

PHONOLOGICAL STRUCTURE OF SPITI

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Spiti belongs to Tibetan group of Himalayan branch of Tibeto—Burman sub-family of the Tibeto-Chinese family of languages. Spiti, locally known as Piti, is spoken in the Spiti Valley of the Lahul-Spiti district of Himachal Pradesh. Sten Konow in Grierson's *Linguistic Survey of India* (Vol. III, part I) postulates three branches within Tibetan group of languages viz. Western, Central and Eastern. Under Western Tibetan are listed Balti, Purik, Ladakhi and Lahul; Spiti Nyamkat, Jad, Garhwal, Kagate, Sherpa, Danjong-ka (Bhotia of Sikkim), Lhoke (Bhotia of Bhutan) are listed under central Tibetan. Kham is the sole member of Eastern Tibetan. Spiti is closely related to Lhasa Tibetan, the lingua franca of Tibet. The total number of speakers of Spiti is 7052 according to the village census of 1971. The census report of 1961 puts the figure at only 33, which seems erroneous. I personally visited the whole valley and found that the population in all 47 villages is about 6,000 (Summer 1972 and 1973 field trips). The written form of the language (which is in Tibetan characters) is known as Bhoti or Bhotia.<sup>1</sup>

The Spiti Valley remains cut off from the rest of the world for more than six months during the snow fall season. The contact with other people in the adjoining areas is limited to the summer season. The influence of Indo-Aryan languages has not been observed in the language under study. The contact with Lahual and Ladakh is also negligible since those valleys are also separated by high mountains.

The present study is the first linguistic work on the spoken language of Spiti and deals with the phonetic and phonemic structure of the segmental and suprasegmental sounds. Among the segmentals seven vowels and thirty-one consonants have been established. Three tones, three pitch-levels of intonational phonemes, three terminal contours, three junctures, and nazalization are found among suprasegmentals.

Spiti speech sounds may be classified into vowels and consonants.

<sup>1</sup>Bhotia is a cover term for many languages of Sino-Tibetan group of languages.

Vowel Chart

	Unrounded Front	Central	Rounded Back
High	i		u
Mid	e		o
Low	ɛ	a	ɔ

Phonemic Contrasts:

The vowels in Spiti differ in frequency as well as in distribution. The vowels /ɛ, ɔ/ occur significantly less in the initial positions. /ɛ, ɔ/ do not occur word initially at all whereas /i, e, u, a, o/ occur in a very limited number of words. The phonetic contrasts in the available positions are given below:

Initially:	/i/	/i/	'this'
		/iwi/	'grandmother'
	/e/	/ey/	'pop-corn'
	/u/	/u/	'husband'
		/uyak/	'noise'
	/a/	/apa/	'father'
		/amo/	'fox' (female)
Medially:	/o/	/òt/	'shine'
		/òrdɔ̃/	'deep'
	/i/	/sir/	'to filter'
	/e/	/ser/	'gold'
	/ɛ/	/sɛr/	'to speak'
	/u/	/sur/	'incense'
	/o/	/sor/	'anger'
Finally:	/ɔ/	/sɔr/	'an idol made of earth'
	/a/	/kàr/	'a type of dance'
	/i/	/mí/	'man'
	/e/	/m̃e/	'pillow shape place'
		/tsé/	'to play or to dance'
	/o/	/khó/	'he'
	/ɛ/	/m̃ɛ/	'fire'
		/r̃ɛ/	'begger'

Finally (Cont'd)	/a/	/ča/	'iron'
		/yá/	'oxide'
		/tá/	'horse'
	/ɔ/	/pɔ́/	'to mix' (imp.)
	/u/	/phú/	'cave'

#### Phonemic Distribution Chart

	<u>i</u>	<u>e</u>	<u>ɛ</u>	<u>a</u>	<u>u</u>	<u>o</u>	<u>ɔ</u>
Initially	+	+	-	+	+	+	-
Medially	+	+	+	+	+	+	+
Finally	+	+	+	+	+	+	+

#### Phonetic Description of Vowel Phonemes and their Allophonic Variations

Vowels in Spiti display a wide range of phonetic variations. First of all we shall point out that the general norms of variants applicable to all the vowel classes and sub-classes.

- (1) All the vowels are pure and have a distinct syllabic nuclei.
- (2) Vowels preceded and followed by nasal consonants are nasalized. This nasalization is considered automatic and hence not marked in the phonetic transcription.
- (3) Phonemic nasalization is heavier than the automatic one.
- (4) Vowels with rising tone are shorter than those which occur with falling tone
- (5) Tense vowels characteristically occur in falling tone syllables, whereas lax vowels occur in rising tone syllables.
- (6) Length in all the vowels is allophonic except /ɔ/ which does not exhibit lengthened allophones.

