???

Tímə́h, the language of *Shaygų́*

M.M.N.H.

A descriptive grammar

2017-18

Dedicated to my haters

```
Class: artlang
Version: 70 (beta)
Date: 1/28/18
```

Contents

Figures

1 | Introduction

1.1 | External history

The Timah language (tˀíməh [tˀíməh]; 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 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 (kʰɔkˀɔtɕɔʔe [k͡pʰɔ̀k͡pˀɔ̀ʥɔʔè] lit. many-person). They live on the Saykung Archipelago (sʰajkoɴ [sʰæjɡ̀b̀ũ̀ŋ̀m] 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

	Labial	*Alveolar*	*Palatal*	*Velar*	*Glottal*	*Placeless*
Nasal	m	n				ɴ
Plosive		t^h t $t^ʔ$	$tɕ^h$ tɕ $tɕ^ʔ$	k^h k $k^ʔ$	ʔ	
Fricative		s^h s $s^ʔ$			h	
Approximant	w	l	j			

Figure 2.1: Consonant phonemes

- /n t^h t $t^ʔ$/ are dental [n̪ $t̪^h$ t̪ $t̪^ʔ$][1]; /s^h s $s^ʔ$ l/ are alveolar
- /$tɕ^h$ tɕ $tɕ^ʔ$/ are alveolo-palatal; /j/ is palatal
- /h/ is articulated with true frication of the glottis, i.e., it is not a voiceless glottal approximant
- /ɴ/ is a nasal coda archiphoneme, i.e., not an uvular nasal[2]
- the aspirated obstruents /t^h $tɕ^h$ k^h s^h/ may be accompanied by slight breathy-voice on the following vowel
- the glottalized obstruents /$t^ʔ$ $tɕ^ʔ$ $k^ʔ$ $s^ʔ$/ 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 ɗ] word-initially and as clusters [ʔɓ ʔɗ] intervocalically
- the alveolar nasal /n/ surfaces as alveolo-palatal [ɲ̟] before [i]
- the coda archiphoneme /ɴ/ surfaces as [n ɲ̟ 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 [n͡m] word-finally after the back vowels /o ɔ/ and before the labio-velars [$\widehat{kp}^ʔ$ $\widehat{kp}$ $\widehat{kp}^h$]
- the alveolar plosives /t^h t $t^ʔ$/ surface as trills [r̥ r $r^ʔ$] before [i]. This does not occur after /ɴ/ nor in clusters
- the aspirated plosives /t^h $tɕ^h$ k^h/ surface as fricatives [θ ɕ x] before /a/. This does not occur after /ɴ/ nor in clusters

[1] [n̪ $t̪^h$ t̪ $t̪^ʔ$] (and, when applicable, their allophones) are transcribed as [n t^h t $t^ʔ$] (i.e., without the dental bridge diacritic) for aesthetic reasons

[2] yes, I say /ən ˈuvjəlɚ/; deal with it

- the aspirated obstruents /tʰ tɕʰ kʰ sʰ/ are deäspirated to [t tɕ k s] intervocalically and after /m n w j ɴ/
- the tenuis obstruents /t tɕ k s/ are voiced to [d dʑ g z] intervocalically and after /m n w j ɴ/
- the velars /kˀ k kʰ/ surface as labio-velars [k͡pˀ k͡p k͡pʰ] before the back vowels /o ɔ/. [k͡p] is voiced to [g͡b] and [k͡pʰ] is deäspirated to [k͡p] intervocalically and after /w j ɴ/
- the sibilants /sʰ s sˀ/ are palatalized to [ɕʰ ɕ ɕˀ] before [i]. [ɕ] is voiced to [ʑ] and [ɕʰ] is deäspirated to [ɕ] intervocalically and after /w j ɴ/
- the labiovelar /w/ surfaces as labiodental [ʋ] before [i]
- the liquid /l/ surfaces as a tap [ɾ] intervocalically and after /w j ɴ/
- the clusters (*see § 2.3.1.1*) /hm hn hw hl hj/ surface as voiceless sonorants [m̥ n̥ w̥~ɸ l̥~ɬ j̊~ç][4]; /hw/ surfaces as [ʋ̥] before [i]; the sonorants also surface as voiceless when clustered with the aspirated plosives /tʰ tɕʰ kʰ/

2.1.2 | Dialectal variations of consonants

- in some[*which?*] dialects, the alveolo-palatals /tɕʰ tɕ tɕˀ/ surface as alveolar affricates [tsʰ ts tsˀ], true palatals [cʰ c cˀ], or non-affricated alveolo-palatals [ʨʰ ʨ ʨˀ]
- in some[*which?*] dialects, the glottalized plosives /tˀ tɕˀ kˀ sˀ/ surface as ejectives [t’ tɕ’ k’ (t)s’] or geminates [tt ttɕ kk ss~tts]
- depending on dialect[*which ones?*] and idiolect, the glottal fricative /h/ may variously surface as any of [x~χ ħ h̃]
- in some[*which?*] dialects, the liquid [l] has merged with either /j/ or /n/
- depending on dialect[*which ones?*] and idiolect, the liquid /l/ may variously surface as any of [ɹ ɻ ɻ̢ ɭ ɺ̞ ɮ ʐ̢] in addition to the typical [l ɾ] realizations
- in the Shore dialect, /w/ surfaces as [ɯ̹ᵝ], i.e., it has lip compression instead of protrusion

2.2 | Vowels

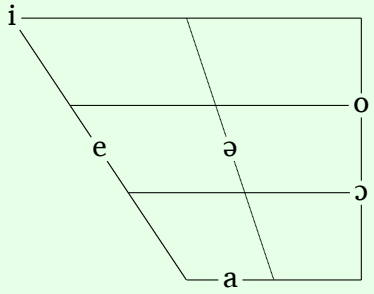

Figure 2.2: Vowel phonemes

[4] although often articulated with varying frication, the voiceless approximants are transcribed as [w̥ l̥ j̊] for aesthetic reasons

- all vowels may occur as long or short (*see § 2.3.1*)
- all vowels may occur with high tone /◌́/, low tone /◌̀/, or as toneless (*see § 2.5*)
- /e/ is true mid [ẹ][4]
- /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 [ɨ] after the velars and glottal /kʰ k kˀ h/ and before coda [ŋ h]
- /a/ fronts to [æ~ɛ] after the palatals /tɕʰ tɕ tɕˀ j/ and before coda /j/
- /o ɔ/ raise to [u ọ][4] word-finally in open syllables, after the velars /kʰ k kˀ w/, and before coda [ŋ]

2.2.2 | Dialectal variations of vowels

- some[*which?*] dialects merge the front vowels /i e/ into [i~ɪ]
- some[*which?*] dialects merge the central vowels /ə a/ into [a]
- some[*which?*] dialects merge the back vowels /o ɔ/ into true mid [ọ]
- in the Shore dialect, the back vowels /o ɔ/ (and their allophones) surface as [ɤ$^{\beta}$ ʌ$^{\beta}$], i.e., they have lip compression instead of protrusion

2.3 | Phonotactics

2.3.1 | Word profile

The profile of the phonological word is as follows:

$$\#\left[\begin{array}{c}\mathrm{C}\\ \varnothing\end{array}\left[\mathrm{C}\ \mathrm{V}_1^{\mathrm{T}}\ \begin{array}{c}\mathrm{F}\\ \mathrm{V}_2^{\mathrm{T}}\\ \varnothing\end{array}\right]_{\sigma}\begin{array}{c}\sigma\\ \varnothing\end{array}\right]_{\omega}\#$$

Figure 2.3: Word profile

Wherein:

- ω represents the phonological word
- σ represents a syllable

[4] [ẹ ọ] are transcribed as [e o] for aesthetic reasons

- C represents any consonant except /ɴ/
- V_1^T represents a nucleic vowel and tone /◌ ◌́ ◌̀/
- F represents a coda consonant /ɴ ʔ h w j/
- V_2^T represents a long vowel mora, which must be homorganic to the nucleic vowel in vowel quality but not necessarily in tone
- ∅ represents nothing, i.e., optionally, the slot may be empty

