LADAKHI
PHONETIC READER

SANYUKTA KOSHAL.

CENTRAL INSTITUTE OF INDIAN LANGUAGES
MYSORE - 570006
ClIL Phonetic Reader Series—18

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CENTRAL INSTITUTE OF INDIAN LANGUAGES
MYSORE—570 006
The Central Institute of Indian Languages was set up on the 17th July, 1969 with a view to assisting and co-ordinating the development of Indian languages. The Institute was charged with the responsibility of serving as a nucleus to bring together all the research and literary out-put from the various linguistic streams to a common head and narrowing the gap between basic research and developmental research in the fields of languages and linguistics in India.

The Institute and its four Regional Language Centres are thus engaged in research and teaching which led to the publication of a wide-ranging variety of materials. Preparation of materials designed for teaching/learning at different levels and suited to specific needs is one of the major areas of interest of the Institute. Basic research relating to the acquisition of language and study of language in its manifold psycho-social relations constitute another broad range of its interest. The publications will include materials produced by the members of the staff of the Central Institute of Indian Languages and its Regional Language Centres and associated scholars from universities and institutions, both Indian and foreign.

The Central Institute of Indian Languages has initiated the *Phonetic Reader Series* in Indian languages with a view to presenting the range of phonetic variation obtaining in this sub-continent.
and demonstrating the closeness of language on the basis of phonetic patterning. These Readers are biased towards learning the sound systems of languages. Thus it is hoped that this series will be of interest to both scholars who are interested in phonetic studies and practical learners of languages who wish to make a beginning in their language study.

If these materials help solving the problems in the State and help in understanding the people speaking the language, then our efforts will have been amply rewarded.

Director

[Signature]
The Census of India 1961 enumerates 1652 mothertongues in the country. Besides the languages listed in the Eighth Schedule of the Indian constitution, there are many other languages, tribal as well as non-tribal, with substantial number of mothertongue speakers. Such languages belong to any one of the four language families represented in India. Ladakhi, a language belonging to the Sino-Tibetan sub-family, is one of them. Ladakhi is spoken in the Ladakh District of Jammu & Kashmir State by 52,714 speakers (according to the Census of India, 1961).

A large number of Ladakhi speakers belong to Buddhist faith. Ladakhi is prevalent mostly as a means of oral communication among its speakers. They used Tibetan language for education, literary expression and religious tradition till recently.

During the last 25 years a new generation of Ladakhi speakers has come up which has been educated in India and is now working for the development of Ladakhi language as a means of school education as well as literary expressions.

As Ladakhi is mainly a language of oral communication it has developed different regional varieties like Stopta, Shamma, Nubra, Zanskar and Leh. Among these, Leh variety is
considered standard and is being developed as such. Not only are there regional variations at the phonological and grammatical levels among Ladakhi dialects, there is language variation correlated to the social stratification of the speech community. Thus there are differences between the language of the monks and the common man. There is also an impact of Tibetan on different linguistic levels of Ladakhi. Thus the Ladakhi speech situation is quite complex.

As Ladakhi is sought to be introduced at by the lower levels of education there is an urgent necessity of studying the language in all its aspects. The Central Institute of Indian languages under its Tribal and Border Languages Research Programme has undertaken a comprehensive study of Ladakhi. The Institute is preparing a phonetic reader, a synchronic grammar, a multilingual dictionary and instructional materials. The Institute has also collected a vast amount of folk literature, folk songs as well as folk narrations, which are being analysed, edited and translated for publication. It is visualised that with the completion of this intended package of research a study of background language materials in the language would have been completed.

The present study is based mainly on the Central Ladakhi variety (as spoken in Leh), which is considered as the standard variety. However, adequate material was collected on language variation in Ladakhi and prominent phonological as well as phonetic variations are pointed out in this Reader.

The present Phonetic Reader differs to an extent from other publications in the series in terms of the order of presentation as well as emphasis. Thus Ladakhi sounds are described only as allophones of different phonemes to which they belong. Comprehensive and detailed analysis of the Tibetan writing system as used for Ladakhi is also presented and shapes of letters used in fast and slow handwriting, etc., are also given.
The present Phonetic Reader like other phonetic readers in the series is intended for the language teacher, the educated adult learner as well as for the linguist. Taking into consideration the multiple purpose of the Phonetic Reader an effort has been made to present the phonetics and phonology of Ladakhi with as little terminological complexity as possible without sacrificing sufficient and accurate information about Ladakhi phonology.

The study is divided into five chapters.

The first chapter gives a brief description of the mechanisms of production of speech sounds, speech organs and their functions and a classification of speech sounds according to the principles of articulatory phonetics.

The second chapter gives preliminary background information on Ladakhi language and describes the elicitation procedures followed and the details of the informants used. It further describes the kinds of variation at the phonemic and sub-phonemic levels in the language.

The third chapter gives an account of the phonological system of Ladakhi. It gives the phonemic inventory in the beginning. Then the phonemes, their allophones and distributions are presented. Information is also given on specific problems like vowel length, nasalisation, etc. In the end of this chapter an account of the consonant clusters is also included.

The fourth chapter gives a detailed analysis of the Ladakhi script. It also gives phonemic-graphemic correspondences and points out all the irregularities. Details of punctuation, marking of syllable boundaries, etc., are also given. In the end of this chapter correspondence between the printed shape and their slow and fast handwritten shapes are also given. This chapter also gives a system of Devanagari symbols which could be adopted for
writing Ladakhi. It is followed by a system of Perso-Arabic symbols for the same purpose.

The fifth chapter gives comprehensive phonetic drills utilising all possible sets of combinations of vowels and consonants. It is hoped that the phonetic drills will go a long way in inculcating correct pronunciation of Ladakhi sounds.

The Phonetic Reader does not claim to be complete or perfect. Certain aspects of Ladakhi phonology have been left unanalysed. Thus there is no description of the intonational features in the present Phonetic Reader. Although it is true that the pronunciation of a language can be more effectively learnt with the help of a native teacher, the usefulness of a Reader like this cannot be underestimated. It is hoped that the present Reader will be useful to the learners and teachers of Ladakhi and also to linguists working on Ladakhi.

B. G. MISRA
ACKNOWLEDGEMENT

I wish to record my gratitude

to Dr. D. P. Pattanayak, Director, Central Institute of Indian Languages, who provided all the facilities for the study of the Ladakhi language. But for his constant help and encouragement the work would not have been completed.

to Dr. B. G. Misra, Deputy Director, Central Institute of Indian Languages, who helped in the solution of various problems of transcription as well as analysis. His constant guidance has helped in improving the quality of the work.

to Prof. R. N. Srivastava, Central Institute of Hindi, New Delhi, and Dr. E. Annamalai, Deputy Director, CIIL, Mysore, for having read through the manuscript and giving useful suggestions.

to the authorities of the J. & K. Govt., especially the district authorities of Ladakh, for providing various facilities on request.

to the authorities of the Defence Department, especially the authorities at Ladakh, for various physical amenities.

to my informants Shri Thupstan Paldan, teacher in Girls' High School, Leh, Ladakh; Shri Tashi Rabgyas, Information
ACKNOWLEDGEMENT

Officer, J & K State; Shri Rinchen, Information Officer and Shri Lobzang Dorje, a monk, Leh. I am especially grateful to Shri Thupstan Paldan, who has unstintingly helped in the data collection. I am also thankful to other Ladakhi speakers from whom various items of data have been checked.

to Kumari N. K. Rukmini for typing the manuscript efficiently.

to Shri H. L. N. Bharati and the authorities of M/s Samskrita Sahitya Sadana, for the production and printing of the work respectively.

SANYUKTA KOSHAL
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SYMBOLES USED

\[
/ \quad / \\
\]
Slant brackets enclose phonemic transcription.

\[
[ \quad ]
\]
Square brackets enclose phonetic transcription.

Underlining is used for transliteration of the Ladakhi script materials in Chapter 4.

\[-\]
In Ladakhi items written in phonetic or phonemic transcription or graphemic transliteration, it marks syllable boundary.

\[\sim\]
Marks variation between items.

\[C\]
a consonant

\[V\]
a vowel
1. INTRODUCTION

1.1. The present study describes the sound system of Ladakhi and analyses the sounds into significant units of phonological description. It gives a comprehensive statement of the distribution of different phonemes and their sequences. Furthermore, it also gives an introduction to the Ladakhi writing system and shows its relationship to Ladakhi phonology.

1.1.1. The study is divided into five chapters. Chapter I includes a brief description of the mechanism of production of speech sounds, speech organs and their functions, and a classification of the speech sounds according to the principles of articulatory phonetics. Efforts have been made to use as little technical terminology as possible without sacrificing accuracy and clarity of description.

1.1.2. Chapter II gives a brief account of the methodology used in the study. It describes the elicitation technique, the bases of data collection, the scope of the analysis, the theoretical frame-work followed for the phonological analysis and the conceptual frame-work. It further includes a brief account of the main Ladakhi dialects, their regions and distinguishing features at the phonological as well as sub-phonemical levels. The chapter also discusses the types of free variation occurring in Ladakhi at the phonological level.
Chapter III describes the phonemes of the language, their allophones and distributions. It also includes an analysis of the consonant clusters occurring in the language.

Chapter IV describes the traditional Ladakhi writing system. It gives an analysis of the different letters, the alternants of the shapes of letters, if any, and their combinations. The phonemic values of the letters are given and all irregularities pointed out. This chapter also includes information on Ladakhi punctuation system and exemplifies different styles of handwriting.

Chapter V gives comprehensive phonetic drills, utilising all possible sets of vowels and consonants separately.

The present study on the one hand aims at giving a phonological description of the language for the linguist and, on the other hand, gives useful information for the language teacher for his reference and for classroom use. Phonetic drills are specifically aimed at classroom practice for non-native speakers learning Ladakhi.

In order to understand the mechanism of speech production, it is necessary to have a sound familiarity with the speech organs and their functions. A schematic diagram of sagittal section of the speech tract is given here. The main organs of speech are also identified and enumerated in this diagram. The reader is requested to familiarise himself with the organs of speech and their locations in the speech tract.

Speech sounds are produced by the modification of the air stream while it is exhaled or inhaled. Articulation of speech sounds by the modification of the inhaled air stream is relatively rare; however, implosive stops are not unknown in Indian languages. Sindhi, for instance, has such stops. Speech sounds are also produced by the modification of the air stream which is
formed in the pulmonic region and is pressed out from the lungs. It then passes through the vocal cords where it may or may not be impeded. Then it passes through the oral cavity or the nasal cavity or both. In the oral cavity the different shapes of the
cavity are formed and the air current is exhaled in a specified manner resulting in different speech sounds.

Speech organs can be classified as either articulators or points of articulation. At the time of production of the speech sound when any movable part of the vocal tract causes a partial or complete closure of the air passage, it becomes an articulator. Thus all movable organs of speech are potential articulators since they may become active ones by fulfilling the conditions given above. Potential articulators are the lips, the tongue (tip, blade, front, back and root), the velum, uvula and the velic. The epiglottis and the vocal cords have also been considered as articulators.

Any vocal organ which is accessible to the contact or near contact of a potential articulator is called a potential point of articulation and becomes an active one when a stricture (partial or complete) is made at that point. These are the upper teeth, alveolar ridge, hard palate and the soft palate.¹

Where two organs of speech which are flexible move towards each other to produce a partial or a complete contact, it is not strictly possible to identify one of them as the articulator and the other as the point of articulation; therefore either name is suitable as term of reference for such organs.

a) Lips:

The upper and lower lips may both be used in articulation. When they are in close contact the stop sounds are produced; when they leave some gap, fricatives and some other sounds are

¹ Pike, K. L. : Phonetics, Ann Arbor : The University of Michigan 1943 p. 121
² Ibid, p. 123
produced. Their shape along the scale of rounding to unrounding is one of the criteria for the classification of vowel sounds. In some articulations only one of the lips is involved. However, most of the languages of the world use only the lower lip in this context.

b) **Teeth:**

In the production of speech sounds normally back side of the teeth is used. Sounds can be produced by the articulator coming in between the teeth or anywhere on the back.

c) **Alveolar Ridge:**

The term alveolar ridge is usually used for that part of the roof of the mouth which starts from gums to the front part of the palate.

d) **Palate:**

The palate covers the entire region of the roof of the mouth. The front part of the roof of the mouth is called hard palate and the back part of the soft palate. Dependent upon the sounds of the specific language, different points of the palate are used in the production of different speech sounds in specific languages. The back part of the soft palate is called the velum. Velum is that part of the palate which lies at the extreme end of the soft palate.

e) **Uvula:**

The extreme end of the roof of the mouth is called uvula. It is a hanging portion of flesh. When raised it closes the nasal passage blocking the air current from entering to the nasal cavity; when lowered, the air current can pass either partially or fully through the nasal cavity. If the air current passes fully through the nasal cavity, nasal sounds are produced; when air current passes partially through the nasal cavity and partially through the oral cavity, nasalized sounds are produced.
f) **Epiglottis**: 

The epiglottis is in the pharynx. Pharyngal sounds are produced in this region.

g) **Larynx**: 

The larynx is a cartilaginous structure at the summit of the trachea. It contains the vocal cords which are two horizontal folds of elastic tissue, one on the either side of the passage. These can be completely closed, can remain wide open or in different positions in between. Voicing is produced by the vibrations of the vocal cords. When the vocal cords remain wide open, the air current passes without obstruction and voiceless sounds are produced, e.g., p, t, k, s. When the vocal cords are stretched taut with little space between them so that passing air stream forces itself through thus vibrating the vocal cords, voicing is produced. Such sounds are called voiced sounds, e.g., b, d, g, z, etc. Most of the vowel sounds in different languages are voiced. The position of the vocal cords and the kind of vocal turbulence of the passing air stream also produces whisper and murmured sounds.

1.3. **Classification of Speech Sounds**:

Speech sounds are divided firstly into two broad categories: segmental and supra-segmental. Supra-segmental sounds are those phonetic features which 'co-occur with segmental sounds, thus features of length, nasalization, tone, stress and intonation etc., are termed as suprasegmentals. Segmental sounds are broadly classified into vowels and consonants.

1.3.1. **Vowels**:

Vowels are those speech sounds which are produced when the air passes through the oral cavity with no localized obstruction.
Different vowel sounds are produced due to the modification of the oral cavity by the tongue and the lips. Dependent upon the part of the tongue involved in the production of a vowel sound and the height to which that part of the tongue is raised, different kinds of vowels are produced. The shape of the lips from rounded to unrounded also determines the quality of the vowel sound.

Vowels are classified as front, central and back. Front and back vowels are produced when the front of the tongue, and the back of the tongue are respectively involved in the articulation. Central vowels are produced when the front part of the back of the tongue (also called central part of the tongue by some phoneticians) is raised towards the mid palate.

Thus when the front of the tongue is used in the articulation the sound produced is called a front vowel eg. i, e, E, etc., and when the centre of the tongue is involved it is called a central vowel, eg., ə, ə̈, etc., if the back of the tongue is used it is called a back vowel, eg. u, o, ɔ etc.

The tongue can be raised to a certain height for the production of vowels. Phoneticians have divided the potential height maximally and minimally used for the articulation of vowels differently. Thus in the IPA (International Phonetic Association) system four degrees of height are accepted, viz., close, half-close, half-open, open. Some scholars have accepted only three degrees of height: high, mid, and low. For a more refined articulatory description, these have been further subdivided into seven subcategories higher-high, lower-high, higher-mid, mean-mid, lower-mid, higher-low, lower-low.

If the lips are relatively rounded during the articulation of vowels, rounded vowels are produced, while, if the lips remain comparatively spread, unrounded vowels are produced.
b) **Labio-Dental** sounds are produced when the lower lip and the upper teeth are involved, e.g. f, v, etc.

c) **Dental** sounds are produced when the tip of the tongue makes a contact with the back of the teeth, e.g. t, d, n.\(^1\)

d) **Alveolar** sounds are produced when the alveolus acts as the point of articulation, e.g. t, d, n etc.

e) In the articulation of retroflex sounds hard palate is used as the point of articulation. The tongue curls back and its back or reverse is involved in the articulation. Such sounds are ŋ, ʂ, ʐ, etc.

f) **Palatal** sounds are produced when contact or near contact is made with the palate by the tongue. Such sounds are ʃ, ʒ, etc.

g) **Velar** sounds are produced when the velum acts as the point of articulation. Such sounds are k, g, etc.

h) **UVular** sounds are produced with the uvula acting as the point of articulation, e.g. q.

i) **Glottal** sounds are produced in the glottis, e.g. h.

1.1.3 There are certain sounds which cannot be classified either as vowels or consonants. They are y and w and called semi-vowels. They assume a consonant or a vocalic function dependent upon the environment in which they occur.

1.4. Stops are classified as voiceless and voiced based on the position the glottis takes during the articulation of the stop

\(^1\) These are represented as t, d, n, in this phonetic reader as there are no alveolar sounds in the language.
sounds. If the glottis remains open during the closure phase, voiceless stops are produced. If the glottis remains open during the plosion, the plosion will itself be voiceless and the sound thus produced will be voiceless aspirated. If the vocal cords start vibrating during the plosion, the sound produced will be voiceless unaspirated one. Thus aspiration is a period of voicelessness during the plosion phase of a stop. Although the term aspirated is used in conjunction with voiced stop, it has a fairly different sense because there is no question of voicelessness during the plosion in such cases as the vocal cords remain vibrating all along to produce voicing. The so called voiced aspirated stops have the characteristics that “they are followed by a vowel pronounced with a ‘breathy voice’, i.e. with a different register”.

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2. METHODOLOGY

2.1. GEOGRAPHICAL DISTRIBUTION:

Ladakhi is a language of the Sino-Tibetan subfamily of Chinese. It is spoken in Leh, Nubra, Nyuma and Zanskar tehsils of Ladakh district of the present Jammu and Kashmir state. It is spoken by 52,714 persons (Census of India, 1961)

2.2. LADAKHI DIALECTS

Ladakhi has three main dialects—Upper Ladakhi, Central Ladakhi and Lower Ladakhi. Upper Ladakhi is spoken in the higher attitude areas, i.e., in the east of Leh like Upshi etc., and its boundaries extend upto the Tibetan border. This variety shows a great degree of Tibetan influence on its phonology. This variety is called stotpa by the Ladakhi speakers. Central Ladakhi is the variety spoken in and around Leh, i.e., Leh, Sabu, etc. This variety is considered as the standard form of Ladakhi and carries more prestige. It is this form of the language that the speakers of other dialects try to emulate. The third variety is called the shamma variety. i.e., lower Ladakhi in and around Shamma.

Ladakhi spoken in Zanskar and in Nubra shows some minor phonological and lexical differences. The form of Ladakhi spoken in Zanskar is acclaimed to agree with Upper Ladakhi according to Linguistic Survey of India. The Ladakhi spoken in Nubra is
considered to be akin to the Shamma variety. More linguistic work is needed to clearly establish their relationships with the major dialects.

**ELICITATION PROCEDURES AND INFORMANTS:**

The present study is based mainly on Central Ladakhi which is the standard variety. Data have been collected at different times over a period of two years. Initially the data were collected on the basis of a previously prepared word-list and a sentence-list. This was supplemented by collecting additional lexical items of cultural and local use and connected narrations. Care was taken during the data collection stage to elicit and check various noun and verb paradigms so that nothing significant is left out. The data collection was done from native informants following the standard elicitation technique. Although the major part of the data has been collected from a male informant aged 30 years, care was taken to check the data with other informants of different age groups as well as different sex. However, it must be mentioned that data were collected from Buddhist informants who comprise the majority of Ladakhi speakers. When some data were elicited from Muslim Ladakhi speakers, no significant difference was found except that Muslim speakers showed an impact of Persianized vocabulary to a certain degree.

It is also significant to point out that the informants were drawn from the literate as well as illiterate speakers and from higher as well as lower social strata of Ladakhi speakers. While the differences in terms of literacy and social status did not show any phonological differences, clear grammatical and lexical differences showed up in a systematic manner. Ladakhi speakers of higher social status and education use honorific forms and a set of honorific lexical items in their common linguistic repertoire. The illiterate and the lower social status Ladakhi speakers do not use the honorific forms and lexical items in normal intercourse, except when addressing a person of higher social status.
2.4. The present phonological description is based on the structural-distributional theory of linguistic analysis. Ladakhi sounds have been analysed on the basis of the principles of contrast and complementation, and phonemes established. Together with the phonemes, their allophone and distributions have been stated, thus presenting a comprehensive picture of the segmental phonology. Phonetic features like duration, nasalization, stress and tone are found to be non-significant in the language. The analysis has been done not only on the basis of taking word as the domain of analysis but macro-segments have been duly taken into consideration. However, intonation patterns have not been analysed.

2.5. Ladakhi, being a language of the Sino-Tibetan group, is a syllabic language like other languages of the Chinese family. It clearly manifests the fact that its phonological organisation is amenable to an appropriate description only if syllable is taken as the basic unit of description. By the basic unit of description we mean that the phonemes are established and their distributions described in terms of their occurrence in syllables. If we do not analyse the phonology of Ladakhi syllabically, we will have a large number of consonant clusters in the so called medial position (if word were the basic unit of analysis) which will not have counterparts among either the initial or the final consonant clusters\(^1\) or would they represent an accepted sequence of the same. The derivational morphology also gives confirmation of the syllabic nature of the language. In Ladakhi, each syllable is analysable as a separate morpheme. This may not have been possible if Ladakhi were not a syllabic language.

The Ladakhi writing system also attests to the syllabic nature of the language. Not only does the writing system mark syllabic

\(^1\) Whorf B. L.: “Linguistics as an exact science” in Language, thought and reality. 1956, M.T.
boundaries, statement of graphemic-phonemic correspondences is amenable to a more systematic analysis in terms of the syllabic nature of the language. Therefore, this description of Ladakhi language takes syllable as the unit of analysis and not the word. Thus in this work initial, final, etc., should be construed to mean the initial and final etc. of a syllable.

2.6. Regional Variation

It has been mentioned earlier that Ladakhi has three major dialects. There are some regional differences characterizing each one of these dialects. Grierson has pointed out some such variations at the grammatical and phonological level. Our study also shows the following features:

(a) /s/ occurs as the second member of the final consonant clusters in Central and Lower Ladakhi dialects. In Upper Ladakhi it is always elided. This linguistic variable also correlates with the place the speaker received his education. Thus, speakers of Central and Lower Ladakhi dialects educated in Tibet also elide the final /s/ as mentioned above, while those educated in India do not. This has a further dependent relationship with age. Since 1962, no Ladakhi speaker has been able to go to Tibet for his education which was the earlier practice among Ladakhis; thus Tibet-educated Ladakhis belong to an older age group than the non-Tibet-educated ones, and the elimination of /s/ in Central and Lower Ladakhi correlates with older age groups.

b) Ladakhi has various syllable initial consonant clusters. The first consonant of such clusters is regularly elided in Upper Ladakhi. In Central and Lower Ladakhi this elision is only optional. It has not been possible to correlate this optional deletion with any linguistic or sociological factor.
c) In terms of lexical differences, Shamma dialect has a certain number of items which do not occur in other areas. For example: /i-ču/ 'bird' occurs only in Shamma area.

2.7. Language variation

There are certain variable linguistic features which occur in the entire Ladakhi speech area. Such variable features are the following:

(a) The initial voiceless phonemes /p, t, ź, č, k/ are in free variation with their voiced counterparts /b, d, ʒ, ʝ, g/ in certain items, e.g.,

\[\begin{align*}
/pe-mə/ & \sim /be-mə/ \quad \text{‘sand’} \\
/pu-tıʃə/ & \sim /bu-tıʃə/ \quad \text{‘son’} \\
/tək-po/ & \sim /ðək-po/ \quad \text{‘pure’} \\
/ˈtuŋ/ & \sim /ˈduŋ/ \quad \text{‘shell’} \\
/ˈtoŋ-mo/ & \sim /ˈdoŋ-mo/ \quad \text{‘cold’} \\
/ˈtu-ʒi/ & \sim /ˈdu-ʒi/ \quad \text{‘ship’} \\
/ˈçaŋ-pə/ & \sim /ˈjaŋ-pə/ \quad \text{‘rubber’} \\
/ko-sə/ & \sim /go-sə/ \quad \text{‘rank’} \\
/ko-bur/ & \sim /go-bur/ \quad \text{‘napthalene’}
\end{align*}\]

b) Syllable initial voiceless aspirate /č/ freely varies with its unaspirated counterpart /č/ in certain items, e.g.

\[/tə-čə/ \sim /tə-čə/ \quad \text{‘wages’}\]

c) Syllable initial voiceless aspirate /ph/ freely varies with its voiced unaspirated counterpart, e.g.

\[/ə-phə/ \sim /ə-bo/ \quad \text{‘father’}\]

d) /ə/ is in free variation with /ɔ/ in certain items, e.g.,

\[/təɾ/ \sim /təɾ/ \quad \text{‘snow surface’}\]
2.8. **Sub-phonemic Free-variation**:

In the previous two sections an account of the phonemic variation of Ladakhi has been given. There are certain features which freely vary at the sub-phonemic level. Such variations are the following:

a) \([\mathcal{a}]\) freely varies with \([\mathcal{e}]\) in the medial position.

\([\text{mak}] \sim [\text{mek}]\) ‘war’

b) \([\mathcal{a}]\) freely varies with \([\mathcal{e}]\) in the non-absolute final position.

\([\text{za- phur-bu}] \sim [\text{ze- phur-bu}]\) ‘mercury’

c) Syllable initial voiced stops \([b, d, g]\) occurring in the non-absolute initial position freely vary with their fricativized counterparts.

**Examples**:

\([g\dot{\mathcal{a}}-\mathcal{b}a] \sim [g\mathcal{a}-\mathcal{ba}]\) ‘blacksmith’

\([\text{rde}-\text{mo}] \sim [\text{rd}-\text{E-mo}]\) ‘beautiful’

\([\text{sk\dot{a}r-da}] \sim [\text{sk\mathcal{a}r-\mathcal{a}-a}]\) ‘meter’

\([\mathcal{sEr}-\mathcal{ga}] \sim [\mathcal{sEr}-\mathcal{g}-\mathcal{a}]\) ‘crack’

\([\text{le- gur}] \sim [\text{le- g ur}]\) ‘immediate’
3. PHONOLOGY

3.1. The phonemes of the Ladakhi language are as follows:

3.1.1 **VOWELS**

  \[i \quad u\]

  \[e \quad o\]

3.1.2. **CONSONANTS** See page 19.

3.2. In all there are nine vowel and thirty-nine consonant sounds in Ladakhi. The phonetic description and distribution of these phones and the phonemes to which they belong are given below in detail.

3.2.1 **DISTRIBUTION OF VOWEL PHONEMES**

All the vowel phones occur in all the three positions—initial, medial and final.

3.2.2 There are nine vowel phones in Ladakhi, *viz.*, [i, e, E, e, a, a, o, u]. [i, e, E] are front, [e, a] are central and [a, o, u] are back vowels. Among these, high vowels are [i, u], mid are [e, E, a, o, A] and low ones are [e, a]. All the vowels are oral and voiced. In the articulation of all these vowels the soft palate is raised to close the nasal passage and the
### 3.1.2. **Consonants**

<table>
<thead>
<tr>
<th>Category</th>
<th>Labial</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stops</strong></td>
<td>p</td>
<td>t</td>
<td>ŭ</td>
<td>k</td>
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<td>Voiceless</td>
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<tr>
<td>Voiceless</td>
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<tr>
<td>aspirated</td>
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<tr>
<td>Voiced</td>
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<td>d</td>
<td>d</td>
<td>g</td>
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<tr>
<td><strong>Affricates</strong></td>
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<tr>
<td><strong>Fricatives</strong></td>
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<td><strong>Trill</strong></td>
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<td><strong>Lateral</strong></td>
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<td><strong>Murmur Lateral</strong></td>
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<td><strong>Nasals</strong></td>
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<td>Voiced</td>
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<tr>
<td><strong>Semi-Vowels</strong></td>
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</tbody>
</table>
vocal cords remain vibrating so as to produce voicing. These two features, viz. voicing and non-nasality will not be repeated in the detailed description of sounds given later in this section.

\[/i/ \ [i\] \ Lower–high Front Unrounded Vowel\]

In the articulation of this vowel the front of the tongue is raised to the lower-high position, lips remain in the neutral position, and the aperture of the jaws is narrow to medium. This sound occurs in all the positions.

**Examples**

Initial

[i-ču]  ‘bird’

[i]  ‘it’

[i-ru]  ‘here’

Medial

[mik’]  ‘eye’

[šik’]  ‘louse’

[zik’]  ‘panther’

Final

[spi]  ‘buttock’

[ri]  ‘hill’

[mi]  ‘man’

\[/e/ \ [e\] \ Higher–mid Front Unrounded Vowel\]

In the production of this sound the front part of the tongue is raised slightly higher than half the way to the maximum height required for the articulation of vowels, the position of lips remains
neutral, and the aperture of the jaws is medium to wide. This sound occurs only in the final position.

Final

[me]  ‘fire’
[l̪e]  ‘tongue’
[t̪e]  ‘life’

[ɛ]  Mean-mid Front Unrounded Vowel

In the articulation of this vowel the front part of the tongue is raised to half the way of the maximum height for the production of vowels. The lips remain neutral, and the aperture of the jaws is medium to wide. It occurs only initially and medially.

Initial

[F1-ɛE]  ‘to neglect’

Medial

[sɛl]  ‘glass’
[zɛr]  ‘light’
[zɛp]  ‘stallion’

[a]  Mean-mid Central Unrounded Vowel.

In the articulation of this vowel the central part of the tongue is raised to slightly lower than the mid-height position. The lips remain in the neutral position; the aperture of the jaws is narrow. This sound occurs in the initial and medial positions.

Examples:

Initial

[əm-ɛi]  ‘doctor’
[ɔː]-n ʰ ̄ ‘ear-ring’
[ɔː]-g ɔ u ‘uncle’

Medial
[ɔ ʰ ə ks] ‘iron’
[ɾəs] ‘cotton’
[tʃo ks] ‘strainer’

[u] Low Central Unrounded Vowel.
In articulating this sound, the central part of the tongue remains in low position. The lips are in neutral position and the aperture of the jaws is wide.

It freely varies with [ɔ] in initial and medial positions.

[a] Low Central to Back Unrounded Vowel.
In the articulation of this sound the front part of the back of the tongue is used; the tongue is not raised but remains low, lips remain in the neutral position, and the aperture of the jaws is wide. It occurs in the final position.

Examples:
[sa] ‘hair’
[za] ‘planet’
[ʃa] ‘part of a rainbow’

In the the pre-interal juncture position, where it also occurs, it freely varies with [u].

Examples:
[za- phur-bu] ~ [za-phur- bu] ‘jupiter’
[ma-yəɾ] ~ [mə-yəɾ] ‘stepmother’
[gya-ʃho]  ~  [gye-ʃho]  ‘ocean’

/o/  [n]  Mean-mid Back Rounded Vowel.

In the articulation of this sound the back part of the tongue is raised half-way to the maximum height for the articulation of the vowels. The position of the lips is slightly rounded. The aperture of the jaws is medium to wide. It occurs initially and medially. It also occurs in syllable-final but not absolute final position.

Examples:

Initial

[nɔt]  ‘light’
[nɔm-thuŋ]  ‘infant’
[nɔs-mol]  ‘broom’

Medial

[thɔnt-pa]  ‘forehead’
[nɔn-r-cən]  ‘rich’
[tʃhnɔn]  ‘colour used for painting’

Syllable Final

[pɔ-mo]  ‘girl’
[gɔ-tʃɔk]  ‘headache’

[o]  Higher-mid Back rounded Vowel

In the articulation of this sound the back part of the tongue is raised to slightly higher than half-way height required for the articulation of vowels. The lips remain fairly open and rounded,
and the aperture of jaws is medium. It occurs only in the final position.

**Examples:**

**Final**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ro]</td>
<td>'dead body'</td>
</tr>
<tr>
<td>[zgo]</td>
<td>'door'</td>
</tr>
<tr>
<td>[ʔo]</td>
<td>'curd'</td>
</tr>
</tbody>
</table>

**/u/ [u]** Lower-high Back Rounded Vowel

In the articulation of this vowel the back part of the tongue is raised to the lower-high height and the position of lips is fairly close and rounded. The aperture of jaws is medium. It occurs in all the positions—initial, medial and final.

**Examples**

**Initial**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[uks]</td>
<td>'breath'</td>
</tr>
<tr>
<td>[u]</td>
<td>'head (honourific)'</td>
</tr>
<tr>
<td>[u-ʔa]</td>
<td>'cap (honourific)'</td>
</tr>
</tbody>
</table>

**Medial**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[gut]</td>
<td>'deaf'</td>
</tr>
<tr>
<td>[rus]</td>
<td>'courage'</td>
</tr>
<tr>
<td>[ɗuŋs]</td>
<td>'story'</td>
</tr>
</tbody>
</table>

**Final**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ʔchu]</td>
<td>'water'</td>
</tr>
<tr>
<td>[gu]</td>
<td>'nine'</td>
</tr>
<tr>
<td>[ʔzu]</td>
<td>'bow'</td>
</tr>
</tbody>
</table>
3.2.3. Vowel-length

If the duration of the articulation of a vowel is longer, it is called a long vowel. In Ladakhi the lower-high front and back vowels [i, u] are relatively longer in the final position, however the quality of the vowels remains unchanged. [i, u] in all other positions and the rest of the vowels in all occurrences exhibit no length distinction.

3.2.4. Vowel Nasality

In Ladakhi all vowels become slightly nasalized in the vicinity of nasal consonants. Being a predictable feature it is not marked in the transcription.

3.3. Consonants

There are thirty-nine consonant sounds in Ladakhi, viz. [p, t, ʈ, k, k', ph, th, ʈh, kh, b, d, ɖ, g, tʂ, tʃh, dʐ, ɬ, ɭh, y, z, ʒ, ʂ, ʐ, h, ŋ, ɦ, ɻ, r, r, m, n, ŋ, ŋ, w, y]. However, there are only thirtythree consonants phonemes in the language.

All the consonant phonemes occur initially. Before pause only /k, t, p, s, m, n, ŋ, r, l/ occur.

3.3.1. Stops

There are twelve stop phonemes /p, t, ʈ, k, ph, th, ʈh, kh, b, d, ɖ, g/. Stops are articulated by completely closing the passage of the air stream at a specific place in the oral cavity and then suddenly opening the closure, so that air escapes with plosion. These are subclassified into four groups according to the points of articulation; bilabial /p, ph, b/, dental /t, th, d/, retroflex /ʈ, ʈh, ɖ/ and velar /k, kh, g/; each phoneme has one allophone except /b, d, g/ which have respectively two allophones each [b, d, g] and [ɬ, ɭ, ʃ, ʐ] which are phonetically fricatives; /k/ has two allophones [k] and a retracted variety. [k']. 
/p/  [p]  Voiceless Bilabial Stop

In the articulation of [p], the air is compressed by pressure from the lungs and passes through the opening of the vocal cords without any obstruction, the air stream is completely blocked by closing the lips, then the lips are opened and the air suddenly escapes with explosion. It occurs initially and finally.

Initial

[pəɡ-bu]  'brick'
[pu-tum]  'bud'
[pu-mo]  'girl'

Final

[kʰəp]  'needle'
[rəp]  'best'
[lekʰ-sup]  'glove'

/phony  [ph]  Voiceless Aspirated Bilabial Stop

[ph] is articulated in the same manner as [p] except that the glottis remains open during the release phase resulting in aspiration. The degree of aspiration is relatively weak when it occurs after the internal juncture. It occurs only initially.

Examples:

Initial

[phəŋ]  'spindle'
[pho]  'man'
[phiʃ-ba]  'rug'
phonology

[sɜ:l-phəks] 'pay or allowance (honourific)'

[laːk-phis] 'hand towel, handkerchief'

/b/ [bh] Voiced Bilabial Stop

[b] sound is articulated in the same manner as [p] except that the vocal cords remain vibrating thus producing voicing during the articulation. It occurs initially (except as mentioned for the distribution of [b] below) and syllable finally. It does not occur before pause.

Examples

Initial

[bʊnt] ‘call’

[ben] ‘target of an arrow’

[bul-wa] ‘offering’

Final

[tɬnb-ɬn] ‘master’

[yaŋ-yum] ‘parents (honorific)’

[b] Voiced Bilabial Fricative

In the articulation of [b] sound the air is compressed by pressure from the lungs; the vocal cords are made to vibrate so that voice is produced; the lower lip approaches the upper lip but does not touch it, instead a very small opening remains for the air stream to pass by producing a slight degree of friction. It occurs (i) in initial clusters after [r], and (ii) after a vowel or [r, l, n, ŋ] and syllable boundary, i.e. [ŋ-液压] and [r-液压] [l-液压, n-液压, ŋ-液压].
EXAMPLES

[tʰət]  an instrument to
         smooth the harrow'

[nər-bu]  'gem'

[gəɾ-ba]  'black smith'

[təɾ-tək>']  'gun'

[se-ɾət-thək>-ɾət]  'blood and sweat'

[teɾ-ba]  'foolish'

[ʃeɾ-buɾ]  'bottle'

[miɾ-bo]  'brother'

It may be mentioned that in the above environments this sound is in free variation with [b].

/t/  [t]  Voiceless Dental Stop

In the articulation of [t] sound, the air is compressed by the pressure from the lungs and passes through the opening of the vocal cords without any obstruction, the tip of the tongue presses against the upper teeth and when the tongue is removed from the back of the teeth, the air suddenly escapes with plosion. It occurs in initial and final positions.

EXAMPLES

Initial

[tus]  'time'

[təɾ-ɾəm]  'bear'

[təɾ-ɾo]  'first'

Final

[tʃəɾt]  'fever'

[θəɾ-t-pə]  'forehead'

[sEms-ɾit]  'soul'
/th/  [th]  Voiceless Aspirated Dental Stop

[th] sound is articulated in the same manner as [t], except that the glottis remain open during the release phase resulting in aspiration. The degree of aspiration is relatively weak when it occurs after the internal juncture.

**Examples**

**Initial**

[\text{thik}^\text{>}]  ‘line’

[\text{thu-la}]  ‘down’

[\text{them-ska}]  ‘ladder’

[st\text{\textunderscore}thu\text{\textunderscore}\text{\textunderscore}]  ‘blouse’

[th\text{\textunderscore}\text{\textunderscore}thi\text{\textunderscore}\text{\textunderscore}]  ‘small symbol’

[\text{n\textunderscore}m-thu\text{\textunderscore}\text{\textunderscore}]  ‘infant’

/d/  [d]  Voiced Dental Stop

[d] sound is articulated in the same manner as [t] except that the vocal cords are made to vibrate so that ‘voice’ is produced during the articulation of the sound. It occurs in the initial position. In the syllable final position it occurs only before a voiced sound. It does not occur in absolute final position.

**Example**

**Initial**

[d\text{\textunderscore}b\text{\textunderscore}n\text{\textunderscore}ba]  ‘truth’

[d\text{\textunderscore}\text{\textunderscore}]  ‘and’

[di\text{\textunderscore}ru]  ‘here’

**Final**

[r\text{\textunderscore}g\text{\textunderscore}\text{\textunderscore}d\text{\textunderscore}mo]  ‘old woman’

[\text{ts\textunderscore}n\text{\textunderscore}d\text{\textunderscore}ma]  ‘boiled vegetable rice’
Voiced Dental Fricative

In the articulation of this sound, the vocal cords remain vibrating so as to produce ‘voicing’, the soft palate is raised and the tip of the tongue is raised towards the back of the upper teeth to leave a very narrow construction for the air stream to squeeze out with friction. It occurs (i) in initial clusters after \([r, l]\), and (ii) after a vowel or \([r, l, n, ʔ]\) and syllable boundary, i.e. \([v-\text{d}^{-}v]\) and \([r-\text{d}^{-}v, l-\text{d}^{-}v, n-\text{d}^{-}v, ʔ-\text{v}]\)

**Examples**

\[
\begin{align*}
[r\, \text{d}^{-}\text{E}-\text{mo}] & \quad \text{‘beautiful’} \\
[r\, \text{d}^{-}\text{u}ŋ-\text{ma}] & \quad \text{‘rafter’} \\
[skəɾ-\text{d}^{-}\text{a}] & \quad \text{‘meteor’} \\
[kun-\text{d}^{-}\text{um}] & \quad \text{‘small basket’} \\
[ʃəŋ-\text{d}^{-}\text{n}ŋ] & \quad \text{‘cave of a wolf’} \\
[çhu-\text{d}^{-}\text{oŋ}] & \quad \text{‘well’} \\
[sə-\text{d}^{-}\text{ən}] & \quad \text{‘carpet (literary)’} \\
[ŋə-\text{d}^{-}\text{ək}>] & \quad \text{‘ruler’} \\
[rin-\text{d}^{-}\text{i}] & \quad \text{‘kind of metal’} \\
[ʒəl-\text{d}^{-}\text{n}ŋ] & \quad \text{‘face (honourific)’}
\end{align*}
\]

This sound is in free variation with \([d]\)

/ʃ/  \(\text{[ʃ]}\)  Voiceless Retroflex Stop

In the articulation of this sound, the air is compressed by pressure from the lungs and passes through the opening of the vocal cords without any obstruction; the soft palate is raised to close the nasal passage and the tip of the tongue curls and touches the pre-palatal region; then the tongue is tongue is removed resulting in the air suddenly escaping with plosion. It occurs only initially.
EXAMPLES

[\texttt{tuk}^\texttt{\textasciitilde} ]  \quad 'six'

[\texttt{t\textasciitilde l}]  \quad 'cue'

[\texttt{t\textasciitilde o\textasciitilde p\textasciitilde o}]  \quad 'straight'

/\texttt{th}/  \quad [\texttt{th}]  \quad \textbf{Voiceless Aspirated Retroflex Stop}

[\texttt{th}]  \quad \text{sound is articulated in the same manner as [t], except}
\quad \text{that the glottis remains open during the release please resulting in}
\quad \text{aspiration. The degree of aspiration is weaker when it occurs}
\quad \text{after the internal juncture. It occurs only initially.}

\textbf{Example}

[\texttt{tha}]  \quad 'hawk'

[\texttt{thul}]  \quad 'egg'

[\texttt{thims}]  \quad 'to punish'

[\texttt{t\textasciitilde n\textasciitilde b\textasciitilde \textasciitilde thuk}]  \quad 'pupil'

[\texttt{sk\textasciitilde n\textasciitilde \textasciitilde thi}]  \quad 'bench'

/\texttt{d}/  \quad [\texttt{d}]  \quad \textbf{Voiced Retroflex Stop}

[\texttt{d}]  \quad \text{sound is articulated in the same manner as [t] except}
\quad \text{that the vocal cords are made to vibrate so that 'voice' is produced}
\quad \text{during the articulation of the sound. It occurs only initially.}

\textbf{Examples}

[\texttt{d\textasciitilde n\textasciitilde t}]  \quad 'wild yak'

[\texttt{d\textasciitilde o\textasciitilde s}]  \quad 'rice'

[\texttt{d\textasciitilde e}]  \quad 'ghost'

[\texttt{mun\textasciitilde d\textasciitilde k}^\texttt{\textasciitilde \textasciitilde}]  \quad 'darkness'
/k/  [k]  Voiceless Velar Stop

In the articulation of [k] sound the air is compressed by pressure from the lungs and passes through the opening of the vocal cords without any obstruction, the passage to the nasal cavity is completely blocked by raising the soft palate; the back of the tongue touches the soft palate and then the tongue is lowered resulting in the air suddenly escaping with explosion. It occurs only in the initial position.

**Examples**

[kəɾ]  ‘dance’
[kur]  ‘tent’
[kəŋ-ma]  ‘higher’

[kʰ] is a retracted variety of the voiceless velar stop [k]; i.e. the back of the tongue touches the back of the soft palate, the rest of the mechanism involved is the same as the production of [k] It occurs only in the final position.

**Examples**

[tʃʰakʰ]  ‘point’
[khakʰ]  ‘part’
[tʃe-pikʰ]  ‘little’

/kh/  [kh]  Voiceless Aspirated Velar Stop

[kh] sound is articulated in the same manner as [k], except that the glottis remains open during the release phase resulting in aspiration. The degree of aspiration is relatively weak when it occurs after the internal juncture.
\textbf{Examples}

\begin{itemize}
  \item \texttt{[khE-mo]} 'cheap'
  \item \texttt{[kh-n-k'-pa]} 'inside of the body'
  \item \texttt{[khur-po]} 'burden'
  \item \texttt{[t'hus-khə]} 'bath room'
  \item \texttt{[ph-n-khEps]} 'quilt'
\end{itemize}

\texttt{/g/} \quad \texttt{[g]} \quad \textbf{Voiced Velar Stop}

\texttt{[g]} sound is articulated in the same manner as \texttt{[k]}, except that the vocal cords are made to vibrate, so that 'voice' is produced during the articulation of the sound. It occurs in the initial position and in syllable final only when the following syllable has an initial voiced sound.

\textbf{Examples}

\begin{itemize}
  \item \texttt{[g-n-n-pa]} 'monastery'
  \item \texttt{[gu]} 'nine'
  \item \texttt{[gə-ma]} 'beloved'
  \item \texttt{[mag-mi]} 'soldier'
  \item \texttt{[dzug-mo]} 'index finger'
\end{itemize}

\texttt{[g-]} \quad \textbf{Voiced Velar Fricative}

In the articulation of this sound the air is compressed from the lungs, the vocal cords remain vibrating to produce voicing, the soft palate is raised, and the back part of the tongue approaches the soft palate, but does not touch it, instead a very small opening remains for the air stream to pass through with a slight degree of friction. It occurs in the following environments (i) in initial cluster after \texttt{/r/} and (ii) after vowel, or \texttt{[r, l, n, ɾ]} and syllabic boundary, i.e., \texttt{[V-r-g-V]} and \texttt{[r-g-V, l-g-V, n-g-V, ɾ-g-V]}. 
3.3.2. Affricates:

There are six affricate phonemes in Ladakhi, viz., /ts, ć, tʃh, ćh, dʒ, ʃ/, each having only one allophone each. These affricates can be subgrouped according to the place of articulation: alveolar affricates are /ts, tʃh, dʒ/ and palatal affricates are /ć, ćh, ʃ/.

/tʃ/ [tʃ]. Voiceless, Alveolar Affricate

In the articulation of this sound the air is compressed by pressure from lungs and passes through the vocal cords without any obstruction; the nasal passage remains closed by raising the velum; the front of the tongue is raised in the direction of hard palate and the tip of the tongue touches the teeth ridge; the tongue is not taken away from the teeth-ridge completely all of a sudden as in the case of stops, but is lowered slowly and the air stream passes through the narrow passage with friction.

It occurs only initially.
Examples

[tʂəŋ-ma] ‘clean’
[tʂʰə-po] ‘basker’
[tʂa] ‘rust’

[tʂʰ] Voiceless, Aspirated, Alveolar Affricate

[tʂʰ] is pronounced in the same manner as [tʂ], except that the glottis remains open during the release phase resulting in aspiration. It occurs initially. The degree of aspiration is relatively weak when it occurs after the internal juncture.

Examples

[tʂʰəŋ-ma] ‘all’
[tʂʰən-d-ma] ‘vegetable’
[tʂʰor-ka] ‘anxiety’
[rgye-tʂho] ‘sea’
[pu-tʂha] ‘son’

/dʐ/ [dʐ] Voiced Alveolar Affricate

[dʐ] sound is formed in the same manner as [tʂ], except that the vocal cords vibrate to produce voicing during the articulation. It occurs only in the initial position.

Examples

[dʐət-pa] ‘work’
[dʐɛ-nat] ‘lepsory’

/a male animal, who is a mixed breed of cow and yak’
/č/  [č]  Voiceless Palatal Affricate

In the articulation of this sound the air is compressed by pressure from lungs and passes through the vocal cords without any obstruction; the soft palate is raised; the front of the tongue is raised to the pre-palate region and when the tongue is separated from the palate the air stream passes with friction. It occurs only in the initial position.

**Examples**

[čik̚]  'one'
[čot]  '(to) cut'
[čēm-čēm]  'measles'

/ch/  [ch]  Voiceless, Aspirated, Palatal Affricate

[čh] is produced in the same manner as [č], except that glottis remains open during the release phase resulting in aspiration. It occurs initially only. The degree of aspiration is relatively weak when it occurs after the internal juncture.

**Examples**

[čhəj]  'local beer'
[čhur pe]  'cheese'
[čhi-ma]  'tear'
[ţak-čha]  'echo'
[ŋul-čhu]  'mercury'

/j/  [j]  Voiced, Palatal Affricate

[j] sound is articulated in the same manner [č] except that the vocal cords vibrate so that the sound produced is a voiced one. It occur only initially.
There are nine fricatives in Ladakhi i.e. \([\text{b, d-}, -\text{g-}, s, \text{š, š, z, ž, h}]\). These can be subgrouped according to the place of articulation; \(\text{[b]}\) is bilabial, \(\text{[d-]}\) is dental, \(\text{[g-]}\) is velar, \(\text{[s, z]}\) are alveolar, \(\text{[s]}\) is retroflex, \(\text{[š, ž, j]}\) are palatal and \(\text{[h]}\) glottal; \(\text{[s, z, š, ž]}\) can also be called sibilants, \(\text{[b, d-], [g-]}\) being allophones of \(\text{[b, d, g]}\) respectively have been described together with the stop phonemes in 3.3.1. The rest of the six sounds are all phonemic. Thus there are six fricative phonemes in the language.

\(/s/\) \([s]\) Voiceless Alveolar Fricative

For articulating this sound the air stream passes through the vocal cords without any obstruction; the soft palate is raised, the blade of the tongue approaches the teeth ridge, and the front part of the tongue is raised towards the hard palate; a narrow aperture is maintained between the articulator and the point of articulation and the air passes with friction. It occurs in the initial and final positions.

**Examples**

**Initial**

\([\text{sur-na}]\)  'shahnai; a long narrow instrument'

\([\text{skat}]\)  'voice'

\([\text{ser}]\)  'gold'
Final

[tus]  'time'
[łos]  'work'
[čhəs]  'religion'

/z/  [z]  Voiced Alveolar Fricative

[z] is articulated in the same manner as [s], except that the vocal cords are made to vibrate so that 'voice' is heard. It occurs in the initial position and the syllable final-position but not before absolute pause.

Examples

Initial

[zikʰ]  'panther'
[dzət]  'godwon'
/zur−mo/  'pain'

Final

[ʐuz-məɾ]  'melted butter'
[ʂəz-mən]  'spice (literary form)'
[gəz-ɬək]  'clothes (sing.)'

/s/  [s]  Voiceless Retroflex Fricative

In the articulation of this sound the air is compressed from lungs, the air passes through the vocal cords unimpeded; the velum is raised, and the tip of the tongue curls back and is raised towards the hard palate leaving a narrow passage between the hard palate and the curled part of the tongue through which the air current passes with friction. It occurs in the initial position only.
EXAMPLES

Initial

[ʃəɾ]  ‘street’
[ʂi]  ‘milk the cow gives immediately after she has given birth to a calf’
[ʂun-po]  ‘an infant who does not give trouble’

/ʂ/  [ʂ]  Voiceless Palatal Fricative

In the articulation of this sound the air is compressed from the lungs and passes through the vocal cords unobstructed; the velum is raised; the front of the tongue is raised towards the prepalate region, thereby forming a narrow groove, through which the air current passes with friction. It occurs in the initial position only.

EXAMPLES

[ʂeɾ]  ‘glass’
[ʂums]  ‘cry (honorific)’
[ʂa]  ‘flesh’

/z/  [z]  Voiced Palatal Fricative

This sound is articulated in the same manner as [ʂ] except that the vocal cords are made to vibrate so that ‘voice’ is produced. It occurs in the initial position only.

EXAMPLES

Initial

[ʔa]  ‘marshy land’
[ʔəɾ]  ‘busy’
[ʔim-po]  ‘tasty’
/h/  [h]  Voiceless Glottal Fricative

In the articulation of this sound the air current is compressed from the lungs, and passes through the vocal cords without any obstruction, the oral organs remain in the neutral vowel position. It occurs only in the initial position.

**EXAMPLES**

**Initial**

[ħ-ʋgo]  ‘understanding’

[ħ.n-s.n.r]  ‘date palm’

[hel-ɛn]  ‘robust’

3.3.4. **TRILLS**

/r/  [r]  Voiced Alveolar Trill

In the articulation of this sound the air is compressed from the lungs, the vocal cords vibrate to produce voicing and the passage to the nasal cavity is closed by raising the velum; it is articulated by a rapid succession of taps of the tip of the tongue against the teeth-ridge, tongue is held in a loose position and the air stream causes the tip to vibrate. It occurs in the initial and final positions.

**EXAMPLES**

**Initial**

[rɪ]  ‘hill’

[rul]  ‘snake’

[r.n.l-mo]  ‘musical instrument’

**Final**

[ʃɔr]  ‘east’

[ʃɛr]  ‘gold’

[ʃu-k.n.r]  ‘cyclone’
[\textit{\textdegree}r\textdegree\textdegree] Voiceless Alveolar Trill

In the articulation of this sound the air stream passes through the vocal cords without any obstruction, this allophone is the voiceless variety of the above \textit{\textdegree}r\textdegree\textdegree and occurs as the first member of the consonant clusters when the second member is a voiceless consonant.

\textbf{Examples}

\textit{Initial}

\[\textit{\textdegree}ts\textdegree\textdegree\textdegree-s-tha\}\quad \text{`bank of river'}

\[\textit{\textdegree}t\textdegree\textdegree\textdegree-pa\]\quad \text{`heel'}

3.3.5. \textbf{LATERALS}

There are three lateral sounds, viz., (l, l, t); [l] is a voiced alveolar lateral, [l] is a voiceless alveolar lateral and [t] is a voiced alveolar murmured lateral. However, there are only two lateral phonemes, viz. /l, t/ as the voiceless alveolar lateral [l] and voiced lateral [l] are allophones of /l/.

/l/ [l] Voiced Alveolar Lateral

In the articulation of /l/ sound, the tip of the tongue approaches the teeth-ridge to make a complete closure in the medium line passage, however a passage is left on both sides of the tongue for the air to pass through, the velum is raised, and the vocal cords are made to vibrate to produce `voice'. It occurs in initial and final positions.

\textbf{Examples}

\textit{Initial}

\[\textit{l}\textdegree\textdegree\textdegree\textdegree\]\quad \text{`work'}

\[\textit{l}o\]\quad \text{`year'}

\[\textit{luk\textdegree\textdegree\textdegree}\]\quad \text{`sheep'}
Final

[rʊl] 'snake'
[ʃəl] 'plough'
[rəz-bo] 'cotton'

[l] Voiceless, Alveolar Lateral

[l] is articulated in the same manner as [l], except that the vocal cords are not made to vibrate. It occurs only in clusters before voiceless consonants.

Examples

[lʰɛəkʂ] 'iron'
[lʰpəks] 'skin'
[lʰtəd-əmə] 'show'
[lʰće] 'tongue'

[i] [i] Voiced, Alveolar Murmured Lateral

This sound is produced in the same manner as [l] except that the extra breath accompanied by murmur is released towards the end of the lateral articulation. The sound is produced at a lowered pitch. It occurs only in the syllable-initial.

Examples

Initial

[te] 'name of the district head-quarter of Ladakh'
[tuŋ-s-po] 'air'
[ta] 'God'
[ʃEn-bə] 'lazy'
3.3.6. **Nasals**

Ladakhi has four nasal phonemes /m, n, ñ, ŋ/. Each **of them** has only one allophone, i.e., /m/ has bilabial nasal [m]; /n/ alveolar nasal [n]; /ñ/ palatal nasal [ñ]; /ŋ/ velar nasal [ŋ].

/m/  [m]  **Voiced Bilabial Nasal**

In the articulation of this sound the air is compressed from the lungs, and the vocal cords vibrate to produce voicing, the outgoing current is completely blocked by closing the lips, the velum remains lowered and the air passes through the nose; the tongue remains in the neutral position. It occurs in initial and final positions.

**Examples**

**Initial**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[mɔɾ]</td>
<td>'butter, oil'</td>
</tr>
<tr>
<td>[mo]</td>
<td>'woman'</td>
</tr>
<tr>
<td>[mig-ra]</td>
<td>'spectacles'</td>
</tr>
</tbody>
</table>

**Final**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[nəm]</td>
<td>'sky'</td>
</tr>
<tr>
<td>[pa-tum]</td>
<td>'bud'</td>
</tr>
<tr>
<td>[zum]</td>
<td>'(to) catch'</td>
</tr>
</tbody>
</table>

/n/  [n]  **Voiced Alveolar Nasal**

In the articulation of this sound, the air is compressed from the lungs, the vocal cords vibrate to produce 'voicing', the tip of the tongue touches the alveolar ridge blocking the air stream, then the velum remains lowered and the air current passes through the nasal cavity. It occurs in initial and final positions.
Examples

Initial

[rɔŋ-tnn] 'self-interest'
[mʊ-bu] 'tongue'
[dik-ɕin] 'crab'

Final

[ŋa] 'fish'
[nuŋ-ma] 'turnip'

/ŋ/ [ŋ] Voiced Palatal Nasal

In the articulation of this sound, the air is compressed from the lungs, the vocal cords vibrate to produce 'voicing', the front of the tongue touches the pre-palate region blocking the air stream, then the velum remains lowered and the air current passes through the nasal cavity. It occurs in the initial position.

Examples

Initial

[ŋa] 'fish'
[nuŋ-ma] 'turnip'

/ŋ/ [ŋ] Voiced, Velar Nasal

In the articulation of this sound, the air is compressed from the lungs, the vocal cords vibrate to produce 'voicing', the back of the tongue touches the soft palate, blocking the air stream, the velum remains lowered and the air current passes through the nasal cavity. It occurs in initial and final positions.
3.3.7. Semi-vowels

There are two semivowels in Ladakhi, viz., bilabial [w], and palatal [y] and both are phonemic.

/w/ [w] Voiced Bilabial Semivowel.

In the articulation of [w] the air is compressed from lungs, the velum is raised, vocal cords are made to vibrate in order to produce ‘voice’; the lower lip approaches the upper lip, thereby leaving a narrow aperture for the air to pass through. It occurs in the initial position only.

Examples

Initial

[wɔ-tʃe] ‘fox’
[dzɔ-wɔ] ‘friend’
[rE-wa] ‘hope’
Voiced, Palatal Semivowel.

In the articulation of [y] the air is compressed from the lungs, the velum is raised, the vocal cords are made to vibrate to produce 'voicing'; the front of the tongue is raised towards the prepalatal region slightly higher than the maximum height for the production of a vowel, and the air current passes through this opening in the oral cavity unobstructed. It occurs initially; before vowel /i/ it has a pronounced on glide effect.

**Examples**

Initial

[yul] 'country'

[yak] 'yak’ a local animal'

[mə-yur] ‘main canal’

[yik] ‘letter’

[yin] ‘to be’

3.4. As Ladakhi is syllabic it is important to discuss the criteria for demarcation of syllabic boundary in Ladakhi and the structure of different types of syllables in the language. A syllable has been defined differently on the basis of differing criteria—phonetic, phonemic and morphemic. Phonetically syllable has been defined in articulatory as well acoustic terms. However no satisfactory definition has been put forth. Phonemically it is possible to demarcate syllable boundaries in terms of the permitted initial and final consonants as well as initial and final consonant clusters. Phonological and or morphemic junctures also help in determining syllable boundaries.

In this work we have utilised the above criteria for demarcating syllable boundaries. Morphemic juncture as well as the nature of permissible initial or final consonants or consonant clusters have been used to demarcate syllabic boundaries.
Ladakhi has the following syllabic structure (C) (C) (C) V (C) (C). The possible expansions of this structure with examples are as follows.

- **V**: /i/ 'this'
- **VC**: /ot/ 'light'
- **VCC**: /uks/ 'breath'
- **CV**: /ṣə/ 'hair'
- **CCV**: /ṣəə/ 'drum'
- **CCCV**: /skyə/ 'light colour'
- **CVC**: /təŋ/ '(to) give'
- **CCVC**: /skəŋ/ 'leg'
- **CCCV**: /skyəŋ/ 'wild horse'
- **CVCC**: /daŋs/ 'colour'
- **CGVCC**: /skəŋs/ 'filled'
- **CCCVCC**: /skyəŋs/ 'spread'

### 3.4.5. Consonant Clusters

Ladakhi has mostly two consonant clusters occurring in the syllable-initial and syllable-final positions. Three consonant clusters are rare and occur only initially.

#### 3.5.1. Initial

**A. Two consonant clusters:**

Initial two consonant clusters are as follows.

**(i) Trill + Stops, Affricates**

The following combinations occur in the language:

- \([r]+[c^\prime], [b], [d^\prime], [j], [dz^\prime], [ts], [t]\).
Examples

\[
\begin{align*}
[r] + [\mathcal{g}] & \quad [r \mathcal{g} \text{-at-po}] & \text{‘old man’} \\
/rg\text{-at-po}/
\end{align*}
\]

\[
\begin{align*}
[r] + [\mathcal{t}] & \quad [r\mathcal{t}\text{-iaps}] & \text{‘wave’} \\
/r\mathcal{t}\text{-iaps}/
\end{align*}
\]

\[
\begin{align*}
[r] + [\mathcal{d}] & \quad [r\mathcal{d}\text{-or-rdo}] & \text{‘a stone to sharpen the knife’} \\
/rd\text{-or-rdo}/
\end{align*}
\]

\[
\begin{align*}
[r] + [\mathcal{i}] & \quad [r\mathcal{i}\text{jes}] & \text{‘after, behind’} \\
/r\mathcal{i}\text{jes}/
\end{align*}
\]

\[
\begin{align*}
[r] + [\mathcal{d}\mathcal{z}] & \quad [rd\mathcal{d}\mathcal{z}\text{e}s}] & \text{‘material’} \\
/rd\mathcal{d}\mathcal{z}\text{e}s/
\end{align*}
\]

\[
\begin{align*}
[\mathcal{r}] + [\mathcal{t}\mathcal{s}] & \quad [r\mathcal{t}\mathcal{s}\text{e}l\text{-pa}] & \text{‘to give’} \\
/r\mathcal{t}\mathcal{s}\text{e}l\text{-pa}/
\end{align*}
\]

\[
\begin{align*}
[\mathcal{r}] + [\mathcal{t}] & \quad [r\mathcal{t}\mathcal{i}\text{n}\text{-pa}] & \text{‘heel’} \\
/r\mathcal{t}\mathcal{i}\text{n}\text{-pa}/
\end{align*}
\]

(ii) Liquid /\mathcal{l}/ + Stops, Affricate

The following clusters are available in the language;

\[
[\mathcal{l}] + [\mathcal{g}[, [\mathcal{d}[, [\mathcal{j}, [\mathcal{z}] \text{ and } [\mathcal{r}] + [\mathcal{p}, [\mathcal{t}, [\mathcal{c}]
\]

Examples

\[
\begin{align*}
[\mathcal{l}] + [\mathcal{g}] & \quad [l\mathcal{g}\text{-en-bu}] & \text{‘balloon’} \\
/l\mathcal{g}\text{-en-bu}/
\end{align*}
\]

\[
\begin{align*}
[\mathcal{l}] + [\mathcal{d}] & \quad [l\mathcal{d}\text{-en-pa}] & \text{‘balloon’} \\
/l\mathcal{d}\text{-en-pa}/
\end{align*}
\]
(iii) Sibilant /s/+ Stops, Nasals

The following combinations occur in the language:

\[
[s] + [k], [t], [p], [m], [n], [ŋ], [ŋ].
\]

**Examples**

\[
[s] + [k] \quad [skut-pa] \quad \text{‘thread’} \\
/skut-pa/
\]

\[
[s] + [p] \quad [spər] \quad \text{‘lawn’} \\
/spər/
\]

\[
[s] + [t] \quad [stət-pa] \quad \text{‘upper part’} \\
/stot-pa/ \quad \text{‘or man from upper part’}
\]

\[
[s] + [m] \quad [smən-lem] \quad \text{‘prayer’} \\
/smon-lem/
\]
(iv) Sibilant /z/ + Stops

The following combinations occur in the language:

\[ [z] + [b], [d], [g] \]

**Examples**

\[ [z] + [b] \rightarrow [zb\,n\,m-po] \rightarrow \text{thick (for wood)} \]
\[ /zbom-po/ \]

\[ [z] + [d] \rightarrow [zd\,n\,j-po] \rightarrow \text{trunk of the tree} \]
\[ /zd\,j\,po/ \]

\[ [z] + [g] \rightarrow [zg\,n] \rightarrow \text{high} \]
\[ /zg\,n/ \]

(v) Sibilant /s/ + Stops, Nasals

The following combinations occur in the language:

\[ [s] + [t], [k], [m], [n], [\tilde{n}], [\tilde{\iota}] \]

**Examples**

\[ [s] + [t] \rightarrow [st\,i\,g\,pa] \rightarrow \text{heel} \]
\[ /st\,i\,g\,pa/ \]
The following combinations occur in the language:

[k], [kh], [g], [h] + [y]

**Examples**

[k] + [y]  [kyoŋ]  /kyoŋ/

[kh] + [y]  [khyoŋ]  'you'  /khyot/

[g] + [y]  [gyoŋ]-pa]  'to wear'  /gyon-pə/

[h] + [y]  [nhoŋ]-e]  'sorrow'  /nyoŋ-e/
(vii) It is important to note here that some clusters having a stop as its first member occur in syllable-initial position only after an open syllable in numerals where numeral items are composed of more than one syllable. Such clusters are /bč, kš, ks, gñ, bd, bź, rg, brgy/

**Examples**

\[
\begin{align*}
[b] + [č] & = [ži-bču] \quad \text{‘forty’} \\
& /ži-bču/ \\
[k] + [š] & = [ču-kšik] \quad \text{‘eleven’} \\
& /ču-kšik/ \\
[ɾ] + [n] & = [ču-gñis] \quad \text{‘twelve’} \\
& /ču-gñis/ \\
[k] + [s] & = [ču-ksum] \quad \text{‘thirteen’} \\
& /ču-ksum/ \\
[b] + [d] & = [ču-bdun] \quad \text{‘seventeen’} \\
& /ču-bdun/ \\
[b] + [z] & = [ču-bži] \quad \text{‘fourteen’} \\
& /ču-bži/ \\
[r] + [g] & = [ču-rgu] \quad \text{‘nineteen’} \\
& /ču-rgu/ \\
[b]+[r]+[g]+[y] & = [ča-brgya] \quad \text{‘eighteen’} \\
& /co-brgya/
\end{align*}
\]

Thus it is evident that in such cases the first member of the clusters occurring in the numerals in non-absolute initial syllable is elided in the absolute initial position.
It may be mentioned that some clusters having nasal /m/ as its first member occur in syllable-initial position only after an open syllable in certain items (doublets and compounds). Such clusters are as follows /m·th, kh, tʃh/

\[
\begin{align*}
[m] + [\text{th}] &= [\text{smə-mth.ən}] \quad \text{‘low high’} \\
&m\text{smə-mthon} \\
[m] + [\text{kh}] &= [\text{sku-mkhər}] \quad \text{‘palace’} \\
&\text{sku-mkhər} \\
[m] + [tʃh] &= [\text{rgyø-mtʃho}] \quad \text{‘sea’} \\
&\text{rgyø mtʃho}
\end{align*}
\]

B. Three consonant cluster

only three initial three consonant clusters occur in Ladakhi: [sky], [rgy], [ʃky]

Examples

\[
\begin{align*}
[\text{sky.ən}] &= \text{‘fault’} \\
&\text{skyon} \\
[\text{rgyø-la}] &= \text{‘road’} \\
&\text{rgyø-la} \\
[\text{ʃkyø}] &= \text{‘wild horse’} \\
&\text{ʃkyø}
\end{align*}
\]

3.4.2. **Final Clusters**

In this position only two consonant clusters occur. In such clusters [s] is always the second member; which is weakly articulated, and often elided. It occurs with the following consonants; [k], [p], [m], [y], [s].
(i) Stops, Nasals + /s/

[k] + [s]  \[t\;n\;ks\;\cdot\;po\]  ‘friend’
/\;toks\;\cdot\;po/

[p] + [s]  \[\;s\;ups\]  ‘cover’
/\;s\;ups/

[\(\)] + [s]  \[\;t\;sha\;\cdot\;s\;\cdot\;pa\]  ‘brahmin’
/\;t\;sha\;\cdot\;s\;\cdot\;pa/

[m] + [s]  \[sa\;\cdot\;t\;sh\;\cdot\;ams\]  ‘border’
/\;sa\;\cdot\;t\;sh\;\cdot\;ams/

(ii) Following final clusters are rarely used in Ladakhi.

[t] + [s]  \[di\;\cdot\;e\;\cdot\;dzats\]  ‘wrote (hon.)’
/\;di\;\cdot\;e\;\cdot\;dzats/

[n] + [s]  \[\;t\;\cdot\;\cdot\;ns\]  ‘applied’
/\;t\;\cdot\;\cdot\;ns/

[r] + [s]  \[\;z\;\cdot\;\cdot\;rs\]  ‘told’
/\;z\;\cdot\;\cdot\;rs/

[l] + [s]  \[\;ch\;\cdot\;k\;\cdot\;s\;\cdot\;ls\]  ‘bowed in’
/\;chek\;\cdot\;s\;\cdot\;ls/

Final clusters other than [s] as a second member are found in loan words; e.g., Sanskrit word  swasti  in Ladakhi  [s\;n\;\cdot\;sti]  /so\;\cdot\;sti/.
<table>
<thead>
<tr>
<th>Second Member</th>
<th>First Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
</tr>
<tr>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
</tr>
<tr>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
</tr>
<tr>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
</tr>
<tr>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
<td>p ph b t th d t d t k kh g t th dz e ch j y z t i k h m n f g r l w y</td>
</tr>
</tbody>
</table>

X=Initial
θ=Final
4. LADAKHI SCRIPT

4.0. Ladakhi uses the Tibetan script, which is written from left to right. It has an inventory of thirty primary symbols and four *matras*: there are twenty-eight consonant symbols and two vowel symbols. The traditional order of the alphabet is given below together with the sounds they represent in roman transcription. Common Ladakhi word for script is called /yi-ge/. However it is called /chos/ when used for writing religious texts etc.

4.1. PRIMARY SYMBOLS

\[\text{का} \quad \text{ख} \quad \text{गा} \quad \text{ञा} \quad \text{छा} \quad \text{चा} \quad \text{झा} \quad \text{ञा} \]
In Ladakhi these symbols are called

\[ /\text{kə-nə-suṃ-ču}/ \text{‘from k thirty’}. \]
Consonants are called अक्षमत्रस्त्र 'ak-mat-sam-ču/ and vowels are called युक्तिः /yos/.

The vowel matras are as follows:

\[ \begin{align*}
    \text{ě} & \quad \text{i} \\
    \text{ē} & \quad \text{e} \\
    \text{ō} & \quad \text{o} \\
    \text{ū} & \quad \text{u}
\end{align*} \]

These matras are called गुणः /ki-gu/.

\[ \begin{align*}
    \text{देण्हुः} & \quad /deṇ-bu/, \\
    \text{नेर} & \quad /nə-ro/, \\
    \text{जोन्तुः} & \quad /z o ps-kyu/, respectively in Ladakhi. \]
(Syllable boundary\(^1\))

It is called \(\text{क्षा} /\text{tsh-ək}/\) or \(\text{क्षा} /\text{tsək-di}/\).

4.2.1. **Vowels**

There are two vowel symbols, viz., \(\text{r}I\) and \(\text{a}/\), both of them represent the phoneme /ə/.

(a) The use of the vowel symbol \(\text{r}I\)

The vowel symbol \(\text{r}I\) is used in the following ways:

i) \(\text{r}I\) is written in the beginning of certain items before

\[\text{g} \quad \text{d} \quad \text{b} \quad \text{e} \quad \text{j}\]

\[\text{dz} \quad \text{kh} \quad \text{ch}, \quad \text{th},\]

\(^1\) The rules about the marking of syllable boundary in the the writing system are discussed in 4.4. It is, however, important to mention here that all inherent a, i.e., a inherently represented in the consonant graphs which are elided due to the syllabic boundary marking are also not written in our transcription in this chapter.
\( \text{pa} \) and \( \text{ts} \), i.e., words having initial voiceless aspirated stops and affricates and voiced stops and affricates (excluding retroflexes). In all such cases the phonemic value of \( \text{q} \) is zero. However items written with \( \text{q} \) symbol initially have a different meaning than those which are written without this symbol. Thus homophonous items having different meanings are represented differently in the script; one with \( \text{q} \) initially and the other without.

**Examples:**

\[ \text{q} \text{khru} /\text{thu}/ \text{‘(to) wash’} : \text{khru} /\text{thu}/ \text{‘a measurement’} \]

\[ \text{q} \text{gro} /\text{do}/ \text{‘(to) go’} : \text{gro} /\text{do}/ \text{‘barley’} \]

\[ \text{q} \text{ch} \text{m} /\text{cham}/ \text{‘a dance done with mask on’} : /\text{cha m-pa}/ \text{‘cold’} \]
\(\text{அை} /\text{ோ}/\) 'rainbow in a small piece'\n\(\text{ெ}/\text{ோ}/\) 'tea'

\(\text{ை} /\text{ோ}/\) 'to fight'
\(\text{ெ}/\text{ோ}/\) 'oven, fireplace'

\(\text{ே} /\text{ோ}/\) 'to tremble'
\(\text{ெ}/\text{ோ}/\) 'cloth (literary)'

\(\text{ை} /\text{ோ}/\) 'to jump'
\(\text{ெ}/\text{ோ}/\) 'that side, otherside'

\(\text{ை} /\text{ோ}/\) 'to soak'
\(\text{ெ}/\text{ோ}/\) 'race'

\(\text{ை} /\text{ோ}/\) 'crow'
\(\text{ெ}/\text{ோ}/\) 'nest'
ii) This symbol carries the matras $\checkmark$ and $\breve{u}$ in certain words although such instances are rare,

\begin{align*}
\text{\textipa{\texte\textipa{od}}} & /\textipa{od}/ & \text{‘light’} \\
\text{\textipa{\texti\textipa{on}}} & /\textipa{on}/ & \text{‘come (literary)’}
\end{align*}

iii) This symbol also carries the matra of $\text{i}$ and represents the sound [e],

\begin{align*}
\text{\textipa{\texte\textipa{\texte}}} & /\textipa{\texte}/ & \text{‘me, to me’}.
\end{align*}

iv) In the final position its phonetic value is [a] in some items.

\begin{align*}
\text{\textipa{\texta\textipa{\texte}}} & /\textipa{\texte}/ & \text{‘arrow’} \\
\text{\textipa{\texta\textipa{\textg}}} & /\textipa{\textg}/, & \text{‘some’}
\end{align*}

Such instances are rare.

v) Long-vowels, in loan words are represented by writing the symbol at the bottom and the matra above the consonant, e.g,

\begin{align*}
\text{\textipa{\texta\textipa{\texta}}} & \text{ki} & \text{\textipa{\texta\textipa{\texta}}} & \text{ki;} & \text{\textipa{\texta\textipa{\textg}}} & \text{ku} & \text{\textipa{\texta\textipa{\textg}}} & \text{ku:}
\end{align*}
This symbol also represents the phoneme /a/, initially.

\[ \text{कौ} /\text{a}-\text{ne}/ 'aunt'

\[ \text{कॉ} \text{रै} /\text{a}-\text{gi}/ 'number'

This symbol is also used to carry the Matras

\[ /i/ \quad /e/ \quad /o/ \quad /u/ \quad \text{for representing such vowel sounds in the initial position.} \]

In other positions these vowels are represented by writing the Matras of

\[ /i/ \quad /e/ \quad /o/ \quad \text{at the top and} \]

\[ /i/ \quad /e/ \quad /o/ \quad \text{and} \]

\[ /i/ \quad /e/ \quad /o/ \quad \text{and} \]

\[ /u/ \quad \text{recently.} \]

However, the common practice is to use \[ \text{को} \quad \text{कौ} \quad \text{कॉ} \quad \text{कौ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{कॉ} \quad \text{'
/u/ at the bottom of the consonant symbols but not touching the symbol itself. However if the shape of the symbol has a roundish curve at the bottom, a small hook is used to join the matra symbol with consonant symbol. Identical syllables occurring in sequence are written in linear order e.g., \( \text{\texttt{\textdia{a}} \text{\textdia{a}}} \) /no-no/

‘younger brother’, however there is an alternate way of writing such sequences by writing the matra two times with the same consonant symbol e.g. /no-no/, \( \text{\texttt{\textdia{a}}} \) This is true of the matras which are written at the top of the consonant symbols. If two successive syllables have the same consonant and the first syllable has /u/ vowel and the second has /i, e, or o/ vowel, it is possible to write the consonant symbol only once and write both the matras, one below and the other above, the consonant symbol. In such cases the order of transcribing is

consonant + /u/ + consonant + /i, e, or u/.

\( \text{\texttt{\textdia{\textdia{t}}} \text{\textdia{\textdia{t}}} \text{\textdia{\textdia{t}}}} \) /tšu-tšot/ can be written as

\( \text{\texttt{\textdia{\textdia{t}}} \text{\textdia{\textdia{t}}} \text{\textdia{\textdia{t}}}} \) /tšu-tšot/ ‘watch’

4.2.2. Consonants

All consonant symbols in Ladakhi have the inherited vowel [a], when they occur in the final position and [ə] elsewhere. In order to write a final consonant symbol, a small circle \( \circ \) is put below the 'consonant symbol. This is analogous to the writing of halant in Devangari. It is not used in modern books now, as
super-linear script dot indicating syllable boundary which marks the presence of the inherited vowel in the following syllable also indicates that the consonant preceding the dot is without a following vowel, e.g.,

\[ \text{lag-pa} \quad /\text{læ k-pæ}/ \quad \text{‘hand’} \]

or

\[ \text{baŋ} \quad /\text{baŋ}/ \quad \text{‘wool’} \]

\[ \text{gle-la} \quad /\text{te-la}/ \quad \text{‘in Leh’} \]

In items having only one consonantal symbol in the writing system the dot indicating the syllable boundary is written, but it does not indicate the absence of the vowel phoneme after that consonant, i.e., still represents C\text{æ}

\[ /\text{jæ}/ \quad \text{‘tea’} \]

Following graphemes have more than one graph.

\[ /\text{r}/ \quad \text{rₚ} \quad \text{r}: \quad \text{r} \quad \text{`} \]

\[ /\text{y}/ \quad \text{ye} \quad \text{w} \quad \text{`} \]

\[ /\text{w}/ \quad \text{wa} \quad \text{h} \quad \text{`} \]

Their distribution is given later.
4.2.3 The following phonemes are represented by only one graphemic shape in the script:

- \(/\text{ph}/\) \(\text{pha}\)
- \(/\text{b}/\) \(\text{ba}\)
- \(/\text{dz}/\) \(\text{dza}\)
- \(/\text{s}/\) \(\text{sa}\)

* It may however be noted that while writing Sanskrit borrowings having a voiced aspirate, such aspirates are represented in Ladakhi script by a composite group. In such cases the symbol representing the voiced sound is followed by the symbol \(h\). The complete set of such composite graph sequences is

\[ \text{b} + \text{h} = \text{bh} \]
\[ \text{d} + \text{h} = \text{dh} \]
\[ \text{j} + \text{h} = \text{jh} \]
\[ \text{g} + \text{h} = \text{gh} \]

It may however, be mentioned that although these graph-sequences have a representation of \(h\), they are pronounced in Ladakhi without aspiration.
4.2.4. The following phonemes are represented by two symbols in the script:

/i/ i) da occurs in certain words before ba

ii) sa occurs in the rest.

/\z/ i) sa occurs before voiced sounds

ii) za occurs elsewhere

/\j/ i) sbya occurs in certain items

ii) ja occurs elsewhere

/\z/ i) zwa occurs initially in certain items.

ii) za elsewhere.
/w/  i) Ɪ  \( \text{ba after da in initial sequences and in the} \)  
\( \text{suffixes -wə, -wo, -wu.} \)

ii) Ɪ  \( \text{wa elsewhere.} \)

/p/  i) Ɪ  \( \text{ba before pause, before /s/ in the final} \)  
\( \text{cluster and before a voiceless consonant of} \)  
\( \text{the following syllable.} \)

ii) Ɪ  \( \text{pa elsewhere.} \)

4.2.5. The phoneme /r/ is represented by four symbols in the script.

/r/  i) Ɪ Ɪ  \( \text{sa occurs before Ɪ Ɪ tsa as the first} \)  
\( \text{member of the conjunct.} \)

ii) Ɪ Ɪ  \( \text{la occurs before Ɪ Ɪ ba as the first mem-} \)  
\( \text{ber of the conjunct.} \)

iii) Ɪ Ɪ  \( \text{rda occurs in the final position in certain} \)  
\( \text{items in old texts.} \)

* See note on page 48 for an example of 4.2.5. (iii).
iv) \[\text{da occurs in the numeral}\]
\[\text{/}\
cu-\
rgu/\text{ ‘nineteen’}\]

v) \[\text{rwa occurs in certain items initially.}\]

vi) \[\text{occurs elsewhere,}\]

4.2.6. The following phonemes are represented by more than one symbol in the script; in some cases these are also combinations of two different symbols:

\[/t/\]

i) \[\text{twa occurs initially in certain items.}\]

ii) \[\text{da before pause, before }/s/\text{ in the final cluster and before a voiceless consonant of the following syllable.}\]

iii) \[\text{ta occurs elsewhere.}\]

\[/d/\]

i) \[\text{dwa occurs initially in certain items.}\]

ii) \[\text{da occurs elsewhere.}\]
/tʃ/ i) \( t\text{swa} \) occurs initially in certain items.

ii) \( t\text{sa} \) occurs elsewhere

/tʃh/ i) \( t\text{shwa} \) occurs initially in certain items.

ii) \( t\text{sha} \) occurs elsewhere

/č/ i) \( č\text{wa} \) occurs initially in certain items (see 4.2.7.)

ii) \( p\text{ya} \) occurs initially in certain items (see 4.2.7.)

iii) \( b\text{ya} \) occurs initially in certain items (see 4.2.7.)

iv) \( č\text{a} \) occurs elsewhere.

/čh/ i) \( p\text{hya} \) occurs initially in certain items (see 4.2.7.)

ii) \( ċ\text{ha} \) occurs elsewhere

/Ṉ/ i) \( f\text{wa} \) occurs initially in certain items.

ii) \( Ṉ\text{a} \) occurs elsewhere.
/k/  i)  \[\text{kwa occurs initially in certain items}\]

ii)  \[\text{ga occurs before pause, before /s/ in a final cluster and before a voiceless consonant of the following syllable.}\]

iii)  \[\text{ka occurs elsewhere.}\]

/kh/  i)  \[\text{khwa occurs initially in certain items.}\]

ii)  \[\text{kha occurs elsewhere.}\]

/g/  i)  \[\text{gwa occurs initially in certain items.}\]

ii)  \[\text{ga occurs elsewhere.}\]

/n/  * i)  \[\text{nda occurs finally in certain items in old texts.}\]

* In the final position, in three items a graphic sequence of two graphs with \[\text{da as the second member is written but it is never pronounced. Such items are as follows:}\]
ii) \( \text{ā}^{\text{ṛ}} \) na occurs in Sanskritic loanwords with retroflex nasal.

iii) \( \text{ā}^{\text{ṛ}} \) na occurs elsewhere.

/1/ * i) \( \text{ā}^{\text{ṛ}} \) lda occurs finally in certain words in old texts.

ii) \( \text{ā}^{\text{ṛ}} \) la occurs elsewhere.

4.2.7 Representation of /č/ and /chè/

/č/ is represented mostly by a single graph \( \text{ṭ}^{\text{ṛ}} \) ča. It is also written in some words by combining two different graphs, i.e., \( \text{ṭ}^{\text{ṛ}} \) čwa, \( \text{ṭ}^{\text{ṛ}} \) pya, and \( \text{ṭ}^{\text{ṛ}} \) bya in

\[ \text{ਨੰਦਿ} \quad /\text{kund} / \quad \text{all} \]

\[ \text{ਨੰਦੀ} \quad /\text{ṣərd} / \quad \text{east} \]

\[ \text{ਲਾਲੀ} \quad /\text{pha-rold} / \quad \text{phə-rol/} \]
certain words; the allographs 葭 and 葭 of wa and ya are written at the bottom of the symbols 柾,  Ça, 𢱱 pa and 𢱳 ba. The aspirated form of this affricate /çh/ is represented by a single graph 𢱲 cha and also by combining the graphs of 𢱲 pha and 𢱳 ya i.e. 𢱲 phya; the allograph 葭 of ya is written at the bottom of the symbol for pha.

4.2.8. Representation of Retroflex Phonemes:

The retroflex consonants /t, th, d th, s/ are represented by shapes, which are formed by joining two different graphs representing other consonants as given in the list. This composite graph in each case represents a single phoneme. All composite graphs representing these phonemes are listed below.
The symbol ㊙ ra before ka, ぴ a, ta, ɲ a and symbol 

キュ la before ka, ɲ a, the symbol of apia da before pa

represent /s/, the graphic sequence mra represents /sm/. These are listed below:

اوية rka /sk/

اوية lka /sk/

اوية rña /ʃŅ/

اوية lña /ʃo/

اوية rta /ʃ/

جزيرة dpa /ʃ/

اوية rña /ʃη/  

جزيرة mra /sm/

(i) Symbol 逶 ta, 逶 tha, 逶 da

are the reversed shapes of the graphs representing the dental consonants i. e. 逶 ta, 逶 tha, 逶 da

Likewise the symbol 逶 sa is the reverse shape of the symbol for palatal fricative _permsay sa. The reverse shape
of dental nasal  

is used in the script for retro-

flex nasal in Sanskrit loanwords, but is pronounced as dental nasal.

These reversed symbols represent the retroflex consonants [ɾ], [ʈʰ], [ɖ] and [ʂ] respectively in Sanskrit loanwords only.

(ii) The three composite graphs used for writing /t/ are formed by joining the graphs of  

with the symbol for  

The allograph  of grapheme  is used as the constituent element and placed at the bottom of the above consonant symbols.

(iii) The three composite graphs for writing /d/ are formed by joining the graph of voiced stops  

with the allograph  of the grapheme  which is placed at the bottom of these graphs.
(iv) a) Ladakhi has three composite graphs for writing /š/. These graphs are formed by writing the symbol used for

\[ \text{sa, ha, ša} \] plus the allograph of the grapheme \( \text{ra} \), which is placed at the bottom of these graphs, as given here:

\[
\begin{align*}
/s/ & \quad \text{sa} + \text{ra} = \text{sra} \\
        & \quad \text{ha} + \text{ra} = \text{hra} \\
        & \quad \text{ša} + \text{ra} = \text{šra} \\
\end{align*}
\]

b) /š/ in clusters /šk, šn, šm/, is represented by the allograph of the grapheme \( \text{ra} \), which is placed at the top of the individual consonant symbol. In writing /šn/ the phoneme /š/ is represented by the allograph of the grapheme \( \text{ra} \) and is put at the top of the symbol for /n/.

\[
\begin{align*}
/šk/ & \quad \text{ra} + \text{ka} = \text{rka} \\
\end{align*}
\]
\[ /s/ \quad \underline{\text{r}}_a + \underline{\text{n}}_a = \underline{\text{r}}_a \]

\[ /s/ \quad \underline{\text{r}}_a + \underline{\text{n}}_a = \underline{\text{r}}_a \]

\[ /s/ \quad \text{in cluster} /s/\text{m/ is also represented by the combination of} \]

\[ \underline{\text{a}}_m + \underline{\text{r}}_a, \text{and the allograph} \eta \text{ of} \underline{\text{r}}_a \]

\[ \text{is placed at the bottom, i.e.,} /s/\text{m/} = \underline{\text{a}}_m + \underline{\text{r}}_a \]

\[ /s/ \text{in clusters} /s/\text{k,} /s/\text{g/ is also represented by the symbol} \underline{\text{l}}_a \text{representing} /l/ \text{in the script and it is written at the top. Thus while} /s/\text{k/ can be written as} \]

\[ \underline{\text{r}}_a + \underline{\text{r}} \text{ka in certain words, it is also represented as} \]

\[ \underline{\text{l}}_a + \underline{\text{r}} \text{ka} \underline{\text{l}}_k \text{ka in some other words;} \]
similarly while /ŋ/ is written as ᶙ ra + ᵡ na /ŋ/

in certain items, it is also written as ᶜ la + ᵡ na = ᵤ a ya in some other items.

d) /ʃ/ in the cluster /šm/, is written as ᵨ ma + ᶙ ra the allograph \ of the grapheme ᶙ ra is placed at the bottom i.e. ᶙ ma + ᶙ ra = ᵤ a /šm/

e) /ʃ/ in the cluster /sp/, is represented by the grapheme ᶜ da, e.g. for writing /d/ as ᶜ da + ᵟ pa = ᶜ pa /sp/; in such cases ᶜ da is written before ᶜ pa

In certain regions, it is in free variation with /sp/, but still written as ᶜ pa

f) The cluster /rt/ is represented by writing the allograph \ of the grapheme ᶙ ra at the top of the symbol for
It may however be noted that due to the free variation of 
\( /r/ \sim /s/ \) before \( \text{ा} \), this also represents \( /sa/ \) in \( /st/ \).

4.2.9. **Representation of \( /i/ \)**

\( /i/ \) is represented by six different composite graphs, which are combinations of two different graphs as shown in the following table.

\[
\begin{align*}
/\text{i}/ & \quad [i] \\
\text{ा} \cdot \text{la} + \text{ह} \cdot \text{ha} & = \text{व} [i] \\
\text{क} \cdot \text{ka} + \text{ल} \cdot \text{la} & = \text{र} [i] \\
\text{ग} \cdot \text{ga} + \text{ल} \cdot \text{la} & = \text{व} [i] \\
\text{ब} \cdot \text{ba} + \text{ल} \cdot \text{la} & = \text{र} [i] \\
\text{र} \cdot \text{ra} + \text{ल} \cdot \text{la} & = \text{व} [i] \\
\text{स} \cdot \text{sa} + \text{ल} \cdot \text{la} & = \text{व} [i]
\end{align*}
\]
In & la, the symbol for la is written at the top and the symbol for ha at the bottom. In all other cases the symbol for la is written at the bottom as shown in the table. In all the six cases the full shapes of both the symbols are written.

4.2.10. The phonetic value of ba, da, ga, ma in certain absolute initial letter-sequences as given below is zero (except in the case of dpa which represents /sp/n/sp/)

The sequences are given below:

i) ba [b] before ka [k], ga [g],
   rga [ro], ca [c], rja [rj],
   sā [s], ta [t], sna [sn],
   rtsa [rτ], ža [z], za [z],
   ša [š], sa [s];
ii) अः ga before दः ča [č], ऋः ūa [ũ], हः ta [t], ऋः da [d], ऐः na [n], ऋः tsa [ts], ऐः ža [ž], ऋः za [z], नः ya [y], नः śa [ś], नः sa [s];

iii) ऋः da [d] before दः ka [k], अः ga [g], ऋः na [n], ऋः ba [b], नः ma [m], नः pa [p]

iv) ऐः ma [m] before दः kha [kh], ऑः ga [g], ऋः na [n], ऑः čha [čh], ऑः ja [j], ऑः ūa [ũ], ऑः la [th], ऑः da [d], ऑः na [n], ऑः tša [tš], ऑः dza [da].
It may however be noted that the words written with these graph sequences intitally have a different meaning than those in which the graphs of ba, da, ga, ma are not written. Thus homo-phonoous items with different meanings are represented differently in the script; one with these graphs and the other without.

**Examples**

(i)  

\[ \text{b-\epsilon-} \]

\[ बारी \quad /kə/ \quad \text{‘order’} \quad : \quad फा \quad /kə/ \quad \text{‘pillar’} \]

\[ \text{b kə} \quad \text{ka} \]

\[ गोरी \quad /gos/ \quad \text{‘distribute’ (imp.)} \quad : \quad गोरी \quad /gos/ \quad \text{‘long coat’} \]

\[ \text{b go s} \quad \text{gos} \]

\[ ले \quad /sə̃/ \quad \text{‘(to) cut, reap’} \quad : \quad ले \quad /sə̃/ \quad \text{‘a round drum’} \]

\[ \text{b rə} \quad \text{sə̃} \]
*  b ću  /cu/  ‘ten’  :  ṟi  /cu-li/  ‘apricot’

b ću-li

b sūe-byēs  sūe-ma

b sūe-ma

b tiŋ

b tiŋ

b tiŋ

b dēg

b dēg
/snam/ 'to take (hon.)': /snam-bu/ 'woollen'

/rtsε-ba/ 'love': /rtsε/ 'peak'

/żi/ 'four': /żi/ 'peace'

/zæɾ/ 'dripping of water from a wet cloth, over flow': /żæɾ/ 'a rake to remove rubbish'
(i) \(\text{āvga}\) \(/\text{sups}/\) ‘(to) whisper’

\(\text{vga}\) \(/\text{sups}/\) ‘cover’

(ii) \(\text{d}-- \phi--\)

\(\text{ga}\) \(/\text{kə}/\) ‘difficult’

\(\text{ka}\) \(/\text{kə}/\) ‘pillar’
LADAKHI SCRIPT

- 'a little'
- 'you (hon.)'
- 'small bowl used for worship'
- 'right'

\[ \text{cik} \]  
\[ \text{nit} \]  
\[ \text{tjo} \]  
\[ \text{dam} \]

- 'one'
- 'sleep'
- 'depth'
- 'mud'

\[ \text{d} \]  
\[ \text{m} \]  
\[ \text{p} \]  
\[ \text{g} \]
Ladakhi Phonetic Reader

necessary (literary): नेत्र /nət/ 'sick' /nət/

g_ n_ d

monastery, university: त्सु_लौक_खेन /tsu-lɔk-khen/ 'pierce' /tsuk/

g_ tṣu_ g_ k_ hə

background: झिं /ži/ 'peace' /ži-ba/

ɡ_ ži

form, shape: झुक /zuks/ 'pierced' /zuks/

ɡ_ zu_ ɡ_ s

'village'
yul

'monk's room'
šek

'yellow'
ser

'mouth'
khā

'war (literary)':
yul

'(to) cut into pieces, (to) operate'
šek
g s g

'gold',
ser
g s r

'sky'
khā


\begin{itemize}
  \item \text{go} /\text{go}/ \quad \text{‘head’} \quad : \quad \text{\textbullet} \quad /\text{go}/ \quad \text{‘(to) understand’}
  \item \text{m go} \quad \text{go}
  \item \text{gor} /\text{gor}/ \quad \text{‘sweet’} \quad : \quad \text{\textbullet} \quad /\text{gor}/ \quad \text{‘enthusiasm’}
  \item \text{m gor} \quad \text{gor}
  \item \text{chon} /\text{chon}/ \quad \text{‘correction’} \quad : \quad \text{\textbullet} \quad /\text{chon}/ \quad \text{‘a kind of food, barley cooked in the form of soup’}
  \item \text{m chon} \quad \text{chon}
  \item \text{am-po} /\text{am-po}/ \quad \text{‘with’} \quad : \quad \text{\textbullet} \quad /\text{am-thak}/ \quad \text{‘poor’}
  \item \text{m am-po} \quad \text{am-po}
  \item \text{\textbullet} \quad /\text{\textbullet}/ \quad \text{‘g’}
\end{itemize}
'big hammer'

'duŋ'

'big conch shell'

'nɐn- tàn'

'certain'

'tʃes|'

'date'

'lo| press, bury'

'nɐn|'

'sPEAR'

'tʃes|'

'neighbour'

'khɐm| tʃes|'

'khɐm-m-tʃes|'

'naŋ|'

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4.2.11 In certain items the graphic sequence \( \text{db}^- \) occurring initially before \( u \) has a zero phonetic value, e.g.,

\[ \text{d bu g s} \]

\[ /\text{k}\text{s}/ \quad \text{‘breath’} \]

In certain items three graph sequences are written in the beginning, and the first two of such graphs have zero phonetic value. Such cases are of \( \text{dby}^- \) which corresponds with \( /\text{y}^-/ \) e.g.,

\[ \text{d by r} \]

\[ /\text{yr}/ \quad \text{‘summer’} \]

\[ \text{d by g s} \]

\[ /\text{y}\text{gs}/ \quad \text{‘tune’} \]

\[ \text{d by i b s} \]

\[ /\text{y}\text{ps}/ \quad \text{‘form, shape’} \]
4.3. **Clusters**:

In previous sections all those cases have been discussed wherein a graph sequence or a composite graph (consisting of two or more symbols) represents one phoneme in Ladakhi.

Now the representation of consonant clusters of two or more consonant phonemes in the Ladakhi writing system will be discussed.

In Ladakhi most of the clusters are of two consonants and occur in the initial and final of the syllables. In most cases of initial clusters the graph representing the second consonant is written at the bottom of the graph for first consonant. The final clusters are written in linear sequence. The allographs and sequencing of the symbols in individual cases will be discussed in detail in this section. The following initial clusters occur in the language:

i) /k, kh, g + y/

ii) /ñ + y/

iii) /s + p, t, k, m, n, ñ, ŋ/

iv) /z + b, d, g/

v) /s + t, k, n. ñ, ŋ/ 

vi) /r + b, t, d, g, ŋ, tʃ, ʒ, dʒ/

vii) /l + p, t, d, ć, ʒ, z, g/

It may be noted that sometimes the same consonant phoneme is represented by two different graphs. The details of the graphic representation of all the clusters is given below.
i) When $\text{y}$ is the second members of the conjunct it is represented by the symbol $\text{y}$ which is written below the first consonant, the first consonant is written in its full shape.

\[\text{ky-} : \begin{array}{c}
\text{y} \\
\text{k}
\end{array} + \begin{array}{c}
\text{y} \\
\text{y}
\end{array} = \begin{array}{c}
\text{y} \text{y} \\
\text{y}
\end{array}\
\]

\[\text{kh} : \begin{array}{c}
\text{y} \\
\text{kh}
\end{array} + \begin{array}{c}
\text{y} \\
\text{y}
\end{array} = \begin{array}{c}
\text{y} \\
\text{y}
\end{array} \\ 
\text{y}
\]

\[\text{gy-} : \begin{array}{c}
\text{y} \\
\text{g}
\end{array} + \begin{array}{c}
\text{y} \\
\text{y}
\end{array} = \begin{array}{c}
\text{y} \\
\text{y}
\end{array} \\ 
\text{y}
\]

ii) $/\text{n}+\text{y}/$. The phoneme $/\text{n}/$ is represented by $\text{n}$. The partial shape $\text{y}$ of $\text{y}$ is added at the bottom of the symbol.

\[\text{ny} : \begin{array}{c}
\text{n} \\
\text{y}
\end{array} + \begin{array}{c}
\text{y} \\
\text{y}
\end{array} = \begin{array}{c}
\text{n} \\
\text{y}
\end{array} \\ 
\text{y}
\]

iii) $\text{ja}$ graph as the first member of the conjunct is written in its full shape; the second consonant which is written at the bottom of the first one is also in its full shape.
iv) /z/ phoneme is represented in the script by the grapheme ʂ as the first member of the conjunct to which the full shape of the second is written below the first.
\[ /zd/ : \text{\text{\text{\text{\text{}}} + \text{\text{\text{\text{}}} = \text{\text{\text{}}}} \]

\[ /zg/ : \text{\text{\text{\text{}}} + \text{\text{\text{}}} = \text{\text{\text{}}}} \]

v) \[ /s/ \text{ as the member is represented by } \text{\text{\text{}}} \text{ in the conjunct.} \]

\text{Its full shape } \text{\text{\text{}}} \text{ is used before } \text{\text{\text{}}} \text{, elsewhere only its partial shape is used.}

\[ /st/ : \text{\text{\text{}}} \text{ + \text{\text{}}} \text{ = \text{\text{}}}} \]

\[ /sk/ : \text{\text{\text{}}} \text{ + \text{\text{}}} \text{ = \text{\text{}}}} \]

\[ /sm/ : \text{\text{\text{}}} \text{ + \text{\text{}}} \text{ = \text{\text{}}}} \]

\[ /sn/ : \text{\text{\text{}}} \text{ + \text{\text{}}} \text{ = \text{\text{}}}} \]

\[ /sn/ : \text{\text{\text{}}} \text{ + \text{\text{}}} \text{ = \text{\text{}}}} \]

\[ /sn/ : \text{\text{\text{}}} \text{ + \text{\text{}}} \text{ = \text{\text{}}}} \]
/ʃ/ in cluster /ʃk/ in certain items is also represented by a composite graph ky, e.g.

/ʃk/ : ʃ + ʢ k + ʢ y = ʢ

It may be mentioned that /ʃ/ in /s/ can also be written by the graph ʢ l; in such cases full shapes of both the graphs are written, the second being written below the first.

/ʃk/ : ʢ l + ʢ k = ʢ

In writing the cluster /ʃm/ in certain items the symbol ʃ r representing /ʃ/ is written at the bottom of ʢ m.

/ʃm/ : ʃ r + ʢ m = ʢ

/ʃ/ in /sŋ/ is represented by the graph ʢ l. Both the graphs are written in their full shapes, the second graph being written below the first one.

/ʃŋ/ : ʢ l + ʢ n = ʢ
vi) /r/ as the first member of the conjunct is represented by the allograph ʁ. The graph representing the second consonant is placed at the bottom of the first one.

\[
\begin{align*}
/rb/ & : ʁ \cdot r + ʁ b = ʁ b \\
/rt/ & : ʁ \cdot r + ʁ t = ʁ t \\
/rd/ & : ʁ \cdot r + ʁ d = ʁ d \\
/rg/ & : ʁ \cdot r + ʁ g = ʁ g \\
/rj/ & : ʁ \cdot r + ʁ j = ʁ j \\
/rtʃ/ & : ʁ \cdot r + ʁ tʃ = ʁ tʃ \\
/rdʒ/ & : ʁ \cdot r + ʁ dʒ = ʁ dʒ
\end{align*}
\]

/r/ in the cluster /rtʃ/ is also represented by the graph ʁ at

in some words:

\[
\begin{align*}
/rtʃ/ & : ʁ \cdot ʁ + ʁ tʃ + ʁ \cdot s
\end{align*}
\]
In certain words, in cluster /rb/, /r/ is also represented by әә I and әә b is written at bottom of әә I.

/rb/ әә I + әә b = әә

vii) /l/ as the first member of the conjunct is always written in its full shape. The graph for the second member is also written in its full shape and is added below the first one.

/lp/ әә l + әә p = әә

/1t/ әә l + әә t = әә

/1d/ әә l + әә d = әә

/1c/ әә l + әә c = әә

/1y/ әә l + әә j = әә

/1z/ әә l + әә z = әә

/1g/ әә l + әә g = әә

In the cluster /1z/, әә l is written at the bottom of әә z.

/1z/ әә z + әә l = әә
There are only three initial three-consonant clusters in Ladakhi /sky/, /rgy/, and /sky/.

/sky/ : Զ ɾ + Դ ɾ + ױ ɾ = Դ

/rgy/ : ڑ ɾ + ګ ɾ + ױ ɾ = ګ

/sky/ : ڑ ɾ + Դ ɾ + ױ ɾ = Դ

The following clusters occurring in the numerals are written as follows,

/pč/ : ɾ ɾ + ԁ ɾ = ԁ

/kš/ : ګ ɾ + ԁ ɾ = ګ

/ks/ : ګ ɾ + ԁ ɾ = ګ

/kŋ/ : ګ ɾ + ȵ ɾ = ȵ

/bd/ : ɾ ɾ +  |_| =  |_|

/bz/ : ɾ ɾ +  |_| =  |_|

/rg : ɾ ɾ +  |_| =  |_|
It is clear from the above that grapheme b is pronounced as [p] before [č]. Grapheme g is pronounced as [k] before [s, š, ų].

It is important to mention that all these graphic sequences represent two consonant cluster phonemically only when they occur after an open syllable, when these clusters occur in the absolute initial of a numeral item the first graphs of all the above seven sequences have zero phonetic value, i.e., they are not pronounced.

**Examples**

\[\text{b} \, \text{ču} \]
\[\text{b} \, \text{ži-bču} \]
\[\text{g} \, \text{či} \, \text{g} \]

/brgy/: \[\text{b} + \text{č} + \text{g} + \text{y} = \text{čbg} \]

/ču/: \[\text{ču} \, \text{bču} \, \text{čik} \, \text{ču-gšik} \]

'ten': \[\text{bču} \, \text{ži-bču} \, \text{čik} \, \text{ču-gšik} \]

'forty': \[\text{ču} \, \text{ži-bču} \, \text{čik} \, \text{ču-gšik} \]

'eleven': \[\text{bču-gči} \, \text{bču-gšik} \]
<table>
<thead>
<tr>
<th></th>
<th>LADAKHI PHONETIC READER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>'twelve'</strong></td>
<td>cu-gnis</td>
</tr>
<tr>
<td><strong>'seventeen'</strong></td>
<td>cu-bdun</td>
</tr>
<tr>
<td><strong>'fourteen'</strong></td>
<td>cu-bzi</td>
</tr>
<tr>
<td><strong>'nineteen'</strong></td>
<td>cu-rgu</td>
</tr>
<tr>
<td><strong>'two'</strong></td>
<td>b cu-gnis</td>
</tr>
<tr>
<td><strong>'seven'</strong></td>
<td>b cu-bdun</td>
</tr>
<tr>
<td><strong>'four'</strong></td>
<td>b cu-bzi</td>
</tr>
<tr>
<td><strong>'nine'</strong></td>
<td>b cu-rgu</td>
</tr>
<tr>
<td><strong>'fi'</strong></td>
<td>fi</td>
</tr>
<tr>
<td><strong>'dun'</strong></td>
<td>dun</td>
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<td><strong>'zi'</strong></td>
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<tr>
<td><strong>'gu'</strong></td>
<td>gu</td>
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<td><strong>g fi s</strong></td>
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<tr>
<td><strong>b du n</strong></td>
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<tr>
<td><strong>b zi</strong></td>
<td></td>
</tr>
<tr>
<td><strong>dgu</strong></td>
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</tbody>
</table>
Final clusters

There is only one graph which occurs as the second member of the final clusters with /p/, /m/, /k/, /t/, /n/, /ŋ/ /r/ and /l/ as first members.

 payable

‘covers’

‘border’
/ks/  ག + བྱ : ས /toks-po/ 'friend'

/qs/  བ + བྱ /tshigs-po/ 'brahmin'

tsh ṭ s pa

/ts/  ཆ + བྱ ས /di-dzays/ 'wrote (honourific)'

bri m dz d s

/ns/  ག + བྱ : ས /tens/ 'applied fomentation'

sl m s
4.4. The above description of the Ladakhi script makes it evident that it has a certain amount of variations and irregularities in terms of phonemic equivalences of the symbols. Such irregularities are of three types:

(i) Certain symbols are written in the script but have zero phonemic status. However, sometimes the writing of these symbols in certain lexical items marks a difference in meaning (see sections 4.2.1, 4.2.10).

(ii) One phoneme is represented by more than one symbol and the occurrences of such symbols are predictable only in terms of specific lexical items.
(iii) One symbol is used for representing more than one phoneme. In such cases also the symbol is predictable only in terms of occurrences of specific lexical items.

For the purpose of unambiguous representation of Ladakhi sounds in the writing system, it will be necessary to affect some modifications in the script; so that each phoneme is represented by one and only one symbol unambiguously.

4.5. Punctuation Convention:

(i) In Ladakhi, a small dot (.) after the grapheme placed in linear position indicates the syllabic boundary; it is called in Ladakhi /ʂət/ ने, e.g.

\[ \text{ने} /\text{nə}\text{}/ \text{‘inside, room’} \]

\[ \text{क्षर्पा} /\text{khər-pə}/ \text{‘house’} \]

It may be noted that syllabic boundary is marked even before pause, thus in a two-letter sequence which is one syllable, the inherent a of the second letter is never pronounced. Likewise in a three-letter sequence which represents one syllable the inherent vowel a of the second as well as the third letter is not pronounced, e.g.

\[ \text{स्मा} /\text{sma}/ \text{मत्स}/ /\text{kə}s/ \]

(ii) The small circle at the bottom of the grapheme marks the lack of the inherent vowel, a, this is analogous to Devanagari halant. However it is used only in the books written for the children, e.g.
The syllable boundary marking dot \( \cdot \) is not marked when a vowel is written after an open syllable. Thus \([\text{mi-i}]\) is represented as \( \text{nīr} \text{~ mi-i} \). It is clear that syllable marking dot \( (.) \) is not put after \( \text{mi} \), although it is a syllable. Such cases occur when the suffixes \( -i \) and \( -e \) are added to open syllabic items.

Full-stop is indicated by a vertical line after a sentence, but if the final graph has a vertical line the full-stop is not marked, e.g.

1. \( \text{rāgza} \text{~ nīgā} \) /i-bo-\text{ge-yin}/ "this is my house"

but

2. \( \text{rāgza} \text{~ nīgā} \) /kho-\text{ge-duk}/ "he is in the house"

Last graph in the second sentence has a vertical line, thus full-stop is not marked with another vertical line as in the sentence 1. above.

In poetry it is indicated by two vertical lines and between these two vertical lines a little space is left \( || \), but if the final graph has a vertical line then only one vertical line is used to mark a full-stop, e.g.
'beautiful and gay time of summer has come'
'at the feet of the mountain the greenary is danging'

At the end of the chapter, story or at the completion of a poem four lines are used to mark the full-stop, between the first two lines there is a very little gap and then some space is left and then two lines are written, e.g.  

If the final graph has a vertical line then this full-stop is marked with three lines; one line is written and after the space two more lines are written i.e.,  

'vent created by the Guru (teacher) Anu (name) is finished'
but .......................... ऑज्जिसिनक्क

........................[tə-śis-ś.n.k]  ‘Mangal be’

(v) A syllable is not divided between two successive lines, i.e., a bi-letter syllable has to be written in the same line. In case a sentence is not completed in one line, a syllable or a sequence thereof is written in the following line and the full-stop marks this phenomenon by placing a dot above the vertical line,

\[\text{रागीर्गुयुनर्कण्येनमें}\]

[ṛe-lə-rgyu-nər-kəŋ-yen-met]

‘I do not have any money and property’

(vi) If the word has a cluster in the final position, and there is no space in the line, instead of writing the syllable in the next line the cluster is written differently.

a) ज्ञिष्ठ [ks] at the end of a line may be alternatively written as झा, this is the reverse shape of ह [t], e.g.

\[\text{दूधिर्मा} \sim \text{दूर्दा}\]

dogs \sim\text{ do t reverse}  [t.n.ks]  ‘friend’
b) In case of [ms] མེ་ cluster in the final position, if there is no space to write the two graphs, then a small circle is placed at the top of the preceding grapheme; and its phonetic value is མ, but in Sanskrit loan words its phonetic value is [], e.g.

\[\text{་མེ་} \sim \text{་མེ} \quad \text{[ms]} \quad \text{‘plural’} \]

\[\text{་མེ་} \sim \text{་མེ} \]

\[\text{[huŋ]} \quad \text{(skd.)} \]

\[\text{hου} \]

(c) However, in all other clusters at the end of a line if there is no space to write two symbols in linear succession, the symbol for [s] is written at the bottom of the preceding symbol, e.g.

\[\text{ལི་དུམས་} \sim \text{ལི་དུམ} \quad \text{[lo-diks]} \quad \text{‘Ladakh’} \]

\[\text{ལི་དུམ} \sim \text{ལི་དུམ} \]

or the full syllable is written in the next line.

vii) a) In case of inadvertant omission of the second consonant of the cluster it can be written at the bottom of the first consonant symbol.
b) If one letter is omitted while writing that graph is written at the bottom of that line and not above as in Roman, Devanagari, etc., e.g.

\[ \text{[y.n.n-t.@ n-z@.s-p ə-ser-yin]} \]

'knowledge is like gold'

or

\[ \text{[y.n.n-tən-ʒ@es]} \]

4.6. **Handwriting**:

Ladakhi alphabet like some other alphabets has different shapes of letters when they are handwritten and when they are printed. The shapes of Ladakhi letters described up to this time are the printed ones. The handwritten forms in slow and fast writing are given below. Ladakhi being a syllabic language and the writing system also being syllabic the symbols given below represent consonants as well as consonants plus matras. The order of presentation here follows the traditional arrangement.
Hand-Writing

Slow  Fast

\[ ka \]

\[ ki \]

\[ ku \]

\[ ke \]

\[ ko \]

\[ kha \]
LADAKHI SCRIPT

Slow

Fast

[khi]

[khu]

[khe]

[kho]

[ga]

[gi]
Slow

[gu]

[ge]

[go]

[na]

[gi]

[gu]
<table>
<thead>
<tr>
<th>Solw</th>
<th>Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td>[tu]</td>
<td></td>
</tr>
<tr>
<td>[te]</td>
<td></td>
</tr>
<tr>
<td>[to]</td>
<td></td>
</tr>
<tr>
<td>[thu]</td>
<td></td>
</tr>
<tr>
<td>[thi]</td>
<td></td>
</tr>
<tr>
<td>[thu]</td>
<td></td>
</tr>
</tbody>
</table>
Slow

Fast

[the]

[tho]

[da]

[di]

[du]

[de]
Slow

[pə]

[pʰə]

[pʰə]
<table>
<thead>
<tr>
<th></th>
<th>Slow</th>
<th>Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>ϕ</td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Ψ</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td>ρ</td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td>ϝ</td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
<tr>
<td>ο</td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
</tr>
<tr>
<td>β</td>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
</tr>
<tr>
<td>γ</td>
<td><img src="image15.png" alt="Image" /></td>
<td><img src="image16.png" alt="Image" /></td>
</tr>
<tr>
<td>θ</td>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
</tr>
<tr>
<td>ι</td>
<td><img src="image19.png" alt="Image" /></td>
<td><img src="image20.png" alt="Image" /></td>
</tr>
<tr>
<td>Slow</td>
<td>Fast</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td></td>
</tr>
</tbody>
</table>
| अ | अ | ।
| [mo] | ।
| त्त | त्त | ।
| [tsa] | ।
| त्छ | त्छ | ।
| [tsi] | ।
| त्स | त्स | ।
| [tsu] | ।
| त्सू | त्सू | ।
| [tse] | ।
| त्सै | त्सै | ।
| [tso] | ।
<table>
<thead>
<tr>
<th>Slow</th>
<th>Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td>[tsha]</td>
<td>[tsha]</td>
</tr>
<tr>
<td>[tshi]</td>
<td>[tshi]</td>
</tr>
<tr>
<td>[tshu]</td>
<td>[tshu]</td>
</tr>
<tr>
<td>[tshe]</td>
<td>[tshe]</td>
</tr>
<tr>
<td>[tsho]</td>
<td>[tsho]</td>
</tr>
<tr>
<td>[dza]</td>
<td>[dza]</td>
</tr>
</tbody>
</table>
Slow

Fast

[dzi]

[dzu]

[dze]

[dzo]

[wa]

[wi]
<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Pronunciation</th>
<th>Slow</th>
<th>Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td>ཙ</td>
<td>[wu]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ཉ</td>
<td>[we]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ཊ</td>
<td>[wo]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ཋ</td>
<td>[za]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ཌ</td>
<td>[zi]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ཌྷ</td>
<td>[zu]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Slow

Fast


I.

PHONETIC

Slow

Fas

[ru]

[re]

[ro]

[la]

[li]

[lu]
Slow

East
Clusters written in the script representing single phoneme or two phonemes, with _matra_ as well as without _matra_ are written as follows:
Slow

Fast
<table>
<thead>
<tr>
<th>Solw</th>
<th>Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td>[so]</td>
<td>[st]</td>
</tr>
<tr>
<td>[skɔ]</td>
<td>[sk]</td>
</tr>
<tr>
<td>[ski]</td>
<td>[sk]</td>
</tr>
<tr>
<td>[sku]</td>
<td>[sk]</td>
</tr>
<tr>
<td>[ske]</td>
<td>[sk]</td>
</tr>
<tr>
<td>[sko]</td>
<td>[sk]</td>
</tr>
<tr>
<td>Slow</td>
<td>Fast</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>![skā]</td>
<td>![skā]</td>
</tr>
<tr>
<td>![lki]</td>
<td>![lku]</td>
</tr>
<tr>
<td>![lke]</td>
<td>![lko]</td>
</tr>
<tr>
<td>![skā]</td>
<td>![skā]</td>
</tr>
<tr>
<td>Slow</td>
<td>Fast</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>[tu]</td>
<td></td>
</tr>
<tr>
<td>[le]</td>
<td></td>
</tr>
<tr>
<td>[io]</td>
<td></td>
</tr>
<tr>
<td>[ka]</td>
<td></td>
</tr>
<tr>
<td>[ki]</td>
<td></td>
</tr>
<tr>
<td>[ku]</td>
<td></td>
</tr>
</tbody>
</table>
The small dot indicating the syllable boundary, and full-stop in poetry and prose in slow and fast hand-writing are as follows:

<table>
<thead>
<tr>
<th>Slow</th>
<th>Fast</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="ka.png" alt="ka.png" /></td>
<td><img src="ka_fast.png" alt="ka_fast.png" /></td>
</tr>
<tr>
<td><img src="ki.png" alt="ki.png" /></td>
<td><img src="ki_fast.png" alt="ki_fast.png" /></td>
</tr>
<tr>
<td><img src="ku.png" alt="ku.png" /></td>
<td><img src="ku_fast.png" alt="ku_fast.png" /></td>
</tr>
<tr>
<td><img src="ke.png" alt="ke.png" /></td>
<td><img src="ke_fast.png" alt="ke_fast.png" /></td>
</tr>
<tr>
<td><img src="ko.png" alt="ko.png" /></td>
<td><img src="ko_fast.png" alt="ko_fast.png" /></td>
</tr>
</tbody>
</table>
DOT FOLLOWED BY FULL STOP:

The dot indicating syllable boundary followed by the fullstop is omitted in slow and fast hand-writing; it is written only after [ŋ]

Full stop is written after the grapheme which has vertical line, but in hand writing the straight parpenditicular nature of this line is not maintained and is replaced by symbols shown below:

Slow Fast

[ŋi] [ŋi] [ŋi]
47. **System of Devanagari Symbols for Ladakhi**

For writing Ladakhi language in Devanāgari script, the following system together with equivalent Ladakhi symbols and phonemic values is suggested.

(a) **Ladakhi Alphabets**

<table>
<thead>
<tr>
<th>Devanagari</th>
<th>Ladakhi</th>
<th>Phonic Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>क</td>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td>क्ष</td>
<td>kh</td>
<td>kh</td>
</tr>
<tr>
<td>ग</td>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>ङ</td>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>च</td>
<td>cch</td>
<td>j</td>
</tr>
<tr>
<td>छ</td>
<td>ch</td>
<td>j</td>
</tr>
<tr>
<td>ज</td>
<td>j</td>
<td>j</td>
</tr>
<tr>
<td>झ</td>
<td>jh</td>
<td>j</td>
</tr>
<tr>
<td>ध</td>
<td>dh</td>
<td>n</td>
</tr>
<tr>
<td>त</td>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>थ</td>
<td>th</td>
<td>d</td>
</tr>
<tr>
<td>द</td>
<td>d</td>
<td>n</td>
</tr>
<tr>
<td>न</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>प</td>
<td>p</td>
<td>b</td>
</tr>
<tr>
<td>फ</td>
<td>ph</td>
<td>b</td>
</tr>
<tr>
<td>ब</td>
<td>b</td>
<td>m</td>
</tr>
<tr>
<td>म</td>
<td>m</td>
<td>m</td>
</tr>
</tbody>
</table>
(b) **Primary Vowel Symbols**

<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic</th>
<th>Devanāgari</th>
</tr>
</thead>
<tbody>
<tr>
<td>ल</td>
<td>o</td>
<td>ओ</td>
</tr>
<tr>
<td>इ</td>
<td>i</td>
<td>ई</td>
</tr>
<tr>
<td>आ</td>
<td>ə</td>
<td>ए</td>
</tr>
<tr>
<td>उ</td>
<td>ɔ</td>
<td>उ</td>
</tr>
</tbody>
</table>

(c) **Secondary Vowel Symbols**

Matras as placed on consonants in the Ladakhi script and as suggested for Naṅgarī are as follows:
### Examples

<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic</th>
<th>Nagari</th>
</tr>
</thead>
<tbody>
<tr>
<td>ख़</td>
<td>i</td>
<td>ʢ</td>
</tr>
<tr>
<td>ख़</td>
<td>e</td>
<td>ʣ</td>
</tr>
<tr>
<td>ख़</td>
<td>o</td>
<td>ʔ</td>
</tr>
<tr>
<td>ख़</td>
<td>u</td>
<td>ʃ</td>
</tr>
</tbody>
</table>

ki ke ko ku
कि के को कु

(d) Other Consonant Symbols
<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic</th>
<th>Nāgarī</th>
</tr>
</thead>
<tbody>
<tr>
<td>བ</td>
<td>th</td>
<td>ྣ</td>
</tr>
<tr>
<td>ད</td>
<td>པ</td>
<td>ྦ</td>
</tr>
<tr>
<td>ར</td>
<td>ཆ</td>
<td>ྡྷ</td>
</tr>
</tbody>
</table>
Consonant clusters may be represented in the usual Devanagari manner either by conjoining the two symbols following the traditional rules or by marking the non-final consonant of the clusters by halant. Examples are as follows:
<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic</th>
<th>Nāgari</th>
</tr>
</thead>
<tbody>
<tr>
<td>ལེ</td>
<td>ska</td>
<td>མ or ག ོ</td>
</tr>
<tr>
<td>སྐ</td>
<td>sge</td>
<td>ཡ or ཆ ོ</td>
</tr>
<tr>
<td>སུ</td>
<td>shi</td>
<td>ར or ལ ོ</td>
</tr>
<tr>
<td>བྷི</td>
<td>sto ~ ste</td>
<td>བ ག or ལ ོ or ལ ོ</td>
</tr>
<tr>
<td>སྐོ</td>
<td>spe</td>
<td>བ ོ or ལ ོ</td>
</tr>
<tr>
<td>སྨོ</td>
<td>sma</td>
<td>བ ོ or ལ ོ</td>
</tr>
</tbody>
</table>
4.8. System of Perso-Arabic Symbols for Ladakhi

(a) Ladakhi Alphabets

(k k)  (g n)

(ç ch)  (j ñ)

(t th)  (d n)
(b) **Primary Vowel Symbols**

<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic Value</th>
<th>Perso-Arabic Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ड़</td>
<td>h</td>
<td>ى</td>
</tr>
<tr>
<td>ढ़</td>
<td>i</td>
<td>ى</td>
</tr>
<tr>
<td>ण़</td>
<td>e</td>
<td>ى</td>
</tr>
<tr>
<td>त़</td>
<td>o</td>
<td>ى</td>
</tr>
<tr>
<td>थ़</td>
<td>u</td>
<td>ى</td>
</tr>
</tbody>
</table>
(c) **Secondary Vowel Symbols**

<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic Value</th>
<th>Perso-Arabic Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ә</td>
<td>ә</td>
<td>ә</td>
</tr>
<tr>
<td>е</td>
<td>е</td>
<td>е</td>
</tr>
<tr>
<td>ọ</td>
<td>ọ</td>
<td>ọ</td>
</tr>
<tr>
<td>у</td>
<td>у</td>
<td>у</td>
</tr>
</tbody>
</table>

**Examples**

ki  ke  ko  ku
<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic Value</th>
<th>Perso-Arabic Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ला</td>
<td>ला</td>
<td>ला</td>
</tr>
<tr>
<td>रा</td>
<td>रा</td>
<td>रा</td>
</tr>
<tr>
<td>ध</td>
<td>ध</td>
<td>ध</td>
</tr>
<tr>
<td>ध्र</td>
<td>ध्र</td>
<td>ध्र</td>
</tr>
<tr>
<td>धृ</td>
<td>धृ</td>
<td>धृ</td>
</tr>
<tr>
<td>ध्य</td>
<td>ध्य</td>
<td>ध्य</td>
</tr>
<tr>
<td>ध्र्य</td>
<td>ध्र्य</td>
<td>ध्र्य</td>
</tr>
<tr>
<td>ध्र्य</td>
<td>ध्र्य</td>
<td>ध्र्य</td>
</tr>
<tr>
<td>Ladakhi</td>
<td>Phonemic Value</td>
<td>Perso-Arabic Symbol</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>꜒</td>
<td>ّ</td>
<td>ﮟ</td>
</tr>
<tr>
<td>꜒ ꜒ ęk ꜒</td>
<td>ﯿ</td>
<td>ﮟ</td>
</tr>
<tr>
<td>꜒ ꜒ ꜒ ꜒ ꜒</td>
<td>ﯿ</td>
<td>ﮟ</td>
</tr>
<tr>
<td>꜒ ꜒ ꜒ ꜒ ꜒</td>
<td>ﯿ</td>
<td>ﮟ</td>
</tr>
</tbody>
</table>
(e) **Consonant Clusters**

Consonant clusters may be represented in the manner used to represent them in the Perso-Arabic Script.

<table>
<thead>
<tr>
<th>Ladakhi</th>
<th>Phonemic Value</th>
<th>Perso-Arabic Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>द्द</td>
<td>sko</td>
<td>द्द</td>
</tr>
<tr>
<td>ब्र</td>
<td>त्है</td>
<td>ब्र</td>
</tr>
<tr>
<td>इ</td>
<td>द्तै</td>
<td>इ</td>
</tr>
<tr>
<td>रत</td>
<td>रतै</td>
<td>रत</td>
</tr>
<tr>
<td>थत</td>
<td>थतै</td>
<td>थत</td>
</tr>
<tr>
<td>Ladakhi</td>
<td>Phonemic Value</td>
<td>Perso-Arabic Representation</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>ڀن</td>
<td>ء</td>
<td>ڪ</td>
</tr>
<tr>
<td>ڀؤ</td>
<td>ھ</td>
<td>ڪ</td>
</tr>
</tbody>
</table>
5. DRILL

5.0. To show the contrast between different phonemes, phonemes are contrasted in pairs in the following items. Contrasts are illustrated in different environments. Items are given in phonemic as well as phonetic transcriptions. It may be mentioned that words with vowels occurring initially and finally are rare in the language.

5.1. VOWELS

5.1.1. /i/

(i) /i/ : /e/

Initial

/i-bo/ 'this' /el-čes/ 'to neglect'
[i-bo] [el-čes]

/i-ču/ 'bird'
[i-ču]

Medial

/đis/ 'wrote' /đes/ 'place where
[đis] [đes] hay is kept'

/đes/ 'place where
[đes] hay is kept'
<table>
<thead>
<tr>
<th>Initial</th>
<th>Medial</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i-bo/</td>
<td>/čik/</td>
</tr>
<tr>
<td>/i-bo/</td>
<td>‘this’</td>
</tr>
<tr>
<td>/e-bo/</td>
<td>‘that’</td>
</tr>
<tr>
<td></td>
<td>[e-bo]</td>
</tr>
<tr>
<td>/i-cu/</td>
<td>‘bird’</td>
</tr>
<tr>
<td>/i-cu/</td>
<td>/e-čik/</td>
</tr>
<tr>
<td></td>
<td>[e-čik~]</td>
</tr>
<tr>
<td></td>
<td>‘grain with</td>
</tr>
<tr>
<td></td>
<td>husk’</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td></td>
</tr>
</tbody>
</table>

| /di/             | ‘(to) write’    |
| /de/             | ‘ghost’         |
|                  | [de]            |
| /si/             | ‘cheese’        |
| /se/             | (to) mix’       |
|                  | [se]            |
| /mi/             | ‘man’           |
| /me/             | ‘fire’          |
|                  | [me]            |
| /ti/             | ‘knife’         |
| /te/             | ‘mule’          |
|                  | [te]            |

(ii) /i/: /ə/
DRILL.

Final

/mik/ 'eye' /mək/ 'war'

/phij/ 'come out' /phəŋ/ 'spindle'

/riŋ/ 'long' /rəŋ/ 'self'

/di/ 'this' /da/ 'arrow'

/ni/ 'even though' /na/ 'oath'

/či/ 'what' /ča/ 'tea'

/ši/ '(to) die' /ša/ 'meat'

/ə-bi/ 'grandmother' /ə-ba/ 'father'

[i]-ru/ 'here' /oŋs/ 'crop after having been thrashed'

(iii) /i/ : /o/

Initial

/in/ 'future tense suffix' /ot/ 'light'

/i-ru/ 'here' /oŋs/ 'crop after having been thrashed'
LADAKHI PHONETIC RDAEER

/i/ 'genitive suffix' /o-kər/ 'a hilly animal which looks like a cat'

Medial

/čik/ 'one' /čok/ 'harvest kept in small bundles after cutting'

/šik/ 'lice, (to) wipe' /šok/ '(to) cut the wood'

/mik/ 'eye' /mok-mok/ 'a kind of food'

Final

/ri/ 'hill' /ro/ 'dead body'

/ši/ '(to) die' /šo-wa/ 'wart'

(iv) /i/ : /u/

Initial

/i/ 'this' /u/ 'head (hon.)'

[u]
/i–ru/  ‘this side’  /uks/  ‘breath’
[i–ru]

/i–thuk/  ‘upto this’  /u–thuk/  ‘one who is
[i–thuk³]  sensitive, poor’

Medial

/žiʒ/  ‘field’  /žuŋ/  ‘government, center’
[žiŋ]  [žuŋ]

/mil/  ‘mile’  /mul/  ‘silver’
[mil]  [mul]

/dik/  ‘a cooking pot  /duk/  ‘(to) be, sitting’
[dik³]  ‘having a long neck’  [duk³]

Final

/či/  ‘what’  /ču/  ‘ten’
[či]  [ču]

/či–mo/  ‘tear’  /čhu/  ‘water’
[či–ma]  [čhu]

/ri/  ‘hill’  /ru/  ‘tussel’
[ri]  [ru]

/ži/  ‘four’  /zu/  ‘bow’
[ži]  [zu]

5.1.2. /e/

(i) /e/ : /ə/

Initial

/el/  ‘(to) neglect’  /ə–lon/  ‘earing’
[El]  [ə–lon³]
### Medial

<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/des/</td>
<td>'place where hay is kept'</td>
<td>/dɛs/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[dɛs]</td>
</tr>
<tr>
<td>/thel/</td>
<td>'shame'</td>
<td>/θɛl/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[θɛl]</td>
</tr>
<tr>
<td>/šel/</td>
<td>'glass'</td>
<td>/ʂɛl/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ʂɛl]</td>
</tr>
</tbody>
</table>

### Final

<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/me/</td>
<td>'fire'</td>
<td>/mɛ/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ma]</td>
</tr>
<tr>
<td>/nɛ-mo/</td>
<td>'near'</td>
<td>/nɔ/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[nɑ]</td>
</tr>
<tr>
<td>/ŋe/</td>
<td>'my'</td>
<td>/ŋɔ/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ŋɑ]</td>
</tr>
</tbody>
</table>

(ii) /ɛ/ : /ɔ/

### Initial

<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɛl/</td>
<td>'(to) neglect'</td>
<td>/ɔl/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ɔl]</td>
</tr>
</tbody>
</table>

### Medial

<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/zer/</td>
<td>'to tell'</td>
<td>/zɔr/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[zɔr]</td>
</tr>
</tbody>
</table>
(/šersh-ka/) 'sorrow'  (/šersh-wo/) 'touch'
[šersh-ka]  [šersh-wo]

(/šel/) 'glass'  (/šol/) 'plough'
[šel]  [šol]

(/khel/) '(to) climb'  (/khol/) 'spin (imp)'
[khel]  [khol]

Final

(/te/) 'name of a town'  (/to/) 'south'
[te]  [to]

(/me/) 'fire'  (/mo/) 'feminine suffix'
[me]  [mo]

(/že/) 'penis'  (/žo/) 'curd'
[že]  [žo]

(iii) /e/ : /u/

Initial

(/el/) '(to) neglect'  (/uks/) 'breath'
[el]  [uks]

(/el/) 'shame'  (/thul/) 'egg'
[el]  [thul]

(/rel/) '(to) tie'  (/rub/) 'to get rotten, snake'
[rel]  [rub]

(/šel/) 'glass'  (/šul/) 'remains of food
or drink'
[šel]  [šul]
Final

\[
\begin{array}{lll}
/\text{ie}/ & \text{‘name of city’} & /\text{tu}/ & \text{‘song’} \\
/\text{te}/ & \text{[te]} & /\text{tu}/ & \\
/\text{phe}/ & \text{‘pounded barely’} & /\text{phu}/ & \text{‘blow with mouth’} \\
/\text{ge}/ & \text{‘my’} & /\text{gu}/ & \text{‘(to) cry’} \\
/\text{be}/ & \text{‘(to) open’} & /\text{bu}/ & \text{‘insect’} \\
/\text{pe}/ & \text{[pe]} & /\text{bu}/ & \\
\end{array}
\]

5.1.3. /\text{a}/

(i) /\text{a}/ : /\text{o}/

Initial

\[
\begin{array}{lll}
/\text{a-ma}/ & \text{‘mother’} & /\text{o-ma}/ & \text{‘milk’} \\
/\text{a-ma}/ & \text{[a-ma]} & /\text{o-ma}/ & \text{[o-ma]} \\
/\text{o-se}/ & \text{‘mulberry’} & /\text{o-se}/ & \text{[o-se]} \\
/\text{a-çe}/ & \text{‘elder sister} & /\text{a-çe}/ & \text{[a-çe]} \\
\end{array}
\]

Medial

\[
\begin{array}{lll}
/\text{e}_1\text{a}/ & \text{‘broad’} & /\text{zog-po}/ & \text{‘busy} \\
/\text{e}_1\text{a}/ & \text{[e}_1\text{a}]/ & /\text{zog-po}/ & \text{[zog-po]} \\
/\text{tshor}/ & \text{‘(to) be finished’} & /\text{tshor}/ & \text{‘(to) hear’} \\
/\text{tshor}/ & \text{[tshor]} & /\text{tshor}/ & \text{[tshor]} \\
\end{array}
\]
DRILL 169

'wash' /ʃəl/ [ʃəl] ~ [ʃəl]

'laugh' /ʃəl/ [ʃəl]

'palace' /kʰəɾ/ [kʰəɾ] ~ [kʰəɾ]

'(to) revolve' /kʰəɾ/ [kʰəɾ]

Final

'earth' /sə/ [sə]

'tooth' /sə/ [sə]

'curd' /zə/ [zə]

'clay used for bricks' /zə/ [zə]

'pass' /lə/ [lə]

'year' /lə/ [lə]

'goat' /rə/ [rə]

'dead body' /rə/ [rə]

'mouth' /kʰəɾ/ [kʰəɾ]

'he' /kʰəɾ/ [kʰəɾ]

(ii) /ə/ : /u/

Initial

'used for feeding' /əm/ [əm] ~ [əm]

'kiss' /əm/ [əm]

'the baby' /u-m/ [u-m]

'coriander seed' /ə-sə/ [ə-sə]

'that' /u-sə/ [u-sə]

Medial

'(to) spin' /kʰəl/ [kʰəl] ~ [kʰəl]

'inside' /kʰəl/ [kʰəl]

'kiss' /kʰəl/ [kʰəl]

'coriander seed' /kʰəl/ [kʰəl]

'inside' /kʰəl/ [kʰəl]
<table>
<thead>
<tr>
<th>Word</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/šəl/</td>
<td>[šəl]</td>
<td>'to rinse'</td>
</tr>
<tr>
<td>/šul/</td>
<td>[šul]</td>
<td>'remains of some food or drink'</td>
</tr>
<tr>
<td>/rəl/</td>
<td>[rəl]</td>
<td>'hair of goat'</td>
</tr>
<tr>
<td>/rul/</td>
<td>[rul]</td>
<td>'snake'</td>
</tr>
<tr>
<td>/məl/</td>
<td>[məl]</td>
<td>'print or impression of body part on a surface'</td>
</tr>
<tr>
<td>/mul/</td>
<td>[mul]</td>
<td>'silver'</td>
</tr>
<tr>
<td>/sə/</td>
<td>[sa]</td>
<td>'earth'</td>
</tr>
<tr>
<td>/su/</td>
<td>[su]</td>
<td>'who'</td>
</tr>
<tr>
<td>/rə/</td>
<td>[ra]</td>
<td>'goat'</td>
</tr>
<tr>
<td>/ru/</td>
<td>[ru]</td>
<td>'tassel'</td>
</tr>
<tr>
<td>/ŋə/</td>
<td>[ŋa]</td>
<td>'eye'</td>
</tr>
<tr>
<td>/ŋu/</td>
<td>[ŋu]</td>
<td>'(to) cry'</td>
</tr>
<tr>
<td>/čə/</td>
<td>[ča]</td>
<td>'pair'</td>
</tr>
<tr>
<td>/ču/</td>
<td>[ču]</td>
<td>'water'</td>
</tr>
</tbody>
</table>

5.1.4. /o/

(i) /o/ : /u/

Initial
<table>
<thead>
<tr>
<th>Word</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ot/</td>
<td>[ət]</td>
<td>'light'</td>
</tr>
<tr>
<td>/ut-pə-la/</td>
<td>[ut-pə-la]</td>
<td>'blue flower'</td>
</tr>
<tr>
<td>/o-na/</td>
<td>[ə-na]</td>
<td>'yes'</td>
</tr>
<tr>
<td>/u-na/</td>
<td>[u-na]</td>
<td>'oath (hon.)'</td>
</tr>
</tbody>
</table>
### Medial

<table>
<thead>
<tr>
<th>/mol/</th>
<th>'told'</th>
<th>/mul/</th>
<th>'silver'</th>
</tr>
</thead>
<tbody>
<tr>
<td>[mˌoʊl]</td>
<td></td>
<td>[mʊl]</td>
<td></td>
</tr>
<tr>
<td>/sol-pom/</td>
<td>'cook'</td>
<td>/sul/</td>
<td>'wrinkle'</td>
</tr>
<tr>
<td>[sˌɒl-ˈpMut]</td>
<td></td>
<td>[sʊl]</td>
<td></td>
</tr>
<tr>
<td>/rol/</td>
<td>'burrow'</td>
<td>/rul/</td>
<td>'snake'</td>
</tr>
<tr>
<td>[rˌoʊl]</td>
<td></td>
<td>[rʊl]</td>
<td></td>
</tr>
<tr>
<td>/šol/</td>
<td>'piough'</td>
<td>/šul/</td>
<td>'remains of some food or drink'</td>
</tr>
<tr>
<td>[ʃˌoʊl]</td>
<td></td>
<td>[ʃʊl]</td>
<td></td>
</tr>
</tbody>
</table>

### Final

<table>
<thead>
<tr>
<th>/žo/</th>
<th>'curd'</th>
<th>/žu/</th>
<th>'bow'</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ʒo]</td>
<td></td>
<td>[ʒu]</td>
<td></td>
</tr>
<tr>
<td>/ro/</td>
<td>'dead body'</td>
<td>/ru/</td>
<td>tassel</td>
</tr>
<tr>
<td>[ɾo]</td>
<td></td>
<td>[ru]</td>
<td></td>
</tr>
<tr>
<td>/so/</td>
<td>'tooth'</td>
<td>/su/</td>
<td>'who'</td>
</tr>
<tr>
<td>[sɔ]</td>
<td></td>
<td>[su]</td>
<td></td>
</tr>
</tbody>
</table>

### 5.2. Consonants and Semivowels

#### 5.2.1. /p/

(i) /p/ : /ph/

**Initial**

<table>
<thead>
<tr>
<th>/pæk/</th>
<th>'diet'</th>
<th>/phæk/</th>
<th>'pig'</th>
</tr>
</thead>
<tbody>
<tr>
<td>[pæk] ~ [pæk]</td>
<td></td>
<td>[phæk] ~ [phæk]</td>
<td></td>
</tr>
</tbody>
</table>

*
/−pə/  

'masculine'  

[−pa]  

'suffix'  

/phɔ/  

'father'  

[pha]  

/pən/  

'lap'  

[pən]  

[pən]  

/phən/  

'spindle'  

[phən]  

/phən/  

'lap'  

[phən]  

[phən]  

/peʃ/  

'design, block, photo'  

[peʃ]  

[per]  

[phər]  

(to) bounce'  

[phər]  

[phər]

(ii) /p/ : /b/  

Initial  

/pər/  

'photo'  

[por]  

[per]  

/bər/  

'(to) burn'  

[bər]  

[ber]  

/pən/  

'lap'  

[pən]  

[pən]  

/bən/  

'race'  

[bən]  

[bən]  

/pək/  

'diet'  

[pək]  

[pək]  

[pək]  

[pək]  

[pək]  

[pək]  

[pək]  

[pək]  

[pək]  

/pa/  

'bravery (literary)'  

[pa]  

[ba]  

(iii) /p/ : /t/  

Initial  

/tən/  

'(to) give'  

[tən]  

[tən]  

/pən/  

'lap'  

[pən]  

[pən]  

/tur-tur/  

'one who is always in haste'  

[tur-tur]  

[tur-tur]  

/pur-pur/  

'rough surface'  

[pur-pur]  

/pər/  

'frozen surface'  

[por]  

[per]  

[por]  

[per]  

[por]  

[per]  

[por]  

[per]
Final

/čahp/ 'water (hon.)' /čah/ 'less'
[čahp] ~ [čahp] [čah] ~ [čah]

/rip/ '(to) cover' /rit/ 'to get numb'
[rip] [rit]

/rub/ 'to get mixed' /rut/ 'land or snow slide'
[rub] [rut]

/nup/ 'to be drowned' /nit/ 'sickness'
[nup] [nit] ~ [nit]

/sup/ 'to bury' /sat/ '(to) kill'
[sup] [sat] ~ [sat]

(iv) /p/ : /k/

Initial

/peŋ/ 'lap' /koŋ/ 'where
[peŋ] ~ [peŋ] [koŋ] ~ [koŋ] (literary)

/par/ 'photo' /kar/ 'white'
[par] ~ [per] [kar] ~ [ker]

/-pa/ 'masc. suffix' /ka/ 'pillar'
[-pa] [ka]

Final

/kap-čes/ '(to) cover' /kak-čes/ 'to close'
[kap-čes] ~ [kap čes] [kak-čes] ~ [kak-čes]
/'təp/  ‘(to) learn, teach’  /tək-pə/  ‘Wednesday’
[ˈtəp] ~ [ˈtəp]

/'rəp/  ‘best’  /rək/  ‘(to) be (literary)’
[rəp] ~ [rəp]

/'rup-čes/  ‘to get melted and mixed up’  /ruk-čes/  ‘to pick up’
[rup-čes] ~ [ruk-čes]

5.2.2.  /b/

(i)  /b/ : /d/

Initial

/bək/  ‘mask’  /dək/  ‘pure’
[bək] ~ [dək]

/bəɾ/  ‘race’  /dəɾ/  ‘and yesterday’
[bəɾ] ~ [dəɾ]

/ba/  ‘cow’  /da/  ‘arrow’
[ba] ~ [da]

/bəɾ/  ‘between’  /dəɾ/  ‘cloth’
[bəɾ] ~ [dəɾ]

/bəɾ/  ‘wool’  /dəɾ/  ‘free’
[bəɾ] ~ [dəɾ]

(ii)  /b/ : /g/

Initial

/bəɾ/  ‘wool’  /gəɾ/  ‘(to be) incorrect’
[bəɾ] ~ [gəɾ] ~ [gəɾ]
/bær/ 'gap' /gær-/ 'blacksmith' 
[baːr] ~ [ber] [gær-] ~ [ger] 
/bør/ '(to) keep' /gor/ 'to be) late'
[bør] [gor-] 

(iii) /b/ : /m/ 

Initial 
/ba/ 'cow' /ma/ 'mother'
[ba] [ma] 
/bɔŋ/ 'race' /mɔŋ-/ 'many'
[baŋ] ~ [baŋ] [mɔŋ]- ~ [mɔŋ]- 
/bæk/ 'mask' /mek/ 'husband'
[bæk] ~ [bek] [mek]- ~ [mek]- 
/ben/ 'target of an arrow' /men/ 'no'
[ben] [men] 

(iv) /b/ : /w/ 

Initial 
/ben/ 'race' /wen-/ 'seclusion'
[ben] ~ [ben] [wen]- 
/ben/ 'target of an arrow' /wen-/ 'seclusion'
[ben] [wen-] 
/bɔ/ 'cow' /wo/ 'fox'
[ba] [wo]
5.2.3. /t/

(i) /t/: /th/

Initial

\[
\begin{align*}
\text{/tok/} & \quad \text{‘top’} & \quad \text{/thok/} & \quad \text{‘roof’} \\
[\text{t} \text{\text{n} k}] & & [\text{th} \text{\text{n} k}] \\
\text{/tuŋ/} & \quad \text{‘a long instrument’} & \quad \text{/θuŋ/} & \quad \text{‘(to) drink’} \\
[\text{tuŋ}] & & [\text{θuŋ}] \\
\text{/təŋ/} & \quad \text{‘(to) give’} & \quad \text{/θəŋ/} & \quad \text{‘ground’} \\
[\text{təŋ}] & \sim [\text{θəŋ}] & [\text{θəŋ}] & \sim [\text{θəŋ}] \\
\text{/təm/} & \quad \text{‘conversation, (to) catch’} & \quad \text{/θəm/} & \quad \text{‘(to) catch’} \\
[\text{təm}] & \sim [\text{θəm}] & [\text{θəm}] & \sim [\text{θəm}] \\
\end{align*}
\]

(ii) /t/: /d/

Initial

\[
\begin{align*}
\text{/teŋs/} & \quad \text{‘gave’} & \quad \text{/dəŋs/} & \quad \text{‘composition of music (Raga)’} \\
[\text{teŋs}] & \sim [\text{dəŋs}] & [\text{dəŋs}] & \sim [\text{dəŋs}] \\
\text{/tok/} & \quad \text{‘highest point of a thing’} & \quad \text{/dok/} & \quad \text{‘colour’} \\
[\text{t} \text{\text{n} k}] & & [\text{d} \text{\text{n} k}] \\
\text{/toŋ/} & \quad \text{‘give (imp.)’} & \quad \text{/doŋ/} & \quad \text{‘face’} \\
[\text{toŋ}] & & [\text{doŋ}] \\
\text{/təm/} & \quad \text{‘conversation proverb’} \\
[\text{təm}] & \sim [\text{təm}] & [\text{təm}] & \sim [\text{təm}] \\
\end{align*}
\]
(iii) /t/ : /t/

Initial

/tɔŋ-tɔŋ/ 'give'  /tɔŋ-tɔŋ/ 'creed'
\[t_n̥̂ŋ-t_n̥̂ŋ\]

/tuk/ 'poison'
\[tuk^>\] \sim [duk^>]

/ṭɔr/ 'cloth'
\[ṭɔr\] \sim [ṭər]

/tiŋ-tiŋ/ 'smooth'
\[tiŋ-tiŋ\]

(iv) /t/ : /k/

Initial

/ṭɔr/ 'cloth'
\[ṭɔr\] \sim [ṭər]

/ḳɔŋ/ 'white'
\[ḳɔŋ\] \sim [ḳəŋ]

/təŋ/ '(to) give'
\[təŋ\] \sim [təŋ]

/ḳəŋ/ 'where'
\[ḳəŋ\] \sim [ḳəŋ]

/ṭəp-čEs/ '(to) sow'
\[ṭəp-čEs\] \sim [ṭəp-čEs]

/ḳəp-čEs/ 'to cover'
\[ḳəp-čEs\] \sim [ḳəp-čEs]

Final

/sət-čEs/ 'to kill'
\[sət-čEs\] \sim \[sət-čEs\]

/sək-čEs/ 'to collect'
\[sək-čEs\] \sim \[sək-čEs\]

/tət-pa/ 'brain'
\[tət-pa\] \sim \[tət-pa\]

/tək-pa/ 'wednesday'
\[tək-pa\] \sim \[tək-pa\]
/that-po/ ‘happy’ /thak-pa’ ‘rope’
[that-po] ~ [thak-pa]
[that-po] ~ [thak-pa]

(v) /t/ : /s/

Initial
/təm/ ‘conversation, səm/ ‘thought, [təm] ~ [tam] proverb’ [səm] ~ [səm] discussion’
/tɛs/ ‘gave’ səns/ ‘incense’ [tɛs] ~ [tɛs]
/suŋ/ ‘(to) say’ [suŋ] (hon.)

/t/ : /s/

Final
/zət/ ‘(to) be worn’ /zəs/ ‘food, material, [zət] ~ [zət] out’ [zəs] ~ [zəs] articles’
/ʃət/ ‘(to) say’ /ʃəs/ ‘prince’ [ʃət] ~ [ʃət]
[ʃəs] ~ [ʃəs]

5.2.4. /d/

(i) /d/ : d/

Initial
/dok/ ‘colour’ /dok/ ‘pasture’
[dək>] [dək>]

<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Sound</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/də/</td>
<td>'arrow'</td>
<td>/də/</td>
<td>'voice, enemy'</td>
</tr>
<tr>
<td>[da]</td>
<td></td>
<td>[də]</td>
<td></td>
</tr>
<tr>
<td>/dæk/</td>
<td>'pure'</td>
<td>/dæk/</td>
<td>'rock'</td>
</tr>
<tr>
<td>[dæk̚]</td>
<td></td>
<td>[dæk̚]</td>
<td></td>
</tr>
<tr>
<td>/dus/</td>
<td>'time'</td>
<td>/dus/</td>
<td>'(to) dig'</td>
</tr>
<tr>
<td>[dus]</td>
<td></td>
<td>[dus]</td>
<td></td>
</tr>
</tbody>
</table>

(ii) /d/ : /g/  
<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Sound</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dəl-/</td>
<td>'face'</td>
<td>/gəl/</td>
<td>'(to) be incorrect'</td>
</tr>
<tr>
<td>[dəl̚]</td>
<td></td>
<td>[gəl]</td>
<td></td>
</tr>
<tr>
<td>/dən/</td>
<td>'and'</td>
<td>/gən/</td>
<td>'(to) fill'</td>
</tr>
<tr>
<td>[dən̚]</td>
<td></td>
<td>[gən̚]</td>
<td></td>
</tr>
<tr>
<td>/dər/</td>
<td>'cloth'</td>
<td>/gər/</td>
<td>'blacksmith'</td>
</tr>
<tr>
<td>[dər̚]</td>
<td></td>
<td>[gər̚]</td>
<td></td>
</tr>
</tbody>
</table>

(iii) /d/ : /n/  
Initial  
<table>
<thead>
<tr>
<th>Sound</th>
<th>Meaning</th>
<th>Sound</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/də/</td>
<td>'arrow'</td>
<td>/nə/</td>
<td>'oath'</td>
</tr>
<tr>
<td>[da]</td>
<td></td>
<td>[na]</td>
<td></td>
</tr>
<tr>
<td>/dən/</td>
<td>'mud'</td>
<td>/nəm/</td>
<td>'sky'</td>
</tr>
<tr>
<td>[dən̚]</td>
<td></td>
<td>[nəm̚]</td>
<td></td>
</tr>
<tr>
<td>/dəl/</td>
<td>'free'</td>
<td>/nəl/</td>
<td>'(to) sleep'</td>
</tr>
<tr>
<td>[dəl̚]</td>
<td></td>
<td>[nəl̚]</td>
<td></td>
</tr>
</tbody>
</table>
(iv) /d/ : /z/

<table>
<thead>
<tr>
<th>Initial</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dər/</td>
<td>'cloth'</td>
</tr>
<tr>
<td>[dər] ~ [dəɾ]</td>
<td></td>
</tr>
<tr>
<td>/zəɾ/</td>
<td>'Wooden fork like thing to separate the husk from the grain'</td>
</tr>
<tr>
<td>[zəɾ] ~ [zəɾ]</td>
<td></td>
</tr>
<tr>
<td>/də/</td>
<td>'arrow'</td>
</tr>
<tr>
<td>[da]</td>
<td></td>
</tr>
<tr>
<td>/zuks/</td>
<td>'(to) sit'</td>
</tr>
<tr>
<td>[duks]</td>
<td></td>
</tr>
<tr>
<td>/zuks/</td>
<td>'shape'</td>
</tr>
<tr>
<td>[zuks]</td>
<td></td>
</tr>
</tbody>
</table>

5.2.5. /t/    

(i) /t/ : /ṯh/  

<table>
<thead>
<tr>
<th>Initial</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/tu-gu/</td>
<td>'reel of thread'</td>
</tr>
<tr>
<td>[tu-gu]</td>
<td></td>
</tr>
<tr>
<td>/ṭu-gu/</td>
<td>'child'</td>
</tr>
<tr>
<td>[ṭu-gu]</td>
<td></td>
</tr>
<tr>
<td>/ṭul/</td>
<td>'carnation'</td>
</tr>
<tr>
<td>[ṭul]</td>
<td></td>
</tr>
<tr>
<td>/ṭu/</td>
<td>'corner'</td>
</tr>
<tr>
<td>[ṭu]</td>
<td></td>
</tr>
<tr>
<td>/ṭi-čes/</td>
<td>'(to) ask'</td>
</tr>
<tr>
<td>[ṭi-čEs]</td>
<td></td>
</tr>
<tr>
<td>/ṭi-čes/</td>
<td>'to lessen'</td>
</tr>
<tr>
<td>[ṭi-čEs]</td>
<td></td>
</tr>
<tr>
<td>/ṭu/</td>
<td>'a kind of measurement'</td>
</tr>
<tr>
<td>[ṭu]</td>
<td></td>
</tr>
<tr>
<td>/ṭul/</td>
<td>'egg'</td>
</tr>
<tr>
<td>[ṭul]</td>
<td></td>
</tr>
<tr>
<td>/ṭu-gu/</td>
<td></td>
</tr>
<tr>
<td>[ṭu-gu]</td>
<td></td>
</tr>
<tr>
<td>/ṭi-čes/</td>
<td></td>
</tr>
<tr>
<td>[ṭi-čEs]</td>
<td></td>
</tr>
<tr>
<td>/ṭi-čes/</td>
<td></td>
</tr>
<tr>
<td>[ṭi-čEs]</td>
<td></td>
</tr>
</tbody>
</table>
(ii) /t/ : /d/

Initial

/ti-čEs/ ‘(to) ask’
[ti-čEs]

/di-čes/ ‘(to) write’
[di-čes]

/ču/ ‘corner’
[ču]

/čEs-ma/ ‘a kind of grass’
[čEs-ma]

/šes/ ‘to get mixed’
[šEs]

/tuk/ ‘six’
[tuk]

/du/ ‘(to) dig’
[du]

/šuk/ ‘dragon’
[šuk]

(iii) /t/ : /s/

Initial

/ti/ ‘(to) ask’
[ti]

/si/ ‘milk, a cow gives soon after the birth of a calf’
[si]

/tuk/ ‘six’
[tuk]

/šuk/ ‘(to) shake stir’
[šuk]

5.2.6. /k/ : /kh/

Initial

/kə-wə/ ‘pillar’
[kə-wa] ~
[ka-wa]

/kər/ ‘white’
[kə] ~[kər]

/khər/ ‘palace’
[khə] ~ [khər]
Initial

\(/k\bar{\alpha}s/\quad \text{‘crack’} \quad /k\bar{\alpha}s-/\quad \text{‘scholar’}
[\bar{\alpha}s] \sim [\bar{\alpha}s]
[k\bar{\alpha}s-] \sim [k\bar{\alpha}s-]

\(/k\bar{\epsilon}n\bar{\gamma}/\quad \text{‘ice’} \quad /k\bar{\epsilon}n/\quad \text{‘house’}
[k\bar{\epsilon}n\bar{\gamma}] \sim [k\bar{\epsilon}n\bar{\gamma}]

\(/k\bar{\alpha}l-\check{c}e\bar{s}/\quad \text{‘to load, to send’} \quad /k\bar{\alpha}l-\check{c}e\bar{s}/\quad \text{‘to spin’}
[k\bar{\alpha}l-\check{c}e\bar{s}] \sim [k\bar{\alpha}l-\check{c}e\bar{s}]
[k\bar{\alpha}l-\check{c}e\bar{s}] \sim [k\bar{\alpha}l-\check{c}e\bar{s}]

(ii) \(/k/ : /g/

\(/k\bar{\alpha}n/\quad \text{‘where} \quad /g\bar{\alpha}n/\quad \text{‘(to) fill’}
[\bar{\alpha}n] \sim [\bar{\alpha}n] \quad (\text{literary}) \quad [\bar{\alpha}n] \sim [\bar{\alpha}n]

\(/k\bar{\alpha}r/\quad \text{‘white’} \quad /g\bar{\alpha}r/\quad \text{‘blacksmith’}
[k\bar{\alpha}r] \sim [k\bar{\alpha}r]
[g\bar{\alpha}r] \sim [g\bar{\alpha}r]

\(/k\bar{\alpha}p-\check{c}e\bar{s}/\quad \text{‘to cover’} \quad /g\bar{\alpha}p-\check{c}e\bar{s}/\quad \text{‘to hatch egg}
[k\bar{\alpha}p-\check{c}e\bar{s}] \sim [k\bar{\alpha}p-\check{c}e\bar{s}]
[g\bar{\alpha}p-\check{c}e\bar{s}] \sim [g\bar{\alpha}p-\check{c}e\bar{s}]

\(/k\bar{\alpha}l-\check{c}e\bar{s}/\quad \text{‘to load, to send’} \quad /g\bar{\alpha}l-\check{c}e\bar{s}/\quad \text{‘to be incorrect’}
[k\bar{\alpha}l-\check{c}e\bar{s}] \sim [k\bar{\alpha}l-\check{c}e\bar{s}]
[g\bar{\alpha}l-\check{c}e\bar{s}] \sim [g\bar{\alpha}l-\check{c}e\bar{s}]

5.2.7. \(/t\bar{s}/\n
(i) \(/t\bar{s}/ : /t/

Initial

\(/t\bar{s}\bar{\alpha}m/\quad \text{‘how much’} \quad /t\bar{\alpha}m/\quad \text{‘proverb, conversation’}
[t\bar{s}\bar{\alpha}m] \sim [t\bar{s}\bar{\alpha}m]
[t\bar{\alpha}m] \sim [t\bar{\alpha}m]
/tən/ ‘clean’ /tən/ ‘(to) give’
[tən] ~ [tən-]

/tsum-/ ‘(to) shut’ /tuŋ/ ‘a long
[tsum-] mouth or eyes’ [tuŋ] instrument’

(ii) /ts/ : /č/

Initial

/tsan-mo/ ‘chief lady’ /čo-mo/ ‘nun’
[t san-mo] [čan-mo]

/tsan-/ ‘clean’ čaŋ/ ‘some’
[t san-] ~ [tsan-] [čaŋ] ~ [čaŋ]

/tson/ ‘a kind of /čaŋ/ possessive
[tson] ~ [tsen] ghost’ [čaŋ] ~ [čaŋ] suffix’

/tsik/ ‘word’ čik/ ‘one’
[tzikabyrinth]

(iii) /ts/ : /tsh/

Initial

/tson-ma/ ‘clean’ /tshon-ma/ ‘all’
[tson-ma] ~ [tson-ma] [tshon-ma] ~ [tshon-ma]

/tso-/ ‘wood /tshot/ ‘estimate’
[tso/] used for [tshot] colour’

/tsoks/ ‘same’ /tshoks/ ‘forest’
[tsok/] [tshok/]
\[/\text{tsir}/\] ‘(to) milk the cow, squeeze’ \[/\text{tshir}/\] ‘turn’

(iv) \[/\text{ts}/ : /\text{dz}/\]

\[/\text{tsun-ba}/\] ‘young monk’ \[/\text{dzun-ba}/\] ‘lie’

\[/\text{ts}/\] ‘a sitting posture of dog or elephant’ \[/\text{dz}/\] ‘Ladakhi animal used for carrying load or ploughing’

\[/\text{tsum}/\] ‘to shut mouth or eyes’ \[/\text{dzum}/\] ‘(to) smile’

\[/\text{tsem-ces}/\] ‘to sew’ \[/\text{dzem-ces}/\] ‘to shrink, avoid’

(v) \[/\text{ts}/ : /\text{s}/\]

Initial

\[/\text{tsik}/\] ‘word’ \[/\text{sik}/\] ‘winnowing’

\[/\text{ts}/\] ‘(to) shut mouth, eye’ \[/\text{s}/\] ‘three’

\[/\text{tsam}/\] ‘how much’ \[/\text{sam}-/\] ‘thought, discussion’
5.2.3. /tʃ/  

(i) /tʃ/ : /ch/

Initial

/tʃət/ ‘heat proof’ /ʃət/ ‘promise’  
[tʃət] ~ [tʃət]  
[ʃət] ~ [ʃət]

/tʃəks/ ‘dense’ /ʃəks/ ‘(to be) tied’  
[tʃəks] ~ [tʃəks]  
[ʃəks] ~ [ʃəks]

/tʃəɾ/ ‘(to be) finished’ /ʃəɾ-/ ‘rain’  
[tʃəɾ-] ~ [ʃəɾ-]  
[ʃəɾ-]

/tʃə/ ‘life’ /ʃə/ ‘big’  
[tʃə]  
[ʃə]

5.2.9. /dz/  

/dz/ : /z/

Initial

/ʃə-wə/ ‘friend’ /zə-ʃes/ ‘to eat’  
[ʃə-wə] ~ [zə-ʃes]  
[ʃə-wə]  
[zə-ʃes]

/ʃə-ra/ ‘lunch’ /zər/ ‘wooden fork’  
[ʃə-ra] ~ [zər]  
[ʃə-ra]  
[zər]

/ʃək/ ‘(to) plant’ /ʃək/ ‘to pierce’  
[ʃək]  
[ʃək]
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/dzo/ 'Ladakhi
[dzo] animal for
[zo] carrying load and for
ploughing'

(ii) /dz/ : /ž/

Initial
/dzo/ 'a Ladakhi
[dzo] animal used for
[zo] carrying load
and for ploughing'

5.2.10. /č/ : /čh/

(i) /č/ : /čh/

Initial
/čəŋ-met/ 'nothing'
[čəŋ-mêt] ~
[čəŋ-mêt]
/ču/ 'ten'
[ču]
/čək/ '(to) break'
[čək] ~ [čək]
/čət/ '(to) cut'
[čət] ~ [čət]

/žo/ 'shape'
[zo] 'curd'

/chəŋ-met/ 'absence of
[čəŋ-mêt] ~
[čəŋ-mêt]
/čhu/ 'water'
[čhu]
/čək/ '(to) break'
[čək] ~ [čək]
/čət/ '(to) cut'
[čət] ~ [čət] wood etc.'

/čət/ ~ [čət] thread etc.'
<table>
<thead>
<tr>
<th>Initial</th>
<th>Meaning</th>
<th>Initial</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/čan/</td>
<td>'possessive suffix'</td>
<td>/čan/</td>
<td>'cooked food'</td>
</tr>
<tr>
<td>[čan] ~ [čan]</td>
<td></td>
<td>[čan] ~ [čan]</td>
<td></td>
</tr>
<tr>
<td>/č/     : /j/</td>
<td></td>
<td>(ii) /č/ : /j/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>'robe'</td>
<td></td>
<td>'to be impressed'</td>
</tr>
<tr>
<td>/čak-pa/</td>
<td></td>
<td>/jək-pa/</td>
<td></td>
</tr>
<tr>
<td>[čak-pa] ~ [čak-pa]</td>
<td>[jək-pa] ~ [jək-pa]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ču/</td>
<td>'ten'</td>
<td>/jʊ/</td>
<td>'greeting'</td>
</tr>
<tr>
<td>[ču]</td>
<td></td>
<td>[jʊ]</td>
<td></td>
</tr>
<tr>
<td>/čuk/</td>
<td>'(to) let, allow'</td>
<td>/jʊk/</td>
<td>'edge, end, border, last thing'</td>
</tr>
<tr>
<td>[čuk]</td>
<td></td>
<td>[jʊk']</td>
<td></td>
</tr>
<tr>
<td>/čə/</td>
<td>'tea'</td>
<td>/jə/</td>
<td>'a small rainbow'</td>
</tr>
<tr>
<td>[ča]</td>
<td></td>
<td>[jə]</td>
<td></td>
</tr>
<tr>
<td>(iii) /č/ : /ʃ/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'tea'</td>
<td>/ʃə/</td>
<td>'meat'</td>
</tr>
<tr>
<td>/ʃə/</td>
<td></td>
<td>[ʃə]</td>
<td></td>
</tr>
<tr>
<td>/čən/</td>
<td>'possessive suffix'</td>
<td>/ʃən-pə/</td>
<td>'butcher'</td>
</tr>
<tr>
<td>[ʃən-pə] ~ [ʃən]</td>
<td></td>
<td>[ʃən-pa] ~ [ʃən-pa]</td>
<td></td>
</tr>
<tr>
<td>/ʃət-/</td>
<td>'(to) cut'</td>
<td>/ʃət-/</td>
<td>'(to) say'</td>
</tr>
<tr>
<td>[ʃət-] ~ [ʃət]</td>
<td></td>
<td>[ʃət-] ~ [ʃət]</td>
<td></td>
</tr>
</tbody>
</table>
5.2 11. /j/ 

(i) /j/ : /dz/

Initial

/juk/ 'behind' /dzuk-/ 'to plant'

/juk/ [juk*] [dzuk-]

/jə/ 'a small rain bow' /dzə-wo/ 'friend'

[jə] [dzə-wo] ~ [dzəwo]

/jor-čes/ 'to cling' /dzə-ro/ 'lunch'

[jor-čEs] [dzə-ra] ~ [dzə-ra]

/jer-čEs/ [dzə-ra]

/je/ 'penis' /dze/ 'loper'

[je] [dze]

(ii) /j/ : /ʒ/

Initial

/jə/ 'a small rainbow' /ʒə/ 'muddy land'

[jə] [ʒa]

/ju/ 'greeting' /ʒu/ 'bow'

[ju] [ʒu]

5.2.12 /s/ 

/s/ : /ʃ/

Initial

/sil-čes/ 'to read' /šil-čes/ 'to wrap'

[sil-čEs] [šil-čEs]
/sa/ 'earth.' /sa/ 'hair'

[sa]

/sem-ba/ 'thought, discussion' /sem/ 'an aquatic cat, offer'

[sem-ba] ~ [sem]

/so/ 'tooth' /so/ 'anger'

[so]

/so-ma/ 'new' /so-ma/ 'egg of louse'

[so-ma]

/s/ : /s/

Initial

/son-pa/ 'to listen' /son-pa/ 'butcher'

[son-pa] ~ (honourific) [son-pa] ~ [son-pa]

/sor/ 'a kind of measurement' /sor/ '(to) run'

[sor] [sor]

/so/ 'earth' /so/ 'meat'

[so] [so]

/sat-ces/ 'to kill' /sat-ces/ 'to say'

[sat-ces] ~ [sat-ces] [sat-ces] ~ [sat-ces]

/s/ : /z/

Initial

/zens/ 'incense' /zens/ 'copper'

[zens] ~ [zens] [zens] ~ [zens]
/\textit{sik}'/ 'winnowing' \hspace{1cm} /\textit{zik}'/ 'leopard'

[\textit{sik}'] \hspace{1cm} [\textit{zik}']

/\textit{sat-čës}/ 'to kill' \hspace{1cm} /\textit{zët-čës}/ 'to be worn

[\textit{sat-čës}] \sim [\textit{sat-čës}] \hspace{1cm} [\textit{zët-čës}] \sim [\textit{zët-čës}] 'out'

/\textit{sëm-ba}/ 'thought' \hspace{1cm} /\textit{zëm-pa}/ 'bridge'

[\textit{sëm-ba}] \sim [\textit{sëm-ba}] \hspace{1cm} [\textit{zëm-pa}] \sim [\textit{zëm-pa}]

/\textit{so}/ 'tooth' \hspace{1cm} /\textit{zo}/ 'shape'

[\textit{so}] \hspace{1cm} [\textit{zo}]

\textit{s} : \textit{ž}

Initial

/\textit{so}/ 'earth' \hspace{1cm} /\textit{žo}/ 'muddy land'

[\textit{sa}] \hspace{1cm} [\textit{ža}]

/\textit{so}/ 'tooth' \hspace{1cm} /\textit{žo}/ 'curd'

[\textit{so}] \hspace{1cm} [\textit{žo}]

/\textit{su}/ 'who' \hspace{1cm} /\textit{žu}/ 'bow'

[\textit{su}] \hspace{1cm} [\textit{žu}]

/\textit{sok-čës}/ 'collect' \hspace{1cm} /\textit{žok-čës}/ 'to get cracked'

[\textit{sok-čës}] \sim [\textit{sëk-čës}] \hspace{1cm} [\textit{žok-čës}] \sim [\textit{zëk-čës}]

5.2.13 \textit{š}

\textit{š} : \textit{š}

Initial

/\textit{ša}/ 'hair' \hspace{1cm} /\textit{ša}/ 'meat'

[\textit{ša}] \hspace{1cm} [\textit{ša}]
/ʃiŋ/  'wait'  /ʃiŋ/  'wood'
{ʃiŋ}  

/ʃi/  'milk a cow gives soon after the birth of the calf'
{ʃi}  

/ʃok/  'life, being'  /ʃi/  'to tear, split'
{ʃok}  

/ʃol/  'custom'  /ʃol/  'plough'
{ʃol}  

/ʃi/  :  /ʃi/  

Initial

/ʃən-ma/  'peas'  /ʒən-ma/  'other'
{ʃən-ma}  

/ʃo/  'anger'  /ʒo/  'curd'
{ʃo}  

/ʃi/  'milk a cow gives soon after the birth of calf'
{ʃi}  

/ʃaps/  'bridle'  /ʒəps/  'foot'
{ʃaps}  

/ʃiŋ/  '(to) wait, to give by stretching the hand'
{ʃiŋ}  

/ʒiŋ/  'field'  

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\[\hat{s}/ : \hat{z}/\]

Initial

\[\hat{s}ə\]  
[\(\hat{s}a\)]  

\[\hat{s}o\]  
[\(\hat{s}o\)]  

\[\hat{s}uk\]  
[\(\hat{s}uk>\)]  

\[\hat{s}əs\]  
[\(\hat{s}əs\)]  

5.2 14  \[\hat{z}/\]

\[\hat{z}/ : \hat{\tilde{z}}/\]

Initial

\[\hat{z}ə\]  
[\(\hat{z}a\)]  

\[\hat{z}əə\]  
[\(\hat{z}əə\)]  

\[\hat{z}əɾ\]  
[\(\hat{z}əɾ\)]  

\[\hat{z}ik\]  
[\(\hat{z}ik>\)]  

\[\hat{z}i\]  
[\(\hat{z}i\)]
\[/\text{zuks}/\] shape\] \[/\text{žuks}/\] 'sit (hon.)'

5.2.15 \(/\text{h}/\)

\(/\text{h}/\) : \(/\text{s}/\)

Initial

\[/\text{hɔm-pa}/\] 'greed' \[/\text{səm-bə}/\] 'thought'

\[/\text{hɔm-pa}]/ \sim [hɔm-pa] \[/səm-bə]/ \sim [səm-ba]

\[/\text{ha}/\] 'affirmative' \[/\text{sə}/\] 'earth'

\[/\text{hɔ}/\] interjection' \[/\text{sə}/\]

\[/\text{hor}/\] 'people from Yarkand' \[/\text{sɔr}/\] 'a kind of measurement'

\[/\text{hor}/\] [hɔr]

5.2.16 \(/\text{r}/\)

\(/\text{r}/\) : \(/\text{l}/\)

Initial

\[/\text{ro}/\] 'dead body' \[/\text{lo}/\] 'year'

\[/\text{ro}/\] [ro] \[/\text{lo}/\] [lo]

\[/\text{ri}/\] 'hill' \[/\text{li}/\] 'brass'

\[/\text{ri}/\] [ri] \[/\text{li}/\]

\[/\text{res}/\] 'cloth' \[/\text{ləs}/\] 'work'

\[/\text{res}/\] \sim [res] \[/\text{ləs}/\] \sim [ləs]

\[/\text{ra}/\] 'goat' \[/\text{la}/\] 'pass'

\[/\text{ra}/\] [ra] \[/\text{la}/\]
\(/\text{rem-pə}/\) ‘root of grass'  \(/\text{ləm-pə}/\) ‘road builder, traveller'

Final

\(/\text{mar}/\) ‘butter'  \(/\text{məl}/\) ‘impression'

\(/\text{khər}/\) ‘palace’  \(/\text{khəl}/\) ‘spin'

\(/\text{šər}/\) ‘east’  \(/\text{šəl}/\) ‘(to) rinse'

5.2.17 \(/l/\)

\(/l/\) : \(/i/\)

\(/\text{lək-pə}/\) ‘hand'  \(/\text{iək-pə}/\) ‘Wednesday'

\(/\text{la}/\) ‘pass'  \(/\text{iə}/\) ‘goad'

\(/\text{lʊŋ-pə}/\) ‘stream'  \(/\text{iʊŋs-pə}/\) ‘air'

\(/-\text{le}/\) ‘honorific suffix’  \(/\text{te}/\) ‘Leh, name of the district headquarter’
5.2.18. /m/

/m/ : /n/

Initial

/mə/ 'mother' /nə/ 'oath'
[ma] [na]

/məj-po/ 'many' /nəj/ 'inside of a
[maj-po]~ [na] [naj] house, room'

/mok-mok/ 'a ladakhi meat
[mok-mok] samosa' /nok-nok/ 'smeared,
[nok-nok]

/mek-pa/ 'husband' /nak-po/ 'black'
[mek-pa] [nak-po]

Final

/phəm/ '(to) be defeated' /phən/ '(to) be
[phəm] [phən] profitable'

/sam-čes/ '(to) think' /san-čes/ '(to) hear
[sam-čes] (hon.)'
[san-čes]

/lem/ 'path or road' /lən/ 'answer'
[lem] [lən]
/t̪sam/ 'how much' /t̪san/ 'a kind of
[t̪sam] ~ [t̪sam] [t̪san] ~ [t̪san] demon'

/m/ : /ŋ/

Initial
/mə/ 'mother' /ŋə/ 'fish'
[ma] [ŋa]

/-mo/ 'feminine suffix' /ŋo/ '(to) buy'
[-mo] [ŋo]

/mi/ 'man' /ŋi-/ 'sun'
[mi] [ŋi-]

/mu-tik'/ 'pearl' /ŋu-ti/ 'pear'
[mu-tik'] [ŋu-ti]

/men/ 'no' /ŋen/ 'relative'
[men] [ŋen]

/m/ : /ŋ/

Initial
/mə/ 'mother' /ŋə/ 'I'
[ma] [ŋe]

/-mo/ 'feminine suffix' /ŋo/ 'face'
[-mo] [ŋo]

/mər/ 'butter' /ŋər/ 'sweet'
[mər] ~ [mər] [ŋər] ~ [ŋər]
<table>
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<th>Notes</th>
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<td>/ˈðoʊ-ˈwɑː/</td>
<td>odd-way</td>
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<td>/wɔː/</td>
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<td>sleep (to),</td>
<td>/lɛu/</td>
<td>sleep (to),</td>
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<td>/ˈou/</td>
<td>younger brother,</td>
<td>/ou/</td>
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<tr>
<td>/ˈkɑː/</td>
<td>math,</td>
<td>/kɑː/</td>
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Initial

/g/ : /u/

/u/  5.2.19

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<td>Tuesday</td>
<td>sand,</td>
<td>mud,</td>
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<td>/ˈɡɛr/</td>
<td></td>
<td>/ˈɡɛr/</td>
<td></td>
</tr>
<tr>
<td>/ˈkɑː/</td>
<td>Give (to),</td>
<td>conversation,</td>
<td>/ˈkɑː/</td>
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<td>throw,</td>
<td>/ˈfæm-ˈɡɛm/</td>
<td>/ˈfæm-ˈɡɛm/</td>
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<td></td>
<td>/ˈfæm-ˈɡɛm/</td>
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</table>

Final

/sn/ | three, | /sn/ | /sn/ |
/n/ : /ŋ/

Initial

/nət/ 'sickness' /ŋət/ 'suffix meaning very strong, sharp etc.'
[nət] ~ [ŋət]

/no/ 'younger' /ŋo/ 'face'
[no] brother' [ŋo]

/nəl/ '(to) sleep' (hon.) /ŋəl/ 'tiredness'
[nəl] ~ [ŋəl]

/nəŋ-čes/ 'to press' /ŋən/ 'bad'
[nəŋ-čēs] ~ [ŋən] ~ [ŋəl]

Final

/phəŋ-po'/ 'profit' /phəŋ-čes/ 'to throw'
[phəŋ-po'] ~ [phəŋ-čēs] ~ [phəŋ-čes]

/riŋ/ 'price' /riŋ/ 'length'
[riŋ] ~ [riŋ]

/phin/ 'a kind of food, made out of peas' /phin/ '(to) take out'
[phin] [phin]

/čəŋ/ 'possessive suffix' /čəŋ/ 'north'
[čəŋ] ~ [čen] ~ [čəŋ]
5.2.21 /n/

/ŋ/ : /ŋ/

Initial

/ŋə/  ‘fish’ /ŋə/  ‘I’
[ŋə]  [ŋə]

/ŋo/  ‘(to) buy’ /ŋo/  ‘face’
[ŋo]  [ŋo]

/ŋə-ra/  ‘(to) care’ /ŋə-ra/  ‘cold air’
[ŋə-ra]~  [ŋə-ra]~
[ŋə-ra]  [ŋə-ra]

/ŋən/  ‘(to) hear’ /ŋən/  ‘bad’
[ŋən]~  [ŋən]
[ŋən]~  [ŋən]

5.2.20. /w/

/y/ : /w/

Initial

/yəŋ/  ‘then’ /wəŋ/  ‘power’
[yəŋ]~  [wəŋ]
[waŋ]~  [wəŋ]

/yə/  ‘single’ /wə/  ‘fox’
[yə]  [wə]

/yə-to/  ‘companion’ /wə-to/  ‘a long
[yə-to]~  [wə-to]~
[yə-to]  [wə-to]
[wa-to]  for storing
[wa-to]  water’
$|y| : |\dot{z}|$

**Initial**

| /yəŋ/ | /əŋ/ | {and'} | /žəŋ/ | /θəŋ/ | 'width' |
| [yəŋ]~[yəŋ] | [žəŋ]~[žəŋ] |

| /yik/ | /žik/ | 'script' | /žik²/ | 'one' |
| [yik³] | [žik²] |

| /yo/ | /θo/ | 'cleverness' | /θo/ | 'curd' |
| [yo] | [θo] |

| /yu/ | /žu/ | 'turquoise' | /žu/ | 'bow' |
| [yu] | [žu] |
BIBLIOGRAPHY

WHORF, B. L. : Language Thought and Reality, 

JACKOBSON, ROMAN : 'Selected Writings' Word and Language 1971, Mouton.


HEFFENER, R.M.S. : General Phonetics.


Gimson, A. C.: *An Introduction to Pronunciation of English*.

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*Note:* The Errata have been minimised by excluding general errors.