# Khongso

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Khongso /kʰɔŋ˩so˩/ is an SVO Tibeto-Burman language spoken by between two and three thousand speakers in Paletwa Township, Southern Chin State, Myanmar (Dryer 2008, Wright 2009). The speakers live in 17 villages primarily along the Michaung River (see Figure 1).[1] Khongso is mutually intelligible with Anu, which has a population of 700 and is spoken west of the Khongso area (So-Hartmann 1988, Wright 2009, Lewis, Simons & Fennig 2016). The ISO code for Khongso and Anu is anl and the glottolog code is anuu1241.

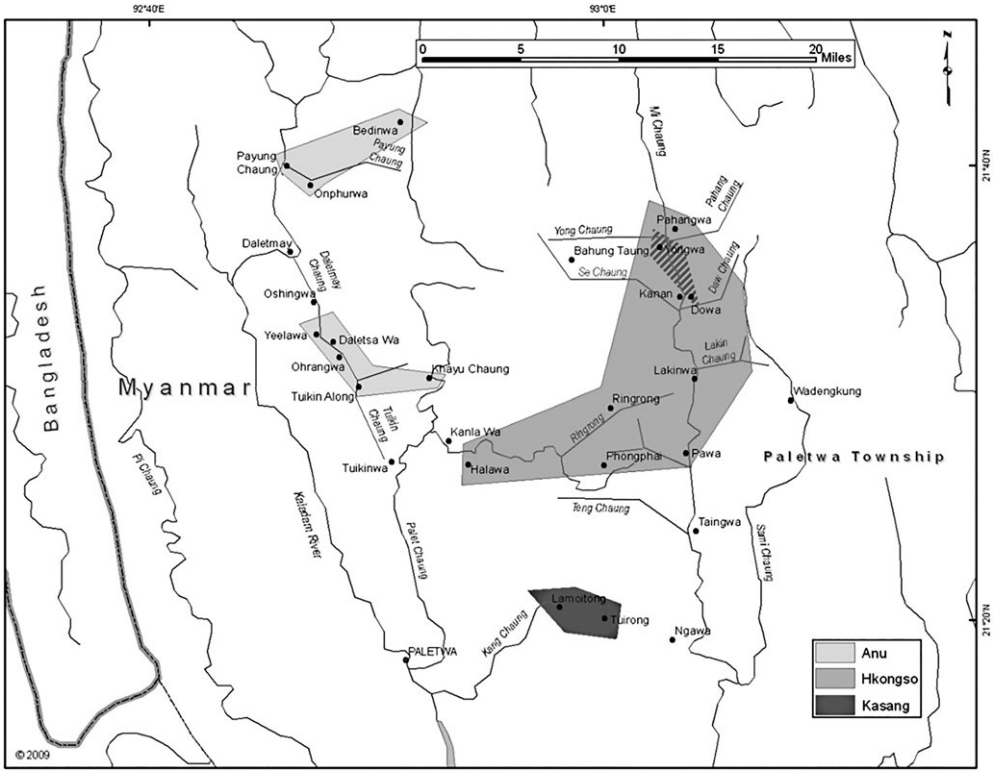


**Figure 1** Distribution of the Khongso, Anu, and Kasang languages.

[1] Previously the language name was spelled Hkongso. In 2017 the Hkongso people changed the orthography and now spell the name Khongso. Items created prior to this date, such as Figure 1, may have the original orthographic choice. The map in Figure 1 is used by permission of Eva Ujlakyova. Kasang is included in this map due to sociolinguistic issues under consideration when the map was made. Kasang is not mutually intelligible with Anu or Khongso.

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Although mutually intelligible, Khongso and Anu were previously listed as separate languages by the Burmese government (Burma Socialist Party 1968). Today, their cultural differences have resulted in separate sociolinguistic groupings. The Khongso and Anu language was considered a Tibeto-Burman isolate for many years, but recent evidence has led to further clarification (Peterson & Wright 2009, Wright 2009). Khongso and Anu are now listed together as a separate Burmish branch with the Mru of Bangladesh, the only other SVO language in the area (Peterson 2006, Peterson & Wright 2009, Lewis et al. 2016).

The Khongso, Anu, and Mru language group differs grammatically from the Chin languages around it. Khongso differs in these ways: it has no inflectional morphology, very little derivational morphology, no classifier system, no verb stem alternation, and is SVO (see Wright 2009 for further information on morphosyntactic characteristics). The syllable structure is primarily monosyllabic with (C)(C)V(C) (e.g. /kläŋ↓/ 'body') or sesquisyllabic with a minor syllable followed by a major syllable (e.g. /kə˧vəŋ˥/ 'to fall'). Minor syllables are characterized by reduced onset inventories, a nucleus limited to /ə/, and a tone limited to a mid tone. Alternatively, they may be syllabic nasals. Major syllables exhibit a full range of syllable structures and tones (see section 'Word structure'). There are five contrastive tones (see section 'Tone').

Prior linguistic description of Khongso is limited to Wright (2009). For that study, linguistic information was collected from speakers living in or traveling to Yangon from the Khongso area. Khongso research assistants also collected recordings in main Khongso villages forming my Khongso data corpus. This corpus was supplemented by more recent data collection in 2015 which occurred similarly. From this corpus, recorded wordlists from a single Khongso speaker were compiled for the present analysis and illustrations. The speaker is male in his forties. He lived in the Khongso village, Yongwa, until his late 20s when he moved to Yangon. His parents were both born in Kanan and spoke Khongso to him as a child. This speaker also recorded 'The North Wind and the Sun' for this article.

## Consonants

| | Bilabial | Labio-dental | Alveolar | Palatal | Velar | Glottal |
|---|---|---|---|---|---|---|
| Plosive | p b<br>pʰ | | t d<br>tʰ | c | k<br>kʰ | ʔ |
| Nasal | m̥ m | | n̥ n | | ŋ̊ ŋ | |
| Trill | | | r̥ r | | | |
| Fricative | | f v | s | | | h |
| Approximant | w | | | j | | |
| Lateral approximant | | | l̥ l | | | |

| | | | | | |
|---|---|---|---|---|---|
| /pʰ/ | /pʰä↓/ | 'soft shell turtle' | /c/ | /cäk↓/ | 'rice' |
| /tʰ/ | /tʰäm˧/ | 'cool' | /k/ | /kär↓/ | 'chicken' |
| /kʰ/ | /kʰäk˧/ | 'to be bitter' | /ʔ/ | /miʔ˥/ | (LINKER) |
| /m̥/ | /m̥ä˧/ | 'to forget' | /b/ | /bä˥/ | 'bee hive' |
| /n̥/ | /n̥äi↓/ | 'to be good' | /d/ | /däp˧/ | 'to be useless' |

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| | | | | | |
|---|---|---|---|---|---|
| /n̥/ | /n̥ät↓/ | ‘to prepare food’ | /m/ | /mäŋ˥/ | ‘dream’ |
| /r̥/ | /r̥ä↓/ | ‘strength’ | /n/ | /näŋ↓/ | ‘to be poor’ |
| /f/ | /fä˥/ | ‘to be empty’ | /ŋ/ | /ŋä˧/ | ‘to be bad’ |
| /s/ | /säm↓/ | ‘hair’ | /r/ | /rin˥/ | ‘to laugh’ |
| /h/ | /här↓/ | ‘to be new’ | /v/ | /vä˥/ | ‘bird’ |
| /l̥/ | /l̥ä˧/ | ‘to be far’ | /l/ | /läp↓/ | ‘to shout’ |
| /p/ | /pä↓/ | ‘father’ | /w/ | /we↓/ | ‘emotion PRT’ |
| /t/ | /täp˧/ | ‘to be thick’ | /j/ | /jä↓/ | ‘to win a game’ |

## Plosives

Plosives in Khongso occur at five places of articulation: bilabial, alveolar, palatal, velar, and glottal. In the bilabial and alveolar regions there is a three-way plosive contrast: voiceless /p/ and /t/, voiceless aspirated /p$^h$/ and /t$^h$/, and voiced /b/ and /d/. Alveolar plosives are articulated in the dental region by some speakers. Velar plosives are voiceless /k/ and voiceless aspirated /k$^h$/. A voiced velar plosive does not occur. Plosives that occur word-finally are not released or voiced.

