SORBUNG, AN UNDOCUMENTED LANGUAGE OF MANIPUR: ITS PHONOLOGY AND PLACE IN TIBETO-BURMAN

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Abstract
Sorbung is a Tibeto-Burman language of Manipur, India. This study outlines the phonology of the language based on data elicited from a speaker of residing temporarily in the United States, where he was studying theology. Sorbung shares characteristics with at least two branches of Tibeto-Burman—Tangkhulic and Kuki-Chin—without showing unambiguous evidence of belonging to either group. A word list based upon this collection of data is provided as an appendix.

Keywords: phonology, classification, Tibeto-Burman

1. Introduction
Sorbung is a previously undocumented Tibeto-Burman language of Manipur, India. The current study outlines the major features of the phonology of the language, describing the segment inventories, prosodic structures, phonotactic constraints, and phonological alternations that characterize Sorbung. This sketch is based on lexical and other data elicited from a single native speaker of Sorbung (a male in his thirties) residing temporarily in the United States, where he was studying theology. Elicitation was conducted.

22 The original field research on Sorbung was supported by a UC Berkeley Summer Research grant (2004) to the first author.

23 Although we have no reason to doubt that our consultant’s speech was typical of the speech of the broader language community, caution should be used in interpreting these results. Like most other speakers of Sorbung in his age group, our consultant was proficient to some degree in Standard Tangkhul, Meithei, Hindi, and English. Some instances of language interference are therefore likely. Since his spouse was not from Sorbung, he spoke to her and his children primarily in Standard Tangkhul. He had resided in the United States for approximately three years at the time the first author worked with him and his use of Sorbung was primarily confined to telephone conversations with family members during that time. However, he expressed considerable confidence in his Sorbung language competence, and was both prompt and consistent in his responses to elicitation prompts. Unfortunately, since the current political situation in Manipur makes fieldwork difficult and dangerous, it is unlikely that work on Sorbung based.

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primarily in English but Standard Tangkhul and visual illustrations were used for difficult forms. Audio recordings were made of most of the lexical material elicited from the consultant, and these were used to verify and correct the transcriptions made while the first author was working with him. A word list based upon this collection of data is provided as an appendix.

Sorbung is phonologically interesting for a number of reasons. From a comparative standpoint, it shares characteristics with at least two branches of Tibeto-Burman—Tangkhulic (Mortensen & Miller 2009a; Mortensen & Miller 2009b) and Kuki-Chin (VanBik 2009)—without showing unambiguous evidence of belonging to either group. From a synchronic point of view, it displays a variety of productive alternations (both segmental and tonal) that may be of theoretical interest. It also shows interesting patterns of synchronic variation that may provide evidence regarding diachronic developments that have occurred elsewhere in Tibeto-Burman, specifically the development of manner distinctions from the “collapse” of lexical prefixes into the onsets of roots.

1.1. Geographic and Demographic Information
Sorbung is spoken in Sorbung village, a community of about 300 located in the southeast corner of Ukhrul District, Manipur State, India (about 40 km east of the border with Burma). Despite some significant linguistic and cultural differences, the inhabitants of Sorbung village consider themselves to be ethnic Tangkhuls, the majority ethnic group in Ukhrul District. The immediately neighboring villages are also ethnic Tangkhuls, though there is significant Kuki (Thadou) settlement that separates Sorbung from the larger group of Tangkhul villages to the north. According to our consultant, many of these villages are homes to dialects closely related to Sorbung. Others, like Tusom village, are inhabited by speakers of languages belonging unambiguously to the Tangkhulic group. To the south and southwest is a network of Maring and Old Kuki villages. The linguistic and ethnic affiliation of the villages to the east is not clear.

It is not well established whether Tangkhulic (or Kuki-Chin) are separate top-level branches of Tibeto-Burman or whether they form a subgroup with one another or other Tibeto-Burman languages. Traditionally, they have been grouped together as part of a Kuki-Chin-Naga group. However, as Burling (2003) notes, this subgroup has been based more on intuition than argument. Mortensen and Miller (2009b) present some evidence for innovations shared among Kuki-Chin, Tangkhulic, and an additional subset of “Naga” languages and suggest that they share a common ancestor more recent than Proto-Tibeto-Burman. Since there is no consensus on this subject, we will treat Tangkhulic and Kuki-Chin only as distinct taxonomic units, without specifying the relationship between them.

Like other ethnic Tangkhul, the inhabitants of Sorbung village are multilingual. Most aspects of family and village life are negotiated in the local language (here called Sorbung). Church sermons and some schooling are carried out in the ethnic lingua franca we call Standard Tangkhul (a Tangkhlic language originally based on the speech of Ukhrul village, now the district headquarters). Other schooling is done in Meithei—the dominant regional language, Hindi, and English. English is important not only because of its international stature, but because the overwhelming majority are Baptist Christians with a
persisting historical relationship to the American Baptist denomination. Loanwords from all of these languages appear in the Sorbung lexicon.

1.2. Previous Work
There is no previous work on Sorbung directly, but at least one published data set from a different dialect of the same language exists. Brown (1837) published word lists collected by Capt. George Gordon, a British political agent in Manipur, for a variety of languages in Manipur. These included “Luhuppa,” which is largely identical to the Tangkhul language of Ukhrul town, “Champung,” the language of another Tangkhul village, and three varieties explicitly labeled as Tangkhul: “Northern Tangkhul,” “Central Tangkhul,” and “Southern Tangkhul.” Of these, Southern Tangkhul is the least like the others but very similar to Sorbung in its lexical, morphological, and phonological properties. Unfortunately, Brown’s word lists were only 60 words long, and provide the only published information on this language up until the present.

Mortensen (2003) and Mortensen and Miller (2009a; 2009b) show that most of the languages spoken by members of the Tangkhul tribe belong to a single subgroup within Tibeto-Burman. They establish criteria for membership in this group, “Tangkhulic,” on the basis of phonological, morphological, and lexical innovations. All of the Tangkhul languages enumerated by Brown (1837) appear to belong to this group, with the exception of “Southern Tangkhul.” Our more complete corpus of data from Sorbung makes it clear that it does not descend from the Proto-Tangkhulic reconstructed by Mortensen and Miller. While Sorbung speakers belong to the same ethnic group as the speakers of Tangkhulic language, their language appears to come from a somewhat different branch of the Tibeto-Burman family.

1.3. The Place of Sorbung within Tibeto-Burman
It is well known that ethnic and linguistic boundaries do not align neatly. This is no less true in South and Southeast Asia than elsewhere. It appears likely that Tangkhuls, as an ethnicity, may be the result of the convergence of two or more populations already related in language and culture. One of these comprises, roughly, the forebears of Tangkhulic speakers; another comprises the ancestors of Sorbung and “Southern Tangkhul” speakers. We contend that this second group spoke a language closely related to the so-called “Old Kuki” languages that are spoken to the south and west of Sorbung. While the population around Sorbung came to identify ethnically with population of Tangkhulic speakers, and while their language was subject to some lexical and structural influence from Tangkhulic languages, they retain a linguistic tradition distinct from their northern neighbors. This was facilitated, no doubt, by the high degree of linguistic heterogeneity present even among Tangkhulic languages. It is apparent that Sorbung and “Southern Tangkhul” fall outside of Tangkhul as a group only when they are compared with Old Kuki languages like Kom (Kom Rem).

This is not to say that Sorbung does not resemble Tangkhul languages in some respects (only that its resemblance to Old Kuki languages is stronger). Like Tangkhul but unlike most Kuki-Chin languages, Sorbung shows no evidence of subject agreement in verbs. It also shows little or no evidence of verbal stem alternation, an important Kuki-
Chin feature\textsuperscript{24}. Phonologically, too, Sorbung resembles Tangkhul in some respects. For example PTB *kr-, *kl- become c- in Sorbung, just as they did in Proto-Tangkhulic. Compare the following Sorbung forms with related reconstructions from Proto-Tangkhulic (PTk) and Proto-Tibeto-Burman (PTB):\textsuperscript{25}

**Table 1:** Palatal reflexes of velar clusters in Proto-Tangkhulic and Sorbung.

<table>
<thead>
<tr>
<th>PTB</th>
<th>PTk</th>
<th>SORBUNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>*krap</td>
<td>*cap</td>
<td>caap 'cry; weep'</td>
</tr>
<tr>
<td>*kri(y)</td>
<td>*ci</td>
<td>-cii ‘fear’</td>
</tr>
<tr>
<td>*klaw</td>
<td>*cow</td>
<td>ciu ‘dig’</td>
</tr>
</tbody>
</table>

However, in Tangkhulic, this appears to be a general process of palatalization before palatal vowels and glides, medial liquids having previously become palatal glides (Mortensen & Miller 2009b). In Sorbung, it is limited to PTB *kr- and *kl- specifically; *k- does not become c- before high front vowels, when has undergone secondary aspiration, does not become c- even before medial *-l-:\textsuperscript{26}

**Table 2:** Forms displaying palatization in Tangkhulic but not Proto-Kuki-Chin or Sorbung.

<table>
<thead>
<tr>
<th>PTB</th>
<th>PTk</th>
<th>PKC</th>
<th>SORBUNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>*klum</td>
<td>*ʃim</td>
<td>*khum</td>
<td>kʰuum ‘sweet’</td>
</tr>
<tr>
<td>*g-la-y</td>
<td>*ʃi</td>
<td>*khi</td>
<td>kʰii ‘wind (n.)’</td>
</tr>
<tr>
<td>—</td>
<td>—</td>
<td>*klaa</td>
<td>kʰaa ‘moon/month’</td>
</tr>
<tr>
<td>—</td>
<td>—</td>
<td>*kuak</td>
<td>kʰuak ‘brain’</td>
</tr>
<tr>
<td>*kəy</td>
<td>*sa-kii</td>
<td>sakii</td>
<td>‘deer’</td>
</tr>
<tr>
<td>*g(y)əy</td>
<td>*-ci</td>
<td>*kii (PNC)</td>
<td>bakii ‘parrot’</td>
</tr>
</tbody>
</table>

Furthermore, when lexical items with palatal stops are compared with their cognates in the Old Kuki languages Kom and Moyon, and the lexically-similar language Puiron\textsuperscript{27}, it is apparent that these languages share the same pattern of palatalization as Sorbung:

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\textsuperscript{24} Many Kuki-Chin languages have a morphological process that derives an inflected stem form (Form II) from the basic form (Form I). For a useful comparative study of this phenomenon, see Button (2009:182ff). Note, however, that there are Old Kuki languages which display evidence of neither subject agreement nor stem alternation (Grierson 1903:288-290).  

\textsuperscript{25} Except where otherwise indicated, Proto-Tibeto-Burman reconstructions are from Matisoff (2003) and Proto-Tangkhulic reconstructions are from Mortensen & Miller (2009b).  

\textsuperscript{26} Except where otherwise indicated Proto-Kuki-Chin (PKC) reconstructions are from VanBik (2009). Reconstructions labeled “DRM” are due to the first author.  

\textsuperscript{27} Ethnically, the speakers of Puiron are a subset of the Nruangmei tribe, most of whom speak languages belonging to the Zeme group (Burling 2003). Burling suggests that Puiron is a Zeme language with many Kuki loans. Below we suggest that Puiron is, like Sorbung, a “Nagafied” Old Kuki language.
Table 3: Parallels in palatalization between Sorbung, Old Kuki (Kom and Moyon), and Puiron.

<table>
<thead>
<tr>
<th>PTB</th>
<th>PKC</th>
<th>SORBUNG</th>
<th>KOM</th>
<th>MOYON</th>
<th>PUIRON</th>
</tr>
</thead>
<tbody>
<tr>
<td>*krap</td>
<td>*krap</td>
<td>cùap</td>
<td>kə-čəp</td>
<td>—</td>
<td>cap</td>
</tr>
<tr>
<td>*kri(y)</td>
<td>*kriʔ</td>
<td>ʔənciʔi</td>
<td>—</td>
<td>—</td>
<td>kaci</td>
</tr>
<tr>
<td>*klaŋ</td>
<td>*kraŋ  (DRM)</td>
<td>cóŋ</td>
<td>toŋ riŋ</td>
<td>leŋŋ</td>
<td>—</td>
</tr>
<tr>
<td>*tsywap</td>
<td>*tsuap</td>
<td>ʔəcūap ‘spleen’</td>
<td>əčip</td>
<td>—</td>
<td>maci</td>
</tr>
<tr>
<td>*m-t(s)i</td>
<td>*tsii</td>
<td>macii</td>
<td>—</td>
<td>—</td>
<td>maci</td>
</tr>
<tr>
<td>*dzyup</td>
<td>—</td>
<td>ciup</td>
<td>ʔuču</td>
<td>ʔučuʔ</td>
<td>‘breast’</td>
</tr>
</tbody>
</table>

In other words, palatal reflexes of PTB *krJ, *klJ, etc. cannot be used to associate Sorbung with Tangkhulic in preference to Kuki-Chin.

Another area of similarity between Tangkhulic and Sorbung is their personal pronouns. In this respect, Sorbung actually is quite different from most Kuki-Chin languages but similar to Tangkhulic languages (when the family is taken as an aggregate). Table 4 compares the Sorbung person pronouns (both the bound-root forms and the free forms) with their cognates in Proto-Tangkhul:

Table 4: Comparison of Sorbung and Proto-Tangkhulic pronominal forms.

