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A grammar of the Thangmi language with an ethnolinguistic introduction to the speakers and their culture

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CHAPTER 3

PHONOLOGY

The Thangmi sound system is the topic of this chapter. The full inventory of Thangmi phonemes is given in Table 40 below.

TABLE 40. THANGMI PHONEMES

vowel phonemes					
i	e	a	ă	o	u
diphthongs					
ei	ăi	oi	ui		
eu	ău	ou			
consonant phonemes					
k	kh	g	gh	ŋ	
c	ch	j	jh		
ʈ	ʈh	ɖ	ɖh	ɳ	
t	th	d	dh	n	nh
p	ph	b	bh	m	
y	r	l	w		
	s	h	(ʔ)		

A phoneme is defined as the smallest contrastive unit in the Thangmi sound system, with the qualification that a phoneme may exhibit a range of acoustic values which are treated as equivalent by the Thangmi speech community. A phoneme is therefore not a discrete sound segment with a clearly defined boundary, but rather one in a set of speech sounds which serve to distinguish one word from another. An allophone, on the other hand, is a phonetic variant of a phoneme and can be defined as one of several speech sounds which are regarded as contextual or environmental variants of the same phoneme.

The structure of this chapter is as follows: in Section §1, I discuss the vowel phonemes and allophones, their limited nasality, and offer a list of contrastive minimal pairs. In Section §2, I discuss consonant phonemes and their allophones and also provide a list of minimal pairs. In Section §3, I focus on phonotactics, stress, syllable structure and consonant clusters; and in Section §4, I address prosodic lengthening. In Section §5, I discuss the phonology of Nepali loans, while in Section §6, I explain the chosen orthography and the motivations that have informed my decisions in presenting the phonology of Thangmi in this manner.

1. Vowels

1.1 Overview of vowel phonemes

Thangmi distinguishes six monophthongal vowels /i/, /u/, /e/, /o/, /a/, /ǎ/ which represent three grades of vowel height and three steps on the front-back scale. Thangmi exhibits no contrast between short and long vowels, but does distinguish seven diphthongs /ei/, /ǎi/, /oi/, /ui/, /eu/, /ǎu/, /ou/. In the following subsections, I describe the distribution of Thangmi phonemes and their allophones by contrasting minimal and near minimal pairs.

1.2 Monophthongs and their allophones

The phoneme /i/ is a short, unrounded, high front vowel [i], with a lowered or retracted allophone [ɪ] in closed syllables:

<i>cici</i>	meat
[tsitsi]	
<i>tim</i>	mortar
[tɪm]	
<i>liṣa</i>	to scatter, broadcast
[liṣa]	

The phoneme /u/ is a short, closed, rounded high back vowel [u]:

<i>pur</i> [pur]	nipple
<i>ulam</i> [ulam]	path, road, way

The phoneme /e/ is variously realised by Thangmi speakers. In general, older and monolingual Thangmi speakers realise /e/ as a short, mid-open, unrounded front vowel [ɛ], while younger Thangmi speakers who are bilingual in Nepali articulate /e/ as [e], with slightly more closure:

<i>elepe</i> [ɛlɛpɛ ~ elepe]	spleen
<i>ahel</i> [aɦel ~ aɦel]	garuga, <i>Garuga pinnata</i>

The phoneme /o/ is usually realised as a short, mid-closed, rounded, back vowel [o], particularly in open syllables. In closed syllables, the phoneme /o/ has a mid-open realisation as [ɔ]:

<i>obo</i> [obo]	white
<i>tokolok</i> [tokolɔkʰ]	hoe, long-handled mattock with a narrow blade

The phoneme /a/ is variously realised by Thangmi speakers. In general, older and monolingual Thangmi speakers realise /a/ as a short, open, unrounded, front vowel [a], while younger Thangmi speakers who are bilingual in Nepali pronounce /a/ with slightly more closure, as in English [æ] in *cat*:

<i>alak</i> [alakʰ ~ ælækʰ]	small wooden or bamboo foot bridge
<i>cahuca</i> [tsaɦutsa ~ tsæɦutsæ]	man, menfolk

The phoneme /ǎ/ has varying realisations from speaker to speaker, and occurs only infrequently. The phoneme /ǎ/ is usually pronounced as a short, open, unrounded,

back vowel [ɑ], but in the speech of some Thangmi speakers it is given more closure and rendered as [ʌ]:

ālāmtha far, distant
[ɑlam̥tha ~ ʌlam̥tha]

jārāme the spirit of death
[dzarame ~ dzʌrʌme]

The Thangmi phonemes /ǎ/ and /a/ correspond to what are often, albeit erroneously, referred to as the ‘short’ and ‘long’ /a/ of Nepali. Although these two Nepali vowel phonemes are qualitatively distinct from one another in timbre and vowel quality, following accepted and traditional Indological transcription they are rendered as *a* and *ā* respectively, as in Nepali *pani* ‘also’ versus *pānī* ‘water’. In my chosen orthography for Thangmi, these words would be represented as *pǎni* and *pani*.

1.3 Diphthongs and their allophones

Although Thangmi boasts more vowel diphthongs than monophthongs, diphthongs occur only infrequently in native Thangmi words.¹ They are more common, however, in open-stem verbs borrowed from Nepali, as in Thangmi *ghumǎisa* ‘to turn around, show around’ from Nepali *ghumāunu* ‘to turn around, show around’, and Thangmi *banǎisa* ‘to make’ from Nepali *banāunu* ‘to make’. Diphthongs are attested in a handful of indigenous Thangmi forms, in which they have the same length as a monophthongal vowel. The criterion of length provides the justification for analysing these vowel forms as diphthongs rather than as vowel sequences or chains.

The diphthong /ei/ commences as a mid-open, unrounded front vowel [ɛ] and concludes with the unrounded, front retracted allophone [ɪ]. In natural allegro speech, the diphthong /ei/ is occasionally realised close to the mid-open, unrounded front vowel [ɛ].

kheisa to pour, be poured
[k^hɛɪʂa]

kokoteisa to become stiff from cold, become numb
[kokotɛɪʂa]

¹ While it may seem peculiar to suggest that Thangmi has more diphthong than monophthong vowels, this proposition is the result of careful examination. A Thangmi diphthong is indeed the union of two vowels pronounced as one syllable, and may not be analysed as a sequence of two monophthongs.

The diphthong /ăi/ starts as a slightly advanced, short, open, unrounded, back vowel [ɑ] and ends with the short, unrounded, front retracted allophone [ɪ]:²

<i>adhăi</i> [aɖ ^h ɑɪ]	cucumber, <i>Cucumis sativus</i>
<i>ăikuca</i> [ɑɪkutsa]	long, slightly curved knife, <i>khukurī</i>
<i>aspăisa</i> [aʃpaɪʃa]	to throw something violently, smash

The diphthong /oi/ starts as a short, mid-open, rounded, back vowel [ɔ] and ends with the short, unrounded, front retracted allophone [ɪ]:

<i>joisa</i> [dzɔɪʃa]	to leak, penetrate
<i>coi</i> [tsɔɪ]	blood
<i>roimi</i> [rɔɪmi]	a Newar person

The level diphthong /ui/ starts as a short, closed, rounded, high back vowel [u] and ends with the short, unrounded, front retracted allophone [ɪ]:

<i>chyaituk uyu</i> [ts ^h juɪtʊk ^ʔ uju]	small black rodent, mole, vole
<i>luisa</i> [luɪʃa]	to become flaccid (particularly of a penis)
<i>mui</i> [muɪ]	banana, <i>Musa x paradisiaca</i>

² It is not uncommon for a rarely occurring or even phonologically non-existing vocoid to be a constituent of a diphthong.

deusal a box of matches [Sindhupālcok dialect only]
[dɛuʂal]

<i>călăuni</i>	moon
[tsalauni]	

aprou tump line or head strap for carrying a load
[aprou]

The diphthongs /eɪ/, /äi/ and /ui/ are particularly associated with emphatic function or intensified meaning in Thangmi, and may well have been borrowed directly from the Nepali emphatic morpheme <-ai> (EMP). The diphthong /eɪ/, for example, is present in Thangmi *sakalei* ‘all, each, every, everything, totally’ which is itself loaned from Nepali *sakal* ‘all, every’. Likewise, the diphthong /äi/ is often associated with emphatic meaning in Thangmi, as in the adverb *choncäi* ‘fast, quickly’, and the adjective *begäläi* ~ *begale* ‘other (emphatic)’ from Nepali *beglo* ~ *beglai* ‘other’. It is probable that Thangmi *begäläi* ~ *begale* ‘other (emphatic)’ was borrowed directly from Nepali *beglai* ‘other’, since in Nepali the emphatic form is more frequent than *beglo* ‘other’. Finally, the Thangmi diphthong /ui/ is also associated with emphatic meaning in *ayehui* ‘very much (emphatic)’ (Sindhupälcok dialect only), an intensified form of Thangmi *aye* ~ *ahe* ‘very’. In this instance, <-ui> occurs as a suffix indicating an intensified feeling.