The voice onset time (VOT) for plosives differs by place, voicing, and aspiration. Table 1 contains measurements from the Khongso speaker’s plosive onsets over 282 syllables: /b/ (n = 20), /d/ (n = 11), /k/ (n = 109), /k$^h$/ (n = 16), /p/ (n = 53), /p$^h$/ (n = 8), /t/ (n = 50), /t$^h$/ (n = 15). These VOT measurements are relative to the release burst. Voice onset occurring before release, as in voiced plosives, are therefore negative and after release, as in voiceless plosives, are positive.

**Table 1** Voice Onset Time of plosives.

| | Bilabial | | | Alveolar | | | Velar | |
|---|---|---|---|---|---|---|---|---|
| Measure | Unasp. | Asp. | Voiced | Unasp. | Asp. | Voiced | Unasp. | Asp. |
| Mean (seconds) | 0.019 | 0.095 | −0.089 | 0.015 | 0.088 | −0.085 | 0.030 | 0.102 |
| Standard deviation | 0.011 | 0.014 | 0.020 | 0.007 | 0.026 | 0.026 | 0.010 | 0.022 |
| Tokens | 53 | 8 | 20 | 50 | 15 | 11 | 109 | 16 |

Unasp. = unaspirated; Asp. = aspirated

Figure 2 shows VOT measurements accumulated across three places of articulation. The mean VOT for 212 unaspirated tokens is 0.024 seconds, for 39 aspirated tokens is 0.096 seconds, and for 31 voiced plosive tokens is −0.087 seconds. A linear regression was conducted to compare the effect of plosive type on VOT over the 282 tokens. Results indicated a significant effect, $F(7,274) = 187.6$, $p < .001$.[2] Specifically, voiceless aspirated plosives had a significantly longer VOT than voiceless unaspirated plosives ($F(1,280) = 768.46$,

[2] Linear regressions were performed using the lm function within the R computing program (R Core Team 2018).

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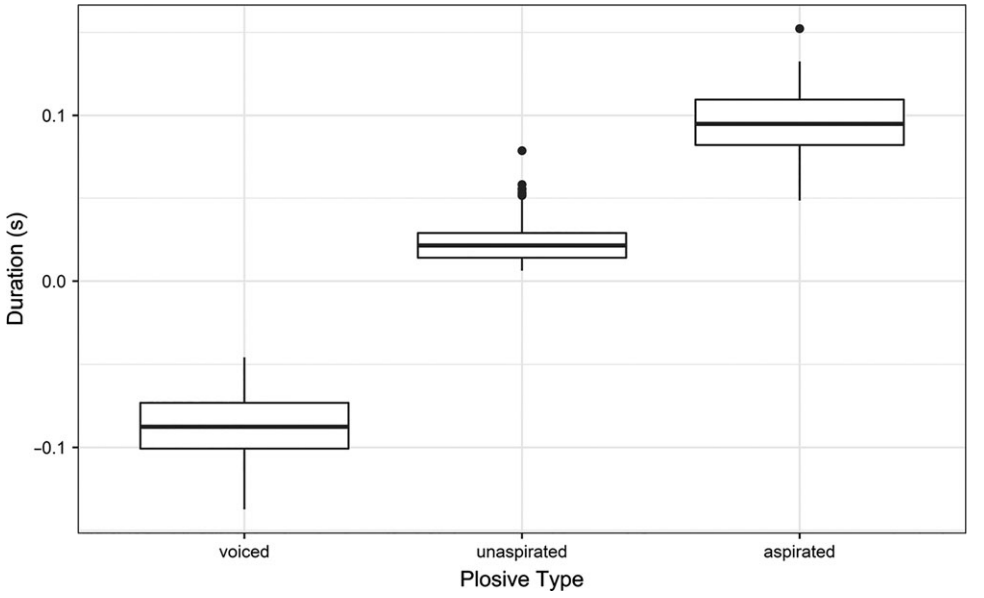


**Figure 2** Voice onset time duration in seconds by plosive type.

$p < .001$). Voiced plosives also had significantly longer VOT than voiceless unaspirated plosives ($F(1,280) = 508.66$, $p < .001$). These results are common among languages with three-way plosive contrasts (Lisker & Abramson 1964, Henton, Ladefoged & Maddieson 1992).

Figure 3 shows the VOT measurements for each place of articulation separated by plosive type. A linear regression indicated that place of articulation was a significant factor for

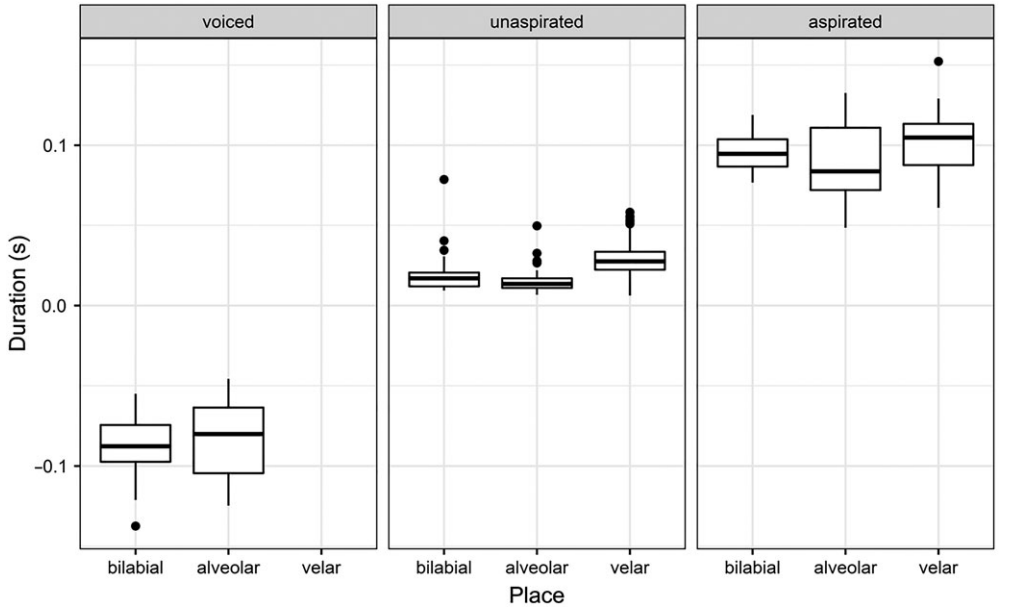


**Figure 3** Voice onset time duration in seconds by place across plosive type.

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voiceless unaspirated plosives ($F(2,209) = 43.61$, $p < .001$), with voiceless unaspirated velar plosives having significantly longer VOTs. Place was not significant for voiceless aspirated plosives ($F(2,36) = 1.47$, $p = .24$) or voiced plosives ($F(1,29) = 0.22$, $p = .65$). These results are not unexpected. Longer VOT for voiceless unaspirated velar plosives is common (Lisker & Abramson 1964, Henton et al. 1992). Also, voiced velar plosives are often absent from plosive inventories (Ohala 1983).

The realization of the palatal /c/ is variable. The speaker in this study produces [c]. Other speakers in my corpus produce it as [t͡s] or [t͡ʃʲ]. Some Myanmar loan words, such as /tʃäunꜜ/ 'school', contain the affricate [t͡ʃ]. For these words some Khongso speakers produce [t͡ʃ] and some produce [c].

The glottal stop occurs word-finally. Figure 4 illustrates a glottal stop occurring on the linker /miʔꜛ/.[3] This contrasts with the following word /iꜛ-miꜛ/ '1PL-people (person)', where there is no break in voicing going into the next word.

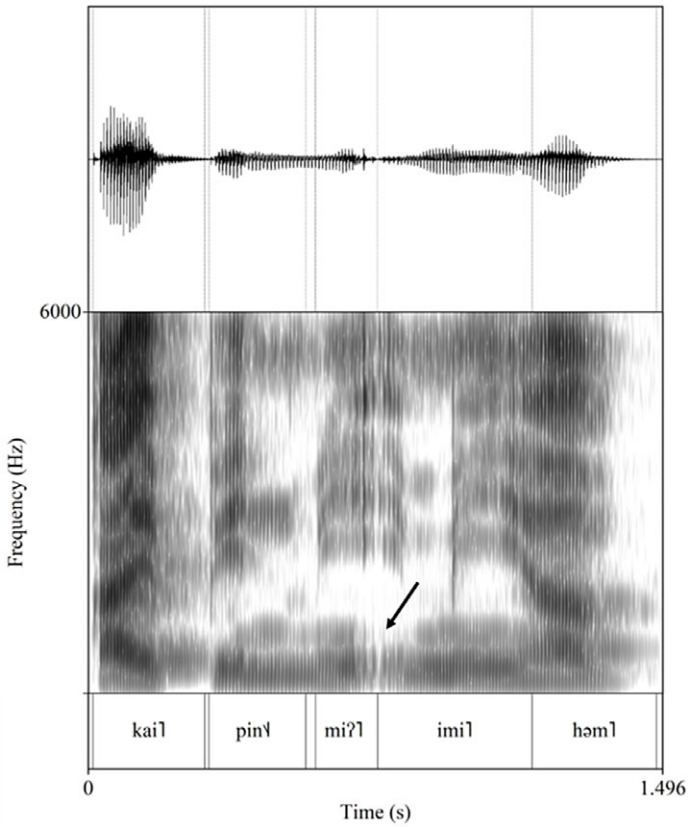


**Figure 4** Final glottal stop.

[3] The linker /miʔꜛ/ typically occurs with a high tone. However, it can be reduced to a mid tone when it occurs together with other words as a conjunction in coordinate and complement clauses.

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## Nasals

Nasals in Khongso occur in three places of articulation and are voiced and voiceless: voiced bilabial /m/, voiceless bilabial /m̥/, voiced alveolar /n/, voiceless alveolar /n̥/, voiced velar /ŋ/, and voiceless velar /ŋ̊/. Voiced nasals occur in the onset, coda, and in initial syllabic nasals in disyllabic words. Voiceless nasals only occur in the onset.

Figure 5 contrasts /m̥/ and /m/ in the words /m̥urɬ/ 'to wipe the face' and /muɬ/ 'dark'. In /m̥urɬ/ the nasal friction from /m̥/ occurs between 4000 Hz and 5000 Hz for approximately 0.1 second before voicing onset.

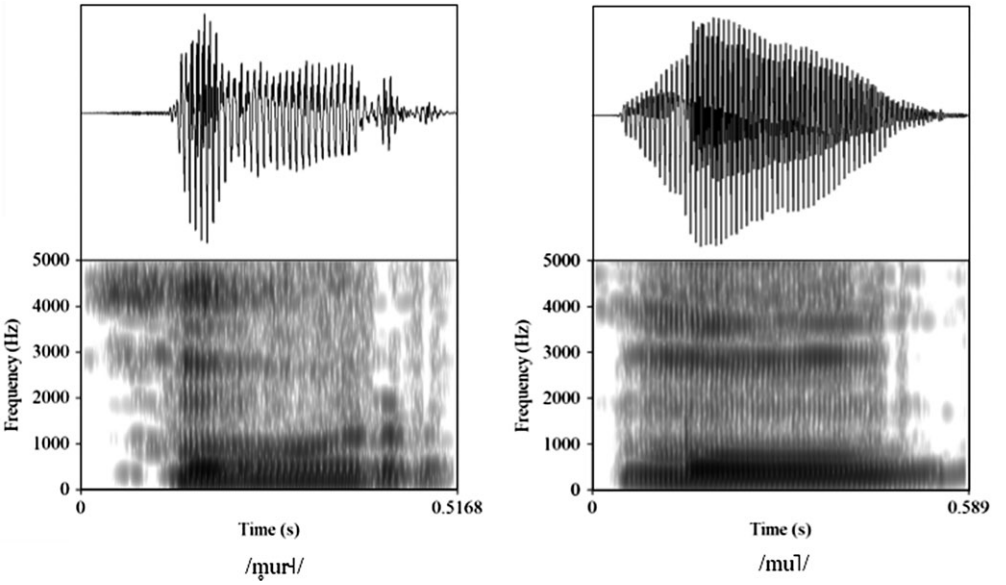


**Figure 5** Voiceless and voiced bilabial nasals.

## Trills

Trills in Khongso occur in the alveolar region and are voiced /r/ and voiceless /r̥/. The voiced trill occurs in the onset, coda, and as the second consonant in clusters within syllable onsets. The voiced trill /r/ is variable and may be realized as [ɾ] or [ɹ]. Figure 6 contrasts /r/ and /r̥/ in the words /r̥äɻ/ 'strength' and /rinɬ/ 'to laugh'. In /r̥äɻ/ the airflow is directed over the vibrating apical articulator for approximately 0.2 seconds before voicing onset. This contrasts with /rinɬ/ in Figure 6, where voicing occurs with the trill.

## Fricatives

Fricatives in Khongso occur in three places of articulation: labio-dental /f/ and /v/, alveolar /s/, and glottal /h/. Examples include /fäɬ/ 'to be empty', /väɬ/ 'bird', /sämɻ/ 'hair', and /härɻ/ 'to be new'. The voiced fricative [z] occurs in English loan words, but does not occur in words with Khongso origins.