<table>
<thead>
<tr>
<th>FREE PRONOUNS</th>
<th>BOUND PRONOMINAL PROCLITICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SORBUNG</td>
<td>PTK</td>
</tr>
<tr>
<td>FIRST ʔoo (&lt;*ej)</td>
<td>*ʔej, *ʔi ʔəJ (&lt; *ŋJ ?) *ʔiJ</td>
</tr>
<tr>
<td>SECOND naŋ</td>
<td>*naŋ</td>
</tr>
<tr>
<td>THIRD maa</td>
<td>*ʔa maJ</td>
</tr>
</tbody>
</table>

Apart from the third person proclitic, each of the Sorbung pronouns has a clear cognate in Tangkhulic. This is unsurprising for the second person pronouns, which are widespread in Tibeto-Burman (Matisoff 2003) and are also found in Kuki-Chin languages. For first and third person pronouns, however, Kuki-Chin languages usually have both free forms and proclitics from *kai ‘1’ and *ʔa ‘3’ (La Polla 2006). However, this match does not tie Sorbung to Tangkhulic exclusively. Meithei pronouns match those in Sorbung even more exactly:

Table 5: Comparison of Sorbung and Meithei personal pronouns.

<table>
<thead>
<tr>
<th>FREE PRONOUNS</th>
<th>BOUND PRONOMINAL PROCLITICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SORBUNG</td>
<td>MEITHEI</td>
</tr>
<tr>
<td>FIRST ʔoo (&lt;*ej)</td>
<td>ay</td>
</tr>
<tr>
<td>SECOND naŋ</td>
<td>naŋ</td>
</tr>
<tr>
<td>THIRD maa</td>
<td>má</td>
</tr>
</tbody>
</table>

The idea that the Sorbung pronouns (and possibly, those of Tangkhulic) have been borrowed from the politically and economically powerful Meithei-speaking community cannot be dismissed out of hand. It is also true that all of the Sorbung pronouns seem to have cognates among Kuki-Chin languages. Consider, for example, the pronouns of Kuki Thadou (Hyman 2007b):
Table 6: Comparison of Sorbung and Kuki Thadou personal pronouns.

<table>
<thead>
<tr>
<th></th>
<th>FREE PRONOUNS</th>
<th>BOUND PRONOMINAL PROCLITICS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SORBUNG</td>
<td>KUKI THADOU</td>
</tr>
<tr>
<td>FIRST EXCLUSIVE</td>
<td>?oo (&lt;*ej)</td>
<td>?i-, ?aN-</td>
</tr>
<tr>
<td>FIRST INCLUSIVE</td>
<td>kei</td>
<td>ka-</td>
</tr>
<tr>
<td>SECOND</td>
<td>naŋ</td>
<td>na-</td>
</tr>
<tr>
<td>THIRD</td>
<td>maa</td>
<td>ma-</td>
</tr>
</tbody>
</table>

The proclitic i- marks ‘first person inclusive’ in some Kuki-Chin languages. The free first person pronoun in Puiron is ai, probably cognate with Sorbung ?oo. In many Old Kuki languages, the third-person pronoun consists of *a- ‘3’ plus a formative like ma: Hallam a-ma, Aimol a-ma, Kolren a-ma. In Purum, this formative acts by itself as the marker of third person, as in mo-ju ‘3-NOM’. The same is true of Lamgang, where the 3sg prefix is ma- (Grierson 1903:282-284). In summary, the evidence supporting a special relationship between Sorbung and Tangkhulic breaks down under examination. It is unusual for Sorbung to share a characteristic with Tangkhulic unless the same characteristic is shared with Old Kuki languages.

The term “Old Kuki” is not without its complexities. As an ethnic term, it has been used to describe the Kuki-identified peoples who settled in Manipur at a relatively early time, prior to the arrival of the larger and more powerful Kuki groups like the Mizo (Lushai) and Thadou. These include the Anal, Aimol, Chothe, Purum, Koiren, Kom (Kom Rem), Lamkang, Moyon, Chiru, Tarao, and Vaiphei. Some of these groups, for political reasons, now identify as Naga (e.g. the Lamkang and the Tarao). We propose that certain other Naga groups, such as the Puiron (an ethnic subgroup of the Nruangmei) are the descendents of outlying Old Kuki groups that affiliated themselves ethnically with their Naga neighbors. It is not completely clear what groups should be characterized as Old Kuki and whether the languages of these people form a genetic subgroup (p.c., Kenneth VanBik). The internal coherence of Old Kuki was assumed in LSI, and this assumption has been carried on in part because of the lack of reliable data with which to test it.

VanBik, in his dissertation on Proto-Kuki-Chin, tentatively classified Old Kuki languages as part of his Northern (Zo) group, which is, in turn, part of his Peripheral group. This grouping is based on lexical resemblances between Northern Chin languages like Thadou and Paite and the Old Kuki language Purum. However, this speculation was removed from the published version of this work (VanBik 2009). We argue that the old Kuki languages cannot be part of VanBik’s Northern subgroup. The criterial innovation definition the Peripheral group is the fortition of PKC *r- > *g-. However, there is no evidence of this change in Old Kuki languages (or in Sorbung). Etyma with PKC *r- retain r- in Anal, Kom, Moyon, Puiron, and Sorbung, as they do in Mizo (a Central Kuki-Chin language) but develop g- Tedim, a Northern Kuki-Chin languages, as show in Table 7.
Table 7: Reflexes of Proto-Kuki-Chin *r- and *hr- in Tedim, Old Kuki (Anal, Kom, and Moyon), Puiron, and Sorbung.

<table>
<thead>
<tr>
<th>PKC</th>
<th>MIZO</th>
<th>TEDIM</th>
<th>ANAL</th>
<th>KOM</th>
<th>MOYON</th>
<th>PUIRON</th>
<th>SORBUNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ruʔ</td>
<td>ruʔ</td>
<td>ruʔ</td>
<td>ru</td>
<td>ru</td>
<td>row</td>
<td>ru</td>
<td>ʔo-r̥u</td>
</tr>
<tr>
<td>*p-ruul</td>
<td>ruul</td>
<td>gu:l²</td>
<td>pu-riul</td>
<td>—</td>
<td>—</td>
<td>ma-run</td>
<td>ho-r̥i</td>
</tr>
<tr>
<td>*rik</td>
<td>rit</td>
<td>gik'</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>rit-nu</td>
<td>R̥iit</td>
</tr>
<tr>
<td>*ril</td>
<td>ril</td>
<td>gil²</td>
<td>—</td>
<td>ʔo-ri</td>
<td>l-r̥or</td>
<td>—</td>
<td>ʔo-r̥i</td>
</tr>
<tr>
<td>*raʔ</td>
<td>ràʔ</td>
<td>gàʔ</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>tak-ra</td>
<td>R̥a</td>
</tr>
<tr>
<td>*ruy ~ *hruy</td>
<td>hrũy</td>
<td>gui</td>
<td>—</td>
<td>r̥i</td>
<td>ri</td>
<td>r̥i</td>
<td>r̥u</td>
</tr>
<tr>
<td></td>
<td>(Paite)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Lexical resemblances between Sorbung and Kuki-Chin.

<table>
<thead>
<tr>
<th>SORBUNG</th>
<th>PKC</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>som</td>
<td>*som</td>
<td>‘ten’</td>
</tr>
<tr>
<td>pan</td>
<td>*puan</td>
<td>‘blanket; cloth’</td>
</tr>
<tr>
<td>bùu</td>
<td>*ɓuʔ</td>
<td>‘rice (cooked)’</td>
</tr>
<tr>
<td>kèe</td>
<td>*kee</td>
<td>‘foot’</td>
</tr>
<tr>
<td>lu-kaan (Pi)</td>
<td>*lu</td>
<td>‘head’</td>
</tr>
<tr>
<td>lu-siip</td>
<td>*tship</td>
<td>‘crown (of head)’</td>
</tr>
<tr>
<td>ʔèk</td>
<td>*ʔeek</td>
<td>‘feces; shit’</td>
</tr>
<tr>
<td>ma-r̥ai</td>
<td>*raay</td>
<td>‘be pregnant’</td>
</tr>
<tr>
<td>cèm</td>
<td>*tsem</td>
<td>‘knife’</td>
</tr>
<tr>
<td>ʔotak</td>
<td>*tak</td>
<td>‘flesh’</td>
</tr>
<tr>
<td>wàm</td>
<td>*wom</td>
<td>‘black’</td>
</tr>
<tr>
<td>dài</td>
<td>*daay</td>
<td>‘cool; quiet’</td>
</tr>
<tr>
<td>paasàa (Paite)</td>
<td>*pa-sal</td>
<td>‘husband; man’</td>
</tr>
</tbody>
</table>

If all Northern Kuki-Chin languages are in the Peripheral group, and PKC *r- > g- in the common ancestor of all peripheral languages, the Old Kuki languages cannot be part of the Northern group. Given the morphological and lexical conservatism of Old Kuki languages, this introduces the possibility that they constitute a separate top-level branch of Kuki-Chin. However, they have been little-exploited in comparative reconstruction because relatively little data on them has been available. If it can be established that Sorbung belongs to this group, the body of data that we have assembled here could be of considerable value in reconstructing the history of Kuki-Chin as a family.

Aside from the evidence that has been presented thus far, there are three types of evidence that suggest Sorbung is a member of the Kuki-Chin family with specific affinities to the Old Kuki languages: shared lexical innovations, shared morphological innovations, and shared phonological innovations.

One striking aspect of the Sorbung lexicon is the presence of many lexical items that are widespread within Kuki-Chin but which are not widely found elsewhere in Tibeto-Burman.
However, Old Kuki languages (and Puiron) have even more specific lexical resemblances to Sorbung:

**Table 9:** Innovative lexical items shared between Sorbung, Old Kuki (Kom, Aimol, Moyon, Chiru) and Puiron.

<table>
<thead>
<tr>
<th>SORBUNG</th>
<th>KOM</th>
<th>AIMOL</th>
<th>MOYON</th>
<th>CHIRU</th>
<th>PUIRON</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʔóo</td>
<td>ei</td>
<td>—</td>
<td>ò</td>
<td>ai</td>
<td>‘bite; chew’</td>
</tr>
<tr>
<td>hóoŋ</td>
<td>ka-hoŋ</td>
<td>ò-jŋ</td>
<td>—</td>
<td>a-hoŋ hoŋ</td>
<td>‘come’</td>
</tr>
<tr>
<td>ʔíin</td>
<td>in</td>
<td>—</td>
<td>lń</td>
<td>in</td>
<td>‘drink’</td>
</tr>
<tr>
<td>kʰòop</td>
<td>—</td>
<td>Khop</td>
<td>—</td>
<td>—</td>
<td>‘be full’</td>
</tr>
<tr>
<td>ʔən-cáŋ-lám</td>
<td>čŋ</td>
<td>—</td>
<td>ti-cáŋ</td>
<td>čŋ-lam</td>
<td>‘right (side)’</td>
</tr>
<tr>
<td>ʔən-suŋ</td>
<td>in-suŋ</td>
<td>ò-suŋ</td>
<td>—</td>
<td>a-su</td>
<td>‘sit’</td>
</tr>
<tr>
<td>ʔìin</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>in</td>
<td>‘sleep’</td>
</tr>
<tr>
<td>lée</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>lo</td>
<td>‘take’</td>
</tr>
<tr>
<td>Kaa</td>
<td>kha-wa</td>
<td>Kha</td>
<td>—</td>
<td>—</td>
<td>‘that’</td>
</tr>
<tr>
<td>Wa</td>
<td>hi-wa</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>‘this’</td>
</tr>
<tr>
<td>ham-búu</td>
<td>hum-pui</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>‘tiger’</td>
</tr>
<tr>
<td>kòoŋ</td>
<td>koŋ</td>
<td>—</td>
<td>kuŋ</td>
<td>koŋ</td>
<td>‘waist; back’</td>
</tr>
</tbody>
</table>

The lexical similarities between Sorbung and Old Kuki languages are very strong and indicate, at the very least, a history of contact between southern Tangkhuls and Kuki-Chin speaking peoples. The morphological similarities (in both inflection and derivation) help to reinforce the idea that the relationship is a genetic one. Hartmann (2001) shows that there are a pair of valence-related prefixes in Daai Chin (a Southern Kuki-Chin language): ng-, occurring in low-valence verbs, and m-, occurring in transitive (especially causative) verbs:

(1) a. thei ‘be clever’ ng-thei ‘learn’ m-thei ‘teach’  
   b. püi ‘be together’ ng-püi ‘be included’  
   c. kyūh ‘be afraid’ m-kyūh ‘make afraid’

Cognates of these two prefixes appear in Sorbung as ʔəN- and mə-, respectively:

(2) a. ʔən-tʰée ‘awake; be awake’ mə-tʰée ‘get somebody up’  
   b. ʔən-cií ‘fear; be afraid’ mə-ciíp ‘frighten’

Various innovative inflectional markers found in Sorbung are also found in Old Kuki languages. The Sorbung progressive suffix -om (< ʔóm ‘exist; be a place’) has a cognate at least in Aimol. Compare Aimol sekor a-chongaa-om ‘horse 3-ride-PROG (he is riding a horse)’ with Sorbung titkooŋ-a a-kíak-óm-ôo ‘tree-DEM fall-PROG-DECL (the tree is falling)’. The Sorbung genitive suffix -ta also appears to have cognates in Langrong, Purum, and Kolren (all of which have a formally similar suffix in genitive pronouns).

Since comparative reconstruction of languages in the India-Burma borderlands area remains in its infancy, relatively speaking, it is difficult to speak of phonological innovations in terms as explicit as would be desirable. As noted above, Sorbung shares with Old Kuki languages a common development of PTB *kr-, *kl-, *ts(y)-, and *dzy-. It was also noted that a similar change has occurred in Tangkhulic and that it is not entirely
possible to establish the complete independence of these changes. The same may be said for another cluster of changes that are shared by Kuki-Chin, Sorbung, and Tangkhulic:

Table 10: Reflexes of Proto-Tibeto-Burman coronal fricatives and affricates in Proto-Kuki-Chin, Proto-Tangkhulic, and Sorbung.

