<table>
<thead>
<tr>
<th>Title</th>
<th>A sketch grammar of Chang</th>
</tr>
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<tr>
<td>Author(s)</td>
<td>Chor, Wan Ting</td>
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<td>Date</td>
<td>2011</td>
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</tr>
</tbody>
</table>
A Sketch Grammar of Chang

Name: Chor Wan Ting
Supervisor: Asst. Professor Alexander Coupe

A Final Year Project submitted to the School of Humanities and Social Sciences, Nanyang Technological University in partial fulfillment of the requirements for the Degree of Bachelor of Arts in Linguistics & Multilingual Studies

2011
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### Abbreviations and Conventions

The following abbreviations and conventions are used in the thesis:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/</td>
<td>phonemic transcription</td>
</tr>
<tr>
<td>[ ]</td>
<td>phonetic transcription</td>
</tr>
<tr>
<td>:</td>
<td>low level toneme</td>
</tr>
<tr>
<td>-</td>
<td>mid level toneme</td>
</tr>
<tr>
<td>¹</td>
<td>low level allotone</td>
</tr>
<tr>
<td>³</td>
<td>mid level allotone</td>
</tr>
<tr>
<td>⁵</td>
<td>high level allotone</td>
</tr>
<tr>
<td>σ</td>
<td>syllable</td>
</tr>
<tr>
<td>§</td>
<td>section in the paper</td>
</tr>
<tr>
<td>C</td>
<td>consonant</td>
</tr>
<tr>
<td>V</td>
<td>vowel</td>
</tr>
<tr>
<td>G</td>
<td>glide</td>
</tr>
<tr>
<td>S</td>
<td>single (argument of an intransitive verb)</td>
</tr>
<tr>
<td>A</td>
<td>agent (argument of a transitive verb)</td>
</tr>
<tr>
<td>O</td>
<td>Patient (argument of a transitive verb)</td>
</tr>
<tr>
<td>TB</td>
<td>Tibeto-Burman</td>
</tr>
<tr>
<td>SOV</td>
<td>Subject-Object-Verb order</td>
</tr>
<tr>
<td>e.g.</td>
<td>for example</td>
</tr>
<tr>
<td>i.e.</td>
<td>that is</td>
</tr>
<tr>
<td>*</td>
<td>proto</td>
</tr>
</tbody>
</table>

The following abbreviations are used in glosses:

<table>
<thead>
<tr>
<th>Digit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>first person</td>
</tr>
<tr>
<td>2</td>
<td>second person</td>
</tr>
<tr>
<td>3</td>
<td>third person</td>
</tr>
<tr>
<td>ABL</td>
<td>ablative</td>
</tr>
<tr>
<td>ALL</td>
<td>allative</td>
</tr>
<tr>
<td>ASP</td>
<td>aspect</td>
</tr>
<tr>
<td>AUG</td>
<td>augmentative</td>
</tr>
<tr>
<td>AUX</td>
<td>auxiliary</td>
</tr>
<tr>
<td>AWAY</td>
<td>‘away’ lexical suffix</td>
</tr>
<tr>
<td>BEN</td>
<td>benefactive</td>
</tr>
<tr>
<td>CAUS</td>
<td>causative</td>
</tr>
<tr>
<td>CAUSAL</td>
<td>causal converb suffix</td>
</tr>
<tr>
<td>CLASS</td>
<td>classifier</td>
</tr>
<tr>
<td>COLL</td>
<td>collective</td>
</tr>
<tr>
<td>COM</td>
<td>comitative</td>
</tr>
<tr>
<td>CONT</td>
<td>continuative</td>
</tr>
<tr>
<td>CONJ</td>
<td>conjunction</td>
</tr>
<tr>
<td>DAT</td>
<td>dative</td>
</tr>
<tr>
<td>DIM</td>
<td>diminutive</td>
</tr>
<tr>
<td>DIST</td>
<td>distal demonstrative</td>
</tr>
<tr>
<td>DU</td>
<td>dual</td>
</tr>
<tr>
<td>DUR</td>
<td>durative converb</td>
</tr>
<tr>
<td>ERG</td>
<td>ergative</td>
</tr>
<tr>
<td>EX</td>
<td>exclusive</td>
</tr>
<tr>
<td>FEM</td>
<td>feminine</td>
</tr>
<tr>
<td>GEN</td>
<td>genitive</td>
</tr>
<tr>
<td>INC</td>
<td>inclusive</td>
</tr>
<tr>
<td>INES</td>
<td>inessive</td>
</tr>
<tr>
<td>INST</td>
<td>instrumental</td>
</tr>
<tr>
<td>INTER</td>
<td>interrogative</td>
</tr>
<tr>
<td>IRR</td>
<td>irrealis</td>
</tr>
<tr>
<td>LOC</td>
<td>locative</td>
</tr>
<tr>
<td>MASC</td>
<td>masculine</td>
</tr>
<tr>
<td>NOM</td>
<td>nominating suffix</td>
</tr>
<tr>
<td>ORD</td>
<td>ordinal</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>POSS</td>
<td>possessive pronoun</td>
</tr>
<tr>
<td>PRES</td>
<td>present</td>
</tr>
<tr>
<td>PST</td>
<td>past</td>
</tr>
<tr>
<td>REL</td>
<td>relational morpheme</td>
</tr>
<tr>
<td>RC</td>
<td>relative clause</td>
</tr>
<tr>
<td>RPET</td>
<td>repetitive</td>
</tr>
<tr>
<td>SEQ</td>
<td>sequential converb</td>
</tr>
<tr>
<td>SEPI</td>
<td>‘separate’ lexical suffix</td>
</tr>
<tr>
<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>SIM</td>
<td>simultaneous converb</td>
</tr>
<tr>
<td>PURP</td>
<td>purposive</td>
</tr>
<tr>
<td>UP</td>
<td>‘ascend’ lexical suffix</td>
</tr>
</tbody>
</table>
Abstract

This paper describes a sketch grammar of Chang, a Tibeto-Burman language spoken in Nagaland state, north-east India. The sketch grammar uses data collected from a fieldwork in Nagaland. The data includes an elicited 800-wordlist and 2 narrative texts. The chapters of the grammar are mainly divided into phonology and morphosyntax. In the phonology chapter, Chang has 17 consonant phonemes and 7 vowel phonemes. There are also 3 tonemes: high level, low level and falling. The morphosyntax chapters covers word classes, nominal morphology, verbal morphology and ending with grammatical functions. Chang uses constituent order and ergativity to prescribe grammatical functions. It is hoped that this paper will shed a little more light on the Chang languages and other Tibeto-Burman languages in the Nagaland.

Keywords – Chang, phonology, morphosyntax, grammar, Tibeto-Burman, Nagaland
1 Introduction

The aim of this thesis is to sketch a preliminary grammar of Chang, a Tibeto-Burman language spoken in the north-east Indian state of Nagaland. It serves to contain a preliminary description of phonology, morphology and syntax of the language.

There are a total of 7 chapters in this thesis. This first chapter deals with the background of the language and the source of the data. The second chapter provides a description of the phonology and the phonological processes of the language. Chapters 3 to 7 cover the grammatical portions of Chang, specifically word classes, nominal morphology, verbal morphology, clause structure and grammatical functions. To narrow the scope for this thesis, focus is given to the grammatical portions.

1.1 Language Classification

Linguistic studies concentrating on the languages of the Sino-Tibetan (ST) language family has proliferated in the last 55 years (Matisoff 1991). The TB languages and the Sinitic languages constitute the two main daughter branches of the ST language family. The TB family was conceived as early as the 1850s when it was found that there are cognate words between Written Tibetan and Written Burmese (Matisoff 1991). India is home to more than 107 languages that belong to the TB family and the speakers of these languages are concentrated mainly in the 7 states of north-east India (Matisoff 1991; Burling, 2003). Nagaland is one of the 7 states of north-east India and spans 6350 square miles with Myanmar forming its east borders. Languages spoken in Nagaland belong to the TB language family.

1.1.1 Chang

Chang is spoken by people living in Tuensang, located north-east of Nagaland state. Figure 1 shows the location of Tuensang in Nagaland state.
Alternate names for Chang include Mojung, Changyanguh, Machongrr, Mochumi and Mochungrr. There are several different names for Chang because names differ between what the group of people call themselves (autonym) and what other groups call them (exonyms) (Matisoff 1991). Some names also derived from locations such as a distinct village or a river nearby. According to Lewis (2009), there were 60,900 speakers of Chang living in 36 villages in 2001.

Within the subgroup of TB, Chang has been classified together with Konyak, Phom and Khiamngan, also spoken in north-east Nagaland. This group, called the Konyak group, also includes Nocte, Tangsa and Wancho spoken in neighbouring north-east Indian state, Arunachal Pradesh (Burling, 2003). Geographically, these languages are spoken in the vicinity of the state border that divides Nagaland and Arunachal Pradesh in north-east India. Burling (1983) has attempted to group the Konyak languages together with the Bodo and Jinghpaw languages to form the Bodo-Konyak-Jinghpaw subgroup based on shared lexical innovations that other languages in the TB family do not exhibit. This sub-grouping is also named the ‘Sal’ languages by Burling (1983) after the innovation of *sal* ‘sun’ by these languages.
Work focusing Chang is relatively few. This includes a sketch grammar written by Hutton in 1929 and a Chang-English, English-Chang dictionary (see Erdican, 2003).

1.2 Source of Data
The unpublished data provided for the analysis for this paper was shared by my supervisor, Assistant Professor Alexander Coupe. He collected the data during fieldwork in Nagaland between 2005 and 2006. The data comes in the form of recordings and the hand-written transcriptions with interlinearizations. It is limited to the following:

- transcribed recordings of over 800-item lexical word list
- interlinearized text recording of Chafe’s (1969) film, The Pear Story
- interlinearized text recording of Mayer’s (1969) picture book, Frog, Where are you?

The lexical words were elicited in a substitution frame, ᵇ̅嗓 tá (1SG.ERG ______ say-PRES) ‘I _____’ followed by a repeat of the lexical item twice in isolation. This is to allow for tones to be recognised.

I have used a software tool, Praat, to check transcriptions and tones of the elicited words. The texts were input into software programs, Transcriber and Toolbox, to create a lexicon and a database of interlinearized texts aligned with the recordings. These facilitated my analysis of the language. In the phonology section, the analysis is based on the elicited word list. The grammatical sections are written based on the analysis of both the word list and the texts.