2.3.1.1 | Consonant clusters

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

		C_1												
		m	n	t^h	t	$t^ʔ$	$tɕ^h$	tɕ	$tɕ^ʔ$	k^h	k	$k^ʔ$	ʔ	h
	m	m	n	t^hm	tm	$t^ʔ$m	$tɕ^h$m	tɕm	$tɕ^ʔ$m	k^hm	km	$k^ʔ$m	ʔm	hm
	n	m	n	nt^h	nt	$nt^ʔ$	$ntɕ^h$	ntɕ	$ntɕ^ʔ$	k^hn	kn	$k^ʔ$n	ʔn	hn
	t^h	mt^h	nt^h	t^h	t^h	t	$tɕ^h$	$tɕ^h$	tɕ	k^ht^h	k^ht^h	kt	t	t^h
	t	mt	nt	t^h	$t^ʔ$	$t^ʔ$	$tɕ^h$	$tɕ^ʔ$	$tɕ^ʔ$	k^ht^h	kt	$k^ʔt^ʔ$	$t^ʔ$	t^h
	$t^ʔ$	m$t^ʔ$	n$t^ʔ$	t	$t^ʔ$	$t^ʔ$	tɕ	$tɕ^ʔ$	$tɕ^ʔ$	kt	$k^ʔt^ʔ$	$k^ʔt^ʔ$	$t^ʔ$	t
	$tɕ^h$	m$tɕ^h$	n$tɕ^h$	$tɕ^h$	$tɕ^h$	tɕ	$tɕ^h$	$tɕ^h$	tɕ	$k^htɕ^h$	$k^htɕ^h$	ktɕ	tɕ	$tɕ^h$
	tɕ	mtɕ	ntɕ	$tɕ^h$	$tɕ^ʔ$	$tɕ^ʔ$	$tɕ^h$	$tɕ^ʔ$	$tɕ^ʔ$	$k^htɕ^h$	ktɕ	$k^ʔtɕ^ʔ$	$tɕ^ʔ$	$tɕ^h$
	$tɕ^ʔ$	m$tɕ^ʔ$	n$tɕ^ʔ$	tɕ	$tɕ^ʔ$	$tɕ^ʔ$	tɕ	$tɕ^ʔ$	$tɕ^ʔ$	ktɕ	$k^ʔtɕ^ʔ$	$k^ʔtɕ^ʔ$	$tɕ^ʔ$	$tɕ^h$
	k^h	mk^h	nk^h	t^hk^h	t^hk^h	tk	$tɕ^hk^h$	$tɕ^hk^h$	tɕk	k^h	k^h	k	k	k^h
C_2	k	mk	nk	t^hk^h	tk	$t^ʔk^ʔ$	$tɕ^hk^h$	tɕk	$tɕ^ʔk^ʔ$	k^h	$k^ʔ$	$k^ʔ$	$k^ʔ$	k^h
	$k^ʔ$	m$k^ʔ$	n$k^ʔ$	tk	$t^ʔk^ʔ$	$t^ʔk^ʔ$	tɕk	$tɕ^ʔk^ʔ$	$tɕ^ʔk^ʔ$	k	$k^ʔ$	$k^ʔ$	$k^ʔ$	k
	ʔ	ʔm	ʔn	t	$t^ʔ$	$t^ʔ$	tɕ	$tɕ^ʔ$	$tɕ^ʔ$	k	$k^ʔ$	$k^ʔ$	ʔ	h
	s^h	mt^h	nt^h	t^h	t^h	t	$tɕ^h$	$tɕ^h$	tɕ	k^h	k^h	k	s	s^h
	s	mt	nt	t^h	$t^ʔ$	$t^ʔ$	$tɕ^h$	$tɕ^ʔ$	$tɕ^ʔ$	k^h	$k^ʔ$	$k^ʔ$	$s^ʔ$	s^h
	$s^ʔ$	m$t^ʔ$	n$t^ʔ$	t	$t^ʔ$	$t^ʔ$	tɕ	$tɕ^ʔ$	$tɕ^ʔ$	k	$k^ʔ$	$k^ʔ$	$s^ʔ$	s
	h	m	n	t^h	t^h	t	$tɕ^h$	$tɕ^h$	tɕ	k^h	k^h	k	ʔ	h
	w	m	nw	t^hw	tw	$t^ʔ$w	$tɕ^h$w	tɕw	$tɕ^ʔ$w	k^hw	kw	$k^ʔ$w	ʔw	hw
	l	ml	n	t^h	t	$t^ʔ$	$tɕ^h$	tɕ	$tɕ^ʔ$	k^hl	kl	$k^ʔ$l	ʔl	hl
	j	mj	n	$tɕ^h$	tɕ	$tɕ^ʔ$	$tɕ^h$	tɕ	$tɕ^ʔ$	$tɕ^h$	tɕ	$tɕ^ʔ$	ʔj	hj

Figure 2.4: Consonant clusters[5]

Clusters may only occur word-initially. If a prefix or proclitic is prepended to a word that begins with a cluster, the C_1 of the cluster migrates to the beginning of the word. In fig. 2.4, entries in blue denote the result of C_1-migration (i.e., cluster resolution); i.e., if C_1 forms an illegal cluster after migration, the illegal cluster is resolved by returning the corresponding entry.

[5] cells are unmerged for the purpose of clarity

2.3.1.2 | Restraints

These phonotactic restraints govern allomorphy.

- the coda nasal /ɴ/ 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/
- 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.

ʔ		◌◌́
h	→	◌◌̀
ɴ w j		◌◌

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 /ɴ w j/ or long vowel are grouped as *live* and those ending in /ʔ 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

Gemination of consonants is not allowed, even across word boundaries. When a coda /ʔ 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[ʔ]áw wíini

/s[ʔ]áw wíini/

[sˀáʊ͡i̯ŋ̍ì]

some cats

2.4.2 | Active processes

2.4.2.1 | Vowel harmony

Vowel harmony is 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 § 9.6.2*), here represented by $\omega_1\omega_2$, may undergo weakening. If an obstruent is present initially in ω_2, it undergoes one of the following mutations:

tˀ	tʰ		t
tɕˀ	tɕʰ		tɕ
kˀ	kʰ	→	k
sˀ	sʰ		s
ʔ			h

Figure 2.8: Obstruent weakening

2.4.2.3 | Obstruent contraction

Sequences of $P^*_1VP^*_2V$, wherein P* represents any obstruent and V represents any vowel, the sequence $P^*_1VP^*_2$ 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 $tɕ^h$ k^h s^h h/, P represents the tenuis obstruents /t tɕ k ʔ[6]/, and $P^ʔ$ represents the glottalized obstruents /$t^ʔ$ $tɕ^ʔ$ $k^ʔ$ $s^ʔ$ $ʔ^6$/. The glottals /ʔ h/ only affect contraction when they occur as P_2^*.

P_1^*		P_2^*		P_3^*
P^h, P		P^h, P		P^h
P^h	+	$P^ʔ$	→	P
P, $P^ʔ$		P, $P^ʔ$		$P^ʔ$
$P^ʔ$		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.

$$k^* > tɕ^* > t^* > s^* > ʔ, h$$

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*.

Oral		*Nasal*
w		m
l	→	n
j		

Figure 2.11: Nasal harmony

[6] /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^*

Nasal harmony is regressive, i.e., it moves right-to-left within a word. Nasal forms are triggered by the nasals /m n ɴ/. Nasal harmony is blocked by the non-glottal obstruents /tʰ t tˀ tɕʰ tɕ tɕˀ kʰ k kˀ sʰ s sˀ/.

2.4.3.2 | Palatal harmony

In certain environments, the alveolars /tʰ t tˀ l/ may alternate with the palatals /tɕʰ tɕ tɕˀ j/. This is marked by a subscript *y*.

Alv.		*Pal.*
t*	↔	tɕ*
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 /tɕʰ tɕ tɕˀ j i/; alveolar forms are triggered by the alveolars /n tʰ t tˀ sʰ s sˀ l/. Palatal harmony is blocked by the (labio-)velars /kʰ k kˀ w/.

2.4.3.3 | Phonation harmony

In certain environments, the non-glottal obstruents /tʰ t tˀ tɕʰ tɕ tɕˀ kʰ k kˀ sʰ s sˀ/ harmonize in phonation, i.e., they align in the qualities of being aspirated, tenuis, or glottalized. This is marked by a subscript *p*.

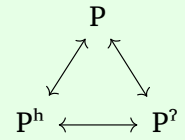

Figure 2.13: Phonation harmony

Phonation harmony is progressive. Aspirated forms are triggered by the aspirated obstruents /tʰ tɕʰ kʰ sʰ h/; tenuis forms are triggered by tenuis obstruents /t tɕ k s/; glottalized forms are triggered by the glottalized obstruents /tˀ tɕˀ kˀ sˀ ʔ/.

2.5 | Tone

There are 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 may be affected by various tonological processes such as *tone mobility* and *tone association*.

2.5.1 | Depression

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

sóósa, mólá, hə̀ló?ló

/sóósə, mólá, hàlóʔló/

[sóōzə̀, mórə̄, hə̀ɾóʔlū]

container, wave/wash, late winter

2.5.2 | Polarity

Certain affixes (notated as ¬AFFIX or 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*).

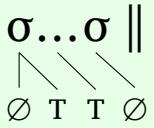

Figure 2.14: Leftward tone shift

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.

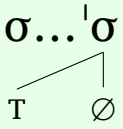

Figure 2.15: Rightward tone movement

2.5.4 | Tone association

Tone association is the process in which the tone of the second syllable of a given foot (*see § 3.2*) may spread to the preceding toneless syllable within the foot. This applies after tone mobility.

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

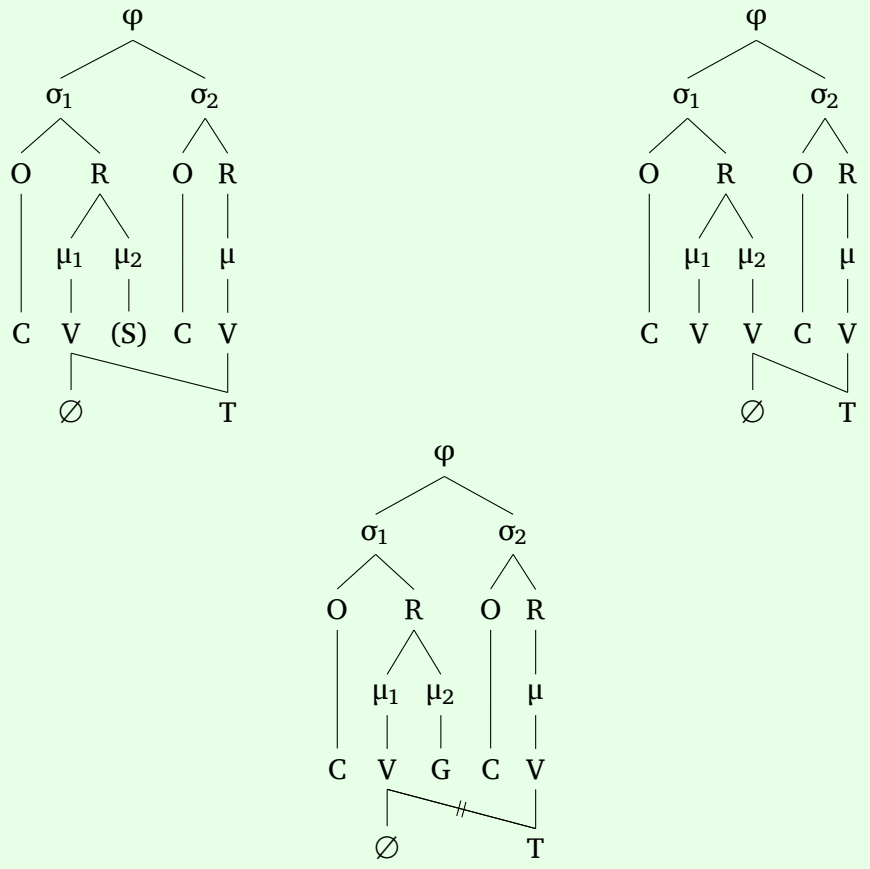

Figure 2.16: Tone association

2.5.5 | Floating tones

Floating tones occur on certain affixes (notated as ◌́-AFFIX or AFFIX-◌́, wherein ◌́ may be high ◌́ or low ◌̀) and after obstruent contraction (if the elided vowel is tonic, *see § 2.4.2.3*). Floating tones associate in the direction in which they shift and are not limited by intervening segments.

3 | Prosody

3.1 | Isochrony

Isochrony 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 may be separated into a hierarchy of sub-units. In fig. 3.1, φ represents a prosodic foot, σ represents a syllable, and μ represents a mora. Superscript numbers represent the amount of that to which they are superscript.

The *metrical foot*, or just *foot*, is an important unit.

`TODO` all of this

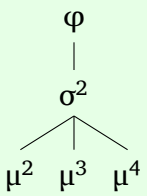

Figure 3.1: Prosodic hierarchy

3.3 | Intonation

`TODO` all of this

4 | Orthography

The Timah language uses the *Lhoma* script (hlɔ́ma [l̥ɔ̋mà] lit. smooth-word), a defective abugida that was borrowed from a neighboring language *Maryu* (máájo [mā̀ājò]). It was originally written on the large, durable leaves of the *saraw* (sˀə́lə́w [sˀə́rə́w]) plant, which contributes to the script's curled aesthetic.

TODO native, script, other adaptations

4.1 | Other scripts

4.1.1 | Latin

	Labial	*Alveolar*	*Palatal*	*Velar*	*Glottal*	*Placeless*
Nasal	⟨m⟩	⟨n⟩				⟨◌̣⟩[8]
Plosive		⟨th d t⟩	⟨ch j c⟩	⟨kh g k⟩	⟨ḥ⟩[8]	
Fricative		⟨sh x s⟩			⟨h⟩	
Approximant	⟨w⟩	⟨l⟩	⟨y⟩			

Figure 4.1: Latin (consonants)

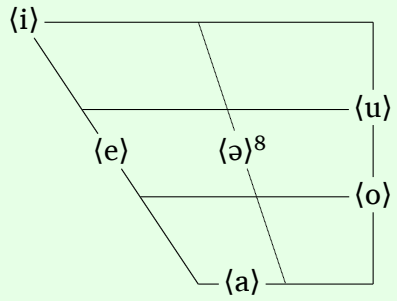

Figure 4.2: Latin (vowels)

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

[8] /ɴ ʔ ə/ may alternatively be romanized as ⟨n ' v⟩, respectively

4.1.2 | Tibetan

	Labial	*Alveolar*	*Palatal*	*Velar*	*Glottal*	*Placeless*
Nasal	⟨མ⟩	⟨ན⟩				⟨ཨཾ⟩[9]
Plosive		⟨བ ད ྡ⟩	⟨ཚ ཇ ཙ⟩	⟨ཁ གྷ ཀ⟩	⟨འ, ཌ⟩[9]	
Fricative		⟨ཕ ཟ ས⟩			⟨ཧ, ཨཿ⟩[9]	
Approximant	⟨ཝ, ྭ⟩[9]	⟨ར⟩	⟨ཡ, ྱ⟩[9]			

Figure 4.3: Tibetan (consonants)

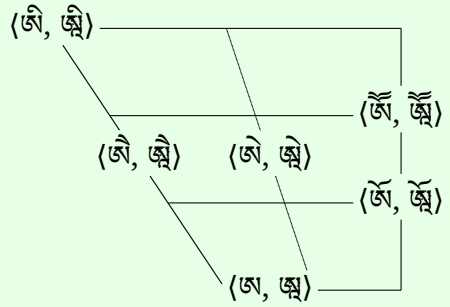

Figure 4.4: Tibetan (vowels)[9]

Tone is not marked.

4.1.3 | Mkhedruli

	Labial	*Alveolar*	*Palatal*	*Velar*	*Glottal*	*Placeless*
Nasal	⟨მ⟩	⟨ნ⟩				⟨◌ნ⟩
Plosive		⟨თ დ ტ⟩	⟨ც ძ წ⟩	⟨ქ ღ კ⟩	⟨ყ⟩	
Fricative		⟨ფ ზ ს⟩			⟨ჰ⟩	
Approximant	⟨ვ⟩	⟨რ⟩	⟨ჲ⟩			

Figure 4.5: Mkhedruli (consonants)

[9] ⟨ཨ⟩ is a filler letter; in slots with two elements, the second element is the coda form for consonants, and the long form for vowels

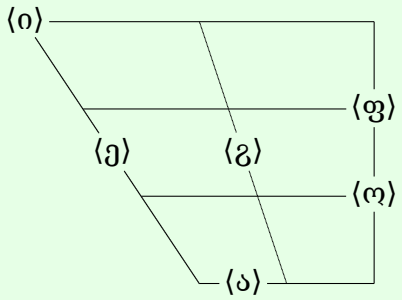

Figure 4.6: Mkhedruli (vowels)

Vowels are marked with ⟨◌ʊ⟩ for high tone, ⟨◌ʊ⟩ for low tone, and unmarked for toneless.

4.1.4 | Hacm

	Labial	*Alveolar*	*Palatal*	*Velar*	*Glottal*	*Placeless*
Nasal	⟨ɒ⟩	⟨n⟩				⟨◌ⁿ⟩
Plosive		⟨fʰ ɷ f⟩	⟨lʰ s l⟩	⟨ɿʰ ɸ ɿ⟩	⟨h⟩	
Fricative		⟨ʃʰ l ʃ⟩			⟨ɻ⟩	
Approximant	⟨o⟩	⟨l⟩	⟨ɥ⟩			

Figure 4.7: Hacm (consonants)

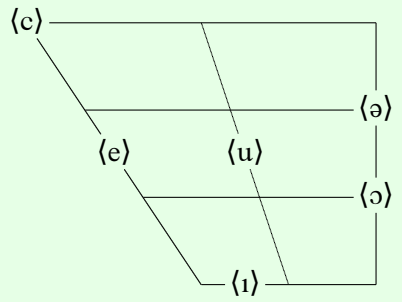

Figure 4.8: Hacm (vowels)

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

5 | Syntax

5.1 | Sentence profile & word order

Basic sentence profile is as follows:

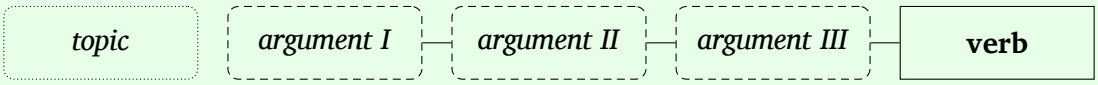

Figure 5.1: Basic sentence profile

Wherein the *arguments I-III* indirectly correspond to *subject*, *object*, and *peripheral*; the order of these arguments is dependent on the *empathy hierarchy*.

The *topic* is the entity under discussion, see § 6.1.

The *subject* is the argument that performs the verb.

The (*direct*) *object* is the argument upon which the verb is directly performed.

The *peripheral*, or indirect/oblique object, is the argument upon which the verb is indirectly performed. It is marked with the *associative* case (*see § 8.5.3*), which may be supplemented with a *postposition* (*see § 8.6*).

The *verb* is the action that is performed within a clause, and is obligatory. Some verbs may not take a subject or object (*see § 9.3*). A verb must agree with its subject and object (*see § 9.6.1*), if present.

Word order is *direct-inverse*, and is largely dependent on the *empathy hierarchy* in independent and replete dependent clauses (*see § 5.1.1*).

The empathy hierarchy is based on both *person* (*see § 8.4*) and *integrity* (*see § 8.2*).

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

Figure 5.2: 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 copular clauses (*see § 9.7*).

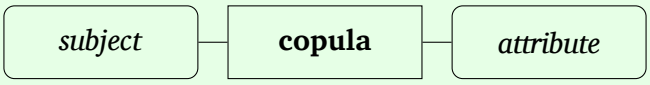

Figure 5.3: Copular sentence profile

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 § 12.1*). All dependent clauses are placed before their head and are deranked (*see § 9.6*).

nəj	*introduces basic dependent clause*
teɴ	*introduces causal dependent clause*
motó	*introduces consecutive dependent clause*

Partial dependent clauses consist of both *relative* and *adverbial* clauses (i.e., they are not differentiated). They are *dually-headed*, wherein the head occurs both within the clause as well as outside.

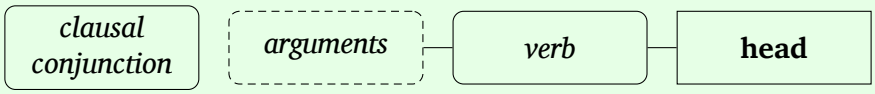

Figure 5.4: Partial dependent clause profile

Only *agentive* (*see § 8.5.3*) arguments may be relativized, and the head must be the agentive argument in both the partial dependent clause and the independent clause within which it is.

TODO example sentences

The head of a *restrictive* partial dependent clause (i.e., one that delimits that which it modifies) is always marked as *referential* (*see § 8.5.4*); the head of a *non-restrictive* partial dependent clause (i.e., one that does *not* delimit that which it modifies) is always marked as *non-referential*.

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 § 9.6.6*), *valency* describes the number of arguments of the verb (*see § 9.3*), and *volition* describes the degree of control or intent concerning the verb (*see § 9.4*).

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. 5.5, S represents the subject of a monovalent verb, A represents the subject of a multivalent verb, O represents the object of a multivalent verb.

<table>
<tr><th></th><th></th><th>Mval.</th><th>Mtval.</th></tr>
<tr><td>Pfv.</td><td></td><td colspan="2">S=O=ABS, A=ERG</td></tr>
<tr><td rowspan="2">Npfv.</td><td>Vol.</td><td>S=AGT</td><td rowspan="2">A=AGT, O=PAT</td></tr>
<tr><td>Nvol.</td><td>S=PAT</td></tr>
</table>

Figure 5.5: Alignment

The secundative construction is dominant, wherein the *theme* (object that is directed toward the recipient) of a trivalent verb (i.e., a polyvalent verb that takes three arguments, *see § 9.3*) is the peripheral marked by the *associative* case (*see § 8.5.3*), and the recipient is the object.