<table>
<thead>
<tr>
<th>PTB</th>
<th>PTk</th>
<th>PKC</th>
<th>SORBUNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>*s-, *sy₁-</td>
<td>*tʰ-</td>
<td>*th-</td>
<td>tʰ-</td>
</tr>
<tr>
<td>*sy₂-</td>
<td>*s-</td>
<td>*sʰ-</td>
<td>s-</td>
</tr>
<tr>
<td>*ts-</td>
<td>*s-</td>
<td>*s-, *θ-</td>
<td>s-</td>
</tr>
<tr>
<td>*tsy-</td>
<td>*ts-, *c-</td>
<td>*ts-, s-</td>
<td>c-, s-</td>
</tr>
<tr>
<td>*dz-</td>
<td>*ts-</td>
<td>*ts-</td>
<td>c-</td>
</tr>
<tr>
<td>*dzsy-</td>
<td>*c-, *ts-</td>
<td>*ts-</td>
<td>c-</td>
</tr>
</tbody>
</table>

One piece of evidence that at least the Kuki-Chin and Sorbung innovations are shared is the fact that irregular and variable etyma tend to pattern the same way in PKC and Sorbung (given that PKC *ts- regularly corresponds to Sorbung c-):

Table 11: Comparison of regular and variable developments from PTB *ts-, *ts(y)-, and *dzy-. Note that Sorbung patterns like PKC rather than PTk.

<table>
<thead>
<tr>
<th>PTB</th>
<th>PTk</th>
<th>PKC</th>
<th>SORBUNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>*tsam</td>
<td>*sam</td>
<td>*sam</td>
<td>sàam ‘hair of head’</td>
</tr>
<tr>
<td>*ts(y)a-t</td>
<td>*tsa</td>
<td>*saa</td>
<td>saa ‘hot; ill’</td>
</tr>
<tr>
<td>*ts(y)a</td>
<td>*tsa</td>
<td>*θaa</td>
<td>saa ‘child’</td>
</tr>
<tr>
<td>*dzya-k/t/n</td>
<td>*tsa</td>
<td>*θaʔ</td>
<td>saa ‘eat’; sak ‘feed’; food; feed’</td>
</tr>
<tr>
<td>*tsywap</td>
<td>*tsup</td>
<td>*tsuap</td>
<td>cúap ‘spleen’; ‘lung’</td>
</tr>
</tbody>
</table>

It is also the case that Sorbung and Proto-Kuki-Chin developed initial glottal stop from the same—reasonably diverse—set of onsets:

Table 12: Sources of Proto-Kuki-Chin and Sorbung initial glottal stop.

<table>
<thead>
<tr>
<th>PTB</th>
<th>PTk</th>
<th>PKC</th>
<th>Sorbung</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ʔaːr</td>
<td>*ar</td>
<td>*ʔaar</td>
<td>?aa chicken; fowl</td>
</tr>
<tr>
<td>*kʷʔy</td>
<td>*hwɨ</td>
<td>*ʔuy</td>
<td>?ʔu dog (Canis familiaris)</td>
</tr>
<tr>
<td>*hyen</td>
<td>—</td>
<td>*ʔeŋ</td>
<td>?eŋ look</td>
</tr>
<tr>
<td>*k-yim</td>
<td>*ʃim</td>
<td>*ʔim</td>
<td>?in house</td>
</tr>
</tbody>
</table>

Perhaps the most striking evidence of a close relationship between Old Kuki and Sorbung is that fact that at least one Old Kuki language, Kom, shares with Sorbung a productive voicing alternation that seems to be active in the same environments. This alternation is discussed at length in Section 0 below.

Based on the evidence that we have presented here, we argue that Sorbung is best seen as a Kuki-Chin language (closely related to Old Kuki languages like Kom, Aimol, and Moyon) that has come under influence from Tangkhulic languages. We further suggest that it is not the only “Nagafied” Kuki language and that Puiron might be another case of this type, a matter that cannot be discussed at length here.
1.4. Important Characteristics

The significance of Sorbung partly lies in that it demonstrates of changes in progress that are important for accounting for historical developments elsewhere in Tibeto-Burman. These changes orbit around minor syllables (“presyllables” or “prefixes”), both their development from etymological major syllables and their collapse into following major syllables, yielding a new stop series.

Sorbung shows a pervasive pattern of reduction in pretonic syllables. Compounds consisting of two noun roots that would consist of heavy syllables in isolation are realized as a sequence of a light syllable and heavy syllable. This stress-conditioned pattern of reduction creates a kind of structure that is intermediate between full disyllables and sesquisyllables and provides a likely pathway for the development of new minor syllable prefixes from compounded roots.

In true minor syllables, though, another process is in progress. The vocalism in such syllables is now completely predictable; thus, the /ə/ vowels in minor syllables are analyzed here as epenthetic. However, in certain environments, epenthesis variably fails to occur. Thus, instead of [ʔəkái] ‘hips’, our consultant often produced [ʔkái]. Such preglottalized productions could easily develop into fortis [kʰái] or geminate stops [kːái], which could be reanalyzed by learners as aspirates [kʰái]. Since the prefix [ʔə ~ ʔ-] has an unpredictable distribution, such a change would lead to what would appear to be, retrospectively, an unconditioned change in manner. Matisoff (2003:87ff) has suggested that many of the apparently sporadic manner correspondences among Tibeto-Burman onsets should be attributed to the effects of lexical prefixes that have collapsed into the following major syllable onset. Because the distribution of Tibeto-Burman lexical prefixes seems to be heavily determined by analogical processes, but seldom shows deterministic grammatical conditioning, the presence of a prefix often has to be inferred from the effect its existence is meant to explain. While this presents a methodological problem (invoking a hidden cause), cases like Sorbung give additional empirical support to the idea that semi-productive lexical prefixes can give rise to new laryngeal distinctions in onsets.

2. Syllable Structure and Prosody

Sorbung, like many other Tibeto-Burman languages (indeed, many Southeast Asian languages generally), tends to have sesquisyllabic word stems. That is, word stems often consist of a minor-syllable “prefix” (which is sometimes a morphological prefix) and a major syllable “root”. This pattern is consistent with a general tendency towards right-headed (iambic) prosodic constituents. It is also essential to understanding the distribution to tone (which is only contrastive on major syllables) and the general syllable-structure constraints in the language.

2.1. Stress

Stress in Sorbung has the following correlates:

1. **Duration**: Unstressed vowels are never long; underlying long vowels are shorted in unstressed syllables.
2. **Amplitude**: Stressed syllables are louder than unstressed syllables.
3. **Pitch**: Pitch excursions are more pronounced in stressed syllables.
All of these correlates point to a general iambic pattern of stress. This is not to say, however, that Sorbung stress is predictable without reference to morphological structure. The following general principles seem to hold:

1. Minor syllables are never stressed. This may be due to the fact that the vowels in these syllables are epenthetic.
2. The last root syllable in a compound stem, not counting derivational suffixes, is stressed.
3. Two consecutive unstressed syllables are not tolerated.
4. Stress assignment is cyclic. ‘Underarm hair,’ from the compound cuub laa (cuup ‘breast’ plus laa ‘crotch’) plus mii ‘hair’ is cuub laa mii rather than *cuublaˈmii.
5. Suffixes do not affect the stress of the base to which they are attached: ’look ‘big’, ’loog- oo ‘big-DECL’, ?’uu ‘dog’, ?’uu-e ‘dog-NOM’.
6. The members of one set of suffixes are always stressed (including the obligatory final suffixes marking mood). Another set of suffixes are always unstressed (including case suffixes).
7. Some non-lexicalized compounds, particularly verbs compounded with nominal objects, may not display stress subordination. Thus, while móò ‘fire’ is unstressed and reduced in mó-sém ‘fire-blow; blow on fire’, cuup ‘breast’ is fully stressed and not reduced in cuup-ʔíin-e ‘breast-drink-IMP; suckle!’

The following data illustrate these principles more fully. It can be seen in (3) that /ŋaa/ ‘fish’ is stressed when final or when preceded by a minor syllable, but is unstressed when it is initial:

(3)

a. ˈŋaa ‘fish’
b. ʔəJˈŋaa ‘0’ + ‘fish’
c. ʔəJˌŋaaJˈmíi ‘0’ + ‘fish’ + ‘hair/feather’ ‘scale; fin’
d. ŋaJˈmíi ‘fish’ + ‘hair/feather’ ‘flying fish’

The examples in (4-6) show that /kee/ ‘foot’ is unstressed when in it occurs penultimately (5) but is stressed before a minor syllable (6):

(4) ˈkèe ‘foot’

(5)

a. kè-ˈlúuŋ ‘foot’ + ‘print’ ‘footprint’
b. kè-ˈkíuk ‘foot’ + ‘crippled’ ‘lame’
c. kè-ˈbůu ‘foot’ + ‘great one’ ‘big toe’
d. kè-ˈsáa ‘foot’ + ‘child’ ‘little toe’

(6)

a. ˌked-moˈtőo ‘foot’ + ‘thigh’ ‘crotch’
b. ˌked-moˈrái ‘foot’ + ‘calf’ ‘calf’
c. ˌked-moˈjáa ‘foot’ + ‘palm/sole’ ‘sole’
d. ˌked-moˈjúum-ˈràa ‘foot’ + ‘digit’ + ‘fruit’ ‘toe’

In each word, one stress is more prominent than the others (specifically, it has a greater amplitude and longer duration). This is indicated here as primary stress [ˈ]. Other stressed syllables are marked as bearing secondary stress [ˌ]. By way of illustration, duration of ‘foot’ in (5a-d) is much shorter than the duration of ‘foot’ in (6a-d). This, in turn, is somewhat shorter than the duration of ‘foot’ in (4). We have not identified any
cases where the distinction between primary and secondary stress is contrastive. However, its patterning does suggest that both Sorbung feet and prosodic words are right-headed.

2.2. Word Structure
Barring loanwords, non-compound stems in Sorbung are always monosyllabic or sesquisyllabic. Monosyllabic stems consist of a single major syllable. Sesquisyllabic stems consist of a minor syllable followed by a major syllable. Underlyingly, we believe that all Sorbung roots have a single vowel and that the predictable schwa-vocalism in minor syllables is the result of epenthesis. However, the system is easier to describe if it is approached from the surface.

2.3. Minor syllables
With one exception, the minor syllables in Sorbung have the shape Cə, where C can be any of the onsets allowed in major syllables except for /p/, /t/, /w/, /j/, and /ʃ/. The exception to this pattern is /ʔəN/, where N is a nasal that shares the same place of articulation as the following consonant. In all instances of minor syllables, [ə] is the only vowel to appear (though it is possible that the quality of these vowel is affected by coarticulation with following vowels). The complete inventory is given in the following table:

**Table 13: Minor syllables in Sorbung.**

<table>
<thead>
<tr>
<th>minor syllables</th>
<th>meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>bə</td>
<td>bərii ‘snake’</td>
</tr>
<tr>
<td></td>
<td>bəkii ‘parrot’</td>
</tr>
<tr>
<td>pə</td>
<td>pəlái ‘navel’</td>
</tr>
<tr>
<td>pʰə</td>
<td>pʰənaat ‘grind’</td>
</tr>
<tr>
<td>pʰəláa</td>
<td>pʰəláa ‘wing’</td>
</tr>
<tr>
<td>mə</td>
<td>mətir ‘shrew’</td>
</tr>
<tr>
<td>məmit</td>
<td>məmit ‘extinguish’</td>
</tr>
<tr>
<td>sə</td>
<td>səloo ‘buffalo’</td>
</tr>
<tr>
<td>səkūu</td>
<td>səkūu ‘porcupine’</td>
</tr>
<tr>
<td>rə</td>
<td>rəŋáa ‘five’</td>
</tr>
<tr>
<td>rəŋaad</td>
<td>rəŋaad ‘shoulder’</td>
</tr>
<tr>
<td>lə</td>
<td>ləʃùa ‘put’</td>
</tr>
<tr>
<td>təN</td>
<td>təŋguáp ‘headdress’</td>
</tr>
<tr>
<td>təmbuelàm</td>
<td>təmbuelàm ‘river’</td>
</tr>
<tr>
<td>ʔəN</td>
<td>ʔənt’hée ‘awake’</td>
</tr>
</tbody>
</table>

With one exception, the minor syllables in Sorbung have the shape Cə, where C can be any of the onsets allowed in major syllables except for /p/, /t/, /w/, /j/, and /ʃ/. The exception to this pattern is /ʔəN/, where N is a nasal that shares the same place of articulation as the following consonant. In all instances of minor syllables, [ə] is the only vowel to appear (though it is possible that the quality of these vowel is affected by coarticulation with following vowels). The complete inventory is given in the following table:
In actual production, each of the Cøy minor syllables has a variant without a schwa. Thus, /s-mùk/ ‘cattle’ can be realized either as [samùk] or [sùmûk] and /ʔ-kʰaaw/ ‘grasshopper’ can be realized either as [ʔakʰaaw] or [ʔkʰaaw]. The variants with initial consonant clusters occur more frequently when there is a sharp increase in sonority between the two consonants.

Problematically, our database contains minor syllables with /b/ but not with any other voiced stop (in spite of the fact that /d/ appears as the onset of major syllables). We believe this to be an accidental gap. Also, aspirated-stop minor syllables have a restricted distribution, occurring only before sonorant onsets. However, in this environment they contrast with their unaspirated counterparts, at least on the surface:

(7) a. kʰəràan ‘spider’ kəraak ‘voice’
   b. pʰəláa ‘wash’ pəlái ‘snake’
   b. tʰərii ‘boundary’ təràt ‘tie’

We propose that this pattern actually results from a morphological cause: the aspirated stop minor syllables occur only in monomorphemic stems and are the result of epenthesis into underlying stop-sonorant clusters. The minor syllables with unaspirated stops occur in both monomorphemic stems, as in (7) and bimorphemic stems where the minor syllable is a lexical prefix. Underlying, we posit that monomorphemic stems like those in (7) have forms as in (8) while bimorphic stems have forms like those in (9):

(8) a. /kʰràan/ ‘spider’ /kraak/ ‘voice’
   b. /pʰláa/ ‘wash’ /plái/ ‘snake’
   b. /tʰrii/ ‘boundary’ /trát/ ‘tie’
(9) a. /m-Mít/ ‘extinguish’ /t-Mít/ ‘bar’
   b. /r-ʃáa/ ‘five’ /l-ʃáa/ ‘put’
   b. /s-loo/ ‘buffalo’ /ŋ-náar/ ‘tie’

This accounts for the freer distribution of unaspirated-stop minor syllables versus aspirated-stop minor syllables and for the greater frequencies of schwa-less variants stems in the aspirated-stop minor syllable group.