Diphthongs are particularly common in lexical loans from Nepali. Two co-occurring monophthongs in Nepali may give rise to a diphthong in Thangmi. For example, while Nepali *makai* ‘corn, maize’ has two syllables and Nepali *malāi* ‘to me’ has three syllables, both forms are disyllabic in Thangmi (creating a minimal pair), and make use of the diphthong /ǎi/:

mǎkǎi corn, maize (from Nepali *makai*)
[makǎi]

mǎlǎi to me, for me (from Nepali *malāi*)
[malǎi]

1.4 Nasality

Nasals are not a distinctive feature of Thangmi phonology.³ Thangmi contains only a handful of lexemes with nasals, none of which can be contrasted with non-nasals. Nasality is more pronounced in the Sindhupālcok dialect of Thangmi, and most of the examples I present below are therefore drawn from this speech area. Moreover, as seen in the following examples, nasals occur primarily in onomatopoeic or reduplicative expressions and interjections:

ǎdǎi yes, uh-huh
[ǎdǎi]

heʔē yes, uh-huh [Sindhupālcok dialect]
[heʔē]

hĩʔikote over there [Sindhupālcok dialect]
[hĩʔikoʔe]

khoĩkhoĩsa to cough [Sindhupālcok dialect]
[kʰoĩkʰoĩʂa]

hũhũisa to writhe in pain, squirm
[hũhũiʂa]

³ See Rutgers (1998: 15) for a similar discussion on nasality in Yamphu. Although minimal pairs for the nasal/non-nasal distinction are not attested in Thangmi, there remains a possibility that nasality is nevertheless distinctive. For the present discussion, however, I regard nasality as non-distinctive.

In a few Thangmi lexemes, nasalised vowels occur in free variation alongside their non-nasalised counterparts. It should be noted, however, that these instances invariably co-occur with the voiced, dorso-velar nasal continuant [ŋ]. In such cases, vowel nasalisation may be the result of assimilation to the nasal phoneme, as in the following examples:

<i>ciŋya</i> ~ <i>cīyā</i> ~ <i>cīŋa</i> [tsiŋja ~ tsījā ~ tsīŋa]	nose
<i>saŋa</i> ~ <i>sāwā</i> [saŋa ~ sāwā]	finger millet, <i>Eleusine coracana</i>
<i>ŋyasa</i> ~ <i>ŋyāsa</i> [ŋjaʂa ~ ŋjāʂa]	to rot, become rotten, suppurate

Thangmi has only three lexemes with nasalised vowels which do not occur in free variation with non-nasalised vowels. Two of these forms are recorded in the Sindhupālcok dialect area only. The nasalised short, mid-closed, rounded, back vowel [o] in *phōŋok* [p^hōŋɔk̚] ‘inflated, swollen’, which was also recorded in Dolakhā, results from assimilation to the following retroflex nasal:

<i>bhaīse</i> [b ^h ai̯ʂe]	tomorrow [Sindhupālcok dialect]
<i>kīyabat</i> [kījabaɾ̥]	in three days [Sindhupālcok dialect]
<i>phōŋok</i> [p ^h ōŋɔk̚]	inflated, swollen, squashy (especially used to describe people’s noses)

1.5 Vowel minimal pairs

The distinctive qualities of vowel height and lip rounding are illustrated by the following chart of minimal and near minimal pairs:

/i/ vs. /u/	<i>nini</i> ‘paternal aunt, father’s sister’, <i>nunu</i> ‘milk’; <i>thisa</i> ‘to touch’, <i>thusa</i> ‘to pull up weeds’.
/i/ vs. /e/	<i>ir-ir</i> ‘totally stuffed with food’, <i>ere</i> ‘flour ball used in the death rite (ritual language)’; <i>lisa</i> ‘to scatter, broadcast’, <i>lesa</i> ‘to select’.

/i/ vs. /o/	<i>ili</i> ‘a species of house-dwelling gecko’, <i>oli</i> ‘four’; <i>nisa</i> ‘to see’, <i>nosa</i> ‘to stir food, serve’; <i>cici</i> ‘meat, flesh’, <i>cyocy</i> ‘female breast’.
/i/ vs. /a/	<i>arki</i> ‘deer’, <i>arka</i> ‘walnut, <i>Juglans regia</i> ’; <i>tisa</i> ‘to burn’, <i>tasa</i> ‘to boil’; <i>wari</i> ‘daughter-in-law’, <i>warak</i> ‘precipice, steep slope’.
/i/ vs. /ǎ/	<i>ciŋya</i> ‘nose’, <i>cǎŋge</i> ‘pigweed, <i>Amaranthus viridis</i> ’; <i>dilaŋ</i> ‘stone resting place’, <i>dǎlǎk</i> ‘dust’.
/u/	<i>yu</i> ‘black-mouthed, white-bodied and long-tailed white money’, <i>uyu</i> ‘mouse’.
/u/ vs. /e/	<i>umansa</i> ‘to cook, prepare food’, <i>emsa</i> ‘to be exhausted by sitting in the sun’; <i>thumsa</i> ‘to bury’, <i>themsa</i> ‘to break’; <i>suwa</i> ‘tooth’, <i>sewa</i> ‘greetings, hello’.
/u/ vs. /o/	<i>tuṣsa</i> ‘to husk rice or millet in a mortar’, <i>tuṣpa</i> ‘to wash clothes by beating them’; <i>ulum</i> ‘the upper part of a grinding stone’, <i>olon</i> ‘milk, yoghurt’.
/u/ vs. /a/	<i>uma</i> ‘wife’, <i>ama</i> ‘mother’; <i>cuksa</i> ‘to insert, pour into’, <i>caksa</i> ‘to cover, patch or overlay bamboo when there are holes’.
/u/ vs. /ǎ/	<i>culi</i> ‘goat’, <i>cǎlǎuni</i> ‘moon’; <i>duru</i> ‘earthquake’, <i>dǎri nunu</i> ‘cow or buffalo milk used in the death rite (ritual language)’.
/e/ vs. /o/	<i>leksa</i> ‘to swallow’, <i>lokxa</i> ‘to drain’; <i>melsa</i> ‘to roast millet prior to grinding’, <i>molsa</i> ‘to mix in, stir up’.
/e/ vs. /a/	<i>ere</i> ‘flour ball used in the death rite (ritual language)’, <i>ari</i> ‘fear’; <i>nem</i> ‘house’, <i>name</i> ‘name’; <i>reŋ</i> ‘flower’, <i>raŋ</i> ‘dry or unirrigated field’.
/e/ vs. /ǎ/	<i>elepe</i> ‘spleen’, <i>ǎlǎmtha</i> ‘far, distant’; <i>kereṣsa</i> ‘to cry, weep’, <i>kǎrǎisa</i> ‘to call out, be hungry’.
/o/ vs. /a/	<i>oŋgol</i> ‘Adam’s apple’, <i>aŋal</i> ‘shame, embarrassment’; <i>doŋ</i> ‘intestines, Brahmin’, <i>daŋsa</i> ‘to look for, search, seek’.
/o/ vs. /ǎ/	<i>kotale</i> ‘under, below’, <i>kǎtǎra</i> ‘trough, tray’.
/a/	<i>naŋ</i> ‘you’, <i>naŋa</i> ‘fish’.

/a/ vs. /ǎ/	<i>alam</i> ‘red and white flag used in shamanic ritual’, <i>ălẵmtha</i> ‘far, distant’; <i>bagale</i> ‘peach, <i>Prunus persica</i> ’, <i>băgale</i> ‘type of tree, <i>Maesa chisia</i> ’; <i>caŋ</i> ‘chir pine, <i>Pinus roxburghii</i> ’, <i>căŋge</i> ‘pigweed, <i>Amaranthus viridis</i> ’; <i>cali</i> ‘ladder’, <i>călăuni</i> ‘moon’.
/ei/ vs. /e/	<i>kheisa</i> ‘to pour’, <i>khemsa</i> ‘to make, build’.
/ăi/ vs. /ău/	<i>ăi</i> ‘pus’, <i>ău</i> ‘mango’.
/oi/ vs. /i/	<i>joisa</i> ‘to leak’, <i>jisa</i> ‘to chop, split’; <i>coi</i> ‘blood’, <i>cile</i> ‘tongue’; <i>roimi</i> ‘a Newar person’, <i>rim</i> ‘homemade beer drunk during death rite (ritual language)’.
/ui/ vs. /u/	<i>luisa</i> ‘to become flaccid’, <i>lunsa</i> ‘to climb, ride’; <i>mui</i> ‘banana’, <i>mus</i> ‘body hair’.
/ui/ vs. /i/	<i>luisa</i> ‘to become flaccid’, <i>lisa</i> ‘to scatter, broadcast’; <i>mui</i> ‘banana’, <i>mi</i> ‘person’.
/eu/ vs. /e/	<i>deusal</i> ‘a box of matches’, <i>dese</i> ‘village’.
/ău/	<i>rulău</i> ‘cockroach’, <i>rul</i> ‘snake’.
/ău/ vs. /a/	<i>ău</i> ‘mango’, <i>ayu</i> ‘pine-marten, <i>Martes flavigula</i> ’.
/ău/ vs. /ou/	<i>călăuni</i> ‘moon’, <i>calou</i> ‘wild nettle’.
/ou/ vs. /a/	<i>aprou</i> ‘tump line, head strap’, <i>apraca</i> ‘good’.
/ou/ vs. /o/	<i>jyousa</i> ‘to burn wood’, <i>jyoksa</i> ‘to be burnt’.

2. Consonants

2.1 Overview of consonant phonemes

Thangmi consonant phonemes were presented in Table 40 on the first page of this chapter following the conventional Indological ordering, and are shown in Table 41 below according to phonetic features. The Thangmi consonant inventory is comprised of five series of obstruents across five distinctive and contrastive points of articulation (bilabial, dental, palatal, retroflex and velar), each of which includes an unaspirated voiceless, an aspirated voiceless, an unaspirated voiced and a breathy member.⁴ The Thangmi consonant system further includes a series of nasals at four

⁴ Following van Driem (1993a: 52), I have opted for the term ‘breathy voiced plosive’ rather than ‘voiced aspirate’ to describe the series /bh/, /dh/, /jh/, /ḍh/, /gh/. While such plosives are commonly referred to as ‘voiced aspirates’, particularly in the context of South Asian

points of articulation, one breathy nasal, one glottal stop, one fricative, one trill, one lateral and three approximants. Apart from the glottal stop /ʔ/, all consonants may occur in word-initial position.

TABLE 41. THANGMI CONSONANT PHONEMES

	<i>bilabial</i>	<i>dental</i>	<i>palatal</i>	<i>retroflex</i>	<i>velar</i>	<i>glottal</i>
<i>voiceless</i>	p	t	c	ɖ	k	
<i>aspirated</i>	ph	th	ch	ɖʰ	kh	
<i>voiced</i>	b	d	j	ɖ̣	g	
<i>breathy voiced</i>	bh	dh	jʰ	ɖʱ	gh	
<i>nasal</i>	m	n		ɳ	ŋ	
<i>breathy nasal</i>		nh				
<i>glottal</i>						(ʔ)
<i>fricative</i>		s				
<i>trill</i>		r				
<i>lateral</i>		l				
<i>approximant</i>	w		y			h

2.2 Obstruents and their allophones

2.2.1 Velar stops

The phoneme /k/ can occur in all positions in the Thangmi word or syllable. In word-initial, syllable-initial and intervocalic positions, the phoneme /k/ is a voiceless, unaspirated dorso-velar stop [k]:

<i>kapu</i> [kapu]	head
<i>aŋkalak</i> [aŋkalakʰ]	green-brown coloured lizard
<i>lakaŋe</i> [lakaŋɛ]	radish, <i>Raphanus sativus</i>

languages, this label is misleading since they are usually neither voiced nor aspirated. See van Driem (1993a: 52) for the evidence and discussion.

<i>cikinsa</i>	to give someone a fright
[tsikinʃa]	

Word-finally, the phoneme /k/ is a voiceless, unreleased, unaspirated dorso-velar stop [kʔ] in the Dolakhā dialect and either completely glottalised [ʔ] or a voiceless, unreleased, unaspirated dorso-velar stop with a simultaneous glottal stop [ʔkʔ] in the Sindhupālcok dialect:⁵

<i>akrak</i>	frog [Dolakhā dialect]
[akrakʔ]	
<i>akrak</i>	frog [Sindhupālcok dialect]
[akraʔ]	
<i>ajik</i>	cold (of food and water) [Dolakhā dialect]
[adzɪkʔ]	
<i>ajik</i>	cold (of food and water) [Sindhupālcok dialect]
[adziʔkʔ]	

The phoneme /kh/ can occur in word-initial, syllable-initial and intervocalic positions, in which it is realised as a voiceless, aspirated dorso-velar stop [kʰ]. The phoneme /kh/ is not attested in word-final position:

<i>khen</i>	face
[kʰɛn]	
<i>aŋkhe</i>	lap
[aŋkʰɛ]	
<i>rikhi</i>	the tree, <i>Ficus lacor</i>
[rikʰi]	

The phoneme /g/ can occur in word-initial, syllable-initial and intervocalic positions, in which it is realised as a voiced, unaspirated dorso-velar stop [g]. The phoneme /g/ is not attested in word-final position:

⁵ For a more detailed description of the differences between the two dialects, see Chapter 2, Section §4.1.

<i>gaŋsa</i> [gaŋsa]	to dry
<i>goŋgiŋ</i> [goŋgiŋ]	brown or green praying mantis
<i>jagapsa</i> [dzaɡap̚sa]	to faint, have an epileptic fit

The phoneme /gh/ occurs in word-initial and intervocalic positions, in which it is realised as a voiced, breathy (or murmured) dorso-velar stop [g^h].⁶ The phoneme /gh/ is not attested in word-final position:

<i>ghăŋeu</i> [g ^h aŋɛu]	burp (n.)
<i>aghorsa</i> [aɡ ^h ɔ̌r̥sa]	to dig, scratch with fingernails

The phoneme /gh/ is further attested in two reduplicative lexemes, in which it occurs both word-initially, word-medially and syllable-initially. Syllable-initial and word-medial /gh/ is only attested in these two reduplicative forms, both of which are onomatopoeic:

<i>ghorghorsa</i> [g ^h ɔ̌rg ^h ɔ̌r̥sa]	to grunt (of a pig), roar (of a tiger)
<i>ghoŋloŋ-ghoŋloŋ</i> [g ^h ɔ̌ŋloŋg ^h ɔ̌ŋloŋ]	loose-fitting, baggy, wide, floppy

2.2.2 Retroflex stops

The phoneme /ɽ/ is a voiceless, unaspirated apico-post-alveolar or retroflex stop [ɽ] which is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions, as illustrated by the examples below:

<i>ɽampe</i> [ɽampe]	magnolia tree, <i>Magnolia campbelli</i>
-------------------------	--

⁶ For the reader's comfort, I have chosen to transcribe breathy voice using the raised ^h, as in [g^h] over the phonetically more accurate notation [ḡ].

kaŋi young, fresh, unripe
[kaŋi]

cyat̪aŋmaraŋ a species of thorny bush
[tsjaŋmaraŋ]

lampaŋ plain, farmyard
[lampaŋ]

The phoneme /t̪h/ is a voiceless, aspirated apico-post-alveolar or retroflex stop [t̪ʰ] which is attested in word-initial, syllable-initial and intervocalic positions. The phoneme /t̪h/ is not attested in word-final or syllable-final position, and is illustrated by the examples below:

t̪hoka large silver bracelet worn by women
[t̪ʰoka]

bom̪hissa to blister
[bom̪t̪ʰiʃsa]

kuŋhup tadpole
[kuŋt̪ʰup]

The phoneme /d̪/ is a voiced, unaspirated apico-post-alveolar or retroflex stop [d̪] which is attested in word-initial, syllable-initial and intervocalic positions. The phoneme /d̪/ is not attested in word-final or syllable-final position:

d̪umla common fig, *Ficus carica*
[d̪umla]

han̪da clay pot for cooking nettles
[han̪da]

a̪d̪ipsa to tear pieces of meat off the bone
[a̪d̪iɸsa] with one's teeth

The phoneme /d̪h/ occurs only in word-initial position, in which it is realised as a voiced, breathy (or murmured) apico-post-alveolar or retroflex stop [d̪ʰ]. The phoneme /d̪h/ is not attested in syllable-initial, intervocalic or word-final positions:

ḍhopit anus
[ḍʰopɪt̪]

ḍhokse large bamboo basket used for carrying manure
[ḍʰɔkʂɛ]

The phoneme /ḍh/ is further attested in one reduplicative and onomatopoeic lexeme, in which it occurs both word-initially and syllable-initially:

ḍholoŋ-ḍholoŋ being wide in circumference or diameter
[ḍʰoloŋḍʰoloŋ]

2.2.3 Palatal stops

The phoneme /c/ can occur in word-initial, syllable-initial and intervocalic positions, in which it is realised as a voiceless, unaspirated, apico-palatal or lamino-palatal affricate [ts]. The phoneme /c/ is not attested in word-final position:

cabusa to carry
[tsabuʂa]

demca load (n.)
[ḍɛmtsa]

apraca good, clean, nice
[apratsa]

The phoneme /ch/ can occur in word-initial, syllable-initial and intervocalic positions, in which it is realised as a voiceless, aspirated, apico-palatal or lamino-palatal affricate [tsʰ]. The phoneme /ch/ is not attested in word-final position:

chinik chutney made of the edible seed, *Perilla*
[tsʰinɪkʰ] *frutescens*

jinchiri clitoris
[dzɪntsʰiri]

cacha grandson
[tsatsʰa]

The phoneme /j/ can occur in word-initial, syllable-initial and intervocalic positions, in which it is realised as a voiced, unaspirated, lamino-palatal affricate [dz]. The phoneme /j/ is not attested in word-final position:

<i>jireŋ</i> [dzireŋ]	red wasp
<i>dunji</i> [ɖundzi]	lean, thin, meagre, without fat
<i>aɟa</i> [adza]	leaf

The phoneme /jh/ can occur in word-initial, syllable-initial and intervocalic positions, in which it is realised as a voiced, breathy (or murmured) lamino-palatal affricate [dz^h]. The phoneme is not attested in syllable-initial, intervocalic or word-final positions. While the phoneme /jh/ is attested in only three native Thangmi words from the Dolakhā dialect, it is far more common in the Sindhupālcok dialect. The phoneme /jh/ is also widely attested in Nepali loan words in both dialects.

<i>jhintyak</i> [dz ^h intjak ^ɿ]	catapult, trap
<i>jhyaltuŋ</i> [dz ^h jalʈuŋ]	vessel for carrying burning coals
<i>kuriɟhin</i> [kuridz ^h ɪn]	blemish or spot

2.2.4 Dental stops

The phoneme /t/ is a voiceless, unaspirated dental or alveolar stop [t̪] which is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions. Younger Thangmi speakers who are also fluent in Nepali are more likely to articulate the phoneme /t/ as a dental stop, while older and monolingual Thangmi speakers tend towards an alveolar articulation:

<i>toŋsa</i> [t̪oŋsa]	to wash clothes
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<i>altak</i> [aɭtakʰ]	Nepalese rhododendron tree, <i>Rhododendron arboreum</i>
<i>kotale</i> [koɭale]	under, below
<i>aɭit</i> [aɭtɪ]	blue whistling thrush, <i>Myiophoneus caeruleus</i>

The phoneme /th/ is a voiceless, aspirated dental or alveolar stop [tʰ] which is attested in word-initial, syllable-initial and intervocalic positions. The phoneme is not attested in word-final or syllable-final position. Younger Thangmi speakers who are also fluent in Nepali are more likely to articulate the phoneme /th/ as a dental stop, while older and monolingual Thangmi speakers tend towards an alveolar articulation:

<i>themba</i> [tʰɛmba]	doorframe, doorway
<i>cyurthin</i> [tsjurʰin]	mouth shaped like a monkey's mouth
<i>athaŋsa</i> [aɭʰaŋsa]	to become light

The phoneme /d/ is a voiced, unaspirated dental or alveolar stop [d] which is attested in word-initial, syllable-initial and intervocalic positions. The phoneme is not attested in word-final or syllable-final position. Younger Thangmi speakers who are also fluent in Nepali are more likely to articulate the phoneme /d/ as a dental stop, while older and monolingual Thangmi speakers tend towards an alveolar articulation:

<i>doksa</i> [dɔkʂa]	to peck, sting, bite
<i>denderek</i> [dɛnderekʰ]	coarse, rough
<i>adum</i> [aɖum]	hot (food or drink)

The phoneme /dh/ is a voiced, breathy (or murmured) dental or alveolar stop [d^h] which is attested in word-initial and intervocalic positions. The phoneme is not attested in syllable-initial and word-final or syllable-final positions. Younger Thangmi speakers who are also fluent in Nepali are more likely to articulate the phoneme /dh/ as a dental stop, while older and monolingual Thangmi speakers tend towards an alveolar articulation:

<i>dhiri</i> [d ^h iri]	thunder
<i>dhapre</i> [d ^h apɾe]	Indian aloe, <i>Aloe vera</i>
<i>kadhrap</i> [kad ^h rapʔ]	unidentified species of plant (Nep. <i>malāyo</i>)

2.2.5 Bilabial stops

The phoneme /p/ occurs in all positions in the Thangmi word or syllable. In word-initial, syllable-initial and intervocalic positions, the phoneme /p/ is a voiceless, unaspirated, bilabial stop [p]:

<i>paŋku</i> [paŋku]	water
<i>pampanek</i> [pampanekʔ]	butterfly
<i>papasek</i> [papaʃɛkʔ]	testicles

Word-finally, the phoneme /p/ is a voiceless, unreleased, unaspirated bilabial stop [pʔ]:

<i>asip</i> [asipʔ]	the flower of an unidentified species of tree (Nep. <i>ghurmiso-ko phūl</i>)
<i>kaŋtap</i> [kaŋtapʔ]	chip of bamboo or splint of wood used to make baskets and cradles

The phoneme /ph/ is a voiceless, aspirated, bilabial stop [p^h] which is attested in word-initial, syllable-initial and intervocalic positions. The phoneme /ph/ is not attested in word-final or syllable-final position.

<i>phase</i> [p ^h aɸ]	flour
<i>lamphaṅsa</i> [lamp ^h aṅsa]	to cross over, step over
<i>aphinca</i> [ap ^h intsa]	light (in weight), thin, narrow
<i>laphar</i> [lap ^h ar]	cowardly, timid, irresolute

The phoneme /b/ is a voiced, unaspirated bilabial stop [b] which is attested in word-initial, syllable-initial and intervocalic positions. The phoneme /b/ is not attested in word-final or syllable-final position:

<i>bosiṅ</i> [boɸiŋ]	alder, Nepal black cedar, <i>Alnus nepalensis</i>
<i>domba</i> [ɖɔmba]	tree
<i>kitriṅbas</i> [kiɽriŋbaɸ]	in four days
<i>abu</i> [abu]	penis

The phoneme /bh/ is a voiced, breathy (or murmured) bilabial stop [b^h] which is infrequent in occurrence and attested in word-initial position only. The phoneme /bh/ is not attested in intervocalic, word-final or syllable-final position.

<i>bhămbăla</i> [b ^h ambala]	unidentified species of tree (Nep. <i>culetro</i>)
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<i>bheterek</i>	bamboo mat
[b ^h ɛ̃tɛrɛkʔ]	

The phoneme /bh/ is further attested in one reduplicative lexeme, in which it occurs both word-initially and syllable-initially:

<i>bhutbhute</i>	flameless and white-hot centre of a fire
[b ^h uʈb ^h uʈɛ]	

2.3 Nasals

Thangmi has a series of voiced nasals at four points of articulation, velar, retroflex, dental and labial, and one breathy nasal. The phoneme /ŋ/ is a voiced, velar nasal [ŋ] which is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions. This Thangmi phoneme occurs frequently:

<i>ŋasa</i>	to say, ask, order, tell
[ŋaʂa]	
<i>căŋa</i>	liver
[tsaŋa]	
<i>aŋil</i>	gum(s)
[aŋɪl]	
<i>loŋsa</i>	to do, make
[lɔŋsa]	
<i>akloŋ</i>	grasshopper, locust
[aklɔŋ]	

The phoneme /ŋ/ is a voiced, retroflex nasal continuant [ŋ] with a free alternate as a voiced, retroflex tap [ɽ]. This phoneme is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions:⁷

<i>ŋepsa</i>	to crush with a stone, bruise by falling
[ŋɛpʂa ~ ɽɛpʂa]	

⁷ In Nepali, /ŋ/ is a marginal phoneme and occurs only infrequently in the informal register of the language.

<i>kuchipṇasa</i> [kutsʰipṇaʃa ~ kutsʰipṛaʃa]	to have a bad experience
<i>alaloṇoṇ</i> [alaloṇoṇ ~ alaloṛoṇ]	large bamboo mat used in death rituals into which a corpse is rolled
<i>aṇeṇsek</i> [aṇeṇ]ʃekʰ ~ aṛeṇ]ʃekʰ]	kidney
<i>kaṇtu</i> [kaṇtu ~ kaṛtu]	neck, throat
<i>cicikoṇ</i> [tsitsikōṇ ~ tsitsikōṛ]	chopping block

The phoneme /n/ is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions. In general, older and monolingual Thangmi speakers realise /n/ as a voiced, alveolar continuant [n], while younger Thangmi speakers who are bilingual in Nepali pronounce /n/ as a voiced, dental nasal continuant [ɳ]. The two allophones exist in free variation:

<i>nembo</i> [nembo ~ ɳembo]	other person
<i>semni</i> [ʃemni ~ ʃemɳi]	a Tamang person
<i>chyunupuṭuk</i> [tsʰyunupuṭukʰ ~ tsʰyuɳupuṭukʰ]	protruding behind of a chicken
<i>yanatasa</i> [janataʃa ~ jaɳataʃa]	to deliver
<i>yante</i> [jaɳte ~ jaɳte]	hand-driven millstone, grindstone, quern
<i>akan</i> [akan ~ akaɳ]	barley, <i>Hordeum vulgare</i>

The phoneme /nh/ is a voiced, breathy alveolar continuant [n^h]. Younger Thangmi speakers who are bilingual in Nepali pronounce /nh/ as a voiced, breathy (or even murmured) dental nasal continuant [ɳ^h]. The two allophones exist in free variation and are attested in both dialects of Thangmi in word-initial position only, preceding vowels [a] and [u], and occurring only in lexical items indicating place, location or direction:

<i>nhabasa</i> [n ^h abaʂa ~ ɳ ^h abaʂa]	lower
<i>nhu-te</i> [n ^h uʔɛ ~ ɳ ^h uʔɛ]	over there (far and down)
<i>nhăiko</i> [n ^h ai̯ko ~ ɳ ^h ai̯ko]	lower storey [Sindhupālcok dialect]

The phoneme /m/ is a voiced, bilabial nasal continuant [m] which is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions:

<i>makarpapa</i> [makarpapa]	spider
<i>dokmaŋ</i> [dɔ̌kmaŋ]	Nepal pepper, prickly ash, <i>Zanthoxylum armatum</i>
<i>cime</i> [cime]	hair (on the scalp)
<i>cumsa</i> [cumʂa]	to seize, hold, grab, catch, grasp, clasp
<i>nem</i> [nem]	house