2 Phonology
This chapter gives a description of the phonology of Chang. Section 2.1 illustrates the syllable structure of Chang. Following that in sections 2.2 and 2.3, the Chang phonemes and their allophonic realisations are given. Allophonic realisations occur when two phones are in complementary distribution as they do not appear in the same environment (Lass 1984: 18). To be allophones of one phoneme, two phones must be phonetically similar other than being in complementary distribution. Lastly, a description of the tonemes and the allophonic realisations are given in section 2.4.

2.1 Syllable Structure
The hierarchical syllable structure of Chang is represented metrically in Figure 2 with reference to Coupe (2006b). Optional constituents are represented in parenthesis. Utterances
are made up of one or more syllables and each syllable consist of an optional onset and a rhyme. Therefore, it is possible for a syllable to have no initial consonant at all. Tonemes are discussed in §2.4.

![Figure 2 Metrical Syllable Structure of Chang](image)

The optional onset slot allows for only a consonant. It can be filled with any of the following consonant phonemes list in Table 2-1. The segmental consonant phonemes are further described in §2.2.

<table>
<thead>
<tr>
<th>p</th>
<th>t</th>
<th>k</th>
</tr>
</thead>
<tbody>
<tr>
<td>pʰ</td>
<td>tʰ</td>
<td>kʰ</td>
</tr>
<tr>
<td>s</td>
<td>ʃ</td>
<td>ʧ</td>
</tr>
<tr>
<td>h</td>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>ɲ</td>
<td>ɳ</td>
<td></td>
</tr>
<tr>
<td>l</td>
<td>w</td>
<td>j</td>
</tr>
</tbody>
</table>

The rhyme contains an obligatory nucleus and an optional coda. The nucleus consists of a mandatory vowel and an optional glide. Any of the vowel phonemes, /a/, /i/, /u/, /e/, /o/, /ə/ can fill V₁. The vowel phonemes are described in §2.3. The optional V₂ is non-syllabic and can be filled with either a glide or a lengthening of the obligatory V₁. A glide can be either /j/, /w/ or /u/. The vowel and glide sequences attested in Chang are /aj/, /aw/, /ej/, /owl/, /əj/, /əu/. The position of the glide can also be filled by a lengthening of V₁ as there is a contrast in the length of vowel in Chang e.g., between /kʰàmpû/ ‘finish-NOM’ and /kʰàːmpû/ ‘be.cold-NOM’. Long vowels that have been attested to be phonemic in Chang are /a:/, /e:/ and
The long vowels are not recognized as separate vowel phonemes but rather, a sequence of vowels where $V_1$ and $V_2$ are filled with the same vowel phoneme. This is to minimize the vowel phoneme number.

The optional coda is limited only to voiceless unaspirated stops, /p/, /t/, /k/ and nasals, /m/, /n/, /ŋ/. A glottal stop also occurs in word-final position and thus, could be thought to be in the coda position. However, when the glottal stop in the coda position of a syllable is followed with another syllable, it is dropped. Thus, the glottal stop is not realised in the word-medial position. The distribution pattern of the glottal stop is restricted only to the end of the word and it is dropped in a word-medial environment as seen in the following two examples shown in Table 2-2. The roots for ‘lick’ and ‘give’ are given as séʔ and kūʔ respectively.

<table>
<thead>
<tr>
<th>GLOSS</th>
<th>REALISATION</th>
<th>GLOSS</th>
<th>REALISATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEG-lick</td>
<td>[a³³-se⁵⁵ʔ]</td>
<td>NEG-give</td>
<td>[a³³-ku⁵⁵ʔ]</td>
</tr>
<tr>
<td>lick-NOM</td>
<td>[se³³tu⁵⁵]</td>
<td>give-NOM</td>
<td>[ku³³-pu⁵⁵]</td>
</tr>
<tr>
<td>lick-PST.AUX</td>
<td>[se³³-kaj⁵⁵]</td>
<td>give-RPET-PST.AUX</td>
<td>[ku⁵⁵-ŋaj³³-kaj¹¹]</td>
</tr>
</tbody>
</table>

This distribution pattern of the glottal stop in Chang resembles that put forward by Coupe (2007) of Ao, a Tibeto-Burman language spoken in Mokokchung district of Nagaland state. Coupe (2007: 77) argues convincingly that given such a restricted distribution pattern, the glottal stop in Ao is better postulated as “a prosodic element occupying an independent tier in the prosodic hierarchy of the word” rather than a segmental phoneme. Therefore, the glottal stop in Chang shall be given the same status of word prosody instead of a phoneme restricted to only a word-final realisation.

2.2 Consonant Phonemes

There are 17 consonant phonemes in Chang, of which 10 are obstruents (stops, fricatives and affricates) and 7 are sonorants (nasals, laterals and approximants). These are listed in Table 2-3 according to the place and manner of articulation. The orthographic symbols used in the text and language examples in this thesis are represented in parentheses.

---

¹ ³³ corresponds to high level tone; ¹¹ to low level tone; ³³ to mid level tone and ⁵¹ to falling tone. The tones of Chang are discussed in §2.4.
Table 2-3 Consonant phonemes in Chang

<table>
<thead>
<tr>
<th></th>
<th>BILABIAL</th>
<th>ALVEOLAR</th>
<th>POST-ALVEOLAR</th>
<th>PALATAL</th>
<th>VELAR</th>
<th>GLOTTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASPIRATED</td>
<td>p (p)</td>
<td>t (t)</td>
<td>k (k)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNASPIRATED</td>
<td>pʰ (ph)</td>
<td>tʰ (th)</td>
<td>kʰ (kh)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFFRICATE</td>
<td></td>
<td></td>
<td>f (f')</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRI CATIVE</td>
<td>s (s)</td>
<td>f (f')</td>
<td>h (h)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NASAL</td>
<td>m (m)</td>
<td>n (n)</td>
<td>n (ɲ)</td>
<td>ɲ (ŋ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPROXIMANT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LATERAL</td>
<td>l (l)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CENTRAL</td>
<td>w (w)</td>
<td></td>
<td>j (j)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The glottal stop is not recognized as a segmental phoneme for reasons given in §2.1.

2.2.1 Oral Stops

Stops can occur in the coda position. The stops occur at three distinctive places of articulation: bilabial, alveolar and velar. It demonstrates the generalization of all languages having a minimal system of having three stops (Lass 1984: 147). The stops at these places of articulation show an aspiration contrast: voiceless aspirated versus voiceless unaspirated. The following (sub-) minimal pairs of words show phonemic aspiration contrasts of the voiceless stops occurring word-initially and word-medially at each of the three distinctive places of articulation.

/p/ versus /pʰ/
/pák/ ‘bat’ /ɑ̃pʰālɛ/ ‘NEG-shallow’
/pʰák/ ‘shoulder’ /ɑ̃pʰɑ̃ŋ/ ‘NEG-diverge’

/t/ versus /tʰ/
/tánpù/ ‘pass’ /ɑ̃tɑ̃ŋ/ ‘NEG-straight’
/tʰám/ ‘soil’ átʰɑ̃ŋjùʔ/ ‘NEG-hit’

/k/ versus /kʰ/
/kámpù/ ‘make’ /ɑ̃kɔ̃n/ ‘NEG-carry’
/kʰámpù/ ‘be cold’ /ɑ̃kʰɔ̃n/ ‘NEG-burry’
There is no voicing contrast of the stops, e.g. /p/ is realised as [p] or [b] in free variation conditioned by the environment of a following /u/. Voicing in stops appears to be a marked state in these languages. Phom does not have voiced stops and although Wancho has a voiced stop at the velar place of articulation, /g/, it is very rare (Burling & Wangsu 1998; Burling & Phom 1998). The following shows the allophonic realisations of bilabial stops.

/p/ unaspirated bilabial stop
→ [p] ~ [b] / _u in free variation
    [p] / elsewhere
examples:
/látpú/ [lat³³pu⁵⁵] ‘reap’
/áŋpú/ [áŋ³³bu⁵⁵] ‘ascend’

/pʰ/ aspirated bilabial stop
→ [pʰ]
examples:
/pʰe⁵⁵/ ‘flesh’
/ápʰɔʔ/ [a³³pʰɔ⁵¹] ‘NEG-place’ (v)
/ńákpʰ̱iŋpú/ [ńá³³kpʰ̱iŋpu⁵⁵] ‘to scatter rice while eating’

The following shows the allophonic realizations of alveolar stops. Note that unlike /p/ which can be realized as voiced in word-initial position, /t/ is not realized as [d] in word-initial position but only in the environment where it follows a vowel. /t/ becomes realized as voiced due to the voicing of the previous vowel.

/t/ unaspirated alveolar stop
→ [t] ~ [d] /V_ in free variation
→ [t] / elsewhere
examples:
/lídpú/ [lì³³di³³pu⁵⁵] ‘release’
/táp/ [ta⁵⁵] ‘ashes’
/séʔ/ [set⁵⁵] ‘eight’
/káwták/ [kaw⁵⁵tak³³] ‘earth’

/tʰ/ aspirated alveolar stop
→ [tʰ]
examples:
/tʰɔʔ/ [tʰɔʔ⁵¹] ‘half’
/ńáʔtʰə/ [ńá³³tʰə¹¹] ‘NEG-snap’
/ńáktʰʌŋ/ [ńá³³tʰʌŋ⁵⁵] ‘mortar’
The following allophonic realizations are of the velar stops. Unlike /p/ and /t/, /k/ is not realized as [g] in the data.

\[
\begin{align*}
/k/ & \quad \text{ unaspirated velar stop} \\
& \quad \rightarrow [k] \\
& \quad \text{examples:} \\
/k\text{ip}u/ & \quad [ki^{39}\text{bu}^{55}] \quad \text{‘exist’} \\
/l\text{aŋk}o\j/ & \quad [laŋ^{39}\text{k}o^{55}] \quad \text{‘life’} \\
/i\k/ & \quad [i^{55}] \quad \text{‘finger’} \\
\end{align*}
\]

\[
\begin{align*}
/k^{h}/ & \quad \text{ aspirated velar stop} \\
& \quad [k^{h}] \quad / \text{ elsewhere} \\
& \quad \text{examples:} \\
/k^{h}\text{u}/ & \quad [k^{h}u^{11}] \quad \text{‘head’} \\
l\text{aŋk}^{h}\text{o}n/ & \quad [laŋ^{39}\text{k}^{h}\text{o}n^{11}] \quad \text{‘cave’} \\
k^{h}\text{uŋp}u/ & \quad [k^{h}\text{uŋ}^{39}\text{bu}^{55}] \quad \text{‘bind’} \\
\end{align*}
\]

To voice stops, there needs to be accumulation of air between the lungs and the obstruction caused at the place of articulation. In articulating [b] and [d], the oral closure occurs near to the front of the mouth, lips and alveolar positions respectively, as compared to [g] where the oral closure occurs further back in the mouth with back of the tongue touching the soft palate. Less air can be stored between the lungs and the oral closure, making it harder to articulate [g] as compared to [b] and [d].