In some cases, there is compelling evidence that minor syllables are distinct morphological units; in other cases, the data suggest that minor syllables are simply part of a root. Evidence for morphological independence includes the following:

1. A root may occur with or without a minor syllable, depending on morphological or syntactic context.
2. The same root may occur with different minor syllables in related lexical items.
3. A cluster of stems containing the same minor syllable share a component or meaning or belong to the same semantic field.
4. The minor syllable is transparently related to an independent lexical item.
According to these criteria, at least the following minor syllables should be considered to be prefixes, rather than parts of the root:

(10) **bə-** fossilized animal prefix
    a. bərīi  ‘snake’
    b. bəkīi  ‘parrot’

(11) **cə-** ‘water’ prefix (*cʉ́ʉ ‘water’)
    a. cəkāaŋ  ‘drought’
    b. cəlòk  ‘flood’
    c. cəluáŋ  ‘flow’

(12) **kə-** lexical prefix
    a. kəniiŋ  ‘two’ (*semníi ‘twenty’)
    b. kərúuk  ‘six’

(13) **ʔə-** lexical prefix
    a. ʔərúu  ‘bone’
    b. ʔəcʉ́ʉ  ‘egg’ (*ʔəcʉ́ʉ ’lay egg’)
    c. ʔəŋaa  ‘fish’ (*ŋàmíi ‘flying fish’)
    d. ʔəmíi  ‘hair; fur’ (*mòrmíi ‘facial hair’)

(14) **mə-** body-part prefix (*PTB *mi ‘human’?)
    a. məsàa  ‘body’
    b. mətóo  ‘lap; thigh’
    c. mətín  ‘nail; claw’

(15) **mə-** ‘mouth’ prefix (*mor ‘mouth’?)
    a. məlit  ‘vomit’
    b. məjúup  ‘kiss’
    c. məcàap  ‘make cry’ (*càap ‘hurt’)
    d. məkʰáa  ‘jaw; chin’

(16) **mə-** fossilized stative prefix
    a. mənée  ‘be soft’
    b. məkʰái  ‘be crooked’
    c. məsáaŋ  ‘be high’
    d. mənèm  ‘be low’

(17) **mə-** productive causative prefix (*mii ‘give’?)
    a. mətʰée  ‘wake up (v.t.)’ (*ʔənthée ‘wake up (v.i.)’)
    b. məcàap  ‘make cry’ (*càap ‘hurt’)
    c. məʔóo  ‘make bite’ (*ʔóo ‘bite’)

(18) **ʔəNh-** valence-decreasing prefix
    a. ʔənthée  ‘wake up (v.i.)’
    b. ʔəncíi  ‘fear (v.i.)’
    c. ʔəndía  ‘fall (v.i.)’
(19)  **lə-**  ‘hand/arm’ prefix (< PTB *l(y)ak ‘hand/arm’?)
   a.  *ləkʰàa* ‘shoulder’
   b.  *ləʃùa* ‘put’
   c.  *ləkium* ‘bar’

(20)  **sə-**  ‘animal’ prefix (< *sa* ‘animal’)
   a.  *səloo* ‘buffalo’
   b.  *səriám* ‘mithun’
   c.  *səkíi* ‘deer’
   d.  *səkúu* ‘porcupine’

None of the aspirated stop-minor syllables belong in this set, consistent with the hypothesis that the aspirated stops are morphologically part of the root.

Minor syllables are subject to an alternation that does not appear in major syllables. In compounds, nasal codas do not assimilate in place to following obstruents:

(21)  a.  [i<sub>np</sub>ú] ‘host (house owner)’
   b.  [pua<sub>nkʰóoŋnaa</sub>] ‘loom’
   c.  [so<sub>m</sub>úum] ‘thirty’
   d.  [ci<sub>t</sub>òon] ‘hill’

The nasal of the minor syllables [ʔəN] and [təN] assimilates in place to the following segment. The following examples show this for [ʔəN], which appears as a possessive prefix on kinship terms and as a stative/valency-reducing prefix on verbs:

(22)  a.  [ʔəmbíi] ‘paternal grandfather (of ego)’
   b.  [ʔəmbúu] ‘maternal grandfather (of ego)’
   c.  [ʔəntʰée] ‘awake’
   d.  [ʔəntʰiàk] ‘green’
   e.  [ʔəndía] ‘fall’
   f.  [ʔənnuu] ‘mother (of ego)’
   g.  [ʔənguu] ‘child’
   h.  [ʔəŋkʰau] ‘fish species’

Similarly, the nasal in [təN], for which no general function is discernable, shares the place of articulation with the subsequent onset.

(23)  a.  [təmbihám] ‘left hand’
   b.  [təmbáak] ‘valley’
   c.  [təŋjük] ‘pestle’
   d.  [təŋguáp] ‘headdress’
   e.  [təŋgguoŋ] ‘ant-eater’
   f.  [təŋkʰai] ‘half’

---

28 This form is probably borrowed from Meithei (see Chelliah 1997).
Before palatals, as in (23c) ‘pestle’, the nasal becomes coronal. This may be due to a general restriction against palatal nasals in Sorbung. Another interpretation of the evidence is that nasal is underlingly /n/. However, we suggest that the nasal is underlingly unspecified for place, for the following reasons:

1. Throughout the corpus, nasal codas generally do not assimilate in place to following obstruents; the different, assimilating behavior of [ʔəN] and [təN] can be explained by the “need” for the final nasals to acquire place features.

2. No where in the data does one of these formatives not occur before an obstruent from which it could acquire place features.

This position is subject to verification, pending the availability of further data.

2.4. Major syllable types

Major syllables in Sorbung may be either open or closed and may have either long or short nuclei. Length is only contrastive in closed syllables and only when syllables are stressed. Unstressed syllables always surface with short nuclei and underlying long vowels are shortened when they occur in weak positions. Stressed syllables, on the other hand, are always closed, have long nuclei, or both.

Table 14: Sorbung major syllable types.

<table>
<thead>
<tr>
<th>Stressed Syllables</th>
<th>Unstressed Syllables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Syllables</td>
<td>CVV</td>
</tr>
<tr>
<td>Closed Syllables</td>
<td>CVC, CVVC</td>
</tr>
</tbody>
</table>

Long nuclei may be either long monophthongs or diphthongs. There appears to be no quantitative (length) contrast among diphthongs. As discussed in section 0 below, monophthongs and rising-sonority diphthongs occur in closed syllables relatively freely. However, (phonological) falling sonority diphthongs do not occur in closed syllables. Interactions between constraints on stress assignment and quantity produce length alternations, which will be discussed at greater length in section 0 below.

2.5. Tone

Tone is contrastive in Sorbung, but the lexical load born by tonal contrasts is relatively low and the phonetic distance between tonal categories is relatively small. Tone interacts with intonation to such an extent that it was sometimes impossible, working from recordings, to determine the tones of a lexical item with complete certainty. Furthermore, all statements about the tonal inventory of Sorbung remain tentative until the tone sandhi system of Sorbung is worked out in greater detail.

2.5.1. Inventory

Sorbung has three contrasting tones, which we will refer to as H, L, and M. These are indicated in our transcriptions by diacritics on the first vowel of a rhyme: acute (x̂), grave (x̂̄), or no diacritic (x), for H, L, and M, respectively. Minimal and near-minimal sets illustrating these contrasts are given in Table 15 below:
Table 15: Example of the three contrastive tones of Sorbung.

<table>
<thead>
<tr>
<th>H</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>sáa</td>
<td>‘hot’</td>
<td>sào</td>
</tr>
<tr>
<td>móo</td>
<td>‘fire’</td>
<td>mòo</td>
</tr>
<tr>
<td>tʰóo</td>
<td>‘hear’</td>
<td>kʰóo</td>
</tr>
<tr>
<td>fì</td>
<td>‘rain cover’</td>
<td>fì</td>
</tr>
<tr>
<td>wàŋ</td>
<td>‘fly (v.)’</td>
<td>wàm</td>
</tr>
<tr>
<td>rée</td>
<td>‘war’</td>
<td>née</td>
</tr>
<tr>
<td>nàap</td>
<td>‘stick (v.)’</td>
<td>nàap</td>
</tr>
<tr>
<td>nàkʰúak</td>
<td>‘deaf person’</td>
<td>nàkʰúak</td>
</tr>
</tbody>
</table>

The labels given here should not be taken as literal phonetic realities: H is not simply a high-pitched tone and L is not simply a low-pitched tone. The tones have characteristic pitch contours and also differ from one another in voice quality. The H tone rises to a peak about two-thirds through its duration before dropping slightly. It often has a tense voice quality. The L tone falls through its duration and sometimes starts higher in pitch than the terminus of a preceding L or M tone. L tone syllables are usually produced with lax or breathy voice quality. The pitch of M tone syllables falls gently before rising again. The voice quality is usually modal.

The contrastive load of tone in Sorbung is relatively low. This may be responsible for some of the difficulty we encountered in producing a complete analysis of the tone system. Our consultant was aware that there were tonal contrasts in Sorbung, and produced a number of minimal sets with little prompting (e.g. ‘rain cover’, ‘sand’, ‘crab’, ‘star’), but found it difficult to say whether two items were similar or different in tone.
2.5.2. Distribution
Tonal contrasts in Sorbung are subject to two major restrictions. First, tonal contrasts only occur on major syllables. The pitch of minor syllables is predictable from the pitch of surrounding major syllables. Second, there is only a two-way tonal contrast in stopped syllables (syllables with a stop coda) but a three-way contrast in major syllables of other types. Neither of these restrictions is unusual in the area.

2.5.3. Alternations
Given the current state of knowledge about Sorbung, it is clear that the language has a robust system of tonal alternations. However, the data are not sufficient to paint a clear and complete picture of these alternations. What follows, then, is only an introduction to some of the most obvious alternations.

Sorbung displays dissimilation of high tones. In smooth syllables, underlying H become M after H:
As can be seen from (24a-c) and (25a-c), the morphemes meaning ‘water; liquid’ and ‘bone’ are realized with a H tone word-initially and when preceded by M or L. However, as shown by (24d-e) and (25d-f), they are realized with a M tone when preceded by a H tone.

This process interacts with another alternation. Stopped syllables with an underlying H tone are realized as L except word-finally. Thus, /kʉ́t/ ‘hand; arm’ is realized as [kʉ̀t] when it occurs finally but as [-kʉ̀t-] when it appears elsewhere:

As shown by example (27c), this process counter-balances the H → M / H___ process described above. Were this not the case, we would expect *[cùb-cʉ́ʉ], with a H tone on the second syllable.
3. Onsets

3.1. Inventory

The onset inventory of Sorbung includes plosives, fricatives, nasals, trills, and approximates. Sorbung has five contrasting places of articulation: labial, coronal, palatal, velar, and glottal. Plosives appear at all of these places and display a three-way distinction among voiceless, aspirated, and voiced. In word-initial position, the /b/-/p/ and /d/-/t/ contrasts are retained but the /g/-/k/ contrasts is neutralized. Neither voicing nor aspiration is contrastive at the palatal place. There is no voiced-voiceless contrast among fricatives and the only voiced fricative is [v], which is a conditioned variant of /w/. There are labial, coronal, and velar nasals but no palatal nasal. The inventory also includes the trill /r/ ([ɾ]) and the approximates /l/, /w/, and /y/. The inventory is summarized in Table 16 below.

Table 16: Sorbung onsets. Onsets in parenthesis only occur as predictable variants of other underlying sounds.

<table>
<thead>
<tr>
<th>LABIAL</th>
<th>CORONAL</th>
<th>PALATAL</th>
<th>VELAR</th>
<th>GLOTTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASAL</td>
<td>m</td>
<td>n</td>
<td>η</td>
<td></td>
</tr>
<tr>
<td>PLOSIVE</td>
<td>p</td>
<td>t</td>
<td>c</td>
<td>k</td>
</tr>
<tr>
<td></td>
<td>pʰ</td>
<td>tʰ</td>
<td></td>
<td>kʰ</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td></td>
<td>g</td>
</tr>
<tr>
<td>FRICATIVE</td>
<td>(v)</td>
<td>s</td>
<td>f</td>
<td>h</td>
</tr>
<tr>
<td>TRILL</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPROXIMATES</td>
<td>l</td>
<td>j</td>
<td>w</td>
<td></td>
</tr>
</tbody>
</table>

The language variably allows a few consonant clusters, comprising of /pl/ /pʰl/ /tr/ /kʰɾ/ and /kl/, (see section 0 above).

3.1.1. Examples

Table 17 provides examples of each of the onsets.

Table 17: Examples of each onset.

