Part II

Phonetics, Phonology and Script
Chapter 3

Panjabi Sounds and Script

Preview of the chapter

Panjabi is claimed to be a “phonetic language”. This claim is then explained as “In Panjabi, you write exactly as you speak and speak exactly as you write.” But this claim is wrong on two counts – (i) A language must not be confused with the script used for writing it; no language is “phonetic”; only a writing system may be so in the sense that there is “one to one correspondence” between its symbols and the phonemes (distinctive sounds) of the language it is used for, and (ii) the Panjabi writing system is not perfectly “phonetic” even in this sense. In this chapter we study only the native Panjabi script known as Gurmukhi used for writing Panjabi in India and by the Panjabi people of Indian origin living outside India. In Pakistan, Panjabi is written in a modified form of the Arabic script known as Shahmukhi. For reasons of space, and also for reasons mentioned in the Preface and Chapter 18, Shahmukhi is not included in the main body of this book.

3.1 The Panjabi “alphabet”

The native Panjabi script, also known as Gurmukhi, belongs to the north-western group of the scripts of the Brahmi family. It is thus related to all the major indigenous modern Indian scripts such as Devanagari, Bangla, Gujarati, Tamil, Telugu, Kannada and Malyalam as well as to the Thai
and Tibetan scripts. The writing system underlying all these scripts is neither purely alphabetic like the Latin alphabet nor purely syllabic in the sense of having a separate symbol for every possible syllable in the language. It is a nice synthesis of the two, known as an alpha-syllabic system (Matthews 2007: 16), as the rest of this chapter will demonstrate.

The present form of the Panjabi writing system is believed to have been finalised in the first half of the 16th century by Guru Angad Dev, the second guru of the Sikh faith, to write the sacred compositions of his faith and Panjabi as it was spoken at that time by making use of and refining and systematising the existing writing conventions used in and around the Panjabi-speaking areas. The result is an extremely simple and logical writing system ideally suitable for writing Panjabi. Almost all the letters and symbols of the system already existed in the regional scripts of the Brahmi family (G.B. Singh 1950). The earlier forms of these regional varieties were well-established in India by the 5th century BC. Some modern scholars argue that the original Brahmi script developed from the Indus Valley script and does not have a Semitic origin.

However, some changes have taken place in the pronunciation of Panjabi since then. Some of the earlier writing conventions have been discarded and some new ones developed. Certain changes have taken place in the older phonological system (the underlying system governing the actual pronunciation) on which the Gurmukhi script was based. While this chapter deals with this basic phonological system, these changes are dealt with in the next chapter. But still, a systematic relation exists between this basic system and the slightly modified but still the same older writing system and the new phonetic changes in pronunciation. So a proper understanding of this system is necessary in order to understand the Panjabi tones, which make Panjabi unique among the major languages of the Indian subcontinent.

### 3.2 The phonetic transcription

The phonetic transcript is used throughout this book for the benefit of those (including the users of Shahmukhi) who do not read Gurmukhi. In other words, this book does not “force” the Panjabi script on any reader. This transcription system is the one developed in the 19th century for transcribing Sanskrit. But three changes have been made: (i) when two letters are used to represent one distinct sound, the second letter has been
superscripted to make it clear that the composite symbol represents one sound, and not a sequence of two sounds, (ii) ī and ē are used differently in this book, and (iii) new symbols have been added for the sounds borrowed from Arabic, Persian and English. The Sanskrit sounds represented by ī and ē do not exist in Panjabi and the Panjabi sounds they are used for here do not exist in Sanskrit. Also, Sanskrit words are transcribed using a different font in this book. So there should be no confusion. The IPA symbols used in the charts, diagrams and elsewhere in the book are there for the benefit of linguists interested in the phonetic technicalities. But they are not explained; it is assumed that these scholars know these symbols well.

The Panjabi phonological system and the Gurmukhi letters for representing it are given in the following chart. Gurmukhi originally had the first thirty-five letters given in the chart. So it is still known as ਪੰਜਾਬੀ ਪੰਤੀ ‘thirty-five’. The remaining seven letters were added later.

Some of the symbols in the chart are put in shaded boxes. They had or have developed certain phonetic peculiarities which affect their pronunciation and/or spelling of the words in which they occur. We shall deal with these peculiarities later in this chapter and the next.
### PANJABI (GURMUKHI) SCRIPT AND TRANSCRIPTION

#### Vowel Bearers

| ओ | ए | ऐ |

#### Older Fricatives

| ਦ s | ਹ [h] |

#### Consonant Square

<table>
<thead>
<tr>
<th>Voiceless Unaspirate</th>
<th>Voiceless Aspirate</th>
<th>Voiced Unaspirate</th>
<th>Voiced Aspirate</th>
<th>Nasal</th>
</tr>
</thead>
<tbody>
<tr>
<td>ਕ [k]</td>
<td>ਕʰ [kʰ]</td>
<td>ਗ [g]</td>
<td>ਗʰ [gʰ]</td>
<td>ਨ [ŋ]</td>
</tr>
</tbody>
</table>

#### Frictionless Continuants


#### New Fricatives


#### More Recent Additions

| ਲ [l] | ਕ [q] |

---

Figure 3.1 Gurmukhi “alphabet” and phonetic transcription


d, k, t, l, and the more recently added l do not occur word-initially (except in their names!). ਦ and ਱ do not occur (or occur extremely rarely) as independent nasal consonants. (For those who are more deeply interested, the only commonly used words in which they occur are ਲ੍ਖੀ ‘lame’, ਕੈੱਡਰ ‘bracelet’, ਟ੍ਰੈਂ ‘in the manner of’, ਕੈਥੀ ‘marriage party’ and ਆਨਥੀ, ‘ignorant’ or ‘child’.)

### 3.3 Names of the letters

A chart of the Panjabi letters is given below with the name of each letter shown in the Panjabi script itself and in phonetic transcription. Since the sound or pronunciation of each character is more important than its name,
this chart can be ignored by readers not interested in Gurmukhi. The names of the consonant letters have a pattern except in the case of ट, whose older name has become homophonous to a taboo word in the language. For the pronunciation of the names of the voiced aspirate letters, read the next chapter. It is notable that the group of the letters in each of the rows from 2–5 has a name. Each name consists of the first letter of the group plus the word ‘group’. Consonants in each group are homorganic. It will become clear later in this chapter why they are treated as special in the Panjabi spelling conventions.

<table>
<thead>
<tr>
<th>क</th>
<th>अ</th>
<th>उ</th>
<th>ग</th>
<th>थ</th>
<th>घ</th>
</tr>
</thead>
<tbody>
<tr>
<td>ड</td>
<td>व</td>
<td>ह</td>
<td>ङ</td>
<td>ठ</td>
<td>ड</td>
</tr>
</tbody>
</table>

As will be pointed out later, letters in the last group are recent additions.

Figure 3.2 Names of the Gurmukhi letters

Letters in the other rows are not treated as belonging to a special group.
so they do not have any established names. Generally, the words बिंदी वाला bindī vālā ‘with a dot’ is added to the name of the older letter to which a dot is added. For example, ਚ is called ਬੀਣਦੀ ਵਾਲਾ ਸੇਸ਼ bindī vālā sassā ( ‘ਚ with a dot’) For two more recent additions, see the chart on page 42.

3.4 Panjabi pronunciation

We shall first discuss the Panjabi consonants inside the Consonant Square. All these consonants are basically stop consonants. The flow of the outgoing breath is stopped in the mouth. In the case of the nasal consonants, however, it goes on escaping through the nose. Each row in the chart represents a place of articulation and each column a manner of articulation. Each consonant’s unique identity is determined by its place in the grid. The Panjabi ਚ d sound, for example, is a voiced unaspirate retroflex stop. These technical terms are explained below.

3.4.1 Panjabi stop consonants

A. Place of articulation

<table>
<thead>
<tr>
<th>Velar</th>
<th>The outgoing breath is stopped by the back of the tongue touching the soft palate as for the English k and g sounds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palatal</td>
<td>The front part of the tongue touches the hard palate behind the gum ridge as for the English ch in church. The Panjabi palatal stop consonants are released with a friction-like sound like the English palatal consonants. So they are also known as affricates.</td>
</tr>
<tr>
<td>Retroflex</td>
<td>The underside of the curled tongue touches the hard palate behind the gum ridge. English has no equivalent sounds.</td>
</tr>
<tr>
<td>Dental</td>
<td>The tip of the tongue touches the upper teeth as for the Italian and French t and d.</td>
</tr>
<tr>
<td>Bilabial</td>
<td>The upper and the lower lip join to stop the flow of air.</td>
</tr>
</tbody>
</table>

All the five consonants in a row are known as homorganic consonants because the same organs of speech are involved in the articulation of all of them.
B. Manner of articulation

<table>
<thead>
<tr>
<th>Manner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiceless</td>
<td>The vocal chords in the throat do not vibrate.</td>
</tr>
<tr>
<td>Voiced</td>
<td>Vocal chords in the throat vibrate and create a buzzing sound.</td>
</tr>
<tr>
<td>Unaspirate</td>
<td>The outgoing flow of breath is strictly controlled and the consonant is released with little or no puff of air.</td>
</tr>
<tr>
<td>Aspirate</td>
<td>The flow of air is very strong and the consonant is released with a strong puff of air. It should be noted that the English voiceless ( k ) and ( p ) in most positions are lightly aspirated. The Panjabi voiceless stops are either completely unaspirated or strongly aspirated. The English-like light aspiration will not work in Panjabi.</td>
</tr>
<tr>
<td>Nasal</td>
<td>The flow of air stopped in the mouth goes on escaping through the nose. All the nasal consonants of Panjabi are voiced.</td>
</tr>
</tbody>
</table>

Some modern phoneticians object to the term **voiced aspirate**, arguing that true voicing and aspiration are not involved in the production of these consonants. They suggest the use of the term **breathy voiced**. Leaving aside the merit of their argument, the term **voiced aspirate** makes a lot of sense in Panjabi phonology. In the dialects of Panjabi dealt with in this book, the voiced aspirate consonants have lost their aspiration in all positions and voicing in some positions.

Panjabi \( ਨ \), though included in this part of the chart (as per tradition), is, strictly speaking, not a **stop** consonant. It is a **flap** consonant, articulated by rapidly flapping the underside of the curled tongue against the part of the palate behind the gum ridge. All the flap consonants in Panjabi are **lax** because the muscles of the tongue are lax for the articulation of these consonants. The non-lax consonants are sometimes called **tense**. As we shall see below, Panjabi has three lax vowels as well. The importance of this distinction and the phonetic behaviour of these lax sounds is described later in this chapter and the next chapter.

### 3.4.2 Panjabi continuant consonants

While the flow of the outgoing breath is **stopped** in the mouth for the **stop** consonants, it is only **obstructed** in one way or the other but not completely stopped for the articulation of the continuants. If it goes out
with a frictional sound, the consonant is called a fricative. If no frictional sound is produced, the consonant is known as a frictionless continuant. Panjabi originally had only two fricatives – szed and ʒɪ. Five more were added with the words borrowed from Arabic, Persian and English. One of these fricatives (szed) has an extremely interesting history. They are described in the following chart. As you can see, the Panjabi letters for these sounds have been created by adding a dot beneath the letter for closest-sounding Panjabi consonant. These letters were created towards the close of the 19th century but came into general use in the twenties and thirties of the 20th century. Many speakers of Panjabi pronounce them like the closest-sounding Panjabi consonants (a dot has been added to those symbols to create letters for these new sounds) and many writers who do not know the Urdu script (in which the original Arabic and Persian spellings are preserved) are often not sure where these letters should be used.

3.4.2.1 Fricatives

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>szed</td>
<td>It sounds like the voiceless English s in <em>sink</em>.</td>
</tr>
<tr>
<td>ʒɪ [ɦ]</td>
<td>You can pronounce it like the English voiceless h sound. But it is actually a voiced aspirate or breathy voiced fricative with friction created in the throat and not in the mouth. It simply adds a breathy voiced effect to the neighbouring vowels and consonants. Historically, breathy voice has been the cause of the generation of tones in Panjabi. The interesting mischief it has been causing in the Panjabi pronunciation and spelling for the last five centuries is discussed in the next chapter.</td>
</tr>
<tr>
<td>ʒɛ</td>
<td>It sounds like <em>sh</em> in the English word <em>ship</em>. This sound existed in Panjabi’s ancestor language Sanskrit but disappeared later for some centuries. With the borrowing of words from Arabic and Persian with this sound, it re-emerged in Panjabi speech. But the letter szed was added much later towards the close of the 19th century. Some speakers of Panjabi use szed in its place in their speech.</td>
</tr>
</tbody>
</table>
In some dialects, \( S \) and \( C \) are merging, resulting in a sound which is more like \( S \) than \( C \). In Panjabi writing, this often results in the use of \( S \) where \( C \) should be used. For example भेजे ‘chickpeas’ is often written as भेजे.

\[ \text{भ एच} \]

It is pronounced somewhat in the manner of the voiceless \( \text{भ क} \), but the tongue only approaches the soft palate without touching it. It is pronounced with a light friction.

\[ \text{च एच} \]

It is the voiced counterpart of \( \text{भ एच} \).

\[ \text{स ऐ} \]

It sounds like the voiced English \( Z \) in zinc. It is the voiced counterpart of \( S \).

\[ \text{फ एच} \]

It sounds like the voiceless \( F \) sound in the English word \( \text{fɪnd} \). But the Panjabi sound is a bilabial fricative unlike the labio-dental English \( F \). Some speakers pronounce \( P \) as \( F \) in some positions. But the reverse is more common.

3.4.2.2 Frictionless continuants

All these consonants are \textit{voiced}.

\[ \text{व ऐ} \]

It sounds like the English \( Y \) sound in \textit{year}. But also see the next chapter.

\[ \text{र र} \]

It is generally pronounced as a lightly trilled sound as in the Scottish pronunciation. But in some positions, it becomes a single tap or even an approximant as in the London variety of English. But it sounds very different from the American variety.

\[ \text{ल ऐ} \]

It sounds like the English \( L \) in \textit{light} (but not in \textit{bull}).

\[ \text{व व} \]

It sounds like a cross between the English \( V \) and \( W \). The lips are not rounded as for \( W \). But it also lacks the slight friction heard in the pronunciation of \( V \). But you can pronounce it either like the English \( V \) or \( W \). Also see the next chapter.
This is not a frictionless continuant but a flap sound like न. You can regard it as a flapped version of न or a non-nasal version of न.

### 3.4.3 More recent additions

Two more letters were added, quite controversially, to the Panjabi alphabet in the middle of 20th century. They are

| क‍ | This is a retroflex flap version of ल. It is a native Panjabi sound and has been there in some dialects of the language probably for many centuries. But only less than half of the Panjabi-speaking people use it in their speech. Most of those who use it are not in favour of having a separate letter क for this sound. |
| न‍ | This voiceless stop is articulated further back than क in the mouth. The tongue touches the uvula and hence it is called the voiceless uvular stop. It occurs in the speech of only a few extremely careful speakers, who pronounce it in some words borrowed from Arabic and Persian. We are not using this letter in this book and will use क in its place. |

But the use of these two letters (especially न) is regarded as unnecessarily pedantic by most writers.

### 3.5 Vowel bearer letters

The three letters द, घ and ङ do not stand for any sounds. So no sounds are associated with them in the diagram. Their place in the Gurmukhi writing system is discussed later on in this chapter.

The system of the Panjabi vowels is best discussed with the help of the following topological map showing which part of the tongue is raised to what height in order to change the shape of the resonance chamber in the mouth to achieve a distinct acoustic quality for the sound of each vowel.
The Panjabi vowels can first be divided into two groups – **high** and **low**. The High vowels can be further divided into **front** and **back** vowels. You can see that the **high front** vowels are written by adding vowel symbols to the vowel bearer letter ए, the **high back** vowels are written by adding vowels symbols to the vowel bearer letter ऑ, and the **low** vowels (irrespective of their front or back position) are written by adding vowel symbols to the vowel bearer letter ओ. The vowel symbol for ओ is invisible. As we shall see later, it would be wrong to say that it “has no symbol”.

Cross-cutting this main division, three vowels (one in each group) are grouped together. Traditionally, they are known as **short** vowels. Even in the traditional phonetic transcription used here, in which length is indicated by a bar sign above a vowel symbol, ओ looks like a shorter version of ए, ऑ a shorter version of ऐ and ओ a shorter version of ऑ. But this is not the whole story. Of course, they are **quantitatively** shorter, but they are also **qualitatively** different. Taking into account the position of the tongue, they are also more **centralised** than the other vowels, which

<table>
<thead>
<tr>
<th>FRONT</th>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>ए [e]</td>
<td>ऑ [o]</td>
</tr>
<tr>
<td>ऐ [i]</td>
<td>ओ [u]</td>
</tr>
</tbody>
</table>

![Figure 3.3 Panjabi vowels](image-url)
are contrastively know as **peripheral** vowels. They are also known as **lax** vowels because the muscles of the tongue are relatively more lax for their articulation. So the other vowels are also contrastively known as the **tense** vowels. Since such “short-long” pairs among the remaining four vowels do not exist, a bar sign is unnecessary there. It is important to keep these distinctions in mind because they have phonetic consequences to be discussed in the next chapter. As we saw above, some Panjabi consonants (ਰ, न, र, फ and ल) are also lax.

In the centre of the diagram, there is a white [ə] symbol against a black background. Its significance and role in the system of Panjabi pronunciation will be explained in the next chapter. For the time being, regard it as a nice design element to make the diagram look beautiful!

In this map, ए and ङ are transcribed by composite symbols. These vowels were diphthongs or gliding vowels in Panjabi some centuries ago and are still so in some dialects. ए is a quick glide from ए to ए and ङ a quick glide from ए to ए. In this glide, the starting vowel is considerably stronger than the target vowel. But in most dialects they are pure non-gliding low vowels now. This historical information is important because it explains some Gurmukhi spelling rules to be dealt with in the later chapters.

For the articulation of the back vowels ए and ङ, ओ औ and क嘴唇 are generally rounded. But for the low back vowel ए some speakers only slightly round their lips and others do not round them at all. In some Western dialects, ए does not exist and ओ is used in its place. In other words, these dialects have only nine distinct vowels.

These vowels can either be **oral** (pronounced through the mouth only) or **nasalised** (pronounced through the mouth and the nose at the same time (as many French vowels are). In our transcription, a nasalised vowel is marked with a squiggle, as अ, आ, उ, ऊ, ि, आ, आ, for example.

### 3.6 Panjabi vowel symbols

The Panjabi (Gurmukhi) script is sometimes said to be a syllabic writing system as opposed to the alphabetic writing systems used for the European languages. But it would be more appropriate to call the Panjabi writing system semi-syllabic because it has some characteristics of an alphabetic system as well. Some linguists use the term alpha-asyllabic for the Indian writing systems. Quite significantly, the Panjabi word for a letter of the
alphabet is ਅਕਲਾ ਅਕਾਲਾ ਅਕਲਾ ਅਕਾਲਾ, which comes from the Sanskrit word *akṣara* ‘syllable’. In most cases, a consonant letter in Gurmukhi does not stand for a consonant sound but for the syllable consonant+a. This is why the symbol for the Panjabi vowel ਆ ਆ 'invisible'. The Panjabi name for this invisible vowel symbol is ਮੁਖਤਾ ਮੁਖਤਾ ‘liberated’ because its pure liberated soul is free from all earthly blackness! The symbols for the Panjabi vowels are:

```
 a  ā  i  ī  u  ū  e  ē  o  ō  a'  o'
```

A vowel in Panjabi can be either oral (the air going out from the mouth only) or nasalised (the air going out from the mouth and the nose at the same time).

If you are interested in the names of the visible vowel symbols of Panjabi, here they are:

```
Ka  Kā  I  Ī  U  Ū  E  Ė  O  Ɔ
```

This is an example of how these symbols are added to the consonant letter ਮ: 

```
 Sa  Sā  Si  Sī  Su  Sū  Se  Sa'  So  Sa" 
```

They are added to the vowel bearer letters as shown below. (Also see the Vowel Diagram on page 49.)

```
 A  Ā  I  Ī  U  Ū  E  Ė  O  Ő  a  ā  i  ī  u  ū  e  ē  o  ō 
```
You can see that r and ō are placed after the consonant letter. f is placed before the consonant letter.  and  come beneath the letter, and ^ and ^ come above the letter. (For typographical reasons, the symbol for the vowel o, when added to the vowel bearer letter  looks like ).

This is how a consonant letter and a vowel symbol are combined in the most basic type of syllable in Panjabi, which is CV (consonant+vowel sounds). There are quite a few deviations from this most basic type of syllable, and they are described and discussed below. The structure of a syllable in Panjabi, on the whole, is quite simple. There are no complicated syllable-initial and/or syllable-final consonant clusters. The Gurmukhi script, which, as we said earlier, was tailor-made for Panjabi, reflects this simplicity. This script does not have a large number of mutilated consonant letters as, for example, its sister scripts Devanagari (now used for writing Sanskrit, Hindi, Marathi and Nepali), Gujarati and Bengali have. A Gurmukhi consonant letter can stand either for Consonant+a sequence or for a lone consonant. It is not mutilated in the latter case. A vowel by itself can constitute a syllable. In that case the vowel symbol is added to one of the vowel bearer letters, as shown in the vowel map given above.

The Gurmukhi writing system is based on the following principles which are best applied in this order:
(1) CV sequences (or basic syllables)
(2) Nasalised vowels
(3) Homorganic nasal consonants
(4) Long (or geminated) consonants

3.6.1 CV sequences (or basic syllables)
Start dividing the word into consonants (Cs) and vowels (Vs), starting from the left. Then find CV sequences. An example is

```
amarjīt
| a | m | a | r | ī | t |
V  C | V | C | C | V | C
V  CV | C | CV | C
a  ma | r | ā | t |
```

A V at the beginning stands alone. If there are two or more Cs next to each other, the rightmost goes with the V and the other stands alone. A C
or a V the end of a word (and not attached to a C) also stands alone. In the Panjabi script,

(a) A CV sequence is represented by a consonant letter plus a vowel symbol;
(b) A lone C sound is represented by a consonant letter;
(c) A lone V sound is represented by a vowel bearer letter plus a vowel symbol.

As pointed out above, the symbol for the vowel a is invisible. But this symbol has to be added to the vowel bearer letter if need arises. The example analysed above is written in Panjabi like this:

\[
\text{amarjït} \quad \text{a} \quad \text{m} \quad \text{a} \quad \text{r} \quad \text{j} \quad \text{i} \quad \text{t}
\]

In this example, represents m plus invisible a, but and stand for lone consonants. The invisible symbol for the lone vowel a is added to vowel bearer letter.

A careful study of the following examples will make the application of these rules clear.

\[
\text{sipâhi} \quad \text{s} \quad \text{i} \quad \text{p} \quad \text{a} \quad \text{h} \quad \text{i} \\
\text{fim} \quad \text{fi} \quad \text{f} \quad \text{fi} = \text{fimfii} \quad \text{‘soldier’}
\]

\[
\text{bijalî} \quad \text{b} \quad \text{i} \quad \text{j} \quad \text{a} \quad \text{l} \quad \text{i} \\
\text{fim} \quad \text{fim} \quad \text{fim} = \text{fimfili} \quad \text{‘electricity’}
\]

\[
\text{umar} \quad \text{u} \quad \text{m} \quad \text{a} \quad \text{r} \\
\text{V} \quad \text{C} \quad \text{V} \quad \text{C} \\
\text{V} \quad \text{CV} \quad \text{C} \\
\text{fime} \text{fim} = \text{fimfim} \quad \text{‘age’}
\]
3.6.2 Nasalised vowels

In the Panjabi script a nasalised vowel is represented by the addition of one of the following symbols:

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\delta}
\end{array} \]

(Called Tippi \textit{tiippi}) or (Called Bindi \textit{bindi})

In some Panjabi grammar books you will find a list of rules determining which of the two to choose. But there is only one simple rule: Always use Bindi with

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\varepsilon}
\end{array} \]

and Tippi everywhere else. In other words, do not use the Tippi where it can touch the vowel marker or a part of the letter.

\[ \begin{array}{c}
g\hat{\varepsilon} \\
g\hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k\hat{\varepsilon} \\
k\hat{\varepsilon}
\end{array} \]

for,

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k\hat{\varepsilon} \\
k\hat{\varepsilon}
\end{array} \]

for.

\[ \begin{array}{c}
g \hat{\varepsilon} \hat{\varepsilon} \\
g \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \hat{\varepsilon} \\
k \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

for,

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \\
k \hat{\varepsilon}
\end{array} \]

for.

\[ \begin{array}{c}
g \hat{\varepsilon} \hat{\varepsilon} \\
g \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \hat{\varepsilon} \\
k \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

for,

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \\
k \hat{\varepsilon}
\end{array} \]

for.

\[ \begin{array}{c}
g \hat{\varepsilon} \hat{\varepsilon} \\
g \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \hat{\varepsilon} \\
k \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

for,

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \\
k \hat{\varepsilon}
\end{array} \]

for.

\[ \begin{array}{c}
g \hat{\varepsilon} \hat{\varepsilon} \\
g \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \hat{\varepsilon} \\
k \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

for,

\[ \begin{array}{c}
\hat{\varepsilon} \\
\hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \\
k \hat{\varepsilon}
\end{array} \]

for.

\[ \begin{array}{c}
g \hat{\varepsilon} \hat{\varepsilon} \\
g \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

and

\[ \begin{array}{c}
k \hat{\varepsilon} \hat{\varepsilon} \\
k \hat{\varepsilon} \hat{\varepsilon}
\end{array} \]

for,
Chapter 3: Panjabi Script and Sounds

3.6.3 Homorganic nasals

Homorganic means “produced by the same speech organs” or having the same place of articulation. It was pointed out that within the Consonant Square on page 42 above, all the consonants in a group or row are homorganic. For example, \( t, \ t^h, \ d, \ d^h \) and \( n \) are homorganic because they are all produced by the same organs – the tip of the tongue touching the teeth. Similarly, \( k, \ k^h, \ g, \ g^h \) and \( n \) are also homorganic. For the production of all these five consonants, the back of the tongue touches the soft palate. The front of the tongue touches the hard palate for the five homorganic consonants \( c, \ c^h, j, j^h \) and \( n \).

In each of the five groups in the Consonant Square, there is a nasal consonant. Thus, we have five nasal consonants in Panjabi – \( ñ, \ ñ, n, n \) and \( m \).

Clusters involving a nasal and a homorganic non-nasal or oral consonant are found probably in all languages, including English and Panjabi. In English, the nasal consonant sound immediately before \( k \) in the word ‘sink’ [siŋk] [sɪŋk] is homorganic to the oral consonant \( k \). Like \( k \), this \( ñ \) is pronounced by touching the soft palate with the back of the tongue. Similarly, the nasal consonant in the word ‘inch’ [iŋč] [ɪŋʧ] is homorganic to the oral consonant \( c \) [ʧ]. (Both are produced by touching the hard palate with the front part of the tongue.)

Since \( ñ \) and \( ñ \) in Panjabi nearly always occur in such clusters as nasal sounds homorganic to the following non-nasal or oral consonants, and rarely as independent nasal consonants (as \( ñ, n \) and \( m \) can in words like \( pāñi, nakk \) and \( kamm \) respectively), the use of the phonetic symbols \( ñ \) and \( ñ \) has been unnecessary. (But also see page 42). We have used \( n \) where \( ñ \) and \( ñ \) could have been used. But if you pronounce words fluently and effortlessly, you will always pronounce, for example, the
word *manjā* as [maɲjā] [məɲdʒə]. In anticipation of the j sound, the front part of your tongue will go the hard palate, and pronounce the nasal consonant preceding j as ŋ [ɲ] even though it is transcribed as n. After all, you most probably do pronounce ‘sink’ as [sɪŋk] [sink]. In anticipation of k, the back of the tongue goes to the soft palate and you pronounce the letter ŋ as [ŋ] [ŋ] in the process.

In the Panjabi script, a homorganic nasal consonant is represented by a Tippi or a Bindi.

Since ŋ and Ń almost always occur only as homorganic nasals in the types of clusters mentioned above, and almost never as independent sounds, they are nearly always represented by a Tippi or a Bindi. This means that you may never in your life use the letters ḏ and ḍ. Many users of Gurmukhi are unable to say how these letters sound in isolation or even which is which!

### ounaři

\[
\begin{array}{cccccc}
\text{u} & \text{n} & \text{g} & \text{a} & \text{l} & \text{i} \\
V & C & C & V & C & V \\
\text{(Homorganic Nasal C)} \\
V & C & CV & CV \\
\end{array}
\]

\[\overset{\text{u}}{\text{C}} \overset{\text{a}}{\text{V}} \overset{\text{g}}{\text{V}} \overset{\text{i}}{\text{V}} = \overset{\text{u}}{\text{a}} \overset{\text{g}}{\text{V}} \text{‘finger’}\]

You generally use a Tippi ‘ with _, the symbol for the lax vowel sound u. But only the Bindi Ḍ can be used with the vowel bearer letter Ḍ.

### maɲjā

\[
\begin{array}{cccc}
\text{m} & \text{a} & \text{n} & \text{j} & \text{ā} \\
C & V & C & C & V \\
\text{(Homorganic Nasal C)} \\
CV & C & CV \\
\overset{\text{m}}{\text{a}} & \overset{\text{n}}{\text{V}} & \overset{\text{j}}{\text{C}} & \overset{\text{ā}}{\text{C}} & = \overset{\text{m}}{\text{a}} \overset{\text{n}}{\text{V}} \overset{\text{j}}{\text{C}} & \text{‘cot’}\]
\]
It is notable that in such a word, the first syllable has a lax vowel (a, i or u). The syllable boundary lies between the homorganic nasal consonant (represented by the Bindi or the Tippi) and the following oral consonant. The two syllables of bandā are ban.dā. A syllable ending with a consonant sound is known as a closed syllable and the one ending with a vowel sound is known as an open syllable. The word bandā has a closed syllable followed by an open syllable.

### 3.6.4 Long consonants

A long (or double or geminate) consonant is one which is prolonged. They are not commonly found in English. The following words need to be studied carefully.

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Panjabi</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>गाट</td>
<td>gadā</td>
<td>‘mace’</td>
</tr>
<tr>
<td>पटाः</td>
<td>patā</td>
<td>‘address’</td>
</tr>
<tr>
<td>पिताः</td>
<td>pitā</td>
<td>‘father’</td>
</tr>
<tr>
<td>गिल</td>
<td>gilā</td>
<td>‘complaint’</td>
</tr>
<tr>
<td>लुक</td>
<td>luk</td>
<td>‘to hide’</td>
</tr>
<tr>
<td>दुक्क</td>
<td>duk</td>
<td>‘to ache’</td>
</tr>
<tr>
<td>गदाः</td>
<td>gaddā</td>
<td>‘cushion’</td>
</tr>
<tr>
<td>पट</td>
<td>pattā</td>
<td>‘leaf’</td>
</tr>
<tr>
<td>पित</td>
<td>pitā</td>
<td>‘physique’</td>
</tr>
<tr>
<td>गिल</td>
<td>gillā</td>
<td>‘wet’</td>
</tr>
<tr>
<td>लुक</td>
<td>lukk</td>
<td>‘coal tar’</td>
</tr>
<tr>
<td>दुक्क</td>
<td>dukk</td>
<td>‘pain’</td>
</tr>
</tbody>
</table>
Read below about the use of the symbol `+`

In our transcription, a long aspirated consonant has only one \( ^{h} \). For example, the long \( t^{h} \) consonant in \textit{patt}^{\text{har}} \) ‘stone’ is transcribed as \( tt^{h} \), and not as \( t^{h}t^{h} \), which not only looks odd but is also technically wrong, because the strong breath symbolised by \( ^{h} \) comes out only at the end of the comparatively longer “hold” phase of the consonant.

In the Panjabi script, the length of a long consonant (other than that of a nasal) is represented by the symbol

\( ^{-} \)  

(Called \textit{Addhak})

The word Addhak means ‘excessive’. The name explains itself.

In the case of a \textit{long nasal consonant}, however, the first half is regarded as a \textit{nasal consonant homorganic} to the second half and is therefore represented by a Tippi or a Bindi (as the following examples show).

\begin{align*}
\text{kutt\={a}} & \\
\begin{array}{ccc}
k & u & tt \\
C & V & C & V \\
\end{array} \\
\text{(Long C)}
\end{align*}

\begin{align*}
\text{vacc}^{\text{\text{h}}}\={\text{A}} & \\
\begin{array}{ccc}
v & a & cc^{h} \\
C & V & C & V \\
\end{array} \\
\text{(Long C)}
\end{align*}

A \textit{long oral consonant} is represented by an Addhak placed before it (on the preceding letter). But a \textit{long nasal consonant} is represented by a Tippi or a Bindi.
Chapter 3: Panjabi Script and Sounds

The first syllable of such a word has a lax vowel. The syllable boundary lies in the middle of the long (or double or geminate) consonant. So the first syllable is a closed one. Only a tense consonant can be geminated in Panjabi. This means that the lax consonants च, ङ, र and ल do not geminate. Also, they do not occur in word-initial position in the language. In other words no Panjabi word can start with any of these three consonants.

3.7 Subscript characters

We have covered all the letters and symbols of the Panjabi script except the following subscript symbols (which are put beneath the letters, or literally “in the foot of a letter”, as speakers of Panjabi say):

Of the three symbols उ is very commonly used. The other two are going out of fashion and their use is debatable among Panjabi scholars.
3.7.1 Subscript ʕ

This symbol is a variant of the letter ʕ but is not pronounced as ʰ or ɦ. In old Panjabi, it used to represent breathy voice after some voiced sounds (nasal consonants and ɾ, ɿ, ʋ, ɾ and ɿ). For example

\[ \begin{align*}
\text{ਧ} & \text{ was pronounced as  nh or ḥh as in } \text{ ਕਨਹੀ } \text{ ‘long-legged spider’} \\
\text{ਦ} & \text{ was pronounced as  nh or ḥh as in } \text{ ਬਨਨੀ } \text{ ‘to bind’} \\
\text{ਜ} & \text{ was pronounced as  mh or mh as in } \text{ ਥਾਮਨੀ } \text{ ‘pillar’} \\
\text{ਡ} & \text{ was pronounced as  rh or ɾh as in } \text{ ਵਰਨੀ } \text{ ‘to rain’} \\
\text{ਢ} & \text{ was pronounced as  lh or ɿh as in } \text{ ਕਲਣੀ } \text{ ‘yesterday/tomorrow’} \\
\text{ਣ} & \text{ was pronounced as  lh or ɿh as in } \text{ ਸਾਲਾਹੀ } \text{ ‘locusts’} \\
\text{ਤ} & \text{ was pronounced as  vh or vʰ as in } \text{ ਰਵਨੀ } \text{ ‘may stay’} \\
\text{ਥ} & \text{ was pronounced as  rh or ɾh as in } \text{ ਪਾਰਨੀ } \text{ ‘to read’}
\end{align*} \]

and so on. This pronunciation has been preserved in some Western Panjabi dialects. Most modern speakers of Panjabi do not pronounce this symbol but use a tone in the word having this symbol. We shall deal with this symbol and tone in the next chapter.

3.7.2 Subscript ɾ

When the second consonant in a CCV cluster is ɾ, this ