

THE ROLE OF LEXICAL TONES IN PUNJABI¹¹

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Introduction

In ancient times, Sanskrit language that Pāṇini had analyzed was characterized by a tonic or pitch accent, i.e., one syllable in a word was pronounced with a higher musical pitch than the others. This means that meaning of a Vedic passage depended on the proper accent (=svara). The word 'svara' was understood as a property possessed exclusively by vowels and not by consonants, as they are entirely dependent on vowels and can at the most be said to possess the same accent as the vowel with which they are uttered together.

Pitch properties of vowels were pertinent to three classes:

- Sūtras:** P : 1.2.29: **uccair udāttaḥ.**
 P : 1.2.30: **nicair anudāttaḥ.**
 P : 1.2.31: **samāhārah svaritaḥ.**

These sūtras are explained by Cardona (1988:19) and Vasu (1906:6-8) as follows:

- P : 1.2.29: The vowel (*ac*) pronounced high (*uccaiḥ*) is called *udāttaḥ* (=high pitched or acutely accented).
 P : 1.2.30: The vowel (*ac*) pronounced low (*nicaiḥ*) is called *anudāttaḥ* (=low pitched or gravely accented).
 P : 1.2.31: The vowel (*ac*) that has a combination of *udātta* and *anudātta* (tones) is said to be *svarita* (=circumflexly accented).

The above mentioned three properties of pitch corresponding to the rising, falling and the rising-falling (circumflex) pitches respectively, can be seen in the following kinds of words:

1. *udāttaḥ* = agnīḥ "fire"
anudāttaḥ = hāna "kill"
svaritaḥ = kanyā "girl"

[The above examples are given by Vasu (1906: 85-87)].

The study of pitch accent or tones in tonal languages has played a significant role in the development of generative phonology, since the independence of tone and other segmental features is most easily demonstrated in the domain of tone, and many languages have rich systems of morphophonemic tonal alternations. The organization of tonal structure within a non-linear phonological model (the nature of tonal features and the location of tonal linkage) is sometimes called tonal geometry. Features of tone, such as high, low and mid, are proposed by distinctive feature theories of generative phonology. There are many

¹¹ Much of the text (with valuable modification) of this paper is taken from various sections of my book "Punjabi Prosody: The Old Tradition and The New Paradigm" (2004). This paper has been designed to illustrate the role of lexical tones in Punjabi.

models and approaches within the non-linear paradigm, which are useful for resolving the problems related to different levels of tone (high, low, and level). Among them, Moraic Approach is considered as a very good approach for representing the tone features. According to Bethin (1998: 3), Moraic Approach has the ability to define syllable nucleus very well. In this paper, the same approach i.e. Moraic Approach is applied for the phonological representation.

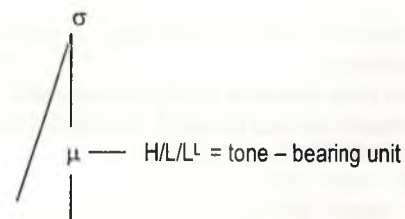
The use of Moraic-Model to represent different levels of tone (high, low, and level) in Punjabi is illustrated in the oncoming sections and subsections of this paper.

Tone: An Overview

Tone is a term used in phonology to refer to the distinctive pitch level of a syllable. In many languages, the tone carried by a word is an essential feature of the meaning of that word (lexical tone), e.g. in Thai the word *ma* can have five possible tone contrasts, e.g.

2.	ma	"come"
	mà	"excitement"
	má	"mother"
	mā	"horse"
	mā	"dog"

Such languages, where word meanings or grammatical categories (such as tense) are dependent on pitch level, are known as tone languages. The unit, which carries the tone (e.g. syllable, mora), is called the tone-bearing unit [as shown in Fig. (1)].



[Fig. 1]

[here H- High tone, L- Low tone
and L- Level/Mid tone]

Moraic-Model as in Figure (1) provides a visual representation of different levels or degrees of tone. All different levels or degrees of tone will be discussed in the next subsection i.e. 3.

Lexical tones in Punjabi

Three degrees of tone, i.e. high, low and level, can be distinguished in Punjabi language. These can be shown with the help of the following contrasting examples:

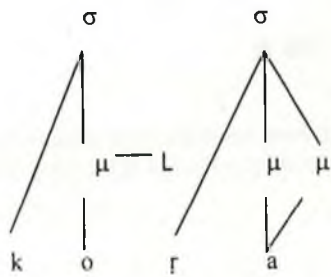
Low	Gloss	High	Gloss	Level	Gloss
kòrā	"horse"	kórā	"leper"	korā	"whip"
pùnn	"roast (IMP)"	púnn	"seep, ooze (IMP)"	punn	"good deed"
kār	"chisel"	kár	"boil"	kar	"bottom"

Table- 1

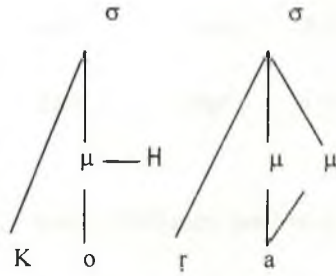
The three way contrast, as in kòrā "horse", kórā "leper", korā "whip", etc., establishes its existence in Punjabi, but as Martinet points out, it is not just such semantic differences that make this linguistic feature important but these contrastive phenomena are essential to understand the general functioning of the language (cited in Gill and Gleason 1969: 29). Before we proceed further let us look at the three-way contrast through the Moraic – Model as shown in Fig. (2).

Moraic- Model

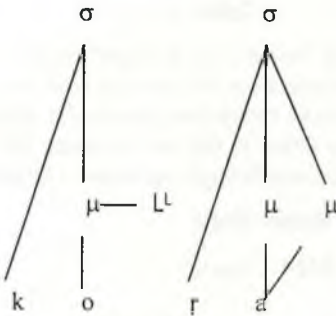
kòrā "horse"



kórā "leper"



koṛā "whip"



[Fig. 2]

Let us now look at the conditions in which these tones are found in the Punjabi language. We will first look at the phenomenon of falling tone and then will go on to look at the rising and the level tones.

Falling tone in Punjabi

Falling tone in Punjabi is found at a place where cognates from a language like Hindi (or Sanskrit) show the presence of voiced aspirates. The occurrence of tones in Punjabi is explained in the context of such cognates of Hindi and Punjabi (examples of Hindi language are taken just to compare the prosodic system of Hindi and Punjabi). Falling tone in Punjabi can be realized in two ways as discussed below:

Falling tone resulting from loss of voicing and aspiration in the onset of syllable in word initial position

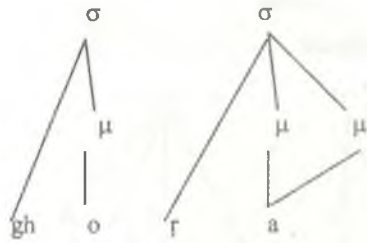
Rule 1: In Punjabi the loss of aspiration and voicing in the onset of syllable in word initial position results in the rightward generation of low tone, as can be seen in the example below:

3.	Hindi	Punjabi	Gloss
	jhandā	cāṇḍā	“flag”
	dhol	tòl	“drum”
	ghoṛā	kòṛā	“horse”

The last part (of 3) can be illustrated in Moraic – Model (as shown in Fig. 3 & 4).

Hindi : ghora

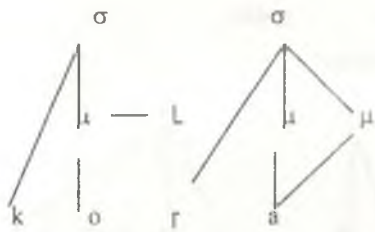
Moraic- Model



[Fig. 3]

Punjabi : kòṛā

Moraic- Model



[Fig. 4]

Falling tone resulting from loss of aspiration in onsets in the non-word- initial syllable positions

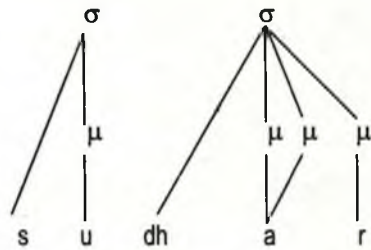
Rule 2: The loss of aspiration in the onsets elsewhere results in the rightward generation of low tone. This can be seen in the examples below:

4.	Hindi	Punjabi	Gloss
	sudh ā r	sudār	“improvement”
	jujh ā r	jujār	“fighter, with fighting skill”
	kandh ā r	kandār	“name of a place”

The first part of example (4) is illustrated in Fig. (5) and (6).

Hindi : sudhar

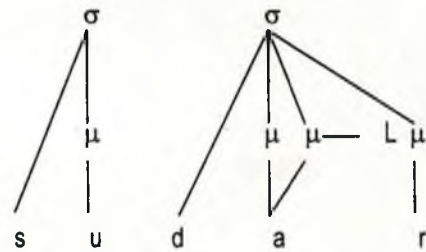
Moralc- Model



[Fig. 5]

Punjabi : sudār

Moralc- Model



[Fig. 6]

Rising tone in Punjabi

Unlike falling tone, rising tone in Punjabi is not found only at a place where cognates from a language like Hindi show the presence of voiced aspirates but also there are places where its presence is well attested. Rising tone in Punjabi can be realized normally in following four conditions:

Rising tone resulting from loss of aspiration in coda position

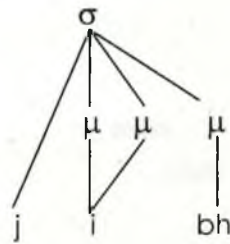
Rule 1: The loss of aspiration in coda position gives rise to a leftward movement of high tone, as shown in the following example:

5.	Hindi	Punjabi	Gloss
	jībh	jīb	“tongue”
	bodh	bód	“pertaining to wisdom”
	bojh	bój	“heaviness, weight”

The first example will be prosodized in the following model:

Hindi : jībh

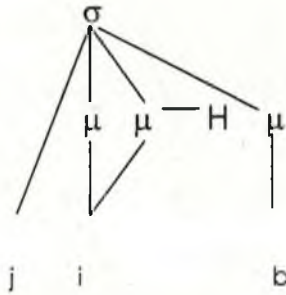
Moraic- Model



[Fig. 7]

Punjabi : jīb

Moraic- Model



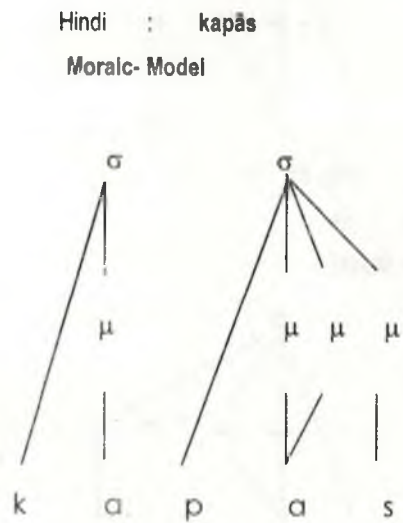
[Fig. 8]

In the case of deletion of **g** in the word final position

Rule 2: High tone in Punjabi is generated in the left ward nucleus of the segment, which reveals the occurrence of sibilant, e.g.

6.	Hindi	Punjabi	Gloss
	kap ā s	kapā	"cotton plant"
	pacc ā s	pajjā	"fifty"
	tis	tī	"thirty"

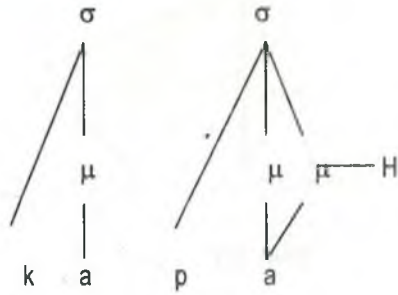
The prosodic structure of one of the forms is as follows:



[Fig. 9]

Punjabi kapā

Moraic- Model



[Fig. 10]

In the case of deletion of h from the onset of the syllable

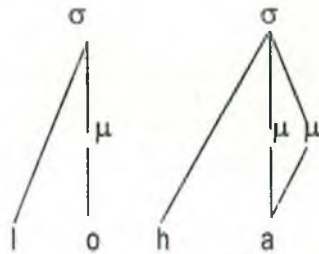
Rule 3: High tone in Punjabi is generated in the leftward nucleus of the segment in the following syllable, which reveals the occurrence of h sound in the onset.