<table>
<thead>
<tr>
<th>/m/</th>
<th>/n/</th>
<th>/ŋ/</th>
<th>/p/</th>
<th>/t/</th>
<th>/k/</th>
<th>/s/</th>
<th>/ʔ/</th>
<th>/pʰ/</th>
<th>/tʰ/</th>
<th>/kʰ/</th>
<th>/b/</th>
<th>/d/</th>
<th>/s/</th>
</tr>
</thead>
<tbody>
<tr>
<td>mai</td>
<td>náa</td>
<td>ŋaa</td>
<td>pai</td>
<td>taa</td>
<td>kaa</td>
<td>sàa</td>
<td>ʔaa</td>
<td>pʰaaglàaŋ</td>
<td>tʰaaŋ</td>
<td>kʰaa</td>
<td>ʔəbák</td>
<td>dài</td>
<td>sàa</td>
</tr>
<tr>
<td>‘face’</td>
<td>‘hurt’</td>
<td>‘fish’</td>
<td>‘man’</td>
<td>‘old’</td>
<td>‘that’</td>
<td>‘cry’</td>
<td>‘fowl’</td>
<td>‘wall’</td>
<td>‘dry’</td>
<td>‘bitter’</td>
<td>‘bat’</td>
<td>‘cold’</td>
<td>‘animal’</td>
</tr>
<tr>
<td>miit</td>
<td>nììŋ</td>
<td>nìia</td>
<td>pii</td>
<td>tìir</td>
<td>ñáki</td>
<td>mòcii</td>
<td>ñiin</td>
<td>pʰiit</td>
<td>tìii</td>
<td>ñákìi</td>
<td>buum</td>
<td>diuu</td>
<td>luisip</td>
</tr>
<tr>
<td>mùu</td>
<td>nèè</td>
<td>ɲèe</td>
<td>mìi</td>
<td>kèe</td>
<td>ñègòo</td>
<td>cèm</td>
<td>ʔìin</td>
<td>ñəpʰʉ̀t</td>
<td>tʰèe</td>
<td>kʰoo</td>
<td>ʔəbʉ́ʉ</td>
<td>mədée</td>
<td>ʔosóo</td>
</tr>
<tr>
<td>‘see’</td>
<td>‘small’</td>
<td>‘white’</td>
<td>‘be born’</td>
<td>‘leg’</td>
<td>‘river’</td>
<td>‘knife’</td>
<td>‘sleep’</td>
<td>‘breath’</td>
<td>‘bow’</td>
<td>‘bee’</td>
<td>‘mole’</td>
<td>‘be born’</td>
<td>‘spear’</td>
</tr>
</tbody>
</table>
Two of the onsets have visibly limited distributions.

- /ʃ/- never occurs before /ee/, /e/, or /aa/.
- /w/- only occurs before /a/ and /aa/.

While it would seem desirable to collapse these onsets with other phonemes, they are both in contrastive distribution with all of the possible candidates.

A more interesting case is the relationship between /g/ and /k/. Both of these occur in the onsets of major syllables following vowel-final minor syllables, establishing them as distinct phonemes:

(28) a. təgók ‘pot’
    b. cəgòo ‘river’

(29) a. səkíi ‘deer’
    b. məkee ‘kidney’
    c. kap kʰat ‘length from thumb to finger’
    d. cəkáap ‘tongs’
    e. səkúan ‘horse’
    f. ʔəkór ‘peel’

However, while /k/ can occur word-initially (30), and word-externally after another major syllable (31), /g/ does not:

(30) a. kʉ́t ‘arm’
    b. kèe ‘foot’
    c. kuum ‘year’
    d. koo ‘do’

(31) a. pakùu ‘younger paternal uncle’
    b. kəkiu ‘crippled, lame, handicapped’

In this respect, /g/ is unlike the other voiced stops, /b/ and /d/. However, like then (and unlike the voiceless stops) /g/ can occur after nasal-final minor syllables:

(32) a. ʔəŋguu ‘baby, child’
    b. təŋguáp ‘hat’
    c. təŋgoon ‘anteater’
A reviewer suggests that this might be a case of free [g ~ k] variation, as is found Jingpho. This is possible. However, within our corpus there are no clear instances of [g] varying with [k] in the same lexical item without a clear conditioning environment (see 0 below).

3.2. Alternations
As discussed above, CəC sequences vary with CC sequences in the same lexical item. That is to say, the epenthetic process that breaks up underlying initial consonant clusters to produce minor syllables is variable. The [ə] appears to be the only vowel permitted in the minor syllables. We note three types of cases where epenthesis sometimes fails to occur, depending crucially on the nature of the two initial consonants. First, in /s/+sonorant clusters, epenthesis variably fails yielding, e.g. [sə.m…] varying with [sm…], as in ‘cattle’:

(33)  
[səmûk] ~ [smûk] ‘cattle’

In this example, as in other cases with /s/+sonorant clusters, the /sm/ cluster is tautomorphemic (/s+muk/ ‘animal prefix’ + ‘cattle’). This variation is apparently sensitive to word length and speech rate. For example, /smûk/ ‘cattle’ was usually realized with epenthesis, but /smukpaasaa/ ‘bull’ was usually realized without epenthesis.

Most of the obstruent-sonorant onset clusters in Sorbung contain stops. These clusters consist of voiceless labial or velar stops followed by /l/ or /r/:

(34)  
b. [pəlaaj] ~ [plaaj] ‘umbilical cord’

c. [pʰeláa] ~ [pʰláa] ‘wing (of a bird)’

d. [kʰəråan] ~ [kʰràan] ‘spider’

In none of these cases is there convincing evidence that the minor syllable is an independent morphological unit. It is notable that while we have recorded instances of clusters with /p/ and /pʰ/, we have noted no clusters with /b/ even though the prefix /bJ/ occurs before the root /ríi/. This leads us to believe that epenthesis between morphemes is more favored that epenthesis into morphemes.

The final, and probably most theoretically interesting, cluster of environments in which epenthesis sometimes fails to occur is between a glottal stop and a following consonant:

(35)  
a. [ʔakʰau] ~ [ʔkʰau] ‘grasshopper’

b. [ʔakʰúan] ~ [ʔkʰúan] ‘voice’

c. [ʔakái] ~ [ʔkái] ‘hips’

d. [ʔakʰúk] ~ [ʔkʰúk] ‘knee’

e. [ʔərìk] ~ [ʔrík] ‘louse’

f. [ʔəpáat] ~ [ʔpáat] ‘soft, mushy’

g. [ʔəŋaa] ~ [ʔŋaa] ‘fish’

As with the /s/+sonorant clusters, the /ʔ/+consonant clusters are all tautomorphemic. There are a number of different prefixes in Sorbung which are underlyingly /ʔ-/i, usually with a following epenthetic schwa. However, all of them seem to pattern similarly with regard to
epenthesis. When there is no epenthetic schwa, the glottal stop is realized as a faint glottal release (before stops), increased duration, or preglottalization (on a following sonorant). The variation does not seem to be constrained by the manner of the second consonant and seems to be a function mostly of speech rate and higher-level prosodic influences.

There are also cases, in Sorbung, where the first mora of a diphthong is devocalized and syllabified as an onset. The best examples of this involve the proximal demonstrative enclitic, /ùá/. When the syllable to which /ùá/ cliticizes ends in a consonant, the clitic is realized as [ùá]:

(36) a. [cèmùá] ‘this knife’
   b. [ʔəʃímùá] ‘this needle’
   c. [təgóguá] ‘this pot’
   d. [təŋguábuá] ‘this headdress’
   e. [təŋguáðùá] ‘this bowl’

If the syllable to which it cliticizes ends in a vowel other than /a/, /ùá/ is usually realized as [wá]:

(37) a. [tʰèewá] ‘this bow’
   b. [lèewá] ‘this medicine’
   c. [réewá] ‘this war’
   d. [ròowá] ‘this axe’
   e. [ʔəsóowá] ‘this spear’

After high vowels, though, /ùá/ varies between [wá] and [vá]:

(38) a. [məʃíiwá ~ məʃíivá] ‘this necklace’
   b. [rʉʉwá ~ rʉʉvá] ‘this rope’
   c. [meciiwá ~ meciivá] ‘this necklace’

Finally, and most curiously, after /a/, /ùá/ varies between [vá] and [βá]:

(39) a. [bélcàavá] ‘this spade’
   b. [iinkʰaaβá ~ iinkʰaavá] ‘this door’
   c. [laavá] ‘this song’

It is not clear to us what the phonetic basis for this latter pattern is.29

29 A reviewer inquires about the fate of the initial low tone in /ùá/. When the /u/ is realized as a vowel, rather than a glide, it is produced with a distinct low tone and the following /a/ is produced with a high tone. When the /u/ is devocalized to [w], [v], etc., the low tone disappears so that in [məʃíiwá], the last two syllables are realized as high tones with no intervening low. This suggests that the low tone may be a default inserted on toneless TBUs.
4. Rhymes

4.1. Inventory

We analyze Sorbung as having five short-long pairs of vowel phonemes in major syllables:

\[
\begin{align*}
/i/ & /i/ /u\ddot{u}/ /u/ /u\dot{u}/ /u/
\end{align*}
\]

\[
\begin{align*}
/e/ & /e/ /o\ddot{u}/ /o/ /o/
\end{align*}
\]

\[
\begin{align*}
/aa/ & /a/
\end{align*}
\]

Phonetically, the short-long distinction is realized through a number of different cues other than duration, including quality and dynamic quality. In general, long vowels have a more peripheral quality and short vowels a more centralized quality. For the high vowels, duration is the primary cue to length. The long mid-vowels /ee/ and /oo/ are phonetically the diphthongs [ej] and [ow] while their short counterparts are realized as the lower monophthongs [ɛ] and [ɔ]. The low vowels /aa/ and /a/ are phonetically [aː] and [ɐ]. A summary of the phonetic values of the vowel phonemes is given below:

\[
\begin{align*}
/i/i &: /i/ /u\ddot{u}/ /u/ /u\dot{u}/ \\
/e/e &: /e/ /o\ddot{u}/ /o/ /o/
\end{align*}
\]

We readily acknowledge that it would be possible to reanalyze this system in terms other than quantity (vowel length). The similar vowel systems of Northern Chin languages, for example, were analyzed by Button (2009) in purely qualitative terms. Our analysis provides a number of advantages. It allows us to easily characterize the stress-conditioned vowel alternations as alternations in a single phonological parameter (length), even though different phonetic parameters are involved depending on the vowel. By treating /ee/ and /oo/ as long vowels rather than phonemic diphthongs, we save the generalization that codas do not appear after phonemic falling-sonority diphthongs (diphthongs with a phonemic off-glide occupying the coda position). It is not simply the case, though, that analyzing the Sorbung vowel system into short-long pairs allows us to better capture the phonological patterns in the language than a quality-based analysis. It is also conceptually simpler and requires us to invoke fewer phonological parameters in order to characterize all of the contrasts in the system.

Aside from vowel length, one other aspect of our analysis of the vowels calls for comment. Although they are contrastive on the surface, it is possible to eliminate /u\ddot{u}/ and /u/ from the underlying vowel inventory if some abstractness in underlying representation is allowed. In stressed syllables, short [u] only occurs before coronal codas (/n/ and /t/) and thus occurs in complementary distributions with [u], which never occurs in these environments. In isolation from other facts, [u] could be reduced to an allophone of /u/. We treat it as distinct because [u] can also surface as a result of stress-conditioned length alternations with [u\dot{u}]. Compare, for example, cíu ‘water’ and cu-rée ‘thirsty (water-thirst)’. Thus, the phonemic status of /u/ is dependent on the phonemic status of /u\ddot{u}/. As noted in Section 0 (above), Sorbung -u\ddot{u} corresponds to PKC *-uy and probably reflects earlier *-ui. As will be seen below, it also behaves like the falling-sonority diphthongs /ai/ and /au/ in that it never occurs with a coda. For this reason, it is tempting to consider [u\ddot{u}]

to be the realization of underlying /ui/. This would not be problematic, apart from the
degree of abstraction involved, if there were not a number of lexical items in Sorbung with
surface [ui]. All of these appear to be loanwords from Meithei or Ukhrul Tangkhul:

(40) **LOANS FROM UKHRUL TANGKHUL**

a. ʃúi  
   ‘tempt’

b. lúi  
   ‘finish’

c. OCK'TUI  
   ‘world’

(41) **LOAN FROM MEITHEI**

cəkui  
‘dance’

In principle, there is nothing to stop us from saying that there is a phonological
process mapping /ui/ to [uu] that only affects the lexical stratum containing native
vocabulary. Claims of the same type have been made for other languages (Itô & Mester
1995; Itô, Mester, & Padgett 1999). However, in the interest of descriptive neutrality, we
have retained the more concrete analysis while highlighting some of its shortcomings.

Excluding a few loanwords which have final /l/, Sorbung allows major syllables to
have one of seven coda consonants:

\[
\begin{array}{llll}
/p/ & /t/ & /k/ \\
/m/ & /n/ & /ŋ/ \\
/r/ & 
\end{array}
\]

With a few exceptions, these can occur after the long and short vowels and after the
rising-sonority diphthongs /ia/, /ua/, and /iu/. They do not occur after the falling-sonority
diphthongs, /ai/ and /au/, and after /uu/. **Table 18** shows which of the combinatorial
possibilities between nuclei and rhymes are attested in our corpus. Examples are given in
the subsequent tables.
Table 18: Sorbung rhymes.

<table>
<thead>
<tr>
<th>0</th>
<th>–r</th>
<th>–m</th>
<th>–n</th>
<th>–ŋ</th>
<th>–p</th>
<th>–t</th>
<th>–k</th>
</tr>
</thead>
<tbody>
<tr>
<td>[a]</td>
<td>ar</td>
<td>am</td>
<td>an</td>
<td>aŋ</td>
<td>ap</td>
<td>at</td>
<td>ak</td>
</tr>
<tr>
<td>aa</td>
<td>aar</td>
<td>aam</td>
<td>aan</td>
<td>aŋa</td>
<td>aap</td>
<td>aat</td>
<td>aak</td>
</tr>
<tr>
<td>[e]</td>
<td>em</td>
<td>en</td>
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<td>et</td>
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<td>eŋ</td>
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<td>[o]</td>
<td>or</td>
<td>om</td>
<td>on</td>
<td>oŋ</td>
<td>oop</td>
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<td></td>
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<tr>
<td>[i]</td>
<td>ir</td>
<td>im</td>
<td>in</td>
<td>iŋ</td>
<td>ip</td>
<td>it</td>
<td>ik</td>
</tr>
<tr>
<td>ii</td>
<td>iin</td>
<td>iin</td>
<td>iŋ</td>
<td>iip</td>
<td>iit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[u]</td>
<td>ur</td>
<td>um</td>
<td>[un]</td>
<td>uŋ</td>
<td>[up]</td>
<td>[ut]</td>
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</tr>
<tr>
<td>uu</td>
<td>uur</td>
<td>uum</td>
<td>uuŋ</td>
<td>uup</td>
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<tr>
<td>au</td>
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<td></td>
</tr>
<tr>
<td>ai</td>
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<tr>
<td>ia</td>
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<td>iŋ</td>
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<td>iat</td>
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<td>ia</td>
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<td></td>
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<td>uar</td>
<td>uam</td>
<td>uan</td>
<td>uaŋ</td>
<td>uap</td>
<td>uat</td>
<td>uak</td>
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<tr>
<td>iu</td>
<td>ium</td>
<td>ium</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 19: Examples of Sorbung open and r-final rhymes.