2.4 Glottal stop

The phoneme /ʔ/ is an energetically articulated glottal stop [ʔ] which is attested only in the Sindhupālcok dialect of Thangmi. While the phone is heard in the northernmost villages of Dolakhā in which Thangmi is spoken, the glottal stop /ʔ/ has phonemic status in Sindhupālcok only. The phoneme /ʔ/ is attested in intervocalic

and syllable-final positions only. In intervocalic position, the phoneme /ʔ/ is most commonly followed by a staccato echo vowel, as in the following five examples, all drawn from the Sindhupālcok dialect:

<i>asaʔasa</i> [aʃaʔaʃa]	to itch
<i>abeʔesa</i> [abeʔeʃa]	to carry a child on one's back
<i>jiʔisa</i> [dziʔiʃa]	to split in two
<i>loʔosa</i> [loʔoʃa]	to drain, pour out
<i>buʔusa</i> [buʔuʃa]	to cover, cover up, put a lid on a pot

There are, however, a number of examples of the phoneme /ʔ/ occurring in intervocalic position followed by a different vowel in the the Sindhupālcok dialect:

<i>cyaʔe</i> [tsjaʔe]	night
<i>haʔi</i> [haʔi]	how much, how many?
<i>aʔum</i> [aʔum]	egg
<i>kiʔuliŋ</i> [kiʔuliŋ]	bottom, buttocks

In a few cases, the phoneme /ʔ/ occurs in syllable-final position in polysyllabic lexical items. In these cases, non-glottalised articulations are rejected by speakers of the Sindhupālcok dialect:

<i>iʔbliŋ</i> [iʔbliŋ]	aright, right side up, right way up
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<i>jaʔco</i> [dzaʔtso]	wheat, <i>Triticum sativum</i> , <i>Triticum aestivum</i>
<i>pecyəʔca</i> [petsjeʔtsa]	small, cramped (of a habitation or living place)
<i>amaʔsa</i> [amaʔʂa]	to beg

At first glance, word-final glottal stops which follow a vowel in the Sindhupālcok dialect appear to be allophones of final consonants, particularly when compared with cognate forms from the Dolakhā dialect in which these lexical items indeed possess final consonants, as in *akraʔ* [akraʔ] ‘inedible toad or frog’ (Sindhupālcok) versus *akrak* [akrakʰ] ‘inedible toad or frog’ (Dolakhā). However, this putative allophonic explanation must be discounted for a number of reasons. First, there is no systematic opposition between Dolakhā [-k] and Sindhupālcok [-ʔ], and a number of Sindhupālcok lexical forms contain the same final voiceless velar stop as recorded for Dolakhā. Second, final vowels may be glottalised in Sindhupālcok in instances when the cognate Dolakhā lexical form exhibits a word-final vowel. Third, speakers of the Sindhupālcok dialect of Thangmi reject final consonants in the place of a glottal stop and similarly reject glottal stops in the place of final /k/ and /t/.

<i>alaʔ</i>	small wooden or bamboo foot bridge [Sindhupālcok dialect]
<i>alak</i>	small wooden or bamboo foot bridge [Dolakhā dialect]
[alaʔ ~ alakʰ]	
<i>asariʔ</i>	taste [Sindhupālcok dialect]
<i>asare</i>	taste [Dolakhā dialect]
[aʂariʔ ~ aʂare]	
<i>asariʔ</i>	common fly [Sindhupālcok dialect]
<i>asareŋ</i>	common fly [Dolakhā dialect]
[aʂariʔ ~ aʂareŋ]	
<i>lonɖoʔ</i>	sternum, middle of chest [Sindhupālcok dialect]
<i>lonɖo</i>	sternum, middle of chest [Dolakhā dialect]
[lonɖoʔ ~ lonɖo]	

jinchiri? clitoris [Sindhupālcok dialect]
jinchiri clitoris [Dolakhā dialect]
 [dzɪnts^hiri? ~ dzɪnts^hiri]

In phonological monosyllables of the Sindhupālcok dialect of Thangmi, the final glottal stop /ʔ/ is articulated in an energetic manner which automatically triggers an echo of the preceding vowel upon release of the closure. The result of this automatically conditioned echo vowel is that phonological monosyllables with a final glottal stop /ʔ/ are phonetically disyllabic:⁸

ce? chestnut tree, *Castanopsis hystrix* [Sindhupālcok dialect]
ce chestnut tree, *Castanopsis hystrix* [Dolakhā dialect]
 [tseʔe ~ tse]

bo? inflorescence of maize [Sindhupālcok dialect]
bok inflorescence of maize or rice [Dolakhā dialect]
 [boʔo ~ bok]

2.5 Fricatives, trills and laterals

The Thangmi sound system contains one fricative /s/, one trill /r/ and one lateral /l/. The phoneme /s/ has two allophones which exist in free variation: a voiceless, lamino-alveolar, grooved fricative [ɕ] and a voiceless, palatal fricative [ʃ]. Younger Thangmi speakers who are also fluent in Nepali are more likely to articulate the phoneme /s/ as [ɕ] while older and monolingual Thangmi speakers tend towards a palatal articulation [ʃ]. The allophone [ʃ] is rejected in syllable-initial position following a consonant, as in *seksa* [ʃekɕa] and explicitly not *[ʃekʃa]. The phoneme /s/ is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions:

sempir ginger, *Zingiber officinale*
 [ɕempɪr ~ ʃempɪr]

sereksa to get up, wake up, arise
 [ɕereɕkɕa ~ ʃereɕkɕa]

⁸ Van Driem (1993a: 56) describes the same process for Dumi, in which the phonological monosyllable /boʔ/ ‘word, language’ is phonetically disyllabic [boʔo].

<i>amisa</i> [amiʃa ~ amiʃa]	to sleep
<i>ustok</i> [uʃtɔkʰ ~ uʃtɔkʰ]	spit, spittle, sputum, saliva
<i>citabas</i> [tsiʈabaʃ ~ tsiʈabaʃ]	day after tomorrow

The phoneme /r/ is a voiced, apico-alveolar trill or resonant [r] which is optionally released as a tap [ɾ] in intervocalic position. The phoneme /r/ is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions:

<i>raphil</i> [rapʰɪl]	tear from the eye (n.)
<i>gamra</i> [gamra]	molar, jaw
<i>bərma</i> [barma]	bouquet grass, <i>Thysanolaena agrestis</i>
<i>akar</i> [akar]	short-tailed Himalayan jungle cat, <i>Felis chaus</i>
<i>baraŋ</i> [baraŋ]	platform of boards or bamboo, shed, stall

The phoneme /l/ is a voiced, apico-alveolar, lateral approximant [l] which is attested in word-initial, syllable-initial, intervocalic and word-final or syllable-final positions:

<i>lembe</i> [lembe]	flat, bamboo winnowing tray
<i>sinlati</i> [ʃɪnlaʈi]	butterfly bush, <i>Buddleja (Buddleia) asiatica</i>
<i>calak</i> [tsalakʰ]	air potato, bitter air yam, <i>Dioscorea bulbifera</i>

duldul flying male of the white ant
[ɖulɖul]

hucil eagle-owl, *Bubo nipalensis*
[hucɪl]

2.6 Approximants

Thangmi contains three approximants or frictionless continuants: glottal /h/, alveolar /y/ and bilabial /w/. The phoneme /h/ is realised as a voiceless glottal approximant [h] in word-initial and syllable-initial position and as a breathy and voiced allophone [ɦ] in intervocalic position. The phoneme /h/ is attested in word-initial and intervocalic positions only:

hapsa to aim, fire, shoot, hunt
[hɑpɕa]

ahunsa to pick up (from the ground), pluck
[aɦunɕa]

In word-initial position, the phoneme /h/ often indicates a question word, as in:

hara what?
[hara]

hara-kăi what for, for what reason, why?
[hara-kɑi]

hani how many, how much?
[hani]

The phoneme /h/ is further attested in one reduplicative noun, in which it occurs both word-initially and syllable-initially:

haŋhaŋ steam
[haŋhaŋ]

Two instances of the phoneme /h/ are attested in combinations with other approximants and nasals, e.g. /hw/ and /hy/. The sequence /hwa/ occurs in only one lexical item of the Dolakhā dialect and two forms from the Sindhupālcok dialect of Thangmi:

hwaŋ-hwaŋ open, spacious, wide [Dolakhā dialect]
[hwaŋhwaŋ]

hwali four [Sindhupālcok dialect]
[hwali]

hwalŋa five [Sindhupālcok dialect]
[hwalŋa]

The sequence /hy/ is attested in both dialects in word-initial position only, preceding vowels [a] and [u], and in lexical items indicating place, location or direction:

hyaletcha to arrive [Sindhupālcok dialect]
[hjaletts^ha]

hya-te ~ hyu-te up there, over there
[hjaɽɛ ~ hjuɽɛ]

The phoneme /y/ is a voiced, lamino-palatal approximant [j] which is attested in word-initial and intervocalic positions:

yaŋ today
[jaŋ]

yuli needle
[juli]

uyu mouse
[uju]

paɽaya rice stalks once the paddy has been removed
[paɽaja]