7.	Hindi	Punjabi	Gloss
	lohā	lōā	“iron”
	ruhī	rūī	“a name”
	cuhā	cūā	“mouse”

The prosodic structure of one of the forms is as follows:

Hindi : lohā

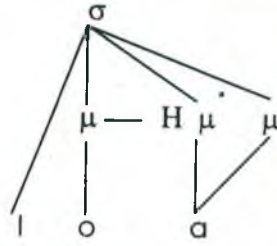
Moraic- Model



[Fig. 11]

Punjabi : loã

Moraic- Model



[Fig. 12]

Due to the presence of a lateral in the coda position

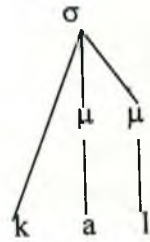
Rule 4: The presence of a lateral in the coda permits high tone, e.g.

8.	Hindi	Punjabi	Gloss
	kal	kál	"tomorrow or yesterday"
	cal	cál	"walk, go (IMP)"
	akelã	kállã	"alone"

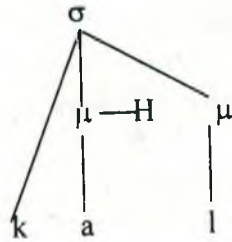
The first part of the above example i.e. example (8) is explained in the following Moraic – Model:

Hindi : kal

Moraic- Model



[Fig. 13]

Punjabi : kál
Moraic- Model

[Fig. 14]

Level tone in Punjabi

Level tone is the average middle pitch of the speaker which remains level throughout. As this occurs most frequently, it is unmarked, being zeroed out for economy (no sign is used to denote the level tone), e.g.

9.

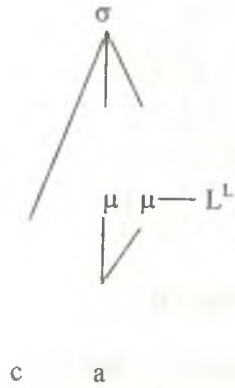
Punjabi Gloss

cā	“liking”
dar	“fear”
kaṛā	“bangle”

Two parts of the above given example are explained by Moraic – Model in Fig. (15) & (16).

Punjabi : cā

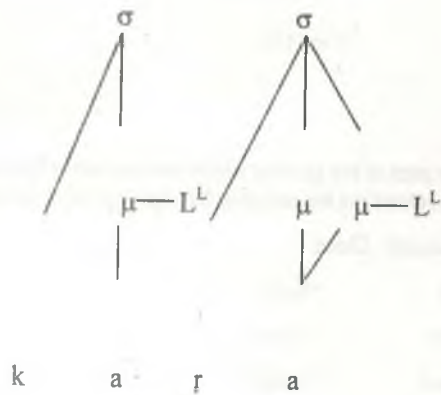
Moraic- Model



[Fig. 15]

Punjabi : kaṛā

Moraic- Model



[Fig. 16]

Level tone may occur on any or all syllables of a morph and it occurs in all kinds of morphs, monosyllabic, bisyllabic or trisyllabic. From the above analysis it is clear that Punjabi has three distinct tones.

Conclusion

In the present paper, the definition of tone and the generalizations concerning the types of tones in Punjabi have been captured through the proposed rules. This work deals with a range of data which has been collected from the speakers (=native speakers) of Punjabi language. In Section 3, three types of tones (rising, falling, and level) in Punjabi have been taken into account and their rules formulated along with the presentation of detailed representations. The first rule stated that:

Falling tone in Punjabi results from loss of voicing and aspiration in the onset of syllable in word initial position, e.g.:

Hindi	Punjabi	Gloss
ghor ā	kòrā	"horse"

The second rule states that a falling tone results from the loss of aspiration in onsets falling e.g.:

Hindi	Punjabi	Gloss
sudh ā r	sudār	"improvement"

The third rule stated that the rising tones results from,

(i) loss of aspiration in coda position, e.g.:

Hindi	Punjabi	Gloss
jībḥ	jīb	"tongue"

(ii) from the loss of the fricative -s in the word final position, e.g.:

Hindi	Punjabi	Gloss
kap ā s	kapā	"cotton plant"

(iii) from the deletion of -h the onset of the following syllable, e.g.:

Hindi	Punjabi	Gloss
loh ā	lóa	"iron"

(iv) due to the presence of lateral in the coda position, e.g.:

Hindi	Punjabi	Gloss
kal	kál	"tomorrow or yesterday"

In the case of level tone no diacritic mark has been used. It can be seen from the data that level tone may occur on any or all syllables of a morph.

In the end, I can say that the present work provides an analysis of tone in Punjabi language that takes into account Moraic-Model of the generative paradigm.

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