`TODO` example sentences

5.3 | Pivot

In multiple statements with a repeated argument, the repeated argument must be the *agentive* argument (*see § 8.5.3*).

`TODO` example sentences

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 | Pragmatics

6.1 | Topic

Topic is an important element of discourse. Generally, the topic consists of known or old information, and often overlaps with the subject.

The topic of a clause is explicitly marked by left-dislocating the topical argument. They also take a reduced inflection template (*see § 8.5*).

(1) melə lehtə́mísʰoh

∅-	melə	=∅	leh=	tə́=	∅-	mísʰoh	-∅
STBL.CMPLT.INAN-	bread	=NREF.VIS.STBL	1.AGT=	3.PAT.CMPLT=	NPFV.REAL-	detest	-AV.DIR

bread, I detest it

Contrastive topics are topics that introduce a new question-under-discussion. They are marked by placing the nominal contrastive conjunction ʔika before the entity.

(2) ʔika melə lehtə́mísʰoh

ʔika	∅-	melə	=∅	leh=	tə́=	∅-	mísʰoh	-∅
but.NML	STBL.CMPLT.INAN-	bread	=NREF.VIS.STBL	1.AGT=	3.PAT.CMPLT=	NPFV.REAL-	detest	-AV.DIR

as for bread, I detest it

6.2 | Questions

All *questions*, i.e., interrogative statements, are syntactically identical to declarative statements; they are not overtly marked morphologically.

Basic questions may be accompanied by an *interrogative pronoun* (*see § 8.4.2*), which replaces the argument to which it refers; they are otherwise unmarked.

TODO example sentences

Polar questions are marked by placing a basic *affirmatory* or *negatory* particle (*see § 12.3*) at the end of the statement. The selection of affirmatory or negatory depends on the expected answer.

TODO example sentences

6.3 | Commands & requests

Commands and *requests*, i.e., imperative statements, are formed by using either the *necessitive* or *desiderative* modals. The necessitive is used for statements in which the target is obligated to perform the action by necessity (within the situation); the desiderative is used for statements in which the target is obligated to perform the action by the solicitation of the speaker.

Generally, the necessitive corresponds to formal commands and requests, while the desiderative corresponds to polite commands and requests; this is not always the case.

`TODO` example sentences

7 | Lexical categories & stems

7.1 | Lexical categories

There is largely no lexical noun-verb distinction, i.e., most content words may 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 §§ 8.1 and 9.1*). These are grouped together as *limitives*, and contrast with *formatives*, which consist of content words that may act as either a noun or a verb.

There are also *descriptives*, which are used to describe words and phrases, and various *particles*, or function words.

7.2 | Stems & perspective

Roots are divided into two word forms, or *stems*. This division is 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.

Concrete	*tangible, physical, actual, real*; CONC
Abstract	*intangible, cognitive, conceptual, unreal*; 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. 7.1*); 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; $[^{\sigma}_{1}C_1\ldots][^{\sigma}_{2}C_2\ldots] \rightarrow [^{\sigma}_{1}C_2\ldots][^{\sigma}_{2}C_1\ldots]$ / #_, i.e., the onsets of the syllables within a foot 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., $|_{\sim}\sigma_i|$; 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.

Intrinsic		*Extrinsic*
C{N[10],w,j}V		CV{ɴ,w,j}
CV{ɴ,w,j}		C{n,w,j}V
P{ʰ,ʔ}V		PV{h,ʔ}
PV{h,ʔ}	→	P{ʰ,ʔ}V
{m,n}V{ʔ,h,w,j}		{ʔ,h,w,j}Vɴ
{ʔ,h,w,j}Vɴ		nV{ʔ,h,w,j}
{w,j}V{ʔ,h}		{ʔ,h}V{w,j}
{ʔ,h}V{w,j}		{w,j}V{ʔ,h}

Figure 7.1: Internal metathesis

[10] the nasals /m n/

8 | Nouns

8.1 | 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. 13*), a quantifier (*see § 12.4*), and sometimes a descriptive (*see Ch. 10*).

8.2 | Integrity

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

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

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.

8.3 | Probability

Probability expresses the likeliness to change in amount of an entity.

Stable	*the amount is not likely to change*; STBL
Unstable	*the amount is likely to change*; NSTBL
Panstable	*probability to change is unknown; generally associated with mass nouns*; PNSTBL

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.

8.4 | Pronouns

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

8.4.1 | Personal

Personal pronouns inflect for person, integrity (in the 3rd person), and case.

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

(3) ləhi meləlehtə́mísʰoh
ləhi ∅- melə -∅ =∅ leh= tə́=
1.AGT CMPLT.INAN.STBL- bread -PAT.CMPLT =NREF.VIS.STBL 1.AGT= 3.PAT.CMPLT=
∅- mísʰoh -∅
NPFV.REAL- detest -AV.DIR
I detest bread

To which the listener might reply:

(4) lehtəjə́ teh
lə= təjə́ teh
1.AGT= REF.REV SURPRISE
you do?!

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

			Pat.	*Agt.*	*Erg.*	*Assoc.*
1st			lə	ləhi	jə́ɴ	sʰaj
2nd			nɔ́	nɔ	nò	
3rd	*Cmplt.*	*Anim.*	tə́ʔ	tə́hi	tɕàɴ	kéh
		Inan.	haɴ			
	Ncmplt.		sə́he		kíɴ	

Figure 8.1: Personal pronouns

The *ergative* and *associative* personal pronouns may be used possessively by prepending one to the object of possession (i.e., as a prefix). The ergative generally denotes inalienable possession; the associative generally denotes alienable possession (*see § 8.5.3*). They are sometimes apppended (i.e., as suffixes).

Alienability

Alienable	*the entity cannot be separated from its possessor, e.g., body parts, family members*
Inalienable	*the entity can be separated from its possessor*

(5) jə́ɴkʰòo
jə́ɴ- kʰòo
1.ERG- arm

my arm

(6) sʰajmelə
sʰaj- melə
1.ASC- bread
my bread

The *animate-inanimate* distinction in 3rd 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

8.4.2 | Interrogative

Interrogative pronouns inflect for integrity and *function*. They are used to mark the specific characteristics of a question (*see § 6.2*).

		Person	*Location*	*Proportion*	*Manner*	*Reason*
Cmplt.	*Anim.*	ʔəsè	kʰɔ̀naj	silɔ	sáj	sʰèh
	Inan.	taɴsà				
Ncmplt.		ʔehi	kéhe	saʔií	səmɔ́ɔ	sʰɔjna

Figure 8.2: Interrogative pronouns

Function

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

8.4.3 | 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.

	Ant.		*Post.*	*Prop.*	*Man.*
	Sin.	*Dex.*			
Prox.	tàá	kò	mɔn	jə́	wɔ́j
Med.	sáwhe	kàme?	jéhə	jín	kən
Dist.	k$^{?}$itɔ̀				

Figure 8.3: Demonstrative pronouns

Proximality

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

Position

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

Function

Proportion	*to an extent, degree*; PROP
Manner	*via a way, method*; MAN

Thus, the deictic space may be modeled as such:

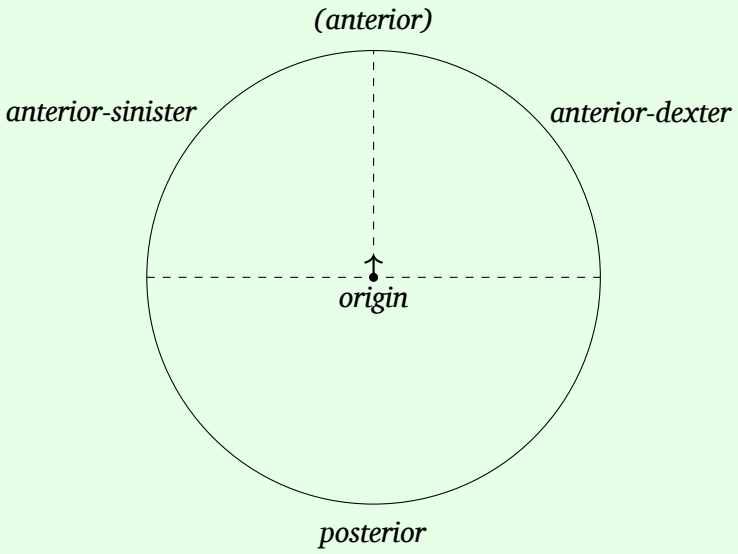

Figure 8.4: Deictic space

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

(7) tàákˀitɔ̀

tàá-	kˀitɔ̀
DEM.ANT.SIN.PROX-	DEM.ANT.DIST

this (in front of)

8.5 | Nominal inflections

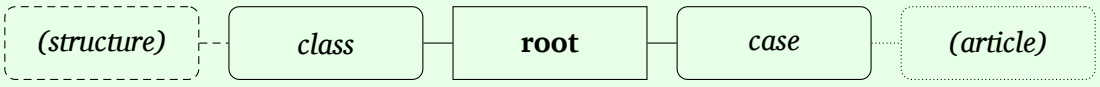

Figure 8.5: Nominal inflection template

Topical arguments (*see § 6.1*) take a reduced inflection template.

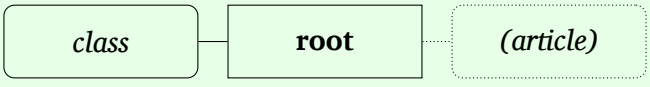

Figure 8.6: Topical inflection template

8.5.1 | Structure

Structure describes the appearance of an entity. With concrete stems, it describes the physical appearance of the entity; in abstract stems, it describes the cognitive appearance of the entity.

kɔj-, ka-	**Handled**; *entity is used with one's hand*; HND
ʔi-	**Standing**; *entity is taller than it is wide*; STA
maa$_{n}$-	**Sitting**; *entity is as tall as it is wide*; SIT
tɕè-	**Lying**; *entity is wider than it is tall*; LNG
sàj-, sè-	**Hollow**; *entity is hollow*; HOL
kʔə́j-, kʔí-	**Fluid**; *entity is liquid, gaseous; general category*; FLU

TODO example sentences

8.5.2 | Noun classes

Noun classes are separated into the groups *complete* and *incomplete*, which are associated with semantic wholeness or entirety of the noun (*see § 8.2*).

	Cmplt.		*Ncmplt.*
	Anim.	*Inan.*	
Stbl.	∅-		wín$_{n}$-
Nstbl.	tɔ-	kaw$_{p}$-, kɔ$_{p}$-	
Pnstbl.	na(N)-	∅-	

Figure 8.7: Noun classes

8.5.3 | Cases

Cases express 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).

	Cmplt.	*Ncmplt.*
Pat.	-∅	(◌́)-N
Agt.	-h	
Erg.	-ʔ	-h
Asc.		

(a) Open

	Cmplt.	*Ncmplt.*
Pat.	-∅	-né
Agt.	-si	-sé
Erg.	-ki	-ho
Asc.	-ʔɔ	

(b) Closed

Figure 8.8: Cases

Cases

Patientive	*in active-stative clauses (see § 5.2), this marks the object of a multivalent verb (see § 9.3) or the subject of a non-volitional monovalent verb. In ergative-absolutive clauses, this marks the object of a multivalent verb or the subject of a monovalent verb*; PAT
Agentive	*in active-stative clauses, this marks the subject of a multivalent verb or the subject of a volitional monovalent verb*; AGT
Ergative	*in ergative-absolutive clauses, this marks the subject of a multivalent verb; may also be used as an inalienable genitive*; ERG
Associative	*marks (alienable) genitive and genitive-like relations, which may be further clarified using postpositions; marks the theme of a trivalent verb*; ASC

The *associative* case may be accompanied by a postposition (*see § 8.6*). In isolation, the associative takes the meaning of an alienable genitive (in contrast to the ergative, which may have an inalienable genitive meaning).

TODO example sentences

8.5.4 | Article enclitics

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

	Ref.		*Nref.*	
	Vis.	*Nvis.*	*Vis.*	*Nvis.*
Stbl.	=mɔ́ɔ	=haN	=∅	=tˀéʔ
Nstbl.	=mé		=ʈɕáá	
Pnstbl.	=já		=kʰɔɔ	

Figure 8.9: Article enclitics

Referentiality

Referential	*a specific instance of the class comprised of the given entity*; REF
Non-referential	*any instance of the class comprised of the given entity*; NREF

Visibility

Visible	*entity can be seen*; VIS
Non-visible	*entity cannot be seen*; NVIS

8.6 | Postpositions

Postpositions further express relationships. The object of a postposition takes the *associative* case.

lí	*accompaniment/use*; with
kˀe	*lack of accompaniment/use*; without
kʰɔɴ	*intent of benefit/purpose*; for
sì	*intent of reference/relation*; about
tɕéʔ	*state of being*; as
kʰò	*change of state; causation*; to
míh	*similarity/comparison*; like

8.7 | Noun reduplication

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

(8) tɕɔ̀ʔi
tɕɔ̀ʔi
person
a person

(9) tɕɔ̀ʔitɕɔ̀ʔi
tɕɔ̀ʔi ~tɕɔ̀ʔi
person ~person
people

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

(10) hòɴ
hòɴ
dog
a dog

(11) hòɴhòɴ
hòɴ ~hòɴ
dog ~dog
a pack of dogs

Plural reduplication may be used in tandem with integrity (*see § 8.2*) 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.

(12) ketehketehsi télajkála

∅-	keteh	~keteh	-si	té=	laj-	kála	-∅
CMPLT.ANIM.STBL-	child	~child	-AGT.CMPLT	3.AGT.CMPLT=	PFV.REAL-	fish	-AV.DIR

the children all went fishing (collectively)

(13) wíketehketehsé halajkála

wí-	keteh	~keteh	-sé	ha=	laj-	kála	-∅
NCMPLT-	child	~child	-AGT.NCMPLT	3.NCMPLT=	PFV.REAL-	fish	-AV.DIR

the children each went fishing (individually)

9 | Verbs

9.1 | 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.

9.2 | Verbal negation

Verbs are negated by placing a negatory particle (*see § 12.3*) before the negated verb. The verb must be in an *irrealis* mode (*see § 9.6.6*). As negatory (as well as affirmatory) particles inherently indicate evidentiality, the corresponding epistemic modality (*see § 9.6.6.1*) is dropped (if present).

(14) lelajkála
le= laj- kála -∅
1.AGT= PFV.REAL- fish -AV.DIR
I went fishing

(15) lekáj hajkála
lə= káj haj- kála -∅
1.AGT= NEG.BAS PFV.IRR- fish -AV.DIR
I did not go fishing

9.3 | Valency classes

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

Avalent	*zero arguments*; AVAL
Monovalent	*zero or one arguments*; MVAL
Subvalent	*one or two arguments, see § 9.3.1*; SVAL
Ambivalent	*one or two arguments*; BVAL
Polyvalent	*two or more arguments*; PVAL

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 § 9.7*) are considered monovalent, while referential copulae are considered ambivalent.

9.3.1 | 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 if the verb were monovalent. 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 associative case (*see § 8.5.3*) and takes the postposition sì (*see § 8.6*). 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.

(16) *ləhi tɕɔ̀ʔimɔ́ɔ lehtə́kʰajtè

*ləhi	∅-	tɕɔ̀ʔi	-∅	=mɔ́ɔ	leh=	tə́=	
*1.AGT	CMPLT.ANIM.STBL-	person	-PAT.CMPLT	=REF.VIS.STBL	1.AGT=	3.PAT.CMPLT=	
∅-	kʰajtè	-∅					
NPFV.REAL-	see	-AV.DIR					

*I see the person (*colloq.* and the person was affected)

(17) ləhi tɕɔ̀ʔiʔ sìmɔ́ɔ ləkʰajtè

ləhi	∅-	tɕɔ̀ʔi	-ʔ	sì	=mɔ́ɔ	lə=	∅-
1.AGT	CMPLT.ANIM.STBL-	person	-CMPLT.ASC	for	=REF.VIS.STBL	1.AGT=	NPFV.REAL-
kʰajtè	-∅						
see	-AV.DIR						

I see (for) the person

9.4 | Volitional classes

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

Volitional	*denotes an action that is intentionally performed*; VOL
Non-volitional	*denotes an action that is unintentionally performed*; NVOL

9.5 | 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

$|\sigma_{i\sim}|$ indicates prefixial reduplication of the initial syllable, and $|\sim\sigma_{f}|$ indicates suffixial reduplication of the final syllable.

9.6 | Verbal inflection

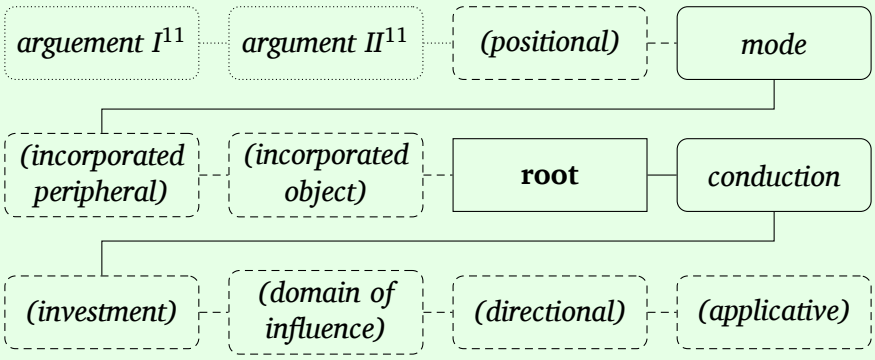

Figure 9.1: Verbal inflection template

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

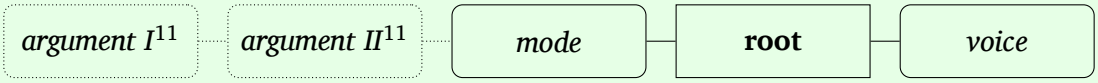

Figure 9.2: Deranked inflection template

Copulae also take more limited inflection.

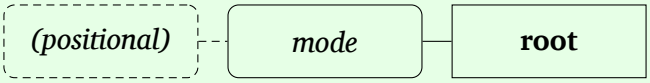

Figure 9.3: Copular inflection template

9.6.1 | 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.

		Pat.	*Agt.*
1st		lə=	le(h)=
2nd		nɔ́=	nɔ=
3rd	*Cmplt.*	tə́=	té(h)=
	Ncmplt.	ha=	

Figure 9.4: Pronominal proclitics

[11] 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

Note that pronominal proclitics only index *agentive* and *patientive* arguments, never *ergative* arguments.

Additionally, there are two pronominal proclitics that fuse 1st and 2nd person arguments. In fig. 9.5, PAT‹AGT.

		Pat.	
		1st	*2nd*
Agt.	*1st*	×	nə̀ə̀=
	2nd	lo(ɴ)=	×

Figure 9.5: Polypersonal pronominal proclitics

9.6.2 | 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

9.6.3 | 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*).

	Dir.	*Inv.*
AV	-∅	-j
UV	◌́-ʔ	¬tɕè$_{p}$
RV	-ɴ	◌́-j
CV	◌́-ɴtè	

(a) Open

	Dir.	*Inv.*
AV	-∅	-ji
UV	-tá	¬tɕè$_{p}$
RV	-ná	-jáɴ
CV	-mɔ́$_{n}$tè	

(b) Closed

Figure 9.6: Conduction

Voice

Actor voice	*the subject is the agent, the object is the patient*; AV
Undergoer voice	*the subject is the patient, the object is the agent*; UV
Reductive voice	*the subject is the agent, the peripheral is the patient*; RV
Correlative voice	*the agent/patient distinction of the argument(s) is reduced*; CV

Bias

Direct	*the subject outranks the object*; DIR
Inverse	*the object outranks the subject*; INV

The *reductive* voice reduces the valency of a verb by one. Ambivalent verbs reduce to subvalent; it cannot apply to avalent or subvalent verbs.

TODO example sentences

The *correlative* voice is used for reflexive and reciprocal constructs.

(18) le mólámɔ́tè

le=	∅-		mólá	-mɔ́tè
1.AGT=	NPFV.REAL-		wash	-CV

I wash myself

(19) le ləmólámɔ́tè

le=	lə=	∅-	mólá	-mɔ́tè
1.AGT=	1.AGT=	NPFV.REAL-	wash	-CV

we wash ourselves

(20) leləmólámɔ́tè

le=	lə=	∅-	mólá	-mɔ́tè
1.AGT=	1.PAT=	NPFV.REAL-	wash	-CV

we wash each other

It is also used on stative verbs, i.e., verbs that convey state of being or condition instead of action.

(21) hòɴmɔ́ɔ tə́tʰawsáɴtè

∅-		hòɴ -∅	=mɔ́ɔ	tə́=		∅-	tʰawsá
CMPLT.ANIM.STBL-	dog	-PAT.CMPLT	=REF.VIS.STBL	3.PAT.CMPLT=		REAL.NPFV-	dark
-ɴtè							
-CV							

the dog is dark-colored

9.6.4 | Investment

The property of *investment* expresses interest or sympathy of the speaker 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.

-ɴ, -né	*weakly invested*; WK.INVST
-ʧà	*moderately invested*; INVST
¬mán	*strongly invested*; STR.INVST

TODO example sentences

9.6.5 | Domain of influence

Domain of influence describes the area in which the subject is able to affect the situation. With certain verbs this is fairly straightforward, e.g., sensory verbs—the domain of influence describes the area in which the subject can sense stimuli.

Verbs inflect for the state of being inside or outside the domain of influence.

◌́-ɴ, -ná?	*inside the domain of influence*; ∈DOI
-lɔ̀ɔ̀$_n$	*outside the domain of influence*; ∉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 situation 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 action.

(22) jə́ɴ hòɴmɔ́ɔ tə́laj?análɔ̀ɔ̀

jə́ɴ	∅-		hòɴ	-∅	=mɔ́ɔ	tə́=	laj-	?aná
1.ERG	CMPLT.ANIM.STBL-		dog	-PAT.CMPLT	=REF.VIS.STBL	3.PAT.CMPLT=	PFV.REAL-	hit
-∅	-lɔ̀ɔ̀							
-AV.DIR	-∉DOI							

I (tried to) hit the dog (and failed)

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

(23) ləhi hòɴsi lehtə́hɔnɔ́ɴ

ləhi	∅-		hòɴ	-si	=∅	leh=	tə́=	hɔnɔ́
1.AGT	CMPLT.ANIM.STBL-		dog	-PAT.CMPLT	=NREF.VIS.STBL	1.AGT=	3.PAT.CMPLT=	want
-∅	-ɴ							
-AV.DIR	-∈DOI							

I want a dog (and believe this to be attainable)

(24) ləhi hòɴsi lətéhɔnɔ́lɔ̀ɔ̀

ləhi	∅-	hòɴ	-si	=∅	leh=	teə́=	hɔnɔ́
1.AGT	CMPLT.ANIM.STBL-	dog	-PAT.CMPLT	=NREF.VIS.STBL	1.AGT=	3.PAT.CMPLT=	want
-∅	-lɔ̀ɔ̀						
-AV.DIR	-∉DOI						

I want a dog (and believe this to be unattainable)

9.6.6 | Modals

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

	Imperfective	*Habitual*	*Iterative*	*Perfective*	*Experiential*
Realis	∅-	$ka(ʔ)_p$-	$σ_i$~$ka(ʔ)_p$-	laj-, le-	jíhi-
Affirmative	~$σ_f$	$k^ʔa_p$-√~$σ_f$	$σ_i$~$k^ʔa_p$-√~$σ_f$	laj-√~$σ_f$, le-√~$σ_f$	jíî-√~$σ_f$
Irrealis	tɔ(ʔ)-	tew_y-, $tə_y$-	$σ_i$~tew_y-, $σ_i$~$tə_y$-	haj-, he-	já-
Conditional	ʔo¬			né(h)-	
Hypothetical	tàj-, tè-		$σ_i$~tàj-, $σ_i$~tè-	$k^hà$-	

Figure 9.7: Mode

Mood

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

Aspect

Imperfective	*event is incomplete*; NPFV
Habitual	*event is repeated within multiple timeframes*; HAB
Iterative	*event is repeated within a single timeframe*; ITER
Perfective	*event is complete*; PFV
Experiential	*event is experienced*; EXP

9.6.6.1 | Epistemic modals

Epistemic modals express forms of knowing. They are placed before their head, and may be stacked.

kʰekʰì	**Witness**; *direct sensory witness, i.e., sight, sound, touch*; WIT
sə́sɔɴ	**Evidential**; *indirect sensory witness, i.e., smell, taste, indirect sight, sound*; EVID
tɔɴke	**Anecdotal**; *knows of event via prior experience(s)*; ANEC
hmɔ́ɔ	**Reportative**; *non-firsthand knowledge, i.e., from another source*; REP
ʔiɴ	**Assimilative**; *knowledge is a firmly integrated part of one's perception*; ASM
mìwe	**Acquirative**; *knowledge is newly acquired; may express surprise and/or doubt*; ACQ
sə̀ə	**Esoteric**; *knowledge is acquired by supernatural or otherworldly means*; ESO
ʔaj	**Quotative**; *marks quoted speech, dialogue*; QUOT

TODO example sentences

9.6.6.2 | Deontic modals

Deontic modals express forms of action. They are placed before their head, and may be stacked.

tkɔná	**Necessitive**; *necessities, required; commands, requests*; NEC
hàná?	**Desiderative**; *desires, wanted; commands, requests*; DES
tɕɔ́	**Commissive**; *commitments, dedication*; COM
tɔ́sʰa	**Permissive**; *permission, approval*; PERM
təj	**Suggestive**; *suggestions, proposals*; SUG

Both the *necessitive* and *desiderative* modals may be used for commands and requests (*see § 6.3*).

TODO example sentences

9.6.6.3 | Dynamic modals

Dynamic modals express capability and willingness. They are placed before their head, and may be stacked.

sòòkɔ	**Abilitive**; *inherent capability*; ABL
tɕʔɔse	**Capacitive**; *situational capability*; CAP
ʔléwtʰà	**Inabilitive**; *inherent incapability*; NABL
tɕawmóN	**Incapacitive**; *situational incapability*; NCAP
kìh	**Alacritive**; *inherent compliance*; ALA
tʔkʔɔ́N	**Consentive**; *situational compliance*; CNS
kʰəwe	**Nonalacritive**; *inherent noncompliance*; NALA
sajtɕa	**Nonconsentive**; *situational noncompliance*; NCNS

TODO example sentences

9.6.7 | 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 § 9.6*). They may occur in either order (i.e., *condition-consequence* or *consequence-condition*), but *condition-consequence* is the most common order.

Implicative	REAL + teN; *basic factual conditional*
Emphatic	AFF + teN; *the consequence is emphasized*
Counterfactual	IRR + motó; *the condition is considered unlikely*
Predictive	HYP + motó; *the condition is considered likely*

TODO example sentences

9.6.8 | Directionals

The *venitive* and *andative* suffixes, collectively called *directionals*, are commonly used with verbs of movement, such as wə́ move, walk, sʰɔj carry, give/take, and others.

-tí	**Venitive**; *motion toward, with*; VEN
-sʰì	**Andative**; *motion away from, against*; AND

TODO example sentences

9.6.9 | 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 may be used in tandem with a directional specifier in order to express direction or efficiency.

-lí	**Comitative**; *accompaniment, relationship*; COM
¬kʰòɴ	**Benefactive**; *intent of benefit/purpose or reference/relation*; BEN
-tˀɔʔ	**Causative**; *causation, final causation*; CAUS
-mîì	**Complementive**; *similarity/comparison, state of being*; CMPL
-tɕòᵧ	**Locative**; *physical or temporal location and movement*; LOC
¬tɕˀeʔ	**Adjutative**; *intent of assistance, utility*; ADJ
-totʰè	**Essive**; *state, manner of the action*; ESS

TODO example sentences

The *relational* and *beneficial* applicatives -lí and -kʰòɴ 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 may be made by using an applicative in tandem with a *positional* (*see § 9.6.10*).

9.6.10 | Positionals

Positionals describe location and motion.

tí-	*movement toward*; toward
kʰì-	*movement away from*; from
méɴ-	*movement onto*; onto
tɕɔ̀ɔ-	*movement under*; under
tʰìsé-	*movement into*; into
sii?i-	*movement out of*; out
kaɴʔɔ-	*movement through, by way of, adjacent to*; via
soʔa-	*in front of/before, below*; before
sàkə-	*behind/after, above*; after
seeʔá-	*between, amidst, within*; between
sɔtʰe-	*surrounding, around, encompassing*; around

TODO example sentences

9.7 | Copulae

Copulae are a subset of verbal limitives that are used to connect arguments.

Copulae only inflect for mode (*see § 9.6.6*) and, if existential, may optionally take a *positional* (*see § 9.6.10*). The constituent arguments within a copular phrase (i.e., the subject and attribute) both take the (unmarked) patientive case.

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; referential copulae are considered ambivalent.

	Essential	*Existential*	*Referential*
Assertive	kew	nénɴ	tʰə̀h
Negatory	klé	níjé	tʰə̀né
Revelatory	ʔowó		təjə́

Figure 9.8: Copulae

The essential copulae express nominal predication (be). The existential copulae express locational, existential, and possessive predication (be at, have). Locational predication may be accompanied by a positional (*see § 9.6.10*).

The referential copulae, while traditionally classed as such due to how they pattern, do not behave like the other two classes of copula. They are considered ambivalent. When used as monovalent verbs, they may either express the inherent action of the subject or, if present, reference the directly preceding verb (do), but cannot reference preceding copulae. When used as divalent verbs, 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 §§ 9.6.6 and 9.6.6.1 to 9.6.6.3*).