### 2.2.2 Affricate

There is only one affricate identified to be phonemic in Chang, /ʧ/. It is analysed as a separate series of obstruent from the stops because unlike the stops, there is no aspiration contrast in the affricate. It also cannot occur in the coda position whereas the sops can. The only affricate /ʧ/ is found in word-initial and word-medial positions as shown in the following allophonic realization.

\[
\begin{align*}
/ʧ/ & \quad \text{ unaspirated palatal affricate} \\
& \quad \rightarrow [ʧ] \\
& \quad \text{examples:} \\
/ʧ\text{om}/ & \quad [ʧ^{55}\text{om}^{55}] \quad \text{‘salt’} \\
/t\text{ūʧ}/ & \quad [t^{55}ʧ^{33}] \quad \text{‘oil’} \\
/ʧ\text{àn)p}u/ & \quad [ʧ^{an}^{33}\text{bu}^{55}] \quad \text{‘distribute’} \\
\end{align*}
\]
2.2.3 Fricatives

There are three fricatives in Chang and they occur at the alveolar, post-alveolar and glottal places of articulation, /s/, /ʃ/, /h/ respectively. They only occur in the onset position of a syllable and never in the coda. The fricatives do not demonstrate aspiration contrasts. The following (sub-) minimal pairs of words show a phonemic contrast between the alveolar fricative and post-alveolar fricative occurring word-initially and word-medially.

/s/ versus /ʃ/

/si/ ‘blood’ /ʤän/ ‘NEG.lick’
/ʃi/ ‘grandchild’ /ʤän/ ‘NEG.thick’

The following (sub-) minimal pairs of words show a phonemic contrast between the post-alveolar fricative and palatal affricate occurring word-initially and word-medially.

/ʃ/ versus /ʧ/

/ʃ’apk/ ‘pinch’ /ʧan/ ‘tongue’
/ʃ’ak/ ‘thorn’ /ʤ’än/ ‘seat’

The following demonstrate the allophonic realisations of the fricatives. The voiced realisation of [z] is triggered by the nasal preceding it.

/s/ alveolar fricative

→ [z] /N_
→ [s] /elsewhere
examples:
/k’hänzänjâl/ [k’hän1zän3j’a33a:\] ‘mosquito’
/sôl/ [sɔ33]\o11] ‘free’ (n)
/mâjsu/ [məj55su11] ‘monkey’

/ʃ/ voiceless post-alveolar fricative

→ [ʃ]
examples:
/ʃ’ow/ [ʃ’ow55] ‘child’
/ʃaiʃ/ [ʃai55ʃ’i11] ‘deer’
/ʃawpû/ [ʃaw33bu’55] ‘eat’

The voiceless glottal fricative in Chang can only fill in the onset of a syllable. Contrastively, the glottal stop can only fill in the coda position of a syllable. This voiceless glottal frication is found in word-initially and word medial position in the following allophonic realisation.
2.2.4 Nasals

In comparisons of phonetically similar nasals, 4 nasals are found to be phonemically distinctive and they occur at the bilabial, alveolar, palatal and velar places of articulation. The bilabial and alveolar nasals can occur in both the onset and coda of a syllable and thus may be found in word-initial, word-medial and word-final positions. On the other hand, the palatal and velar nasals are more restrictive in distribution. The palatal nasal only occurs in the onset of a syllable and thus, may be found in word-initial and word medial position. In contrast, the velar nasal occurs in both onset and coda of a syllable even though less frequently in the onset. About 13.8% or 122 words of the 800 over words in the word list have /ŋ/ occurring in the coda of a syllable whereas only 4.4% or 39 words have /ŋ/ occurring in the onset of a syllable.

The following (sub-) minimal pairs of words show phonemic contrasts between the bilabial and alveolar nasals and between palatal and velar nasals occurring at different positions of a word.

/m/ versus /n/

/mów/ ‘wound’
/nów/ ‘ear’
/sóm/ ‘three’
/són/ ‘lungs’

/p/ versus /ŋ/

/ñaŋpúu/ ‘near’
/ɲápáu/ ‘NEG-be.rotten’
/ŋáŋpúu/ ‘be sad’
/ŋáŋw/ ‘vulva’
The following shows the allophonic realizations of nasals at different places of articulation.

/m/     bilabial nasal
→   [m]

examples:
/máːpúː/   [ma³³pu⁵⁵]   ‘forget’
/ŋəm/       [ŋəm₁¹]   ‘neck’
/ʃɪmónŋ/    [ʃ³⁵moŋ⁵⁵]   ‘navel’

/n/     alveolar nasal
→   [n]

examples:
/nikú/     [ni³⁹ku⁵⁵]   ‘needle’
/pʰotnák/   [pʰot⁵⁵nak³³]   ‘mole on skin’
/òn/        [ən⁵⁵]   ‘basket’

/ɲ/     palatal nasal
→   [ɲ]

examples:
/ɲú/       [nu⁵⁵]   ‘mother’
/ɲáːtpú/    [naːt³³pu⁵⁵]   ‘squeeze’
/tʰánpék/   [tʰa³³ŋek⁵⁵]   ‘face’

/ŋ/     velar nasal
→   [ŋ]

examples:
/ŋówpú/    [ŋow³⁹pu⁵⁵]   ‘fly’ (v)
/pʰâŋá/     [pʰa³³ŋa⁵⁵]   ‘below’
/jáːŋ/      [jaːŋ⁵⁵]   ‘worm’

2.2.5 Approximants

There is one lateral approximant phoneme occurring at the alveolar place of articulation and two central approximant phonemes occurring at the bilabial and palatal places of articulation.
The following shows the allophonic realisations of the approximants.

/l/  voiced alveolar lateral approximant
→  [l]  / elsewhere

examples:
/lá/  [la^55]  ‘brass’
/ŋúli/  [ŋu^33]i^55]  ‘tale’
/wánlon̓/  [wan^33]on̓^11]  ‘flame’

/w/  voiced labial-velar approximant
→  [w]

examples:
/wán/  [wan^55]  ‘fire’
/ŋów/  [a^33]ŋow^55]  ‘NEG-dumb’
/ʃ̃ōwá/  [ʃ̃a^33]lo^55]wá^55]  ‘daytime’

/j/  voiced palatal approximant
→  [j]

examples:
/jákpù/  [ja:k^55]pu^55]  ‘sell’
/jipùk/  [ji^33]puk^11]  ‘rabbit’

2.3 Vowel Phonemes

There are 7 vowel phonemes in Chang as shown in the following table. They phonemic symbols are represented as it is in orthography, i.e. in text and language examples.

<table>
<thead>
<tr>
<th>Table 2-4 Vowel Phonemes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>HIGH</td>
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<tr>
<td></td>
</tr>
<tr>
<td>MID</td>
</tr>
<tr>
<td>LOW</td>
</tr>
</tbody>
</table>

The length of the vowels, /a/, /e/ and /i/ contrast phonemically in Chang. It is accounted for in the syllable structure (see §2.1) to minimize vowel phoneme numbers. This is to adhere to the general principal of making systems as simple as possible (Lass 1984: 25)
The following (sub-) minimal pairs of words demonstrate phonemic contrasts between phonetically similar vowels.

/i/ versus /e/  
/pɪ/ ‘grandparent’  
/pʰɛ/ ‘flesh’  
/u/ versus /ɒ/  
/lʊ̞/ ‘sting’  
/lɒm/ ‘odour’

The high front vowel, /i/ is realised as [i] when it precedes an oral stop, i.e. /p/, /t/, /k/ or a nasal stop, i.e. /m/, /n/, /ŋ/ in the coda position. /ŋ/ does not occur in the coda position. In preparing for the oral or nasal closure, the vowel /i/ is realised as extra short, thus results in the realisation of [ɪ], e.g. [ɪ³³] ‘slap’ and [kʰm⁵⁵] ‘shut’.

/i/  
→ [ɪ] in free variation  
→ [ɪ] elsewhere

examples:  
/fɪpən/ [fɪ³³ʊn₁₁] ‘flower’  
/fɪnpû/ [fɪn⁵⁵pû] ‘put’  
/wiː/ [wiˌ₁¹] ‘body hair’

The following shows the allophonic realisations of the vowel phonemes.