<table>
<thead>
<tr>
<th>0</th>
<th>–r</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>cinʃiipá</td>
<td>‘ant’</td>
</tr>
<tr>
<td>aa</td>
<td>ʔaa</td>
<td>‘fowl’</td>
</tr>
<tr>
<td>e</td>
<td>kèmíit</td>
<td>‘ankle’</td>
</tr>
<tr>
<td>ee</td>
<td>məlée</td>
<td>‘tongue’</td>
</tr>
<tr>
<td>o</td>
<td>tətrò</td>
<td>‘comb’</td>
</tr>
<tr>
<td>oo</td>
<td>tətrò</td>
<td>‘comb’</td>
</tr>
<tr>
<td>i</td>
<td>tʰiï</td>
<td>‘die’</td>
</tr>
<tr>
<td>u</td>
<td>lukaŋ</td>
<td>‘head’</td>
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<td>uu</td>
<td>mɔjiũu</td>
<td>‘mouse’</td>
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<tr>
<td>uu</td>
<td>habũu</td>
<td>‘molar’</td>
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<tr>
<td>au</td>
<td>jau</td>
<td>‘sheep’</td>
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<td>ai</td>
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<td>‘face’</td>
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<td>ua</td>
<td>kə̀ʃuà</td>
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<td>iu</td>
<td>ciu</td>
<td>‘dig’</td>
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<tr>
<td>ʔəhúr</td>
<td>‘frost’</td>
<td></td>
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<tr>
<td>ʔəthárx</td>
<td>‘new’</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>ʔəhúr</td>
<td>‘frost’</td>
<td></td>
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<tr>
<td>jìùur</td>
<td>‘nation’</td>
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</table>
Table 20: Examples of Sorbung nasal-final rhymes.

-\(m\) | -\(n\) | -\(ŋ\)
---|---|---
\(a\) | hambûu | ‘tiger’ | wàn | ‘stomach’ | wàŋ | ‘fly (v.)’
\(aa\) | sôrâam | ‘otter’ | laan | ‘err’ | lukaay | ‘head’
\(e\) | lên | ‘close’ | sen | ‘clear’
\(ee\) |
\(o\) | som | ‘ten’ | ðità kʰôn | ‘my village’ | cóŋ | ‘speak’
\(oo\) | mōhûtoon | ‘window’ | jooŋ | ‘monkey’
\(i\) | ðònim | ‘shadow’ | mòtin | ‘nail’ | mahuŋ | ‘freckle’
\(ii\) | ðìin | ‘drink’ | jìŋ | ‘dark’
\(u\) | kûmpʰèk | ‘duck’ | kun | ‘straight’ | molàŋ | ‘heart’
\(uu\) | kʰuam | ‘sweet’ | jûuŋ | ‘cook’
\(ia\) | sôriám | ‘mithun’ | mòtuñliŋ | ‘eighth’
\(ua\) | mùam | ‘hold’ | puán | ‘blanket’ | cêluñ | ‘to flow’
\(iu\) | lêsium | ‘bar’

Table 21: Examples of Sorbung stop-final rhymes.

-\(p\) | -\(t\) | -\(k\)
---|---|---
\(a\) | nàpkåŋ | ‘dry mucus’ | ðìat | ‘kill’ | ðòbàk | ‘bat’
\(aa\) | naap | ‘stick (v.)’ | kʰâat | ‘one’ | nàak | ‘wait’
\(e\) | ðòrèt | ‘eight’ | mooʔék | ‘hot coal’
\(ee\) |
\(o\) | kʰòop | ‘be satisfied’ | ðòcok | ‘frog’
\(oo\) | mócîp | ‘frighten’ | mit | ‘squeeze’ | ðòrik | ‘louse’
\(i\) | lusìip | ‘top of head’ | miît | ‘eye’
\(ii\) | məjûp | ‘suck (v.)’ | kût | ‘arm’
\(u\) | məjûup | ‘kiss (v.)’ | fûuk | ‘exit’
\(uu\) | məcúap | ‘spleen’ | kʰuachusetts | ‘scratch’ | ðokʰuak | ‘brain’
\(ia\) |
\(ua\) | ðócúap | ‘spleen’ | kʰuätzlich | ‘scratch’
\(iu\) | lôkiüm | ‘bar’

4.1.2 Gaps

Two major nucleus-coda co-occurrence restrictions are found in Sorbung. The first applies to the falling-sonority-coda diphthongs. As mentioned above, phonemic falling sonority diphthongs are never followed by coda consonants. Unlike /ia/, /ua/, and /iu/ that act as nuclei with codas, /ai/ and /au/ do not permit codas because the off-glide fills the coda position. In general, complex codas are not permitted in Sorbung. /ui/ follows the same pattern even though it is found only in loanwords from Ukhrul (Standard) Tangkhul and Meithei. Similarly, no codas appear after long [ʉː], which, as discussed above, is the modern reflex of historical **-ui.
As mentioned above, the coda restriction does not apply to the long vowels /oo/ and /ee/, though phonetically they are falling-sonority [ow] and [ej]. Our analysis of [ow] and [ej] as underlying long vowels, /oo/ and /ee/, explains why they function as monophthongal nuclei instead of falling-sonority diphthongs with regard to syllable structure.

4.2. Alternations

The phonological alternations affecting Sorbung rhymes include voicing alternations in stop codas and vowel shortening in unstressed syllables.

The voicing of stop codas is predictable from the phonological environment. When the following segment in a word is a vowel or voiced consonant, the coda is voiced. Elsewhere, when word-finally and before voiceless consonants, stops are then voiceless. (46a) demonstrates the changing voicing of the coronal stop in /miit/ ‘eye’. When this stem is compounded with /mii/ to form ‘eyebrow’ (literally ‘eye hair’), the final stop is voiced as it precedes a voiced segment. However, when followed by the voiceless consonant-initial /kor/, the stop remains voiceless. Other examples in (46) further demonstrate the same pattern:

(46)

a. miit ‘eye’ mid-mii ‘eyebrow’
   mit-kor ‘eyelid’ mid-ék ‘eye sand’
   kút-kʰóom ‘handspan’

b. kʰóop ‘full’ kʰóob-maa ‘full-question’

c. kʰʉpʉ kʰʉncaaŋ ‘storm’

d. jáapee ‘many’

e. kʰupú kʰuncaŋ ‘storm’

This alternation cannot be attributed to a general process of voicing assimilation. Intervocalic voiceless stops occur frequently:

(47)

a. lukaŋ ‘head’

b. kᵉkʰuŋ ‘crippled’

c. pátáabàa ‘elder paternal uncle’

d. jáapee ‘many’

e. kʰupú kʰuncaŋ ‘storm’
The examples in (47) show that voiceless stop onsets are not subject to intervocalic voicing and therefore dismiss a general voicing assimilation rule. However, it is not clear whether the voicing alternation in Sorbung stop codas should be treated as the voicing of underlying voiceless stops before voiced segments, the devoicing of underlying voiced segments word-finally and before voiceless segments, or the “filling” of laryngeal specifications into segments underlyingly unspecified for voice. As both voiced and voiceless stops appear as onsets, intervocally or otherwise, we cannot assume all stops are either voiced or voiceless. In Kom, an Old Kuki language also spoken in Manipur which shares many traits with Sorbung, we find a similar pattern of voicing (Grierson 1903:244). Word final voiceless stops become voiced when a vocalic suffix is added (48):

(48) a. _kut_ ‘hand’ _a-kud-a_ ‘his hand on’
    b. _kaap_ ‘shoot’ _a-kaab-a_ ‘his shooting’

Like Sorbung, Kom also has examples of voiceless stops between vowels. While the available corpus of Kom data is not large enough to determine whether the alternations are identical, the similarity is suggestive.

In simple compounds consisting of two monosyllabic roots, the first syllable is consistently unstressed. If the first syllable’s vowel is short underlyingly, it will not be modified; if it is long, it will be shortened.

(49) a. _kut_ ‘hand’ _kudbiu_ ‘thumb’
    b. _cõŋ_ ‘words’ _cõŋʔəak_ ‘stutter’

(50) c. _kʰoo_ ‘bee’ _kʰociu_ ‘honey’
    d. _mii_ ‘eye’ _mitkor_ ‘eyelid’
    e. _haa_ ‘tooth’ _habuʔ_ ‘molar’
    f. _cuup_ ‘breast’ _cupcuu_ ‘milk’
    g. _tʰii_ ‘blood’ _tʰiʃuuk_ ‘bleed’
    h. _jaaŋ_ ‘penis’ _jaŋhuŋ_ ‘foreskin’
    i. _kèe_ ‘leg, ‘foot’ _keʔiit_ ‘ankle’

However, the constituent structure of compound formation alters stress and thus reduction. As expected, the vowel reduces in the unstressed position in (51b), but remains a long vowel in the stressed position in (51c). The reduction appears to only apply to instances of endocentric compounds of two simple, one-syllable roots.

(51) a. _ˈkèe_ ‘leg, foot’
    b. _ˌkè-ˈmii_ ‘leg hair’
    c. _ˌkèe-məˈjáa_ ‘footprint’

(52) a. _mə_kʰáa_ ‘jaw’
    b. _mə,kʰáa-ˈruu_ ‘jawbone’

In other complex compounds, especially those containing sesquisyllables, reduction does not apply in the same manner. (52b) displays a complex compound where the
nucleus of the head does not reduce. The length alternation follows almost entirely from the alternations in stress discussed in Section 0 above.

5. Conclusion
Leaving aside Brown’s (1837) brief word list, this study is the first introduction of Sorbung/Southern Tangkhul to the scholarly community. We have introduced some of the significant properties of this language that are likely to be of interest to synchronic theorists, typologists, and comparativists. At the same time, a great deal of work remains to be done. Because our goals in this paper were descriptive, we have not ventured to provide a theoretical rationale for the patterns and alternations that we have reported. We have only ventured far enough into matters diachronic to promote our position that Sorbung is closer to Kuki-Chin than to Tangkhulic and that its phonology should be seen in this perspective. A detailed working-out of both the theoretical implications of the synchronous alternations in Sorbung phonology—cyclic stress assignment, opaque tone sandhi, morphologically conditioned place-assimilation, variable epenthesis, and problematic voicing alternations—will have to be left for further work. So, too, will detailed study of the historical development of Sorbung phonology. Likewise, we have scarcely touched upon the implications that this work has for understanding Tangkhul ethnogenesis and for plotting the historical relationship between the Tangkhuls of the Sorbung area and the rest of the Tangkhul ethnicity. What we do hope to have established is that Sorbung presents interesting data and problems to both the historical and synchronic linguist.

References


### Appendix: Sorbung Word List

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<th>?ərúkəniŋ</th>
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<td>1sg</td>
<td>ʔoo</td>
</tr>
<tr>
<td>1sg-gen</td>
<td>?ità</td>
</tr>
<tr>
<td>1sg-refl</td>
<td>?ōomasaa</td>
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<td>2dl</td>
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<td>2pl</td>
<td>naaŋnaakʰuo</td>
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<td>maa</td>
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<td>3sg-refl</td>
<td>maamasaa</td>
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<tr>
<td>Gloss</td>
<td>NewTrans</td>
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</table>

#### 1. Gloss

**abdomen (external bulge); belly**
- wan

**able**
- kòomán

**accept**
- jáa

**accustomed**
- majúhāa

**adam’s apple; larynx (throat)**
- kəráak

**add together**
- mətúuk

**adult**
- santááarià

**afterbirth; placenta**
- ?əlaam

**alive; living, be**
- riŋ

**animal**
- saajúur

**animal**
- sāa

**ankle**
- kəmīit

**ant**
- ciŋʃiipá

**anteater (pangolin); crocodile**
- təŋgoonŋ

**antler (of deer)**
- ?əkìi

**anus; rectum**
- ?əkái

**arm, upper**
- paambúm

**arm; hand**
- kūt

**armpit; underarm**
- cūbláa

**arrive**
- hàŋguŋ

**arrow**
- tʰèe

**artery; blood vessel; vein**
- məŋeetʰáaruu

**ascend; climb**
- háañ

**ashamed; shy**
- jáak

**asleep, be; sleep**
- ?iin

**aunt, elder paternal**
- ?ənnii

**aunt, maternal**
- nuguonuu

**aunt, wife of elder paternal uncle**
- nūtāanù
aunt, wife of maternal uncle
aunt, wife of younger paternal uncle
aunt, younger paternal
awake, be; wake up (v.i.)
axe
back
back (of something)
back basket
back, lower
backbone; spine
bad (morally)
bamboo spoon for curry
bar
bat
bathe
beak; bill (of bird)
bear (Selenarctos thibetanus)
bear; birth, give
beard
beautiful
become old
bee
behind
belly; abdomen (external bulge)
big
bile
bill (of bird); beak
bird
birth, give; bear
bite (v.)
bitter
black
blanket; cloth
bleed (v.)
blemish on skin
blemish; mole
blind
blink (v.)
blood
blood vessel; vein; artery
blow (mouth)
blow fire
body
body, dead; corpse
boil
bone
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<th>Sorbung</th>
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<tr>
<td>bone, jaw; jawbone; mandible</td>
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<td>bone, malar; cheekbone</td>
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<td>téŋguàt</td>
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</tr>
<tr>
<td>break</td>
<td>məkʰóo</td>
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<td>break (glass, egg); split (a watermelon, other round object)</td>
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<td>cúup</td>
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<td>brother of female, younger</td>
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<td>brother-in-law (of ego)</td>
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<td>burn off fields; slash and burn</td>
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<td>copulate (v.); have intercourse</td>
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<td>cord, one; fathom, one</td>
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<td>creator of the universe</td>
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<td>kękiuk</td>
</tr>
</tbody>
</table>
Sorbung Language of Manipur

