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*Tíməh*, the language of *Shaygı*

**M.M.N.H.**

*A descriptive grammar*

2017-18

*Dedicated to my haters*

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# 1 | Introduction

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## 1.1 | External history

The Timah language (**tʰíməh** [tʰíməh]; lit. language, speech) is a constructed language (*conlang*) made by me, Mareck (M.M.N.H.). It may be further classified as an artistic language (*artlang*). Its primary goal is simply to be documented entirely in  $\text{\LaTeX}$  (*LaTeX*).

Like most of my constructed languages, it tries to focus balancing between the interesting and the naturalistic, in terms of phonology, grammar, etc. Naturalism, however, is not the primary goal. I have therefore given myself the freedom to take liberties in terms of naturalism.

## 1.2 | Internal history

The Timah language is spoken by the Khokan people (**kʰɔkʰɔtɔʔe** [kʰɔkʰɔʔɔtɔʔe] lit. many-person). They live on the Saykung Archipelago (**sʰajkon** [sʰəjɡbũnm] lit. our-place)

TODO all of this

### 1.2.1 | People

The Khokan people are a largely matriarchal and polyandrous society. The practice of polyandry, wherein a woman may take multiple spouses, is due to limited land and natural resources.

Large communities (consisting of several family clans governed by a single clan) are on or around the more mountainous island centers, where terrace-farming is practiced. On the flatter shores, there are smaller communities (consisting of only a few family clans with no single governing clan).

TODO expand this

### 1.2.2 | Place

The Saykung Archipelago consists of five main islands and hundreds of smaller islands surrounding the main islands. The main islands are mainly flat, with mountainous centers and forested areas.

TODO expand this

### 1.2.3 | Beliefs & practices

TODO expand this

#### 1.2.3.1 | Magic

TODO expand this

### 1.2.4 | Dialects

There are four main dialects of Timah. They are, from northmost to southmost, the *Cliff*, *Far Lake*, *Near Lake*, and *Shore* dialects. The Near Lake dialect is the prestige dialect, and is the one



described here. The Far Lake and Shore dialects are fairly similar to the Near Lake dialect; the Cliff dialect is the most divergent.

## 2 | Phonology

### 2.1 | Consonants

	<i>Labial</i>	<i>Alveolar</i>	<i>Palatal</i>	<i>Velar</i>	<i>Glottal</i>	<i>Placeless</i>
<i>Nasal</i>	m	n				N
<i>Plosive</i>		t <sup>h</sup> t t <sup>ʔ</sup>	tɕ <sup>h</sup> tɕ tɕ <sup>ʔ</sup>	k <sup>h</sup> k k <sup>ʔ</sup>	ʔ	
<i>Fricative</i>		s <sup>h</sup> s s <sup>ʔ</sup>			h	
<i>Approximant</i>	w	l	j			

Figure 2.1: Consonant phonemes

- /n t<sup>h</sup> t t<sup>ʔ</sup>/ are dental [n̪ t̪<sup>h</sup> t̪ t̪<sup>ʔ</sup>]<sup>1</sup>; /s<sup>h</sup> s s<sup>ʔ</sup> l/ are alveolar
- /tɕ<sup>h</sup> tɕ tɕ<sup>ʔ</sup>/ are alveolo-palatal; /j/ is palatal
- /h/ is articulated with true frication of the glottis, i.e., it is not a voiceless glottal approximant
- /N/ is a nasal coda archiphoneme, i.e., not an uvular nasal<sup>2</sup>
- the aspirated obstruents /t<sup>h</sup> tɕ<sup>h</sup> k<sup>h</sup> s<sup>h</sup>/ may be accompanied by slight breathy-voice on the following vowel
- the glottalized obstruents /t<sup>ʔ</sup> tɕ<sup>ʔ</sup> k<sup>ʔ</sup> s<sup>ʔ</sup>/ are articulated with laryngeal tension, and may be accompanied by slight creaky-voice on the following vowel

#### 2.1.1 | Consonant allophony

- the clusters /ʔm ʔn/ surface as the implosives [ɓ d] word-initially and as clusters [ʔɓ ʔd] intervocalically
- the alveolar nasal /n/ surfaces as palatal [ɲ] before [i] word-medially
- the coda archiphoneme /N/ surfaces as [n ɲ ŋ] before alveolar, (alveolo-)palatal, and velar plosives, respectively; it surfaces as nasalization of the preceding vowel before all other consonants; it surfaces as [ŋ] word-finally after non-back vowels, and as [ŋ̃m] word-finally after the back vowels /o ɔ/ and before the labio-velars [k̚<sup>ʔ</sup> k̚<sup>ʔ</sup> k̚<sup>h</sup>]
- the alveolar plosives /t<sup>h</sup> t t<sup>ʔ</sup>/ surface as trills [ɾ ɾ r r<sup>ʔ</sup>] before [i]. This does not occur after /N/ nor in clusters
- the aspirated plosives /t<sup>h</sup> tɕ<sup>h</sup> k<sup>h</sup>/ surface as fricatives [θ ɕ x] before /a/. This does not occur after /N/ nor in clusters

<sup>1</sup> [n̪ t̪<sup>h</sup> t̪ t̪<sup>ʔ</sup>] (and, when applicable, their allophones) will be transcribed as [n t<sup>h</sup> t t<sup>ʔ</sup>] (i.e., without the dental bridge diacritic) for aesthetic reasons

<sup>2</sup> yes, I say /ən 'uvjələ/; deal with it

- the aspirated obstruents /t<sup>h</sup> tʰ k<sup>h</sup> s<sup>h</sup>/ are deäspirated to [t t̚ k s] intervocalically and after /m n w j N/
- the tenuis obstruents /t t̚ k s/ are voiced to [d ɖ g z] intervocalically and after /m n w j N/
- the velars /k<sup>ʔ</sup> k k<sup>h</sup>/ surface as labio-velars [k̟<sup>ʔ</sup> k̟ k̟<sup>h</sup>] before the back vowels /o ɔ/. [k̟] is voiced to [g̟] and [k̟<sup>h</sup>] is deäspirated to [k̟] intervocalically and after /w j N/
- the sibilants /s<sup>h</sup> s s<sup>ʔ</sup>/ are palatalized to [ç<sup>h</sup> ç ç<sup>ʔ</sup>] before [i]. [ç] is voiced to [ʒ] and [ç<sup>h</sup>] is deäspirated to [ç] intervocalically and after /w j N/
- the labiovelar /w/ surfaces as labiodental [v] before [i]
- the liquid /l/ surfaces as a tap [ɾ] intervocalically and after /w j N/
- the clusters (see § 2.3.1.1) /hm hn hw hl hj/ surface as voiceless sonorants [ṁ ṅ w̥ ɸ ɭ̥ ɰ̥ ɠ̥]<sup>4</sup>. The sonorants also surface as voiceless when clustered with the aspirated plosives /t<sup>h</sup> tʰ k<sup>h</sup>/

### 2.1.2 | Dialectal variations of consonants

- in some<sup>[which?]</sup> dialects, the alveolo-palatals /tʰ t̚ t̚<sup>ʔ</sup>/ surface as alveolar affricates [ts<sup>h</sup> ts ts<sup>ʔ</sup>], true palatals [c<sup>h</sup> c c<sup>ʔ</sup>], or non-affricated alveolo-palatals [t̪<sup>h</sup> t̪ t̪<sup>ʔ</sup>]
- in some<sup>[which?]</sup> dialects, the glottalized plosives /t<sup>ʔ</sup> t̚<sup>ʔ</sup> k<sup>ʔ</sup> s<sup>ʔ</sup>/ surface as ejectives [t' t̚' k' (t)s'] or geminates [tt tt̚ kk ss-ts]
- depending on dialect<sup>[which ones?]</sup> and idiolect, the glottal fricative /h/ may variously surface as any of [x-χ ɦ ɦ̃]
- in some<sup>[which?]</sup> dialects, the liquid [l] has merged with either /j/ or /n/
- depending on dialect<sup>[which ones?]</sup> and idiolect, the liquid /l/ may variously surface as any of [ɭ ɭ̥ ɭ̥̃ ɭ̥̃̃ ɭ̥̃̃̃ ɭ̥̃̃̃̃] in addition to the typical [l ɾ] realizations
- in the Shore dialect, /w/ surfaces as [uq<sup>β</sup>], i.e., it has lip compression instead of protrusion

## 2.2 | Vowels

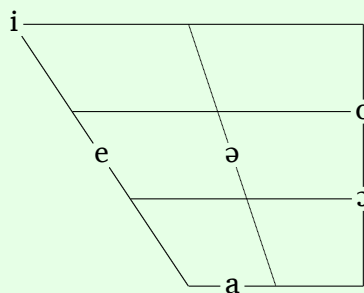


Figure 2.2: Vowel phonemes

<sup>4</sup>although often articulated with varying frication, the voiceless approximants will be transcribed as [w̥ ɭ̥ ɰ̥ ɠ̥] for aesthetic reasons

- all vowels may occur as long or short (*see § 2.3.1*)
- all vowels may occur with high tone /<sup>h</sup>/, low tone /<sup>l</sup>/, or as toneless (*see § 2.5*)
- /e/ is true mid [e]<sup>4</sup>
- /a/ is near-front [a] (i.e., not central [ä])

### 2.2.1 | Vowel allophony

- all vowels are nasalized before nasal consonants
- /i/ backs to [i̠] after the velars and glottal /k<sup>h</sup> k k<sup>ʔ</sup> h/ and before coda [ŋ h]
- /a/ fronts to [æ-ɛ] after the palatals /tɕ<sup>h</sup> tɕ tɕ<sup>ʔ</sup> j/ and before coda /j/
- /o ɔ/ raise to [u ɤ]<sup>4</sup> word-finally in open syllables, after the velars /k<sup>h</sup> k k<sup>ʔ</sup> w/, and before coda [ŋ]

### 2.2.2 | Dialectal variations of vowels

- some<sup>[which?]</sup> dialects merge the front vowels /i e/ into [i-ɪ]
- some<sup>[which?]</sup> dialects merge the central vowels /ə a/ into [a]
- some<sup>[which?]</sup> dialects merge the back vowels /o ɔ/ into true mid [ɤ]
- in the Shore dialect, the back vowels /o ɔ/ (and their allophones) surface as [ɣ<sup>β</sup> ʌ<sup>β</sup>], i.e., they have lip compression instead of protrusion

## 2.3 | Phonotactics

### 2.3.1 | Syllable structure

$$(\#C)CV(T)(V^5(T)|G|S)$$

$$G = \{ʔ, h\}$$

$$S = \{n, w, j\}$$

$$T = \{^h, ^l\}$$

Figure 2.3: Syllable structure

#### 2.3.1.1 | Consonant clusters

Only the following consonant clusters (in black) are allowed:

<sup>4</sup>[ɛ ɤ] will be transcribed as [e o] for aesthetic reasons

<sup>5</sup>long vowel morae must be homorganic in vowel quality, but not necessarily in tone

		C <sub>1</sub>												
		m	n	t <sup>h</sup>	t	t <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ	tɕ <sup>ʔ</sup>	k <sup>h</sup>	k	k <sup>ʔ</sup>	ʔ	h
C <sub>2</sub>	m	m	n	t <sup>h</sup> m	tm	t <sup>ʔ</sup> m	tɕ <sup>h</sup> m	tɕm	tɕ <sup>ʔ</sup> m	k <sup>h</sup> m	km	k <sup>ʔ</sup> m	ʔm	hm
	n	m	n	nt <sup>h</sup>	nt	nt <sup>ʔ</sup>	ntɕ <sup>h</sup>	ntɕ	ntɕ <sup>ʔ</sup>	k <sup>h</sup> n	kn	k <sup>ʔ</sup> n	ʔn	hn
	t <sup>h</sup>	mt <sup>h</sup>	nt <sup>h</sup>	t <sup>h</sup>	t <sup>h</sup>	t	tɕ <sup>h</sup>	tɕ <sup>h</sup>	tɕ	k <sup>h</sup> t <sup>h</sup>	k <sup>h</sup> t <sup>h</sup>	kt	t	t <sup>h</sup>
	t	mt	nt	t <sup>h</sup>	t <sup>ʔ</sup>	t <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	k <sup>h</sup> t <sup>h</sup>	kt	k <sup>ʔ</sup> t <sup>ʔ</sup>	t <sup>ʔ</sup>	t <sup>h</sup>
	t <sup>ʔ</sup>	mt <sup>ʔ</sup>	nt <sup>ʔ</sup>	t	t <sup>ʔ</sup>	t <sup>ʔ</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	kt	k <sup>ʔ</sup> t <sup>ʔ</sup>	k <sup>ʔ</sup> t <sup>ʔ</sup>	t <sup>ʔ</sup>	t
	tɕ <sup>h</sup>	mtɕ <sup>h</sup>	ntɕ <sup>h</sup>	tɕ <sup>h</sup>	tɕ <sup>h</sup>	tɕ	tɕ <sup>h</sup>	tɕ <sup>h</sup>	tɕ	k <sup>h</sup> tɕ <sup>h</sup>	k <sup>h</sup> tɕ <sup>h</sup>	ktɕ	tɕ	tɕ <sup>h</sup>
	tɕ	mtɕ	ntɕ	tɕ <sup>h</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	k <sup>h</sup> tɕ <sup>h</sup>	ktɕ	k <sup>ʔ</sup> tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>h</sup>
	tɕ <sup>ʔ</sup>	mtɕ <sup>ʔ</sup>	ntɕ <sup>ʔ</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	ktɕ	k <sup>ʔ</sup> tɕ <sup>ʔ</sup>	k <sup>ʔ</sup> tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>h</sup>
	k <sup>h</sup>	mk <sup>h</sup>	nk <sup>h</sup>	t <sup>h</sup> k <sup>h</sup>	t <sup>h</sup> k <sup>h</sup>	tk	tɕ <sup>h</sup> k <sup>h</sup>	tɕ <sup>h</sup> k <sup>h</sup>	tɕk	k <sup>h</sup>	k <sup>h</sup>	k	k	k <sup>h</sup>
	k	mk	nk	t <sup>h</sup> k <sup>h</sup>	tk	t <sup>ʔ</sup> k <sup>ʔ</sup>	tɕ <sup>h</sup> k <sup>h</sup>	tɕk	tɕ <sup>ʔ</sup> k <sup>ʔ</sup>	k <sup>h</sup>	k <sup>ʔ</sup>	k <sup>ʔ</sup>	k <sup>ʔ</sup>	k <sup>h</sup>
	k <sup>ʔ</sup>	mk <sup>ʔ</sup>	nk <sup>ʔ</sup>	tk	t <sup>ʔ</sup> k <sup>ʔ</sup>	t <sup>ʔ</sup> k <sup>ʔ</sup>	tɕk	tɕ <sup>ʔ</sup> k <sup>ʔ</sup>	tɕ <sup>ʔ</sup> k <sup>ʔ</sup>	k	k <sup>ʔ</sup>	k <sup>ʔ</sup>	k <sup>ʔ</sup>	k
	ʔ	ʔm	ʔn	t	t <sup>ʔ</sup>	t <sup>ʔ</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	k	k <sup>ʔ</sup>	k <sup>ʔ</sup>	ʔ	h
	s <sup>h</sup>	mt <sup>h</sup>	nt <sup>h</sup>	t <sup>h</sup>	t <sup>h</sup>	t	tɕ <sup>h</sup>	tɕ <sup>h</sup>	tɕ	k <sup>h</sup>	k <sup>h</sup>	k	s	s <sup>h</sup>
	s	mt	nt	t <sup>h</sup>	t <sup>ʔ</sup>	t <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	k <sup>h</sup>	k <sup>ʔ</sup>	k <sup>ʔ</sup>	s <sup>ʔ</sup>	s <sup>h</sup>
	s <sup>ʔ</sup>	mt <sup>ʔ</sup>	nt <sup>ʔ</sup>	t	t <sup>ʔ</sup>	t <sup>ʔ</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>ʔ</sup>	k	k <sup>ʔ</sup>	k <sup>ʔ</sup>	s <sup>ʔ</sup>	s
	h	m	n	t <sup>h</sup>	t <sup>h</sup>	t	tɕ <sup>h</sup>	tɕ <sup>h</sup>	tɕ	k <sup>h</sup>	k <sup>h</sup>	k	ʔ	h
	w	m	nw	t <sup>h</sup> w	tw	t <sup>ʔ</sup> w	tɕ <sup>h</sup> w	tɕw	tɕ <sup>ʔ</sup> w	k <sup>h</sup> w	kw	k <sup>ʔ</sup> w	ʔw	hw
	l	ml	n	t <sup>h</sup>	t	t <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ	tɕ <sup>ʔ</sup>	k <sup>h</sup> l	kl	k <sup>ʔ</sup> l	ʔl	hl
	j	mj	n	tɕ <sup>h</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ	tɕ <sup>ʔ</sup>	tɕ <sup>h</sup>	tɕ	tɕ <sup>ʔ</sup>	ʔj	hj