/e/  
→ [e]

examples:  
/sɛk/ [sɛk₁¹] ‘field’  
/fɛ/ [fɛˌ₁¹] ‘one’  
/nɛj̆kʰɛk/ [nɛj³³kʰɛk₁¹] ‘strip of clothing’

/ə/  
→ [ə]

examples:  
/fɑŋɔt/ [fɒŋt₁¹] ‘before’  
/kʰɔn/ [kʰɔn₁¹] ‘hole’

/u/  
→ [u]

examples:  
/lʊ̞/ [lu⁵¹] ‘sting’  
/ʃɛjœpû/ [ʃɛj₁¹ʊ⁵⁵] ‘exchange’  
/samɲû/ [sam⁵⁵ɲu] ‘compress’
A sketch grammar of Chang

\[ /a/ \]
\[ \rightarrow \ [\text{a}] \]

examples:
\[ /\text{t\text{ā}k}/ \quad [\text{ta:k}^{55}] \quad \text{‘back’} \]
\[ /\text{p\text{ā}w}/ \quad [\text{p\text{ā}w}^{11}] \quad \text{‘fish’} \]
\[ /\text{k\text{ē}j\text{lāng}/ \quad [\text{kej\text{lāng}^{55}}] \quad \text{‘kidney’} \]

Chang does not make a phonemic distinction between the mid-high rounded back vowel \([o]\) and the mid-low rounded back vowel \([\text{a}]\) and thus, the phoneme /o/ is realised as [o] or [\text{a}] in free variation. The frequency of the first formant of the phoneme /o/ in word tokens may lie anywhere between 450Hz to 650Hz. The following shows the allophonic realisations of the vowel phonemes, /o/ and /u/.

\[ /o/ \]
\[ \rightarrow \ [\text{a}] \sim [o] \quad \text{in free variation} \]

examples:
\[ /\text{k\text{o}l\text{i}/} \quad [\text{k\text{o}l\text{i}^{3\text{h}55}] \quad \text{‘horse’} \]
\[ /\text{\text{a}l\text{o}/} \quad [\text{\text{a}l\text{o}^{3\text{h}11}] \quad \text{‘NEG-stand’} \]

\[ /u/ \]
\[ \rightarrow \ [u] \]

examples:
\[ /\text{t\text{ū}n\text{u}/} \quad [\text{t\text{ū}n\text{u}^{3\text{h}55}] \quad \text{‘elephant’} \]
\[ /\text{\text{j\text{ū}n}/} \quad [\text{\text{j\text{ū}n}^{55}] \quad \text{‘abdomen’} \]
\[ /\text{\text{u}k}/ \quad [\text{\text{u}k^{55}] \quad \text{‘pig’} \]

2.4 Tonemes

In Hutton’s (1929) documentation of the Chang language, Hutton differentiates between three tones: high, mid and low. Hutton uses examples only from minimal pair of words where there is a tonal contrast between the high and mid level tones. For example, both lexical items, ‘salt’ and ‘house’ are transcribed as \textit{cham} by Hutton (1929: 4) but ‘salt’ has a high tone while house has a low tone. No examples for mid-tone are given. On the other hand, Coupe (2006b) identifies 3-tone system in Chang: low level, high level and falling. Contrastingly, a falling tone is not identified by Hutton (1929). The fundamental frequency of monosyllabic tokens in each tone level are measured across two speakers and plotted on a graph as a function of time. Figure 3 shows the frequency in hertz of the tonemes identified by Coupe (2006b) in Chang.
Tonemes are given in diacritics and allotonic realisations of tonemes are given using the numerical values of Chao’s (1930) tone letters. The high tone is the most widespread /σ/. Low tone /σ̃/ is the second most widespread in the language. Falling tone /σ̴/ is rare, e.g. kōw ‘door’, kū ‘nine’. There is a possibility that the falling tone could have been borrowed as related languages may borrow tone categories and systems from each other (Matisoff 1992). In both Phom and Wancho which are grouped together with Chang under the Konyak subgroup, falling tones are shown to be prevalent (Matisoff & Phom 1998; Matisoff & Wangsu 1998). The likelihood needs further research.

Utterances can have up to 5 syllables, e.g. kōjavēpūjāk ‘son’s wife’. High tones may be realised as mid-level tones when they precede or follow a syllable with a low tone. Similarly, low tones may be realised as mid-level tones when they precede or follow a syllable with a high tone. Mid level tones do not occur on monosyllables in isolation. The alternation in tones is due to the tone sandhi effect. A syllable seems to be influenced in both ways by both the preceding and the following syllable. A further investigation of the tone sandhi effect is needed and this is beyond the scope of this thesis. Therefore, the tone sandhi is approximated as the following:

\[
\begin{align*}
/\sigma/ & \rightarrow [\sigma^{33}] & /\hat{\sigma} \\
& \rightarrow [\sigma^{33}] & /\tilde{\sigma} \\
& \rightarrow [\sigma^{55}] & /\_\sigma \\
\end{align*}
\]

examples:

/ʃɪmɔn/ ʃɪmɔn ‘navel’  
/jɪbʊk/ [jɪbʊk] ‘rabbit’
2.5 Morpho-phonological Process

In an elicitation of the negativity of items in the word list, it was discovered that the negative prefixes may be realised in different forms as seen in Table 6-1. The negative prefix is realised as á- in more than half of the elicited negated verbs. The allomorphs arise due to the effect of vowel harmony across morpheme boundaries. The realisation of the negative prefix is conditioned by the vowel of the following verb stem. This is illustrated in the following rule:

\[
\text{á-} \rightarrow V_n^- / \_ (h) V_n
\]

In the presence of a consonant in the onset position, the vowel change is only triggered by the glottal fricative in the onset position of the syllable in the verb root.

<table>
<thead>
<tr>
<th>VERB</th>
<th>GLOSS</th>
<th>NEGATED VERB</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) tôm-pù</td>
<td>dance-NOM</td>
<td>á-töm</td>
<td>NEG-dance</td>
</tr>
<tr>
<td>(ii) hùn-pù</td>
<td>be.new-NOM</td>
<td>ú-hùn</td>
<td>NEG-be.new</td>
</tr>
<tr>
<td>(iii) hòt-pù</td>
<td>frightened-NOM</td>
<td>ʔ-hòt</td>
<td>NEG-frightened</td>
</tr>
<tr>
<td>(iv) hù-hù</td>
<td>hide-NOM</td>
<td>ú-hùʔ</td>
<td>NEG-hide</td>
</tr>
<tr>
<td>(v) olín-pù</td>
<td>‘enjoy-NOM</td>
<td>ʔ-olín</td>
<td>NEG-enjoy</td>
</tr>
<tr>
<td>(vi) ójù-pù</td>
<td>fight-NOM</td>
<td>ʔ-ójùʔ</td>
<td>NEG-fight</td>
</tr>
</tbody>
</table>
3 Word Classes

Word classes, also known as parts-of-speech, can be distinguished in a language based on the following criteria (Schachter 1985: 3):

- Distribution – the position that a word occurs in
- Function – the grammatical function that the word plays in a larger structure whether it is acting as an argument or a predicate
- Associated grammatical categories – the types of inflectional and derivational morphology that are able to occur on their stems

A distinction can also be made between open and closed word classes (Robins 1964: 230). Closed classes have a restricted membership of words largely the same for all speakers of the language. Membership for open classes, on the other hand, is unrestricted and may vary from speaker to speaker, time to time. In Chang, nouns and verbs belong to the open word classes whereas pronouns, numerals, demonstratives, postpositions and discourse connectives constitute the closed word classes. The list of word classes may not be comprehensive because most of the data are from texts instead of elicitation.

3.1 Nouns

Nouns function as the heads of noun phrases. They are mostly comprised of lexical items that refer to entities that exist in space and time like people, places or things. Abstract nouns such as those that refer to qualities or states can also be derived from nominalizing verbs with the suffix, -pú, e.g. hêmâj-pú (be.beautiful-NOM) ‘be beautiful’ (see §4.4 for nominalizations).

Most nouns are mono or disyllabic in Chang, e.g. lôj ‘boat’, hîn ‘crab’, sînnà ‘gold’. Noun that have more than two syllables are rare, e.g. nàjsômôj ‘clothes’. Some of the nouns that have two syllables or more are actually formed by the compounding of two nouns, e.g. the compounding of sôn ‘breast’ and têj ‘water’ to give sôntêj (breast+water) ‘milk’.

Nouns in Chang are unbound as they do not seem to employ relational morphemes to group related nouns together. This is different from the related languages, Wancho and Phom. In Wancho, some words concerning the sky or the weather are prefixed with zanj-, e.g. zanj-han ‘REL-sun’, zanj-vat ‘REL-rain’ (Burling & Wangsu 1998: 56). Phom employ a similar form, zabj- (Burling & Phom 1998). However, in Chang, they are simply fûmû ‘sun’ and lànj ‘rain’. There is also no relational morpheme found in body parts, e.g. phûm ‘arm’, ik ‘finger’. This is interesting for reconstruction of proto-Konyak and perhaps, further research can be done.
3.1.1 Pronouns

Pronouns are forms used to substitute a noun or a noun phrase. Personal pronouns in Chang have distinctions in person, number and case. 3 persons (first, second and third), 3 numbers (singular, dual and plural) and 2 cases (ergative and absolutive) are distinguishable. The distinction in cases tells the semantic roles (see §6 for grammatical functions). Table 3-1 shows the list of personal pronouns in Chang. These pronouns are elicited data.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>ñëj</td>
<td>ñò</td>
<td>ñi</td>
</tr>
<tr>
<td>DUAL</td>
<td>sâtìëj</td>
<td>sâtí</td>
<td>kásëj</td>
</tr>
<tr>
<td>INC</td>
<td>kâsi</td>
<td>kâsi</td>
<td>hâwëj</td>
</tr>
<tr>
<td>EXC</td>
<td>sâniëj</td>
<td>sâni</td>
<td>kâni</td>
</tr>
<tr>
<td>PLURAL</td>
<td>kâniëj</td>
<td>kâni</td>
<td>kâni</td>
</tr>
</tbody>
</table>

The following example shows the use of the ergative first person singular pronoun in text.

(1) ñëj thûnù lápâkâj tô lûnkâj

1.SG.ERG elephant catch-ANT-AUX thus tell-AUX.PST

“I have caught an elephant”, he said.

3.2 Verbs

Verbs express actions, processes or states (Schachter 1985: 9). The ability of verbs to negate is the most defining criterion for establishing this word class in TB languages (Matisoff 1991: 495). In Chang, verbs can be negated with the prefix à-, e.g. à-kâj (NEG-be.strong) ‘not strong’ (see §2.5 for allomorphs of the negative prefix and §5.1.1 for discussion of the negative prefix). Verbs in Chang function as the predicate head but not as arguments. They can also be inflected for tense, aspect and modality, e.g. kâm-kâj (make-PST) ‘made’, along with various suffixes on the verb stem (see §5.1 for verbal morphology).

Verb classes can be identified based on transitivity determined by the number of core arguments a verb requires (Crystal 1980). Core arguments are the participants in clauses and depending on the associated verb, they can be assigned semantic roles such as agent (A) or patient (O) (Payne 1997: 47) (see §6 for semantic roles in grammatical functions).

Chang verbs can be classified into intransitive and transitive classes.
3.2.1 Intransitive verbs

An intransitive verb occurs as the head of a verbal clause with only a single core argument (Payne 1997: 171). Intransitive verbs in Chang may describe states, e.g. ȍlin ‘be.happy’, ȁw ‘be.hot’, bodily functions, e.g. jòp ‘sleep’, fōtfōt ‘urinate’ or motions, e.g. pi ‘fly’, làŋ ‘run’.