(whether or not legs are involved)
crocodile; anteater (pangolin)  tæŋgoŋ
crooked  mækʰái
cross  ʔɔkaan
crossbar  tatir
crotch; fork of legs  kɛɛmɔtɔo, kɛɛmɔdɔo
crow (v.); sound (v.i., as a musical intrument)  ʔəkʰuán
crown; pate; head, top of  lusìip
cry; weep  cáap
cut (wood, vegetables)  tán
dance  cəkúi
dark  jiŋ
darkness  ʔəjiŋ
daughter  saa
daughter-in-law (of ego)  ʔihàa
day  ʔəʃunakan
dead, be; die  tʰii
defaf  nàkʰuák
decay  məməaŋ
deceive  mináam
deep  tʰùuk
defeer  səkíi
defecate (v.)  ʔèklen, ʔèglen
descend  júuŋ
desire; want  pam
devil, ghost, demon, evil spirit  rambūu
dew  ʔədáicʉʉ
dhole  ràmʔʉ́ʉ
die; dead, be  tʰii
difficult  lùu
dig  ciu
digit  -məjúumràa
dirty  múàt
dish out; scoop out  ʃuaglee
divide; split  mətáan
do  koo
dog (Canis familiaris)  ʔʉ́ʉ
doar  iinkʰaa
dove; pigeon  ʔəʃūu
dream  máaŋ
drink (v.)  ʔiin
drive; chase; catch  ʔəjii
drought  cəkáaŋ
dry  tʰaŋ
dry land (vs. water); earth; ground  ʔəloo
duck

dull (not sharp)
dumb; mute
dust; powder
eagle
ear
ear canal
eardrum
early; fast
earring
earth; ground; dry land (vs. water)
earthquake
earwax
easy
eat
egg
eggs, fish; roe
eight
eighteen
eighth
elephant
eleven
ember; hot coal
enemy
erase a chalkboard; extinguish
er
err
evening
exist
exist, to
exit
exit, to
expect
expensive
extinguish; erase a chalkboard
extinguish; put out fire
eye
eye sand
eye, white of
eyeball
eyebrow
eyelash
eyelid
face
fall
family
far
fart
fast; early
fat
father (of ego)
father-in-law (of ego)
fathom, half
fathom, one; cord, one
fear
feather (of bird)
feeces; shit
femur; thigh bone
few
field
fifteen
fifth born
fifty
fin; scale of fish
finger
finger width, one
finger, little
fingernail
finish
fire
first born
fish (general)
fish species, light in color
fish, catfish
fish, flying
fishing cat
fit
five
flea
flesh
flood
flow (v.)
fly
fly (v.)
follow
foot
footprint
forehead; brow
foreskin
forget
fork of legs; crotch
four
fourteen  som malii
fourth born  miipaa
fowl, male; rooster  ?akʰoŋ
fowl; chicken  ?aa
fox  rámʔųu
freckle  maihin
friend  ?ajóok
frighten  mɔcip
frog  ?əcok
front (of something)  mɔŋaalam
front of, in  mɔŋaalam
frost  ?əhúr
fruit  tʰiŋraa
fry  tʰåu-jáu
fry  jáu
full; satiated, be  kʰoŋp
fur (of animal)  ?əmií
gape; open mouth (v.)  ?əaŋ
get somebody up  mɔtʰée
get up; rise  ?əntʰée
give  pée
go  jáu
goat  màngolée
goatee  mɔrmíi
gold  sənáa
good  ?əloo
grandchild (of ego); son’s son  ?isíata ʔisáa
grandfather, maternal (of ego)  ?əmbúu
grandfather, paternal  ?əpuu
grandfather, paternal (of ego)  ?əmbúu
grandmother, maternal (of ego)  ?əmbíi
grandmother, paternal (of ego)  ?əmbíi
garner (of things)  ?əkʰaurúaŋ
garner  ?əkʰau, ʔkʰañ
grasshopper  tʰàu
graze (for cooking); oil  tʰàu
green  ʔəntiàk
grind with pestle  ʔənaat
groping (in the dark)  mɔtʰáap
ground; dry land (vs. water); earth  ?əloo
guest  məlóoŋ
gums  hákʰii
hail; sleet  ?əriáràa
hair (general)  ?əmií
hair of head  sàam
hair, body  ?əmií
hair, facial  mɔrmíi
hair, female pubic: širmìi
hair, leg: kèmìi
hair, male pubic: jáŋmìi
hair, underarm: cúbláamìi
hand: kút
hand span: kút kʰóom
hand; arm: kút
handicapped (whether or not legs are involved); crippled; lame: kēkiuk
hard; tough: liu
hat; headdress: təŋguáp
have intercourse; copulate (v.): ʔətéŋná
head: lukaaŋ
head, top of; crown; pate: lusìip
headdress; hat: təŋguáp
hear (v.): tʰöó
heart: məlúŋ
heart; locus of anger: məlúuŋ
heart; locus of emotions: niŋ
heartbeat (=breath): ʔəpʰʉ̀t
heavy: riit
help: páaŋ
hen: ʔalàa
hen, mother: ʔabʉ́ʉ
hiccup: səkái
hide: mətʰúup
hide; leather (dried animal skin): ʔəmèkhűn
high: məsáaŋ
hill: cìiŋtòoŋ
hips: ʔəkái, ʔkái
hit (with stick): pʰíit
hit (with the fist): jìu
hold in mouth (v.): mùam
hole: luŋkʰua
hole (in rock); cave: kʰócūu
honey: ʔəkii
horse: sakúan
host (house owner): ʔinpù
hot: sáa
hot coal; ember: moʔék
house: ʔin
humble: tʰòonáa
hunchback: kòoŋkʰùu
hundred: ʔəjaa kʰáat
hungry, be: bucám
hunt
hurt
hurt; sick, be; ill, be
husband
ice
ill, be; hurt; sick, be
insects
intestines; bowels
iron
itch (v.); itchy, be
itchy, be; itch (v.)
jaw; chin
jawbone; mandible; bone, jaw
joint
kick
kick; knead with the feet
kidney
kill
kiss (v.)
knead with the feet; kick
knee
knee cap; patella
knife
lac insect
ladder
lame; handicapped (whether or not
legs are involved); crippled
langur; leaf-monkey
lap
large intestine
larynx (throat); adam’s apple
late; slow
laugh
lay egg
lead; start
leaf-monkey; langur
leather (dried animal skin); hide
leech (land)
left hand
leg
lend
length from thumb to forfinger
lepros
lick (v.)
lick (v.); carry with hand
ligament (bone to bone)
<table>
<thead>
<tr>
<th>English</th>
<th>Sorbung</th>
</tr>
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<tbody>
<tr>
<td>light (weight)</td>
<td>jaaŋ</td>
</tr>
<tr>
<td>lightning</td>
<td>kʰumléeláap</td>
</tr>
<tr>
<td>like</td>
<td>pam</td>
</tr>
<tr>
<td>like, be; resemble</td>
<td>máān</td>
</tr>
<tr>
<td>lion</td>
<td>hambúu</td>
</tr>
<tr>
<td>lip</td>
<td>mór</td>
</tr>
<tr>
<td>liver</td>
<td>máṭʰín</td>
</tr>
<tr>
<td>living, be; alive</td>
<td>riŋ</td>
</tr>
<tr>
<td>locus of anger; heart</td>
<td>məlúūŋ</td>
</tr>
<tr>
<td>locus of emotions; heart</td>
<td>niŋ</td>
</tr>
<tr>
<td>locus of thought; mind</td>
<td>niŋ</td>
</tr>
<tr>
<td>long</td>
<td>jūō</td>
</tr>
<tr>
<td>look</td>
<td>?en</td>
</tr>
<tr>
<td>look (imperative)</td>
<td>?enee</td>
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<tr>
<td>loom</td>
<td>puankʰóonñaą</td>
</tr>
<tr>
<td>loose</td>
<td>kôlēęŋ</td>
</tr>
<tr>
<td>loose; untie</td>
<td>tərāt-kalen</td>
</tr>
<tr>
<td>lost</td>
<td>máāŋ</td>
</tr>
<tr>
<td>louse</td>
<td>?ərik, ?rik</td>
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<tr>
<td>low</td>
<td>mənêm</td>
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<tr>
<td>man</td>
<td>paasāa</td>
</tr>
<tr>
<td>man, blind</td>
<td>mitcòbāa</td>
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<tr>
<td>mandible; bone, jaw; jawbone</td>
<td>makʰáaruu</td>
</tr>
<tr>
<td>mantis</td>
<td>?əsōm</td>
</tr>
<tr>
<td>many; very</td>
<td>jáəpee</td>
</tr>
<tr>
<td>marrow</td>
<td>?əiliglāk</td>
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<tr>
<td>meat</td>
<td>?əmēek</td>
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<tr>
<td>medicine</td>
<td>lēe</td>
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<tr>
<td>milk</td>
<td>cùpcʉʉ</td>
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<tr>
<td>milk</td>
<td>caŋkʰoom</td>
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<tr>
<td>mind; locus of thought</td>
<td>niŋ</td>
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<tr>
<td>mithun</td>
<td>səriám</td>
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<tr>
<td>mock</td>
<td>mənuuf Já</td>
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<tr>
<td>molar</td>
<td>habuu</td>
</tr>
<tr>
<td>mole</td>
<td>?əbúu</td>
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<tr>
<td>mole; blemish</td>
<td>səməməamii</td>
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<tr>
<td>monkey</td>
<td>jooŋ</td>
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<tr>
<td>month</td>
<td>?əkʰáa</td>
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<tr>
<td>moon</td>
<td>?əkʰáa</td>
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<tr>
<td>morning</td>
<td>?əkʰuənålām</td>
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<tr>
<td>mosquito</td>
<td>tʰəwái</td>
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<tr>
<td>moth</td>
<td>?əpāa</td>
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<tr>
<td>mother (of ego)</td>
<td>?ənnúu</td>
</tr>
<tr>
<td>mother-in-law (of ego)</td>
<td>?ənnii</td>
</tr>
<tr>
<td>mountain</td>
<td>ciiŋtōoŋ</td>
</tr>
<tr>
<td>mouse</td>
<td>majúu</td>
</tr>
</tbody>
</table>
moustache  mòrmii
mouth  mor
mucus, dry  nàpkáan̂̂ng
mucus, liquid  nàap
muscle (=flesh) ʔəták
mushy (of rice, crushed banana); soft ʔapáat, ʔpáat
mute; dumb  conjúuk
my village ʔítá kʰón
nail  mətín
name ʔəmín
narrow nèe
nation júur
nationality júur
navel p(ə)lái
near ʔənái
neck riŋ
necklace maʃii
needle ʔəʃím
nephew (of ego) ʔítúsáa
nest ʔəwaabúu
new ʔətʰár
niece (of ego) ʔítúsáa
night ʔəján
nine ʔəkúu
nineteen som ʔəkúu
ninth moolé̃t
nipple cùbráa
noon ʔəʃʉn
nose  nàráa
nose bridge nàráa
nipple  nákhūur
nurse; suckle (v.) (=drink) ʔíin
oil; grease (for cooking) tʰàu
old ʔolúu
old (age) sëndaa
old folks ʔstaarìa
on fire, be; burn moo-còk
one kʰáat
open maʃóon̂̂ng
open mouth (v.); gape ʔàaŋ
orphan  səràasa
otter  səràam
owl ʔəwaahambʉ́u
palm kùdmajáa
parrot bokii
pate; head, top of; crown lusìip
patella; knee cap  kʰúk
paternal grandmother ʔapíi
path; road lambuu
path; this road lambuwwá
peel ʔakór
penis jaaj
person, blind mitcópá, mitconu
person, deaf náakʰuák
person, old santáarià
perspiration; sweat mákʰáncuù
pestle tənjúk
pig óók
pigeon; dove ʔʃűu
placenta; afterbirth ʔslaam
pond; pool pukʰrii
pool; pond pukʰrii
porcupine sakúu
pot təgók
pot, clay lampʰù tokoo, dógóo
pound rice ʔənpʰeeńnéŋ
powder; dust ʔəhű́t
practicioner of witchcraft léváaʃuán
pregnant, be mərái
price ʔəmáan
pus ʔənái
put ʃũa
put out fire; extinguish məmìt
python bəríi loophpáá
queen (no such office) ʔəhuáŋnúu
quiet, very; cold, very dáriji
quiet; cold dái
rain kãjuà
rat majúu
rectum; anus ʔəkái
red ʔaaŋ
release mákʰáan-lén
resemble; like, be máan
respect kʰəjáaʃá
rib cage wándã ʔərúu
right hand ʔəncáaŋlám
rise; get up ʔəntʰée
river cəkoo, cəgòo
road; path lambuùu
roast ree
roe; eggs, fish ʔəŋaacuù, ʔŋaacuù
roll (v.i.) laam
roll (v.t.)  màŋk(ə)lij
rooster; fowl, male ʔakʰóonj
rope  ruu
round ʔəlúum
rub tai
run sóo
rust ʔadáaháanŋ
saliva məcámcʉ̀u
salt məcìi
sambar; sambhur sajáa
sambhur; sambar sajáa
sand ʔəfjìi
satiated, be; full kʰòop
scab (hardened rice at bottom of pot) ʔəkaanŋ
scale of fish; fin ʔənàmíi
scar ták
scoop out; dish out ḟuagkle
scrape; scratch ʔəhuát
scratch kʰuat
scratch; scrape ʔəhuát
search; seek jónŋ
second born kʰoopaa
see (v.) múu
seek; search jónŋ
sell júu
semen; sperm jaŋcʉ̀u
seven səríi
seventeen som səríi
seventh loopáa
sew dúu
shadow ?ənìm
shadow ?ənìm
shallow tàar-lenleŋ
sharp ɲài
sharpen knife cèm-ʔatát
sheep jau
shin; calf kèemórái
shit; feces ʔèk
shiver; shudder; tremble sái
shoot (v.) káap
short (height) töö
short (length) töö
shoulder ɬakʰàa
shout wàaw
shrew matìr
shudder; tremble; shiver sái
<table>
<thead>
<tr>
<th>English</th>
<th>Sorung</th>
</tr>
</thead>
<tbody>
<tr>
<td>shut; close</td>
<td>lèn</td>
</tr>
<tr>
<td>shy; ashamed</td>
<td>jàak</td>
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<tr>
<td>sick, be; ill, be; hurt</td>
<td>nàa</td>
</tr>
<tr>
<td>side (left)</td>
<td>tənpúelám</td>
</tr>
<tr>
<td>side (right)</td>
<td>?ancáaŋlám</td>
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<tr>
<td>sinew; tendon (muscle to bone)</td>
<td>?əliglák</td>
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<tr>
<td>sing</td>
<td>lasáa</td>
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<tr>
<td>sister of female, elder</td>
<td>tən</td>
</tr>
<tr>
<td>sister of female, younger</td>
<td>?inànù</td>
</tr>
<tr>
<td>sister of male, elder</td>
<td>tən</td>
</tr>
<tr>
<td>sister of male, younger</td>
<td>?isàanù</td>
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<tr>
<td>sister-in-law (of ego)</td>
<td>?imée</td>
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<tr>
<td>sit</td>
<td>?ənʃúŋ</td>
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<tr>
<td>sit on eggs</td>
<td>buum</td>
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<tr>
<td>six</td>
<td>kərúuk</td>
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<tr>
<td>sixteen</td>
<td>som kərúuk</td>
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<td>sixth born</td>
<td>joombáa</td>
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<td>skeleton</td>
<td>?əruràaŋ</td>
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<td>skin</td>
<td>?əhún</td>
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<td>skinny</td>
<td>kəoŋ</td>
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<td>skull</td>
<td>lukáaŋruu</td>
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<td>skull</td>
<td>mairúu</td>
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<tr>
<td>sky</td>
<td>?əwaarām</td>
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<tr>
<td>slash and burn; burn off fields</td>
<td>lèe-hèe</td>
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<tr>
<td>sleep; asleep, be</td>
<td>?iin</td>
</tr>
<tr>
<td>sleet; hail</td>
<td>?əriārāa</td>
</tr>
<tr>
<td>slingshot</td>
<td>sáiróoŋ</td>
</tr>
<tr>
<td>slow; late</td>
<td>jüum</td>
</tr>
<tr>
<td>small</td>
<td>nèe</td>
</tr>
<tr>
<td>small intestine</td>
<td>?əriinèepaa</td>
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<tr>
<td>smart; wise; clever</td>
<td>tʰàanỳmee</td>
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<tr>
<td>smell; sniff (v.)</td>
<td>mənáam</td>
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<tr>
<td>smile (v.)</td>
<td>mənùu</td>
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<tr>
<td>smoke</td>
<td>mokhùt</td>
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<tr>
<td>snail</td>
<td>càbrùulá, càbrùurá</td>
</tr>
<tr>
<td>snake</td>
<td>bərīi</td>
</tr>
<tr>
<td>snake species, large</td>
<td>bərīs(ə)mùuk</td>
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<tr>
<td>sneeze</td>
<td>hâtiì</td>
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<td>sniff (v.); smell</td>
<td>mənáam</td>
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<td>snore</td>
<td>ŋənáar</td>
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<tr>
<td>snow</td>
<td>?əhúr</td>
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<tr>
<td>soft</td>
<td>mənèe</td>
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<tr>
<td>soft; mushy (of rice, crushed banana)</td>
<td>?əpáat, ?páat</td>
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<tr>
<td>sole</td>
<td>kəemajàa</td>
</tr>
<tr>
<td>son</td>
<td>saa</td>
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<tr>
<td>son’s son; grandchild (of ego)</td>
<td>?isàata ?isàa</td>
</tr>
</tbody>
</table>
son-in-law (of ego) ʔihàa
song laa
soul, spirit (Meithei) tʰowáí
sound (v.i., as a musical instrument); crow (v.) ?skʰuán
sour tʰuur
spade bèlcáa
speak (v.) cóŋ
spear ?asóó
speech; words cóŋ
sperm; semen jaŋciu
spider kʰoráan, kʰràan
spin molám
spinal cord (=marrow) ?olíglák
spine; backbone kóongruu
spit (v.) macamciu mətʰúur
spit (v.) macamciu masák
spleen ?ecúap
split (a watermelon, other round object); break (glass, egg) kʰòó
split (as with a candy bar) ?stáanjèe
split; divide mətáan
spring colám
squeeze mit
squeeze; twist mit
squirrel ?olóo
squirrel, giant ?olóo
stammer; stutter cóŋʔàak
stand ñia
stand up (imperative) ñiaèe
star ?əʃii
start; lead ?əntʰée
stature ?aráan
steal məráu
stick (v.) náap
stink mənámʃoo
stomach wan
stone lùuŋ
storm kʰupú kʰuncaŋ
straight kún
strong məkàt
stupid pàaŋ, ?əpàaŋ
stutter; stammer cóŋʔàak
suck (v.) majúp
suckle (v.) (=drink); nurse ?iin
sun ?ənii
sunrise ʔəníi-juuk
sunset ʔəníi-lút
surname; clan səkái
swallow (v.) majjuu
sweat məkʰáan-cuù
sweat; perspiration məkʰáncuù
sweet kʰuum
swell; swollen, be wór
swollen, be; swell wór
tail (of animal) ?əmóó
tailbone; coccyx ?akáiruu
take lée
tall jőo
talon (of bird) mətín
tear (n.) məkʰácuù
tempt júi
ten som
ten thousand lèeʃìŋ som
tendon (muscle to bone); sinew ?əlíg láák
termite; white ant lũuksáa
testicle jāŋráá
that kaa
the muscle comes out ?əták fùugòo
the tail is long ?əmóó sóøòøø
the tail is short ?əmóó tòøòøø
thick lóøk
thigh mətóo
thigh bone; femur mətóoruù
thin məmpañår
think ?əduuuk
third born teepáå
thirsty, be curée
thirteen som ?əntʰúum
thirty somtʰúum
this wa
this axe ròowá
this blanket; this cloth puanùá
this boundary tʰəriiwa, tʰəriivá
this bow tʰəewá
this cloth; this blanket puanùá
this corner ?əkiiwá
this crossbar tətirùá
this door iinjkʰaavá
this earring ?ənáatʰínjúá
this knife cèmùá
this ladder ?əlágáuá
this loom
this medicine
this necklace
this needle
this pestle
this pot
this price
this road; path
this rope
this slingshot
this song
this spade
this spear
this wall
this war
this window
thousand
three
throat; uvula
thumb
thunder
tie
tiger
tight
to dry
toad
toast
toe
toe, big
toe, little
toenail
tongs
tongue
tooth
torso; trunk
touch
tough; hard
trachea; windpipe
tremble; shiver; shudder
trunk; torso
twelve	
twenty
twist; squeeze
two
udder (of cow, goat)
ugly

