there was no difference between the NS group and the High group (\(p > .05\)). Specifically, both the NS and High groups produced a greater number of modifiers than the Low group.

When looking at their use of two major categories of modifiers, namely external and internal, the three groups were found to differ only in their use of internal modifiers \(F(2, 26) = 6.70, \ p = .005\). Particularly, the NSs and high proficiency learners employed a considerably greater number of internal modifiers as compared to the low proficiency learners \(p = .002; \ p = .014\), respectively. There was no difference between the NSs and the high proficiency learners \(p > .05\) (Table 4).

With respect to the various types of external modifiers, the three groups differed significantly in their use of steers \(F(2, 26) = 4.89, \ p = .016\), pre-sequences \(F(2, 26) = 3.78, \ p = .038\), disarmers \(F(2, 26) = 5.63, \ p = .010\) and understatements (i.e. expressions that emphasize the minimal cost of the act) \(F(2, 26) = 3.96, \ p = .033\). Posthoc analyses show that the NSs used far more steers than both learner groups (NSs vs. High group: \(p = .032\); NSs vs. Low group: \(p = .006\)) whereas there was no difference between the two learner groups (\(p > .05\)) (see Table 4).

However, the NSs produced fewer pre-sequences than both groups of learners (NSs vs. High group: \(p = .021\); NSs vs. Low group: \(p = .033\)). Again, there was no difference between the two learner groups in their use of pre-sequences (\(p > .05\)). The Low group produced more disarmers than both the NSs (\(p = .004\)) and their higher proficiency peers (\(p = .018\)) while there were no differences between the two latter groups (\(p > .05\)) (Table 4). Regarding understatements, the High group exceeded the Low group (\(p = .010\)) while there was no difference between them and the NSs (\(p > .05\)) as well as between the other two groups (\(p > .05\)).

Concerning the various types of internal modifiers, the three groups differed significantly in their use of politeness markers \(F(2, 26) = 9.4, \ p = .001\) and appealers \(F(2, 26) = 22.5, \ p < .001\). Posthoc analyses show that both learner groups produced fewer politeness markers than the NSs (NS vs. High group: \(p = .030\); NS vs. Low group: \(p < .001\)). The High group also made use of more politeness markers than their lower proficiency peers (\(p = .037\)). Both learner groups also produced fewer appealers than the NSs (\(p < .001\) for both comparisons) while not differing from each other (\(p > .05\)) (see Table 4).

Overall, the above results indicate the effects of the learners’ proficiency levels on their use of certain types of request modifiers. First, the High group’s total use of modifiers far exceeded that of the Low group. The former group also internally modified their requests more often than the latter group. The fact that the High group outperformed their lower proficiency peers in these two aspects while not differing from the NS use suggests their closer approximation to the NS norms. When it came to individual modifier types, the High learners approximated the NS infrequent use of disarmers and frequent use of understatements, also suggesting proficiency effects in these areas. As for the frequency of politeness markers and appealers, although the High learners produced far fewer than the NS, they produced more than the Low proficiency learners. Especially, a close examination of these two types seems to suggest a more native-like use by the more proficient learners. For instance, they correctly added address terms and honorifics in conformity to the speaker-hearer relationship. They also successfully employed politeness markers and appealers with similar mitigation function to the NSs.
Table 4: Descriptive statistics for means of selected modifiers as used by the NS, High and Low groups

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External modifiers</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Low</td>
<td>8</td>
<td>1.89</td>
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<tr>
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<td><strong>Total use</strong></td>
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</tr>
<tr>
<td>NS</td>
<td>9</td>
<td>3.29</td>
<td>.49</td>
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</tbody>
</table>

In the following examples (Scenario 1), The High learners addressed higher status interlocutors respectfully (Example 2) while addressing equal status interlocutors properly (Example 3). ‘Respectfulness’ (lễ phép) and ‘propriety’ (đúng mức) are two important concepts in modern Vietnamese politeness (Vu 1997; 1999). The former involves showing respect to people of higher power whereas the latter involves showing proper respect to people of equal and lower power and keeping distance vs. solidarity in conformity with the nature of the given speaker-hearer relationship. The High learners’ pragmatic choice, therefore, reflected the ways the NSs addressed their partners in corresponding relationships.

(2) *Em mượn máy tính của chị một chút!* 
younger.sib borrow computer of elder sister a bit 
‘Please let me borrow your computer for just a moment!’

(3) Bạn ơi cho tôi mượn máy bạn cái! 
Friend VOC give I (casual) borrow computer friend Alignment marker 
‘My friend, please let me borrow your computer!’
In addition, the High learners were able to put more weight on solidarity and power factors to tailor the degree of their respectful politeness to different higher status people. For example, they used honorifics for their teacher (Example 4, Scenario 4), but not for an older friend (Example 2).

(4) Cô chỉ viết em sinh viên giỏi nhất
Teacher just write younger.sib student best
‘You only need to write that I’m the best student’
trong lớp thời cô a!
in class just teacher honorifics
‘in the class!’

Generally speaking, honorifics would be desirable when a lower status person addresses a higher status person. However, in case the status difference is not too large (e.g. a younger friend to an older friend, a junior colleague to a senior colleague, etc.) and especially if the relationship is close, their use would be considered unnecessarily khách sáo (ceremonious) and xa cách (distant). The High learners, while showing sufficient respect to their older friend by using appropriate address terms, successfully saved themselves from going unnecessarily formal in a close relationship.

What is more, like the NSs, they were able to appeal for H’s cooperation and support by using appealers in the form of alignment markers such as cái, đi, nhé, and politeness markers such as giúp, xin, thus avoiding giving H the impression that they were imposing their will on H (examples 5 – Scenario 3 and 6 – Scenario 2).

(5) Chị giúp em đi!
Elder sister help younger.sib Alignment marker.
‘Sister, please help me!’

(6) Anh xin mượn nhé!
Elder brother beg borrow Alignment marker.
‘Please let me borrow it!’

As Vũ (1997) pointed out, address terms and appealers constitute a majority of Vietnamese politeness devices and are ranked higher by NSs on the politeness continuum as compared to other devices. The High learners’ employment of these modifier types, therefore, represented an NS approximation.

In contrast, evidence of pragmatic failure was abundant in the Low group’s data. In the following examples, they either misused or dropped address terms and honorifics when interacting with their teachers, thus failing to show status-appropriate politeness (examples 7, 8 – Scenario 4). When interacting in close and status equal relationships, they adopted an unnecessarily formal and distant speech style by making an inappropriate choice of address terms (example 9 – Scenario). Additionally, they failed to employ alignment markers to appeal for their friends’ cooperation, thus giving an unintended dogmatic tone (example 10 – Scenario 3).

(7) Em muốn cô giáo viết thư giới thiệu của em.
younger.sib want teacher write letter introduce of younger.sib
‘I want you to write me a letter of reference.’

(8) L: Xin lỗi tôi muốn chị giúp tôi có học bổng
Sorry I (formal) want elder sister help I (formal) have scholarship
‘Sorry I want you to help me to obtain a scholarship.’
Chị viết được thư giới thiệu?
Elder sister write possible letter introduce?
‘Can you write me a letter of reference?’
I: Nhưng mà khi nào em cần cái thư đấy?
But when younger.sib need CLF letter that?
L: Tuần sau thứ hai hết hạn.
Week after Monday due.
(9) Tôi có quyển sách ngày mai
I (formal) have CLF book tomorrow
mà tôi không đi học
but I (formal) not go study
em trả hộ quyển sách thư viện được không?
younger.sib return help CLF book library possible no?
(10) Em muốn chị trả quyển sách của em vào thư viện.
Younger sibling want elder sister return CLF book library for me.

To sum up, the above findings offered evidence of pragmatic development for the High group and were consistent with findings of previous studies (e.g. Felix-Brasdefer, 2007; Hill, 1997; Otcu & Zeyrek, 2006; 2008; Rose, 2000; Trosborg, 1995; Warga, 2004; Woodfield, 2008). They showed that although some areas still remained difficult, as the learners reached a higher level of proficiency, they also became more aware of the NS norms, thus were more able to successfully negotiate their requests by means of various modifiers.

3.3. Research Question 3: What effect does length of residence have on the learners’ use of request modifiers?
Table 5 summarizes descriptive statistics for means of selected modifiers as used by the NSs, Long-stay and Short-stay groups. Results of a one-way ANOVA show that the three groups significantly differed only in their use of internal modifiers [F(2, 26) =3.62, p =.042]. Posthoc with LSD analysis shows that this difference lay between the NS group and the Short-stay group (p=.013), with the former producing far more internal modifiers. There was no difference between the two learner groups (p>.05) and between the NS group and the Long-stay group (p >.05).

Concerning different types of external modifiers, the three groups differed significantly in their use of steers [F(2, 26) =4.43, p =.023] and pre-sequences [F(2, 26) =5.39, p =.012]. Posthoc analyses show that the NSs used far more steers than both learner groups (NSs vs. Short-stay learners: p=.014; NSs vs. Long-stay learners: p=.019) whereas there was no difference between the two learner groups (p>.05). However, the NSs produced fewer pre-sequences than the Short-stay group (p=.003). There was no difference between the two learner groups (p >.05) and between the Long-stay group with the NS group in their use of pre-sequences (p >.05) (Table 5).

The three groups also significantly differed in their use of politeness markers [F(2, 26) =7.74, p =.003] and appealers [F(2, 26) =25.2, p <.001]. Posthoc analyses show that both learner groups produced fewer politeness markers than the NSs (NS vs. Short-stay learners: p=.001; NS vs. Long-stay learners: p = .022). There was no difference between the two learner groups (p>.05). Both learner groups also lagged behind the NSs in their use of appealers (p <.001 for both comparisons) but the Long-stay group far exceeded their Short-stay peers (p =.048) (see Table 5).

Overall, the above findings generally suggested some effects for the length of residence in the TL culture. Specifically, although the Long-stay learners did not produce a greater total of internal modifiers
than their Short-stay peers, their frequency of use approximated the NS use more closely. When it came to individual external modifier types, the Long-stay group was more similar to the NSs in their use of pre-sequences. Regarding individual internal modifier types, although they produced far fewer politeness markers and appealers than the NSs, they outperformed the Short-stay group in their use of the latter, suggesting a better awareness of this target pragmatic feature.

**Table 5:** Descriptive statistics for means of selected modifiers as used by the NS, Long-stay and Short-stay groups

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External modifiers</strong></td>
<td></td>
<td></td>
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<tr>
<td>Short-stay</td>
<td>8</td>
<td>1.94</td>
<td>.47</td>
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<tr>
<td>Long-stay</td>
<td>10</td>
<td>2.10</td>
<td>.56</td>
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<tr>
<td>NS</td>
<td>9</td>
<td>2.00</td>
<td>.36</td>
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<tr>
<td><strong>Steers</strong></td>
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<tr>
<td>Short-stay</td>
<td>8</td>
<td>.13</td>
<td>.13</td>
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<tr>
<td>Long-stay</td>
<td>10</td>
<td>.15</td>
<td>.09</td>
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<tr>
<td>NS</td>
<td>9</td>
<td>.38</td>
<td>.30</td>
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<tr>
<td><strong>Pre-sequences</strong></td>
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<tr>
<td>Short-stay</td>
<td>8</td>
<td>.13</td>
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<td>Long-stay</td>
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<tr>
<td>NS</td>
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<td><strong>Internal modifiers</strong></td>
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<td>Short-stay</td>
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<td>.73</td>
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<td>Long-stay</td>
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<td>1.01</td>
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<tr>
<td>NS</td>
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<td>1.29</td>
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<td>.25</td>
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<td>.39</td>
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<tr>
<td>NS</td>
<td>9</td>
<td>.61</td>
<td>.21</td>
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<td><strong>Appealers</strong></td>
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<tr>
<td>Short-stay</td>
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<td>Long-stay</td>
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<td>NS</td>
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<tr>
<td><strong>Total use</strong></td>
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<tr>
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<td>8</td>
<td>2.66</td>
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<tr>
<td>Long-stay</td>
<td>10</td>
<td>3.10</td>
<td>.72</td>
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<tr>
<td>NS</td>
<td>9</td>
<td>3.29</td>
<td>.49</td>
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</table>

These findings are not surprising since the study-abroad context has been documented to facilitate both the contextual familiarity and the acquisition of TL norms (see Kasper & Rose, 2002; Schauer, 2009). The reasons are obvious: in addition to formal language learning, learners in this context also benefit from numerous opportunities for using the language outside the classroom. Thus, if they take full advantage of the opportunities available to them, perhaps they can achieve a near-native level over time. In the present study, the Long stay group and the Short stay group appeared to differ not only in terms of their lengths of residence in the host country and thus probably the received amount of exposure to TL input but possibly also with respect to the intensity of their interaction with NSs (see Bella, 2012 for a similar discussion). The Long stay group comprised three learners who were undertaking their tertiary education in Vietnamese universities where Vietnamese language was the medium of instruction. The remaining learners in this group were expatriates working in the TL environment (see Table 2 in the previous section). Presumably, they may have had more abundant opportunities to interact with native speakers in the target language as compared to the Short stay group that consisted of language exchange students. As Barron (2006) pointed out, because of their individualized study programs, study-abroad students may have limited contact with the local people. In addition, since they are frequently placed in study programs with other study broad students, learners may interact more often with their fellow students than with native speakers. In the present study, although informal talks with learners from both groups of learners revealed their substantial exposure to the TL outside the classroom, due to their differentiated situations, their circumstances vis-à-vis input and
interaction may have differed greatly. Apparently, the above findings support those of previous studies regarding both the effects of both length of residence (e.g. Felix-Brasdefer, 2004; Schauer, 2004; 2006) and the intensity of interaction with NSs of the TL (e.g. Bella, 2012).

Despite some improvements in their pragmatic performance, however, the learners who had spent an extended period of time in the TL community still fell short of NS competence with regard to their use of various modifiers. This could be explained by a number of reasons. First, the effects of length of residence may have been confounded by proficiency effects because these two variables overlap to some extent. To put it more specifically, some low proficiency learners belonged to the Long-stay group and vice versa. Therefore, the results reported in this section should be treated with caution. Furthermore, their limited improvement may have also been caused by a lack of noticing of NS politeness strategies, which may not always be salient enough without being explicitly instructed. These findings indicate that it is necessary to train study-abroad students in the TL pragmatics before their departure in order to allow them to maximize the learning opportunities in the host country (see Cohen and Shiverly, 2007).

5. Conclusion
The present study allows us to draw several interesting conclusions about the impact of proficiency and length of residence in the TL environment on the acquisition of request modifiers by learners of L2 Vietnamese. The conclusions are necessarily preliminary, and limited by factors such as gender bias in the NS sample, different L1s among the learners of Vietnamese, and the as-yet unclear relationship between length of stay and the development of target language proficiency. Nevertheless, the data makes clear not only that there are differences in the ways learners of Vietnamese modify their requests as compared to native speakers, but also that the way learners modified their requests displayed greater native-like proficiency as time spent in the TL context increased. The study points towards fruitful avenues of further research that isolates issues such as the L1 of learners, or that focuses explicitly on the variable of time spent in the TL context.

Finally, the present study also offers important pedagogical implications. Previous research has documented that pragmatic knowledge is acquired slowly in naturalistic contexts (e.g. Bardovi-Harlig and Hartford, 1993; Bouton, 1994). In other words, mere exposure is insufficient for L2 pragmatic development. Although study-abroad contexts offer plentiful opportunities for input and interaction with the NS, learners may not always make good use of these opportunities or notice TL pragmatic norms available to them. Therefore, pragmatic instruction is crucial in order to raise the learners’ consciousness of form-function mappings and pertinent contextual variables they may otherwise overlook (Kasper and Schmidt, 1996). As a result, study-abroad programs should consider integrating training in cross-cultural pragmatic strategies to help learners make the most of their sojourns.

References


APPENDIX: A taxonomy of request modifiers in Vietnamese

EXTERNAL MODIFIERS: Supportive moves that occur before or after the head act.

a. Steers: Phrases that are used to prepare the hearer for the request. The speaker may do so by checking if the hearer is available to perform the request. Steers are used to avoid being abrupt and inconsiderate.

(1) Scenario 1
P1: Linh ơi mà đang chat với ai đấy?
Name VOC you (casual) PROG chat with who that?
‘Linh, who are you chatting with?’
I: À, tao đang chat với bạn trai tao.
Ah I (casual) PROG chat with boyfriend I (casual).
‘I’m chatting with my boyfriend.’
P1: Thế à, quan trọng không?
So YNQ important no?
‘Are you? Is it important?’

b. Pre-sequences: The speaker announces that they are going to make a request or checks if the hearer is willing to hear the request.

(2) Scenario 4
P4: Cô ơi có việc này em nhờ cô một tý
Teacher VOC have matter this younger.sib ask for help teacher one bit
‘Teacher, I have something’
‘that I need your help with.’

c. Grounders: Excuses, reasons or explanations that the speaker uses to justify their request and thus to appear reasonable.

(3) Scenario 5
P2: Cô ơi
Teacher VOC
‘Teacher,’

hôm nay em có hẹn với cô hôm nay young.sib have appointment with teacher
‘I have an appointment with you today’

nhưng mà tuần trước em không khỏe lắm nhưng mà week before young.sib no PASS well very
‘but I wasn’t feeling very well last week’

nên em vẫn chưa viết xong cô a.
so young.sib still not yet write finish teacher honorific.