The phoneme /y/ is also widely attested in both dialects as a post-consonantal offglide:

byeŋga a species of toad [Sindhupālcok dialect]
[byeŋga]

cyasa to eat
[tsjaɣa]

<i>ɲyal-ɲyal</i> [ɲjalɲjal]	soft, tender
<i>agyosa</i> [agjoʂa]	to call, cry, rumble
<i>ghyoksa</i> [gʰjɔkʂa]	to bark (of a dog)

The phoneme /w/ is a voiced, median, labial-velar approximant [w] which is attested in word-initial, syllable-initial and intervocalic positions:

<i>wakhe</i> [wakhe]	word, story, chat
<i>wa</i> [wa]	chicken, hen
<i>awa</i> [awa]	locally-grown tobacco [Sindhupālcok dialect]
<i>lawa</i> [lawa]	husband, boyfriend
<i>cawasa</i> [cawaʂa]	to walk, wander, roam

The phoneme /w/ is also widely attested in both dialects as a post-consonantal offglide following the unaspirated velar stops /k/ and /g/:

<i>kwăi</i> [kwai]	all root vegetables, particularly potatoes
<i>kwassa</i> [kwaʂsa]	to be enough, feed to the full, be stuffed
<i>gwi</i> [gwi]	thief, robber

gwaŋaŋiŋ pregnant female
[gwaŋaŋiŋ ~ gwaŋaŋiŋ]

2.7 Consonant minimal pairs

Some minimal pairs and near minimal pairs illustrating the distinctiveness of the consonant phonemes are given below:

2.7.1 Distinctiveness of voicing

/k/ vs. /g/	<i>koŋkolyaŋ</i> ‘bent, twisted’, <i>goŋkolyaŋ</i> ‘snaked, articulated in many places’; <i>koŋe</i> ‘stone wall’, <i>goŋe</i> ‘pubic hair’; <i>kari</i> ‘song’, <i>gare</i> ‘rooster’; <i>kaŋ</i> ‘boil, pimple’, <i>gaŋsa</i> ‘to dry’; <i>bagale</i> ‘peach, <i>Prunus persica</i> ’, <i>bakal-cakal</i> ‘half-cooked, half-raw’.
/kh/ vs. /gh/	<i>khaŋou</i> ‘door’; <i>ghaŋău</i> ~ <i>ghaŋeu</i> ‘burp’; <i>khirimsa</i> ‘to braid, twist, entwine’, <i>ghiritsa</i> ‘to scratch, peel off’; <i>agha?</i> ‘crow, raven’, <i>akho</i> ‘grasshopper’.
/t/ vs. /d/	<i>teksa</i> ‘to tear cloth or paper, lacerate’, <i>deksa</i> ‘to have enough sleep’; <i>tiŋsa</i> ‘to close, shut’, <i>diŋsa</i> ‘to comb someone’s hair’; <i>aŋit</i> ‘the whistling thrush’, <i>aŋipsa</i> ‘to suckle on a mother’s milk’.
/th/ vs. /dh/	<i>thoka</i> ‘large bracelet’, <i>dhokse</i> ‘large bamboo container or basket’.
/c/ vs. /j/	<i>calak</i> ‘air potato, <i>Dioscorea bulbifera</i> ’, <i>jalat</i> ‘Nepalese hog plum, <i>Choerospondias axillaris</i> ’; <i>ceksa</i> ‘to bite, sting’, <i>jeksa</i> ‘to clean, wash’; <i>cisa</i> ‘to throw, throw away’, <i>jiŋsa</i> ‘to chop, split in two’; <i>cyokpa</i> ‘a small bird’, <i>jiyoksa</i> ‘to be burnt’; <i>cyou</i> ‘fat, grease’, <i>jiyousa</i> ‘to burn, roast’.
/ch/ vs. /jh/	<i>chinik</i> ‘chutney made of the edible perilla seed, <i>Perilla frutescens</i> ’, <i>jhintyak</i> ‘catapult, trap’; <i>chyapaŋ</i> ‘ritual pollution related to death’, <i>jhyaŋtuŋ</i> ‘a vessel used to carry burning coals’.
/t/ vs. /d/	<i>taŋsa</i> ‘to be happy, smile’, <i>daŋsa</i> ‘to look for, search’; <i>tapsa</i> ‘to beat or play the drum’, <i>dapsa</i> ‘to measure, fill’; <i>ti</i> ‘honey’, <i>di</i> ‘one’.

/th/ vs. /dh/	<i>thapu</i> ‘fireplace, hearth’, <i>dhapre</i> ‘Indian aloe, <i>Aloe vera</i> ’; <i>thumsa</i> ‘to mark, stain, stick’, <i>dhumba</i> ‘mist, fog, cloud’.
/p/ vs. /b/	<i>pampanek</i> ‘butterfly’, <i>bampre</i> ‘rib, chest’; <i>paŋku</i> ‘water’, <i>baŋkal</i> ‘stomach, belly’; <i>pene</i> ‘vagina’, <i>bena</i> ‘brown oak of the Himalaya, <i>Quercus semecarpifolia</i> ’; <i>pisa</i> ‘to give’, <i>bisa</i> ‘to enter, go inside’.
/ph/ vs. /bh/	<i>phetelek</i> ‘watery, moist’, <i>bheterek</i> ‘bamboo mat’; <i>phinphin</i> ‘smooth, flat, even’; <i>bhimbira</i> ‘termite’.

2.7.2 Distinctiveness of aspiration and breathy articulation

/k/ vs. /kh/	<i>kari</i> ‘song’, <i>kharu</i> ‘old’; <i>keret</i> ‘red, orange’, <i>kherte</i> ‘near, close’; <i>ken</i> ‘cooked vegetable curry’, <i>khen</i> ‘face’; <i>koŋ</i> ‘trough’, <i>khonja</i> ‘a small basket for carrying fish’.
/g/ vs. /gh/	<i>gaŋa</i> ‘spherical earthenware jug, large mud jar’, <i>ghaŋău</i> ‘burp’; <i>goŋgiŋ</i> ‘a praying mantis’, <i>ghoŋŋoŋ</i> ‘loose fitting, wide, baggy’.
/t/ vs. /tʰ/	<i>taŋsa</i> ‘to open’, <i>tʰaŋsa</i> ‘to discover a god’; <i>taŋsa</i> ‘to tease, deride, joke, harass’, <i>tʰasa</i> ‘to scrape off, peel off, strip off’; <i>tesa</i> ‘to remove corn cobs from the stalk’, <i>tʰesa</i> ‘to displace water’.
/ɖ/ vs. /ɖʰ/	<i>ɖoŋɖoŋ</i> ‘the lower leaves or outer covering of a bamboo plant’, <i>ɖholoŋ-ɖholoŋ</i> ‘being wide in circumference or diameter’.
/c/ vs. /ch/	<i>ca</i> ‘son’, <i>cha</i> ‘salt’; <i>caŋ</i> ‘the chir pine, Himalayan long-leaved pine, <i>Pinus roxburghii</i> ’, <i>chaŋ</i> ‘wicker or bamboo basket to carry a baby’; <i>ciniksa</i> ‘to impregnate, conceive’, <i>chinik</i> ‘chutney made of the edible perilla seed, <i>Perilla frutescens</i> ’.
/j/ vs. /jh/	<i>jinchiri</i> ‘clitoris’, <i>jhintyak</i> ‘catapult’.
/t/ vs. /tʰ/	<i>tamsa</i> ‘to loose’, <i>tʰamsa</i> ‘to insert, add, put in’; <i>taŋsa</i> ‘to be happy, smile’, <i>tʰaŋsa</i> ‘to be healthy’; <i>tasa</i> ‘to boil’, <i>tʰasa</i> ‘to be’.

/d/ vs. /dh/	<i>dăi</i> ‘towards’, <i>dha</i> ‘he, she, it’; <i>dabsa</i> ‘to measure, fill’, <i>dhabasa</i> ‘on the other side’.
/n/ vs. /nh/	<i>nabi</i> ‘downhill, downward’, <i>nhabasa</i> ‘lower’.
/p/ vs. /ph/	<i>pakpak</i> ‘cone or pod of the plantain flower’, <i>phakphak</i> ‘dry flour’; <i>peksa</i> ‘to strip bamboo’, <i>pheksa</i> ‘to tear something apart, split’.
/b/ vs. /bh/	<i>betre</i> ‘bamboo mat’, <i>bhere</i> ‘the wild cherry tree, <i>Prunus puddum</i> ’; <i>buthuru</i> ‘muzzle (for cows, buffaloes, goats)’, <i>bhutbhute</i> ‘the white-hot centre of a fire’.

