

Chapter 2 Phonology outline

2.1 Introduction

The phonology outline in this chapter is taken from the sketch in Person 2000, although Person's outline includes phonemes which are not attested in the data collected for this thesis.

2.2 Syllable structure

Native Bisu words have the syllable structure C1 (C2) V T (CF). "C1" represents an obligatory initial consonant, and "C2" represents an optional medial consonant that forms a consonant cluster with C1. "V" represents an obligatory vowel, "T" an obligatory tone, and "CF" represents an optional final consonant.

2.3 Consonants

2.3.1 Initial consonants

Twenty-two initial consonants attested in the data for this thesis are found in Person's analysis (2000). In addition, the fricative /f/, which does not appear in Person's 2000 analysis, occurs once in the texts collected for this thesis. /f/ is likely adopted from surrounding Tai languages. One of my mother-tongue language teachers noted that /p^halam/ is the way old Bisu people pronounce /falan/ ("white foreigner").

Person's analysis includes four "partially voiced" nasals /hm, hn, hɲ, hŋ/ that are not attested in my data. Person (2003:2) notes that a merger of these partially voiced nasals with their respective fully-voiced counterparts has been observed among some younger Bisu speakers. This observation is consistent with my data, which was primarily collected from three mother-tongue speakers who are under age 30.

	Labial	Alveolar	Palatal	Velar	Glottal
stop vl	p	t	c	k	ʔ
stop vl asp	p ^h	t ^h		k ^h	
stop vd	b	d		g	
fricative	f	s	ʃ		h
affricate		ts	tʃ		
lateral			l		
nasal	m	n	ɲ	ŋ	
approximant			j	w	

Table 1 Initial consonants in Bisu

2.3.2 Consonant clusters

Consonant clusters occur only in syllable-initial position. Thirteen clusters occur in the data collected for this thesis. In addition, Person (2000) notes a /k^hw/ cluster which does not appear in my data.

C1 \ C2	l	j	w
p	pl	pj	
p ^h	p ^h l	p ^h j	
b	bl	bj	
k	kl	kj	kw
k ^h	k ^h l	k ^h j	
m	ml	mj	

Table 2 Initial consonant clusters

2.3.3 Final consonants

Nine consonants serve as syllable-final consonants.

	Labial	Alveolar	Palatal	Velar	Glottal
stop vl	p	t		k	ʔ
nasal	m	n		ŋ	
approximant			j	w	

Table 3 Final consonants

2.3.4 “Floating” nasals

In spoken Bisu, nasals occur unpredictably between words, as shown in Example 1). This example shows a phonetic transcription of the vernacular. In written Bisu the “floating nasal” is omitted.

Example 1) Nov.24/07 data

/kat ŋ tʃa ʔε la/
 market “floating.nasal” FUT go Q
 FT: are [you] going to the market?

Also, word final nasals often vary freely between Ø (no final nasal), n, ŋ and occasionally m. Example 2) shows a single Bisu word “digit (finger, thumb, toe)” that was elicited in isolation multiple times. Different elicitations produced different syllable endings.

Example 2) L1:25

Bisu free variants

/la-ju/ ~ /la-juŋ/ ~ /la-juŋ/ ~ /la-juŋ/

Gloss

“digit (finger, thumb, toe)”

2.3.5 “Floating” palatals

In addition to floating nasals, the palatal /j/ occurs unpredictably in spoken Bisu. Person illustrates assimilation process in Example 3):

Example 3) Person 2001:38

/tsaa/

eat

/haan_ɲ tsaaj_ɲ ja/

rice eat QPRT

FT: Have you eaten?

In addition, I have noted /j/ occurring both between words and following initial consonants. I have noted it after rounded /u/ (written “u” in the orthography), /ɔ/ (written “aw” in the orthography), and unrounded /i/ (written “ui” in the orthography).

In at least one case, in spoken Bisu a palatal /j/ occurs after word-final /ɔ/ and then occurs again after the initial consonant of the next word. The Bisu expression “visit (friends)” is consistently spelled “baw sha” by mother-tongue speakers but is pronounced /bɔ j jʰa/.

Person (2000:38) notes that with regard to both the floating nasals and the floating palatals, “the Bisu seem largely unconscious” of their occurrence. My mother-tongue language teachers frequently corrected my spelling to remove palatals which I heard but which are not written.

2.4 Vowels and diphthongs

As illustrated in the following table, Bisu has nine vowels and five diphthongs.

There is no phonemic length contrast.

	front	central	back		w dphth	j dphth
high	i	ɨ	u		ɔ ^w	a ^j
mid	e	ə	o		e ^w	o ^j
low	ɛ	a	ɔ		ɛ ^w	

Table 4 Vowels and diphthongs

2.5 Tone and tone sandhi

Bisu has three contrastive tones: high, mid, and low. However, a survey of 1,512 major syllables found only 82 high-tone syllables (5%), in contrast to 1,008 mid-tone syllables (67%), and 422 low-tone syllables (28%) (Vatcharee 1987:115). For this reason finding examples of three-way tone contrast is difficult. One example follows:

Phonetic transcription	English gloss
bé	to know
be	basin
bè	to be hungry

Table 5 Three way tone contrast in identical environment

Regarding tone sandhi, Person (2000:37) reports:

There is a limited amount of tone sandhi in Bisu, particularly in the verb phrase and in particle clusters. The low tone preverbal negation marker /bà/, for example, typically lowers the tone of the immediately following word. Similarly, the mid-toned /tʃi:/, one of the most frequently occurring sentence-final particles, often becomes low-toned under the influence of the preceding word or particle.

2.6 The orthography used in this thesis

In 1998, Thai Bisu mother-tongue speakers held a community workshop to create a Thai-based orthography, which has subsequently undergone two major revisions. In 2002, Bisu speakers from Myanmar, who are not familiar with Thai script, asked for a corresponding Roman-based orthography. This Roman orthography is called “Pyen” after the exonym of Bisu speakers in Myanmar (Person 2007).

The Thai Bisu mother-tongue speakers who transcribed the data collected for this thesis are familiar with both the Thai- and Roman-based orthographies and have worked on literacy material in both orthographies. The Pyen orthography was used

to transcribe the data collected for this thesis, and all the vernacular data in this thesis is written in the Pyen orthography. The correspondence of Roman letters to Bisu phonemes is shown in the following chart.

Consonant	IPA	Consonant	IPA	Consonant	IPA
k*	k	p*	p	g	g
hk	k ^h	hp	p ^h	sh	ʃ
ng*	ŋ	f	f	ny	ɲ
c	ts	m*	m	ht	t ^h
ch	tʃ	y*	j	n*	n
s	s	l	l	b	b
d	d	v*	w	no letter	?
t*	t	h	h		

* starred letters are used to write both syllable-initial and syllable-final consonants

Vowel	IPA
a	a
e	e
ae	ɛ
i	i
ui	ɨ
u	u
o	o
aw	ɔ
eu	ə

Diphthong	IPA
ai	a ^j
ao	a ^w
oe	o ^j
eo	e ^w
aeo	ɛ ^w

Tone mark	Tone
σ´	high
σ (unmarked)	mid
σ _˘	low

Table 6 IPA key to Pyen orthography