‘so I haven’t completed my chapter yet.’

d. Disarmers: Utterances that the speaker uses to show their awareness of the pressure that the request may place on the hearer. The speaker might want to acknowledge the pressure and/or apologize.
(4) Scenario 5
P3:  
\[\text{Em biết cô vẫn là bận.}\]
\[\text{younger.sib know teacher still very be busy.}\]
‘I know you are very busy.’

\[\text{Nhưng mà em chưa xong được.}\]
\[\text{But younger.sib not yet finish possible.}\]
‘But I haven’t finished my chapter yet.’

e. Imposition minimizers: Utterances that the speaker uses to free the hearer from the imposition of the request.

(5) Scenario 4
P6:  
\[\text{Thế lúc nào mà cô thấy không bất tiện quá thì cô nhớ giúp em cô nhá?}\]
\[\text{So when that teacher see not inconvenient very then teacher remember help younger.sib teacher alignment marker?}\]
‘So when it’s not too inconvenient to you’

f. Committers: The speaker may want to minimize the cost for the hearer by expressing their compromise with the hearer’s conditions or offering to make it easier for the hearer to perform the act.

(5) Scenario 5
P9:  
\[\text{em sẽ cố gắng viết trong tuần này và em nộp cho cô tại vì tuần vừa rồi em bị ốm quá em chưa viết được trong tuần này em sẽ cố gắng gửi cho cô để cô comment ạ.}\]
\[\text{younger.sib will try write in week this and younger.sib submit for teacher to submit it to you because week last younger.sib PASS sick very ‘I haven’t been able to do it’}\]
‘I will try to write it this week’

\[\text{và em nộp cho cô vì em vừa rồi em bị ốm quá}\]
\[\text{and younger.sib submit for teacher because week last younger.sib PASS sick very}\]
‘to submit it to you’

\[\text{em chưa viết được trong tuần này em sẽ cố gắng gửi cho cô để cô comment a.}\]
\[\text{younger.sib not yet write possible ‘I haven’t been able to do it’}\]
‘I will try this week’

g. Understatement: The speaker may want to understate the request so as to convince the hearer of the minimal cost of the act. Understatements normally occur when the hearer shows hesitation to help.

(6) Scenario 1
P2:  
\[\text{Này Huyền cho tao mượn máy tính cái.}\]
\[\text{Attention seeker name let I (casual) borrow computer IMP}\]
‘Hey, Huyen, let me borrow your computer.’
I: O nhưng bây giờ tao
Surprise marker but now I (casual)
‘But I’m’
dang dùng mà.
PROG use stance marker
‘using it now’

P2: Tao chỉ viết 3 trang thôi.
I (casual) just write 3 pages only.
‘I only need it to write just three pages.’
Sau đấy mày dùng tiếp được không?
After that you (casual) use continue possible no
‘After that you can use it. Is that possible?’

h. Offers of compensation: The speaker may also reduce the cost for the hearer by offering the hearer compensation or a reward.

(7) Scenario 1
P3: Thôi thì chịu khó giúp tớ.
So bear difficulty help me (intimate).
‘So take trouble to help me.’
Có gì tớ sẽ giúp cậu sau.
Have what I (intimate) will help you (intimate) later.
‘I will help you later.’

i. Sympathy seekers: The speaker may want to appeal for the hearer’s sympathy so as to increase the chance of success of the request. This category is absent in Blum-Kulka et al. (1989) but has been added to fit data of this study.

(8) Scenario 3
P9: B4 thì chạy ra thư viện cũng nhanh mà.
B4 emphasis marker run to library also quick stance marker.
‘B4 is so close to the library.’
Hộ tớ tý.
Help me (intimate) bit
‘Help me’
de lâu thư viện nó ... cô thư viện cô ấy
keep long library it ... CLF librarian she
‘If I don’t return it, the librarian’
lại tính tiền thêm
again count money more
‘will ask me to pay more fine’
thi tớ chết mất
then I (intimate) die lose
‘I will sure die’
tớ đã lâu rồi.
I (intimate) PST keep long already.
‘It’s already overdue.’

j. Smoothers: The speaker may want to appeal for the hearer’s willingness to perform the act by offering the hearer a compliment/ appreciation or emphasising the hearer’s role.
(9) Scenario 1
P3: Mày ơi
You (casual) VOC
‘Hey’
Mày là bạn tốt của tao mà,
‘You’re my good friend.’
Đồng ý đi, giúp tao đi.
Agree IMP help me (casual) IMP.
‘Agree to help me, okay?’

k. Thanking: The speaker may want to increase the benefit for the hearer by expressing their gratitude to the hearer for the act, e.g. “Cảm ơn nhé!” (Thanks!) or “Em cảm ơn cô ạ” (Thank you, teacher!).

INTERNAL MODIFIERS: Occur within and form part of the head act
a. Politeness markers: including address terms and honorifics.
   Address terms in the Vietnamese language include kinship terms, titles, personal pronouns, and proper names occurring in alerters, subjects or other places in the utterances (Vu 1997). Address terms are important in the Vietnamese language because a ‘no-naming’ style (i.e. “nói trống không”) violates social norms, particularly when communicating with superiors and in formal contexts. Interlocutors make choices of address terms depending on the relative power and social distance between themselves and the wrong choice of address terms may threat H’s face. This means politeness is determined not only by the use or non-use of address terms, but also by the appropriate choice in conformity to social norms and speaker-hearer role relationships (Vu, ibid: 170). Note that Blum-Kulka et al. (1989) do not categorise address terms as request modifiers but since these linguistic features function as markers of politeness in Vietnamese, we classify them as a type of internal modifiers.
   Honorifics: Particles, honorifics, and verbs that express respect to H, e.g. vâng, dạ, ạ [honorifics], làm ơn [do favour], xin [beg], cho [give], hỗ [help], etc. This category is absent in Blum-Kulka et al. (1989) but has been added to fit our data.

b. Downgraders: Adverbial modifiers that help S to downgrade the act, e.g. một chút, một tý [one bit], etc.

c. Downtoner: Verbs and sentence modifiers that S uses to reduce the pressure their request may place on H such as có lẽ, có thể, chắc là [perhaps, possibly, maybe/ may, probably], etc.

d. Appealers: Particles or phrases S uses to call for H’s understanding and sympathy, e.g. nhé, với, đi, cái [alignment markers], được không? [possible no?]. This category is absent in Blum-Kulka et al. (1989) but has been added to fit our data.
PLANT-BASED NUMERAL CLASSIFIERS IN TAI DAM

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Abstract
Inanimate entities are basically classified into different categories based on their physical forms. The geometric shapes themselves are drawn from naturally occurring forms. They refer to plants, in their component parts (Conklin 1981). This paper aims to study numeral classifiers which are plant-based lexemes in Tai Dam or Black Tai spoken in Vietnam. The result of this study shows that classifications of inanimate objects are based on various parts of plants, namely, stalk/stick, leaf, fruit, seed, flower, tuber, and shoot. The extension of plant classes to other semantic domains is evident in the classifications of similarly shaped objects.

Keywords: numeral classifiers, lexicon, Black Tai

ISO 639-3 codes: blt, soa

1. Introduction
The primary dichotomy of the Tai classifier system is animate versus inanimate (Morev 2000). Animate classifiers are divided into human and non-human. The classification of inanimate nouns is mostly based on a perceptual basis, i.e., their observed characteristics like shape, size, and consistency. Inanimate entities are grouped according to their similar shapes. Conklin points out that the geometric shapes are derived from plants, in their component parts as detailed below:

Looking at the classes lexicographically, the abstract, geometric shapes which are the organizing principles of the categories can be seen as themselves drawn from the natural world. Not circles, spheres, lines, cubes, and golden rectangles have inspired these categories, but rather the categories are geometric generalizations derived from naturally occurring forms. They refer to plants, in their component parts. These shapes are generalized to encompass much of the material, and sometimes spiritual world.

(Conklin 1981:136)

Allan (1977) also notes that inanimacy covers a large number of classifiers. The commonest inanimate classifier is one for trees and wooden objects and the ‘tree’ classifier is frequently related to the class of long or saliently one-dimensional objects.

A large number of inanimate classifiers in Tai Dam or Black Tai, a language of Southwestern Tai (Li 1960), tend to draw heavily on plant parts. This paper, therefore, focuses on a semantic analysis of the plant-based numeral classifiers in Tai Dam. It attempts to show that the Tai Dam data is an example in support of Allen (1977).

Tai Dam refers to people dressed in black costumes. The original hometown of Tai Dam people was in Muang Thaeng (presently Dien Bien Phu in northwestern Vietnam) in the northern part of Laos which used to be under the Luang Prabang government (Sribusara 1987). A number of Tai Dam people migrated from Muang Thaeng to Thailand as prisoners of war. The forced movements took place during the reign of King Taksin (1767-1782) and during the reigns of Rama I, Rama II, and Rama III (Baker and Phongpaichit 2005). The original settlement of Tai Dam people in Thailand was in Phetchaburi province. Later on, Tai Dam people moved to other provinces such as Kanchanaburi, Ratchaburi, Suphanburi, Nakhonpathom, Samut...
Sakhon, and Samut Songkhram. In Thailand, Tai Dam people are addressed by various names such as Lao Song, Song, Lao Song Dam, Thai Song, Thai Song Dam.

Most previous studies of the Tai Dam language were devoted to a phonological description or comparison. A number of lexical studies have also been found. They are geared towards a lexical comparison of Tai Dam dialects (Praphin 1996) and a lexical variation and change according to age group (Buranasing 1988, Liamprawat and Wattanaprasert. 1996, Saeng-ngam 2006). Few works have been found on Tai Dam classifiers. Yensamut (1981) studied words and meanings in the Lao Song spoken in Samutsakhon province. Two aspects of Lao Song classifiers are reviewed in this study, that is, classifiers in numeral noun phrases and classifier types. The author categorizes Lao Song classifiers into three groups: human classifiers, animal and plant classifiers, and inanimate classifiers. She lists sixteen classifiers and describes what nouns these classifiers are used with. Jirananthanaporn et al. (2003) studied the grammatical system in the Thai Song spoken in Phitsanulok province. The study of Thai Song classifiers in this work covers the syntactic structure of Thai Song classifiers and classifier types which include material classifiers and shape-based classifiers. The material classifiers are categorized into human and non-human. Non-human classifiers are used with animals, plants, and objects. The shape-form classifiers class the accompanying nouns according to the shape of their referents, that is, round, long, and flat. This study also describes the word classes that Thai Song classifiers are derived from such as verbs, nouns, and pronouns. Finally, the authors list sixty-three classifiers and the nouns that are used with these classifiers.

This research departs from previous studies of Tai Dam classifiers in that it analyzes the semantic components of Tai Dam numeral classifiers that are derived from plant parts and a metaphorical extension of these numeral classifiers. Moreover, the research sites are also different. This study collects data from three provinces in Vietnam, Yen Bai, Dien Bien Phu, and Son La. As Tai Dam speakers in Vietnam and in Thailand have been in contact with Lao and Thai speakers respectively, some plant-based numeral classifiers of Tai Dam will also be compared with Vientiane Lao and Bangkok Thai.

2. Methodology and framework
The classification of the entities into different semantic domains is based on Adams and Conklin (1973) and Allen (1977). The continuum model posited by Conklin (1981) is adapted to illustrate a metaphorical extension of plant-based numeral classifiers in Tai Dam, Thai and Lao.

A list of 356 nouns was prepared for data collection. Most of these nouns denote plant parts. The nouns referring to non-organic entities were also included in the list because a number of plant-based numeral classifiers are extensively used by Tai Dam speakers for classifying non-organic objects. All nouns used in this study can be categorized into a number of classifier groups. This list was used for interviews with the two main informants. The data were checked with six additional informants. The eight informants are listed below with their ages, genders, and locations.

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1 This research is a part of the sub-project “Plant-based classifiers in Tai Dam” of the cluster research “Ethnicity: New paradigm in language and cultural transmission” sponsored by the Research-Team Promotion Grant 2010-2013, Thailand Research Fund (TRF). The preliminary research result was presented at the 23rd Annual Conference of Southeast Asian Linguistics Society (SEALS23), Faculty of Arts, Chulalongkorn University, Thailand, May 29-31, 2013.

The author thanks Mr. Sawai Petchroon, the Chair of Tai Dam Foundation (Thailand), and Mr. Iyared Boonyarit, my research assistant, for the arrangement of the trip to Tai Dam areas in Vietnam during May 15-22, 2013. My special thanks go to Associate Professor Weera Ostapirat for sharing his expertise on Comparative Tai with me. My sincere thank is extended to all of my excellent Tai Dam informants in Vietnam who patiently worked with me for many hours. Last but not least, I thank Ajarn Richard Hiam for the English edition of this paper.

2 Detailed discussion of Lao and Thai classifiers can be found in the work of Burusphat (2009).
### Gender Age Location

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>male (main informant)</td>
<td>75</td>
<td>Komi village, Sathaengjan, Dien Bien Phu</td>
</tr>
<tr>
<td>male (main informant)</td>
<td>47</td>
<td>Thaengluang village, Sachiangtung, Son La</td>
</tr>
<tr>
<td>female</td>
<td>73</td>
<td>Komi village, Sathaengjan, Dien Bien Phu</td>
</tr>
<tr>
<td>male</td>
<td>81</td>
<td>Kangna village, Nghia Lo, Yen Bai</td>
</tr>
<tr>
<td>female</td>
<td>87</td>
<td>Thaengsuan village, Sammuen, Dien Bien Phu</td>
</tr>
<tr>
<td>female</td>
<td>47</td>
<td>Boong village, Saboonglaw, Dien Bien Phu</td>
</tr>
<tr>
<td>male</td>
<td>81</td>
<td>Piang village, Sanampa, It Ong (Muong La), Son La</td>
</tr>
<tr>
<td>female</td>
<td>62</td>
<td>Kangna village, Nghia Lo, Yen Bai</td>
</tr>
</tbody>
</table>

3. **Numeral classifiers in numeral noun phrases**

   Word order in Tai Dam numeral noun phrases is numeral-classifier-noun as in example 1.

   (1) `sɔŋ³` `kaːn³` `bet³`  
       `two`  `CLF`  `fishing rod`  
       ‘Two fishing rods’

   With numeral one, the word order is altered to classifier-noun-numeral one as in example 2.

   (2) `kʰaɔŋ⁵` `cɔk³` `nɯŋ¹`  
       `CLF`  `glass`  `one`  
       ‘A glass’

   In addition to numerals, quantifiers and demonstratives also occur in numeral noun phrases. The quantifiers are such non-specific numbers as `ʔe³` ‘many’ as in example 3. The demonstratives include, for example, `ni⁶` ‘this’ and `nan⁶` ‘that’ as in example 4. The word order of numeral noun phrases consisting of quantifiers and demonstratives is classifier-noun-quantifier/demonstrative.

   (3) `nuaj³` `ma³` `ʔɯ³` `ʔe³`  
       `CLF`  `pumpkin`  `many`  
       ‘Many pumpkins’

   (4) `kɔ¹` `maj⁶` `ni⁶`  
       `CLF`  `tree`  `this`  
       ‘This tree’

   It should be noted that some quantifiers may precede nouns as found in the work of Edwards (2011: 194) below.

   (5) `not²²` `to²⁴` `ŋəʔ²⁵`  
       `many`  `CLF`  `dragon`  
       ‘Many dragons’

4. **The semantic analysis of the plant-based classifiers in Tai Dam**

   The semantic analysis of the plant-based numeral classifiers in Tai Dam is based on the approaches proposed by Adams and Conklin (1973) and Allen (1977).

   The study of Adam and Conklin (1973) focuses on the semantics of classification by binary oppositions and hierarchically structured sets of discrete categories. They divide the classifiers into qualifiers and quantifiers. The qualifiers are further subdivided into inanimate (long versus round) and animate (non-human versus human). The quantifiers are subcategorized into temporary measures and standard measures.
Allen (1977) proposes seven categories of classification: material (animacy and inanimacy), shape (dimensional and non-dimensional), consistency (flexible, hard, non-discrete), size (big and small), location, arrangement (pleat, fold, twist, coil, etc.), and quanta (measure, volume, weight, time.).

The semantic classification of both works has been applied to this study in order to determine the semantic components of plant-based numeral classifiers. Some plant-based numeral classifiers are compared with those of Lao and Thai. The comparison is based on the work of Conklin (1981) in which a number of semantic fields were selected for comparing classificatory categories across Tai languages. Conklin (1981) proposes that the classifiers can be arranged on a theoretical continuum ranging from the extreme left to the extreme right. This paper uses this continuum model for a comparison of numeral classifier development in Tai Dam, Lao and Thai.

The plant-based classifiers are broadly categorized into two groups, namely, the classifiers of the whole plant and plant parts. The numeral classifiers listed in tables 1-8 develop from nouns which form the part of terminology for plants.

### 4.1 Numerical classifiers of the whole plant

The whole plant is classified by different plant-based numeral classifiers depending on its physical shape as characterized by the semantic components in Table 1. That is, a tall and upright tree is classed by the plant-based classifier kɔ ¹ ‘plant/tree’; a small and fast growing plant by ton ⁵ ‘plant’; a climbing plant by cuo ² ‘slender stem of a climbing plant’; and a cluster of plants by sum ¹ ‘clump’.

**Table 1: Numerical classifiers of the whole plant**

<table>
<thead>
<tr>
<th>Whole plant classifiers</th>
<th>Semantic components</th>
<th>Plant names</th>
</tr>
</thead>
<tbody>
<tr>
<td>kɔ ¹ ‘plant/tree’</td>
<td>whole plant, uprights, tall</td>
<td>kɔ ³ ma ³ paw ⁶ ‘coconut tree’</td>
</tr>
<tr>
<td>ton ⁵ ‘plant’</td>
<td>whole plant, small, fast growing</td>
<td>ton ³ fak ³ kə ³ ‘cabbage plant’</td>
</tr>
<tr>
<td>cuo ² ‘slender stem of a climbing plant’</td>
<td>whole plant, climbing</td>
<td>cuo ³ ma ³ nə ³ ‘luffa/gourd plant’</td>
</tr>
<tr>
<td>sum ¹ ‘clump’</td>
<td>whole plant, cluster</td>
<td>sum ¹ maf ⁶ faj ³ ‘a clump of bamboo’</td>
</tr>
</tbody>
</table>

### 4.2 Numerical classifiers of plant parts

Based on semantic components, the classifiers of plant parts are placed into six groups, i.e., stick/stalk; seeds; fruit; leaf; flower/sprout; and tuber/root.

#### 4.2.1 Stick/stalk-based numerical classifiers

There are nine stick/stalk-based classifiers. Eight classifiers share the one dimensional or long and inflexible semantic feature. The eight stick/stalk-based classifiers are differentiated by their particular semantic components as specified in Table 2. The upright trunk of a tree which is made into posts is classed by ko ¹ ‘stalk’. The classifiers ton ⁴ ‘a piece of wood’, lam ² ‘trunk of a tree’, and lon ⁴–don ⁵ ‘stick of wood’ specify different shapes, lengths, and sizes of wood. That is, a piece or a fragment of wood is classed by ton ⁴; and a large, round and rod-like piece of wood by lam ²; and a small, round and rod-like piece of wood, especially firewood, by lon ⁴–don ⁵. A branch of tree is typically classed by na ⁴ ‘branch of tree’. A midrib or the stem of a leaf is put into the ka:n ⁵ class having the slender and pointed semantic components. The classifier baŋ ³ ‘segment of jointed stem’ is used with a segment of jointed stem which is hollow and has open ends. The classifier plɔŋ ⁵ is used with a similar objects as baŋ ³ but is blocked at both ends. The last classifier, pen ³ ‘board’ has two-dimensional or flat and inflexible semantic components.

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3 The tones of sample words are marked with numbers 1-6. The phonetic characteristics of these tones are [33] for tone 1; tone 2 [55]; tone 3 [35]; tone 4 [44]; tone 5 [31]; and tone 6 [42].

4 Tai Dam has a phonological free variation of l and d which are derived from the proto *ʔd.
Table 2: Stick/stalk-based numeral classifiers

<table>
<thead>
<tr>
<th>Lexically plant-based</th>
<th>Semantic components</th>
<th>Plant parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ko⁴ ‘stalk’</td>
<td>Uprights (posts, pillars)</td>
<td>Majko⁶ ‘post, pillar’</td>
</tr>
<tr>
<td>Ton⁴ ‘a piece of wood’</td>
<td>Piece/fragment</td>
<td>Tonmaj⁶ ‘block’</td>
</tr>
<tr>
<td>Lam⁳ ‘truck of a tree’</td>
<td>Large, round, rod-like</td>
<td>Lam²ɔj⁵ ‘trunk of sugarcanes’</td>
</tr>
<tr>
<td>Lɔn⁴~Don⁵ ‘stick of wood’</td>
<td>Small, round, rod-like</td>
<td>Lɔnluɔ~Donluɔ⁴ ‘firewood’</td>
</tr>
<tr>
<td>Νa⁴ ‘branch of tree’</td>
<td>Branch</td>
<td>Na⁵ma⁶ ‘branch’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Two dimension (flat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ka:n⁵ ‘midrib, the stem of a leaf’</td>
</tr>
<tr>
<td>Ban⁴ ‘segment of jointed stem’</td>
</tr>
<tr>
<td>Plɔŋ⁵ ‘segment of the many-jointed stem’</td>
</tr>
<tr>
<td>Pen³ ‘board’</td>
</tr>
</tbody>
</table>

It should be noted that small pieces of plant parts can also be classed by the classifier kim⁵ ‘small pieces’ which is not derived from plant parts and has no lexical meaning, for example, ma’ten⁴sɔŋ⁴kim⁵ ‘two small pieces of cucumber’ and majpen³sɔŋ³kim⁵ ‘two small pieces of board’.

In addition to kim⁵ ‘small pieces’, there are some other non plant-based classifiers which share the one dimensional and inflexible semantic components as the eight classifiers mentioned above. These classifiers are productive so it is worth mentioning here. They include maʔ⁴, lem⁵, and laːm⁵. The classifier maʔ⁴ is used with long, straight, inflexible, sharp, and penetrating utensils such as tools. The classifier lem⁵ categorizes long, thin, and inflexible entities, but also long, thin, and flexible objects such as lem⁵pʰom¹ ‘hair’ and cɯəʔ ‘rope’. The classifier laːm⁵ classes long and inflexible entities with handles. Some sample entities which are classed by these classifiers are listed in Table 3.

Table 3: Non plant-based numeral classifiers (one dimensional and inflexible)

<table>
<thead>
<tr>
<th>Other non plant-based classifiers (one dimensional and inflexible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No lexical/nominal reference</td>
</tr>
<tr>
<td>Maʔ⁴</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Lem⁵</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Laːm⁵</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Seed-based numeral classifiers

The seed-based numeral classifiers consist of Mit⁴ ‘seed’ and Ken⁵ ‘kernel/seed’ which share three dimensional or small and round semantic components. The former is used with grains while the latter with seeds of fruit as exemplified in table 4.
4.2.3 Fruit/vegetable-based numeral classifiers
There are two fruit/vegetable-based numeral classifiers as listed in table 5. The classifier nuəj³ is lexically ‘fruit’. It has round, globular and spherical semantic components. The classifier fak³ ‘pod’ possesses long and pod semantic components.

Table 5: Fruit/vegetable-based numeral classifiers

<table>
<thead>
<tr>
<th>Fruit-based classifiers</th>
<th>Lexically plant-based</th>
<th>Semantic components</th>
<th>Plant parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nuəj³ ‘fruit’</td>
<td>round, globular, spherical</td>
<td>ma³ten³ nam⁶ ‘watermelon’</td>
</tr>
<tr>
<td></td>
<td>fak³ ‘pod’</td>
<td>long, pod</td>
<td>tʰuə³saːj³su⁶ ‘long bean’</td>
</tr>
</tbody>
</table>

4.2.4 Leaf-based numeral classifier
One leaf-based numeral classifier was found in this study as seen in table 6. The noun bau¹ ‘leaf’ serves as the classifier ‘leaf-like’ which has flexible, flat, and sheet-like semantic components.

Table 6: Leaf-based numeral classifier

<table>
<thead>
<tr>
<th>Leaf-based classifiers</th>
<th>Lexically plant-based</th>
<th>Semantic components</th>
<th>Plant parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bau¹ ‘leaf’</td>
<td>flexible, flat, sheet-like</td>
<td>bau¹ ma¹huŋ¹ ‘papaya leaf’</td>
</tr>
</tbody>
</table>

4.2.5 Flower/sprout-based numeral classifiers
The flower/sprout-based numeral classifiers include bɔʔ³ ‘flower’, tʰuəŋ³ ‘sprout of mushroom’, and duəŋ¹~luəŋ¹ ‘shoot’ as illustrated in table 7. The classifier bɔʔ³ ‘flower’ classes flowers only. The classifier tʰuəŋ³ ‘sprout of mushroom’ is restrictively used for mushrooms, and, duəŋ¹~luəŋ¹ is used for a variety of shoots or sprouts.

Table 7: Flower/sprout-based numeral classifiers

<table>
<thead>
<tr>
<th>Flower/sprout-based classifiers</th>
<th>Lexically plant-based</th>
<th>Semantic components</th>
<th>Plant parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bɔʔ³ ‘flower’</td>
<td>flower-shaped, blossom</td>
<td>bɔʔ³ma³ʔu³ ‘pumpkin flower’</td>
</tr>
<tr>
<td></td>
<td>tʰuəŋ³ ‘sprout of mushroom’</td>
<td>sprout, mushroom</td>
<td>tʰuəŋ³her³ ‘mushroom’</td>
</tr>
<tr>
<td></td>
<td>duəŋ¹~luəŋ¹ ‘shoot’</td>
<td>self-extended⁵</td>
<td>duəŋ¹nɔ³/luəŋ¹ma³j⁷ ‘bamboo shoot’ \ duəŋ¹nɔ³kʰa³ ‘banana shoot’ \ nɔ³kʰa³ ‘galingale shoot’</td>
</tr>
</tbody>
</table>
4.2.6 Tuber/root-based numeral classifiers

The numeral classifiers derived from tuber/root are ban⁵ ‘tuber’ and hua¹ ‘head/front’ which share the round semantic component. These two classifiers are distinguished by bulb and head-like semantic features respectively.

<table>
<thead>
<tr>
<th>Tuber/root-based classifiers</th>
<th>Plant parts</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ban</em>⁵ ‘tuber’</td>
<td>fuəʔ³ ‘taro’</td>
</tr>
<tr>
<td><em>hua</em>¹ ‘head/front’</td>
<td>hɔmⁱ buə³ ‘onion’</td>
</tr>
</tbody>
</table>

5. Metaphorical extension

The plant-based numeral classifiers are lexemes. They are derived from nouns which can be used as their own classifiers called “repeaters”. An example of repeaters is *fak*³ which is derived from the noun ‘pod’. As a numeral classifier, it repeats the first part of such noun as *fak*³ *ma*³ *kʰaːm⁵ nɯŋ³ *fak*³ ‘a pod of tamarind’. Some of these repeaters remain nominal and some have undergone a metaphorical extension from the original plant parts to other non-organic entities of similar shapes and finally have been grammaticalized into classifiers. The extension of plant names to other semantic domains is a typical feature of Tai languages according to Conklin (1981: 137) who noted that “Although the specific range of plant-based lexemes varies from language to language, the extension of plant classes to other semantic domains is a consistent feature in Tai.”

Some repeaters have a small degree of extension and some have a wide range of extension as seen in Table 9:

<table>
<thead>
<tr>
<th>Lexically plant-based</th>
<th>Semantic components</th>
<th>Non-plant entities</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>sum</em>¹ ‘clump’</td>
<td>whole plant, cluster</td>
<td><em>sum</em>³ <em>puəʔ</em>³ ‘anthill, termite hill’</td>
</tr>
<tr>
<td><em>lon</em>⁵–<em>don</em>⁵ ‘stick of wood’</td>
<td>round, small, rod-like</td>
<td><em>maj</em>³ *tʰu¹ kʰɛw⁵ ‘toothbrush’ (also <em>ʔan</em>)</td>
</tr>
<tr>
<td><em>ken</em>³ ‘kernel/seed’</td>
<td>round, small, kernel</td>
<td><em>ken</em>³ <em>kaːw</em>⁵ ‘pupils’</td>
</tr>
<tr>
<td><em>nuəj</em>³ ‘fruit’</td>
<td>round, globular, spherical</td>
<td><em>saj</em>³ ‘egg’</td>
</tr>
<tr>
<td><em>fak</em>³ ‘pod’</td>
<td>long, pod</td>
<td><em>kaːn</em>⁵ but⁴ ci² ‘pencil’</td>
</tr>
<tr>
<td><em>ka:n</em>⁵ ‘midrib, the stem of a leaf’</td>
<td>slender, pointed</td>
<td><em>ka:n</em>³ *buəŋ³ ‘small spoon’</td>
</tr>
</tbody>
</table>

Conklin (1981) studied the classifiers of eight Tai languages, namely, Siamese, Shan, Kam-muang, Līi, White Tai, Nung, Wu-ming, and Dioi.
The classifier *sun* ‘clump’ for a cluster of trees, shrubs, or plants extends to some non-plant things which can be conceived as a cluster such as *sun* ‘anthill, termite hill’.

Tai Dam has extended the round, small, rod-like classifier *lon* ‘stick of wood’ to cover some other stick-like objects such as *taw* ‘walking stick’ and *taw* ‘walking stick’.

The small round classifier *ken* ‘kernel/seed’ is extended to class other small round non-plant entities such as *ka:n* ‘pupils’ and *ka:n* ‘testicles’. On the other hand, the seed-based classifier *mit* ‘seed’ is much less wide-ranging as a classifier. It is restricted to grains.

The fruit-based classifier *nuaj* ‘fruit’ extends from fruits through a considerable range of round/globular and bulky entities such as *na:n* ‘bullet’ and *na:n* ‘water jar’. Since *nuaj* ‘fruit’ has a broad extension, it has become generic. The pod-based classifier *fak* ‘pod’ is a more specific class. It is restrictedly extended to class some pod-like objects such as *fak* ‘knife sheath’.

The classifier *ka:n* ‘midrib, the stem of a leaf’ is widely used for inflexible, long, extended, inanimate objects such as *ka:n* ‘large spoon’ and *ka:n* ‘joss stick’.

The classifier *baŋ* ‘segment of jointed stem’ which has long, round, and hollow semantic features has undergone a metaphorical extension to class tube-like, concave, and hollow objects such as *baŋ* ‘reed of a loom’, *huo* ‘boat’, and *baŋ* ‘air plane’. The extension goes further beyond hollow form of transport to other kinds of vehicles such as *se* ‘buffalo cart’, *se* ‘bicycle’, *se* ‘motorcycle’, and *baŋ* ‘car’.

The leaf-based classifier *bau* ‘leaf’ is a widely-used classifier. It has developed to a considerable degree beyond its original referent. It is extended to cover sheet-like materials such as *cia* ‘paper’, *be* ‘ticket’, and *bau* ‘bank note’. *bau* has further crossed the flat flexible semantic domain to encompass

<table>
<thead>
<tr>
<th>Lexically plant-based</th>
<th>Semantic components</th>
<th>Non-plant entities</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>baŋ</em> ‘segment of jointed stem’</td>
<td>segment, hollow, open ends</td>
<td><em>bay</em> ‘reed of a loom’ (also <em>k</em> ‘fim’)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>hao</em> ‘boat’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>se</em> ‘buffalo cart’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>se</em> ‘bicycle’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>se</em> ‘motorcycle’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>baŋ</em> ‘car’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>baŋ</em> ‘air plane’</td>
</tr>
<tr>
<td><em>bau</em> ‘leave’</td>
<td>flexible, flat, sheet-like</td>
<td><em>cia</em> ‘paper’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>be</em> ‘ticket’ (also <em>be</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>bau</em> ‘bank note’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>bau</em> ‘winnowing basket’ (also <em>k</em> ‘fim’)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>kup</em> ‘hat’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>le</em> ‘plate’ (also <em>le</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>tuj</em> ‘bowl’</td>
</tr>
<tr>
<td><em>duŋ</em>–<em>luŋ</em> ‘shoot’</td>
<td>shoot</td>
<td><em>duŋ</em> ‘pot’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>mɔ</em> ‘pan’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>da:wa</em> ‘star’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>ta’</em> ‘sun’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>bua:n</em> ‘moon’</td>
</tr>
</tbody>
</table>

---

7 A toothbrush can also be classed by the general classifier *lan*.
8 Conklin (1981: 149) points out that “The most generalized plant-based classes are those extended from ‘fruit’.”
9 This noun is also classed by the general classifier *kaj* which has no lexical reference.
10 Conklin (1981: 160) notes that “The broadest extensions of ‘leaf-like’ as a classifier are found in Black Tai. The category has been generalized to indicate any round-flat thing.”
11 *be* ‘ticket’ is also classed by the partial repeater *be*.
flat and inflexible containers such as baɯ ɗoŋ ‘winnowing basket’ and lɛ kʰa:w ‘plate’. It also goes beyond flat inflexible containers to non-flat containers such as tʰuŋ ‘bowl’ and even kup ‘hat’.

The sprout-based classifier duəŋ ~ luəŋ ‘shoot’ has much potential as a generalizable class. It has evolved broad semantic ranges. It is widely applied to round-shaped and star-shaped entities such as duəŋ mɔ ‘pot’, mɔ kʰuə ‘pan’, daːw ‘star’, taːwen ‘sun’, and buən ‘moon’. Conklin (1981) has found that actually this classifier originally classes round and radiating objects in other Tai languages such as Shan and White Tai. In White Tai, this classifier is etymologically an indication of round, illuminated entities such as the moon, lamps, and stars. It has expanded beyond these round and radiating objects to encompass mushrooms, sprouts, flowers, cross bows and cooking pots while the cognate loŋ in Shan is used for things that open out, which extend themselves circularly such as umbrellas and pock marks. In Siamese, the cognate duang indicates radiation from a center, classifying the sun, lamps, arrows, scars and pocks, seals, medallions and, for some speakers, eyes.

6. Conclusion and Discussion
This paper studies the numeral classifiers that are derived from plants in the Tai Dam language spoken in Vietnam. The analysis of semantic components is based on the works of Adams and Conklin (1973), Allen (1977) and Conklin (1981). Two major kinds of plant-based numeral classifiers have been found in this study, that is, the numeral classifiers of the whole plant and plant parts.

The whole plant numeral classifiers include kɔ ‘plant/tree'; ton ‘plant'; cɯə ‘slender stem of a climbing plant'; and sum ‘clump’. These numeral classifiers are differentiated by virtue of their physical shapes. Based on semantic components, the numeral classifiers of plant parts are categorized into six groups, namely, stick/stalk-based classifiers, seed-based classifiers, fruit-based classifiers, leaf-based classifiers, flower/sprout-based classifiers; and tuber/root-based classifiers. Some numeral classifiers of these six groups have undergone a metaphorical extension to be used with other non-organic entities.

The following sections will discuss eight important issues emerging from this study that should be noted.

6.1 It was found that the development of plant-based numeral classifiers in Tai Dam is similar to White Tai studied by Conklin (1981). For example, the round/radiating classifier duəŋ ~ luəŋ ‘shoot’ in Black Tai and duang in White Tai are widely applied to round-shaped and star-shaped things such as sprouts, pots, pans, bowls, and heavenly bodies. In addition, the classifier lem in Black Tai and the cognate lim in White Tai are more widely used than in other languages (Shan, Siamese, Kam-muang, Lî, Nung, Wu-ming, and Dîoî). In White Tai lim is included in a plant-based class since it is the only classifier for a part of a plant, namely, for trunks, stalks, or stems of whole plants. Both Black Tai and White Tai use this classifier for both long, inflexible and long, flexible entities whereas other languages limit its use to long, inflexible, pointed objects.

6.2 The classification of entities with plant-part names in Tai Dam is geographically varied. Tai Dam in Nakhonpathom province, Thailand has extended the use of nuaj which originally classes fruit and spherical objects in the same way as Lao. This round classifier has expanded beyond the round objects to encompass containers, woven baskets, utensils and bulky objects such as mountain as well as non-spherical objects such as furniture and appliances. On the other hand, Tai Dam in Vietnam limits the use of this classifier to fruits and some spherical objects such as eggs, beads, buttons, bullets, and small jars. In Thai, the word nuiaj is rarely used as a classifier but used in the sense of ‘unit’ such as nuiajːːːckoːʔaːːːn ‘government office’ (Weera Ostapirat p.c. 2013). A comparison of the extended usage of this classifier in Tai Dam and Lao is illustrated in the following continuum model.

---

12 This noun is also classed by the general classifier kʰaŋ.
13 le kʰa:w ‘plate’ is also classed by the partial repeater le.
14 Conklin (1981: 165) points out that “this classifier is used in all the Southwestern Tai languages and in none of the Central or Northern Tai languages.
Diagram 1: A comparison of the extended usage of *nuaj* in Tai Dam (Vietnam), Tai Dam (Thailand), and Lao

<table>
<thead>
<tr>
<th>Tai Dam (Vietnam)</th>
<th>fruits</th>
<th>spherical objects</th>
<th>containers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tai Dam (Thailand)</th>
<th>fruits</th>
<th>spherical objects</th>
<th>containers</th>
<th>bulky objects</th>
<th>non-spherical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Lao                |        |                   |            |               |              |

6.3 Objects may be used with different classifiers depending on how they are perceived. A pencil *but ci* is used with three classifiers, *lon* (stick), *ma2* (bladed implement), *ka:n* (slender, pointed), by three different informants. Another example is the noun *kup* ‘Vietnamese hat’ which is perceived as flat (two dimensional) so the classifier *bau* ‘leaf’ is used with this object whereas *muʔ* ‘hat’ is used with the general classifier *kʰaŋ*.

It should be noted that Tai Dam in Vietnam has two general classifiers *ʔan* and *kʰaŋ*. The latter is more productive than the former. It can be used with a variety of objects such as implements, utensils, containers woven baskets, appliances, and newly-introduced items such as radio, television, computer, camera, electric fan, and refrigerator. As noted by a 75 year old informant “*kʰaŋ man vaːŋaːj*” ‘It’s easy to use *kʰaŋ*’.

6.4 Some plant-based numeral classifiers have not undergone a metaphorical extension to class non-organic objects. For example, the classifier *mit* ‘seed’ is used only with grains in Tai Dam (Vietnam) whereas Tai Dam (Thailand) also uses this classifier to class *jaːmit* ‘tablet (medicine)’. Tai Dam (Vietnam) uses the classifier *ton* ‘small pieces’ with ‘tablet’ instead. Tai Dam in Thailand might have been influenced by the Thai language as Thai use *mé* with a variety of granular and small entities such as buttons, rain drops, pimples, moles, salt, pills, and pearls.

6.5 Tai Dam people, both in Vietnam and Thailand, have developed their own classifier system resulting in some innovative classifiers such as *ban* ‘tuber’ and *tʰuəŋ* ‘sprout’. Tai Dam people in Thailand use the classifier *tʰuəŋ* with both bamboo shoots and mushrooms whereas Tai Dam in Vietnam use this classifier only with mushrooms and the classifier *duəŋ* with shoots. The classifier *duəŋ* has been extended to class pots, pans, and heavenly bodies.

In Lao and Thai, shoots are classed with *nɔː* and mushrooms are put in the same class as flowers, thus they are classed with *dɔːk*. The Lao classifier *dɔːk* has been shifted from the original ‘round and radiating’ domain to be used with round and bladed tools such as sickles and finally to the ‘long’ domain which includes long bladed tools (e.g., spears, swords) and long musical instruments (reed organ).

The Thai cognate *duan* remains within the ‘round’ class. In addition to round and illuminated entities, it also classes a variety of objects perceived as round such as heart, eyes, stamps, seals, soul, spirit, and abstract nouns. A comparison of the extended usage of this classifier in Tai Dam, Lao, and Thai is illustrated in the following continuum model.
Diagram 2: A comparison of the extended usage of $\text{duaŋ}^1$ in Tai Dam, Lao, and Thai

<table>
<thead>
<tr>
<th>Tai Dam</th>
<th>Shoots</th>
<th>Heavenly bodies</th>
<th>Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lao</td>
<td>round and illuminated (the sun, moon, stars)</td>
<td>round and bladed tools (sickle)</td>
<td>Long bladed tools (spear, sword)</td>
</tr>
<tr>
<td>Thai</td>
<td>round and illuminated (the sun, moon, stars)</td>
<td>round (heart, eyes)</td>
<td>perceived as round (stamp, seals, soul)</td>
</tr>
</tbody>
</table>

While bladed tools are classified with $\text{duaŋ}^1$ in Lao, they are classed with $\text{maʔ}^4$ in Tai Dam. The classifier $\text{maʔ}^4$ is shared by other Tai languages as well, such as Shan, Bouyei, and Southern Zhuang. It is speculated that this classifier might be derived from a noun meaning ‘a mark made by bladed tools’. The bladed semantic component has been transferred from the noun to a new classifier. As a result, this noun has been grammaticalized as a classifier for bladed implements. This classifier corresponds to the Thai verb $\text{baːk}^2$ ‘to make a mark, to bevel’ which has not been grammaticalized as a classifier. In Thai, bladed implements are classed by $\text{lem}^3$.

6.6 An overlapping of different semantic domains may be found in one language but absent in another. For example the Tai Dam plant-based numeral classifier $\text{bau}^1$ ‘two dimension (flat), flexible’ has been extended to the ‘two dimension (flat), inflexible’ and ‘three dimension (round), inflexible’ semantic domains as seen in the following continuum model. This classifier does not overlap with other classifiers in other semantic domains as in Lao and Thai.

Diagram 3: The extended usage of $\text{bau}^1$ in Tai Dam

| Tai Dam        | Leaves | flat, flexible (paper, tickets bank notes) | flat, inflexible (winnowing basket, Vietnamese hat, plate) | round, inflexible (bowls) |

On the other hand, this classifier overlaps with $\text{pʰæ̅ːn}^1$ ‘flat, inflexible’ and $\text{nūaj}^1$ ‘round, inflexible’ in Lao and $\text{pʰæ̀ːn}^1$ ‘flat, inflexible’ and $\text{lûːk}^1$ ‘round (nominal meaning ‘offspring’)’ in Thai. A photograph may be classed with both $\text{baj}^1$ and $\text{pʰæ̀ːn}^1$ in Lao and Thai. A bowl may be classed with both $\text{bǎːj}^1$ and $\text{nūaj}^1$ in Lao and with both $\text{baj}^1$ and $\text{lûːk}^1$ in Thai.

6.7 Language contact plays an important role in the development of the classifier system in Tai Dam. The classifier $\text{luʔ}^4$, classifier for ‘round objects’ such as fruits which is derived from the noun $\text{luʔ}^4$ ‘offspring’ is absent in Tai Dam in Vietnam but present in Tai Dam in Thailand because of the influence of the Thai language. Conklin (1981:152) remarks that $\text{lûːk}^1$ is not found as a classifier in any other language except Siamese.

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15 See further discussion of this classifier in Burusphat (2010).
While most numeral classifiers of Tai Dam are plant-based, there are some non-plant-based numeral classifiers which are not derived from plants but used with plant parts. Take the classifier \( hua^1 \) for an example. This classifier is lexically ‘head/front/beginning’ and used as a classifier for root vegetables, bulbs, head-like vegetables, cabbages, etc. such as \( hua^1 haw^1 kip^3 \) ‘garlic’, \( haw^1 bua^3 \) ‘shallot’, and \( ma^3 k^{hwa} \) ‘round eggplant’.

As mentioned in section 2, the data used in this study are limited to 356 nouns and elicited from two main informants. It is suggested that more nouns should be added to future study as well as more main informants and locations.

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CAN A LANGUAGE WITH MILLIONS OF SPEAKERS BE ENDANGERED?

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Abstract
The dialogue on language endangerment worldwide has largely focused on languages with small speaker populations, in line with Krauss’s (1992) prediction that any language with a speaker population of less than 100,000 is at risk. The relationship between population size and language vitality is particularly relevant in the Indonesian context, where over 700 local languages have speaker populations that range from single digits to tens of millions of speakers. This paper considers the role of size in determining the fate of these local languages, against the backdrop of the highly successful development of Indonesian as a national language. Using Javanese as a case study, we show that even a language with over 80 million speakers can be at risk, a trend that has serious implications for all of the languages of Indonesia. Although a large population may signal a greater likelihood for official recognition and a more diverse speaker population that is less likely to simultaneously shift away from the L1, size alone cannot predict whether robust intergenerational transmission is occurring. Rather a clearer understanding of the demographic, sociolinguistic, and attitudinal factors that lead to individual and community decisions about intergenerational transmission are essential for assessing risk of endangerment.

Keywords: language shift, language endangerment, vitality
ISO 639-3 language codes: ind, jav.

1. Introduction
The discussion on language endangerment worldwide has focused primarily on languages with very small speaker populations and decreasing numbers of young speakers, partly following Krauss’s (1992) prediction that any language with fewer than 100,000 speakers is at risk. This problem is particularly acute in Indonesia, where 90% of Indonesia’s living languages have fewer than 100,000 speakers (Lewis, Simons and Fennig 2013). The problem may be even bigger than we think. Rapid changes to intergenerational transmission patterns suggest that even the largest local languages in Indonesia may be at risk, raising the question of whether a language with millions of speakers can be endangered. In this paper we begin by asserting that a small speaker population size is a symptom, not a cause, of language shift (following Himmelman 2010), by showing that the population size of Indonesian languages does not correlate with current measures of language vitality. We then investigate the question of whether a language with millions of speakers can be endangered by using Javanese, the most widely spoken regional language of Indonesia (80 million speakers), as a case study, based on work by Errington (1998), Kurniasih (2006), Poedjosoedarmo (2006), Smith-Hefner (2009), and Setiawan (2012) among others. We conclude with a discussion of how current measures of language vitality may be enhanced by a clearer understanding of the
complexity of factors involved in language shift and an increased focus on clarifying the relative importance of these factors in predicting successful intergenerational transmission.

2. Language Endangerment

The 16th edition of the *Ethnologue* (Lewis 2009) includes a statistic that for many linguists highlights a critical need to protect linguistic diversity around the world, with special attention to the fate of minority languages:

“It turns out that 389 (or nearly 6%) of the world’s languages have at least one million speakers and account for 94% of the world’s population. By contrast, the remaining 94% of languages are spoken by only 6% of the world’s people.”

(*Ethnologue*, 16th edition, 2009)

This statistic, and the fact that it is seen as an implication that the majority of the world’s languages are under threat of extinction, exemplifies both the issue of language endangerment and the assumptions that commonly surround the discussion of a language’s size. Namely, we assume that a small speaker population makes language obsolescence a foregone conclusion, and therefore the fact that the majority of the world’s languages have small speaker populations does not bode well for the future of linguistic diversity.

Krauss (1992) makes a similar prediction, calculating that of the 6000 or so languages listed in the *Ethnologue* at the time, only 600 could be considered safe. He included in these 600 any language that was an official or national language of some nation, as well as any language that had at least one hundred thousand speakers. The rest Krauss considered at risk of endangerment over the next century. Thus he concludes that a combination of a lack of official recognition and a small speaker population is likely to result in a language’s death, and conversely that either official status or a large speaker population make a language more likely to be maintained. In fact, as Krauss points out, the only operable measure he considers is language size, since none of the languages with fewer than 100,000 speakers were official languages. Our discussion here suggests that speaker size may not actually confer special protections, whereas by definition, we expect that official status does.1

Anderbeck (2013) raises this question from a different angle, by asking whether there are languages that are “too big to fail.” As Anderbeck discusses, this question is particularly relevant in the Indonesian context, where the range of languages includes both those with speaker populations in the single digits and those with tens of millions of speakers. Thus Indonesia turns out to be an ideal place for testing our assumptions about the role of speaker population in predicting language vitality, an issue that needs to be better understood to develop more predictive models of language shift.

In the following section we consider the current linguistic situation in Indonesia, in light of the highly successful development of Indonesian as the national language following the founding of the Republic of Indonesia in 1945, paying particular attention to the question of the relationship between population size and language vitality.

3. Language Endangerment in Indonesia

Indonesia (population: 247 million2) is the second most multilingual nation in the world, led only by Papua New Guinea. The *Ethnologue* counts 706 living languages in Indonesia, which accounts for almost 10% of the living languages listed worldwide (Lewis, Simons and Fennig 2013). Although the total country population is also large, Indonesia still has a relatively high diversity index (.815), meaning that the likelihood that any two randomly chosen people speak different languages is very high. This diversity across the archipelago can be seen in the linguistic map of Indonesia from the Ethnologue, shown here in Figure 1.

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1 Also intriguing is the issue of official languages with very small speaker populations, like Nauru on the island of Nauru (speaker population 6000) and Tuvaluan (speaker population 11,000) in the nation of Tuvalu (Lewis, Simons, and Fennig 2013).

2 Source: http://data.worldbank.org/country/indonesia
The nature of Indonesia’s great linguistic diversity is, as with most post-colonial nation-states, a product of its particular and complex socio-history. The language we now know as Indonesian (also called Bahasa Indonesia) is a variety of Malay, once widely spoken as a lingua franca throughout the archipelago. It was first proclaimed the national language a generation before independence in 1928, laying the foundation for the establishment of Indonesian as the national language of Indonesia at its founding in 1945. It is currently the sole national and official language of Indonesia. Fishman (1978:333, as cited by Sneddon 2006) describes the development and promotion of Indonesian as a “‘miraculous’ process whereby the population was ‘successfully convinced that a particular outside language should become their own integrative, inter-ethnic, unifying tongue’.” Indeed, the spread of Indonesian as a national language and lingua franca in Indonesia is remarkable, and possibly unparalleled in modern times. Certainly there is no other formerly colonized nation that has promoted a single, non-European language as a national and official language with as much success as Indonesia has, and the results of this policy decision have been very positive in terms of unity and nation building (Anwar 1980, Collins 2004, Sneddon 2003a, Dardjowidjodjo 1998, Anderson 1991), especially remarkable when compared to similar situations in, for example, the Philippines (Savella 2010) where language policy has been highly contentious.

Making the linguistic situation more complex, Indonesian as a national language coexists alongside a number of closely related varieties of Malay in addition to the other Austronesian and non-Austronesian languages of Indonesia. Moreover, a distinction needs to be made between official, formal Indonesian and colloquial Indonesian, generally distinguishable varieties that have no official labels or recognition but that are sometimes referred to as bahasa resmi (“official language”) and bahasa sehari-hari (“everyday language”), respectively (Sneddon 2006). Both Errington (1986) and Sneddon (2003b) argue that the use of these two varieties in largely differentiated domains constitutes a type of diglossia (albeit one that differs from Ferguson’s (1959) definition in that the varieties of Indonesian exist along a continuum rather than being recognized as separate languages).

Table 1 illustrates the different stages in the development of Indonesian as a national language, along with the foci in the literature during these respective periods. During the independence movement and early independence, the establishment and development of Indonesian was largely discussed in the language policy literature (e.g. in Lo Bianco 2012). This was followed by its diffusion throughout the country.

Figure 1: Indonesia Language map\(^3\) (Ethnologue, 17th Edition)

\(^3\) Available at www.ethnologue.com/map/ID_x__.
following independence, widely discussed in terms of multilingualism and diglossia (e.g. in Sneddon 2003b). Finally this period of multilingualism has led to a post-diffusion period of fairly widespread shift away from local languages by the first generation of Indonesians to grow up completely fluent in Indonesian, and this is largely discussed in the language endangerment literature. Now, as we examine the future of multilingualism and diglossia in Indonesia, we ask whether the current level of multilingualism and maintenance of local languages is sustainable, or whether shift will continue away from local languages and lead to widespread language endangerment and loss. As Grimes (1996: 724) writes, “[S]hould Indonesian be a force for unity at the expense of the diversity of existing languages and cultures, or should national unity be built on a foundation that accommodates and appreciates ethnolinguistic diversity?”