Figure 2.4: Consonant clusters<sup>6</sup>

Clusters may only occur word-initially. If a prefix or proclitic is prepended to a word that begins with a cluster, the C<sub>1</sub> of the cluster migrates to the beginning of the word. In fig. 2.4, entries in blue denote the result of C<sub>1</sub>-migration (i.e., cluster resolution); i.e., if C<sub>1</sub> forms an illegal cluster after migration, the illegal cluster is resolved by returning the corresponding entry.

### 2.3.1.2 | Restraints

These phonotactic restraints govern allomorphy.

- the coda nasal /N/ cannot precede a nasal /m n/
- the coda glottals /ʔ h/ cannot precede another glottal /ʔ h/
- the coda glottal /h/ cannot precede a sonorant /m n w l j/.
- The glides /w j/ cannot precede another glide /w j/
- the coda glide /w/ cannot follow /o ɔ/

<sup>6</sup>cells are unmerged for the purpose of clarity

- the coda glide /j/ cannot follow /i e/

In roots, the following coda reductions occur if the former rules are violated. The coda is deleted and lengthens the preceding vowel (if short). It may also apply tone to the long vowel.

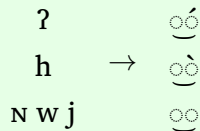


Figure 2.5: Coda reductions

## 2.4 | Phonological processes

There are three types of *phonological processes*: *basic*, *active*, and *dormant* processes.

*Basic* processes occur on the phonetic level. *Active* processes are highly productive and often morphophonological in nature. In contrast, *dormant* processes only occur in set environments, e.g., certain affixes.

### 2.4.1 | Basic processes

#### 2.4.1.1 | Stress

Stress placement is phonologically determined and is not phonemic.

Stress occurs on the left-most live syllable, wherein a syllable ending in a sonorant /N w j/ or long vowel are grouped as *live* and those ending in /? h/ are grouped as *dead*.

Open syllables (i.e., syllables with a short vowel and no coda) are superseded by live syllables but take precedence over dead syllables in terms of stress hierarchy.

#### 2.4.1.2 | Degemination

Timah does not allow gemination of consonants, even across word boundaries. When a coda /? h w j/ precede a word with an identical onset, the onset is elided and the coda takes its place. This occurs on the phonetic level.

s<sup>ʔ</sup>áw wíini

/s<sup>ʔ</sup>áw wíini/

[s<sup>ʔ</sup>áv\_îîni]

some cats

### 2.4.2 | Active processes

#### 2.4.2.1 | Vowel harmony

Timah displays vowel harmony based on tongue root position.

Vowels are divided into two classes: [+ATR] and [-ATR], traditionally grouped as *light* and *heavy* vowels.

[+ATR] (light)	i	ə	o
[-ATR] (heavy)	e	a	ɔ

Figure 2.6: Vowel harmony

Vowel harmony is very pervasive; within a word, harmony spreads rightward from a stressed vowel until it is terminated.

Vowel harmony is terminated after dead syllables (i.e., syllables ending in /ʔ h/, represented in fig. 2.7 by  $\sigma_{\dagger}$ ).



Figure 2.7: Harmony spread

### 2.4.2.2 | Obstruent weakening

Initial obstruents in compound words (including verbs with incorporated nouns, *see* § 8.6.2), here represented by  $\omega_1\omega_2$ , may undergo weakening. If an obstruent is present initially in  $\omega_2$ , it undergoes one of the following mutations:

$t^?$	$t^h$	$t$
$t\text{c}^?$	$t\text{c}^h$	$t\text{c}$
$k^?$	$k^h$	$k$
$s^?$	$s^h$	$s$
$\text{ʔ}$		$h$

Figure 2.8: Obstruent weakening

### 2.4.2.3 | Obstruent contraction

Sequences of  $P_1^*VP_2^*V$ , wherein  $P^*$  represents any obstruent and  $V$  represents any vowel, the sequence  $P_1^*VP_2^*$  is contracted to  $P_3^*$  if the following conditions are met:

- non-initial
- $P_1^*V$  is unstressed
- after obstruent weakening (*see* § 2.4.2.2)
- at a morpheme boundary

In fig. 2.9,  $P^h$  represents the aspirated obstruents / $t^h$   $t\text{c}^h$   $k^h$   $s^h$   $h$ /,  $P$  represents the tenuis obstruents / $t$   $t\text{c}$   $k$   $\text{ʔ}^7$ /, and  $P^?$  represents the glottalized obstruents / $t^?$   $t\text{c}^?$   $k^?$   $s^?$   $\text{ʔ}^7$ / . The glottals / $\text{ʔ}$   $h$ / only affect contraction when they occur as  $P_2^*$ .

<sup>7</sup>/ʔ/ is classed as tenuis when it is either  $P_1^*$  or  $P_2^*$ , and as both tenuis and glottalized when it is  $P_3^*$

$P_1^*$		$P_2^*$		$P_3^*$
$P^h, P$		$P^h, P$		$P^h$
$P^h$	+	$P^?$	→	$P$
$P, P^?$		$P, P^?$		$P^?$
$P^?$		$P^h$		$P$

Figure 2.9: Obstruent contraction

The specific place and manner of articulation of  $P_3^*$  is dependent on a hierarchy of the obstruents in the positions  $P_1^*$  and  $P_2^*$ , i.e., obstruents lower in the hierarchy assimilate to those higher in the hierarchy.

$$k^* > t\varsigma^* > t^* > s^* > \text{ʔ, h}$$

Figure 2.10: Obstruent hierarchy

If there is a tone associated with the elided vowel, it and all tones left of it are shifted one syllable leftward until a toneless syllable (see § 2.5.3).

### 2.4.3 | Dormant processes

#### 2.4.3.1 | Nasal harmony

In certain environments, the approximants /w l j/ may alternate with the nasals /m n/. This is marked by a subscript *n*.

<i>Oral</i>		<i>Nasal</i>
w		m
l	→	n
j		

Figure 2.11: Nasal harmony

Nasal harmony is regressive, i.e., it moves right-to-left within a word. Nasal forms are triggered by the nasals /m n N/. Nasal harmony is blocked by the non-glottal obstruents /t<sup>h</sup> t t<sup>ʔ</sup> t $\varsigma$ <sup>h</sup> t $\varsigma$ <sup>ʔ</sup> k<sup>h</sup> k k<sup>ʔ</sup> s<sup>h</sup> s s<sup>ʔ</sup>/.

#### 2.4.3.2 | Palatal harmony

In certain environments, the alveolars /t<sup>h</sup> t t<sup>ʔ</sup> l/ may alternate with the palatals /t $\varsigma$ <sup>h</sup> t $\varsigma$  t $\varsigma$ <sup>ʔ</sup> j/. This is marked by a subscript *y*.

<i>Alv.</i>		<i>Pal.</i>
t <sup>*</sup>	↔	t $\varsigma$ <sup>*</sup>
l		j

Figure 2.12: Palatal harmony



Palatal harmony is progressive, i.e., it moves left-to-right within a word. Palatal forms are triggered by the palatals /tʃʰ tʃ tʃʲ j/; alveolar forms are triggered by the alveolars /n tʰ t tʲ sʰ s sʲ l/. Palatal harmony is blocked by the velars /kʰ k kʲ/ and labials /m w/.

### 2.4.3.3 | Phonation harmony

In certain environments, the non-glottal obstruents /tʰ t tʲ tʃʰ tʃ tʃʲ kʰ k kʲ sʰ s sʲ/ harmonize in phonation, i.e., they align in the qualities of being aspirated, tenuis, or glottalized. This is marked by a subscript *p*.

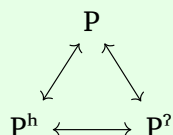


Figure 2.13: Phonation harmony

Phonation harmony is progressive. Aspirated forms are triggered by the aspirated obstruents /tʰ tʃʰ kʰ sʰ/; tenuis forms are triggered by tenuis obstruents /t tʃ k s/; glottalized forms are triggered by the glottalized obstruents /tʲ tʃʲ kʲ sʲ/. Phonation harmony is blocked by the glottals /ʔ h/.

## 2.5 | Tone

Timah has two distinct tonemes: *high* and *low*, as well as the option of being unmarked for tone. Tonally unmarked syllables are phonetically realized identically to the low tone, but unlike low tone, it can be affected by various tonological processes such as *tone mobility* and *tone association*.

### 2.5.1 | Depression

The high tone /ó/ surfaces as mid [̄] when preceded by another high tone (with no regard to intervening segments). This occurs on the phonetic level.

sóósa, mólá, h̀̀lóló

/sóósə, mólá, h̀̀lóló/

[sóōzə, mórā, h̀̀rólū]

container, wave/wash, late winter

### 2.5.2 | Polarity

Certain affixes (marked as -AFFIX, the affix being the target) may take the inverse tone of the immediately preceding or following tone-bearing mora (the trigger) under the following conditions:

- if the trigger has a high tone, the target takes a low tone
- if the trigger has a low tone, the target takes a low tone
- otherwise, the target takes its default tone

Tonal inversion applies to the entire affix.

### 2.5.3 | Mobility

Tones may move from their inherent position to a different surface position.

#### 2.5.3.1 | Leftward tone shift

At the end of a prosodic unit (PU), all tones are shifted one syllable leftward until a toneless syllable, leaving the final syllable toneless. Unlike tone association (see § 2.5.4), tone shift is not blocked by dead syllables. This also occurs when a tonic vowel is elided by obstruent contraction (see § 2.4.2.3).

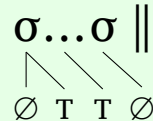


Figure 2.14: Leftward tone shift

#### 2.5.3.2 | Rightward tone movement

If the stressed syllable of a word contains a toneless vowel, the nearest tone leftward of the stressed syllable moves to the stressed toneless vowel. If the stressed syllable contains a toneless long vowel, the two nearest tones leftward move to the stressed toneless long vowel.

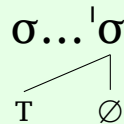


Figure 2.15: Rightward tone movement

### 2.5.4 | Tone association

Tone association is the process in which the tone of a given syllable may spread to the preceding toneless syllable under certain circumstances. This applies after tone mobility.

In fig. 2.16, S represents a sonorant /N w j/ and G represents a glottal /ʔ h/.

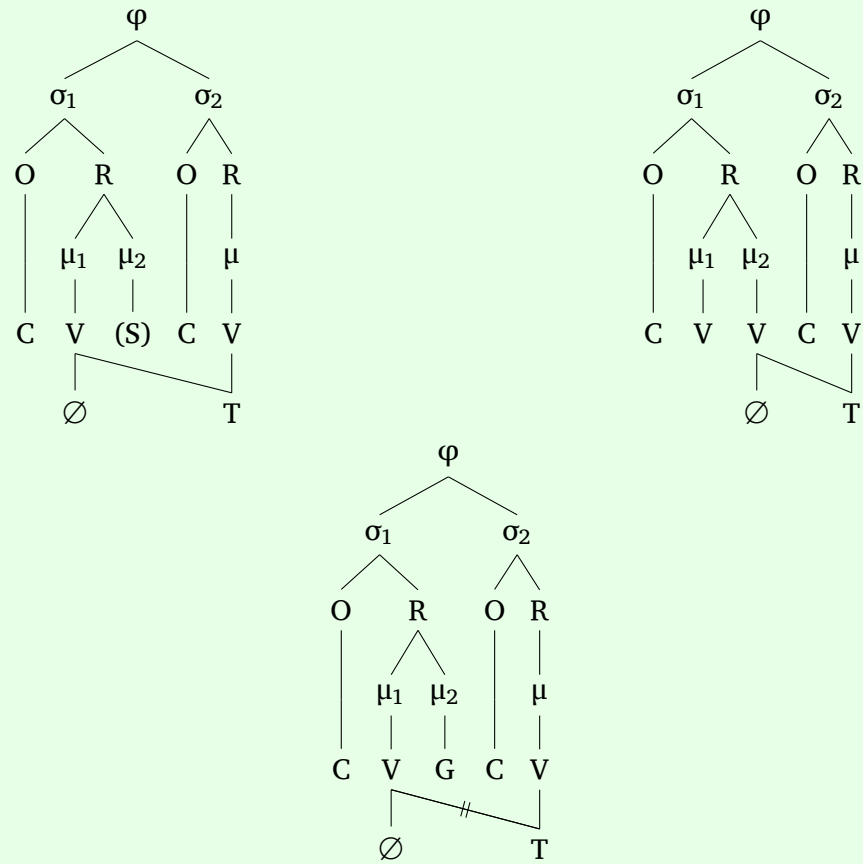


Figure 2.16: Tone association

Floating tones follow similar rules, but associate in the direction in which they moved.

## 3 | Prosody

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### 3.1 | Isochrony

Timah is moraically-timed, i.e., the duration of every mora is approximately equal. Nuclei and live codae both count as one mora; onsets and dead codae do not contribute to mora count (see § 2.4.1.1).

### 3.2 | Prosodic hierarchy

Prosodic units can be separated into a hierarchy of sub-units. In fig. 3.1, PU represents a prosodic unit,  $\varphi$  represents a prosodic foot,  $\sigma$  represents a syllable, and  $\mu$  represents a mora. Superscript numbers represent the amount of that to which they are superscripted.