puankʰóŋŋaavá
lèewá
məʃiiwá
ʔəʃímùá
tənʃugùá
ʔəmáanùá
lambùuwá
ruuwá
sàiròoŋùá
laavá
bélçāavá
ʔəsóowá
pʰáaglàaŋùá
réewá
məhʉtʰoonùá
lèeʃìŋ kʰáat
ʔəntʰúum
kəráak
kùdbùu
macèk kàa
tarât
hambùu
cìn
makaanŋ
ʔəcok
mahai
kèemajúumràa
kèbùu
kèsáa
kèematin
cəkáap
məlée
haa
məsàa
còo
lùu
kəráak
sái
məsàa
som kəníiŋ
semníi
mit
kəniiŋ
cúup
cáakʃa
<table>
<thead>
<tr>
<th>English</th>
<th>Sorbung</th>
</tr>
</thead>
<tbody>
<tr>
<td>umbilical cord</td>
<td>p(ə)láí</td>
</tr>
<tr>
<td>uncle, elder paternal</td>
<td>pátáábáá</td>
</tr>
<tr>
<td>uncle, husband of elder paternal aunt</td>
<td>pùu</td>
</tr>
<tr>
<td>uncle, husband of maternal aunt</td>
<td>pakùu</td>
</tr>
<tr>
<td>uncle, husband of younger paternal aunt</td>
<td>pùu</td>
</tr>
<tr>
<td>uncle, maternal</td>
<td>pùu</td>
</tr>
<tr>
<td>uncle, younger paternal</td>
<td>pakùu</td>
</tr>
<tr>
<td>underarm; armpit</td>
<td>cúbláá</td>
</tr>
<tr>
<td>untie; loose</td>
<td>təràt-kəlen</td>
</tr>
<tr>
<td>urinate (v.)</td>
<td>məcée-len</td>
</tr>
<tr>
<td>urine</td>
<td>məcéécʉ̀ʉ, məcéecʉʉ</td>
</tr>
<tr>
<td>uvula; throat</td>
<td>kəráák</td>
</tr>
<tr>
<td>vagina</td>
<td>jir</td>
</tr>
<tr>
<td>valley (river valley)</td>
<td>təmbàak</td>
</tr>
<tr>
<td>vein; artery; blood vessel</td>
<td>məncetʰáarʉʉ</td>
</tr>
<tr>
<td>vertebrae (of spine)</td>
<td>kənəŋrúu</td>
</tr>
<tr>
<td>very; many</td>
<td>jəaapee</td>
</tr>
<tr>
<td>village</td>
<td>?əkʰúan</td>
</tr>
<tr>
<td>voice</td>
<td>?əkʰúan, ?kʰúan</td>
</tr>
<tr>
<td>vomit (v.)</td>
<td>məlit</td>
</tr>
<tr>
<td>wait</td>
<td>ɲàak</td>
</tr>
<tr>
<td>wait (imperative)</td>
<td>ɲàagée</td>
</tr>
<tr>
<td>wake up (v.i.); awake, be</td>
<td>ʔantʰèe</td>
</tr>
<tr>
<td>walk</td>
<td>jáu</td>
</tr>
<tr>
<td>wall</td>
<td>pʰäaglāanj</td>
</tr>
<tr>
<td>want; desire</td>
<td>pam</td>
</tr>
<tr>
<td>war</td>
<td>rée</td>
</tr>
<tr>
<td>wart (= skin disease)</td>
<td>ʔəhúnnáa</td>
</tr>
<tr>
<td>wash (clothes)</td>
<td>ʔəʃúu</td>
</tr>
<tr>
<td>wash (hands, vegetables, cars)</td>
<td>pʰərii</td>
</tr>
<tr>
<td>water</td>
<td>cʉ́ʉ</td>
</tr>
<tr>
<td>weak</td>
<td>ʃuan</td>
</tr>
<tr>
<td>weep; cry</td>
<td>càap</td>
</tr>
<tr>
<td>well, be</td>
<td>ʔəlóo</td>
</tr>
<tr>
<td>wet</td>
<td>juu</td>
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<tr>
<td>whiskers (of animal)</td>
<td>mərmíi</td>
</tr>
<tr>
<td>whistle</td>
<td>məhųúu</td>
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<tr>
<td>white</td>
<td>ɲée</td>
</tr>
<tr>
<td>white ant; termite</td>
<td>lūuksáa</td>
</tr>
<tr>
<td>whole</td>
<td>kəlúuktæe</td>
</tr>
<tr>
<td>widow</td>
<td>ʔəmonoməkʰúu</td>
</tr>
<tr>
<td>wife</td>
<td>mənamóó</td>
</tr>
<tr>
<td>wind</td>
<td>kʰii</td>
</tr>
<tr>
<td>window</td>
<td>məhųtʰoon</td>
</tr>
<tr>
<td>windpipe; trachea</td>
<td>kəráak</td>
</tr>
<tr>
<td>English</td>
<td>Lush</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>wing (of bird)</td>
<td>pʰəláa, pʰláa</td>
</tr>
<tr>
<td>wise; clever; smart</td>
<td>tʰàañmee</td>
</tr>
<tr>
<td>wolf</td>
<td>rámʔʉ́u</td>
</tr>
<tr>
<td>woman</td>
<td>moosáa</td>
</tr>
<tr>
<td>woman, blind</td>
<td>mitcôn uu</td>
</tr>
<tr>
<td>woodpecker</td>
<td>ʔəwaatʰìŋhútpá</td>
</tr>
<tr>
<td>words; speech</td>
<td>cóŋ</td>
</tr>
<tr>
<td>world; cosmos</td>
<td>ókətʰui</td>
</tr>
<tr>
<td>yawn (v.)</td>
<td>ma hãm</td>
</tr>
<tr>
<td>year</td>
<td>kuum</td>
</tr>
<tr>
<td>yellow (color of curry)</td>
<td>jaiŋàaŋmacuu</td>
</tr>
<tr>
<td>young (age)</td>
<td>mənée</td>
</tr>
</tbody>
</table>