Table 1: Indonesia’s sociolinguistic history.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Time Period</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Establishment and development of Indonesian</td>
<td>~1920s – 1940s</td>
<td>Language policy</td>
</tr>
<tr>
<td>II. Diffusion of Indonesian</td>
<td>~1950s – 1980s</td>
<td>Multilingualism/diglossia</td>
</tr>
<tr>
<td>III. Post-diffusion</td>
<td>~1990s – 2000s</td>
<td>Language endangerment</td>
</tr>
<tr>
<td>IV. The future</td>
<td>~2010s –</td>
<td>Stable multilingualism?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Widespread language endangerment?</td>
</tr>
</tbody>
</table>

Steinhauer (1994) considers this last question, and examines it by looking at census data from 1971, 1980, and 1990, presented in Figure 2 following Musgrave (n.d.). These census figures show the percentage of respondents claiming to speak Indonesian increasing from 41% of the population in 1971 to 83% of the population in 1990. It is still unknown to what extent this dramatic increase in the use of Indonesian has affected the use of local languages. In recent years, linguists working on local languages in Indonesia have observed that the increased use of Indonesian is impacting the domains of use of local languages (Steinhauer 1994, Collins 2004). Yet although anecdotal comments are often made about the negative impact of the growth of Indonesian on the continuing use of regional languages, only a few systematic studies have been done (notable exceptions include Errington 1998a and Adisasmito-Smith 2004; see also Nazar 1991). Notably, in the 1970’s and 1980’s attention was focused on the success of the adoption of Indonesian and not on the effect that this might have on the use of local languages. Figure 3 schematizes three different possibilities, with the solid black line representing something close to stable multilingualism and the grey line representing large-scale language shift away from local languages in favor of the use of Indonesian. The dotted line represents something akin to Krauss’s (1992) prediction, where the small languages are endangered while the large ones are maintained.

Anderbeck (2013) presents three portraits of Indonesian language vitality that exemplify the different ways that local languages might be affected by the large scale incursion of Indonesian into every communicative domain. The first scenario is represented by Marori, a language isolate now spoken by only a few individuals in a village on the south coast of Papua New Guinea. The second scenario is represented by Una, spoken in the interior of Papua, which Anderbeck describes as the only minority language in the region to enjoy Sustainable Literacy, although he qualifies this by noting that this period of sustainable multilingualism may be fleeting and threatened by outmigration. Finally, Anderbeck’s third scenario is “languages with large speaker populations, but weakening use by the younger generations”. His example of this type of scenario is Gorontalo, one of the largest languages in Sulawesi, with a speaker population of close to 1 million. This last example leads Anderbeck to the question of whether there can be languages that are “too big to fail” – the question that we return to in the following section.

The language endangerment literature has largely focused on shift away from local languages in Eastern Indonesia (e.g. in Florey 2005), although it may be argued that Eastern Indonesia is not the best example of shift toward Indonesian, since language shift in this area toward the Trade Malays of the area would largely pre-date the post-diffusion period of shift toward Indonesian (Grimes 1996).
4. The relationship between size and vitality

With respect to language shift and endangerment in Indonesia, the first question we ask is: To what degree does language size correlate with risk of endangerment? To get a broad overview we can look at language population size along with some measure of that language’s vitality, which we do in Figures 4 and 5, showing that in fact there is little correlation between small size and threatened status (or conversely, large size and stability).

Figure 4 gives speaker population sizes for 716 languages of Indonesia (using data from Anderbeck 2013, which has a slightly higher total language count for Indonesia than Lewis, Simons, and Fennig 2013)\(^5\). The five black bars on the left of the chart include all of those languages with fewer than 100,000 speakers — that is, all of the languages that Krauss would consider, based on numbers alone, to be at risk (the leftmost bar counts those languages that are already extinct). The two right-hand (grey) bars, then, include all of the “big” languages of Indonesia — all of those languages with speaker populations of over 100K. This includes

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\(^5\) We are very grateful to Karl Anderbeck for his generosity in sharing an earlier version of the EGIDS numbers with us, without which we would not have been able to conduct this analysis. Since the publication of Ethnologue 17 there have been some updates and changes to the EGIDS numbers that are not reflected in our analysis. In addition, the difference in total language counts between the two has partly to do with border language communities, where the speech community on one side of a border may have different dynamics than that on the other side of a border (a fact that is not reflected in the Ethnologue numbers, which treat each language community as a single speech community).
79 languages, for a total of over 200 million speakers. Excluding Indonesian, eighteen of these languages have over a million speakers and are, notably, all spoken in Western Indonesia. The top three – Javanese, Sundanese, and Madurese – all spoken in Java, account for over half of the population of Indonesia and are of particular interest, given the observation that “[i]n spite of their large speech communities, the Javanese, Sundanese, and Madurese languages are actually endangered in that some of their domains of usage are being taken over by Indonesian, and, to a lesser extent, in that they are not always passed on to the next generation” (Adelaar 2010: 25).

Figure 4. Languages in Indonesia and number of speakers

Figure 5 displays the vitality of Indonesia’s languages according to the Expanded Graded Intergenerational Disruption Scale (EGIDS) developed by Lewis and Simons (2010) and based on Fishman’s GIDS (1991). This scale categorizes languages according to an assessment of their status based on answers to five questions: i) What is the current identity function of the language; ii) What is the level of official use; iii) Are all parents transmitting the language to their children; iv) What is the literacy status; and v) What is the youngest generation of proficient speakers? The thirteen possible categories are listed in Table 2. The scale is intended to serve as an evaluative framework of language endangerment, and to provide practical and accessible information for practitioners of language maintenance and language revitalization. The use of the EGIDS scale as an assessment tool is an excellent step in providing insight into the factors that put languages at risk of endangerment, even if trying to distill the linguistic situation of a given language to a single number is necessarily an oversimplification in situations of dynamic multilingualism.

Table 2: EGIDS Levels (Lewis and Simons 2010)

<table>
<thead>
<tr>
<th>Number</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>International</td>
</tr>
<tr>
<td>1</td>
<td>National</td>
</tr>
<tr>
<td>2</td>
<td>Regional</td>
</tr>
<tr>
<td>3</td>
<td>Trade</td>
</tr>
<tr>
<td>4</td>
<td>Educational</td>
</tr>
<tr>
<td>5</td>
<td>Written</td>
</tr>
<tr>
<td>6a</td>
<td>Vigorous</td>
</tr>
<tr>
<td>6b</td>
<td>Threatened</td>
</tr>
<tr>
<td>7</td>
<td>Shifting</td>
</tr>
<tr>
<td>8a</td>
<td>Moribund</td>
</tr>
<tr>
<td>8b</td>
<td>Nearly Extinct</td>
</tr>
<tr>
<td>9</td>
<td>Dormant</td>
</tr>
<tr>
<td>10</td>
<td>Extinct</td>
</tr>
</tbody>
</table>
The EGIDS scale also allows for a coarser categorization of languages as either “safe” or “threatened,” where the authors conclude that languages with a status of 6a or lower are safe, and 6b and above are threatened. Figure 5 displays this categorization by using grey bars for the languages that are tentatively considered safe (due to their function in society and/or an assessment of successful intergenerational transmission), while the black bars indicate those languages that fall under categories that are considered threatened.

![Figure 5. EGIDS status for Indonesian languages (data from Lewis, Simons, and Fennig 2013)](image)

Assuming the EGIDS scale to be a reliable indicator, we can ask the question to what degree does speaker population correlate with EGIDS status? Despite what is often widely assumed – that languages with small numbers of speakers are more likely to be endangered, we find little evidence of this in the languages of Indonesia, and we are led to conclude that even larger languages can be at risk. Using the EGIDS status for each of the documented languages of Indonesia, based on data provided by Anderbeck (2010), we find that there is in fact only a very weak correlation between population size and EGIDS status for the languages of Indonesia, as seen in Figure 6. We hypothesize that this fact may be true elsewhere in the world.

![Figure 6. Speaker population (log) and EGIDS vitality measure for languages with under a million speakers](image)
Since it is not possible to treat the EGIDS scale as a true continuous scale, where distance between one EGIDS level and the next is equal, we are limited in the statistical analysis that we can perform. However, we can nonetheless consider whether there is a significant population difference between those languages that are considered endangered according on this scale and those that are considered safe. Strikingly, there is no evidence that the average population size is significantly different for the “more vital” languages in Indonesia than it is for the “less vital” languages. Using a t-test to compare average population for the threatened languages (categories 6b-9, excluding 10: “Extinct”) to average population for the safe languages (categories 1-6a, excluding 0: “International”) we find that the difference is not significant (p = 0.32). Considering how widely it is assumed that language size and vitality correlate this is a startling result.

A small speaker population at some point of course will accompany language death, since the definition of language death includes a dwindling number of speakers. But it is important to distinguish between those factors that result from language death and those that contribute to it. Himmelman (2010: 46) puts this in terms of factors and scenarios, noting “it is rarely the case that one or two or three causes or factors lead to language endangerment. Instead, language endangerment results from the specific and complex constellation of a variety of such factors…an endangerment scenario.” The fact that language size and vitality do not correlate is only further evidence that a small speaker population is not a cause of language death. Moreover, as noted by a reviewer, the method used to assign EGIDS numbers further masks the lack of correlation between size and vitality than we show here, since researchers are hesitant to assign languages with large populations an EGIDS value higher than 6a. As Florey writes, “[r]estricting the definition of ‘endangered language’ to those languages with small speaker populations disguises the extent of the problem” (Florey 2005: 59).

We are left then with several issues to consider. First, this comparison brings attention to the fact that multiple factors contribute to language shift and must be considered when assessing the vitality of a language. In addition, even if there were a strong correlation between size and vitality this would not necessarily indicate a causal relationship. Rather, a small speaker population seems likely to be a symptom, rather than a cause, of language endangerment; the corollary of this observation is that even the large languages in Indonesia are not “safe”. In the following section we turn to a case study of Javanese that offers further evidence of shift toward Indonesian amongst speakers of even the largest languages in Indonesia.

5. A case study: Javanese

Javanese is by far the most widely spoken local language in Indonesia; estimated to have over 80 million speakers it is by some counts the 10th most widely spoken language in the world. It is the only language in this group that is not a national or official language of any country, but if any language of Indonesia is “safe”, it seems that Javanese should be. There are a number of factors that would seem to favor maintenance of Javanese, including the size of the speaker population, the existence of dense speaking communities, and the cultural and political dominance of the Javanese community in Indonesia. Indeed, in the early days of Independence and the accompanying promotion and diffusion of Indonesian as the national language, there was concern both about whether Javanese people would learn Indonesian and whether Javanese would overly influence spoken Indonesian. And yet, despite all of these factors that should seemingly support strong language loyalty, we still see changes in use of Javanese that are symptomatic of language shift, especially when we consider shift away from use of Javanese by younger speakers.

One aspect of this shift is a dramatic decrease in the use of high Javanese (krama), as reported by Errington (1998b), Poedjosoedarmo (2006), Smith-Hefner (2009), and Setiawan (2012). Young people commonly cite a fear of making mistakes and laziness (Smith-Hefner, Setiawan 2012) as reasons for abandoning the use of the high register in favor of either low Javanese (ngoko) or Indonesian, both of which are also seen as both “more communicative” and more egalitarian. Taken together these studies suggest a categorical loss of krama in younger generations, and a more gradient loss of ngoko (in fact not unlike what we see in other language shift situations with a more precipitous loss of the more formal register). This is exacerbated in the Javanese context with a highly codified distinction between formal and informal, which precipitates a more rapid loss of the formal register.

Accompanying the shift away from krama is a rapid shift away from ngoko toward increased use of Indonesian as the primary home language. Setiawan (2012), Smith-Hefner (2009), and Kurniasih (2006)
report on this phenomenon and on the social factors that play a role in this shift, including gender, class, language attitudes, and level of urbanization. Of particular relevance to our discussion with respect to language shift are university students’ responses collected by Smith-Hefner to the question of what language they use with their parents and grandparents versus their planned language use with future children. In Table 3, reproduced from Smith-Hefner (2009), we see a striking shift from patterns of language use with older speakers and projected language use with future children. Only 11% of students report using Indonesian with grandparents, 13% with their parents, but 62% report planning to use Indonesian with their children. In addition, both Kurniasih and Smith-Hefner show middle class girls leading the shift to Indonesian as a first language. Table 4, also reproduced from Smith-Hefner (2009), shows a higher percentage of her university women respondents shifting to Indonesian than the university men, both with their parents and with their expected future children. Finally, an urban-rural divide is found in Setiawan’s (2012) study of children aged 9-11 in three East Java locations (city, town, and village), which finds that while “city children report us[ing] Indonesian when communicating with all their interlocutors regardless of domain,” most village children “report using Javanese to all of their interlocutors except when communicating with their teachers in the classroom” (293-94).

Table 3: Reported Indonesian language use by university respondents in Smith-Hefner (2009).

<table>
<thead>
<tr>
<th>Reported Indonesian language use</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Use with grandparents</td>
<td>22/206 (11%)</td>
<td></td>
</tr>
<tr>
<td>Use with parents</td>
<td>25/199 (13%)</td>
<td></td>
</tr>
<tr>
<td>Plan to use with own children</td>
<td>123/198 (62%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Reported Indonesian language use by university respondents in Smith-Hefner (2009), broken up by sex.

<table>
<thead>
<tr>
<th>Reported Indonesian language use</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use with grandparents</td>
<td>10/105 (10%)</td>
<td>12/101 (12%)</td>
</tr>
<tr>
<td>Use with parents</td>
<td>8/104 (8%)</td>
<td>17/95 (18%)</td>
</tr>
<tr>
<td>Plan to use with own children</td>
<td>50/97 (52%)</td>
<td>73/101 (72%)</td>
</tr>
</tbody>
</table>

Together these studies paint a picture of pivotal language shift reflecting rapidly changing social attitudes and social goals, evidenced in particular in the language use patterns of urban dwellers and middle class women and their daughters. Although it is not clear from these data alone whether children or parents are driving these linguistic choices, Smith-Hefner’s study suggests that it may be mothers, as much as daughters, and Setiawan reports on the negative attitudes many parents in his study held toward Javanese, labeling it “difficult,” and “old-fashioned,” and conveying an impression that its speakers are “poor and village-like.” Thus the parents in Kurniasih and Setiawan’s studies and the young adults in Smith-Hefner’s study appear to be a pivotal generation in language shift, a group of fluent speakers who nonetheless display both overt and covert negative attitudes toward their home language. This finding is reported for other language shift scenarios (see, for example, Ravindranath 2009). As Indonesian takes over in more and more domains of communication and intergenerational transmission of Javanese breaks down, we are led to conclude that even a language with over 80 million speakers can be at risk, a trend that has serious implications for all of the local languages of Indonesia.

6. Conclusions and next steps
While it is generally agreed that Indonesian is a successful example of language planning and language standardization in the interest of nation building, this has clearly had implications for local languages. Moreover, the negative impact of Indonesian on local languages is not limited to the “smaller” languages in Indonesia, but is even affecting the larger languages, not generally thought to be at risk. Clearly, even a huge
language like Javanese, amongst the top ten languages in the world, can be endangered. In terms of language endangerment then it seems there is no such thing as “too big to fail”. Although there may be a number of possible predictors of maintenance that relate to larger speaker population size (including a greater likelihood for official recognition, a greater likelihood for previous documentation, and a more diverse speaker population that may be less likely to simultaneously shift away from the L1), size alone cannot predict whether robust intergenerational transmission is occurring. Thus a clearer understanding of the demographic, sociolinguistic, and attitudinal factors that lead to individual and community decisions about intergenerational transmission is crucial to assessing risk of endangerment.

Since the issue of language shift away from the large regional languages of Indonesia has been comparatively understudied, we choose to focus on these – both in this paper and in our work in progress. We see a need to complement and augment the heretofore standard methodologies of either giving a single number to assess language viability or conducting careful ethnographic studies of smaller communities. To this end, we have initiated a survey to examine the social factors related to shift in Sundanese and Javanese speaking communities (Kuesioner Penggunaan Bahasa Sehari-hari, Cohn et al 2013). An advantage to a focus on languages with large speaker populations is that it offers us an opportunity to conduct multivariate analyses of a wide range of factors in a demographically diverse language community. Since we can find speakers of Javanese, Sundanese, and Madurese not only in all age groups and genders, but also with widely differing levels of education, diverse levels of access to technology, diverse types of family structures, and in both urban and rural environments at different stages of socioeconomic development, this diversity allows us to compare and consider more closely how these factors may or may not contribute to language shift. This work also brings attention to the fact that vitality assessments of language communities are likely to be flawed if they do not take into account the fact that language communities are not necessarily the same as speech communities, that is, groups of speakers who share not only a language but also norms about language use (Labov 1972). A single language community may be made up of smaller speech communities that have different sociolinguistic dynamics. At a minimum therefore we may need to consider that it is more useful to assign vitality measures such as EGIDS to individual speech communities than to the larger community of speakers of a particular language.

The study of language endangerment is really still in its infancy. We do not yet have predictive models of what languages are at risk, and while it is clear that documentation is important, we need a methodology that allows us to more accurately predict the degree of risk. We have shown in this paper that size is not an accurate predictor of language shift. In order to better understand which factors are predictors of language shift, it is necessary to study local patterns of use to understand the complex factors that contribute to language vitality and thereby create a typology of language endangerment scenarios. At the same time we would like to be able to document as many factors as we can that contribute to language shift, while we document the rate of change. As it becomes clear that large, dense, diverse speaker populations do not prevent language shift, we aim to build awareness of this issue, as well as take the opportunity to use these large language communities to quantitatively analyze the factors that contribute to the process of language shift.

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The authors would especially like to thank Karl Anderbeck for sharing with us the EGIDS data on the languages of Indonesia (collected from scholars working on these languages, and the basis for the data in the Ethnologue). We would like to thank the audience at SEALs 23 and an anonymous reviewer for helpful comments on this paper. We would also like to thank the Fulbright Foundation for funding Cohn’s research in Indonesia, Atma Jaya Catholic University for hosting Cohn during her recent sabbatical, and both the Mario Einaudi Center for International Studies at Cornell University and the Center for the Humanities at the University of New Hampshire for funding portions of this research.
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EVIDENTIALITY IN LAMJUNG YOLMO

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Abstract
Lamjung Yolmo is a Tibeto-Burman language of the Bodish branch spoken in Nepal. Like related languages it has a verbal system that includes evidential distinctions. In this paper I look at the role of these evidentials in interaction, and in relation to other features of grammar. These features include their relationship to events, interaction with subject person, endopathic verbs and negative polarity. I also look at constructions with no overt evidential marking, and evidential elision, to give a more rounded representation of the role of evidentiality for speakers of Lamjung Yolmo, and explore its role in audience perception of utterances.

Keywords: Tibeto-Burman, Yolmo, evidentiality

ISO 639-3 codes: scp

1 Introduction
Evidentiality is a well attested feature of Tibeto-Burman languages (LaPolla 2003b), particularly within the Bodish branch. In this paper I examine the evidential forms in the Lamjung variety of Yolmo1 (ISO 639-3 SCP), with particular focus on their relationship to other features of the grammar and the role they play in interaction. In taking this broader focus I hope to help drive forward the discussion on evidentiality in this linguistic area, and demonstrate that evidentiality cannot be analysed in isolation.

Descriptions of the forms and functions of evidentiality are well represented for Tibeto-Burman languages (Caplow 2000; Garrett 2001; LaPolla 2003a; Grunow-Härsta 2007; Hongladarom 2007; Hyslop 2011; Lidz 2007; Willis 2007), and I have given a basic description of the copulas in Lamjung Yolmo (Gawne, forthcoming). As Tournadre and LaPolla (2014) observe “Simply saying evidentials mark source of information does not capture all of the actual uses of evidential marking”. Instead, like them I take a much broader approach to what needs to be considered when discussing the use of evidentiality. In this paper I focus on a number of systems with which evidentiality interacts, including person-marking, endopathic verbs and negation to give a more nuanced picture of how speakers of Lamjung Yolmo use these forms in interaction. I also look at constructions without evidential marking, and elision of evidential forms, as well as listener perception of evidentiality, to give a more rounded picture of evidential use in the language.

Yolmo is a Central Bodish language spoken in Nepal (Hari 2010). The majority of Yolmo speakers are from the Helambu and Melamchi Valleys area north of Kathmandu, but there are around 700 speakers from half a dozen villages who reside in Lamjung, over 100kms from the original

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1 Yolmo is also known as Yohlmo, Hyolmo and Helambu Sherpa.
settlement. These Yolmo speakers have lived in Lamjung for around 100 years, and while their language is still highly mutually intelligible with the Yolmo of the Melamchi and Helambu Valleys there are some lexical and syntactic differences. Yolmo is also closely related to Kyirong (ISO 639-3 KGY, Huber 2005) and Kagate (ISO 639-3 SYW, Gawne 2013b).

Examples of Lamjung Yolmo are drawn from a corpus of elicited and naturalistic data, archived with Paradisec (catalog.paradise.org.au/collections/LG1). Each example includes a reference with the speaker initials and the archival file number of the recording, which is also the date. One example in this paper comes from a written record, and is marked accordingly. Naturalistic examples also include a time code.

2 Evidentiality in Lamjung Yolmo

In this paper I will look the interactional use of evidentiality in Lamjung Yolmo, and a number of grammatical features with which it interacts to create complex patterns and distribution in usage. I begin by introducing the evidential forms, their semantics and basic functions in Section 2.1. I then explore how they interact with different event types (§2.2), grammatical subject (§2.3), endopathic verbs (§2.4) and negation (§2.5). These topics all explore how people choose the appropriate evidential form in interaction. In Section 2.6 I look at utterances with no marked evidential value, either through an evidentially unmarked grammatical structure, or elision of the evidential element in interaction. In Section 2.7 I examine the attention that interlocutors pay to the evidential forms people choose.

2.1 Lamjung Yolmo evidential forms

Lamjung Yolmo has a set of copula verbs. Not only do these verbs function as standard copulas, but like many Tibeto-Burman languages a subset are also used in auxiliary verb constructions (Anderson 2006) where they contribute modal information, which includes evidential categories. Copulas are not inflected for person, number or politeness level and many do not distinguish tense. Instead they have functions that include equation and existence.

Table 1 presents the copula forms in Lamjung Yolmo. The distinctions along the side denote functional distinctions, including arguments licensed and tense, while those along the top are the semantic distinctions. The negative form is presented beneath each affirmative form, and italicised.

### Table 1: The Lamjung Yolmo copula system

<table>
<thead>
<tr>
<th></th>
<th>Egophoric</th>
<th>Dubitative</th>
<th>Perceptual evidence</th>
<th>General fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation</td>
<td>yìmba mìn</td>
<td>yìnɖo mìnɖo</td>
<td>(dùba) (mìnduba)</td>
<td>-</td>
</tr>
<tr>
<td>Existential present</td>
<td>yè mè</td>
<td>yèʈo mèʈo</td>
<td>dù mìndu dùba mìnduba</td>
<td>òŋge mèŋge</td>
</tr>
<tr>
<td>past</td>
<td>yèkè yèba mèke mèba</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in Table 1, only the existential egophoric copula has distinct forms that occur in the past tense. The yèba form is related to the lexical -pa past tense suffix. The yèke form cannot be morphologically analysed as the -ke suffix is a non-past tense suffix for lexical verbs.
Semantically, there are four different categories of copula verbs in Lamjung Yolmo. The first is the egophoric, which is similar to the Standard Tibetan egophoric in that it is an evidential form that encodes information that is known personally by the speaker (ego Garrett 2001; Tournadre 2008). It is different to Standard Tibetan though, as the speaker does not have to be either the subject or closely affiliated with the subject^2 to use the form, giving it wider scope. The dubitative is an epistemic marker that indicates reduced certainty on the part of the speaker, it is not an inferential evidential as there is no focus on or source needed to make a statement with a dubitative, although it can be used in similar situations. The perceptual evidential is for all kinds of sensory evidence. That it draws attention to the sensory means that it draws attention to the act of perception, which means that it can contextually acquire a pragmatic sense of ‘newness’ of information that others have confused for mirativity in related languages (DeLancey 1986; Hill 2012). The general fact copula is for those very generally known facts about the world, such as sugar being sweet. It is not frequently used in daily interaction. That the system includes copula forms that are epistemic (the dubitative) as well as evidential is one indicator that evidentiality is not a grammatical category that exists in isolation, but is part of the larger repertoire of modal options that speakers can draw on in interaction (see Gawne 2013a for a more detailed discussion).

Functionally, equational copulas are used in constructions that equate two noun phrases. The existential forms are used in existential constructions, but also in locational, possessive and attributive constructions as well, which is common for Tibeto-Burman existential copulas (Genetti 2007: 190; Hari 2010; Caplow 2000; Garrett 2001). There are distinct forms for each of these functions for the egophoric and the dubitative. The general fact copula only appears in existential-type constructions and has no corresponding equational form. The perceptual evidential is used on very rare occasion by speakers as an equational, and this appears to be at the periphery of acceptable use.

The copula does not only function as the main verb of a sentence; those in the bolded box within Table 1 can also function as an auxiliary in certain constructions. This is a common use of copulas in Tibeto-Burman languages and is also found in Melamchi Valley Yolmo (Hari 2010: 60) and Sherpa (Kelly 2004: 351). This subset of copula verbs can be used to add tense information as well as epistemic information about the evidential status of the utterance. The structures that include copulas as auxiliaries are perfective and imperfective, habitual and narrative past. In the examples presented below copulas that are used as auxiliaries are glossed AUX. I do not focus on the nature of the auxiliary constructions, but on the evidential contribution of the form to the utterance.

Table 1 presents an initial challenge for discussing evidentiality in Lamjung Yolmo. The first limitation is that this paradigm does not include all of the evidential forms in Lamjung Yolmo. Like many other Tibeto-Burman languages, Yolmo also has a reported speech particle^3 lô that operates external to this set. Therefore, the evidential forms do not exist in one clear syntactic category that can be examined in isolation. I do not discuss the reported speech evidential in any detail in this paper, but it presents its own interactionally complex patterns of use, and is discussed in detail in Gawne (2013a). The second challenge is that this is not exclusively a set of choices between evidential forms; the dubitative form is epistemic. The relationship between evidentiality and epistemic modality has been a matter of on-going debate. Some consider evidentiality to be a completely separate

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^2 As one reviewer noted, the notion of ‘subject’ is problematic in Tibetic languages, a better term may be something like ‘main speech act participant’ (Zeisler 2012, Tournadre 2014), however for this paper a broad idea of subject captures the main distinction between the egophoric in Tibetan and Lamjung Yolmo.

^3 The Tibeto-Burman forms are discussed as ‘hearsay’ or ‘inferential’, and may be clitics or suffixes instead of free particles. Matisoff (2003: 663) reconstructs *dz(y)ay as a ‘quotative particle’ in Proto-Tibeto-Burman, demonstrating a long areal presence.
phenomenon to modality (de Haan 1997, 2001a; Aikhenvald 2004); a second perspective is to subsume evidentiality within the category of epistemic modality (Bhat 1999); and a third is to consider evidentiality as a category within modality, on an equal footing to epistemic modality (Palmer 2001). In this paper I demonstrate that when we look at these forms in use in Lamjung Yolmo, it becomes difficult to argue that they are entirely functionally distinct categories.

2.2 Evidentials and events

The description of the copula verbs above demonstrates the broad differences in their functions. When we look more closely at how they are used in interaction, it becomes apparent that these basic features lead to the different forms being used for different events. As I demonstrate in this section, the differences lead to additional pragmatic features of these forms. In this regard I pay particular attention to the egophoric and the perceptual evidential, which are the two most frequently used copula categories. In this section I also demonstrate that while these forms are used in different contexts, they are not necessarily mutually exclusive in the contexts in which they can be used - instead speakers can choose to highlight their stance towards an event in the choice of copula they use. As Tournadre and LaPolla (2014) have also emphasised, evidentiality is not about objective evidence, but speakers’ subjective interactional stance, and what they wish to foreground.

The first difference between the perceptual evidential and the egophoric is the specificity of the event being referred to. The deictic function of the perceptual evidential ë is to point to a specific instance of perception involving a specific event.

(1)  dì mì thómbo ë
     this person tall COP.PE.NEG
     ‘this person is tall’ (AL 100924-01)

(2)  dì mì thómbo yë
     this person tall COP.EGO.NEG
     ‘this person is tall’ (AL 100924-01)

If a person uses the perceptual evidential when describing a tall person, they are referring to a specific incident of seeing a tall person. The event of someone being tall is not a specific event, as it is a property of that person, but the event of seeing this tall person is the specific event that the evidential is indicating. This has also been frequently observed in analyses of the cognate ‘dug in Standard Tibetan (Goldstein & Nornang 1970; Denwood 1999; Garrett 2001: 86, see also Caplow 2000: 20 for Dokpa Tibetan). In all of these analyses a specific instance of perception contrasts with knowledge that has some duration. In Lamjung Yolmo the egophoric evidential points to the person’s own knowledge, and therefore the deictic reference is not to a specific event of perceiving a tall person, but the knowledge state of an individual about the tall person.

The two examples below more clearly illustrate this contrast in the specificity of an event. Example (3) would be used if a person does not have children. Example (4) on the other hand would be used if a speaker did not have their children present at the time of the utterance. This is because the egophoric is for personally known information, while the perceptual points to a specific instance of an event, i.e. the non-presence of the children, but this does not also mean that beyond this event the speaker does not have children.

Example (3) would be used if a person does not have children. Example (4) on the other hand would be used if a speaker did not have their children present at the time of the utterance. This is because the egophoric is for personally known information, while the perceptual points to a specific instance of an event, i.e. the non-presence of the children, but this does not also mean that beyond this event the speaker does not have children.
The egophoric is also preferred for habitual actions, which is further evidence that it is preferred for non-specific events, as opposed to the perceptual evidential, which is preferred for more specific, individual instances.

The second difference between the perceptual and egophoric categories is the level of engagement with the context. By using the egophoric copula and deictically referring to their own knowledge, the speaker is showing that they have more personal knowledge of the context than if they had used the perceptual evidential, which involves pointing to something that they have perceived, indicating that someone else could also see what they are talking about. This means that for (2) the person speaking would have to be acquainted with the tall subject of the sentence so as to know they are tall. It should be noted that this is not on the level of close personal proximity as the egophoric in Tibetan, which would involve the speaker being closely related to the subject. Instead the relationship between the speaker and the subject is not as rigid, simply that the speaker knows the person, without necessarily any personal connection. This is a wider version of Garrett’s (2001: 41) concept of ‘intimacy’ in of Standard Tibetan. The more personally acquainted with the knowledge a speaker is, the more appropriate the use of the egophoric becomes. Caplow (2000: 51) notes for Dokpa that it is possible to make copula choices to express a greater sense of involvement in an event. By using personal evidentials (equivalent to Lamjung Yolmo egophoric) to describe the states or activities of others, the speaker can indicate a personal connection in a way that using the perceptual evidential does not capture.

To return to the descriptions of the tall person in (1), the perceptual evidential would be used if the tall person was a new acquaintance, or someone who has grown tall since you last saw them. This is because after a period of time it is not necessary to flag the specific instance of seeing the tall person (and their remarkable height); instead the egophoric would suffice. The perceptual evidential therefore predominantly marks recently perceived information, in contrast to the information that already exists as part of an individual’s personal knowledge. This has also been observed in the cognate form in Standard Tibetan (Tournadre 2008: 298; Vokurková 2008: 111) as well as Kyirong (Huber 2005). Note that there is a sense of newness should not be confused with mirativity. DeLancey (1997: 33) defines mirativity as information “new or surprising to the speaker, regardless of whether the information source is first- or second-hand.” In the examples above, the perceptual evidential in Lamjung Yolmo includes only events directly perceived by the speaker, so we can discount the ‘second-hand’ information part of the definition. The difference between ‘new’ and ‘surprising’ information is worth considering, as they are quite different. While speakers may often use the perceptual evidential to show that something is newly perceived they are not necessarily surprised by these events, or lack “psychological preparation” (DeLancey 1997: 35) to deal with the events they are describing. Also, to describe these forms as ‘mirative’ is to take away from the fact that their
primary function is to indicate perceptual evidence (see Hill 2012 for a more detail discussion with regard to Standard Tibetan). Others have separated out newness and surprise in their discussions of perceptual evidentials in closely related languages, including Huber (2005) in her discussion of Kyirong and Zeisler (2000: 39-40), who takes into account a number of different Tibetic languages.

Although the perceptual evidential forms in Lamjung Yolmo are not grammatical miratives, there are some specific instances where we see them used with a strong sense of surprise, or counter-expectation. This is most frequently the role of the emphatic dùba form. Examples elicited for different contexts can show how they are used. The two examples below could be used as statements about the location of the speaker’s child. Sentence (5) would be used if a mother had left her child in someone else’s village and knew that the child was being looked after. Example (6) would be used if the mother expected that her child was at home, and found that instead the child was at another person’s house. The choice of the emphatic perceptual evidential over the regular perceptual evidential indicates that the information in (6) is not only new to the speaker, but also surprising. This would be further emphasised by an increase in pitch and volume, and other communicative indicators such as the accompanying gestures.

(5) ṇà=ki pìza khé=ki yùl=la yè
1SG=GEN child 2SG=GEN village=LOC COP.EGO
‘my child is in your village’ (SKL 101023-06)

(6) ṇà=ki pìza khé=ki yùl=la dùba
1SG=GEN child 2SG=GEN village=LOC COP.PE.EMPH
‘my child is in your village!’ (SKL 101023-06)

This distinction can also be illustrated with more naturalistic examples. In this recording, I was performing a brief magic trick for AL. In this performed activity, I showed her the empty bag, and demonstrated for her that there was nothing inside. She observed this empty state (7) before I made a bank note ‘appear’ in the bag, and then she exclaimed (8).

(7) nàŋla tɔ̀ˈaŋ mìndu tɔŋba-raŋ dù
inside none COP.PE.NEG empty- EMPH COP.PE
‘there is nothing inside, it is empty’ (AL 110217-03 01:50)

(8) (laughs) āŋa-raŋ dùba
money-EMPH COP.PE.NEG
(laughs) ‘there is money’ (AL 110217-03 02:02)

Here the speaker expected an empty bag and had observed the state with the perceptual evidential, however the appearance of the money was contrary to her expectations (as indicated by the laughter, and exclamation immediately afterwards that her daughter should come and see the trick, as well as by the use of the emphatic dùba).