2.7.3 Distinctiveness of nasals

/m/ vs. /ŋ/	<i>khoma</i> ‘the feathery inflorescence of the millet plant’, <i>khonja</i> ‘a small basket for carrying fish’; <i>maŋ</i> ‘body’, <i>ŋaŋ</i> ‘and’; <i>myuŋ</i> ‘cloth, clothes, material’, <i>ŋyu</i> ‘brain’; <i>thamsa</i> ‘to insert, put in’, <i>thaŋsa</i> ‘to be healthy, be able’.
/m/ vs. /n/	<i>mama</i> ‘father’s sister’s husband’, <i>nama</i> ‘with, together’; <i>mansa</i> ‘to knead’, <i>namsa</i> ‘to smell’.
/m/ vs. /ŋ/	<i>mesa</i> ‘water buffalo’, <i>nesa</i> ‘to hit, strike’; <i>miŋ</i> ‘cloth, clothes, material’, <i>ŋiŋ</i> ‘stone, rock’.
/n/ vs. /ŋ/	<i>nasa</i> ‘to put’, <i>ŋasa</i> ‘to be infested with lice’; <i>nesa</i> ‘to grind, pound’, <i>nesa</i> ‘to hit, strike’.
/n/ vs. /ŋ/	<i>thansa</i> ‘to move, transfer, change’, <i>thaŋsa</i> ‘to discover a god’; <i>nasa</i> ‘to put, place, position’, <i>ŋasa</i> ‘to say, tell, inquire, order, ask’.
/ŋ/ vs. /ŋ/	<i>ŋasa</i> ‘to say, tell, inquire, order, ask’, <i>ŋasa</i> ‘to be infested with lice’; <i>ŋyu</i> ‘brain’, <i>nu</i> ‘later’.

2.7.4 Distinctiveness of other consonants

/s/ vs. /r/ vs. /l/	<i>sasa</i> ‘vein, tendon, ligament’, <i>rasa</i> ‘to come’, <i>lasa</i> ‘Indian rhododendron, <i>Melastoma malabathricum</i> ’; <i>sisa</i> ‘to die’, <i>rise</i> ‘the tree, <i>Maesa chisia</i> ’, <i>lisa</i> ‘to scatter, broadcast’; <i>kosa</i> ‘bone’, <i>korsa</i> ‘to weed with a hoe’, <i>kolsa</i> ‘to add the leftover millet or maize paste from a previous meal to a new pot of hot water in order to reuse it and prepare a new meal’.
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<i>/w/</i> vs. <i>/y/</i> vs. <i>/h/</i>	<i>was</i> ‘to plough’, <i>ya</i> ‘to feed, give food’, <i>has</i> ‘to fall from a height’; <i>wa</i> ‘chicken, hen’, <i>ya</i> ‘ritual word for giant taro, <i>Alocasia</i> <i>indicum</i> ’; <i>awa</i> ‘locally-grown tobacco’, <i>ayu</i> ‘pine-marten’, <i>ahe</i> ‘very, a lot, much’.
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3. Phonotactics, syllables and the Thangmi word

3.1 Stress

In Thangmi, stress is non-distinctive, prosodic and relatively unpronounced. In glossary entries in the lexicon, stress is indicated by a stress mark ['] before the stressed syllable, but only in instances when it is not predictable. Unless otherwise indicated, all Thangmi words are stressed on the first syllable. The only deviations from this rule are Thangmi verb forms composed of three syllables or more, in which the stress falls on the second syllable:

<i>ca</i> [tʂa]	son [one syllable]
<i>bok</i> [bɔkʰ]	maize or rice inflorescence [one syllable]
<i>hara</i> [hara]	what? [two syllables]
<i>akyarak</i> [akʂarakʰ]	bulb of an arum lily, <i>Arum campanulatum</i> [three syllables]
<i>bosa</i> [boʂa]	to grow (of crops) [two syllables]
<i>kerepsa</i> [keʰrepʂa]	to cry, weep [three syllables]
<i>cinampasa</i> [tsiʰnampaʂa]	to cause to amuse, make play [four syllables]

Reflexive verbs follow a slightly different pattern with regard to word and syllable stress. Since the reflexive marker <-si> (REF) is never stressed, the stress always falls on the preceding syllable, as in the examples below:

<i>phaksisa</i>	to eat by throwing a mouthful at a time into
[p ^h akʃiʂa]	one's mouth [three syllables]

<i>thanṇaraṇsisa</i>	to lie on one's back without sleeping
[thanṇa'raṇʃiʂa]	[five syllables]

Inflected verb forms do not deviate from the above rules, as illustrated by the examples below:

<i>boy-an</i>	it grew
[ˈbojan]	[two syllables]

<i>kerep-ṇa-n</i>	I cried
[ke'repṇan]	[three syllables]

<i>cinampay-eṇ-du</i>	they are made to play
[tsi'nampajɛṇdu]	[five syllables]

<i>phak-si-du</i>	s/he's eating by throwing a mouthful at a time
[p ^h akʃiɖu]	into his/her mouth [three syllables]

<i>thanṇaraṇ-si-ṇa-du</i>	I am lying on my back without sleeping
[thanṇa'raṇʃiṇaɖu]	[six syllables]

3.2 Syllable structure

The phonological word consists of one or more syllables, the borders of which are determined by the rules of Thangmi syllable structure and type. The canonical syllable structure observed for Thangmi lexical items may be schematised as follows:⁹

$$(C_i) (G) V (C_f)$$

A syllable may consist of a single vowel phoneme (V):

⁹ Loans from Nepali may deviate from this schema.

<i>ǎi</i>	pus	(V)
[aɪ]		

<i>ǎu</i>	mango	(V)
[au]		

A syllable may also be formed by a consonant and a vowel (C_iV), in which (C_i) is the initial and optional opening segment of a syllable consisting of a single consonant. All Thangmi consonant phonemes listed in Table 41 above, apart from the glottal stop /ʔ/, may occur as the syllabic onset and are thus attested in initial position:

<i>ca</i>	son	(C _i V)
[tsa]		

<i>ni</i>	we, honey	(C _i V)
[ni]		

<i>to</i>	he, she, it	(C _i V)
[tɔ]		

A syllable may consist of a consonant, a vowel and another consonant (C_iVC_f), in which (C_f) is the final and optional closing segment of a syllable. This coda always consists of a single consonant. Of the Thangmi consonant phonemes listed in Table 41 above, 15 are attested in final position as the coda of a syllable: /p/, /t/, /c/, /tʃ/, /k/, /b/, /g/, /m/, /n/, /ŋ/, /ʔ/, /s/, /r/ and /l/, some examples of which are given below:

<i>doŋ</i>	intestines	(C _i VC _f)
[dɔŋ]		

<i>ban</i>	friend	(C _i VC _f)
[ban]		

<i>dol</i>	valley, deep place	(C _i VC _f)
[dɔl]		

<i>lak</i>	hand, arm	(C _i VC _f)
[lakʰ]	[Dolakhā]	

<i>laʔ</i>	hand, arm	(C _i VC _f)
[laʔ]	[Sindhupālcok]	

<i>mus</i> [muʃ]	body hair, head hair	(C _i VC _f)
<i>pur</i> [pur]	nipple	(C _i VC _f)
<i>rot</i> [rɔ̃t]	landslide	(C _i VC _f)
<i>sem</i> [ʃɛm]	a Tamang [Sindhupālcok]	(C _i VC _f)

A syllable may also consist of a consonant and a vowel (C_iV) which are separated by a glide (G). The phonemes /l/, /r/, /y/ and /w/ occur as post-consonantal glides (G). The phoneme /l/ is attested as a post-consonantal glide following /b/, /g/, /k/ and /p/ only:

<i>bliṇsa</i> [bliṇsa]	to reverse, overturn
<i>glensa</i> [glɛṇsa]	to be left over (of food)
<i>kleṇ thasa</i> [kleṇ tʰaṣa]	to be full [Dolakhā dialect]
<i>pleṇsa</i> [pleṇsa]	to become full, be filled [Sindhupālcok dialect]

The phoneme /r/ is attested as a post-consonantal glide (G) following /b/, /d/, /k/, /kh/, /p/, /s/ and /t/:

<i>broṇ</i> [brɔ̃ṇ]	mildew
<i>droʔosa</i> [d̥rɔʔɔṣa]	to run, flee [Sindhupālcok dialect]
<i>krepsa</i> [kreṗsa]	to cry, weep

<i>khrimsa</i> [k ^h rimʂa]	to twist, braid, entwine
<i>priŋ</i> [priŋ]	outside
<i>srăi</i> [ʂrai]	a species of small tree, <i>Eurya japonica</i>
<i>traba</i> [traba]	ashes

The phoneme /y/ is attested as a post-consonantal glide (G) following /b/, /c/, /ch/, /d/, /g/, /k/, /kh/, /j/, /l/, /m/, /n/, /ŋ/, /p/, /r/, /s/, /t/, /t̥/ and /tʰ/, some examples of which are given below:

<i>cyasa</i> [tsjaʂa]	to eat
<i>chyasa</i> [ts ^h jaʂa]	to be pulled off, scraped off
<i>dyaksa</i> [djakʂa]	to mature, ripen
<i>gyal-gyalti</i> [gjalgjal̥ti]	fecund, highly fertile
<i>kyan̥</i> [kjan̥]	needle wood tree, <i>Schima wallichii</i>
<i>khyaksa</i> [k ^h jakʂa]	to fall from above and get trapped or stuck
<i>lyun̥</i> [ljuŋ]	stone, rock
<i>myun̥</i> [mjuŋ]	cloth, clothes, material

<i>ɲyu</i> [ɲju]	brain
<i>ɬyaŋ</i> [ɬjaŋ]	then, well, and
<i>ɬyaŋ-ɬyaŋ</i> [ɬjaŋɬjaŋ]	naked

The phoneme /w/ is attested as a post-consonantal glide (G) following /g/ and /k/ only:

<i>gwi</i> [gwi]	thief, robber
<i>gwaŋiŋiŋ</i> [gwaŋiŋiŋ]	pregnant female
<i>kwǎi</i> [kwai]	root vegetables, particularly potatoes

3.3 Consonant clusters and geminate consonants

Thangmi does not permit sequences of consonants in syllable-final position. Loan words from English which have final nasal consonant clusters, such as *think*, would be rendered in Thangmi as /thiŋ/ [tʰiŋ]. In syllable-initial position, the only consonant clusters attested are those in which the second phoneme is either /l/, /r/, /y/ or /w/. These four consonant phonemes then function as post-consonantal glides, as described in Section §3.2 above. At syllable breaks in Thangmi words, consonant clusters are attested in so far as they involve the closed coda of one syllable and a consonant initial in the following segment, as in:

<i>syap̣ta</i> [sjaɸta]	a species of small bird	(C _i GVC _f C _i V)
<i>aɖipsa</i> [aɖɪpsa]	to suckle (vi.)	(V C _i VC _f C _i V)
<i>tamtam</i> [taɸtaɸam]	white clay	(C _i VC _f C _i VC _f)

Gemination is the adjacent clustering of identical consonants within a phonological word. The phonetic value of geminate consonants is discerned to be different to single consonants on the basis of clearly audible length. The consonants /p/, /t/, /tʃ/, /k/, /n/, /ŋ/, /s/ and /l/ are attested as geminates in native Thangmi lexical items:

<i>puppap</i> [puppap]	sweepings
<i>botton</i> [bɔʈʈɔn]	thorny bamboo, <i>Bambusa arundinacea</i>
<i>gyaʈʈa</i> [gjaʈʈa]	loincloth
<i>ukkar</i> [ukkar]	wild cush-cush, yam, <i>Dioscorea deltoidea</i>
<i>hen-no</i> [hɛnno]	take!
<i>syuŋŋan</i> [ʃjuŋŋan]	garuga, <i>Garuga pinnata</i>
<i>hassa</i> [haʃʃa]	to fall from a height, fall down (and not die)
<i>kulla</i> [kulla]	ear

On account of the phonological composition of the verbal agreement suffixes in Thangmi, geminate sequences of the consonant phoneme /ŋ/ are widely attested:

<i>cijyaŋ-ŋa-du</i> [tsidzaŋŋadu]	I speak
<i>waŋ-ŋa-n</i> [waŋŋan]	I came up

The Sindhupālcok dialect of Thangmi has one single example of a lexical form in which the doubling of a consonant (but then aspirated) leads to a difference in meaning:

<i>huca</i>	baby, child, infant
[hutsa]	
<i>huccha</i>	baby, child, infant when being spoken or
[hutsts ^h a]	referred to in a derogatory manner

4. Prosodic lengthening

Certain Thangmi vowels are lengthened for emphasis or as the result of bearing the prosodic accent of a clause or sentence. These lengthened vowels occur primarily in adjectives, adverbs and interjections when the speaker intends to convey an intensified feeling or emotion. Examples include *ho to* (yes that) ‘yes, that one’ from Nepali *ho* ‘yes’ and Thangmi *to* ‘he, she, it (distal)’ which is rendered as [ho: to:] and *atthe apraca* ‘very good, excellent’ which is often pronounced with lengthened initial vowels on each word, as in [a:tt^he a:pratsa]. When giving directions, older Thangmi speakers use vowel lengthening to indicate relative distance and the difficulty of the terrain, as in *dhu-te hen-ko māi-Ø-du* (over.there-LOC go-ADH must-SAS-NPT) ‘you must go over there’, in which [d^hu] is often rendered as [d^hu:] to underscore the distance.

5. The phonology of loans from Nepali

On account of the copious borrowing of grammatical and lexical elements from Nepali, a few words about these loans should be included in this chapter on the Thangmi sound system. There is considerable variation among Thangmi speakers in the rendering of Nepali forms, with younger and bilingual Thangmi speakers usually articulating Nepali words with standard and received Nepali pronunciation, while older Thangmi speakers pronounce Nepali less perfectly. Moreover, as is apparent from the overview of Thangmi phonemes in Table 40 of this chapter, Thangmi phonology does not differ greatly from Nepali phonology, and the inventory of consonant phonemes is near identical.

The most immediately audible difference between Thangmi speakers articulating Nepali and the speech of native Nepali speakers is vowel quality and length. Many Thangmi speakers, even those with a high level of conversational fluency in Nepali, render Nepali अ as a short, open, unrounded, front vowel [a] and not as a short, half-open, unrounded back vowel [a ~ ə] which would be the correct

Nepali pronunciation. This is particularly significant since Thangmi has a similar, albeit infrequently occurring phoneme: the short, open, unrounded, back vowel [ɑ ~ ʌ] /ǎ/. The result is that Nepali अ [ɑ] and आ [a] are both pronounced as [a] by Thangmi speakers, making Nepali *ma* ‘I’ and *mā* ‘at, in’ appear homophonous since both are rendered as [ma]. This phonological contraction has not gone unnoticed by native speakers of Nepali who live in otherwise predominantly Thangmi villages. Non-Thangmi mother tongue Nepali speakers imitate Nepali-speaking ethnic Thangmi by mimicking their inability to disambiguate Nepali अ [ɑ] and आ [a].

Another noticeable feature of Nepali as spoken by most Thangmi is the tendency to diphthongise clusters of Nepali vowels, as described in Section §1.3 above. Two co-occurring monophthongs in Nepali give rise to a diphthong in Thangmi, as in *gāī* ‘cow’, which is disyllabic in Nepali but which becomes a monosyllabic diphthong when articulated by Thangmi speakers as *gǎi* [gɑi]; or the trisyllabic Nepali *thakāī* ‘weariness, fatigue’ which becomes disyllabic when rendered by most Thangmi as *thakǎi* [tʰakɑi].

The final distinctive feature of Nepali loans in Thangmi relates to borrowed verbs. Nepali causative verb forms, such as *paḍhāunu* ‘to teach (lit. to cause to learn)’ and their standard non-causative transitive or intransitive forms, such as *paḍhnu* ‘to read, study’, are slightly reworked when borrowed into Thangmi. Causative verb forms from Nepali lose the causative and infinitive elements <-āunu> and receive <-ǎisa> in Thangmi, as in Thangmi *paḍhǎisa* [paḍʰɑɪʂa] ‘to teach’ from Nepali *paḍhāunu* ‘to teach’. Non-causative verb forms which Thangmi speakers borrow from Nepali undergo a slightly different process: the Nepali infinitive suffix <-nu> is replaced with Thangmi <-ǎisisa> (*ǎi* + REF + INF), as in Nepali *paḍhnu* ‘to read, study’ and Thangmi *paḍhǎisisa* [paḍʰɑɪʂɪʂa] ‘to read, study’.

6. The orthography

The orthography I have adopted for transcribing Thangmi follows the phonological value of words and syllables. As discussed in Section §3.1 above, stress is not indicated unless it deviates from the expected norm. In keeping with widespread orthographical conventions, I have opted to use the character *ǎ* to represent the infrequently occurring short, open, unrounded, back vowel [ɑ], in order to distinguish it from *a* [a]. In large part this orthographical choice has been motivated by a limitation of computer typography for representing the Times font: when italicised, the regular character **a** loses its head loop and becomes *a*. This change is frustrating to linguists, since [a] is a different vowel to [ɑ], whether rendered in Roman or cursive script.

The staccato vowel following /ʔ/ from the Sindhupālcok dialect of Thangmi is always indicated in the orthography, as in *loʔosa* [lɔʔɔsa] ‘to drain, pour’. Word-internal morpheme boundaries are indicated with hyphens, as in *hen-sa* [hensa] (go-INF) ‘to go’. Hyphenation is also used to separate two phoneme symbols which might otherwise be read as the digraph for another phoneme, as in *hik-hiksa* ‘to hiccough’, for which the pronunciation is [hikhiksa] and certainly not *[hik^hiksa]. Hyphens are further used to separate the components of reduplicative, rhyming and onomatopoeic adjectival forms, as in *ʃyanʃ-ʃyanʃ* [tʃaŋtʃaŋ] ‘naked’, but not for nouns such as *puppap* [puppap] ‘sweepings’.

When they form part of a glossed and translated example, loan words from Nepali are transcribed according to the local pronunciation provided by the speaker. Borrowed forms with an identical meaning in the source language are indicated by italicising the English gloss, as in Thangmi *begläi* ~ *begale* ‘other, another’ from Nepali *beglo* ‘other’. Naturalised loan words or borrowed forms with a variant indigenous meaning, such as Thangmi *guru* ‘shaman’ (from Indo-Aryan *guru* ‘spiritual guide, mentor, teacher’), Thangmi *name* ‘name’ (from Indo-Aryan *nām* ‘name’) and Thangmi *dese* ‘village’ (from Indo-Aryan *deś* ‘place, quarter, region, province, country, nation’), are not italicised in the English gloss.