3.2.2 Transitive verbs

A transitive verb occurs as the head of a verbal clause with two core arguments, describing the relation between these two participants (Payne 1997: 171). Examples of transitive verbs in Chang include verbs of perception such as ṭôm ‘look’, làm ‘search’ and verbs of action-processes such as thàmjù ‘hit’, sòp ‘pierce’. These verbs involve both an agent and an affected patient.

A further sub-class, surface-contact verbs can be derived from the transitive verb class and is explained in the following section.

3.2.3 Surface-contact verbs

“Surface-contact verbs” coined by Fillmore (1970: 130) emphasizes on the existence of some physical contact between two participants. The two participants may not necessarily have undergone any change. Example of surface-contact verbs in Chang include ip ‘slap’, sàmbùnfáp ‘kiss’ and ŋàm ‘beat’.

Surface-contact verbs are singled out from the rest of the transitive verbs in Chang because their O arguments are marked differently from that of other transitive verbs. The O arguments take on a dative marking -là, unlike the O arguments of the rest of the transitive verbs being unmarked (see §6.1.2 for case marking).
3.3 Numerals & Classifiers

Numerals in Chang follow classifiers to quantify nouns, e.g. pûhêk pâm sâm (fruit CLASS 3) ‘three pieces of fruit’. Table 3-1 shows numerals of Chang from one to ten.

<table>
<thead>
<tr>
<th>NUMERAL</th>
<th>FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ŋêʔ</td>
</tr>
<tr>
<td>2</td>
<td>ŋîʔ</td>
</tr>
<tr>
<td>3</td>
<td>sôm</td>
</tr>
<tr>
<td>4</td>
<td>lâjʔ</td>
</tr>
<tr>
<td>5</td>
<td>ᵃwʔ</td>
</tr>
</tbody>
</table>

Table 3-2 Chang numerals from 1 to 10

<table>
<thead>
<tr>
<th>NUMERAL</th>
<th>FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ŋêʔ</td>
</tr>
<tr>
<td>2</td>
<td>ŋîʔ</td>
</tr>
<tr>
<td>3</td>
<td>sôm</td>
</tr>
<tr>
<td>4</td>
<td>lâjʔ</td>
</tr>
<tr>
<td>5</td>
<td>ᵃwʔ</td>
</tr>
<tr>
<td>6</td>
<td>lâk</td>
</tr>
<tr>
<td>7</td>
<td>nêt</td>
</tr>
<tr>
<td>8</td>
<td>sêt</td>
</tr>
<tr>
<td>9</td>
<td>kû</td>
</tr>
<tr>
<td>10</td>
<td>ān</td>
</tr>
</tbody>
</table>

In Chang, numerals eleven to nineteen are expressed with ten being used as a base, e.g. án-tîk-ŋêʔ (10-ABOVE-1) ‘eleven’ which can be literally translated as one above ten. In the expression of round numbers from twenty onwards however, a vigesimal counting system which means that the base is twenty is used. Chang belongs to a group of what Matisoff (1995: 149) terms as the “super-vigesimal” languages along with other members of the Konyak group, Wancho, Phom and Konyak. In this group, the even round numerals (20, 40, 60, 80) are expressed as multiples of twenties while the odd round numerals (30, 50, 70, 90) are expressed in addition or subtraction of the next lower or higher multiple of twenty (Matisoff 1995). They are “super-vigesimal” because even hundred is expressed as five times of twenty. Two hundred is therefore expressed as ten times of twenty. In Chang, the odd round numerals are found to be ten subtractive from the next higher multiple of twenty as shown in Table 3-3. Thirty is however, uniquely expressed as khûṭfîn.
### Table 3-3 Chang round numerals

<table>
<thead>
<tr>
<th>NUMERAL</th>
<th>FORM</th>
<th>DERIVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>sàwʧēʔ</td>
<td>20 x 1</td>
</tr>
<tr>
<td>30</td>
<td>khùʧîn</td>
<td>unique</td>
</tr>
<tr>
<td>40</td>
<td>sàwɲîʔ</td>
<td>20 x 2</td>
</tr>
<tr>
<td>50</td>
<td>ânfinsöm</td>
<td>substrate 10 from (20 x 3)</td>
</tr>
<tr>
<td>60</td>
<td>sàwsòm</td>
<td>20 x 3</td>
</tr>
<tr>
<td>70</td>
<td>ânfìnľâjîʔ</td>
<td>substrate 10 from (20 x 4)</td>
</tr>
<tr>
<td>80</td>
<td>sàwlâjîʔ</td>
<td>20 x 4</td>
</tr>
<tr>
<td>90</td>
<td>ânfìnŋâwʔ</td>
<td>substrate 10 from (20 x 5)</td>
</tr>
<tr>
<td>100</td>
<td>sàwnjâwʔ</td>
<td>20 x 5</td>
</tr>
<tr>
<td>200</td>
<td>sàwân</td>
<td>20 x 10</td>
</tr>
<tr>
<td>1000</td>
<td>hâzâu</td>
<td>loan from Hindi.</td>
</tr>
</tbody>
</table>

In between round numbers, the numerals are expressed in the form of an addition to, e.g. twenty-one is given as sàw-tòʔʧēʔ (20-ALL-1) which can be literally translated as ‘one added to twenty’. The same form, tòʔ, is also postposition encoding the spatial case of allative. (see §3.5.1 for spatial cases).

Cardinal numerals are suffixed with -pòw to form ordinals. -pòw is also a nominalizing suffix (see §4.4 and §4.4.2 for more about -pòw). The ordinal given in (2) functions as an adverbial.

(2) hàw pù-jùtòʔ jù-pòw á:ŋ-ŋâj-ʧînēj
  3SG tree-AUG ALL two-ORD climb-RPET-while
  ‘While he was climbing the tree a second time,’

### 3.4 Demonstratives

Demonstratives are used in Chang to point to the referent of the following noun (Schachter 1985: 40). A demonstrative may act like a determiner by modifying the noun it follows. Such a demonstrative is marked for case if it occurs at the end of a noun phrase, e.g. kêj khò-ēj (dog this-ERG) ‘this dog’. Table 3-4 shows the demonstratives in Chang. This list is not comprehensive as they are extracted from texts and not elicited.
Table 3-4 Demonstratives in Chang

<table>
<thead>
<tr>
<th>ENGLISH GLOSS</th>
<th>FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>This</td>
<td>hò</td>
</tr>
<tr>
<td>That</td>
<td>khò</td>
</tr>
<tr>
<td>Here</td>
<td>hátòw</td>
</tr>
<tr>
<td>There</td>
<td>khátòw</td>
</tr>
</tbody>
</table>

hátòw ‘here’ and khátòw ‘there’ are distal demonstratives that refer to space and can take the role of a pronoun, e.g. háw-èj khátòw tʃəув-kəj (3SG-ERG there look.PST) ‘he looked there’.

### 3.5 Postpositions

Postpositions follow noun phrases in Chang e.g. mâŋjúk â (shirt LOC) ‘in [his] shirt’, encoding semantic cases. The postpositions can be categorized into spatial (§3.5.1) and non-spatial markers (§3.5.2).

#### 3.5.1 Spatial Cases

A postposition that marks spatial cases indicates location in space. A list of the forms and their semantic meanings is given in Table 3-5. There is similarity in form between the locative á and the ablative káʔ. DeLancey (1985: 62) argues that the ablatives in TB languages come from a more general locative. It seems likely to be the case for Chang. Noonan (2005) uses the term ‘syncretism’ to refer to situations where a form marks more than one relational function. Relational functions include both grammatical functions and location. Therefore, tòʔ exhibits syncretism.
Two postpositions can also occur one after the other. Noonan (2008) terms such instances as ‘case stacking’ where two or more case markers are needed because there is more than one reference point of the place. In (3), there are reference points indicating ‘towards’ and ‘inside’.

(3)  

\[
\begin{array}{cccccccc}
\text{màñw-pòw} & \text{si} & \text{kêj} & \text{hâm} & \text{lák} & \text{kà} & \text{á:ti-ti-pù} \\
\text{child-MASC} & \text{and} & \text{dog} & \text{together} & \text{cliff} & \text{ABL} & \text{fall-CAUS-REL} \\
\text{tèj} & \text{mà:ŋ} & \text{tò} & \text{fà:ti-làŋ-kàj} \\
\text{water} & \text{INES} & \text{ALL} & \text{land-AWAY-PST.AUX} \\
\end{array}
\]

‘The boy and the dog who both fell from the cliff landed in the water’

\section*{3.5.2 Non-spatial cases}

Postposition can also mark non-spatial cases. Table 3-6 shows a list of postpositions and their semantic meanings.

\begin{table}[h]
\centering
\caption{List of postpositions marking non-spatial cases}
\begin{tabular}{l|l}
\hline
\textbf{SEMANTICS} & \textbf{FORM} \\
\hline
COMITATIVE (in company with someone) & ñùá \\
PURPOSIVE (for the purpose of) & ñàŋà \\
INSTRUMENTAL (using something as a tool) & ñj \\
\hline
\end{tabular}
\end{table}

The two examples below show how the non-spatial postpositions are used in texts.

(4)  

\[
\begin{array}{cccccccc}
kêj & \text{ñàw-kàj} & \text{kàj} & \text{sà:k} & \text{jùá} & \text{màñw-pòw} & \text{ffùu-kò} & \text{là:ŋ-kò} \\
dog & \text{go-PST.AUX} & \text{also} & \text{deer} & \text{COM} & \text{child-MASC} & \text{look-SIM} & \text{run-SIM} \\
\end{array}
\]

‘The dog also went running along with the deer, looking at the boy.’
The form, èj marks not only instrumental but also ergativity (see § 6.1.2 for case marking in grammatical functions). This pairing of instrumental and ergativity in syncretism has been widely attested primarily in the Bodic languages of the TB family by Noonan (2005).

### 3.6 Conjunctions

Conjunctions are words that are used to join words, phrases or clauses (Schachter 1985: 46). Table 3-7 shows conjunctions attested in the data.

<table>
<thead>
<tr>
<th>ENGLISH GLOSS</th>
<th>FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>and</td>
<td>sì / hòpà</td>
</tr>
<tr>
<td>but</td>
<td>lâwsikjàj</td>
</tr>
<tr>
<td>while</td>
<td>ŋìnèj</td>
</tr>
<tr>
<td>when</td>
<td>lâtány</td>
</tr>
</tbody>
</table>

lâwsikjàj is only attested at the start of the sentence but serves to connect the clause to the previous one in narrative text.

(6) lâwsikjàj hâwsi-èj pùhèk á-fâw

‘But, they two did not eat the fruit.’

The conjunctions, sì and hòpà are used interchangeably to coordinate nouns as shown in (7).

(7) (a) kèj sì nàfòw-pòw (b) kèj hòpà nàfòw-pòw
dog conj child-MASC dog conj child-MASC

‘dog and boy’

hòpà is also frequently found in the narrative texts to connect clauses, often indicating a connection of the following utterance to the one that has just ended such as in (8). However, the same cannot be said for sì as the latter can only coordinate nouns. In Ao, Coupe (2007)
terms such constructions as “discourse connectives” where they serve the purpose of creating
pragmatic structure in discourse.

(8) ṣòpà ṭù ḥúp-kàj
and head get-jam-PST.AUX

‘And [the dog's] head got stucked [inside].’

l regulating ‘when’ and फिनेज ‘while’ introduce subordinate clauses.

(9) ṣòpà ṭù pùhèk-pùu-pòw ṭù pùlò ḳà lòt-kàj
when fruit-tree-AUG-MASC this tree.canopy abl descend-PST.AUX

‘When the fruit owner came down from the canopy of the tree, …’

4 Noun Phrase & Nominal Morphology

A noun phrase serves as a core argument in A, S or O function or as an oblique argument
(optional participants). Its head is a noun or pronoun. The structure of the noun phrase is as
follows:

(pre-modifiers) noun (post-modifiers)

Pre-modifiers may be possessive pronouns and relative clauses. Possessive pronouns and
relative clauses occur in complementary distribution. Post-modifiers include attributes,
demonstratives and numerals. Demonstratives and numerals also occur in complementary
distribution. Overall, the order of the modifiers is postulated as follows:

{ possessive pronoun
  relative clause
} noun (attribute){ demonstrative
  numeral
}

Inflectional markings on the whole of the noun phrase are stipulated as the following:

Noun(-DIM)(-AUG)(-POW)(modifier)(-ERG)(-GEN)

Examples of noun phrases enclosed in brackets are shown in (10).

(10) [lò:n kòw-pòw mòt khò-èj] [khùn jànj-pú]
goat pull-NOM person this-ERG hat be.big-NOM

häuser kí-téj-kàj
wear-SEQ stay-CONT-PST.AUX

‘The man who was pulling the goat was wearing a big cap.’
The ergative marker, -\textit{ej} and the genitive case marker, -\textit{pu} (see §4.3 for genitive case marking) come at the end of the noun phrase. In nominal morphology, nouns can be inflected for diminutive, genitive, gender and augment. The order of these inflections in relation to the noun root has not been fully explored but the following noun structure is postulated:

\begin{verbatim}
root \{ -AUG -DIM \} \{ -MASC -FEM \}
\end{verbatim}

The remaining sections of chapter 4 will describe nominal morphology.

\section*{4.1 Augmentative and diminutive}

The augmentative marker -\textit{nu} is used to mark nouns, expressing greater intensity in comparison to the diminutive marker, -\textit{fow}. \textit{Nu} itself has a lexical meaning of ‘mother’ and \textit{fow} is indexed as ‘child’. These words have been grammaticalized to form bound morphemes that imply a sense of degree in size, e.g. \textit{ju-nu} ‘river’; \textit{ju-n-fow} ‘stream’. The use of this overt opposition between ‘mother’ and ‘child’ to represent augmentative versus diminutive is attested in many languages spoken in East and Southeast Asia including ST languages (Matisoff 1992). The augmentative marker denotes femininity in kinship terms, e.g. \textit{nofo-nu} ‘older sister’ (see §4.3 for gender case). It has also shown up in \textit{puhek pu-nu} (fruit tree-\textit{AUG}) ‘fruit tree owner’, possibly indicating a sense of ‘ownership’. However, further research is needed.

\section*{4.2 Gender}

The masculine marker is -\textit{pov}, e.g. \textit{nafow-pov} (child-\textit{MASC}) ‘boy’ with origins from \textit{pov} ‘father’. -\textit{pov} is also used as a nominalizing suffix described in §4.4.

Contrastingly, the feminine marker is -\textit{nu}. -\textit{nu} as stated in §4.1 is also an augmentative marker grammaticalized from the word, \textit{nu} ‘mother’.

\section*{4.3 Genitive Case}

-\textit{pu} is used to mark genitive case, expressing a possessive relation between two nouns. It attaches itself to the end of the possessor noun and the possessee noun follows, e.g. \textit{sak-\textit{ej}-pu l\textit{a}n} (deer-ERG-GEN horn) ‘deer’s antlers’.

Possessive pronouns are also formed though the inflection of pronouns with -\textit{pu}, e.g. \textit{noj-pu} \textit{g\textit{om}} (1.SG.ERG-GEN house) ‘my house’; \textit{haw-\textit{ej}-pu} \textit{g\textit{om}} (3.SG.ERG-GEN house) ‘his house’.

26
4.4 Nominalizations

Nominalization is a derivational process in which something is turned into a noun (Comrie & Thompson 1985: 349). There are two nominalizing suffixes or nominalizers in Chang, -pû and -pów. They are marked on verb roots and thus, turn verbs into nouns. Note that -pû and -pów have been discussed earlier as a possessive marker (§4.3) and a masculine marker (§4.2) respectively. The multi-functional uses of -pû and -pów will be summarized in §4.4.2.

The use of -pû can turn a verb root into a noun as seen in (11).

\[
\text{\textbf{(11)} } \text{sat-pû} \quad \text{khô} \quad \text{pûhék} \quad \text{pû-pû-pów-èj} \quad \text{fî}
\]
\[
\begin{align*}
\text{go.away-NOM} & \quad \text{this} \quad \text{fruit} \quad \text{tree-AUG-MASC-ERG} \quad \text{TOP} \\
\text{á-ŋjè-kô} & \\
\text{NEG-know-SIM}
\end{align*}
\]
\[
\text{‘That going away [of the boy] was not known by the fruit owner...’}
\]

In the narrative text, the language consultant was commenting how a boy in the Pear Story had stolen some fruits from the fruit owner and went away. The nominalized structure derived from a verb root with the nominalizing suffix, -pû is the head noun of the noun phrase. It functions exactly the same as a noun.

In Chang, the product of nominalization is not only confined to nouns. Modifiers of a noun phrases can also be derived. The many functions of nominalization including producing relative clauses have been well documented in other TB languages (see Coupe, 2007 for Ao; Watters, 2008 for Himalayish languages; Lapolla, 2008 for Rawang). Nominalizations as modifiers will be elaborated upon in the next section (§4.4.1).

4.4.1 Nominalizations as modifiers

The modifier-type of nominalization comes as a form of relativization in which the nominalized structure becomes of subordinate status. This is exemplified in (12a).

\[
\text{\textbf{(12)} } \begin{align*}
\text{\textbf{(a)} } & \text{lo:n} \quad \text{kôw-pów} \quad \text{môt} \quad \text{khô-èj} \\
\text{goat} & \quad \text{pull-NOM} \quad \text{person} \quad \text{this-ERG}
\end{align*}
\]
\[
\begin{align*}
\text{\textbf{(b)} } & \text{khûn} \quad \text{jûy-pû} \quad \text{hâ:n-ân} \quad \text{ki-têj-kàj} \\
\text{hat} & \quad \text{be.big-NOM} \quad \text{wear-SEQ} \quad \text{stay-CONT-PST.AUX}
\end{align*}
\]
\[
\text{‘The man who was pulling the goat was wearing a big cap.’}
\]
There are two modifiers formed through nominalization in (12) and there are differences between the two. The modifier in (12b) is formed with -pû, unlike that in (12a) which uses -pôw. Furthermore, (12b) follows the head whereas (12a) precedes the head. (12b) functions like an attribute. Such attributes modify the head noun and are derived from a verb root through the use of the suffix, -pû as seen in (12b) and (13). In the data, only verbs denoting states are nominalized with -pû to form attributes, as a post-modifier. Coupe (2007) refers to the attributes formed by nominalizing verbs in the Ao language as ‘relativized attributes’.

(13)  hâw-èj  kâm  kû-n-pû  fê  tân-kâj
     3SG-ERG  basket  be.empty-NOM  one  set-PST.AUX

‘He placed an empty basket.’

In (13) above, the nominalized verb follows the noun as an attribute. But, it can occur before the head too as a relative clause, i.e. kû-n-pû kâm (be.empty-NOM basket) ‘basket which is empty’ is also possible. Whether it is ‘the empty basket’ or ‘the basket that is empty’, the meaning does not change much. However, in post-nominal attributes, only the roots of stative verbs are nominalized, such as in (12b) and (13). And, only -pû can be used as the nominalizing suffix.

Relative clauses will precede the head it modifies such as in (12a) and (14) and either -pû or -pôw can be used as the nominalizing suffix. As the relative clause precedes the head, Chang exhibits externally-headed relative clauses. The head occurs in the matrix clause whereas the gapping strategy is deployed in the relative clause.

(14)  kéj  khô-èj  [jûk  ã-fîn-ân  phô-pû]  thûn  khô
      dog  this-ERG  frog  place-SEQ  keep-NOM  vessel  this
       tô?  lôm  ã-fôm-ân  ã-fôm-lâ  fûnâ  khù  á:t-ti-kâj
      all  smell  sniff-UP  house-DAT  BEN  head  fall-CAUS-PST.AUX

‘The dog inserted its head inside the vessel in which the frog was kept in order to sniff and look.’

In the relative clause of (14), the head noun in the relativized clause serves as an oblique argument. The role of the head noun within the relative clause is of concern here because there is an accessibility hierarchy to the noun phrases that can be relativized according to its function as stated in the following according to Comrie (1989: 154)

subject > direct object > indirect object > oblique > processor
The accessibility hierarchy works such that if a given position can be relativized in a language, then all positions to the left of the hierarchy should also be able to be relativized. That is, since the oblique argument can be relativized in Chang, all positions to the left should be able to be relativized. Relativization of the direct object can occur in Chang, e.g. hāwši-ēj lá:p-pú júk (3DU-ERG catch-NOM frog) “The frog that they caught”. Relativization of the subject is shown in (12a). A bigger corpus is needed to seek out more examples.