These examples demonstrate the kind of psychological unpreparedness that DeLancey sees as key to mirativity. It is, however, only one use of the dùba form, which also has a non-past and an interrogative function, which may also relate to some of the features that make it effective as a marker of counter-expectation in interaction. There are also intonation cues such as increase in speech volume for others to tell that speaker is surprised. At best we can only say that in Lamjung Yolmo what DeLancey defines as mirativity is a pragmatic extension of the perceptual evidential, and not a core feature of its semantics.

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The examples above show that different contexts call for either an egophoric copula or a perceptual evidential. Although they are the two most commonly used forms, neither can really be considered the ‘default’ different contexts call for different preferred forms.

2.3 Evidentials and person

The nature of evidentiality is such that the relationship between the speaker and the subject of an utterance influences the evidential form used. As we see in examples (9)-(11) the first person forms will often occur with egophoric, because this is the most appropriate evidential form to use for actions you perform, as you have personal knowledge of these actions. The perceptual evidential is more appropriate for second and third person subjects because you are a witness to their actions.\(^4\)

(9) \(nà\ tó sà-teràŋ yè\)
1SG rice.cooked eat-IPFV AUX.PE
‘I am eating rice’ (AL 100929-01)

(10) \(khé tó sà-ku dù\)
2SG rice.cooked eat-IPFV AUX.PE
‘You are eating rice’ (AL 100929-01)

(11) \(khó tó sà-ku dù\)
3SG rice.cooked eat-IPFV AUX.PE
‘He is eating rice’ (AL 100929-01)

This type of patterning is similar to that of ‘conjunct/disjunct’ or ‘egophoricity’ systems (Hale 1980, DeLancey 1992, Floyd et al. forthcoming), in that first person is distinct from second and third person through a self/other distinction this is accompanied by an interrogative structure where second person subjects in questions hold the same egophoric value as the first person declaratives. Lamjung Yolmo the mechanism is the egophoric evidential, and the question structure also occurs. I argue elsewhere (Gawne 2013a, in prep) that these analyses are limited, because they do not account for the full relationship between the evidential forms and different subjects, or the full relationship between evidential forms and other grammatical features. Although some elements of the discussion in this section will be familiar to readers acquainted with the conjunct/disjunct and egophoricity literature, I do not present them within such terms.

Lamjung Yolmo speakers can also encode surprise at their own non-volitional actions with the perceptual evidential, as per (12), although this form would be marked to draw attention to the unexpectedness of their own dancing. Example (12) would be appropriate if the speaker had intended to not dance all evening and found themselves pulled into the action.

(12) \(nà tàpse tchálm-ku dù\)
1SG now dance-IPFV AUX.PE
‘I appear to be dancing’ (RL 110204-03)

\(^4\) Two different imperfective forms are used in these constructions. Both indicate an event with internal duration, and it has not been possible to date to determine if any difference exist in their semantics. The -\(ku\) form can only occur with the perceptual evidential, while the -\(teràŋ\) form can occur with the egophoric, perceptual or dubitative, which accounts for their distribution to some extent. For more discussion of the past/non-past tense forms and perfective/imperfective aspectual forms see Gawne 2013a, forthcoming.
As Hargreaves (1991, 2005) showed for Kathmandu Newar, the semantics of the perceptual and egophoric evidentials in Lamjung Yolmo interact with the volitionality of the action. The egophoric cannot be used for first person non-volitional because the speaker’s knowledge of the event is not drawn from their existent knowledge state. Although volitionality is not a strong component of the semantic distinction of these verbs with first person, it is still one of the dimensions on which they operate.

There are some contexts in which the same copula is used regardless of the person-marking of the subject. For example, when talking about a person’s name the egophoric is used if you are talking about your own name, the name of your interlocutor or another person (13)-(14).

(13) ŋà=gi   min  rádz yimba
1SG=ERG name Raj COP.EGO
‘my name is Raj’ (RL 110204-03)

(14) khó=gi  min sòm yimba
3SG.M=ERG name Som COP.EGO
‘his name is Som’ (RL 110129-01)

When we consider that the perceptual evidential is only used when there is external evidence of something (or internal evidence for first person subject endopathic verbs, see Section 2.4) then it makes sense that speakers would use the egophoric for all speakers, as there is no external evidence of what a person’s name is. There are some fringe cases where the perceptual might be appropriate, such as reading a name tag of a person whose name you were not sure of, but speakers were reluctant to agree with such scenarios, perhaps because it was quite specific, unlikely and not a particularly polite interactive move.

The perceptual evidential can be used for volitional first person actions, as long as another self undertakes those actions. Example (15) would be appropriate if the speaker was looking at a photograph or a video of themselves at a funeral, lighting one of the many butter candles that are burned during the ceremonial proceedings:

(15) ŋà=gi  bòti pár-teraŋ dù
1SG=ERG candle(Nep) light-IPFV AUX.PE
‘I am lighting a candle’ (RL 29/10/10 book 4, p. 18)

In this example there is never any doubt that the speaker was acting volitionally in the image. The perceptual evidential is not being used because of a lack of volition, it is being used as its semantics indicate, for a witnessed event. This is only possible because the speaker is referring to an image of himself lighting a candle. It is not the action, but the perception of the action that is the focus here. Garrett (2001: 78, 166) also discusses scenarios where speakers use the perceptual evidential when talking about another version of oneself, such as in an image or video, as do Denwood (1999) and Tournadre (1998, 2003).

2.4 Endopathic verbs

Endopathic verbs offer an example of how the choice of copula form can interact with the semantics of other verbs in an utterance. Endopathic verbs are a subset of verbs relating to internal feelings, cognitive processes and sensations. Examples include kyu ‘feel cold’, tòo ‘feel hungry’ and tèmba sàl ‘remember’. This class of verb differs from other verbs in that they are used with the perceptual
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evidential for first person subject, but the perception is personal and internal, and unobservable by others. Tournadre and LaPolla (2014) discuss endopathic as a type of sensory access, but one that is internal and not accessible to others. Talking about other people as having the same states and emotions cannot be done using the perceptual evidential copula, as it is not possible to have perceptual evidence of the internal states of others. In these situations the egophoric form is used instead. These parameters mean that endopathic verbs have a different general split in egophoric and perceptual evidential for first versus second and third person subjects; with the perceptual evidential being used for first person subjects and the egophoric forms being used for second and third person subjects. Tournadre (1996: 206, see also Tournadre and Dorje 2003: 197-198) observes this patterning for Standard Tibetan and forged the ‘endopathic’ terminology. It has also been discussed by Garrett (2001: 19) for Standard Tibetan and Caplow (2000: 23) for Dokpa. It appears to be a relatively common feature of the Tibetic branch of Tibeto-Burman languages.

There is one interesting example of the use of the egophoric copula with a second person endopathic verb in a declarative utterance in the Lamjung Yolmo corpus. In a telling of the story of the Jackal and Crow (Kelly & Gawne 2011) the crafty Jackal manages to get the crow to drop the fish he is holding by flattering him into singing. In his strategic flattery the Jackal declares that the Crow can sing (16).

(16) `càro khé lú nèn cée yè
crow 2SG song sing know AUX.EGO
‘crow, you know how to sing songs’ (RL 101027-01 01:46)

Here the Jackal is presuming familiarity with the Crow’s (fictitious) ability to sing. In a second telling of the story, when the Crow shows reluctance to sing, the Jackal further goads him (17).

(17) làndi làp-sin yimba ná kí
jackal say-PST COP.EGO PART or
khé=kí lú nèn mè-ée dìba
2SG=ERG song sing NEG.NON.PST-know AUX.PE.EMPH
‘(the) jackal said ‘perhaps you [...] don’t know how to sing a song’ (RL 101027-01 04:48)

Here the Jackal has shifted to the perceptual evidential to indicate that the Crow has provided no evidence of his ability to sing, indicating that he does not know how.

For first person, the use of the perceptual evidential for endopathic verbs does not occur if the utterance involves a habitual internal state or feeling (18). This is because of the focus on perception being related to a specific event as discussed in Section 2.2.

(18) còole jìma lúmrànj nà=la tóo yè
morning sun every 1SG=DAT hunger COP.EGO
‘every morning I feel hungry’ (AL 091005-02)

There are also examples where the use of different copulas with some endopathic verbs can actually give rise to difference sense. To demonstrate, (19) would be uttered if the person was ill in a

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Note that the use of the egophoric in the first line of this utterance is a part of the fixed grammatical construction yimba ná kí that will not be discussed in this paper, but is examined in Gawne 2013a.
way that left no physical trace, such as a headache, while (20) would be for contexts where there were visible symptoms of the illness, such as vomiting, or sweating.

(19) mò nà-ti yè
3SG.F be.ill-PFV AUX.EGO
’she became ill’ (AL 120127-01)

(20) mò nà-ku dù
3SG.F be.ill-IPFV AUX.PE
’she appears ill’ (AL 120127-01)

Therefore, it is not just the fact that a verb is in the endopathic category, but also the accompanying evidential information, that determines whether it is endopathic in context. If ‘endopathic’ in Lamjung Yolmo is broader than a sub-set of verbs, this may indicates that what we see is a larger pattern in the conception of the cognitive delineation between ‘self’ and ‘other’ that is similar to Hargreaves’s (2011, 2012) analysis of internal state attribution in Kathmandu Newar. Hargreaves distinguishes between ‘self’ and ‘other’ in terms of knowledge structures, of which internal state attribution is one component. Such an analysis is concerned with looking at the way speakers construct knowledge attribution across the whole language. This treatment, rather than just a fixed list of ‘endopathic verbs’ in the grammar is a more holistic way of considering how people use these structures.

Garrett (2001: 80) observes that the judgments Standard Tibetan speakers have about endopathic verbs and their modal properties are “quite robust”. When I overtly discussed the preferred copulas for different verbs with Lamjung Yolmo speakers I also got quite consistent descriptions from them, on which the above analysis is based. The endopathic verbs are not necessarily a clear-cut set that are easily distinguishable from other verbs, which we can observe from a broader range of the corpus data. While the existence of endopathic verbs does appear to be robust, there are fringes where speakers’ reported usage is different to actual production.

Above I observed that endopathic verbs occur with perceptual evidential forms for first person subjects, however the use of egophoric evidentials for endopathic verbs with first person subjects appears to be at the fringes of general acceptable use. There are many examples such as those in (21) and (22) where first person constructions are given with the egophoric instead of the perceptual evidential.

(21) ñà=ki née-teraŋ yè
1SG=ERG think-IPFV AUX.EGO
‘I am thinking’ (RL 110204-03)

(22) ñà=ki sém há kò yè
1SG=GEN mind know AUX.EGO
‘I know’
(lit. ‘my mind knows’) (AL 120122-02)

It is possible that because speakers are producing these utterances in elicitation they are not referring to their own cognitive processes, but are using the egophoric to mark something more generic. Given how consistent the general attitude to endopathic verbs is amongst speakers, This is likely not the case. It is also possible in (22) that this is a more habitual or durative sense of knowing, or that the relationship between a person and their mind might be a complex internal state. It appears
that the boundary between what constitutes perceived knowledge that is internal to oneself and personal knowledge is a contextual gradation rather than grammatical absolutes.

2.5 Evidentials and negation

The relationship between the copula forms and negative polarity is worth considering, as the scope of the negation in relation to the propositional content and copula semantic is not always straightforward. This section provides a brief description of how negation and the semantics of the copula verbs interact. I have included this section because the relationship between negation and evidentiality is often overlooked in descriptions of these systems, the relationship to negation is also worth considering because it provides a different way of considering the relationship between evidentiality and modality, as I discuss below. All of the copulas in the paradigm have a single negative equivalent. This is different to lexical verbs, which have two different negative prefixes, with one being used for non-past and the other being used for past and imperative constructions.

For the egophoric copulas, the evidence is internal and tied to the assertions people make, and is not part of the scope of the negation. Below are examples of negated egophoric copulas, including both a copula of identification min (23) and one of existence mè (24). The speaker is not negating their knowledge state, but only the propositional content of the utterance.

(23) mò gòroŋ min
3SG.F Gurung COP.EGO.NEG
‘she is not Gurung’ (AL 110217-02)

(24) nà jàmu ğaŋa mè
1SG with money COP.EGO.NEG
‘I have no money with me’ (RL 120217-02)

In neither of these the participant can be said to be negating their own knowledge of the proposition they are putting forth, so we can say that the negation scopes does not include the evidential value of the utterance.

The dubitative forms in (25) and (26) also include both an identification form (minɖo) and an existential form (mè tọ).

(25) kauli mìnɖo
cauliflower(Nep) COP.DUB.NEG
‘it is probably not a cauliflower’ (SL 120214-02 10:44)

(26) mì ɗŋ mè y
person come COP.DUB.NEG
‘the person is probably not coming’ (RL 101028-04)

In this situation the negation has scope over the content of the clause, but not the possibility, so the evidential is not within the scope of the negation.

The perceptual evidential copulas have the clearest relationship between the evidential value and negation of all of the forms under consideration. Both of the utterances in (27) and (28) involve a person looking at the thing that is being referenced.
With the perceptual evidential in Lamjung Yolmo, it is not the act of perceiving that is negated, but the information that is being described with the perceptual evidential. Therefore, the negation does not incorporate the perceptual evidential.

The general fact copula has restricted use in Lamjung Yolmo, but speakers consistently use it in the appropriate context in elicitation. The negative form is presented in (29).

(29) kálaŋ sè ŋārmu měòge
lapsi sweet COP.GF.NEG
‘lapsi (fruit) are not sweet’ (RL 101125-01)

The scope of the negation with the general fact copula is quite difficult to discern compared to some of the other examples. It is possible that it can be interpreted that the negation scopes over the evidential, and so it could be that lapsi are sweet, but this is not a generally known fact. However, in this specific instance (given that lapsi are very sour), and what appears to be the case for all uses of the general fact, the negation scopes under the evidential and is instead negating the property of the item referred to, and not its status as a general fact.

I cannot include the reported speech particle in this discussion, as there is no negated reported speech form, nor is it possible to negate the particle. The reported speech particle is only used when there is a specific reported speech event that can be marked, the absence of a speech even (or the presence of another speech event) do not meet the conditions for its use.

Willett (1988) and de Haan (1997) have argued that evidentials are distinct from the category of modals because negation does not scope over evidentials. Although the perceptual evidential in Lamjung Yolmo scopes over negation, this is not a definitive reason to exclude it from a discussion of modality, especially given that the dubitative, which is clearly modal, also appears to scope over negation.

2.6 The absence of evidentiality
When looking at the interactional weight of evidential forms, it is also worth remembering that in Lamjung Yolmo they do not occur in all utterances. As mentioned in Section 2.1, there are constructions like the basic past (30) and non-past (31):

(30) tòŋla dènmu lè zò-sin
before like.this work make-PST
‘before (he) worked like this’ (AL 091108-01 39:20)

(31) ŋà tàpse tó sà-ke
1SG now rice.cooked eat-NON.PST
‘I am now eating rice’ (AL 100930-01)
This utterance could be used regardless of whether the person has been seen or not. As it can be used for a specific instance of something it is not possible to just assume that there is a default modal value assigned to these copula-less constructions. Garrett (2001: 113-114) observes that in Standard Tibetan those verbs that are unmarked with a copula are underlyingly egophoric; however in Lamjung Yolmo, given that the egophoric has a wider range of use, it is not possible to say whether a speaker would be drawing on perceptual or personal knowledge in many cases where there is no overt marking. In (30) the speaker is looking at an image of a man working, using her perception and referencing a specific event. It would appear that overt evidentiality is not relevant to these clauses, and epistemic certainty is assumed because it has not been marked otherwise as uncertain.

The use of copula-less tensed constructions is quite frequent in some genres of discourse. This includes explicatives and first person narratives. I will begin by looking at these, and then move on to examples where speakers alternate between constructions with less predictability. In these instances I will explore what motivates the lack of copula use, and what that says about construction of knowledge in interaction.

The genre with the most obvious absence of evidential forms is explication. There is no use of perceptual evidentials across the explication recordings in the corpus, and very few examples of the egophoric copula. Explication involves talking about an abstract set of actions, rather than a specific individual event, which would explain why the perceptual evidential is not used. In this genre the speaker uses egophoric forms very infrequently too. This may be because again they are not speaking of a specific event, and therefore their person knowledge of the actions does not need to be foregrounded, or perhaps because they are giving instructions on actions they do not need to foreground their personal knowledge, with a default egophoric reading similar to Garrett’s analysis discussed above.

First person narratives also exhibit low use of copula forms. The use of the picture narrative Family Story activity (San Roque et al. 2012) provides an interesting example of this, as we can compare the first person telling to the third person and general descriptive tellings of the story of a family drama in a small village. The third person description of events include use of the perceptual evidential, as well as some egophoric forms, while the first person descriptions use few egophoric constructions and many copula-less constructions. For example, in the fifth card of the story, the man and his wife are sitting in court after he has hit her. The actual hitting event is presented in a subsequent card (as the images are initially given to participants out of any clear narrative order), but the man is restrained and the woman is heavily bandaged. The utterances in (33) are from the first time SBL is describing the cards.