9.8 | Asymmetric copular construction

The *asymmetric copular contruction* 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 § 8.2*)
- the subset argument must be in the *complete* integrity

TODO example sentence

10 | 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.

tɕʰànéˊ	*good, positive; full*
sìɴkà	*bad, negative; empty*
semɔ́ʔ	*fast; loud; hard, rough*
hlɔ́	*slow; quiet; soft, smooth*
kʰɔkʔɔ	*big, strong; many*
tɕʰi	*small, weak; few*
sɔɴ	*short, wide; feminine*
ʔiɴ	*long, narrow; masculine*
tɕósʰa	*white, light; fresh, new*
káj	*warm (color); hot, dry*
sɔ̀tɕe	*cool (color); cold, wet*
tʰawsá	*black, dark; stale, old*

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

10.1 | 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			
		white	*warm*	*cool*	*black*
Ω	*white*	×	kétɕɔ́h	sɔ̀tɕʔáh	sʰátɕʰá
	warm	tɕókʰáj	×	sɔ̀kʔáj	sɔ́ké
	cool	tɕósə̀	kétɕʔə̀	×	tʰɔ́sɔ̀h
	black	tɕɔ́tʰɔ́	kétɕá	sɔ̀tɕʰéw	×

Figure 10.1: 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.

10.2 | Comparison

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

lí	*positive comparison*
míh	*equative comparison*
kˀe	*negative comparison*

(25) ketehmɔ́ɔ tɕɔ̀ʔiʔ límɔ́ɔ kew tɕósʰa
∅- keteh -si =mɔ́ɔ ∅- tɕɔ̀ʔi
ANIM.STBL.CMPLT- child -PAT.CMPLT =REF.VIS.SG ANIM.STBL.CMPLT- person
-ʔ lí =mɔ́ɔ ∅- kew tɕósʰa
-ASC.CMPLT with =REF.VIS.SG REAL.NPFV- COP.ESSNT.ASSRT new
the child is younger than the man

Superlative constructions are a subtype of comparatives, and are formed by placing a quantifier (prototypically ní all, every, *see § 12.4*) before the recipient, or using it in place of the recipient.

(26) ketehmɔ́ɔ séè (tɕɔ̀ʔiʔ) lí(mɔ́ɔ) kew tɕósʰa
∅- keteh -∅ =mɔ́ɔ séè (∅- tɕɔ̀ʔi
ANIM.STBL.CMPLT- child -PAT.CMPLT =REF.VIS.SG all (ANIM.STBL.CMPLT- person
-ʔ) lí =(mɔ́ɔ) ∅- kew tɕósʰa
-ASC.CMPLT) with =(REF.VIS.SG) REAL.NPFV- COP.ESSNT.ASSRT new
the child is the youngest of all (men)

Excessive constructions are formed by omitting the recipient entirely.

(27) ketehmɔ́ɔ lí kew tɕósʰa
∅- keteh -∅ =mɔ́ɔ sʰì ∅- kew
ANIM.STBL.CMPLT- child -PAT.CMPLT =REF.VIS.SG with REAL.NPFV- COP.ESSNT.ASSRT
tɕósʰa
new
the child is very/too young

11 | Word formation

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

11.1 | 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

tɔ̀j-, tə-	*opposite, reverse*
tɕʰà(ʔ)-	*person, profession*
lə(h)-(◌́)	*place; time*
kósóₚ-	*homorganic group/mass*
kʰeₚ-	*heterorganic group/mass*
tɕá(ɴ)-(◌̀)	*prevent, stop, interrupt*
sáj-, sé-	*pretend, mimic, falsify*
sóo-	*cause, source*
ʔikə̀-	*expected accompaniment*

Suffixes

-tɕʔə́	*attempt, try*
-tàjᵧ	*product, result*
(◌́)-sɔ́h	*container, captivity, portation*
-kʔə́ʔ	*tool, instrument*
(◌̀)-sʔoo	*abstraction, mass*
-tɕáh	*animals, inedible plants*
-jə́hₙ	*edible plants, food*
-kʔée	*pejorative, derogatory*

11.1.1 | Sound symbolism

Sound symbolism may 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.

Strong		*Weak*
t*	↔	s*
tɕ*	→	
k*	↔	tɕ*
ʔ	↔	h

Figure 11.2: 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.

Oral		*Nasal*
w	↔	m
l	↔	n
j	→	
-w, -j[12]	→	-N[12]
◌͡◌	↔	

Figure 11.3: Movement

11.2 | Compounding

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

11.2.1 | 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

11.2.2 | 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

[12] the coda phonemes /w j ɴ/

12 | Particles

12.1 | Conjunctions

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

Nominal

ní	*presents non-contrast*; and.NML
ʔika	*presents contrast*; but.NML
teh	*presents exclusive alternative*; or.NML

Verbal

nəj	*presents non-contrast; introduces basic (dependent) clause*; and.VRBL
teɴ	*presents rationale, causality; introduces causal (dependent) clause*; for.VRBL
motó	*presents consequence; introduces consecutive (dependent) clause*; so.VRBL
ʔihi	*presents contrast*; but.VRBL
kàh	*presents exclusive alternative*; or.VRBL

12.2 | Satellite conjunctions

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

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

12.3 | 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	**Affirmatory-basic**; *affirms with no regard to evidence*; AFF.BAS
sʰè	**Affirmatory-witness**; *affirms via visual evidence*; AFF.WIT
sʰɔ̀	**Affirmatory-sensory**; *affirms via non-visual evidence*; AFF.SNS
sʔó	**Affirmatory-evidential**; *affirms via direct evidence*; AFF.EVID
tɕʔén	**Affirmatory-anecdotal**; *affirms via prior experience(s)*; AFF.ANEC
jɔ́n	**Affirmatory-reportative**; *affirms via indirect evidence*; AFF.REP

Negatory

káj	**Negatory-basic**; *negates with no regard to evidence*; NEG.BAS
kʰàj	**Negatory-sensory**; *negates via sensory/direct evidence*; NEG.SNS
sə́j	**Negatory-inferential**; *negates via direct evidence/prior experience(s)*; NEG.INF
wáj	**Negatory-reportative**; *negates via indirect evidence*; NEG.REP

12.4 | Quantifiers

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

hiʔ	*none, no*
ʔika	*only, exclusively*
ní	*all, every*
teh	*some, few*
séè	*many, most*
níʔka	*countable, finite*
séèní	*uncountable, infinite*

12.5 | Extension

Extension describes temporal limitation on the axes of *locus* and *restraint*. Extension particles are most commonly applied to conjunctions (*see § 9.6*), but may also apply to content words and

descriptives (*see Ch. 10*). They are placed before their head and, if present, its modifiers.

	Retro.	*Prosp.*	*Delim.*
Antmp.	né	kəsí	tɔ́
Postmp.	liísʰi	tɔ̀je	ʔɔjke
Cistmp.	tɕə́tì	sʰə̀ɴ	×

Figure 12.1: Extension

Locus defines the temporal beginning and end.

Locus

Retrospective	*beginning is focused*; RETRO
Prospective	*end is focused*; PROSP
Delimitive	*both beginning and end are focused*; DELIM

Restraint describes the point at which the locus is defined.

Restraint

Antemporal	*locus is defined before the point of reference*; ANTMP
Postemporal	*locus is defined after the point of reference*; POSTMP
Cistemporal	*locus is defined during the point of reference*; CISTMP

When applied to content words and descriptives, extension is used to express the temporal bounds of the entity 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

12.5.1 | Use with conjunctions

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

TODO example sentences

13 | Numerals

Numerals use a base-60 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 formatives or descriptives.

0	hiʔ	*12*	tɕíha	*24*	síɴ	*36*	sekɔ́	*48*	tʰàse
1	tʰè	*13*	tɕˀəə	*25*	koɴ	*37*	hino	*49*	sʰii
2	niɴ	*14*	náʔah	*26*	ʔəəha	*38*	sʰəə	*50*	sˀóo
3	kɔ	*15*	sʰa	*27*	tʰaà	*39*	tè	*51*	kʰɔ̀j
4	kʰì	*16*	sʰɔh	*28*	tòo	*40*	kˀɔ̀ʔ	*52*	lɔ́ʔeɴ
5	tɕʰajá	*17*	kʰeé	*29*	tɕəɴ	*41*	sómáɴ	*53*	tʰòɴ
6	soo	*18*	jo	*30*	sʰìh	*42*	hasʰè	*54*	tɕɔh
7	sə́h	*19*	tàɴʔa	*31*	sˀə	*43*	kè	*55*	sò
8	ʔɔsə	*20*	tɕʰà	*32*	nɔ́j	*44*	kʰo	*56*	taloh
9	kʰii	*21*	təkˀo	*33*	sàtɕíí	*45*	lato	*57*	jíli
10	tɕé	*22*	ʔətɕˀó	*34*	satɕaʔ	*46*	tɕəh	*58*	tʰɔ̀
11	ləha	*23*	tɔkʰo	*35*	tɕʰoɴ	*47*	sìitʰɔ	*59*	heɴtʰe

Figure 13.1: Numerals

13.1 | Higher & lower numerals

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

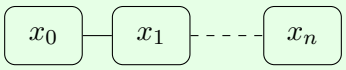

Figure 13.2: Higher numerals

13.1.1 | 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*×
-kˀɔ́	*3*×
-kì	*4*×
-tɕéy	*5*×
-sˀo	*6*×

-jihn	*2*÷
-kʰà	*3*÷
-tép	*4*÷
-sì	*5*÷
-hɔ	*6*÷

13.1.2 | Numeric extractors

Numeric extractors may be used to form higher and lower numerals by associating two numeric arguments and returning a value.

$y\ x$ lí	$x+y$
$y\ x$ kʔe	$x-y$
$y\ x$ kaɴʔɔ	x^y
$y\ x$ seeʔá	$\sqrt[y]{x}$

14 | Units of measure

14.1 | Time

14.1.1 | Years

14.1.2 | Seasons

A year is divided into eight main seasons.

mólɔ́ló	*spring*
miiʔló	*late spring/early summer*
tɕiiʔló	*midsummer*
kʰàʔoló	*late summer/early autumn*
lóoʔló	*autumn*
níjòʔló	*late autumn/early winter*
woʔòló	*midwinter*
hàlóʔló	*late winter/early spring*

14.1.3 | Days

14.2 | Space

15 | Register terms & personal names

15.1 | Register terms

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

	Inferior			*Equivalent*			*Superior*		
	Younger	*Equal*	*Elder*	*Younger*	*Equal*	*Elder*	*Younger*	*Equal*	*Elder*
Formal	tèhah		waj	kátɕʰè	sʰò	sʰəw	létɕaʔ	jóʔoh	sako
Polite	lɔj	tɕʰaw	tɕoo	séhkəh		woʔɔ	kʰemé	miiʔí	
Familiar		tɕʰɔsʰə	toʔa	kʰa		tʰìiʔɔj	tʰìtɕíɴ		tʰè
Pejorative		kəj		ketɕʰɔ̀			kʰèle		

Figure 15.1: Register terms

These terms may also be used to describe familial relations.

Status

Inferior	*target is lower in social status, generation*; INF
Equivalent	*target is similar in social status, generation*; EQV
Superior	*target is higher in social status, generation*; SUP

Age

Younger	*target is younger in age*; YNG
Equal	*target is similar in age*; EQL
Elder	*target is older in age*; ELD

Formality

Formal	*expresses respect, reverence*; FRM
Polite	*expresses politeness, courtesy*; PLT
Familiar	*expresses familiarity, intimacy*; FAM
Pejorative	*expresses disrespect, contempt*; PEJ

15.2 | Personal names

A *personal name* consists of many elements:

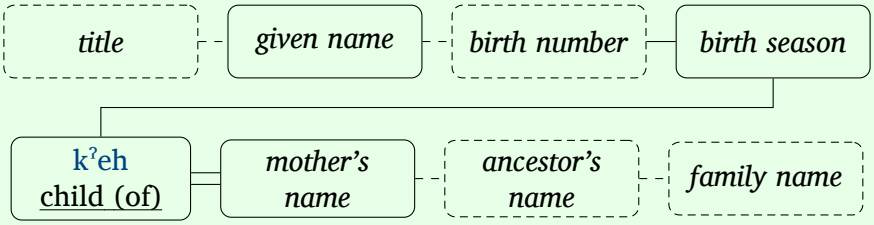

Figure 15.2: Personal name profile

Title	*an optional social title, often a register term, profession, or descriptive*
Given name	*one's given name*
Birth number	*an optional number corresponding to the birth order of oneself in relation to one's siblings (if one has siblings)*
Birth season	*the season of one's birth (see § 14.1.2)*
Mother's name	*one's mother's given name, always preceded by kʔeh*
Ancestor's name	*an optional ancestor's given name, real or mythical*
Family name	*an optional word or phrase that describes the family (e.g., a common family profession or a family descriptor)*

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

16 | Ideophones

16.1 | Ideophonemes

There exists a set of phonemes that may occur only in ideophones. These are called *ideophonemes*, and they cannot cluster (i.e., codae /ʔ h ɴ w j/ may not precede them). Basic consonants may occur in ideophones as well.

	Labial	*Alveolar*	*Dorsal*
Nasal	ᵐb	ⁿd	ᵑg~ŋ
Trill	ʙ̥ ʙ		ʀ̥~χ ʀ~ʁ

(a) Pulmonic

	Dental	*Alveolar*	*Lateral*
Tenuis	ǀ	ǃ	ǁ
Aspirated	ǀʰ	ǃʰ	ǁʰ
Nasalized	ᵑǀ	ᵑǃ	ᵑǁ
Glottalized	ᵑǀˀ	ᵑǃˀ	ᵑǁˀ

(b) Non-pulmonic

Figure 16.1: Ideophonemes

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

16.2 | 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.

Phonomimes	*imitate sounds directly*; PHON
Phenomimes	*imitate sounds associated with tangible states and conditions*; PHEN
Psychomimes	*imitate sounds associated with intangible states and conditions*; PSYCH

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

Light vowels /i ə o/	*light, sharp, soft*
Heavy vowels /e a ɔ/	*heavy, blunt, rough*
Front vowels /i e/	*order, uniformity*
Central vowels /ə a/	*natural structure, innate form*
Back vowels /o ɔ/	*chaos, disformity*
Initial reduplication $\lvert\sigma_{i\sim}\rvert$	*reductive, diminutive, negative*
Final reduplication $\lvert\sim\sigma_{f}\rvert$	*casual, informal, playful*
Full reduplication $\lvert\sim\omega\rvert$	*intensive, augmentative, affirmative*
Lengthening	*general, associative*
Toneless	*natural measure, innate size*
High tone	*narrow, shallow; thin, tall*
Low tone	*wide, deep; fat, squat*

17 | Speech registers

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

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

`TODO` all of this

| Appendices

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. 15*).

TODO all of this

A | Nominal limitives

• tɕɔ̀ʔi (tɕʔè) : (CONC, ANIM) *n.* person, human, humanoid creature ‡ *cl.* people, all humanoids

• taj : (CONC, ANIM) *n.* person of like gender as oneself ‡ *cl.* like-gendered people, humanoids

• náə̀ : (CONC, ANIM) *n.* person of unlike gender as oneself ‡ *cl.* unlike-gendered people, humanoids

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

• keteh (kʔeh), tɕatih^{FP} : (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

• sisì (sʔiì) : (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

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

• tɕasí : (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

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

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

• tʰèʔ : (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

• jə́hɔ : (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

B | Verbal limitives

• wə́ : (CONC, VOL, MVAL) *n.* move, walk, come/go ‡ *aux.* general movement; action

→ mə́

• mə́ : (CONC, VOL, MVAL) *n.* run, move quickly; jump, leap ‡ *aux.* fast, spontaneous movement

⊢ wə́

• sʰɔj : (CONC, VOL, PVAL) *n.* carry, give/take ‡ *aux.* transportation, causative movement

• niwi : (CONC, VOL, BVAL) *n.* consume, eat, drink

• tɕɔ́j : (ABSTR, VOL, PVAL) *n.* speak, write, communicate

• kʰajtè : (ABSTR, VOL, SVAL) *n.* hear, see, directly sense; read, understand ‡ *aux.* direct sensory interaction

• hasì : (ABSTR, VOL, SVAL) *n.* smell, taste, indirectly sense ‡ *aux.* indirect sensory interaction

• jékɔ : (ABSTR, VOL, BVAL) *n.* feel, sense; know ‡ *aux.* cognitive interaction

• seʔmɔ́ : (ABSTR, VOL, PVAL) *n.* make, cause ‡ *aux.* causation

• kʰo : (ABSTR, NVOL, AVAL) *n.* occur, happen, exist ‡ *aux.* state of being

• hɔnɔ́ : (ABSTR, VOL, BVAL) *n.* want, desire, wish

| m

• mísʰoh : (ABSTR, ANIM) *n.* aversion, repulsion, disgust; detestation ‡ (ABSTR, NVOL, BVAL) *v.* be averse, repulsed, disgusted; detest

• 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

• ntɕè : (CONC, INAN) *n.* solid food ‡ (CONC, VOL, MVAL) *v.* prepare solid food

• nɔ́mɔ (nɔ́ɴ) : (CONC, ANIM) *n.* tooth; bite ‡ (CONC, VOL, BVAL) *v.* bite, chew

| tʰ, t, tˀ

• tʰaʔwá (tʰáw) : (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

• tkisʰáj (tiʔsé) : (CONC, INAN) *n.* hardness, durability, endurance ‡ (CONC, VOL, BVAL) *v.* be/make hard, durable, enduring; improve, enhance, fix

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

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

• tətɕìɴ (tɕˀìɴ) : (CONC, ANIM) *n.* eye, pair of eyes; sight ‡ (ABSTR, NVOL, SVAL) *v.* see, visually sense

| tɕʰ, tɕ, tɕˀ

• tɕʰàsˀah (tɕʰàʔ) : (CONC, INAN) *n.* that which is contained; injury ‡ (CONC, VOL, BVAL) *v.* contain (within); incapacitate, debilitate

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

• tɕóhkʰə̀ (tɕoh) : (CONC, INAN) *n.* milk, fat ‡ (CONC, NVOL, MVAL) *v.* be/have/drink milk; be fat

| kʰ, k, kˀ

• kʰə̀ : (CONC, ANIM) *n.* breast; fat ‡ (CONC, VOL, BVAL) *v.* produce milk; nurture, care (for)

• kʰòo : (CONC, ANIM) *n.* fingers, hand, arm ‡ (ABSTR, VOL, BVAL) *v.* touch, interact (with)

• tɕkiʔəj (kʔii) : (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[FP] (mii) : (CONC, INAN) *n.* any grain, cereal or pulse; bread ‡ (CONC, VOL, MVAL) *v.* grow/harvest grain

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

• kʔètɕʔè (ján), jánɴ[NI] : (CONC, ANIM) *n.* friend, spouse; expected accompaniment; friendship, relationship ‡ (ABSTR, VOL, BVAL) *v.* accompany; be in a relationship

| ʔ

• ʔelə́w (lóo) : (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

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

| sʰ, s, sʔ

• sènə́j (sə́j) : (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

• sʔə́lə́w : (CONC, INAN) *n.* saraw plant—a squat, durable, 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

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

| h

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

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

• hòɴ : (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

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

• míɴwo : (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 (wéɴ) : (CONC, ANIM) *n.* mouth, opening, orifice ‡ (CONC, VOL, BVAL) *v.* hold in one's mouth, suck; fellate

• wəwkʰo (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

• lìjókʔo (lìjóʔ) : (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

• ləneh : (CONC, INAN) *n.* mountain, collection of rock/stone ‡ (CONC, VOL, BVAL) *v.* be/climb a mountain; stop, prevent

• lɔtɕʔə́ : (CONC, ANIM) *n.* rain ceremony ‡ (CONC, VOL, MVAL) *v.* perform a rain ceremony

• lɔ́ɴlə (lɔ́ɴ) : (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

D | Ideophones