4.4.2 -pú versus –pów

Other than being nominalizing suffixes, -pú and –pów each are also markers of various functions. Table 4-1 summarizes the comparison the two suffixes.

<table>
<thead>
<tr>
<th>Table 4-1 -pú versus -pów</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNCTIONS</td>
</tr>
<tr>
<td>nominalizations</td>
</tr>
<tr>
<td>verb to noun</td>
</tr>
<tr>
<td>verb to attribute</td>
</tr>
<tr>
<td>mark relative clauses</td>
</tr>
<tr>
<td>mark genitive NPs</td>
</tr>
<tr>
<td>mark masculine nouns</td>
</tr>
<tr>
<td>mark ordinals</td>
</tr>
</tbody>
</table>

The syncretic nature of these morphemes is not uncommon in TB languages. The particle ve in Lahu marks not only genitive constructions and relative clauses but also serves as a nominalizer (Matisoff 1972). In Written Tibetan, the suffix –pa has at least 4 uses: to serve an ergative function; to mark masculinity; to serve as a nominalizer or simply just “bulk-providing” without particular meaning or significance (Matisoff 1992: 322). In Chang, -pów also surfaces in ájpów ‘much’ in which it does not seem to function as any of the above in Table 5-1. Therefore the functions of the nominalizing suffixes need to be further looked into to discover more uses.

5 Verbal morphology

Verbs occur clause-finally, typical of TB languages in Nagaland with the exception of the Karenic languages and Bai (Matisoff 1991: 496) (see §6.1.1 for constituent order). Verbs in Chang function as the predicate but not as arguments. However, they can be used to derive
nouns or noun modifiers through nominalization, which results in the change of word class (§4.4).

The structure of a verb is explained in the following:

$$\text{(NEG-)} \text{root} (-\text{LEX}) (-\text{COLL}) (-\text{ASP}) (-\text{CAUS}) (\text{BEN}) \{ -\text{CV} \quad -\text{TENSE} \quad -\text{NOM} \}$$

1 2 3 4 5 6 7

The verb root forms the head of the predicate and is either monosyllabic or disyllabic. A verb root may be formed from the reduplication of a noun, e.g. ʧt ‘urine’ → ʧʧt ‘urinate’. It is not capable for existing on its own as bare verb roots have not been attested in the corpus. Therefore, while positions 1 to 6 are optional, optional 7 is obligatory to be filled with either a converb, tense or nominalizing suffix. Nominalizing suffixes have been previously discussed in §4.4.

The suffixes discussed here are inflectional morphology that do not change the word class of verbs with the exception of the nominalizing suffixes, which are discussed in §4.4.

### 5.1.1 Negative prefix á-

The negative morpheme, á-, prefixes onto the verb stem and serves as the most defining criterion for deciphering verbs in Chang. It has been attested in the corpus that the negative prefix can occur together with a converb suffix, -ko on the verb stem as shown in (15).

$$\begin{align*}
\text{hàw-éj} & \quad \text{hàw-éj-pù} & \quad \text{pùhék} & \quad \text{ká:m} & \quad \text{fɔn-àn} & \quad \text{phò-pù} \\
3\text{SG-ERG} & \quad 3\text{SG-ERG-GEN} & \quad \text{fruit} & \quad \text{basket} & \quad \text{fill-SEQ} & \quad \text{keep-NOM} \\
\text{ʧû?} & \quad \text{á-kì-kò} & \quad \text{hàpõn-kàj} \\
\text{one} & \quad \text{NEG-STAY-SIM} & \quad \text{realise-PST.AUX} \\
\text{’He realised that one of his fruit baskets filled with fruits was missing.’} \\
\end{align*}$$

There are allomorphs of the negative prefix arising out of morpho-phonological processes. They have been discussed in §2.5.

### 5.1.2 Lexical suffixes

The term ‘lexical suffix’ is used by Coupe (2007: 298) in his grammar of Ao language to group at least seventeen suffixes in Ao that express ‘lexically-oriented adverbia meanings’. I am applying this term to the three suffixes in Chang that appear to function in the same way
as those in Ao. These suffixes imply a relationship between the meaning it carries and the verb that it attaches to. A lexical suffix positions itself immediately to the right of the verb root in position 2. The three lexical suffixes are shown along with their glosses in Table 5-1. Coupe (2007: 298) suspects that lexical suffixes originated from compound verbs and later grammaticalized to become suffixes. With that, they are not only restricted to the compounds but can be used with more verb roots from different semantic classes.

<table>
<thead>
<tr>
<th>Table 5-1 Lexical suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOSS</td>
</tr>
<tr>
<td>SEP (separate)</td>
</tr>
<tr>
<td>UP (ascend)</td>
</tr>
<tr>
<td>AWAY</td>
</tr>
</tbody>
</table>

The lexical suffix, -ɲin expresses the end result of breakage by the action of the verb it attaches to. The same form occurs as in the lexical verb root of ɲin-pú (crack-nom) ‘crack’ and also forms part of the verb for ɲiɲin-pú (tear.NOM) ‘tear’. In (16), the lexical suffix is used with the verb root phát ‘hit’ with an implication that the impact of the verb causes the vessel in the story to break. Therefore, although not attested in the corpus, the lexical suffix is likely to attach to verbs such as kákjútà ‘collide’ that can cause an impact to the patient.

(16) h índ-pú khù à lòn-pú thùj khò

phát-ɲin-kày

hit-SEP-PST.AUX

‘That vessel, which its head was stuck in, was hit and shattered into pieces.’

The lexical suffix, -án implies a directional meaning of upwards. It is interesting to note that in (17) the combination of the verb khàw ‘be bitter’ and the lexical suffix entails the emotion of anger. The use of the directional lexical suffix somehow indicates that the bitter level in the person has risen up to a level that he feels angry.

(17) h índ-èj àjpw khàw-án-kày

3SG-ERG much be.bitter-UP-PST.AUX

‘He was very angry.’

The lexical suffix, -láŋ is used in (18) with a directional meaning of ‘away’.
A sketch grammar of Chang

(18) nāfōw-pōw si kéj hám lāk kāʔ á:1-ti-pū
child-MASC and dog together cliff ABL fall-CAUS-REL
tēj mà:nj tōʔ já:t-lāj -kāj
water INES ALL land-away-PST.AUX

‘The boy and the dog who both fell from the cliff landed in the water.’

5.1.3 Collective -jū?

The suffix encodes collective activity and functions much like the English adverb ‘together’. The lexical suffix is also found in the stems of verbs that require reciprocal action such as ōjū-pū (quarrel-NOM) ‘quarrel’, ikjū-pū (joke-NOM) ‘joke’; or verbs that results in two or more entities coming together such as phōnjū-pū (connect-NOM) ‘connect’, sōwjū-pū (mix-NOM) ‘mix’, háwjū-pū (meet-NOM) ‘meet’. It is not known if the form jū? can stand alone with an independent meaning.

(19) hāw-pū fōŋ khāw-ān-pū hāw tūŋkāʔ pi-tūŋŋ
3SG-AUG group be.bitter-UP-REL 3SG near fly-DUR
tā:n-jūʔ-kō ki-koj
pass.by-COLL-SIM stay-PST.AUX

‘The swarm of angry bees [belonging to the hive] were flying together past nearby him.’

(20) hopā hāwsi hám-ēj ājpōw őlin-jūʔ-kō thūŋ-tōw ā
and 2DU together-ERG much enjoy-COLL-SIM vessel-there LOC
tfīn kéj sī nāfōw-pōw hāwsi-ēj fōu-kōj
place dog and child-MASC 2DU-ERG look-PST.AUX

‘And the two of them, together, were enjoying looking at the frog after placing it in the vessel.’

In (20), collectivity is also indicated by hám ‘together’ which acts like a modifier to the head noun and carries the ergative marker. It can also group noun phrases together, e.g. nāfōwpōw si kéj hám ‘child and dog together’. Therefore, collectivity in Chang can be implied through the collective suffix on the verb stem, -jūʔ or the noun modifier, hám.

5.1.4 Aspectual suffixes

Aspect deals with the internal temporal shape of situations (Payne 1997: 234; 238). Two aspectual suffixes are found to occupy in position 4 of the verb stem. Other aspect suffixes
waits to be attested in a larger corpus. They are the continuative aspect and the repetitive aspect.

5.1.4.1 Continuative aspect – téj / tânj

The continuative aspect refers to a progressive, dynamic process (Payne 1997: 240). The continuative aspect appears in two forms, -têj and -tân. The origins of both or whether they are related needs further analysis.

(21) nàfòw-pôw khò-ej jùk khátòw yá-tàn-lêj-kâj
child-MASC this-ERG frog there call-CONT-?-PST.AUX

‘The boy kept on calling for the frog.’

In (21), the continuative suffix is followed immediately with an unknown suffix -lêj. The latter has the same form as the verb root, lêj-pù (lead-NOM) ‘lead’. Further analysis beyond the scope of this thesis is needed.

(22) khônêj mût yê-ej pûhôk làk lè-ân kl-têj-kâj
there CLASS one-ERG fruit field cultivate-SEQ exist-CONT-PST.AUX

‘There was a man was cultivating a field of fruit there.’

The other form, -têj appears in existential clauses. Every instance of it in the corpus follows immediately behind the existential verb root, kî ‘exist’.

5.1.4.2 Repetitive aspect -nâj

The repetitive marker denotes a repetition of the verb, i.e. the action is being carried out again and again. It may denote that the activity is repeated for a known or unknown number of times. In (23), it is not clear how many times the action is repeated.

(23) hôpà hàwôm pôntôw lôw-ân pûhêk khôk-ân áp-pù
and 3PL all come-SEQ fruit overturn-SEQ scatter-NOM
khô kâ:m khôtôw hê-nâj-kùk-kâj
this basket there grasp-RPET-BEN-PST.AUX

‘They all came and repeatedly picked up the fruit that had turned over and scattered from the basket for the boy.’