(32) pèemi gòo róp-sìn dù khyóga=ki kyàp dûba
wife head break-PST AUX.PE husband=ERG hit AUX.PE.EMPH

khyóga=ki kyàp yè tö
husband=EGO hit AUX.DUB
‘the wife’s head was broken, the husband hit her, the husband probably hit her’
(SBL 101124-04 01:10)

Here SBL uses a narrative past to describe the wife’s state, before claiming that the husband hit her. Although this statement is based on assertion SBL uses the emphatic perceptual evidential. He realises that he does not actually have any perceptual evidence of the event itself, only the residual evidence of the wound and so downgrades the epistemic assertion of his statement in the next utterance. This example is interesting it itself in that it shows people monitor their own evidential use to ensure that it matches their own knowledge state. It is also useful to compare it to a later iteration of
the same events. When he is reporting these events from the perspective of the husband in the final telling there is no evidence marking used (33).

(33) òolegì kyàp tér-sin
and.then hit give-PST
‘and then I hit her’ (SBL 101124-04 28:23)

Although actions and events reported by first person can use the egophoric copula it appears that in extended narratives speakers find modally-unmarked tense sufficient. This is not surprising, as the modal value of events relayed by a participant (although in this case a hypothetical participant) can be inferred to be egophoric knowledge. There are some utterances like (34) that do overtly mark egophoric in narratives that otherwise have large stretches without the use of any copulas.

(34) ñà=la láure kwèla tér-tì yè
1SG=DAT soldier(Nep) clothing give-PFV AUX.COP
‘the soldiers gave me clothing’ (SBL 101124-03 25:42)

However, even when telling your own story, things still happen to other people. In such situations though, the first person narrator uses a modally unmarked past tense (35)-(36) construction.

(35) òndà rò dzàti dzàmma bónti-sin
that.way friend group all say(Nep)-PST
‘in that way, all my friends spoke’ (SBL 101124-03 27:02)

(36) ñà=la kyàp-timaraŋ pèemi ñù-sin
cheek=DAT hit-after wife cry-PST
‘After (I) hit (her) on her cheek, my wife cried’ (SBL 101124-03 30:38)

This indicates that the speaker does not feel the need to mark that they witnessed the event if the narrative framework appears to make it clear to others they were a participant in the events. This then raises the question of why speakers will chose to use these copula-less modally-unmarked forms in interaction when they also have the option of marking the information modally. There are some general observations that can be made from the Lamjung Yolmo corpus about how speakers alternate between modally marked and unmarked forms, but it is important to note that there is no way to predict whether a speaker will chose to use a construction that includes a copulas in auxiliary function, such as the -ku dù imperfective construction, or when they will use an unmarked past form lie -sin. Both constructions are used with the same verbs, often in the same context, so we can rule out the possibility that there may be something inherent about the action or the internal logistics of an event that dictate which form is appropriate. It is possible then that speakers are making a primary choice as to whether they want to mark the internal aspect of the event, as in choosing the imperfective construction, mark their evidential status as a secondary feature of the construction.

That some constructions do not have any evidential value is not a flaw or an absence in the system, but a basic feature of it. As I have shown in this section, speakers prefer these constructions for specific discourse types and can use different constructions to mark something using the set of copulas should the communicative need arise. Just because the speakers are not using overt copula forms does not mean that they are not cognitively tracking this information.

So far I have focused on those constructions where the use of copulas is not licensed as part of a grammatical utterance. There are also situations where there is no overt copula marking due to
omission as a natural feature of interactional discourse. There are some types of interaction where speakers frequently omit copula verbs from constructions where they are included with high frequency in elicitation. We see this in particularly in genres where one participant talks more than the other, including narrative and explication. In (37) ST uses a perfective marker -ti, which is followed by either an egophoric or a perceptual evidential in elicitation. In (38) the same speaker uses a nominalising suffix -kandi, which usually followed by an egophoric in elicited version of the same construction.

(37) tɕʰú=la
       lú-ti
water=LOC       put.into-PFV
‘put into the water’ (ST 120307-01 00:02)

(38) tshé  yindzo-ni  pába  kyúr-kandi
cooked.be      from-FOC    skin       throw-NMLZ
‘remove the shell (from the egg)’ (ST 120307-01 00:18)

The lack of overt copulas in these individual examples is explained by the fact that these utterances exist in a larger context. Any evidential that would be present could be inferred from context. For example, with the explicative texts the speakers were not referring to a specific instance of an event, but a general description of a frequently performed task. The lack of evidence marking does not detract from the speaker’s role as the author of an utterance. As Aikhenvald (2004: 79) observes, the ability to do this relies on the sentence being in ‘connected speech’ where the interactional context makes clear what evidence the speaker intended. Aikhenvald presents a narrative as an example of connected speech, but there is no reason to assume that other interactions cannot support the absence of copula verbs. De Haan (2001b: 197) acknowledges that evidentials are optional in most languages. He summarises that the motivation for this optionality “can best be seen as either the absence of evidence or a choice on the part of the speaker not to express his/her evidence for the action described.” In most examples from Lamjung Yolmo the first motivation does not appear to be particularly robust, as speakers omitted copula forms when they had direct visual evidence. The second motivation appears to be closer to the reason that Lamjung Yolmo speakers omit copulas, although they appear to do this simply because the evidence should easily be inferred from context, and not to avoid making a modal claim. Aikhenvald (2004: 78-79) discusses this process as one of ‘omission’ rather than optionality, which reflects a focus on languages with obligatory marking of evidential information on every sentence, such as Tucano and Tariana (see also Aikhenvald 2003). In a language like Lamjung Yolmo, where the system is flexible enough to allow for a great deal of variation, talk of ‘omission’ implies that there is a rigidity to the system and that it is context that distorts this, whereas to talk of ‘optionality’ is to accept that a system like that found in Lamjung Yolmo is naturally variable depending on the interactional needs of the speakers, this is a key feature of Tournadre and LaPolla’s (2014) definition of evidentiality, where they refer to it as the speaker’s ‘strategy’.

This requires us to consider just how important the Lamjung Yolmo copula verbs, and the modal distinctions they provide, really are for the interactions in which they are used. As I have shown, there are often-used constructions with no modal status, and even in situations where a copula could be used speakers often omit them if they assume that their modal status is recoverable from context. Thus it appears that the copula verbs of Lamjung Yolmo, while useful (and in some contexts still necessary), do not carry the same kind of obligatory use as is described for some of the languages of Amazonia (Aikhenvald 2004), nor even closely related languages like Standard Tibetan (Garrett 2001).
2.7 Do people attend to evidential information?

In this paper so far, I have argued that the evidential and epistemic choices available in Lamjung Yolmo are important grammatical features for indicating knowledge and stance in interaction. As speakers draw on a range of information to make these choices, it follows that their interlocutors would attend to this information. Much of the discussion about evidentiality focuses on the evidential choices people make, it is also important to consider how these choices are taken up by the interlocutors who hear them. This can be difficult to trace in discourse, and so I created an experimental activity that I named the “Multiple Reports task” to try and access some of these intuitions. The task was designed so that there was a short scenario given, such as a new goat in the village, or a question about what was being cooked for dinner. There were then two different remarks from two people on an element of this event. The two reports were given with one different detail, and had different evidential values, for example one person might have said the new goat was brown and used an egophoric evidential, the other black with a perceptual evidential. The participants were then asked which of the two reports they thought was most likely to be true (the information encoded by each copula was switched for each participant, so as to see if the content of the utterance was affecting their choice). The intention of this experiment was to see how much attention speakers paid to modal information encoded in copulas by seeing which. There were ten different scenarios, with reports of different modal weigh. This task was run with five people. This was not enough speakers to be able to perform a quantifiable analysis of the answers given, but the task did give some insight into how speakers might process evidential information.

Of the ten scenarios there were only two where the clear majority of participants chose the report with the same copula form. In the first of these two scenarios, a participant is told that their friend has a new dress, which they have not seen. They are given two reports about the dress, each saying it is a different colour (red or green). One report uses the egophoric copula yè to describe the colour of the dress and the other uses the emphatic perceptual evidential dûba in their description. Regardless of which colour it marked, all participants chose the answer with the perceptual emphatic over the egophoric copula. Those participants who gave a reason said it was because the person who used the perceptual evidentiál had seen the dress. In many ways this was one of the better designed of the Multiple Reports scenarios as there is minimal chance of external context distracting from the binary choice. It also indicated that people place value on their interlocutors providing perceptual evidence. In the second of the two consistently answered scenarios, participants were asked which report they believed about what food was stored in a vessel. The two reports varied in the type of common food stuff stored (rice or corn) and in the use of either an emphatic perceptual evidential or an utterance with an egophoric evidential and a reported speech particle. Only one person did not choose the emphatic perceptual evidential. Therefore, in these situations where someone is describing a specific event, the perceptual evidential is considered by speakers to mark more direct knowledge than the egophoric copula with the reported speech particle, indicating second-hand information.

This may seem to be a straightforward order of preference for certain types of evidence, except it does not hold across all scenarios, even for the same speaker. VL had said that the emphatic perceptual was preferred over the egophoric when describing the dress in the first scenario described above, and that the perceptual evidential was preferred to the reported speech particle in the second. This was in concord with the responses of the other participants. In another situation two people describing the colour of a new goat purchased by someone in the village, one person used the perceptual evidential dû, while the other used the egophoric yè. In this scenario VL appeared to have different intuitions, in that she did not want to presume that one report was more likely to be correct that then other, instead stating that both participants saw the colour of the goat (39).
This is of interest because the other two times she chose a perceptual evidential over the egophoric or reported speech particle, stating that the person who used the perceptual evidential presumably saw the item or event, while the person using ego-marking or reported speech had not. It is possible that because scenario one was early in the task VL was still getting used to the format, but it is also possible that the ‘egophoric means no visual perception’ idea is not as strong as Lamjung Yolmo speakers’ introspection about some contexts indicates.

Although speakers appear to share some consensus in the situation above, in eight of the ten scenarios there was a great deal less agreement. There were some scenarios where the choice of modal or evidential expression did not appear to make any difference to which of the two options people chose. This included situation ten, where participants were given reports that their shoes were either outside or in another room, with one marked with a perceptual evidential and one marked with a reported speech marker. Across all of the performances of this experiment participants chose either option and did not appear to be swayed by which one was marked with which form. UL, VL and KL all preferred the report that the shoes were outside with the perceptual evidential. AL and RL preferred the outside option marked with the reported speech marker. In this situation the cultural politeness (not usually enacted in village life) of not wearing shoes inside may have influenced decisions more than the evidential forms. Given that this task was only performed with a small number of speakers across a fixed set of scenarios, it is best to not draw any strong conclusions about the lack of agreement in terms of the modal information given in the multiple reports; however it does indicate that perhaps speakers may not pay as much attention to modal information in Lamjung Yolmo as de Villiers et al. (2009) argues that they do in Standard Tibetan.

3 Evidentiality looking forward
In this paper I have demonstrated that the nature of evidentiality in Lamjung Yolmo is complex, interacts with other elements of the utterance and its context, and is grounded in interaction. It is likely that with the growing body of language documentation work that focuses on interactional data such descriptions will become more common.

Evidentiality is part of speakers’ larger stance-taking repertoire, and as such interacts with many other features of the language, including epistemic modality. There is no reason to follow Bhat’s (1999) lead and completely conflate evidentiality with epistemic modality. It is not necessary to assume a direct relationship between the type of evidential used and the certainty that the speaker has about the information. Although it is possible to ascribe a sense of certainty to the contextual use of evidentials in Lamjung Yolmo, this is an interactional dimension of these forms, and not an intrinsic value. Therefore, it does not make sense to talk about evidentials as a type of epistemic modality. De Haan (1997, 1999, 2001a, 2005) argues that evidentiality is not a form of modality, in part because it is fundamentally deictic in its function. Considering the deictic function of evidential forms is a useful way of conceptualising their function, but it does not detract from the fact that speakers use this deictic function in interaction, and part of that function is to signal their stance towards the propositional content.

With this wider perspective on evidentiality, it is not surprising that it interacts in complex ways with many other features of language, but it is important that we capture the range of these interactions. Although I have covered many key features of evidential use in interaction in this paper, there are still many others that could be considered, including question structures and reported speech frames, both of which I discuss in detail in Gawne.
(2013a). Strong interactive data that also includes the wider function of evidentiality also gives us stronger grounds for quality cross-linguistic comparison, and a basis from which to begin understanding further questions, such as how children acquire languages with evidentiality.

**Abbreviations**

1 first person 2 second person 3 third person AUX auxiliary COP copula DUB dubitative EGO egophoric EMPH emphatic ERG ergative F female FOC focus GEN genitive GF general fact IPFV imperfective LOC locative NEG negative NMLZ nominaliser NON.PST non-past PART particle PE perceptual evidential PFV perfective PST past SG singular

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It is widely acknowledged that to learn a language also means to learn the culture of the native speakers of that language. The book being reviewed here, Elementary Tagalog: Tara Mag-Tagalog tayo (Come on, let’s speak Tagalog) by Domigpe and Domingo does a good job of presenting the readers/learners with helpful information regarding the Filipino culture, nicely woven into the lessons. As the authors mention in the introduction, Tagalog is the language whereby the national language of the Philippines, Filipino, is based. English is the medium of instruction used in the teaching/learning of Tagalog in this book. According to the authors, this introductory textbook is aimed at true beginners or those who have no prior knowledge of Tagalog and heritage learners or those who might have a passive knowledge of the language having grown up in Filipino-speaking families or communities. The book comes with an MP3 audio CD to help with the pronunciation of new vocabulary items and idiomatic expressions introduced in each lesson. The CD also contains the audio for listening comprehension practice.

The authors state that the sequencing of grammar in the book follows ‘the order-of-acquisition principle, which holds that there is a natural order in which first-and second-language learners acquire and learn different grammatical structures’ (p. ix). The lessons - all twenty-four of them in eight units - end with the practice section covering all four skills; speaking, reading, writing and listening and reading.

The major themes covered in the eight units are About Self (Tungkol sa Sarili), Family (Pamilya), Activities (Mga Gawain), Home (Tahanan), Kalusugan (Health), Food (Pagkain), Travel (Paglalakbay) and Popular Culture in the Philippines (Kulturang Popular sa Pilipinas). It can be gleaned from the sequence of these units that this is not ‘survival Tagalog’ for the tourist. Elementary Tagalog is written for the serious learner keen to master the speaking, writing, and reading of Tagalog.

Each unit begins with some cultural notes or explanations of Filipino cultural practices as they relate to the particular unit. Relevant Filipino sociocultural norms and values are presented in order to make language learning more meaningful. For example in Unit 1, the authors talk about the importance that Filipinos place upon harmonious social relations, solidarity and ‘utang na loob’ or sense of reciprocity.
The units are sub-divided into lessons which are introduced via a one-page overview. This overview presents, at a quick glance, the contents of each lesson: objectives, vocabulary, dialogue and dialogue comprehension, activities, grammar and practice in speaking, reading, writing and listening. The vocabulary section familiarizes the learners with lexical items that will be used in the dialogue or in the reading comprehension exercise that follows. The dialogue section is an exchange/conversation between two or three people talking about a particular topic related to the overall theme. The dialogue shows how the vocabulary items and idiomatic expressions presented earlier in the vocabulary portion are used by the speakers in natural conversation. What follows is the dialogue comprehension section which usually consists of a true or false test or a question- and- answer activity. In some lessons, a reading text is presented instead of a dialogue. In lesson 13, for example, what follows the vocabulary is an excerpt from a health-related leaflet. The reading comprehension exercise that follows asks questions about the text. After the dialogue or reading comprehension, three types of activities are introduced in order to further help with the learning of the newly acquired Tagalog terms and expressions.

The grammar section which is the centre piece of this grammar-oriented textbook has four parts: definitions of terms, examining form, grammar presentation and grammar notes. The grammar structure which is being focused in each lesson is clearly explained with accompanying tables and diagrams to highlight form and pattern of usage. The practice section comes after grammar. It includes exercises or activities covering the four skills - speaking, reading, writing and listening. A Tagalog-English and an English-Tagalog glossary is found at the end of the book for easy reference and recycling of vocabulary.

For the really interested learners with time on their hands, the textbook comes with a workbook, which is available separately, and not part of this review. It serves as a supplement to the textbook for those who feel the need for further practice.

Elementary Tagalog is to be commended for its coverage of a wide range of everyday topics. The suggested activities and practice drills are fun and engaging, and they portray real-life situations where the language is commonly used. Elementary Tagalog will be most useful in a teacher-mediated classroom, not for the independent, do-it-yourself learner. A number of activities require speaking with a partner. There is no answer key provided so it is probably safe to assume that the learner needs a teacher or a language expert to check the answers, specially the written exercises.

While Elementary Tagalog does not require a prior knowledge of Tagalog, it does require a very good grasp of English and the different parts of speech (verb, noun, adjective, and so on). The use of technical-sounding terms (e.g. aspect, inflection, pseudo-verb, transitive/intransitive, enclitics, etc.), although clearly defined, can be daunting for the beginner. Another thing that might be unnerving for some learners is the vocabulary list in each lesson which contains 30 to 50 items or more. The instruction on the page says ‘memorize the vocabulary words before proceeding to the dialogue (my emphasis).’ Unless the learner has already acquired exceptional learning strategies, this can be a really huge and overwhelming task. In other words, if the book is principally targeted to hardworking leaners who is fluent in English, want to speak Tagalog fluently and correctly, and learn about contemporary Filipino culture at the same time then this book is for them. For the teacher using this book, it is well-written and comes with activities and practice tasks that make the teaching and learning of Tagalog quite enjoyable.