TODO all of this

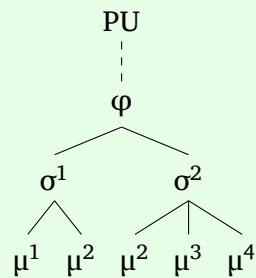


Figure 3.1: Prosodic hierarchy

### 3.3 | Intonation

TODO all of this

## 4 | Orthography

The Timah language uses the *Loma* script (**hlóma** [l̥ómə] lit. smooth-word), a defective abugida that was borrowed from a neighboring language *Maryu* (Timah **májlo** [bǎjɾò]). It was originally written on the large, durable leaves of the **sʔólów** ([sʔóɾów]) plant, which contributes to the script's curled aesthetic.

TODO native, script, other adaptations; tone markers

### 4.1 | Other scripts

#### 4.1.1 | Latin

	<i>Labial</i>	<i>Alveolar</i>	<i>Palatal</i>	<i>Velar</i>	<i>Glottal</i>	<i>Placeless</i>
<i>Nasal</i>	⟨m⟩	⟨n⟩				⟨ŋ⟩ <sup>9</sup>
<i>Plosive</i>		⟨th d t⟩	⟨ch j c⟩	⟨kh g k⟩	⟨h⟩ <sup>9</sup>	
<i>Fricative</i>		⟨sh x s⟩			⟨h⟩	
<i>Approximant</i>	⟨w⟩	⟨l⟩	⟨y⟩			

Figure 4.1: Latin (consonants)

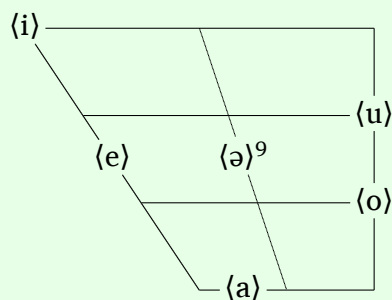


Figure 4.2: Latin (vowels)

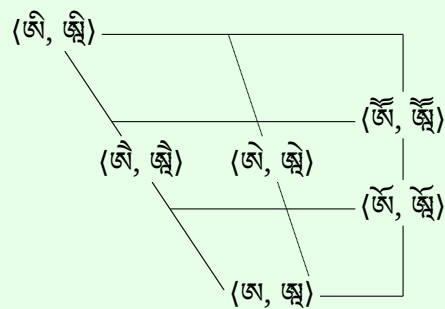
Vowels are marked with ⟨ó⟩ for high tone, ⟨ò⟩ for low tone, and unmarked for toneless.

<sup>9</sup>/N ʔ ə/ may alternatively be romanized as ⟨n ' v⟩, respectively

## 4.1.2 | Tibetan

	<i>Labial</i>	<i>Alveolar</i>	<i>Palatal</i>	<i>Velar</i>	<i>Glottal</i>	<i>Placeless</i>
<i>Nasal</i>	⟨མ⟩	⟨ན⟩				⟨ཙྰ⟩ <sup>10</sup>
<i>Plosive</i>		⟨བ ཌ ཏ⟩	⟨ཆ ཇ ཐ⟩	⟨པ ད ཀ⟩	⟨འ, རྩ⟩ <sup>10</sup>	
<i>Fricative</i>		⟨ཤ ཙ ས⟩			⟨ཌ, ཙམ⟩ <sup>10</sup>	
<i>Approximant</i>	⟨ཕ, ཕྱ⟩ <sup>10</sup>	⟨ར⟩	⟨ཡ, ཡྲ⟩ <sup>10</sup>			

Figure 4.3: Tibetan (consonants)

Figure 4.4: Tibetan (vowels)<sup>10</sup>

Tone is not marked.

## 4.1.3 | Mkhedruli

	<i>Labial</i>	<i>Alveolar</i>	<i>Palatal</i>	<i>Velar</i>	<i>Glottal</i>	<i>Placeless</i>
<i>Nasal</i>	⟨ཐ⟩	⟨བ⟩				⟨ོ <sup>6</sup> ⟩
<i>Plosive</i>		⟨ཏ ཌ ཏ⟩	⟨ཅ ཐ ཏྲ⟩	⟨ཌ ཐ ཐ⟩	⟨པ⟩	
<i>Fricative</i>		⟨ཆ ཙ ཆ⟩			⟨ཌ⟩	
<i>Approximant</i>	⟨ཕ⟩	⟨ལ⟩	⟨འ⟩			

Figure 4.5: Mkhedruli (consonants)

<sup>10</sup>⟨ཙྰ⟩ is a filler letter; in slots with two elements, the second element is the coda form for consonants, and the long form for vowels

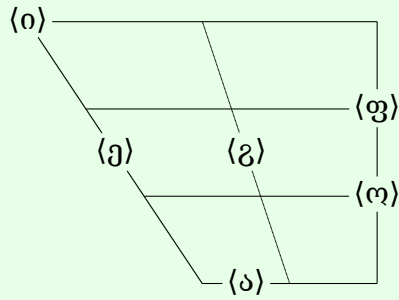


Figure 4.6: Mkhedruli (vowels)

Vowels are marked with ⟨Ჟ⟩ for high tone, ⟨Რ⟩ for low tone, and unmarked for toneless.

#### 4.1.4 | Hacm

	Labial	Alveolar	Palatal	Velar	Glottal	Placeless
<i>Nasal</i>	⟨Ს⟩	⟨Ტ⟩				⟨ᲣᲤ⟩
<i>Plosive</i>		⟨ᲥᲦ Ყ Შ⟩	⟨ᲩᲪ Ძ Წ⟩	⟨ᲭᲮ Ჯ Ჰ⟩	⟨Ჱ⟩	
<i>Fricative</i>		⟨ᲳᲴ Ჵ Ჶ⟩			⟨Ჸ⟩	
<i>Approximant</i>	⟨Ს⟩	⟨Ტ⟩	⟨Უ⟩			

Figure 4.7: Hacm (consonants)

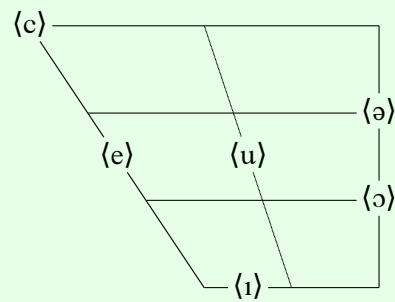


Figure 4.8: Hacm (vowels)

Vowels are marked with ⟨Ს⟩ for high tone, ⟨Ტ⟩ for low tone, and unmarked for toneless.

### 5.1 | Sentence structure & word order

The *subject* is the argument that performs the verb. It consists of one or more noun phrase(s).

The (*direct*) *object* is the argument upon which the verb is directly performed. It, like the subject, consists of one or more noun phrase(s).

The *peripheral*, or indirect/oblique object, is the argument upon which the verb is indirectly performed. It is marked with a *postposition* (see § 7.6) or *oblique case* (see § 7.5.2) and consists of one or more noun or postpositional phrase(s).

The *verb* is the action that is performed within a clause, and is obligatory. It consists of one or more verb phrase(s). Some verbs may not take a subject or object (see § 8.3). A verb must agree with its subject and object (see § 8.6.1).

Timah is *direct-inverse*, so word order in independent and clausal dependent clauses (see § 5.1.1) is largely dependent on an *empathy hierarchy*.

The empathy hierarchy is based on both *person* (see § 7.4) and *integrity* (see § 7.2).

$1^{st} > 2^{nd} > 3^{rd} > \text{Cmplt. Anim.} > \text{Cmplt. Inan.} > \text{Ncmplt.}$

Figure 5.1: Empathy hierarchy

If the arguments of a clause differ in rank in the empathy hierarchy, the higher-ranked argument is always placed first. If the arguments are the same in rank, the most proximate argument is placed first. Otherwise, argument placement defaults to *subject-object-peripheral-verb*.

The empathy hierarchy does not apply to partial dependent clauses (see § 5.1.1) and copular clauses (see § 8.7). Word order is *verb-initial head-final* in partial dependent clauses and *subject-copula-attribute* in copular clauses, wherein the *attribute* is that which is being associated with the subject of the copular phrase.

Dependents are placed before their head unless noted otherwise.

#### 5.1.1 | Dependent clauses

*Dependent* clauses are divided into two types, *partial* and *replete* dependent clauses. They are introduced by one of three clausal conjunctions (a subset of *verbal conjunctions* see § 11.1). All dependent clauses are placed before their head and are deranked (see § 8.6).

nəj	introduces basic dependent clause
ten	introduces causal dependent clause
motó	introduces consecutive dependent clause
ní	introduces restrictive dependent clause

*Partial* dependent clauses consist of both *relative* and *adverbial* clauses (i.e., they are not differentiated). They modify a word or phrase and take *verb-initial head-final* word order, wherein the verb is placed initially and the head of the dependent argument is placed finally, with the



background argument (i.e., the argument of the dependent clause that is not the head) placed medially. Thus, the word order of a partial dependent clause may be either *verb-object-peripheral-subject* or *verb-subject-peripheral-object*. In the former, the subject is the head; in the latter, the object is the head. Only subjects and objects (i.e., not peripherals) may be relativized, and must take the same role in the relative clause as in the main clause. The *restrictive* clausal conjunction limits that which it modifies.

TODO example sentences

*Replete* dependent clauses consist of content clauses. Word order is the same as in independent clauses, with mandatory introduction by a clausal conjunction. Colloquially, the clausal conjunction may be dropped in replete dependent clauses.

TODO example sentences

## 5.2 | Alignment

The morphosyntactic alignment is a type of dually-split-ergative that is dependent of factors of *perfectiveness*, *valency*, and *volition*.

*Perfectiveness* describes the completeness of the verb (see § 8.6.6), *valency* describes the number of arguments of the verb (see § 8.3), and *volition* describes the degree of control or intent concerning the verb (see § 8.4).

The *ergative-absolutive* alignment is used in perfective clauses; the *active-stative* alignment is used in imperfective clauses.

Within imperfective clauses, monovalent may mark the subject as either *agentive* or *patientive*, depending on volition. In volitional clauses, the subject is marked as *agentive*; in non-volitional clauses, the subject is marked as *patientive*.

In fig. 5.2, S represents the subject of a monovalent verb, A represents the subject of a multivalent verb, O represents the object of a multivalent verb.

		<i>Mval.</i>	<i>Mtval.</i>
<i>Pfv.</i>		S=O=ABS, A=ERG	
<i>Npfv.</i>	<i>Vol.</i>	S=AGT	A=AGT, O=PAT
	<i>Nvol.</i>	S=PAT	

Figure 5.2: Alignment

Timah is secundative, with the *theme* (object that is directed toward the recipient) of a trivalent verb (i.e., a polyvalent verb that takes three arguments, see § 8.3) acting as the peripheral and being marked by a postposition (see § 7.6), and the recipient acting as the object.

## 5.3 | Repeat argument dropping

In ergative-absolutive statements, a repeated absolutive argument can be dropped. In active-stative statements, a repeated subject can be dropped. Switching grammatical voice (see § 8.6.3) allows the opposing argument to be dropped.

## 5.4 | Clitics

What are termed *clitics* are actually *phrasal affixes*, i.e., they are affixes that attach to the initial or final component of their head phrase. These are glossed and referred to as clitics, but may also be considered phrasal affixation or *gruppenflexion*.

## 6 | Lexical categories & stems

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### 6.1 | Lexical categories

There is largely no lexical noun-verb distinction, i.e., most content words can act either as a noun or as a verb. The exceptions are the closed classes of *nominal limitives*, or true nouns, and *verbal limitives*, or true verbs (see §§ 7.1 and 8.1). These are grouped together as *limitives*, and contrast with *formatives*, which consist of content words that can act as either a noun or a verb.

### 6.2 | Stems

Roots are divided into two stems based on *perspective*, which is the distinction between *concrete* and *abstract*. This distinction functions inversely, i.e., each root is, by default, unmarked as either being concrete or abstract (the *intrinsic* state); marking inverts this (i.e., to the *extrinsic* state). Some formatives may be both concrete and abstract depending on nominal or verbal function. Pronouns and copulae do not alternate stems.

<b>Concrete</b>	<i>tangible, physical, actual, real</i> ; CONC
<b>Abstract</b>	<i>intangible, cognitive, conceptual, unreal</i> ; ABSTR

Alternation of stems functions derivationally as well as morphologically, i.e., some inflections are dependent on stem alternation.

Perspective is marked by applying the following processes in consecutive order until one succeeds:

- internal metathesis (see fig. 6.1); this applies to the first syllable and proceeds rightward until success;  $C_1$  of  $C_1C_2$  initial clusters is ignored (until cluster resolution)
- external metathesis;  $[{}^{\sigma}_1C_1\dots][{}^{\sigma}_2C_2\dots] \rightarrow [{}^{\sigma}_1C_2\dots][{}^{\sigma}_2C_1\dots] / \#\_$ , i.e., the onsets of the first two syllables are metathesized; this fails if  $C_1$  and  $C_2$  are identical;  $C_1$  cannot be a cluster
- suffixial reduplication of the initial syllable, i.e.,  $[-\sigma_1]$ ; reduplicated clusters are resolved, else truncated to  $C_2$

Cluster resolution and coda reductions (see §§ 2.3.1.1 and 2.3.1.2) apply after these processes.

<i>Intrinsic</i>		<i>Extrinsic</i>
$C\{N^{11}, w, j\}V$		$CV\{N, w, j\}$
$CV\{N, w, j\}$		$C\{n, w, j\}V$
$P\{^h, ?\}V$		$PV\{h, ?\}$
$PV\{h, ?\}$	$\rightarrow$	$P\{^h, ?\}V$
$\{m, n\}V\{?, h, w, j\}$		$\{?, h, w, j\}VN$
$\{?, h, w, j\}VN$		$nV\{?, h, w, j\}$
$\{w, j\}V\{?, h\}$		$\{?, h\}V\{w, j\}$
$\{?, h\}V\{w, j\}$		$\{w, j\}V\{?, h\}$

Figure 6.1: Internal metathesis

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<sup>11</sup>the nasals /m n/

## 7 | Nouns

---

### 7.1 | Nominal limitives

*Nominal limitives* consist of a set of content words that cannot be used as verbs. See App. A for a list. Some nominal limitives are used as classifiers to describe a noun, often in tandem with a numeral (*see Ch. 12*).

### 7.2 | Integrity

Grammatical class, or *integrity*, is divided by compositional integrity, or completeness of the entity. The *complete* class is further divided by animacy. Animacy distinction may not always occur in inflections.

<b>Complete</b>	<i>entity is viewed in its entirety; as sufficient, complete, whole; CMPLT</i>
<b>Animate</b>	<i>living, mobile, warm; more prominent; ANIM</i>
<b>Inanimate</b>	<i>non-living, immobile, cold; less prominent; INAN</i>
<b>Incomplete</b>	<i>entity is viewed partially; as deficient, incomplete, condensed; NCMPLT</i>

Generally, these refer to the compositional integrity within the context of the situation. With concrete stems, integrity refers to physical composition; with abstract stems, it refers to conceptual composition.