In (24), the use of the repetitive suffix denotes that the action was done repeatedly with each time only stealing a fruit, instead of stealing three fruits all at once.
A sketch grammar of Chang

5.1.5 Causative suffix -t

The causative suffix functions to increase the number of arguments that can be used with a verb (Payne 1997: 176). In Chang, the suffix allows an intransitive verb to be used with two core arguments instead of one without a change of verb or to the verb root. The causative suffix, -t occurs in position 5, which is to the right of lexical, reciprocal and aspectual suffixes but to the left of benefactive in position 6 and either tense, converb or the nominalising suffixes in position 7. The use of the causative suffix is illustrated in (25) and (26).

(25) ʰɔpə ʂájkɔl phasis-án ɿə-ti-kùʔ-ŋəj
and cycle lift.up-SEQ stand-CAUS-BEN-PST.AUX
‘And [they] lift up and made the bicycle stand for him.’

In (26), the boy becomes the patient of the intransitive verb, ə:t ‘fall’ even though the agent was not mentioned. However, the previous line in the narrative mentioned an owl emerging and the context allows for the reader to draw that the owl is the causer or the agent of the cause. The causer would take on the ergative marking (see §6.1.2 for case marking). However, in both (25) and (26), the causer does not appear. The causee, which undergoes the cause, in both (25) and (26) takes zero marking, much like a direct object. The causee which would be the subject of the non-causative form cannot have the ergative marker because languages typically cannot tolerate predicate with more than one subject (Comrie 1985: 335).

(26) ʰɔpə nafəw-pów kʰ ŋəŋ-án ə:t-ti-kəj
and child-MASC this push-SEQ fall-CAUS-PST.AUX
‘And the boy was pushed and made to fall [by the owl]’

In the causativization of transitive verbs such as in (27), the number of arguments involved increases to three. The causer supposedly is marked like the subject. The causee is marked with a dative, like an indirect object and the direct object remains unmarked.
5.1.6 Benefactive, -kù?

The benefactive suffix occurs in the penultimate position of the verb stem, to the right of all other suffixes and only preceding the tense markers, converb suffixes or nominalising suffix occurring in last position. Given the same form, the suffix has its origins from the verb root, kù? ‘give’. It means that the action of the verb is carried out by the core argument for the benefit of another animate noun and functions like the English ‘for’. The use of the suffix is demonstrated in (23) and (25) above.

5.1.7 Converb suffixes

A converb serves as a clause linking device and is typically marked by an affix on the verb stem (Coupe 2006a). Coupe (2007) finds at least 10 suffixes in the Ao language that serve a purpose of linking multiple sequences of verbs together and labels them as converb suffixes. There are three such suffixes in Chang in the data that allow for linkage of verbs and they are listed in Table 5-2.

<table>
<thead>
<tr>
<th>Table 5-2 Converb suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOSS</strong></td>
</tr>
<tr>
<td>SEQ (sequential)</td>
</tr>
<tr>
<td>SIM (simultaneous)</td>
</tr>
<tr>
<td>CV (converb)</td>
</tr>
</tbody>
</table>

As a converb suffixes indicate the end of a converb and the start of another verb which follows immediately, it never occurs in main verbs. The simultaneous and sequential suffixes are illustrated in (28) and (29).

(28) jàksá nàfew mòt ʧë? sàjkòl ʧǔŋ-àn
woman child class one cycle hold-SEQ

lòw-kò
come-SIM
ki-tèj-kàj
stay-CONT-PST.AUX

‘There was a girl coming, riding a bicycle.’
The suffix -ʧ ŋ looks like a converb suffix as seen in (29). It occurs much less frequently than the other two converb suffixes. More research is needed to determine its semantic meaning.

(29)  kéj  kho-ēj  nàwháp  khátòw  tóm-ʧ ŋ  á:ŋ-ān
      dog  this-ERG  beehive  there  jump-CV  climb-SEQ

lôm  tūm-ān  fōu-kāj
smell  sniff-SEQ  look-PST.AUX

The dog jumped repeatedly, sniffing and looking at the beehive.

5.1.8 Tense

Tense refers to the sequence of events with the reference point usually at the moment of speech (Payne 1997: 234; 236). There is a distinction between the past and the present tense in Chang. The future tense (if any) needs to be looked into in further research.

Tense is marked on the final position of the verb stem. Tense, converb and nominalizing suffixes occurs in complementary distribution in that position. The tense marker is also a good indication to the end of the verb clause in a series of verb constructions and thus, the end of the sentence. Past tense is generally unmarked, e.g. kā:m ā há:k-ān phó (basekt LOC pour-SEQ keep.pst) ‘poured [the fruits] into a basket and kept them’. I have glossed -kāj as a past tense marker because it occurs only at the end of utterances such as in (25), (26) and (29). Whether past tense is unmarked or marked with -kāj needs further analysis. The present tense marker is -tā, as shown in the substitution frame for eliciting lexical words in the word list, ŋāj ______ lāw-tā (1SG.ERG ______ say-PRES) ‘I say ______’. The categories of tense and modality need further analysis.

6 Grammatical Functions

A simple clause structure in Chang consists of a predicate and one or two core arguments depending on the type of the predicate, intransitive or transitive. However, this does not tell grammatical functions, i.e. who does what to whom. Andrews (1985: 71) conceives that there are three possible ways to encode grammatical functions: constituent order, case marking and cross-referencing (agreement). There is no evidence in Chang that cross-referencing is employed to code grammatical functions. Thus, the remaining two techniques, constituent order and case marking are discussed in §6.1.1 and §6.1.2.
6.1.1 Constituent Order

All TB languages with the exception of the Karenic languages and Bai have the order of Subject-Object-Verb (SOV) syntactically (Matisoff 1991: 496). LaPolla (1995: 215) gives the order of Agent-(Recipient)-Patient-Verb based on semantic roles. The agent acts with purpose, performing and controlling an action (Payne 1997: 49). The patient, on the other hand, is the unmarked semantic role, prototypically undergoing a physical change in state (Payne 1997: 50; 51). With contrast to an agent, a patient does not act with volition. The agent often correlates with the subject and the patient to the object.

Chang has exhibits the SOV constituent order typical of the TB languages.

(30) hâw-èj  ámbóŋj  pù  ꦩəŋ-pów  ké-àn  ki-téj-kòj
    3SG-ERG  mango  tree  most-NOM  plant-SEQ  stay-CONT-PST.AUX

    ‘He planted a majority of mango trees.’

However, the above constituent order is typical and can be considered as the default construction, there are instances where the order is reshuffled between the noun phrases to give Object-Agent-Verb (OAV) order as in (31). By moving to the initial position, this has a topicalizing effect on the patient by making it more prominent. The delivery of the utterance is somehow equitable to a passive voice. Thus, using the passive voice in the English translation is most apt. The A argument of the transitive verb or the agent may also be left out, leaving only the O argument of the transitive verb or patient as in (32).

(31) sát-pú  kho  pùhèk  pù-ŋù-pów-èj  ꦩí
    go.away-NOM  this  fruit  tree-AUG-MAS-ERG  top
    á-ŋè-kò
    NEG-know-SIM

    ‘That going away [of the boy] was not known by the fruit owner…’

(32) hòpà  nàʃów-pów  kho  ꦩəŋ-àn  á:1-tì-kòj
    and  child-MASC  this  push-SEQ  fall-CAUS-PST.AUX

    ‘And the boy was pushed and made to fall [by the owl]’

The omission of the A argument in (32) happens because the core argument has been explicitly introduced in the text previously. Nevertheless, the verb phrase always occurs finally.
6.1.2 Case Marking

Grammatical functions can be assigned according to how core arguments are marked in the language. Dixon (1994) discusses marking patterns that are driven by both semantics and syntax. In nominative-accusative languages, the S argument of an intransitive verb and the A argument of a transitive clause are marked the same way. Thus, the O argument is given a marking different from the other two. In ergative-absolutive languages, the S argument of an intransitive clause is marked the same way as the O argument of a transitive clause which is different from the A argument of a transitive clause.

In Chang, there is a marker -êj, occurring on the A argument of a transitive clause as seen in (29) above. This ergative marker is isomorphic with the instrumental marker (see §3.7.2). As for O arguments, they are generally unmarked such as shown in (30) above. However, O arguments of surface-contact verbs (see §3.2.3) are marked instead with a dative -lá.

(33) jipâk  gê?  khônjât  kâ?  lók-çiûg  lóŋ-kâj
      rat    one    hole    ABL pop.out-DUR  emerge-PST.AUX

hòpâ  nàfôw-pów-lá  kùnj3  â  ták-kâj
and    child-MASC-DAT  nose     LOC  bite-PST.AUX

‘A rat emerged from the hole.’
‘And bit the child on the nose.’

The use of dative or locative marker to mark O arguments has also been attested in other TB languages such as in the Bodish languages (LaPolla 1992: 4). In Classical Tibetan, a Bodo language, “contact verbs” as defined by DeLancey (2003: 259) requires locative marking as well.

(34) hàwsi  jàp-kâj
     2DU    sleep-PST

‘The two of them slept.’

Whether the language is nominative-accusative or ergative-absolutive depends on the marking (if any) found on the S argument of an intransitive clause. In Chang, the S argument of an intransitive clause is unmarked as in (34), much like the O arguments of transitive clauses in the language. This puts the S argument of an intransitive clause and the O argument of an intransitive clause as having the same morpho-syntactic treatment in marking.
grammatical functions. Whereas, the A arguments of transitive clause are given ergative treatment marked with -ej.

7 Conclusion

This thesis seeks to provide a preliminary record of a sketch grammar of Chang.

The phonology chapter (section 2) has provided a phonemic inventory, allophonic rules and phonotactics in minimal redundancy and structurally relevant way. The chapter on word classes give insights to the vigesimal system of counting round numbers in the Konyak group. The chapter on noun phrase and nominalizations show that nominalization play a big role in Chang and also, other TB languages. The chapter on verbs and verb morphology shows that the verb stems are complex and highly agglutinative putting together an extensive arrangement of suffixes. Finally, the chapter on grammatical functions describes the ergative case marking system in Chang.

As Mogul (2006) says with all sketch grammar, it needs constant revising and allowance for more in-depth analysis. The limitation of working with texts is that not all types of constructions I wish to verify are available and therefore, this sketch grammar should be taken as tentative. Further studies are needed to correct and improve this first sketch.
References