#### Allophonic Variations

/i/ has all the following allophones [i:], [i], [i]

[i:] high, front, unrounded, long, tense, occurs: (i) finally in monosyllabic words; e.g. /ñi:/ 'two'

(ii) In disyllabic open syllable words if the vowel in the final syllable is dissimilar

e.g. /miče/ [mi:če] 'life'  
 /pika/ [pi:ka] 'spring'

[ɨ] high, central, unrounded. This occurs before /y/

e.g. /khiyú/ [khiyú] 'moustache'  
 /iyú/ [iyú] 'teat'

[i] high, front, short, unrounded. This occurs elsewhere.

e.g. /iwi/ [iwi] 'grand mother'  
 /izu/ [izu] 'like this'  
 /min/ [min] 'name'

/e/ has the allophones: [e], [ø], [e:]

[e] mid, front, unrounded, short, lax, this occurs in closed syllables.

e.g. /ser/ [ser] 'gold'  
 /den/ [den] 'mat'  
 /senmo/ [senmo] 'nail (body part)'

[ø] mid, front, rounded, short, lax. This occurs:

(i) initially followed by a semi-vowel;

(ii) after mid, back, rounded vowel.

e.g. /ey/ [øy] 'popcorn (made of barley)'  
 /zoe/ [zø] 'do (imp.)'  
 /toewa/ [tøwa] '(he) saw'

[e:] mid, front, unrounded, long, tense. This occurs elsewhere.

e.g. /beta/ [be:ta] 'mate'  
 /demo/ [de:mo:] 'good'  
 /de/ [de:] 'rice'  
 /če/ [če:] 'tongue'

/E/ has the following allophones: [E], [E:]

[E] low, front, unrounded, short, tense. This occurs in closed syllables:

e.g. /phEt/ phEt<sup>1</sup> 'half'  
 /zimEt/ [zimEt<sup>1</sup>] 'family'

[E:] low, front, unrounded, long, lax. This occurs elsewhere.

e.g. /mEmE/ [mE:mE:] 'grand father or old man'  
 /pÈto/ [pE:to:] 'calf'  
 /mÉ/ [mÉ:] 'fire'  
 /rÉ/ [rÉ:] 'to beg'

/u/ has the following allophones: [ü], [u:], [u]

[u] high, back, unrounded, short, lax. It occurs initially.

e.g.	/uʃɔ̃n/	[üʃɔ̃n]	'cry'
	/uyak/	[üyakʰ]	'noise'
	/urɕup/	[ürɕupʰ]	'fast wind'

[u:] high, back, rounded, long tense;

- (i) This occurs initially with a rising tone.
- (ii) In polysyllabic words, if the vowel in the following syllable is dissimilar and in final position.

e.g.	/ú/	[ú:]	'husband'
	/gupa/	[gu:pa]	'ninth'
	/bu/	[bu:]	'insect'

[u] high, back, rounded, short, lax occurs elsewhere.

e.g.	/pùn/	[pùn]	'secondary'
	/thur/	[thur]	'downwards'
	/thukpa/	[thukpa]	'a kind of liquid, dish.'
	/nuku/	[nuku]	'pen'

/o/ has the allophones: [ö], [o], [o:].

[ö] mid, back, unrounded, short, lax. This occurs word initially.

e.g.	/òt/	[ötʰ]	'shine(noun)'
	/òle/	[öle]	'neck'
	/òrdɔ̃n/	[ördɔ̃n]	'deep'

[o] mid, back, rounded, short, lax. This occurs in closed syllables.

e.g.	/kok/	[kok]	'to snatch'
	/kòr/	[kòr]	'coat'
	/kàrok/	[kàrokʰ]	'a big crow'

[o:] mid, back, rounded, long, tense. This occurs in the positions not covered by other allophones (elsewhere).

e.g.	/kào/	[kào:]	'different'
	/pore/	[po:re:]	'balance (to weigh)'
	/dolo/	[do:lo:]	'bald'

/ɔ/ low back, rounded, tense, examples.

	/thɔk/	[thɔkʰ]	'roof'
	/lɔ/	[lɔ]	'year'
	/gɔ/	[gɔ]	'head'

/a/ has the following allophones: [ʌ], [ə], [a]

[ʌ] low, back, central unrounded, tense. It occurs inter-consonantly in closed monosyllabic words.

- e.g. /khap/ [kʰʌpʰ] 'needle'  
 /kham/ [kʰʌm] 'desire'  
 /kat/ [kʌtʰ] 'sound, or speech, talk (noun)'

[ə] mid, central unrounded, short, lax. It occurs in a closed syllable in polysyllabic words.

- e.g. /karma/ [kəɾma] 'star'  
 /gapso/ [gəpsɔ:] 'lower jaw'  
 /ɕharwa/ [ɕhəɾwa] 'rain'  
 /kàrʂu/ [kəɾʂu] 'socks'

a low, central, unrounded, long, tense. It occurs elsewhere.

- e.g. /apa/ [apa] 'father'  
 /pawo/ [pawɔ:] 'skin'  
 /tā/ [tā] 'now'

### Vowel Sequences

There are not many vowel sequences found in a word. It is only medially and finally that some of these occur. Initially there is a total absence of vowel sequences. The following schematic table shows possible combinations found in Spiti.

	<u>i</u>	<u>e</u>	<u>ɛ</u>	<u>u</u>	<u>o</u>	<u>—</u>	<u>a</u>
i	-	-	-	-	-	-	-
e	+	-	-	-	-	-	+
ɛ	-	-	-	-	-	-	-
u	+	+	+	-	+	-	+
o	+	+	+	-	-	-	+
ɔ	-	-	-	-	-	-	-
a	+	+	-	-	+	-	-

Plus (+) means sequence possible.

Minus (-) means sequence not possible.

Co-occurrence restrictions on vowels are apparent from the above tabulation. The vowels in fact, neatly fall into two groups--front and back. No sequence of front - back vowels is possible; only /e, a, o, u/ occur as the first member of a vowel sequence with both front and non-front (back as

well as central) vowels occurring as the second member. A few examples are given below:

<u>ei</u>	/leiye/	'to weave'
<u>ea</u>	/tseat/	'playing'
<u>ui</u>	/ñui/	'mine'
<u>ue</u>	/ñuEt/	'(I,We) are weeping'
<u>uo</u>	/zuo/	'body'
<u>ua</u>	/dua/	'stone'
<u>oi</u>	/nomoi/	'of the daughter'
<u>oe</u>	/čoeña/	'full moon'
<u>oE</u>	/koEt/	'stealing'
<u>ao</u>	/khao/	'lid'
<u>oe</u>	/goese/	'having spoken'
<u>ae</u>	/sae/	'eat or being eaten'
<u>ai</u>	/kàčai/	'leave'
<u>ue</u>	/yuewan/	'I cooked'

# CONSONANT CHART

	<u>Bilabial</u>	<u>Dental</u>	<u>Alveolar</u>	<u>Alveo-Palatal</u>	<u>Palatal</u>	<u>Retroflex</u>	<u>Velar</u>	<u>Glottal</u>
VL. Unasp.	p	t	-	-	-	t	k	-
VL. Asp.	ph	th	-	-	-	ṭh	kh	-
Bd. Unasp.	b	d	-	-	-	ḍ	g	-
Nasal	m	n	-	-	ṇ	-	ṅ	-
VL. Fricative.	-	-	s	ʃ	-	ʂ	-	-
Vd. Fricative.	-	-	z	ʒ	-	-	-	h
VL. Unasp. Affricate.	-	-	ts	-	ç	-	-	-
VL. Asp. Affricate.	-	-	tsh	-	čh	-	-	-
Vd. Unasp. Affricate	-	-	dz	-	j	-	-	-
Lateral	-	-	l	-	-	-	-	-
Trill	-	-	r	-	-	-	-	-
Flap.	-	-	-	-	-	ɾ	-	-
Frictionless continuents (Semi vowel)	w	-	-	-	y	-	-	-

### Places of Articulation

As shown in the schematic Consonant Chart the places of articulation distinguished for the classification and description of Spiti speech sounds are:

1. The glottis
2. The velum
3. The palate
4. Alveolar
5. Alveo-palatal
6. Dental
7. Labial

Retroflexion is customarily given in terms of places of articulation; however, retroflexion is a manner of articulation. The range is between the alveolar region and the hard palate.

### Manners of Articulation

1. Closure
2. Friction-narrow structure
3. Closure followed by narrowing i.e. gradual opening
4. Retroflexion
5. Laterality-closure in the mid and opening by sides
6. Repeated momentary closures
7. Rapid momentary closure once
8. Opening that does not allow audible friction

Secondary features are voicing, aspiration, and nasalization.

### Phonemic Contrasts

Phonemic contrasts are based on the following factors:

1. Place of articulation.
2. Manner of articulation
3. Secondary features i.e., aspiration, voicing and nasality; their presence or absence.

Phonemic Contrasts: Contrasts of articulation. Voiceless Unaspirated Stops: /p t t k/

#### Initially

/p/

/pà/	'cow'
/pá/	'pulse'
/pé/	'open(imp.)'
/pó/	'name of a village'
/pawa/	'a kind of dish'
/potpa/	'Tibetan'.

Nasalization is mentioned as a secondary feature added to the stops without changing their articulator and place of articulation; however, it is given in the schematic chart as a manner of articulation.

/t/	
/tá/	'horse'
/t̃a/	'now'
/tañ/	'and or also'
/ṭ/	
/ṭù/	'boat'
/ṭu/	'child'
/ṭé/	'a type of monkey'
/ṭañ/	'chest'
/ṭuɕu/	'corner'
/ṭokpo/	'small river'
/k/	
/ka/	'wooden pillar'
/koe/	'long coat'

Voiceless aspirated stops: /ph, th, ṭh, kh/

/ph/		
/phí/	'that'	
/phú/	'care'	
/phawa/	'a name of a religious place'	
/th/		/ṭh/
/thá/	'bank of a river'	/ṭhak/ 'blood'
/thuwa/	'bad'	/ṭhin/ 'case'
/thEn/	'pull(imp.)'	
/kh/		
/khá/	'snow'	
/khí/	'dog'	
/khər/	'curb'	

Voiced unaspirated stops: /b, d, ḍ, g/

/b/	
/bu/	'insect'
/beɣe/	'to hide'
/bolmo/	'soft'

/d/		
	/d̥ú/	'hard'
	/dua/	'stone'
/ḍ/		
	/ḍe/	'rice'
	/ḍá/	'enemy'
	/ḍik/	'stop'
/g/		
	/gú/	'mine'
	/gó/	'door'

Nasal Stops: /m, n, ñ ñ/ Nasal stops show contrasts of articulation only.

All the nasals are voiced and unaspirated. Examples:

/m/		
	/mú/	'wife(used only in compound as husband wife)'
	/mí/	'person'
	/mapa/	'fifth month of the Tibetan year'
/n/		
	/nup/	'west'
	/nám/	'when'
	/nima/	'sun'
/ñ/		
	/ñi/	'two'
	/ñá/	'fish'
/ñ̄/		
	/ñ̄a/	'five'
	/ñ̄á/	'I'

Affricates, voiceless unaspirated: /ts ʈ/

/ts/		
	/tsé/	'target'
	/tsam/	'how many'
	/tsuk/	'how'
/ʈ/		
	/ʈe/	'tongue'
	/ʈí/	'what'
	/ʈuk/	'put(imp.)'

Affricates, voiceless aspirated: /tsh, ʈh/

/tsh/

/tshá/ 'salt'

/tshó/ 'lake'

/ʈh/

/ʈhú/ 'water'

/ʈhāñ/ 'beer made of barley or rice'

Affricates voiced unaspirated: /dz, ɟ/

/dz/

/dzú/ 'finger'

/ɟ/

/ɟu/ 'greeting(informal)'

Fricatives voiceless unaspirated: /s, ʃ, ɕ/

/s/ /sa/ 'grass'

/ʃ/ /ʃá/ 'meat'

/ɕ/ /ɕá/ 'hair'

Fricative voiced unaspirated: /z, ʒ/

/z/ /zɔ/ 'a kind of yak'

/ʒ/ /ʒú/ 'bow'

/ʒi/ 'four'

Contrasts of manner: lateral vs. Trill

/l/ /lá/ 'pass' (between two mountains)

/lé/ 'interjection used for addressing a king'

/r/ /rá/ 'goat'

/ré/ 'cloth'

Tri l vs. Flap

/r/ /ʃara/ 'blind man'

/r/ /ʃara/ 'the goat'

/ʃirut/ 'flood'

Contrasts of secondary features:

Voiceless unaspirated vs. Voiceless aspirated vs. voiced unaspirated

Initial contrasts

/k/	/kut/	'theft'
/kh/	/khut/	'mating'
/g/	/gut/	'laugh'
/t/	/t̥aŋ/	'chest'
/t̥h/	/t̥hɔm/	'a function in a happy mood'
/d/	/daŋ/	'honey'
/t/	/tEn/	'saddle'
/th/	/thEn/	'pull(imp.)'
/d/	/dEn/	'mat'
/t̥/	/t̥ú/	'ten'
/t̥h/	/t̥hú/	'water'
/j/	/jú/	'greeting(informal)'
/ts/	/tsé/	'dance or play'
/tsh/	/tshé/	'a type of grass'
/dz/	/dzu/	'finger'
/s/	/só/	'teeth'
/z/	/zó/	'a kind of yak'
/ʃ/	/ʃawa/	'stay'
/ʒ/	/ʒá/	'a small stone'

Medial contrasts

Phonemic contrasts in the medial position are not found in Spiti in minimal pairs, however the occurrence of the phonemes is shown. /Ph, dz, t̥h, s, t̥h, kh/ do not occupy medial position in all.

/p/	/capa/	'cock'
	/nakpo/	'5th month of year'
/t/	/sata/	'(you) eating? interrogative'
	/pòtpa/	'Tibetan'
/t̥/	/t̥aɽe/	'mule'
	/khítuk/	'pup'
/k/	/pika/	'spring'
/th/	/lakthil/	'palm'
/b/	/bāba/	'lamp'
/d/	/lañdo/	'ox'
/d̥/	/kumdi/	'thirst'

/g/	/ʒiga/	'field'
	/gunga/	'winter'
/m/	/ama/	'mother'
/n/	/anE/	'lady'
/ñ/	/nEnñiñ/	'wishes to take'
/ñ/	/sañma/	'clean'
	/riñpo/	'long'
/ts/	/totse/	'shirt'
/tsh/	/ñotsha/	'shame'
/č/	/ačo/	'elder brother'
/ʃ/	/meʃe/	'to take'
/s/	/dɔksa/	'pasture'
/ʒ/	/keʒak/	'birthday'
/z/	/tamze/	'saint'
/ʒ/	/yoʒe/	'cook'
/l/	/čalak/	'a thing'
/r/	/marwo/	'red'
/y/	/riya/	'forest'
/w/	/ruiwa/	'bone'

### Final Contrasts

Voiceless unaspirated stops: /p, t, k/; nasal stops, /m, n, ñ/; lateral /l/; and trill /r/ are the only consonants which are found to occur finally.

/p/	/khap/	'needle'
/t/	/ñit/	'sleep(noun)'
/k/	/thok/	'roof'
/m/	/lam/	'way'
/n/	/den/	'mat'
/ñ/	/tañ/	'and'
	/dañ/	'honey'
/l/	/mul/	'rupee'
/r/	/ʒar/	'east'

### Phonetic description and allphonic variations.

#### Stops

##### Bilabial stops

/p/ has the following allophones: [pʰ], [p]

[pʰ] bilabial, voiceless, unaspirated, unreleased, stop, occurs in the final position. e.g.

/khap/	[kʰapʰ]	'needle'
/lap/	[lʌpʰ]	'language'

[p] bilabial, voiceless, unaspirated, released, stop occurs elsewhere, e.g.

/apa/	[apa]	'father'
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/ph/ [ph] bilabial, voiceless, aspirated, released stop; occurs only initially:

/phú/	[phú:]	'cane'
/phurbu/	[phurbu:]	'Thursday'

/b/ [b] bilabial, voiced, unaspirated, stop, it occurs initially and medially.

/bu/	bu:	'insect'
/penba/	penba	'Saturday'

### Dental stops

/t/ has the following allophones: [tʰ], [t]

[tʰ] a voiceless, dental, unreleased, stop; it occurs finally, e.g.

/òt/	[otʰ]	'shine(noun)'
/gut/	[gutʰ]	'laugh(noun)'
/nit/	[nitʰ]	'sleep(noun)'

[t] voiceless, dental, released, stop; occurs elsewhere, e.g.

/t̄ar/	[t̄ar]	'frozen water'
/kutpa/	[kutpa]	'loin'

/th/ has the allophones [θ], [th]

[θ] a voiceless, aspirated, dental, fricative. It occurs medially in compound words. e.g.

/mother/	[moθur]	'horse diminutive(fe)'
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[th] dental, voiceless, aspirated, stop, it occurs elsewhere. e.g.

/thukpa/	[thukpa]	'food'
/thakpa/	[thakpa]	'rope'

/d/ [d] dental, voiced, unaspirated, stop, it occurs initially; medially; in compound words. e.g.

/dun/	[dun]	'seven'
/dar/	[dar]	'noon'
/nEdat/	[nEdətʰ]	'I take'

Retroflex stops

- /ɖ/ [ɖ] Retroflex voiceless stop; occurs initially and medially. e.g.  
     /ɖɪma/ [ɖɪma] 'dirt'  
     /ɖate/ [ɖate] 'mule'
- /tʰ/ [tʰ] retroflex, voiceless, aspirated, stop; occurs only initially. e.g.  
     /tʰamo/ [tʰamo:] 'thin'  
     /tʰit/ [tʰitʰ] 'guide(noun)'
- /d/ [ɖ] retroflex, voiced, unaspirated, stop; occurs only initially. e.g.  
     /ɖom/ [ɖom] 'box'  
     /ɖonbo/ [ɖonbo:] 'guest'

Velar stops

- /k/ has the allophones [kʰ], [k]  
     [kʰ] velar, voiceless, unaspirated, unreleased, stop. It occurs finally. e.g.  
         /duk/ [dukʰ] 'sound of lightening'  
         /kərok/ [kərokʰ] 'crow (big one)'
- [k] velar, voiceless, unaspirated, released, stop; occurs elsewhere. e.g.  
     /nakpo/ [nakpo:] 'black'  
     /kan/ [kən] 'uvula'
- /kh/ [kh] velar, voiceless, aspirated, stop; it occurs initially. e.g.  
     /khɪ/ [khɪ] 'dog'  
     /khopa/ [kho:pa:] 'throat'
- /g/ [g] voiced, unaspirated, velar, stop; it occurs initially; medially after a homo-organic nasal. e.g.  
     /gowo/ [go:wo:] 'stature'  
     /gangba/ [gangba] 'duck'

Velars are fronted whenever followed by a front vowel /i/ and /y/.

Affricates: Alveolar Affricates.

- /ts/ [ts] voiceless, alveolar, unaspirated, affricate, occurs initially and medially. e.g.  
     /tsam/ [tsam] 'how many'  
     /pùtsa/ [pùtsa] 'boy'

- /tsh/ [tsh] alveolar, voiceless, aspirated, affricate; occurs initially only. e.g.  
 /tshó/ [tshó:] 'lake or sea'  
 /tshá/ [tshá] 'salt'
- /dz/ [dz] alveolar, voiced, unaspirated, affricate, occurs only initially. e.g.  
 /dzú/ [dzú:] 'finger'  
 /dzá/ [dzá] 'rain-bow'

### Palatal Affricates

- /tʃ/ [tʃ] palatal, voiceless, unaspirated, affricate, occurs initially and medially. e.g.  
 /tʃe/ [tʃe] 'tongue'  
 /tʃeʃe/ [tʃe:ʃe:] 'to cut'
- /tʃh/ [tʃh] palatal, voiceless, aspirated, affricate, occurs initially only.  
 /tʃhu/ [tʃhu:] 'water'  
 /tʃhuto/ [tʃhuto:] 'lips'
- /ʃ/ [ʃ] palatal, voiced, unaspirated, affricate, occurs initially only.  
 /ʃule/ [ʃule:] 'greeting'  
 /ʃinan/ [ʃinan] 'fear'

### Nasals

- /m/ [m] bilabial, voiced, nasal, occurs in all the positions: e.g.  
 /min/ [min] 'name'  
 /gylmo/ [gylmo:] 'queen'  
 /nám/ [nám] 'when'
- /n/ has the allophones [ŋ], [n]  
 [ŋ] retroflex, voiced, nasal, flap; it occurs in intervocalic position. But there is only one example found in the data. Nowhere is /n/ found retroflex in this environment. e.g.  
 /ganak/ [gaŋakʰ] 'a name of a village'
- [n] dental, voiced, nasal, occurs elsewhere. e.g.  
 /nomo/ [no:mo:] 'younger sister'  
 /kànʂu/ [kànʂu] 'socks'  
 /mɔm/ [mɔm] 'an Indian'

- /ɲ/ [ɲ] voiced, alveo-palatal, nasal; occurs initially and medially. e.g.  
 /ɲa/ [ɲa] 'fish'  
 /terɲin/ [terɲin] 'wishes to give'
- /n/ [n] voiced, velar, nasal; occurs in all the positions. e.g.  
 /no/ [no:] 'I'  
 /naɲmo/ [naɲmo:] 'tomorrow'  
 /ɬaɲ/ [ɬaɲ] 'chest'

Nasal speech sounds have their nasality spread over the following and the preceding vowel. This is considered automatic and is not marked in phonetic transcriptions. Consonants occurring after the nasals are voiced in rapid speech. Free variation between voiced and voiceless stops preceding nasals is also found to occur. e.g.

- /ɲunpo/ ~ /ɲumbo/ 'blue'  
 /khaɲpa/ ~ /khaɲba/ 'house'  
 /gunka/ ~ /gunga/ 'winter'  
 /kximt͡ʃe/ ~ /kximt͡ʃe/ 'neighbor'

### Lateral

- /l/ has the allophones: [lʲ], [lʷ], [l]  
 [lʲ] voiced, alveo-palatal, lateral, occurs before /y/. e.g.  
 /lyú/ [lʲú] 'flute'
- [lʷ] voiced, alveolar, velarised, lateral. It occurs before back vowels. e.g.  
 /lú/ [lʷú:] 'song'  
 /ló/ [lʷó:] 'south'
- [l] voiced, alveolar, lateral, occurs elsewhere. e.g.  
 /lao/ [lao:] 'pretty'  
 /leha/ [le:ha] 'work'
- /r/ [r] voiced, alveolar, trill, occurs in all the positions. e.g.  
 /rowo/ [ro:wo:] 'friend'  
 /lara/ [lara] 'name of a village'  
 /kàr/ [kàr] 'a name of a dance'
- ./r/ [ɾ] voiced, retroflex, flap. It occurs medially only. e.g.  
 /ʃara/ [ʃara] 'he-goat'  
 /ʃirut/ [ʃirut] 'flood'

Fricatives:Alveolar fricatives

/s/ [s] voiceless, alveolar, fricative, occurs initially and medially. e.g.

/sum/ [sum] 'three'

/gapsó/ [gapsó:] 'lower jaw'

/z/ [z] voiced, alveolar, fricative, occurs initially and medially. e.g.

/zu/ [zu:] 'body'

/kàrza/ [kàrza] 'inhabitant of Lahul'

Alveo-palatal fricatives:

/ʃ/ [ʃ] voiceless, alveo-palatal, fricative, occurs initially and medially. e.g.

/ʃik/ [ʃik] 'long'

/piʃi/ [piʃi] 'cat'

/ʒ/ [ʒ] voiced, alveo-palatal, fricative, occurs initially and medially. e.g.

/ʒu/ [ʒu:] 'bow(for arrows)'

/ʃuʒe/ [ʃuʒe:] 'to digest'

Retroflex fricative:

/ʂ/ [ʂ] retroflex, voiceless, fricative, occurs, initially only. e.g.

/ʂa/ [ʂa] 'hair'

/ʂo/ [ʂo:] 'curd'

Glottal fricative

/h/ [h] voiced, glottal, fricative, occurs, initially and medially. e.g.

/hal/ [hal] 'a name of a village'

/leha/ [le:ha] 'work'

Sometimes voiceless /h/ occurs in free variation with the voiced /h/ medially in rapid speech. e.g.

/seha/ [seha]~[seha] 'ladder'

Frictionless continuants (semi vowels): /y, w/

/y/ has the allophones: [y], [w]

[y] voiced, high, front, close, unrounded, non-syllabic, frictionless, continuant. It occurs initially and intervocalically. e.g.

/yaʂo/ [yaʂo:] 'upper lip'

/teyak/ [te:yak] 'will give'

/moye/ [mo:ye:] 'having sowed'

[y<sup>w</sup>] a voiced high, front, close, rounded, non-syllabic frictionless, continuant, occurs before back vowels.

/yul/ [y<sup>w</sup>ul] 'village'

/yum/ [y<sup>w</sup>um] 'mother(honorific)'

/w/ [w] voiced, high, back, rounded, non-syllabic frictionless continuant occurs initially and medially. e.g.

/wagya/ [wagya] 'you(pl.)'

/bawa/ [bawa] 'filthy'

/w/ whenever followed by /o/ is dropped optionally in rapid speech.

/sirwo/ ~ /siro/ 'yellow'

### Consonant Clusters

Consonant clusters have been studied in the initial and medial positions since there are no final clusters in Spiti. Initial clusters consist of all consonants except /th, tsh, dz, ʃ, s, ʂ, z, ʒ, w, y/ occurring as first member and /y/ as second member. e.g.

/-py-/ /pyaṇ/ 'a musical string instrument'

/-phy-/ /phyak/ 'male yak'

/-by-/ /byak/ 'arrogant'

/-my-/ /myá/ 'cat's eye'

/-ty-/ /tyan/ 'I will go'

/-thy-/ /thyo/ 'thumb'

/-dy-/ /dyan/ 'will warm(I)'

/-ny-/ /nyābo/ 'near'

/-ts-/ /tsyot/ 'to kill(imp.)'

/-čy-/ /čyot/ 'cut(imp.)'

/-čhy-/ /čhyot/ 'please drink'

/-ňy-/ /ňyot/ 'you(honorific)'

/-ṭy-/ /ṭyan/ 'will ask'

/-ḍy-/ /ḍyat/ 'enough'

/-ky-/ /kyot/ 'please come'

/-khy-/ /khyot/ 'you'

/-gy-/ /gyú/ 'original'

/-ñy-/ /ñyabo/ 'together'

/-ly-/ /lyú/ 'flute'

/-ry-/ /ryan/ 'begger'

Medial Clusters

Morphemic structure in the dialect mostly involves two syllables and does not contain any clusters; however, consonant clusters arise only within a word at morphemic junctions. e.g. /taptuk/ 'measuring'; morpheme /tap/ ending in /p/ is followed by another morpheme /tuk/ beginning with /t/, forms a cluster of /-pt-/. The following types of medial clusters are permissible in the dialect.

Stop + Stop

/-bd-/	/sabden/	'a type of cotton mat'
/-kp-/	/mukpo/	'brown'

Stop + Nasal

/-pm-/	/lopma/	'leaf'
/-tm-/	/čätmit/	'ugly'

Stop + Fricative

/-pš-/	/kapšá/	'shoes'
/-ks-/	/miksɔñ/	'hole'

Stop + Affricate

/-pč-/	/gyapče/	'to shut'
/-kč-/	/kokče/	'to snatch'

Stop + Lateral

/-pl-/	/tòpla/	'tasty'
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Stop + Trill

/-br-/	/debra/	'sloppy'
--------	---------	----------

Stop + Frictionless Continuant

/-gy-/	/sibgyat/	'twenty-eight'
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Nasal + Stop

/-mp-/	/dampa/	'cheek'
/-np-/	/khañpa/	'house'

Nasal + Nasal

/-nm-/	/kunma/	'thief'
--------	---------	---------

Nasal + Fricative

/-nz-/	/kunzam/	'a name of a person'
--------	----------	----------------------

Nasal + Affricate

/-mj-/	/khimje/	'neighbour'
--------	----------	-------------

Nasal + Trill

/-mr-/	/phamrak/	'(I) lose'
--------	-----------	------------

Lateral + Stop

/-lt-/	/kàlte/	'if'
--------	---------	------

Lateral + Nasal

/-lm-/	/gyalmo/	'queen'
--------	----------	---------

Lateral + Fricative

/-lʃ-/	/kalʃuEt/	'getting weaved'
--------	-----------	------------------

Trill + Stop

/-rb-/	/phurbu/	'4th day of Tibetan week'
--------	----------	---------------------------

Lateral + Trill

/-lr-/	/gyalrak/	'to win'
--------	-----------	----------

Trill + Nasal

/-rm-/	/kārma/	'star'
--------	---------	--------

Trill + Fricative

/-rs-/	/karsa/	'moon beam'
--------	---------	-------------

Trill + Frictionless Continuant

/-rw-/	/karwo/	'white'
--------	---------	---------

Trill + Affricate

/-rč-/	/khurčun/	'will make him walk'
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Restrictions

(i) Clusters of like consonants are not available in normal rapid speech; however, in careful, slow speech, a few examples are found at morpheme boundaries. e.g. /-nn-/      /nEnna/ 'should have taken', /yulla/ 'of the village'

(ii) Voiceless aspirated stops, voiced unaspirated stops (except /b, g/ which are combined with a few consonants), affricates, fricatives, flaps and frictionless continuants do not participate as first member in a medial cluster.

(iii) /ñ/ alveo-palatal nasal also does not occur as a first member in a cluster.

Supra-segmentals

A three term tonal system, falling, level and rising tone is found in Spiti and associated with the word or lexical item. A given lexical item may be assigned to one or the other supra-segmental category and termed as a Tone 1 word, a Tone 2 word, or a Tone 3 word (henceforth these tones will be referred to by their descriptive names as Tone 1, falling tone; Tone 2, level tone, and Tone 3, rising tone.

Phonetic descriptions of tones

Tone 1, symbolized as / \ /, is falling-rising. There is a fall in the pitch level which starts a bit above the mid level, then falls low and stays level for some time

and then rises to the mid level. The pitch rise does not reach its beginning point.

High Level \_\_\_\_\_

Mid Level \_\_\_\_\_

Low Level \_\_\_\_\_

The syllable bearing falling tone is longer in duration than one bearing the rising tone or the level tone. Examples having falling tone:

/pà/ 'cow'

/tà/ 'now'

/pòmo/ 'girl'

Tone 2 level tone, symbolized as /-/ , is level-rising. This tone is unmarked in the transcription except where contrasts are shown with other tones. The pitch of level tone (tone 2) starts from the mid level, but slightly lower than the beginning point of falling tone and then it stays level for some time. There is slight rise higher than the end point of falling tone, where falling tone does not rise above the mid level. Examples are:

/kā/ 'pillar(wooden)'

/lā/ 'to'

Tone 3; rising tone, symbolized as /' / is rising-falling. The rise in the pitch is followed by a slight fall but the fall in the pitch does not reach the same level as the starting point of the rise.

High Level \_\_\_\_\_

Mid Level \_\_\_\_\_

Low Level \_\_\_\_\_

Examples:

/ká/ 'order'

/nám/ 'sky'

/číla/ 'why'

The pitch levels described above are not absolute but only relative to each other.

### Phonemic contrasts

As stated above three tones have been established as phonemic on the basis of following contrasts, provided the words carrying tones are taken from the same environments similar in such features as emphasis, voice, register and intonation.

Falling tone	/kà/	'title used for a king'
Level tone	/kā/	'pillar (wooden)'
Rising tone	/ká/	'order'
Falling tone	/nà/	'a wet land where some vegetation grows'
Level tone	/nā/	'type'
Rising tone	/ná/	'iron'
Falling tone	/lā/	'pass(between the mountain)'
Level tone	/lā/	'to'
Rising tone	/lá/	'god'

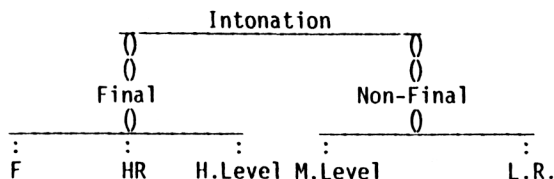
## 1.0 INTONATION

Occurrence of pitches from various intonational patterns at the syntactic level.

Intonational phonemes which include pitch levels and terminal contours are of two main types in Spiti. They are used to delimit the intonational patterns. These are:

### 1.1 Utterance final

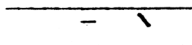
### 1.2 Utterance non-final, terminal contours, each having its own pitch exponents.



For the non-final clauses a two-term system may be stated as follows:

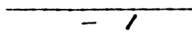
#### 1.1.1 Utterance final terminal contour: Falling tone word with H type intonation.

pā. "(This is) a cow."



#### 1.1.2 Falling tone word with HR type intonation.

pā? "(Is it a) cow (or something else)?"



#### 1.1.3 Falling tone word with F level type intonation.

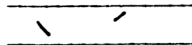
pā! "(Is it really) a cow!"



### 1.2 Utterance non final terminal contour.

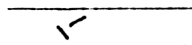
#### 1.2.1 Falling tone word with M level type intonation.

pā, "It is a cow, ..."



#### 1.2.2 Falling tone word with L.R. type intonation.

pā; ("a cow, a yak, a goat) are all animals."



The terminal contour is usually associated with the terminal juncture which marks the sentence units of the language.

Phonemic inventory of Supra Segmental phonemesTonemes

Falling tone	/ \ /
Level tone	/ - /
Rising tone	/ / /

Intonational Phonemes

Intonational Phonemes as explained earlier include pitch levels and terminal contours.

Pitch levels:

Low	/ 1 /
Mid	/ 2 /
High	/ 3 /

Terminal contours.

Rising contour	/ ↑ /
Level contour	/ → /
Falling contour	/ ↓ /

Juncture

Pausal juncture	/ # /
Comma juncture	/ , /
Internal open juncture	/ - /

Nasalization / ~ /Juncture

Pausal juncture	/ # /
-----------------	-------

Phonologically there is a sort of pause in speech activity. It demarcates the beginning and end of a syntactic unit - a sentence. Finally it is accompanied by a terminal contour.

Comma juncture / , /

Phonetically the vowel in the preceding syllable is lengthened. The following utterances are distinguished by this juncture:

Sa, Pitina y<sup>~</sup>Swah "Long distance from Piti I came"

Spitina, y<sup>~</sup>Swan "from Spiti I came"

Internal Open juncture

This juncture occurs at morpheme boundaries, but it is not obligatory that all morpheme boundaries would have internal open juncture. The presence of the juncture prevents assimilation. e.g.

yul - la 'in the village'

nEn-nin 'wishes to take'

goitor-ri 'of the Goitor (name of a festival)'

## Nasalization

Nasalization is phonemic in Spiti. Any non-initial vowel can be nasalized but phonemic nasalization (such as a vowel followed or preceded by a nasal stop) is not marked and phonemic. e.g.


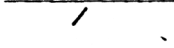
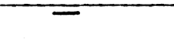
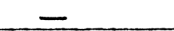

/sɔ/	'to eat'	/sɔ̃/	'get away(imp.)'
/lɔ/	'year'	/lɔ̃/	'to stand up(imp.)'

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F	is symbolized by /!/
H	is symbolized by /./
M	is symbolized by /,/
H.R.	is symbolized by /?/
L.R.	is symbolized by /;/

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## Pitch Representations

F	=	Falling	
HR	=	High Rising	
/1/ HL	=	High level	
/2/ ML	=	Mid level	
/3/ LR	=	Low Rising	

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