### 7.3 | Probability

Grammatical number is divided not by amount, but *probability*, i.e., if the amount is likely or unlikely to change.

<b>Stable</b>	<i>the amount is not likely to change; STBL</i>
<b>Unstable</b>	<i>the amount is likely to change; NSTBL</i>
<b>Panstable</b>	<i>probability to change is unknown; generally associated with mass nouns; PNSTBL</i>

With concrete stems, probability refers to the likeliness to change within the context of the situation; with abstract stems, it refers to the likeliness to change of the entity in general.

### 7.4 | Pronouns

*Pronouns* are a subset of nominal limitives that take the function of another noun or noun phrase.

### 7.4.1 | Personal

*Personal* pronouns inflect for person, integrity (in the 3<sup>rd</sup> person), and case.

Personal pronouns are *absolutely-sequenced* (in contrast to *relatively-sequenced* pronouns, which encode person relative to oneself). That to which a pronoun refers is dependent on the order in which conversation is initiated. 1<sup>st</sup> refers to the initial speaker(s), 2<sup>nd</sup> to the initial listener(s), and 3<sup>rd</sup> to the non-initial participant(s) and/or non-participating referent(s).

While these may overlap with their relatively-sequenced counterparts, this is not always the case. Take the following conversation:

- (1) **lə kawmeləhmów ləhamís<sup>h</sup>oh**  
 lə kaw- melə -h =mów lə= ha=  
 1.AGT CMPLT.INAN.STBL- bread -PAT.CMPLT =REF.VIS.STBL 1.AGT= 3.CMPLT.INAN.PAT=  
 Ø- mís<sup>h</sup>oh -Ø  
 NPFV.REAL- detest -AV.DIR  
I detest bread

To which the listener might reply:

- (2) **lətəjə teh**  
 lə= təjə teh  
 1.AGT= REF.REV SURPRISE  
you do?!

In both cases, the person in (1) is referred to using agreement for 1.AGT (lə=).

			<i>Agt.</i>	<i>Pat.</i>	<i>Erg.</i>	<i>Assoc.</i>	<i>Loc.</i>
1 <sup>st</sup>			lə	ləhi	jón	s <sup>h</sup> aj	tə <sup>h</sup> ə
2 <sup>nd</sup>			nó	nə		nò	nə
3 <sup>rd</sup>	<i>Cmplt.</i>	<i>Anim.</i>	tá?	táhi	tə̀àn	kéh	té
		<i>Inan.</i>		han			
		<i>Ncmplt.</i>		sóhe		kín	s <sup>?</sup> əw

Figure 7.1: Personal pronouns

The *ergative* and *associative* personal pronouns may be used possessively by appending one to the object of possession (i.e., as a suffix). The ergative generally denotes inalienable possession; the associative generally denotes alienable possession (see § 7.5.2). They are sometimes prepended (i.e., as prefixes).

- (3) **tə<sup>h</sup>k<sup>h</sup>òo jón**  
 tə<sup>h</sup>k<sup>h</sup>òo -jón  
 arm -1.ERG  
my arm
- (4) **hòn<sup>s</sup>aj**  
 hòn -s<sup>h</sup>aj  
 dog -1.ASSOC

my dog

The *animate-inanimate* distinction in 3<sup>rd</sup> person pronouns may also be used as a *proximate-obviate* distinction. *Proximate* entities are more prominent, while *obviate* entities are less prominent.

TODO expand; example sentences

#### 7.4.2 | Interrogative

*Interrogative* pronouns inflect for integrity, probability, and *function*. They are used to mark the specific characteristics of a question (see § 8.6.6.3).

		<i>Person</i>	<i>Location</i>	<i>Proportion</i>	<i>Manner</i>	<i>Reason</i>
<i>Cmplt.</i>	<i>Anim.</i>	ʔəsè	k <sup>h</sup> ɔ̃naj	silɔ	sáj	s <sup>h</sup> èh
	<i>Inan.</i>	tansà				
	<i>Ncmplt.</i>	ʔehi	kéhe	saʔií	səmɔ́ɔ	s <sup>h</sup> ɔ̃jna

Figure 7.2: Interrogative pronouns

#### Function

<b>Person</b>	<i>person, thing</i> ; WH.PRSN
<b>Location</b>	<i>place, time</i> ; WH.LOC
<b>Proportion</b>	<i>extent, degree</i> ; WH.PROP
<b>Manner</b>	<i>way, method</i> ; WH.MAN
<b>Reason</b>	<i>reason, rationale</i> ; WH.REAS

#### 7.4.3 | Demonstrative

*Demonstrative* pronouns inflect for proximality, position, and function. They express spatial and temporal position relative to the speaker.

They may stand independently or be appended to that which they modify.

	<i>Ant.</i>		<i>Post.</i>	<i>Prop.</i>	<i>Man.</i>
	<i>Sin.</i>	<i>Dex.</i>			
<i>Prox.</i>	tàá	kò	mɔ̃N	jé	wój
<i>Med.</i>	sáwhe	kàmeʔ	jéhə	jín	kàN
<i>Dist.</i>		k <sup>2</sup> itò			

Figure 7.3: Demonstrative pronouns

Proximality

<b>Proximal</b>	<i>near the speaker; within short timeframe; PROX</i>
<b>Medial</b>	<i>away from speaker and/or near the listener; within a medial timeframe; MED</i>
<b>Distal</b>	<i>far from all participants; within a distant timeframe; DIST</i>

Position

<b>Anterior</b>	<i>in front of the speaker; associated with the past; ANT</i>
<b>Sinister</b>	<i>to the left of the speaker; associated with volitional events; SIN</i>
<b>Dexter</b>	<i>to the right of the speaker; associated with non-volitional events; DEX</i>
<b>Posterior</b>	<i>behind the speaker; associated with the future; POST</i>

Function

<b>Proportion</b>	<i>to an extent, degree; PROP</i>
<b>Manner</b>	<i>via a way, method; MAN</i>

Thus, the deictic space may be modeled as such:

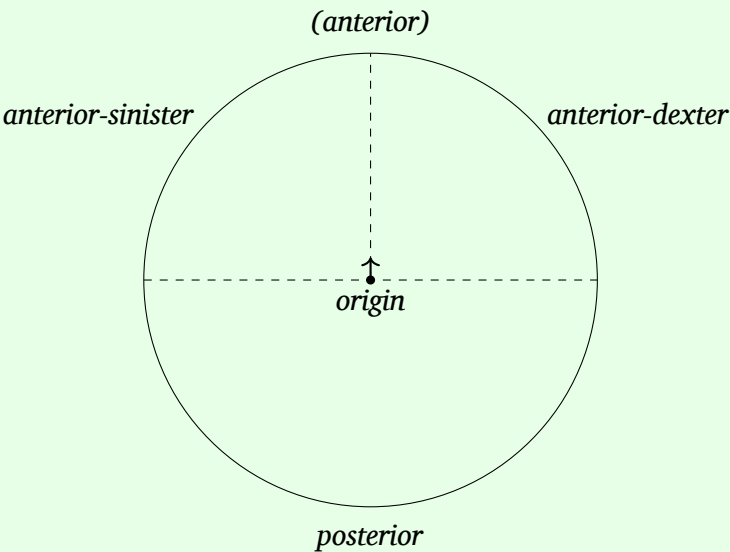


Figure 7.4: Deictic space

The laterally-neutral distal demonstratives **kʔitò** and **tekí** may be compounded with a medial or proximal sinister demonstrative to form laterally-neutral medial and proximal demonstratives.

- (5) **tàákʔitò**



tàá-                      kʔitò  
 DEM.ANT.SIN.PROX- DEM.ANT.DIST  
this (in front of)

## 7.5 | Nominal inflections



Figure 7.5: Nominal inflection template

### 7.5.1 | Noun classes

*Noun classes* are separated into the groups *complete* and *incomplete*, which are associated with semantic wholeness or entirety of the noun (see § 7.2).

	<i>Cmplt.</i>		<i>Ncmplt.</i>
	<i>Anim.</i>	<i>Inan.</i>	
<i>Stbl.</i>	∅-	kaw <sub>p</sub> -, kɔ <sub>p</sub> -	wɪ <sub>n</sub> -
<i>Nstbl.</i>	tɔ-	jé-	
<i>Prnstbl.</i>	na(N)-	∅-	

Figure 7.6: Noun classes

### 7.5.2 | Cases

*Case* expresses syntactic roles and relations. *Open* forms are appended to words that end in an open syllable (i.e., a vowel); *closed* forms are appended to words that end in a closed syllable (i.e., a non-vowel coda).

	<i>Cmplt.</i>	<i>Ncmplt.</i>		<i>Cmplt.</i>	<i>Ncmplt.</i>
<i>Agt.</i>	-∅	(ó)-N	<i>Agt.</i>	-∅	-né
<i>Pat.</i>		-h	<i>Pat.</i>	-si	-sé
<i>Erg.</i>	-ʔ	-h	<i>Erg.</i>	-ki	-ho
<i>Assoc.</i>	-w		<i>Assoc.</i>	-wɔ	
<i>Loc.</i>		-tɕó <sub>y</sub>	<i>Loc.</i>		-tɕó <sub>y</sub>
(a) <i>Open</i>			(b) <i>Closed</i>		

Figure 7.7: Cases

## Cases

<b>Agentive</b>	<i>in active-stative clauses (see § 5.2), this marks the subject of a multivalent verb (see § 8.3) or the subject of a volitional monovalent verb. In ergative-absolutive clauses, this marks the object of a multivalent verb or the subject of a monovalent verb; AGT</i>
<b>Patientive</b>	<i>in active-stative clauses, this marks the object of a multivalent verb or the subject of a non-volitional monovalent verb; PAT</i>
<b>Ergative</b>	<i>in ergative-absolutive clauses, this marks the subject of a multivalent verb. This can also be used as an inalienable genitive; ERG</i>
<b>Associative</b>	<i>marks (alienable) genitive and genitive-like relations, which can be further clarified using postpositions; ASSOC</i>
<b>Locative</b>	<i>marks physical and/or temporal location and movement that can be further clarified using postpositions; LOC</i>

## Alienability

<b>Alienable</b>	<i>the entity cannot be separated from its origin, e.g., body parts, family members</i>
<b>Inalienable</b>	<i>the entity can be separated from its origin</i>

The *associative* and *locative* cases, collectively called *peripheral cases*, may be accompanied by a postposition (see § 7.6). In isolation, the associative takes the meaning of an alienable genitive (in contrast to the ergative, which may have an inalienable genitive meaning) and the locative takes on the meaning of a general locative or temporal (i.e., marking place or time).

TODO example sentences

### 7.5.3 | Article enclitics

*Article enclitics* inflect for referentiality, visibility, and probability. They are appended to the final element of their head phrase.

	<i>Ref.</i>		<i>Nref.</i>	
	<i>Vis.</i>	<i>Nvis.</i>	<i>Vis.</i>	<i>Nvis.</i>
<i>Stbl.</i>	=móɔ	=han	∅	=tʔéʔ
<i>Nstbl.</i>		=mé		=tɕáá
<i>Pnstbl.</i>		=já		=kʰɔɔ

Figure 7.8: Article enclitics

## Referentiality

<b>Referential</b>	<i>a specific instance of the class comprised of the given entity; REF</i>
<b>Non-referential</b>	<i>any instance of the class comprised of the given entity; NREF</i>

## Visibility

<b>Visible</b>	<i>entity can be seen; VIS</i>
<b>Non-visible</b>	<i>entity cannot be seen; NVIS</i>

## 7.6 | Postpositions

There two types of *postpositions*: those of *association* and those of *location*. These types are directly related to the *associative* and *locative* noun cases, as the postpositional peripheral must take the respective case of its postposition.

### Associative

lí	<i>accompaniment/use; basic theme of trivalent verb; with</i>
kʔe	<i>lack of accompaniment/use; negatory theme of trivalent verb; without</i>
kʰɔN	<i>intent of benefit/purpose; beneficial/purposive theme of trivalent verb; for</i>
sì	<i>intent of reference/relation; for</i>
tɕéʔ	<i>state of being; as</i>
kʰò	<i>change of state; causation; to</i>
míh	<i>similarity/comparison; like</i>

### Locative

tí	<i>movement toward; toward</i>
kʰì	<i>movement away from; from</i>
mén	<i>movement onto; onto</i>
tɕɔɔ	<i>movement under; under</i>
tʰísé	<i>movement into; into</i>
siiʔi	<i>movement out of; out</i>
kanʔɔ	<i>movement through, by way of, adjacent to; via</i>
soʔa	<i>in front of/before, below; before</i>
sàkə	<i>behind/after, above; after</i>
seeʔá	<i>between, amidst, within; between</i>
sɔʔhə	<i>surrounding, around, encompassing; around</i>

## 7.7 | Noun reduplication

Many nouns (including pronouns) may be fully reduplicated and attached to their root (i.e., | $-\omega$ |) to indicate plurality or intensity. Reduplication to mark plurality is never used when a numeral is used to quantify the root noun.

- (6)  $t\epsilon\dot{\omega}i$   
 $t\epsilon\dot{\omega}i$   
 person  
a person
- (7)  $t\epsilon\dot{\omega}i t\epsilon\dot{\omega}i$   
 $t\epsilon\dot{\omega}i \sim t\epsilon\dot{\omega}i$   
 person ~person  
people

In some nouns, full reduplication may also be used to derive mass nouns.

- (8)  $h\dot{\omega}N$   
 $h\dot{\omega}N$   
 dog  
a dog
- (9)  $h\dot{\omega}N h\dot{\omega}N$   
 $h\dot{\omega}N \sim h\dot{\omega}N$   
 dog ~dog  
a pack of dogs

Plural reduplication may be used in tandem with integrity (see § 7.2) in order to quantify the arguments of a verb. Marking an argument as both plural and complete indicates that all participants performed the action together; marking an argument as both plural and incomplete indicates that each of the participants performed the action separately.

- (10)  $ketehketeh \ t\acute{\omega}lajk\acute{\omega}la$   
 $\emptyset$ - keteh -keteh - $\emptyset$   $t\acute{\omega}$ = laj-  $k\acute{\omega}la$   
 CMPLT.ANIM.STBL- child -child -AGT.CMPLT 3.CMPLT.ANIM.AGT= PFV.REAL- fish  
 - $\emptyset$   
 -AV.DIR  
the children all went fishing (collectively)
- (11)  $w\acute{\imath}ketehketehn\acute{\epsilon} \ s\acute{\omega}lajk\acute{\omega}la$   
 $w\acute{\imath}$ - keteh -keteh - $n\acute{\epsilon}$   $s\acute{\omega}$ = laj-  $k\acute{\omega}la$  - $\emptyset$   
 NCMPLT- child -child -AGT.NCMPLT 3.NCMPLT.AGT= PFV.REAL- fish -AV.DIR  
the children each went fishing (individually)

### 8.1 | Verbal limitives

*Verbal limitives* consist of a set of content words that cannot be used as nouns. See App. B for a list. Some verbal limitives are used as auxiliaries to describe a verb.

### 8.2 | Verbal negation

Verbs are negated by placing a negatory particle (see § 11.3) before the negated verb. The verb must be in an *irrealis* mode (see § 8.6.6). As negatory (as well as affirmatory) particles inherently indicate evidentiality, the corresponding epistemic modality (see § 8.6.6.1) is dropped (if present).

(12) *ləlajkála*

lə=      laj-          kála -Ø  
1.AGT= PFV.REAL- fish -AV.DIR  
I went fishing

(13) *ləkój hajkála*

lə=      kój          haj-          kála -Ø  
1.AGT= NEG.BAS PFV.IRR- fish -AV.DIR  
I did not go fishing

### 8.3 | Valency classes

There are five main valency classes: *avalent*, *monovalent*, *ambivalent*, *subvalent*, and *polyvalent*.

<b>Avalent</b>	<i>zero arguments; AVAL</i>
<b>Monovalent</b>	<i>zero or one arguments; MVAL</i>
<b>Ambivalent</b>	<i>one or two arguments; BVAL</i>
<b>Subvalent</b>	<i>one or two arguments, see § 8.3.1; SVAL</i>
<b>Polyvalent</b>	<i>two or more arguments; PVAL</i>

Ambivalent and polyvalent verbs that take exactly two arguments are grouped as *divalent* (DVAL), polyvalent verbs that take exactly three arguments are grouped as *trivalent* (TVAL), and ambivalent and polyvalent verbs that take two or more arguments are grouped as *multivalent* (MTVAL). These terms (*divalent*, *trivalent*, *multivalent*) are used only in analysis and metagrouping.

Essential and existential copulae (see § 8.7) are considered monovalent, while referential copulae are considered ambivalent.

### 8.3.1 | Subvalency & salience

Some verbs are classed as *subvalent*. Although these verbs may take up to two arguments, the argument that would prototypically be the object is demoted to the peripheral argument, called the *subvalent peripheral* (The subject behaves as normal). This demotion is motivated by the property of *salience*, or how much the object is affected by the subject. Verbs with less salient objects tend to be subvalent.

The subvalent peripheral is put in the locative case (see § 7.5.2) and takes the postposition *tí* (see § 7.6). When negated, the postposition *s<sup>h</sup>i* is used instead. There is no verbal agreement for the subvalent peripheral.

Colloquially, the subvalent peripheral may be treated as the object (i.e., as if the verb *were* not subvalent) to express that it *was* strongly affected. Inversely, the object of an ambivalent verb may be treated as the subvalent peripheral (i.e., as if the verb *were* subvalent) to express that it *was not* strongly affected.

(14) \**lə ɬə̀ʔihmɔ́ lətéhk<sup>h</sup>ajtè*

\**lə* Ø- *ɬə̀ʔi* -h =mɔ́ *lə*=  
 \*1.AGT CMPLT.ANIM.STBL- person -CMPLT.PAT =REF.VIS.STBL 1.AGT=  
*téh*= Ø- *k<sup>h</sup>ajtè* -Ø  
 3.CMPLT.ANIM.PAT= NPFV.REAL- see -AV.DIR  
\*I see the person (colloq. and the person was affected)

(15) *lə ɬə̀ʔitə́ó tímɔ́ lək<sup>h</sup>ajtè*

*lə* Ø- *ɬə̀ʔi* -*tə́ó* *tí* =mɔ́ *lə*= Ø-  
 1.AGT CMPLT.ANIM.STBL- person -CMPLT.LOC toward =REF.VIS.STBL 1.AGT= NPFV.REAL-  
*k<sup>h</sup>ajtè* -Ø  
 see -AV.DIR  
I see (toward) the person

## 8.4 | Volitional classes

Verbs are inherently classed as either *volitional* or *non-volitional*. These classes determine the case of the subject in monovalent verbs in active-stative-aligned clauses. They denote inherent intent of the agent, regardless of the situational intent. They directly affect alignment (see § 5.2).

<b>Volitional</b>	denotes an action that is intentionally performed; VOL
<b>Non-volitional</b>	denotes an action that is unintentionally performed; NVOL

## 8.5 | Verbal reduplication

Reduplication is more prominent in verbs than in nouns. Full reduplication of the root may be used to indicate greater intensity, but partial reduplication is used in verbal paradigms.

TODO example sentences

|σ<sub>i</sub>~| indicates prefixial reduplication of the initial syllable, and |~σ<sub>f</sub>| indicates suffixial reduplication of the final syllable.

## 8.6 | Verbal inflection

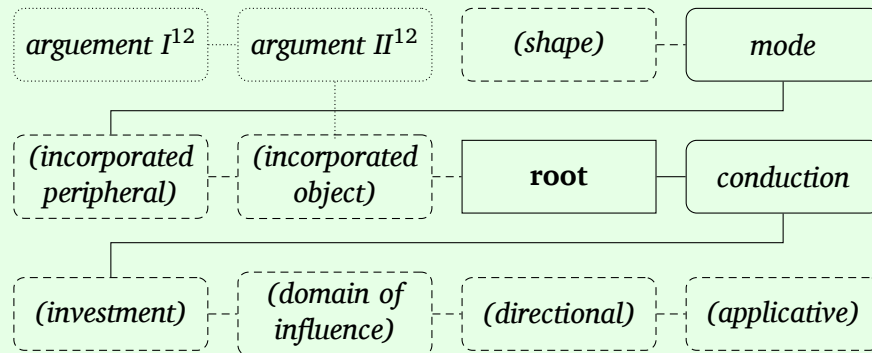


Figure 8.1: Verbal inflection template

In dependent clauses, verbs are *deranked*—they take a more limited inflection template.

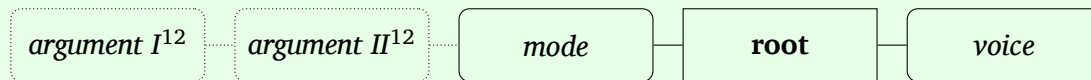


Figure 8.2: Deranked inflection template

Copulae also take more limited inflection.

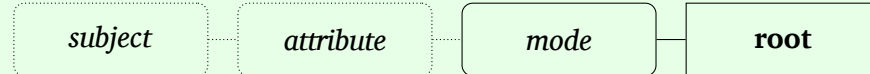


Figure 8.3: Copular inflection template

### 8.6.1 | Pronominal proclitics

*Pronominal proclitics* are obligatorily prepended to the initial element of their head phrase and must agree with their respective argument. Pronouns are dropped when pronominal proclitics are present.

		Agt.	Pat.	Erg.
1 <sup>st</sup>		lə=	le(h)=	jə́(N)=
2 <sup>nd</sup>		nó=		nɔ=
3 <sup>rd</sup>	Cmplt. Anim.	tə́=	té(h)=	ɬə̀à(N)=
	Inan.	ha(N)=		
	Ncmplt.	sá=		kí(N)=

Figure 8.4: Pronominal proclitics

<sup>12</sup>the placement of arguments in the argument slots (which may convey subject or object) is dependent on the empathy hierarchy (see § 5.2); additionally, pronominal proclitics are optional when the corresponding argument is not present

Additionally, there is a set of pronominal proclitics that fuse 1<sup>st</sup> and 2<sup>nd</sup> person arguments, as well as a set that fuses 3<sup>rd</sup> person arguments. In fig. 8.5, AGT>PAT and ERG>AGT.

		Agt.	
		1 <sup>st</sup>	2 <sup>nd</sup>
Pat.	1 <sup>st</sup>	×	néə=
	2 <sup>nd</sup>	lo(n)=	×
Erg.	1 <sup>st</sup>	×	jəw=, jú=
	2 <sup>nd</sup>	naa=	×

(a) 1<sup>st</sup> & 2<sup>nd</sup>

		Agt.		
		Cmplt.		Ncmplt.
		Anim.	Inan.	
Pat.	Cmplt.	tʔéè=	haa=	×
	Ncmplt.	sʔáá=	sʰa=	sáhə=
Erg.	Cmplt.	tɕàntə=	tɕàà=	tɕàná=
	Ncmplt.	×		tɕàkí(n)=

(b) 3<sup>rd</sup>

Figure 8.5: Polypersonal pronominal proclitics

### 8.6.2 | Noun incorporation

In certain verbs, object and peripheral nouns may be *incorporated*, or attached, onto the verb. The incorporated noun may be phonologically reduced or even undergo suppletion. Incorporated nouns are not inflected and are never in focus.

Incorporation may perform one of three functions:

- semantically-reductive derivation
- allow a more prominent argument to take its (previous) role
- background known or unimportant information

TODO example sentences

### 8.6.3 | Conduction

The property of *conduction* expresses both *voice* and *bias*. Voices are symmetric, i.e., they do not alter the valency of the verb, only the arguments' roles. *Bias* describes the arguments' roles in relation to their rank in the empathy hierarchy (see § 5.2).



	<i>Dir.</i>	<i>Inv.</i>		<i>Dir.</i>	<i>Inv.</i>
AV	-∅	-j	AV	-∅	-ji
UV	ó-ʔ	-tɕɛ̀p	UV	-tá	-tɕɛ̀p
CV	ó-ntè		CV	-mó <sub>n</sub> tè	
(a) <i>Open</i>			(b) <i>Closed</i>		

Figure 8.6: Conduction

## Voice

<b>Actor voice</b>	<i>the subject is the agent, the object is the patient; AV</i>
<b>Undergoer voice</b>	<i>the subject is the patient, the object is the agent; UV</i>
<b>Correlative voice</b>	<i>the agent/patient distinction of the subject (and object) is reduced; CV</i>

## Bias

<b>Direct</b>	<i>the subject outranks the object; DIR</i>
<b>Inverse</b>	<i>the object outranks the subject; INV</i>

The *correlative* voice is often used for reflexive constructs, but can also be used for reciprocal constructs.

TODO explain

(16) **ləmólámótè**

lə= ∅- mólá -mótè

1.AGT= NPFV.REAL- wash -CV

I wash myself

(17) **lələmólámótè**

lə= lə= ∅- mólá -mótè

1.AGT= 1.AGT= NPFV.REAL- wash -CV

we wash ourselves

(18) **ləlemólámótè**

lə= le= ∅- mólá -mótè

1.AGT= 1.PAT= NPFV.REAL- wash -CV

we wash each other

### 8.6.4 | Investment

The property of *investment* expresses interest or sympathy of the subject toward the event, e.g., give (uninvested) vs. loan (invested) (*uninvested* is the default, unmarked state). With concrete

stems, investment indicates an interest in the result of the action; with abstract stems, it indicates an interest in the action itself.

-N, -né	<i>weakly invested</i> ; WK.INVST
-tɕà	<i>moderately invested</i> ; INVST
-mán	<i>strongly invested</i> ; STR.INVST

### 8.6.5 | Domain of influence

*Domain of influence* describes the area in which the object is able to be affected by the subject. With certain verbs this is fairly straightforward, e.g., sensory verbs—the domain of influence describes the area in which the subject can sense the object.

Verbs inflect for the presence of the object inside or outside the domain of influence of the subject.

ó-N, -náʔ	<i>inside the domain of influence</i> ; ∈DOI
-lɔ́ɔ́n	<i>outside the domain of influence</i> ; ∉DOI

Only multivalent verbs in either the actor or undergoer voices may be marked for domain of influence, i.e., avalent and monovalent verbs.

When verbs in which the object is understood to be inherently inside or outside the domain of influence take domain of influence marking, it indicates the success or failure of the verb.

- (19) *jəN hònmóʔ jəntɛlajʔanáɔ́*  
 jəN Ø- hòN -Ø =móʔ jəN= tɛ=  
 1.ERG CMPLT.ANIM.STBL- dog -CMPLT.AGT =REF.VIS.STBL 1.ERG= 3.CMPLT.ANIM.AGT=  
 laj- ʔaná -Ø -lɔ́ɔ́  
 PFV.REAL- hit -AV.DIR -∉DOI  
I (tried to) hit the dog (and failed)

In concrete stems, the domain of influence functions as above; in abstract stems, the domain of influence instead describes the perceived attainability of the object (i.e., the subjective probability of it being able to enter the domain of influence).

- (20) *lə hònsi lətɛhɔ́nɔ́*  
 lə Ø- hòN -si =Ø lə= tɛ=  
 1.AGT CMPLT.ANIM.STBL- dog -CMPLT.PAT =NREF.VIS.STBL 1.AGT= 3.CMPLT.ANIM.PAT=  
 hɔ́nɔ́ -Ø -N  
 want -AV.DIR -∈DOI  
I want a dog (and believe this to be attainable)
- (21) *lə hònsi lətɛhɔ́nɔ́lɔ́*  
 lə Ø- hòN -si =Ø lə= tɛ=  
 1.AGT CMPLT.ANIM.STBL- dog -CMPLT.PAT =NREF.VIS.STBL 1.AGT= 3.CMPLT.ANIM.PAT=  
 hɔ́nɔ́ -Ø -lɔ́ɔ́  
 want -AV.DIR -∉DOI  
I want a dog (and believe this to be unattainable)

### 8.6.6 | Modals

*Mode* (which expresses both *mood* and *aspect*) are obligatorily marked on a verb using prefixes. All moods (expressive, basic, and epistemic) are collectively called *modals*.

	<i>Imperfective</i>	<i>Habitual</i>	<i>Perfective</i>	<i>Experiential</i>	<i>Iterative</i>
<i>Realis</i>	Ø-	ka(?) <sub>p</sub> -	laj-, le-	jíhi-	σ <sub>i</sub> -ka(?) <sub>p</sub> -
<i>Affirmative</i>	-σ <sub>f</sub>	k <sup>2</sup> a <sub>p</sub> -√-σ <sub>f</sub>	laj-√-σ <sub>f</sub> , le-√-σ <sub>f</sub>	jîl-√-σ <sub>f</sub>	σ <sub>i</sub> -k <sup>2</sup> a <sub>p</sub> -√-σ <sub>f</sub>
<i>Irrealis</i>	tɔ(?)-	tew <sub>y</sub> -, tə <sub>y</sub> -	haj-, he-	já-	σ <sub>i</sub> -tew <sub>y</sub> -, σ <sub>i</sub> -tə <sub>y</sub> -
<i>Conditional</i>	ʔo-		né(h)-		
<i>Hypothetical</i>	tàj-, tè-		k <sup>h</sup> à-		σ <sub>i</sub> -tàj-, σ <sub>i</sub> -tè-

Figure 8.7: *Mode*

#### Mood

<b>Realis</b>	<i>event is known to be real; REAL</i>
<b>Affirmative</b>	<i>event is emphasized as being real; AFF</i>
<b>Irrealis</b>	<i>event is unknown or unreal; IRR</i>
<b>Conditional</b>	<i>event is dependent upon other events; COND</i>
<b>Hypothetical</b>	<i>event is unknown or unreal, but possible; HYP</i>

#### Aspect

<b>Imperfective</b>	<i>event is incomplete; NPFV</i>
<b>Habitual</b>	<i>event is repeated within multiple timeframes; HAB</i>
<b>Perfective</b>	<i>event is complete; PFV</i>
<b>Experiential</b>	<i>event is experienced; EXP</i>
<b>Iterative</b>	<i>event is repeated within a single timeframe; ITER</i>

#### 8.6.6.1 | Epistemic modals

*Epistemic* modals express the subject's forms of knowing. Epistemic markers are placed before their head, and may be stacked. They are classed as *irrealis*.

TODO example sentences

k <sup>h</sup> ek <sup>h</sup> i	<b>Witness</b> ; <i>direct sensory witness, i.e., sight, sound, touch</i> ; WIT
śsɔ́N	<b>Evidential</b> ; <i>indirect sensory witness, i.e., smell, taste, indirect sight, sound</i> ; EVID
tɔ́Nke	<b>Anecdotal</b> ; <i>knows of event via prior experience(s)</i> ; ANEC
hmɔ́ɔ	<b>Reportative</b> ; <i>non-firsthand knowledge, i.e., from another source</i> ; REP
ʔiN	<b>Assimilative</b> ; <i>knowledge is a firmly integrated part of one's perception</i> ; ASSM
mìwe	<b>Acquirative</b> ; <i>knowledge is newly acquired; may express surprise and/or doubt</i> ; ACQ
ʔaj	<b>Quotative</b> ; <i>marks quoted speech, dialogue</i> ; QUOT

### 8.6.6.2 | Deontic modals

*Deontic* modals express the subject's forms of action. Deontic markers are placed before their head, and may be stacked. They are classed as *irrealis*.

TODO example sentences

tkɔ́ná	<b>Necessitive</b> ; <i>necessity, required</i> ; NEC
hànáʔ	<b>Desiderative</b> ; <i>desired, wanted</i> ; DES
sòðkɔ	<b>Abilitive</b> ; <i>inherent capability</i> ; ABL
tɕʔɔse	<b>Capacitive</b> ; <i>situational capability</i> ; CAP
ʔléwt <sup>h</sup> à	<b>Inabilitive</b> ; <i>inherent incapability</i> ; ABL
tɕawmón	<b>Incapacitive</b> ; <i>situational incapability</i> ; CAP

### 8.6.6.3 | Expressive modals

There are five moods that are independent from basic moods. These are called *expressive moods*, and are placed at the beginning of a clause. They are classed as *irrealis*.

TODO example sentences

tɕɔ́	<b>Imperative</b> ; <i>commands, wishes, desires</i> ; IMP
s <sup>h</sup> a	<b>Interrogative</b> ; <i>questions, requests</i> ; INT
təj	<b>Polar</b> ; <i>yes/no questions; tag questions</i> ; POL
kì	<b>Precative</b> ; <i>polite requests and commands</i> ; PREC
tʔɔ́N	<b>Suggestive</b> ; <i>suggestions, admonitions, warnings</i> ; SUG

The *interrogative* marker s<sup>h</sup>a may be used in tandem with an interrogative pronoun (see § 7.4.2).

### 8.6.7 | Conditionals

*Conditionals* are formed by using a statement in the conditional mood (the *consequence*) in tandem with a statement in another mood (the *condition*). The statements are always separated by a conjunction (see § 8.6). They may occur in either order (i.e., *condition-consequence* or *consequence-condition*), but *condition-consequence* is the most common order.

<b>Implicative</b>	REAL + <b>ten</b> ; <i>basic factual conditional</i>
<b>Emphatic</b>	AFF + <b>ten</b> ; <i>the consequence is emphasized</i>
<b>Counterfactual</b>	IRR + <b>motó</b> ; <i>the condition is considered unlikely</i>
<b>Predictive</b>	HYP + <b>motó</b> ; <i>the condition is considered likely</i>

TODO example sentences

### 8.6.8 | Directionals

The *venitive* and *andative* suffixes, collectively called *directionals*, are commonly used with verbs of movement, such as **wó** move, walk, **s<sup>h</sup>ɔj** carry, give/take, and others.

-tí	<b>Venitive</b> ; <i>motion toward, with</i> ; VEN
-s <sup>h</sup> ì	<b>Andative</b> ; <i>motion away from, against</i> ; AND

TODO example sentences

### 8.6.9 | Applicatives

*Applicatives* are argument-affecting operations that switch the syntactic position of the peripheral with that of the object. They are formed by appending an applicative suffix to the verb, which can be used in tandem with a directional specifier in order to express direction or efficiency.

-lí	<b>Relational</b> ; <i>accompaniment</i> ; REL
-k <sup>h</sup> òN	<b>Beneficial</b> ; <i>intent of benefit/purpose or reference/relation</i> ; BEN
-t <sup>ʔ</sup> ɔʔ	<b>Causal</b> ; <i>causation, final causation</i> ; CAUS
-mî	<b>Complemental</b> ; <i>similarity/comparison, state of being</i> ; COMP
-tɕòy	<b>Locational</b> ; <i>physical or temporal location and movement</i> ; LOCL

TODO example sentences

The *relational* and *beneficial* applicatives **-lí** and **-k<sup>h</sup>òN** may be used to invert the secundative construction (see § 5.1), making it indirective. This allows the theme to be relativized (see § 5.1.1).

Further specifications can be made by supplementing the applicative suffix with a postposition (see § 7.6) placed after the object.

### 8.6.10 | Shape classifiers

*Shape classifiers* are used on certain verbs to describe characteristics of the object. They are often used with verbs of handling.

kɔj-, ka-	<b>Handled</b> ; <i>entity is used with one's hand</i> ; HND
ʔi-	<b>Standing</b> ; <i>entity is taller than it is wide</i> ; STA
maa <sub>n</sub> -	<b>Sitting</b> ; <i>entity is as tall as it is wide</i> ; SIT
tɕè-	<b>Lying</b> ; <i>entity is wider than it is tall</i> ; LNG
sàj-, sè-	<b>Hollow</b> ; <i>entity is hollow</i> ; HOL
kʔəj-, kʔí-	<b>Fluid</b> ; <i>entity is liquid, gaseous; general category</i> ; FLU

TODO example sentences

## 8.7 | Copulae

Timah *copulae* are a subset of verbal limitives that are used to connect arguments.

Copulae only inflect for person and mode (see §§ 8.6.1 and 8.6.6). The constituent arguments within a copular phrase (i.e., the subject and attribute) both take the (unmarked) agentive case (the attribute agrees as the object in copular person agreement).

Copulae are divided into three classes: *essential* (ESSNT), *existential* (EXIST), and *referential* (REF). These are further divided into the subclasses *assertive* (ASSRT), *negative* (NEG), and *revelatory* (REV).

As noted in § 5.1, all copular phrases have *subject-copula-attribute* word order. Essential and existential copulae are monovalent, although pronominal proclitics agree identically as in multivalent verbs (i.e., the attribute is treated as the object in terms of agreement). Referential copulae are considered ambivalent.

	<i>Essential</i>	<i>Existential</i>	<i>Referential</i>
<i>Assertive</i>	kew	nén	t <sup>h</sup> əh
<i>Negatory</i>	klé	níjé	t <sup>h</sup> əné
<i>Revelatory</i>		ʔowó	təjə

Figure 8.8: Copulae

The essential copulae express nominal predication (be). The existential copulae express locational, existential, and possessive predication (be at, have). The location of existential copulae take the locative case; the verb does not agree for location (i.e., it is considered a peripheral).

The referential copulae, while traditionally classed as such due to how they pattern, do not act like the other two classes of copula. They are considered ambivalent, and may either refer to the inherent action of the subject or, if present, to the directly preceding verb (do), but cannot refer to preceding copulae. Additionally, they may be used to form verbs from nouns (e.g., do X); they pattern as normal divalent verbs in this situation with regard to word order, case marking, and inflection template.

TODO example sentences

The assertive subclass expresses the basic form of the copula. The negatory subclass negates the copula. The revelatory subclass expresses surprise, doubt, and/or interest, and suppletes the assertive form of a copula when any irrealis modal is present (see §§ 8.6.6, 8.6.6.1 and 8.6.6.3).

## 8.8 | Asymmetric copular construction

The *asymmetric copular construction* expresses inequality between the subject and attribute, i.e., wherein one argument is a subset or superset of the other. It may only be formed using an essential copula and the following rules:

- the superset argument must be in the *incomplete* integrity (see § 7.2)
- the subset argument must be in the *complete* integrity

TODO example sentence

## 9 | Descriptives

There are twelve descriptives, which function as adjectives or adverbs, or independently as formatives. They are placed before their head. All descriptives may be fully reduplicated to indicate greater intensity.

tɕʰàné	<i>good, positive; full</i>
sìnkà	<i>bad, negative; empty</i>
semɔʔ	<i>fast; loud; hard, rough</i>
hlɔ	<i>slow; quiet; soft, smooth</i>
kʰɔkʰɔ	<i>big, strong; many</i>
tɕʰi	<i>small, weak; few</i>
sɔN	<i>short, wide; feminine</i>
ʔin	<i>long, narrow; masculine</i>
tɕósʰa	<i>white, light; fresh, new</i>
káj	<i>warm (color); hot, dry</i>
sòtɕe	<i>cool (color); cold, wet</i>
tʰawsá	<i>black, dark; stale, old</i>

Order of descriptives is as listed from top to bottom, i.e., *quality-agility-capacity-length-color*.

### 9.1 | Dyadic color terms

In addition to the four main color terms, there exists a set of terms that describe the transition from one color to another, called *dyadic color terms*.

		A			
		<i>white</i>	<i>warm</i>	<i>cool</i>	<i>black</i>
Ω	<i>white</i>	×	kétɕóh	sòtɕʰáh	sʰátɕʰá
	<i>warm</i>	tɕókʰáj	×	sòkʰáj	sóké
	<i>cool</i>	tɕósə	kétɕʰə	×	tʰósəh
	<i>black</i>	tɕótʰɔ	kétɕá	sòtɕʰéw	×

Figure 9.1: Dyadic color terms

The *white* and *black* phases may be used to express the transition of a lighter or darker shade, respectively, to or from the paired color term.



## 9.2 | Comparison

Comparative constructions are formed by placing a postposition after the descriptive in a copular clause. The placement of the *recipient* of comparison is dependent on the empathy hierarchy (see § 5.1).

s <sup>h</sup> i	positive comparison
míh	equative comparison
tí	negative comparison

(22) ketehmów tɛ̀ɛ̀ʔitɛ̀ɛ̀ s<sup>h</sup>imów tákew tɛ̀ɛ̀s<sup>h</sup>a

Ø- keteh -Ø =mów Ø- tɛ̀ɛ̀ʔi  
 ANIM.STBL.CMPLT- child -AGT.CMPLT =REF.VIS.SG ANIM.STBL.CMPLT- person  
 -tɛ̀ɛ̀ s<sup>h</sup>i =mów tá= kew tɛ̀ɛ̀s<sup>h</sup>a  
 -LOC.CMPLT from =REF.VIS.SG 3.CMPLT.ANIM.AGT= COP.ESSNT.ASSRT new  
the child is younger than the man

Superlative constructions are formed by placing a quantifier (prototypically ní all, every, see § 11.4) before the recipient, or using it in place of the recipient. Excessive constructions are formed by omitting the recipient entirely.

(23) ketehmów séè (tɛ̀ɛ̀ʔitɛ̀ɛ̀) s<sup>h</sup>i(mów) tákew tɛ̀ɛ̀s<sup>h</sup>a

Ø- keteh -Ø =mów séè (Ø- tɛ̀ɛ̀ʔi  
 ANIM.STBL.CMPLT- child -AGT.CMPLT =REF.VIS.SG all (ANIM.STBL.CMPLT- person  
 -tɛ̀ɛ̀) s<sup>h</sup>i =(mów) tá= kew tɛ̀ɛ̀s<sup>h</sup>a  
 -LOC.CMPLT) from =(REF.VIS.SG) 3.CMPLT.ANIM.AGT= COP.ESSNT.ASSRT new  
the child is the youngest of all (men)

(24) ketehmów s<sup>h</sup>i tákew tɛ̀ɛ̀s<sup>h</sup>a

Ø- keteh -Ø =mów s<sup>h</sup>i tá=  
 ANIM.STBL.CMPLT- child -AGT.CMPLT =REF.VIS.SG from 3.CMPLT.ANIM.AGT=  
 kew tɛ̀ɛ̀s<sup>h</sup>a  
 COP.ESSNT.ASSRT new  
the child is very/too young

## 10 | Word formation

Word formation is achieved through the processes of *derivation* and *compounding*.

### 10.1 | Derivation

Derivation is possible by appending a descriptive onto a noun or verb. Additionally, there exists a small closed class of various derivational affixes, as well as specific processes that utilize sound symbolism.

#### Prefixes

təj-, tə-	<i>opposite, reverse</i>
tɕ <sup>h</sup> à(?)	<i>person, profession</i>
lə(h)-(ó)	<i>place; time</i>
kósóp-	<i>homorganic group/mass</i>
k <sup>h</sup> e <sub>p</sub> -	<i>heterorganic group/mass</i>
tɕá(N)-(ò)	<i>prevent, stop, interrupt</i>
sáj-, sé-	<i>pretend, mimic, falsify</i>
sóo-	<i>cause, source</i>
ʔikə-	<i>expected accompaniment</i>

#### Suffixes

-tɕ <sup>ʔ</sup> é	<i>attempt, try</i>
-təj <sub>y</sub>	<i>product, result</i>
(ó)-sóh	<i>container, captivity, portation</i>
-k <sup>ʔ</sup> éʔ	<i>tool, instrument</i>
(ò)-s <sup>ʔ</sup> oo	<i>abstraction, mass</i>
-tɕáh	<i>animals, inedible plants</i>
-jəh <sub>n</sub>	<i>edible plants, food</i>
-k <sup>ʔ</sup> ée	<i>pejorative, derogatory</i>

#### 10.1.1 | Sound symbolism

Sound symbolism can also be used as a means of derivation, using processes of alteration.

*Magnitude* is associated with the process of *strength alteration*, wherein certain consonants are classed as either *strong* or *weak*. Strong forms are associated with greater magnitude, while weak forms are associated with lesser magnitude.

<i>Strong</i>		<i>Weak</i>
t*	↔	s*
tɕ*	→	
k*	↔	tɕ*
ʔ	↔	h

Figure 10.2: Magnitude

*Movement* is associated with the process of *nasal alteration*, wherein certain consonants are classed as either *oral* or *nasal*. Oral forms are associated with slower movement, while nasal forms are associated with faster movement.

<i>Oral</i>		<i>Nasal</i>
w	↔	m
l	↔	n
j	→	
-w, -j <sup>13</sup>	→	-N <sup>13</sup>
oo	←	

Figure 10.3: *Movement*

## 10.2 | Compounding

*Compounding* is divided into *coördinating* and *subordinating* compounding.

### 10.2.1 | Coördinating

In coördinating compounds, the elements are equal and may be in any order. These are formed by prepending one word to another.

TODO example

### 10.2.2 | Subordinating

In subordinating compounds, elements are order-dependent; each element is a subset of the following element. These are formed by prepending the reduced form (if one exists) of a word to the word by which it is subordinated.

TODO example

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<sup>13</sup>the coda phonemes /w j N/

## 11 | Function words

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### 11.1 | Conjunctions

The two groups of conjunctions are *nominal* and *verbal*. *Nominal* conjunctions connect nouns, noun phrases, and descriptives; *verbal* conjunctions connect verbs and verb phrases, and can be used to introduce clauses.

#### Nominal

ní	<i>presents non-contrast</i> ; NCNTRST.NML
?ika	<i>presents contrast</i> ; CNTRST.NML
teh	<i>presents alternative</i> ; ALTRN.NML

#### Verbal

nəj	<i>presents non-contrast; introduces basic (dependent) clause</i> ; NCNTRST.VRBL
ten	<i>presents rationale, causality; introduces causal (dependent) clause</i> ; RATNL.VRBL
motó	<i>presents consequence; introduces consecutive (dependent) clause</i> ; CNSQN.VRBL
?ihi	<i>presents contrast</i> ; CNTRST.VRBL
kàh	<i>presents alternative</i> ; ALTRN.VRBL

### 11.2 | Satellite conjunctions

Conjunctions may be used initially or finally in a statement as discourse markers.

ní	<i>indicates weak affirmation of the statement</i> ; WEAK_AFFIRM
?ika	<i>inquires weak affirmation of the listener's experience</i> ; WEAK_AFFIRM_LISTNR
teh	<i>indicates surprise, doubt, or interest toward the statement</i> ; SURPRISE
nəj	<i>indicates strong affirmation and/or discourse-completion of the statement</i> ; STRONG_AFFIRM
ten	<i>indicates agreement with the listener</i> ; AGREE
motó	<i>inquires strong affirmation of the listener's experience</i> ; STRONG_AFFIRM_LISTNR
?ihi	<i>inquires contrast of the listener's experience to the speaker's statement</i> ; CONTRAST
kàh	<i>requests more information from the listener</i> ; INQUIRY

### 11.3 | Affirmatory & negatory

*Affirmatory* and *negatory* particles are used to affirm and negate, respectively, e.g., when answering a polar question. Various levels of evidentiality are expressed in them.

#### Affirmatory

sÉN	<b>Affirmatory-basic</b> ; <i>affirms with no regard to evidence</i> ; AFF.BAS
s <sup>h</sup> è	<b>Affirmatory-witness</b> ; <i>affirms via visual evidence</i> ; AFF.WIT
s <sup>h</sup> ò	<b>Affirmatory-sensory</b> ; <i>affirms via non-visual evidence</i> ; AFF.SNS
s <sup>ʔ</sup> ó	<b>Affirmatory-evidential</b> ; <i>affirms via direct evidence</i> ; AFF.EVID
tɕ <sup>ʔ</sup> ÉN	<b>Affirmatory-anecdotal</b> ; <i>affirms via prior experience(s)</i> ; AFF.ANEC
jón	<b>Affirmatory-reportative</b> ; <i>affirms via indirect evidence</i> ; AFF.REP

#### Negatory

kój	<b>Negatory-basic</b> ; <i>negates with no regard to evidence</i> ; NEG.BAS
k <sup>h</sup> àj	<b>Negatory-sensory</b> ; <i>negates via sensory/direct evidence</i> ; NEG.SNS
sój	<b>Negatory-inferential</b> ; <i>negates via direct evidence/prior experience(s)</i> ; NEG.INF
wáj	<b>Negatory-reportative</b> ; <i>negates via indirect evidence</i> ; NEG.REP

### 11.4 | Quantifiers

*Quantifiers* are particles that indicate or delimit the amount of that which they modify.

hi?	<i>none, no</i>
ʔika	<i>none, no</i>
ní	<i>all, every</i>
teh	<i>some, few</i>
sée	<i>many, most</i>
hak <sup>h</sup> IN	<i>countable, finite</i>
sèNtó?	<i>uncountable, infinite</i>

### 11.5 | Extension

*Extension* describes temporal limitation on the axes of *locus* and *restraint*. Extension particles may apply to content words, descriptives (see Ch. 9), and conjunctions (see § 8.6). They are placed

directly before their head.

	<i>Retro.</i>	<i>Prosp.</i>	<i>Delim.</i>
<i>Antmp.</i>	né	kəsí	tɔ́
<i>Postmp.</i>	liís <sup>h</sup> i	tòje	ʔɔjke
<i>Cistmp.</i>	tɛ́ɔ̀tì	s <sup>h</sup> ə̀N	×

Figure 11.1: Extension

*Locus* defines the temporal beginning and end.

<b>Retrospective</b>	<i>beginning is focused; RETRO</i>
<b>Prospective</b>	<i>end is focused; PROSP</i>
<b>Delimitive</b>	<i>both beginning and end are focused; DELIM</i>

*Restraint* describes the the point at which the locus is defined.

<b>Antemporal</b>	<i>locus is defined before the point of reference; ANTMP</i>
<b>Posttemporal</b>	<i>locus is defined after the point of reference; POSTMP</i>
<b>Cistemporal</b>	<i>locus is defined during the point of reference; CISTMP</i>

When applied to content words and descriptives, extension is used to express when the entity starts and/or ends relative to the time of reference.

The cistemporal retrospective and prospective extensions focus the development and the consequences of the event, respectively.

TODO example sentences

### 11.5.1 | Use with conjunctions

When applied to conjunctions, extension expresses the temporal relation between the phrases modified by the conjunction.

TODO example sentences

## 12 | Numerals

Timah uses a base-60 numeral system. This is not a pure base-60 system orthographically, as it uses base-12 as a sub-base to construct the constituent numeric symbols. There is no overt difference between cardinal and ordinal numbers. All numerals may be used as descriptives or as formatives.

0	hiʔ	12	tɕíha	24	sín	36	sekó	48	tʰàse
1	tʰè	13	tɕʰəə	25	kon	37	hino	49	sʰii
2	nin	14	nəʔah	26	ʔəəha	38	sʰəə	50	sʰóo
3	kɔ	15	sʰa	27	tʰaà	39	tè	51	kʰòj
4	kʰì	16	sʰɔh	28	tòo	40	kʰʔʔ	52	lɔʔen
5	tɕʰajá	17	kʰeé	29	tɕəN	41	sómán	53	tʰòN
6	soo	18	jo	30	sʰih	42	hasʰè	54	tɕɔh
7	sáh	19	tànʔa	31	sʰə	43	kè	55	sò
8	ʔɔsə	20	tɕʰà	32	nój	44	kʰo	56	taloh
9	kʰii	21	təkʰo	33	sàtɕíí	45	lato	57	jíli
10	tɕé	22	ʔətɕʰó	34	satɕaʔ	46	tɕəh	58	tʰò
11	láha	23	təkʰo	35	tɕʰON	47	sìitʰɔ	59	hentʰe

Figure 12.1: Numerals

### 12.1 | Higher & lower numerals

*Higher* numerals are formed by using a positional numbering system, wherein each consecutive slot  $n$  contains a numeral  $x$  and indicates  $60^nx$ .

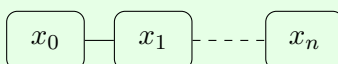


Figure 12.2: Higher numerals

#### 12.1.1 | Numeric distributors

*Numeric distributors* may also be used to form higher as well as *lower numerals*. They multiply or divide the numeral to which they are attached by a set value.

-nii	$2\times$	-jih <sub>n</sub>	$2\div$
-k <sup>ʔ</sup> ʒ	$3\times$	-k <sup>h</sup> à	$3\div$
-kì	$4\times$	-té <sub>p</sub>	$4\div$
-tɕé <sub>y</sub>	$5\times$	-sì	$5\div$
-s <sup>ʔ</sup> o	$6\times$	-ho	$6\div$

Numerals may be added and subtracted using the postpositions lí and k<sup>ʔ</sup>e (which are placed after their arguments), respectively.



## 13 | Units of measure

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### 13.1 | Time

#### 13.1.1 | Seasons

A year is divided into eight main seasons.

mólóló	<i>spring</i>
miiʔló	<i>late spring/early summer</i>
ɬɛiiʔló	<i>midsummer</i>
kʰəʔóló	<i>late summer/early autumn</i>
lóoʔló	<i>autumn</i>
níjòʔló	<i>late autumn/early winter</i>
woʔóló	<i>midwinter</i>
həlóló	<i>late winter/early spring</i>

## 14 | Register terms & personal names

### 14.1 | Register terms

*Register terms* are used to describe the social relationship between people using the three properties of *status*, *age*, and *formality*.

	<i>Inferior</i>			<i>Equivalent</i>			<i>Superior</i>		
	<i>Younger</i>	<i>Equal</i>	<i>Elder</i>	<i>Younger</i>	<i>Equal</i>	<i>Elder</i>	<i>Younger</i>	<i>Equal</i>	<i>Elder</i>
<i>Formal</i>		tèhah	waj	kátɕʰè	sʰò	sʰəw	létɕaʔ	jóʔoh	sako
<i>Polite</i>		lɔj	ɕʰaw	sóhkəh		woʔɔ	kʰemé	miiʔí	
<i>Familiar</i>			ɕʰɔsʰə		kʰa	tʰiiʔɔj		tʰitɕín	tʰè
<i>Pejorative</i>			kəj		ketɕʰɔ			kʰèle	

Figure 14.1: Register terms

These terms can also be used to describe familial relations. Status corresponds to the position of kin in relation to one's generation, i.e., *inferior* corresponds to kin below one's generation, *equivalent* to kin within one's generation, and *superior* to kin above one's generation. Age corresponds to relative age, while formality corresponds to relative social status.

### 14.2 | Personal names

A *personal name* consists of many elements:

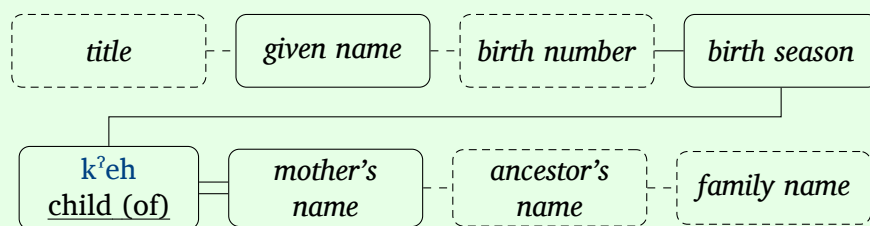


Figure 14.2: Personal name structure

<b>Title</b>	<i>an optional social title, often a register term and/or profession</i>
<b>Given name</b>	<i>one's given name</i>
<b>Birth number</b>	<i>an optional number corresponding to the birth order of oneself in relation to one's siblings (if one has siblings)</i>
<b>Birth season</b>	<i>the season of one's birth (see § 13.1.1)</i>
<b>Mother's name</b>	<i>one's mother's given name, always preceded by <a href="#">k'eh</a></i>
<b>Ancestor's name</b>	<i>an optional ancestor's given name, real or mythical</i>
<b>Family name</b>	<i>an optional word or phrase that describes the family (e.g., a common family profession or a family descriptor)</i>

The elements «[k'eh](#) (mother's given name)» may be repeated an arbitrary amount of times, each consecutive matriarch applying to the previous one.

## 15 | Ideophones

### 15.1 | Ideophonemes

There exists a set of phonemes that can appear only in ideophones. These are called *ideophonemes*, and they cannot cluster (i.e., codae /ʔ h ɳ w j/ may not precede them). Basic consonants can appear in ideophones, but ideophones are restricted to a reduced vowel inventory.

	<i>Labial</i>	<i>Alveolar</i>	<i>Dorsal</i>		<i>Dental</i>	<i>Alveolar</i>	<i>Lateral</i>
				<i>Tenuis</i>		!	
<i>Nasal</i>	<sup>m</sup> b	<sup>n</sup> d	<sup>ŋ</sup> g-ŋ	<i>Aspirate</i>	<sup>h</sup>	! <sup>h</sup>	<sup>h</sup>
<i>Liquid</i>	<sup>l</sup> ḡ Ḃ		<sup>ʀ</sup> χ R-Ḃ	<i>Nasal</i>	ṽ	ṽ!	ṽ
	<i>(a) Pulmonic</i>			<i>Glottal</i>	ṽ ʔ	ṽ!ʔ	ṽ  ʔ
				<i>(b) Non-pulmonic</i>			

Figure 15.1: Ideophonemes

Another notable feature of ideophones is that they are vocally underspecified, i.e., ideophone roots consist only of consonants. Vowels may be inserted (respecting phonotactics) in order to convey meaning.

### 15.2 | Ideophones

There are three types of ideophones: *phonomimes*, *phenomimes*, and *psychomimes*. See App. D for a list of ideophones. Ideophones may function as descriptives or as formatives.

<b>Phonomimes</b>	<i>imitate sounds directly; PHON</i>
<b>Phenomimes</b>	<i>imitate sounds associated with tangible states and conditions; PHEN</i>
<b>Psychomimes</b>	<i>imitate sounds associated with intangible states and conditions; PSYCH</i>

Certain patterns of reduplication and vowel insertion have certain connotations when applied to ideophone roots.

<b>Light vowels</b> /i ə o/	<i>light, sharp, soft</i>
<b>Heavy vowels</b> /e a ɔ/	<i>heavy, blunt, rough</i>
<b>Front vowels</b> /i e/	<i>order, uniformity</i>
<b>Central vowels</b> /ə a/	<i>natural structure, innate form</i>
<b>Back vowels</b> /o ɔ/	<i>chaos, disformity</i>
<b>Initial reduplication</b>  σ <sub>i</sub> ~	<i>reductive, diminutive, negative</i>
<b>Final reduplication</b>  ~σ <sub>f</sub>	<i>casual, informal, playful</i>
<b>Full reduplication</b>  ~ω	<i>intensive, augmentative, affirmative</i>
<b>Lengthening</b>	<i>general, associative</i>
<b>Toneless</b>	<i>natural measure, innate size</i>
<b>High tone</b>	<i>narrow, shallow; thin, tall</i>
<b>Low tone</b>	<i>wide, deep; fat, squat</i>

## 16 | Pragmatics

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### 16.1 | Focus

*Focus* is an important element of discourse. Generally, the focus consists of unknown or new information.

The focus of a clause may be explicitly marked by placing one of three *focus markers* before the head of the phrase containing the focus.

TODO example sentences

kʔitò		<i>focuses the entire phrase</i>
tàá		<i>focuses the head of the phrase</i>
kò		<i>focuses the dependents of the phrase</i>

The specific focus will always be intonationally emphasized.

## 17 | Speech registers

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There exists many special *speech registers*. While identical in grammar, these registers differ in lexicon content and size.

<b>Nuptial registers</b>	<i>used by people who are or have been in an intimate relationship</i>
<b>Internal subregister</b>	<i>used when speaking directly to one's intimate partner</i>
<b>External subregister</b>	<i>used by people who are or have been in a relationship, with no regard to the status of the listener</i>
<b>Avoidance subregister</b>	<i>used when speaking to and around one's previous intimate partners</i>
<b>Foreign registers</b>	<i>used when around foreigners, i.e., non-Khokan people</i>
<b>Positive subregister</b>	<i>used when speaking to foreigners that are considered favorable by the speaker</i>
<b>Negative subregister</b>	<i>used when speaking to foreigners that are considered hostile by the speaker</i>
<b>Vital registers</b>	<i>used when hunting, gathering, and/or observing certain animals or plants</i>
<b>Shallow subregister</b>	<i>used when hunting and observing inherently terrestrial animals</i>
<b>Deep subregister</b>	<i>used when hunting and observing inherently aerial and/or aquatic animals</i>
<b>Passive subregister</b>	<i>used when gathering plants and collecting spoils</i>

TODO all of this

## Appendices

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Within these dictionary appendices, entries are notated as «*word, (reduced form) : (inherent inflections/classes), function, definition*». The *reduced form* may not appear for all entries.

Entries followed by a superscript «NI, NX, NA, FP, FN, VS, VD, VP» correspond to the nuptial internal, nuptial external, nuptial avoidance, foreign positive, foreign negative, vital shallow, vital deep, and vital passive registers, respectively (see Ch. 14).

TODO all of this

## A | Nominal limitives

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- **ṭṭəʔi** (**ṭṭəʔè**) : (CONC, ANIM) *n.* person, human, humanoid creature ‡ *cl.* people, all humanoids

- **kON** : (CONC, INAN, PNSTBL) *n.* place, location, area ‡ *cl.* places, locations

- **kəteh** (**kʔeh**), **ṭṭatih<sup>FP</sup>** : (CONC, ANIM) *n.* baby, offspring; child, young person ‡ *cl.* young (of an animal), offspring, products

- **mɔwɔ** : (CONC, ANIM) *n.* parent, guardian; elder person ‡ *cl.* parent, producers

- **siṣi** (**sʔii**) : (CONC, ANIM, PNSTBL) *n.* water, air; liquid, fluid; motion, movement ‡ *cl.* all fluids

- **neh** : (CONC, INAN) *n.* rock, stone, solid; immobility, inactivity ‡ *cl.* rocks, stones, natural solids; rigid body parts e.g., shells, bone, teeth, nails

- **ṭṭi** : (CONC, ANIM) *n.* animal, creature, beast ‡ *cl.* all wild terrestrial animals excluding insects

- **ṭṭasí** : (CONC, INAN) *n.* tree, plant; foliage, vegetation ‡ *cl.* all non-edible plants

- **sóósa** : (CONC, INAN) *n.* container, vessel, receptacle ‡ *cl.* all containers; all foods that can contain other food

- **kʔəʔe** : (CONC, INAN) *n.* tool, instrument, weapon ‡ *cl.* all tools, instruments, weapons; functional body parts e.g., appendages, sensory organs

- **ṭṭilṣ** : (CONC, ANIM) *n.* body; flesh, meat (living); physical form; body language, behavior

- **ṭṭèʔ** : (CONC, INAN) *n.* corpse; flesh, meat (dead/raw); death ‡ *cl.* soft body parts e.g., flesh, hair, skin; all animal-derived foods

- **kʰàtí** : (CONC, ANIM) *n.* flesh, meat (cooked); meal, feast

- **jəho** : (CONC, INAN) *n.* fruit; edible plant; the flesh of a fruit; flower ‡ *cl.* all plant-derived foods; all flowers

- **ʔolowí** (**ʔoló**) : (ABSTR, ANIM) *n.* season, the division of a year; time ‡ *cl.* time, all temporal concepts

- **ma** : (ABSTR, INAN) *n.* word, symbol, name; writing ‡ *cl.* all symbols, names



- **wó** : (CONC, VOL, MVAL) *n.* move, walk, come/go ‡ *aux.* general movement; action
- **mó** : (CONC, VOL, MVAL) *n.* run, move quickly; jump, leap ‡ *aux.* fast, spontaneous movement
- **s<sup>h</sup>ɔj** : (CONC, VOL, PVAL) *n.* carry, give/take ‡ *aux.* transportation, causative movement
- **niwi** : (CONC, VOL, BVAL) *n.* consume, eat, drink
- **tɕɔj** : (ABSTR, VOL, PVAL) *n.* speak, write, communicate
- **k<sup>h</sup>ajtè** : (ABSTR, VOL, SVAL) *n.* hear, see, directly sense; read, understand ‡ *aux.* direct sensory interaction

- **hasi** : (ABSTR, VOL, SVAL) *n.* smell, taste, indirectly sense ‡ *aux.* indirect sensory interaction
- **jéko** : (ABSTR, VOL, BVAL) *n.* feel, sense; know ‡ *aux.* cognitive interaction
- **seʔmó** : (ABSTR, VOL, PVAL) *n.* make, cause ‡ *aux.* causation
- **k<sup>h</sup>o** : (ABSTR, NVOL, AVAL) *n.* occur, happen, exist ‡ *aux.* state of being
- **hɔnɔ** : (ABSTR, VOL, BVAL) *n.* want, desire, wish

## | m

- **mís<sup>h</sup>oh** : (ABSTR, ANIM) *n.* aversion, repulsion, disgust ‡ (ABSTR, NVOL, BVAL) *v.* be averse, repulsed, disgusted
- **melə (mii)** : (CONC, INAN) *n.* bread; food made from grain; grain ‡ (CONC, VOL, MVAL) *v.* prepare/eat bread; prepare grain
- **mtóósa (máh)** : (CONC, INAN) *n.* book, writing; collection of words ‡ (CONC, VOL, BVAL) *v.* read; write
- **mólá** : (CONC, INAN) *n.* wave, gust; flow, movement, direction ‡ (CONC, VOL, BVAL) *v.* make wet; wash, clean; push, move

## | n

- **níjò** : (ABSTR, ANIM) *n.* awareness of something dangerous, premonition; warning, caution, advice; omen, prophecy; foresight ‡ (ABSTR, VOL, BVAL) *v.* warn, caution, advise; prophesize, foresee, predict
- **ntɛ̀** : (CONC, INAN) *n.* solid food ‡ (CONC, VOL, MVAL) *v.* prepare solid food
- **nómo (nón)** : (CONC, ANIM) *n.* tooth; bite ‡ (CONC, VOL, BVAL) *v.* bite, chew

## | t<sup>h</sup>, t, t<sup>?</sup>

- **t<sup>h</sup>aʔwá (t<sup>h</sup>áw)** : (CONC, ANIM) *n.* yak, cow, dzo; wisdom, strength, power; work, effort ‡ (CONC, VOL, BVAL) *v.* be a yak, cow, dzo; be wise, strong, powerful; (do) work, put effort into
- **tkis<sup>h</sup>áj (tiʔsé)** : (CONC, INAN) *n.* hardness, durability, endurance ‡ (CONC, VOL, BVAL) *v.* be/make hard, durable, enduring; improve, enhance, fix

- **títɛ̀kò̀n (títɛ̀iʔ)** : (CONC, ANIM) *n.* master, superior; guide, leader; direction ‡ (ABSTR, VOL, BVAL) *v.* be a master, be superior; guide, lead, direct

- **tɔ̀nlá** : (CONC, ANIM) *n.* voice, sound; song, music ‡ (ABSTR, VOL, MVAL) *v.* make sound, music; sing

- **tə̀tɛ̀i̯n (tɛ̀ʔi̯n)** : (CONC, ANIM) *n.* eye, pair of eyes; sight ‡ (ABSTR, NVOL, SVAL) *v.* see, visually sense

## | tɛ<sup>h</sup>, tɛ, tɛ<sup>?</sup>

- **tɛ<sup>h</sup>às<sup>?</sup>ah (tɛ<sup>h</sup>àʔ)** : (CONC, INAN) *n.* that which is contained; injury ‡ (CONC, VOL, BVAL) *v.* contain (within); incapacitate, debilitate

- **tɛ̀ii** : (CONC, INAN) *n.* sand, dust, gravel, grain; sugarcane, sugar, sweetness ‡ (ABSTR, VOL, BVAL) *v.* separate, crumble; be particulate, granular; be sweet

- **tɛ̀óhk<sup>h</sup>ə̀ (tɛ̀oh)** : (CONC, INAN) *n.* milk, fat ‡ (CONC, NVOL, MVAL) *v.* be/have/drink milk; be fat

## | k<sup>h</sup>, k, k<sup>?</sup>

- **k<sup>h</sup>ə̀** : (CONC, ANIM) *n.* breast; fat ‡ (CONC, VOL, BVAL) *v.* produce milk; nurture, care (for)

- **tɛ<sup>h</sup>k<sup>h</sup>òo** : (CONC, ANIM) *n.* fingers, hand, arm ‡ (ABSTR, VOL, BVAL) *v.* touch, interact (with)

- **kiʔə̀j (k<sup>?</sup>ii)** : (CONC, INAN) *n.* boat, method of travel; transportation; trade, commerce; goods, cargo, something to be transported ‡ (ABSTR, VOL, PVAL) *v.* travel (by boat); transport; trade (goods)

• **któhi<sup>FP</sup> (mii)** : (CONC, INAN) *n.* any grain, cereal or pulse; bread ‡ (CONC, VOL, MVAL) *v.* grow/harvest grain

• **kála (kóó)** : (CONC, ANIM) *n.* fish; conspiracy, scheme ‡ (CONC, VOL, MVAL) *v.* fish, go fishing; conspire, scheme

• **kʔèṭʔè (ján), ján<sup>NI</sup>** : (CONC, ANIM) *n.* friend, spouse; expected accompaniment; friendship, relationship ‡ (ABSTR, VOL, BVAL) *v.* accompany; be in a relationship

## | ?

• **ʔelów (lloo)** : (CONC, ANIM) *n.* squamate reptile, lizard, snake; tail; self-amputation (of an appendage) ‡ (CONC, VOL, BVAL) *v.* be a squamate reptile, lizard, snake; have/move/be a tail; self-amputate (an appendage)

• **ʔəhee** : (CONC, INAN) *n.* cold food; raw food; something to be made cold ‡ (CONC, VOL, MVAL) *v.* prepare cold food; cool, make cold

• **ʔaná** : (CONC, INAN) *n.* injury, damage; sickness; immobility, laziness; rope ‡ (CONC, VOL, BVAL) *v.* injure, damage; make immobile; be lazy; tie (up), bind, restrain

• **ʔanko** : (CONC, INAN) *n.* bed, place of rest; sleep, rest; dream, hallucination ‡ (ABSTR, VOL, MVAL) *v.* sleep, rest; dream, hallucinate

## | s<sup>h</sup>, s, sʔ

• **sènóǰ (sáj)** : (CONC, ANIM) *n.* bear; fear ‡ (CONC, NVOL, MVAL) *v.* be a bear; be afraid

• **setʔoʔ** : (CONC, ANIM) *n.* river, moving body of water; narrow portion of material, strip ‡ (CONC, VOL, BVAL) *v.* travel by river, moving body of water; make into narrow portions, strips

• **sələn** : (CONC, ANIM) *n.* intestines, that which is digested ‡ (CONC, NVOL, BVAL) *v.* digest, break down (naturally); dissolve

• **sʔəlólw** : (CONC, INAN) *n.* saraw plant, a squat wide-leafed plant used as material on which to write; the leaf of the saraw plant; any material on which one writes ‡ (CONC, VOL, MVAL) *v.* harvest (the leaves of) a saraw plant; write

• **sóo** : (CONC, INAN) *n.* excrement, waste ‡ (CONC, NVOL, MVAL) *v.* excrete, produce waste

• **sòjsi** : (CONC, ANIM) *n.* hot food; cooked food; something to be made warm ‡ (CONC, VOL, MVAL) *v.* prepare hot food; heat, make warm

## | h

• **hmon (hmoo)** : (ABSTR, ANIM) *n.* thought, mind; memory; heart, center; spirit, soul; personal connection ‡ (ABSTR, NVOL, MVAL) *v.* think, concentrate, focus; remember; personally connect

• **həlóo** : (CONC, INAN) *n.* root; source, origin, cause; stability ‡ (ABSTR, NVOL, BVAL) *v.* be a source, origin; cause; be stable; stabilize

• **hòn** : (CONC, ANIM) *n.* dog, wolf, canine; any domesticated animal ‡ (CONC, NVOL, BVAL) *v.* be a dog; domesticate

• **hój (hoj)** : (CONC, ANIM) *n.* number, numeral; amount, quantity; group, collection ‡ (ABSTR, VOL, BVAL) *v.* count, enumerate, quantify; collect, amass

## | w

• **wìn** : (CONC, ANIM, PNSTBL) *n.* rain, precipitation; tears ‡ (CONC, NVOL, AVAL) *v.* rain, precipitate; fall, come down, descend; cry, weep

- **mínwo** : (CONC, ANIM) *n.* bird; flight; gossip ‡ (CONC, VOL, MVAL) *v.* be a bird; fly; gossip
- **wítɕʰə** : (ABSTR, INAN) *n.* weakness, laziness ‡ (ABSTR, NVOL, MVAL) *v.* be weak, lazy
- **wíini (wíi)** : (CONC, ANIM) *n.* cat; cleverness, wit ‡ (CONC, NVOL, MVAL) *v.* be a cat; be clever, witty
- **wíkən (wén)** : (CONC, ANIM) *n.* mouth, opening, orifice ‡ (CONC, VOL, BVAL) *v.* hold in one's mouth, suck; fellate
- **wéwkʰo (wóʔ)** : (CONC, INAN) *n.* that which is broken; breakage, damage, injury ‡ (CONC, NVOL, BVAL) *v.* break, damage, injure; be broken, damage, injured
- **wónəj (wój)** : (CONC, INAN) *n.* small amount; poverty ‡ (ABSTR, NVOL, MVAL) *v.* have few; be poor
- **wolòh** : (CONC, INAN) *n.* snow, ice, frost, cold water ‡ (CONC, NVOL, AVAL) *v.* snow, hail, rain coldly

## | l

- **lijókʰo (lijóʔ)** : (CONC, INAN) *n.* face, flat surface; table ‡ (CONC, VOL, BVAL) *v.* flatten, make flat; be flat; lay flat
- **letʰitɕa (litɕʰa)** : (CONC, ANIM) *n.* liquid food ‡ (CONC, VOL, MVAL) *v.* prepare liquid food
- **lənəh** : (CONC, INAN) *n.* mountain, collection of rock/stone ‡ (CONC, VOL, BVAL) *v.* be/climb a mountain; stop, prevent
- **lɕʰəʔə** : (CONC, ANIM) *n.* rain ceremony ‡ (CONC, VOL, MVAL) *v.* perform a rain ceremony
- **lónlə (lón)** : (CONC, INAN) *n.* dumpling, dough; smallness, roundness; cuteness ‡ (CONC, VOL, MVAL) *v.* have/eat/prepare/be (a) dumpling(s), dough; be small and round; be cute

## | j

- **jon** : (CONC, INAN) *n.* cave, dwelling; quiet, silence ‡ (ABSTR, VOL, MVAL) *v.* live in a cave; be quiet, silent