## Laterals and approximants

Approximants in Khongso occur in two places of articulation: bilabial /w/ and palatal /j/. There are two alveolar lateral approximants: voiced /l/ and voiceless /l̥/. All approximants

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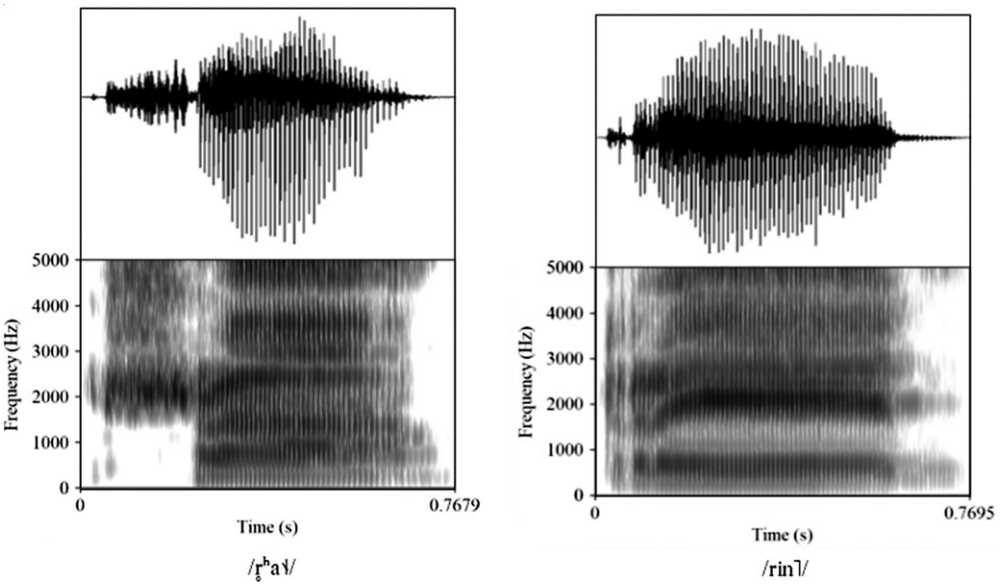
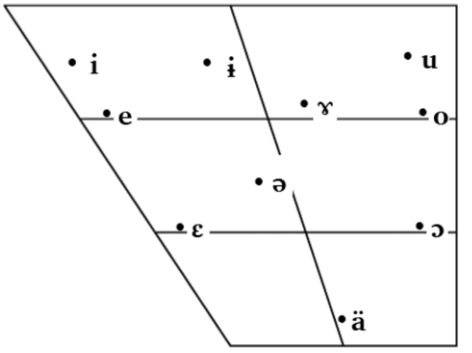



**Figure 6** Voiceless and voiced alveolar trills.

and laterals occur syllable-initially and all but /l̥/ may occur as the second consonant in clusters within syllable onsets. None occur in syllable codas.

## Vowels

### Monophthongs




| | | | | | |
|---|---|---|---|---|---|
| /i/ | /siɬ/ | (PL) | /ə/ | /cəɬ/ | (TOPIC) |
| /e/ | /seɬ/ | ‘sister’ | /ä/ | /cäʔ/ | ‘to eat’ |
| /ɛ/ | /sɛɬ/ | ‘and you?’ | /u/ | /cuɬ/ | ‘granddaughter’ |
| /ɨ/ | /cɨɬ/ | ‘some more’ | /o/ | /coɬ/ | (EVIDENTIAL) |
| /ɤ/ | /sɤʔ/ | ‘to leave behind’ | /ɔ/ | /lɔɬ/ | ‘friend’ |

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Khongso has 10 monophthongs, /i e ɛ ɨ ɤ ə u o ɔ ä/. All monophthongs occur in open syllables and in closed syllables. Figure 7 shows the F1 and F2 values of each monophthong, converted to Bark following Traunmüller's formula (Traunmüller 1997). Individual data points show the extent of variability of each vowel space. The large filled circles represent the mean of each vowel. The ellipses are set at a .67 confidence interval, only to aid visualization of the vowel space. Measurements of data points were taken from the midpoint of each vowel. As previously discussed, samples came from wordlists produced by a single Khongso speaker. There were a total of 610 samples with the following numbers for each monophthong: /i/ (n = 76), /e/ (n = 30), /ɛ/ (n = 19), /ɨ/ (n = 42), /ɤ/ (n = 25), /ə/ (n = 93), /u/ (n = 107), /o/ (n = 18), /ɔ/ (n = 48), /ä/ (n = 152).

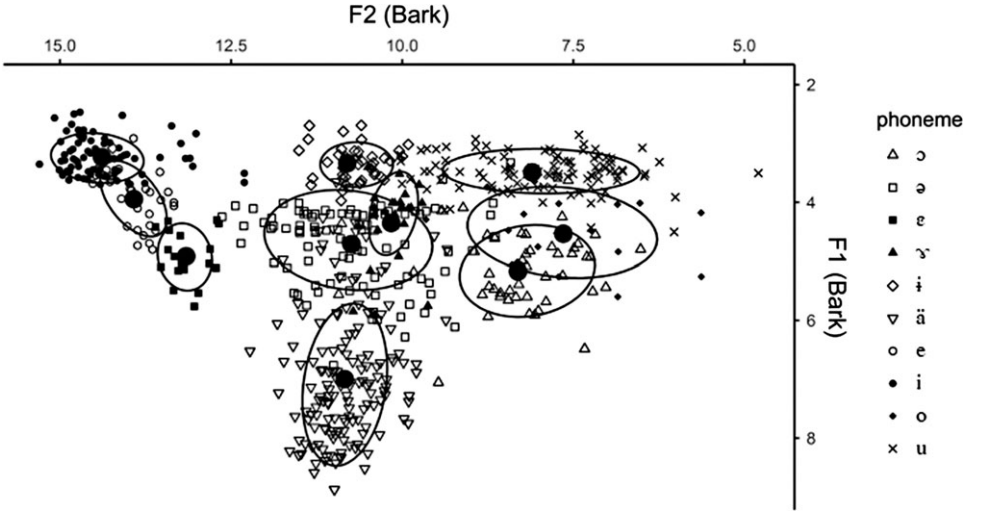


**Figure 7** F1 and F2 values of Khongso monophthongs.

The monophthong /i/ is a close front unrounded vowel. In syllables with alveolar nasal codas, such as [rɪn˥] 'to laugh', /i/ is realized as /ɪ/. The other two front vowels, /e/ and /ɛ/, are both unrounded. Both occur in closed and open syllables. However, /ɛ/ primarily occurs in syllables with stop codas, as in /p$^{h}$lɛk↓/ 'to splatter'. When /ɛ/ occurs word-finally, the word is typically a sentence-final particle. The central vowels /ɨ ɤ ə/ are unrounded and all occur in open and closed syllables. However, /ə/ primarily occurs in unstressed syllables. As Khongso has a sesquisyllabic word structure, these are typically the first syllable in disyllabic words. The back vowels /u o ɔ/ are the only rounded vowels. They occur contrastively in open and closed syllables. The open central unrounded vowel /ä/ also occurs in open and closed syllables.

## Diphthongs

| | | | | | |
|---|---|---|---|---|---|
| /iu/ | /iu↓/ | 'to enter' | /oi/ | /roi↓/ | 'friend' |
| /eu/ | /n̩ˊteuˊ/ | 'bamboo' | /äi/ | /cäi↓/ | 'elephant' |
| /uə/ | /juə˥/ | 'person' | /äu/ | /pau↓/ | 'flower |
| /ui/ | /ui˥/ | 'fruit' | | | |

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Khongso has seven diphthongs. In the present data, all diphthongs only occur in open syllables in Khongso words. However, some Myanmar loan words, such as /tʃäunɬ/ 'school', are produced with a diphthong followed by a final consonant. The possibility of diphthongs followed by a consonant coda precludes the analysis of diphthongs as monophthongs followed by glides. The monophthong + glide analysis would lead to complex consonant codas in words such as /tʃäunɬ/ 'school', and complex consonants are not found in unambiguous syllables.

Of the seven diphthongs, /ui oi äi/ glide towards a close front target, /uə/ glides to the central target /ə/, and /iu eu au/ glide to the back close target /u/.

Figure 8 shows the mean F1 and F2 values for each diphthong, converted to Bark following Traunmüller's formula (Traunmüller 1997). Arrows in Figure 8 demonstrate the trajectories of the formant movement of each diphthong. The starting and end points of the arrows represent means measured at twenty percent and eighty percent of the duration of each diphthong. Although the F1 level of /uə/ may suggest [oə] rather than [uə], the consistent orthographic transcription as *ua* in the orthography together with an increase in lip rounding over that present on /o/ leads to a preference of /uə/. There were a total of 86 samples with the following numbers for each diphthong: /iu/ (n = 3), /eu/ (n = 2), /uə/ (n = 8), /ui/ (n = 27), /oi/ (n = 7), /äi/ (n = 24), /äu/ (n = 15).

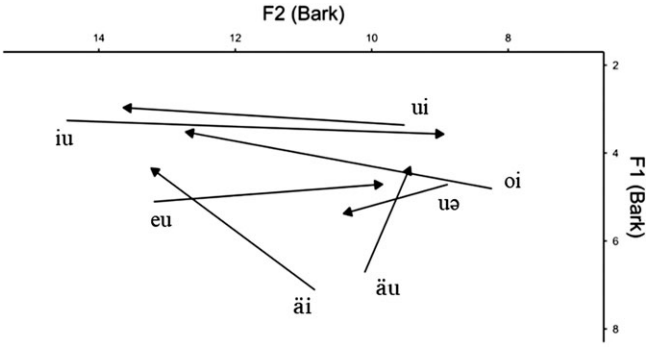


**Figure 8** F1 and F2 values of Khongso diphthongs.

## Tone

As listed in Table 2, Khongso has five contrastive lexical tones with two level and three contour tones. Figure 9 shows the tones displayed with normalized time. Pitch measurements were done in PRAAT and were taken at every five percent of the word to create normalized time. Measurements between 20 and 90 percent of the vocalic portion of the syllable were

**Table 2** Tones.

| Index | Tone | Contrast | Gloss |
|---|---|---|---|
| Tone 1 | Mid | leŋɬ | 'gather firewood' |
| Tone 2 | Mid falling | leŋꓡ | 'lasso' |
| Tone 3 | High | leŋ˥ | 'to tie' |
| Tone 4 | High falling | leŋ˩ | 'wave' |
| Tone 5 | Mid high mid | leŋ˧˥ | 'to ask' |

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used. Measurements outside of this range were more difficult to measure consistently because of surrounding consonants or transitions to silence. These measurements come from 285 monosyllabic words selected from the word lists used for other measurements throughout the current paper: mid (n = 54), mid falling (n = 118), high (n = 41), high falling (n = 54), mid high mid (n = 17). They were taken from the single Khongso speaker.

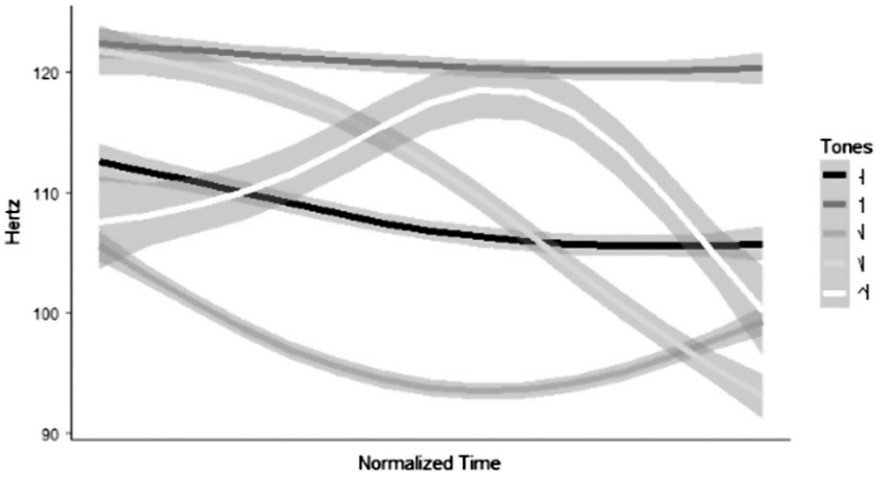


**Figure 9** Lexical tones.

The F0 contour lines in Figure 9 represent the mean of those measurements with the grey areas representing ±1 standard error of the mean. The mid tone is represented by the black line, the high tone is represented by the dark gray line, the mid falling tone is represented by the gray line, the high falling tone is represented by the light gray line, and the mid high mid tone is represented by the white line. In Figure 9 the mid falling tone rises at the end. The mid falling tone varies on its ending. In word lists some speakers end with a rise while others do not. In context a final rise rarely occurs.

Duration of tones was measured using a linear regression. There was no significant variance of duration between tones ($F(4,279) = 1.38$, $p = .24$). The means and standard deviations are shown in Table 3.

**Table 3** Means and standard deviations of tone duration in seconds.

| Tone | Mean (seconds) | Standard deviation |
|---|---|---|
| Mid | 0.43 | 0.10 |
| Mid falling | 0.45 | 0.07 |
| High | 0.43 | 0.09 |
| High falling | 0.41 | 0.10 |
| Mid high mid | 0.41 | 0.07 |

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Tones are not restricted in major syllables, which are mentioned in the introduction and discussed in the following section. Each tone may occur in open or closed syllables, as illustrated in (1) and in Table 2.

(1) /mu˥/ 'dark'

/no˩/ (NEG)

/mi˥/ (3SG)

/nu˩/ 'mother'

/be˧˥/ 'again'

However, non-final syllables in polysyllabic words typically lose their tonal contrasts, and are realized with a level mid tone, as illustrated in the trisyllabic word in (2) and disyllabic words in (3).

(2) /lə˧kʰəl˧klom˥/ 'to be happy'

(3) /kə˧vəŋ˧˥/ 'to fall'

/mə˧luk˧˥/ 'roof'

Unlike tones in other Southern Chin languages, Khongso tones are resistant to change across phonetic and morphophonemic environments, maintaining similar contours in isolation and in discourse. Although tone sandhi processes are not obvious, preliminary analysis suggests that Khongso tones are not entirely immutable. Future analysis will illuminate sources of variation.

Samples of the mid falling tone in this study frequently occur with creaky voice. Covariation of non-modal phonation and F0 is common in tonal languages, particularly Tibeto-Burman languages (Bradley 1982, Watkins 2000, Gruber 2011, Yu & Lam 2014). However, phonation contrasts can occur in tonal languages independent of F0 contrasts (Silverman 1997). Also, non-modal phonation can simply covary with low F0 levels (Gordon & Ladefoged 2001, Kuang 2017). Finally, this feature may be indicative of the population or may simply be idiosyncratic. Future work will address these considerations.

## Word structure

Khongso is an isolating language with little derivational morphology and no inflectional morphology. Most words are primarily monosyllabic (e.g. /mu˥/ 'dark'), but disyllabic (e.g. /kə˧vəŋ˧˥/ 'to fall') and polysyllabic (e.g. /lə˧kʰəl˧klom˥/ 'to be happy') words can occur. Most disyllabic words are sesquisyllabic, with a minor syllable followed by a major syllable. However, in compound words where the meaning of individual syllables can be reconstructed, as in *i˥-mi˥* '1PL-people (person)', both syllables can be full.

### Rhythm

Khongso exhibits a rhythmic pattern consisting of combinations of minor and major syllables in an iambic pattern (unstressed-stressed) which is typical of languages of mainland

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Southeast Asia, including Mon-Khmer languages, Thai, and Burmese (Donegan & Stampe 1983, Wheatley 1987). Initial elements of polysyllabic constructions tend to be shorter due to this rhythmic pattern.

## Sesquisyllable

Disyllabic words in Khongso meet Bennett's (1995) and Butler's (2014) sesquisyllable criteria, meaning that they contain a reduced 'minor' syllable followed by a full 'major' syllable. Other polysyllabic words, such as trisyllabic words, are similar in that they contain reduced syllables followed by a major ultimate syllable. Major syllables in Khongso exhibit a full range of syllable structures and tones (see sections 'Major syllable structure' and 'Tone'). Minor syllables, on the other hand, are reduced. They contain a single initial consonant ($C_I$), allowing a reduced consonant inventory (see Table 4), followed by /ə/, and only a level mid tone. Syllabic nasals (N̩) can also occur as a minor syllable, and so the minor syllable is diagrammed as $C_I$ə or N̩. Syllabic nasals precede major syllables and they do not significantly differ in duration from $C_I$ə syllables. A linear regression including major, $C_I$ə, and N̩ syllables, contrast coded to compare $C_I$ə and N̩ syllables, shows no significant difference between the duration of $C_I$ə syllables (mean = 0.10, sd = 0.04, n = 70) and N̩ syllables (0.11, 0.03, n = 16), $F(1,573) = 0.09$, $p = .76$.

**Table 4** Sesquisyllabic word structure.

| Minor syllables | | Major syllables | | | |
|---|---|---|---|---|---|
| Onset | Nucleus | ($C_I$) | ($C_2$) | Nucleus | ($C_F$) |
| /k/ /l/ /m/ /n/ /ŋ/ /r/ /s/ /t/ /v/ | /ə/ or N̩ | All Cs | /j/ /w/ /r/ /l/ | V(V) | /p/ /t/ /k/ /ʔ/ /m/ /n/ /ŋ/ /r/ |

The major syllable can contain a complex onset with an initial consonant ($C_I$) followed by a second consonant ($C_2$). The nucleus can be a monophthong or a diphthong, and the coda can be a single final consonant ($C_F$). The major syllable is diagrammed as ($C_I$)($C_2$)V(V)($C_F$) (see section 'Major syllable structure'). The allowable sesquisyllabic word structure is shown in Table 4.

Figure 10 provides a visual representation of the similar duration between $C_I$ə and N̩ minor syllables in the words /mə˧˩läi˩/ 'rich' and /n̩˧˩le˧/ 'path'. Both are followed by major syllables with significantly longer durations.

## Major syllable structure

In the narratives in my Khongso corpus, described in the introduction, CV and CVC are by far the most common major syllable types, but V, VC, CCV, and CCVC are possible. The major syllable is diagrammed in Table 4 as ($C_I$)($C_2$)V($C_F$) and examples are presented in Table 5. In major syllables, all consonant phonemes can occur in the initial position of the onset (CI), but only /j w r l/ can occur in the second position of complex onsets (C2). In the coda, only unaspirated, voiceless stops /p t k ʔ/, nasals /m n ŋ/, and the voiced alveolar trill /r/ may occur.

## Onset of major syllables

The initial C is the least limited element of the syllable. Any phonemic consonant may occur in this position. Consonant clusters are only found in the onset. Consonant clusters, illustrated

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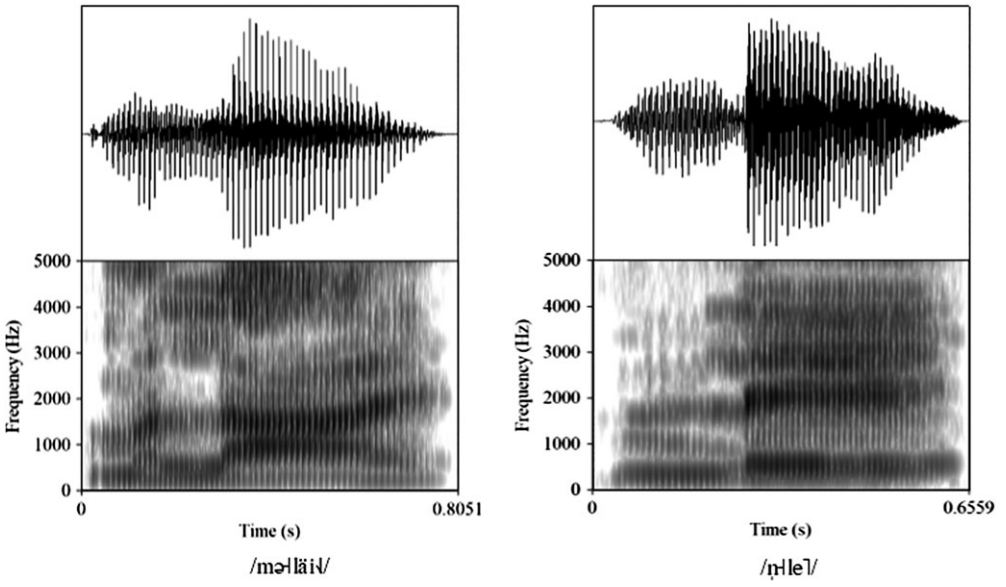


**Figure 10** Khongso sesquisyllablic words.

**Table 5** Major syllable.

| Structure | Form | Gloss |
|---|---|---|
| V | /ɤɬ/ | 'there' |
| VC | /äpɬ/ | 'to shoot' |
| C V | /nuɬ/ | 'mother' |
| C V C | /bɔnɬ/ | 'soil' |
| C C V | /klɤʔ/ | 'language' |
| C C V C | /kläŋɬ/ | 'body' |

in (4) and (5), are restricted to aspirated and unaspirated voiceless stops followed by liquids and semivowels. The full list of possible consonant clusters in onset position is presented in Table 6.

(4) /klɤŋɬ/ 'leg'

/krumɬ/ 'river confluence'

/kʰləkɬ/ 'to remove meat from a shell'

/kʰrekɬ/ 'to love'

/plaïɬ/ 'to dance'

/präŋʔ/ 'outside'

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/pʰlɛkɬ/ ‘to splatter’

/pʰreˇɬ/ ‘to answer’

(5) /pʰjäuɬ/ ‘to wash’

/pjuŋɬ/ ‘to run’

/kwäiɬ/ ‘bee’

/kwänɬ/ ‘to scratch an itch’

/pwäɬ/ ‘to visit’

**Table 6** Attested consonant clusters occurring in major syllables.

| Initial consonant ($C_1$) | Second consonant ($C_2$) | | | |
|---|---|---|---|---|
| | /l/ | /r/ | /w/ | /j/ |
| /p/ | √ | √ | √ | √ |
| /pʰ/ | √ | √ | √ | √ |
| /k/ | √ | √ | √ | √ |
| /kʰ/ | √ | √ | | √ |
| /t/ | | | √ | √ |
| /tʰ/ | | | | √ |
| /h/ | | | √ | √ |
| /b/ | | | | √ |
| /v/ | | | | √ |
| /l/ | | | | √ |

## Nucleus and coda of major syllables

The nucleus may only be a single vowel or a diphthong. Consonant codas do not occur after diphthongs, except in loan words, such as /tʃäunɬ/ ‘school’. With a single vowel nucleus, codas may occur. In the coda, all stops /p/, /t/, /k/, and /ʔ/ are unreleased. Nasals /m/, /n/, /ŋ/ and voiced alveolar trills /r/ may also occur in the coda as illustrated in (6).

(6) /läpɬ/ ‘to shout’

/n̊ɛtɬ/ ‘to tear or break’

/kʰrekɬ/ ‘to love’

/ləɬmuʔɬ/ ‘sky’

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/kärˬ/ ‘chicken’

/lämˬ/ ‘fish’

/bɔnˬ/ ‘soil’

/bɨŋ˧/ ‘to shut’

With few exceptions, codas do not occur in non-final syllables in polysyllabic words. In one exception, /l/ appears in the coda of the second syllable, as shown in (7).

(7) /ləˌ.kʰəlˌ.ˈklom˥/ ‘to be happy’

In (8), the syllable-final /s/ appears because it is a loan word.

(8) /päsˌ.torˆˬ/ ‘pastor’

## Minor syllable

The most common onsets in minor syllables are /k/, /l/, and /m/ (Table 7). Consonants /n/, /ŋ/, /r/, /s/, /t/, and /v/ are attested in minor syllables with less frequency. Minor syllables cannot constitute words by themselves.

**Table 7** Common minor syllables.

| /kə/ as initial syllable | | /lə/ as initial syllable | | /mə/ as initial syllable | |
|---|---|---|---|---|---|
| /kəˌvəŋˆˬ/ | ‘to fall’ | /ləˌmuʔˬ/ | ‘sky’ | /məˌkleˬ/ | ‘firefly’ |
| /kəˌläkˬ/ | ‘mouth’ | /ləˌkärˬ/ | ‘needle’ | /məˌläiˬ/ | ‘rich’ |
| /kəˌmäiˬ/ | ‘today’ | /ləˌläˬ/ | ‘moon’ | /məˌloŋˬ/ | ‘ground’ |
| | | | | /məˌluk˥/ | ‘roof’ |

In minor syllables, nasals /m/, /n/, and /ŋ/ occur with a following /ə/ (/Nə/). However, syllabic nasals /m̩/, /n̩/, and /ŋ̩/ can also occur. Typically, when a syllabic nasal occurs, it occurs in the same place of articulation as the major syllable onset, suggesting a homorganic syllabic nasal, as shown in (9).

(9) /m̩ˌplɔtˌ/ ‘door’

/n̩ˌcäkˬ/ ‘demon’

/m̩ˌm̥äˬ/ ‘road’

/ŋ̩ˌkʰätˬ/ ‘rail’

/n̩ˌle˥/ ‘path’

/ŋ̩ˌkomˌ/ ‘thirty’

/n̩ˌsänˬ/ ‘spider’

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However, syllabic nasals do occur before major syllable onsets that do not share the same place of articulation, and /Nə/ minor syllables do occur before major syllable onsets that share the same place of articulation.

## Conclusion

Overall, the Khongso consonant inventory consists of voiced and voiceless sets of plosives, nasals, and trills, as well as four fricatives, two approximants, and two laterals. The vowel system consists of ten monophthongs that occur in open and closed syllables and seven diphthongs that occur only in open syllables. The tone system consists of five phonological tones. Khongso word structures are mainly monosyllabic, but multisyllabic words can occur. Disyllabic words are mainly sesquisyllabic, being comprised of a reduced minor syllable followed by a full major syllable. Trisyllabic words are rare and contain two reduced syllables followed by a full major syllable. The structure of major syllables is diagrammed as $(C_I)(C_2)V(C_F)$ and minor syllables are $C_I$ə and N̩.

## Transcription of recorded passage: 'The North Wind and the Sun'

Prior to 2006 Khongso had never been written. The author, Wright, worked with the Khongso people in 2006 to develop the orthography below, which is the only known orthography for the language in use today. A similar orthography was simultaneously developed together with the Anu. Literacy committees were formed in each group to make literacy and orthographic decisions. The final orthographic decisions were made by each community. The Khongso people decided not to mark tone in the orthography. The primary Khongso committee members were a part of the Christian community, but efforts were made to include all members of the community in the literacy process. The story was translated from English and then audio recorded in Khongso by a Khongso research assistant in Yangon. It was translated by Wright and the research assistant. Wright transcribed the recording using a broad phonemic transcription.

### Orthographic version

Takthang hai Tim hak Rasa

Vanki up khuk khü imi jua kai pin mikha takthang hai tim hak rasa cü mimi hra ky kük by peimih ka-eikja peh. Mi kaipin mih imi khlxt hmat hai vanki mih par khüm py ri mih imi cü hra kykük mih peinü hmai hüm peimih ra-ui kadxja peh. Hna kacü takthang hai tim cü kaipin mih imi hüm hmat mah hra vei mirük hutjok peh. Mitawk kapü mi imi cü hmat hai vanki hly kapaurat, kapaurat vit peikhü, kung kacü takthang hai tim cü kanawn vit ky peh. Hna kacü kaipin mih imi kham rasa cü raujok mikha kaipin mih imi cü hmat hai vanki hüm khlxt pai vit kypeh. Hnakha kacü takthang hai tim cü mija long rasa ni hra kykük peikhü txr peh.

### Phonemic version

täk˨ tʰäŋ˧˥ häi˧ tim˨ häk˧ rəsä˨

vən˧ki˧ up˨ kʰuk˨ kʰə˨ i˧mi˧ juə˧ käi˧ pin˨ mi?˧ kʰä˨ täk˨ tʰäŋ˧˥ häi˧ tim˨ häk˧ rə˧sä˨ cə˨ mi˧mi˧ r̥ä˨

kɤ˧ kək˨ bɤ˨ pe˧ mi?˧ kə˧ek˧ jä˨ pɛ?˨ mi˧ käi˧ pin˨ mi?˧ i˧mi˧ kʰli̥t˨ m̥ät˧ häi˧ vən˧ki˧ mi˧pär˧

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kʰəm˥ pɤ˦ ri˥ mi?˥ i˥mi˥ cə˩ ɻä˩ kɤ˥ kə˩ mi?˥ pe˦ nə˩ m̥äi˦ həm˥ pe˦ mi?˥ rə˦ui˥ kə˦də˦ jä˩ pɛ?˩ n̥ä˦ kə˦cə˩ täk˩ tʰäŋ˥˩ häi˥ tim˩ cə˩ käi˥ pin˩ mi?˥ i˥mi˥ həm˥ m̥ät˦ mä?˦ ɻä˩ ve˦ mi?˥ rək˥ hut˩ jok˩ pɛ?˩ mi˥ tɔk˥ kə˦pə˩ mi˥ i˥mi˥ cə˩ m̥ät˦ häi˥ və˦nki˦ l̥ɤ˩ kə˦päu˦rät˥ kə˦päu˦rät˥ vit˦ pe˦ kʰə˩ kuŋ˥ kə˦cə˩ täk˩ tʰäŋ˥˩ häi˥ tim˩ cə˩ kə˦nɔn˥ vit˦ kʰə˩ pɛ?˩ n̥ä˦ kə˦cə˩ käi˥ pin˩ mi?˥ i˥mi˥ kʰäm˩ rə˦sä˩ cə˩ räu˥ jok˩ mi?˦ kʰä˩ käi˥ pin˩ mi?˥ i˥mi˥ cə˩ m̥ät˦ häi˥ və˩nki˦ həm˥ kʰli˩ päi˦ vït˦ kɤ˥ pɛ?˩ n̥ä˦ kʰä˩ kə˦cə˩ täk˩ tʰäŋ˥˩ häi˥ tim˩ cə˩ mi˥ jä˩ loŋ˩ rə˦sä˩ ni˩ ɻä˩ kɤ˥ kək˩ pe˦ kʰä˩ tɨr˦ pɛ?˩

## Original English version

The North Wind and the Sun

The North Wind and the Sun were disputing which was the stronger, when a traveler came along wrapped in a warm cloak. They agreed that the one who first succeeded in making the traveler take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveler fold his cloak around him; and at last the North Wind gave up the attempt. Then the Sun shone out warmly, and immediately the traveler took off his cloak. And so the North Wind had to confess that the Sun was the stronger of the two.

## Interlinearized version

This version contains the phonemic transcription, the interlinear gloss, and the English translation of the text.

ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| 1, 3 | first, third person | EVID | evidential | PL | plural |
| BKGR | background | IRR | irrealis | POSS | possessive |
| CLF | classifier | LNK | linker | PRT | particle |
| COP | copula | LOC | locative | SUBJ | subject |
| DECL | declarative | OBJ | object | SUP | superlative |
| DET | determiner | PERF | perfect | TEMP | temporal |
| DU | dual | PFV | perfective | TOP | topic |

1. täk˩ tʰäŋ˥˩ häi˥ tim˩ häk˦ rə˦sä˩
   north side LOC wind and sun
   'The North Wind and the Sun'

2. vən˦ki˦ up˩ kʰuk˩ kʰə˩ i˥-mi˥ juə˦ käi˦ pin˩ mi?˦ kʰä˩
   shirt warm wrap PERF 1PL-people CLF go trip LNK TEMP
   'Having wrapped in a warm shirt, a person went on a trip, and'

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3. takɨ̈↓ tʰaŋ̈↗ häi↑ tim↓ häk↑ rə↑sä↓ cə↓
north side LOC wind and sun TOP
'the North Wind and the sun'

4. mi↑mi↑ r̥ä↓ kɤ↑ kək↓ bɤ↓ pe↑ miʔ↑ kə↑ek↑ jä↓ pɛʔ↓
3PL strength big SUP maybe EVID LNK argue DU DECL
'were arguing which one would be the strongest.'

5. mi↑ käi↑ pin↓ miʔ↑ i↑-mi↑ kʰlɨt↓ m̥ät↑ häi↑ vən↑ki↑ mi↑pär↑
DET go trip LNK 1PL-people take.off own.self POSS shirt so.that

6. kʰəm↑ pɤ↑ ri↑ miʔ↑ i↑-mi↑ cə↓ r̥ä↓ kɤ↑ kək↓ miʔ↑ pe↑ nə↓
succeed do more LNK 1PL-people TOP strength big SUP LNK EVID BKGR

7. m̥äi↑ həm↑ pe↑ miʔ↑ rə↑ui↑ kə↑də↑ jä↓ pɛʔ↓
remember IRR EVID LNK insides agree DU DECL
'They agreed that it would be known (remembered) that the one who succeeded in getting the traveler to take off his shirt would be the strongest.'

8. n̥ä↑ kə↑cə↓ täk↓ tʰäŋ̈↗ häi↑ tim↓ cə↓ käi↑ pin↓ miʔ↑ i↑-mi↑ həm↑
over when north side LOC wind TOP go trip LNK 1PL-people OBJ

9. m̥ät↑ mäʔ↑ r̥ä↓ ve↑ miʔ↑ rək↑ hut↓ jok↓ pɛʔ↓
own.self SUBJ strength COP LNK maximum blow give DECL
'And then the North Wind blew the traveler with all the strength that he had.'

10. mi↑ tɔk↑ kə↑pə↓ mi↑ i↑-mi↑ cə↓ m̥ät↑ häi↑ vən↑ki↑ l̥ɤ↓
DET is even.though DET 1PL-people TOP own.self POSS shirt with

11. kə↑päu↑rät↑ kə↑paü↑rät↑ vit↑ pe↑ kʰə↓
wrap.tight wrap.tight PFV EVID PERF
'However, the traveler wrapped his shirt even tighter'

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12. kuŋ˥ kə˧˥cə˨ täk˨ tʰäŋ˥˧ häi˥ tim˨ cə˨ kə˧˥nɔn˥ vit˧˥ kʰə˨ pɛʔ˨
after when north side LOC wind TOP rest PFV PERF DECL
'And so then, the North Wind gave up (rested).'

13. n̥ä˧˥ kə˧˥cə˨ käi˥ pin˨ miʔ˥ i˥-mi˥ kʰäm˨ rə˧˥sä˨ cə˨ räu˥ jok˨ miʔ˧˥ kʰä˨
over when go trip LNK 1PL-people to sun TOP shine give LNK TEMP
'And then, when the sun shone on the traveler,'

14. käi˥ pin˨ miʔ˥ i˥-mi˥ cə˨ m̥ät˧˥ häi˥ vən˧˥ki˧˥ həm˥ kʰlɨt˨ päi˧˥ vit˧˥ kɤ˥ pɛʔ˨
go trip LNK 1PL-people TOP own POSS shirt OBJ take.off PRT PFV PERF DECL
'the traveler immediately took off his shirt.'

15. n̥ä˧˥ kʰä˨ kə˧˥cə˨˥täk˨ tʰäŋ˥˧ häi˥ tim˨ cə˨
over TEMP when north side LOC wind TOP
'And so then, the North Wind'

16. mi˥ jä˨ loŋ˨ rə˧˥sä˨ ni˨ r̥ä˨ kɤ˥ kək˨ pe˧˥ kʰä˨ tɨr˧˥ pɛʔ˨
DET DU among sun light strength big SUP EVID TEMP tell DECL
'said that, out of the two, the sun was the strongest.'

## Acknowledgments

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## Supplementary material

To view supplementary material for this article (including audio files to accompany the language examples), please visit https://doi.org/10.1017/S0025100320000286.

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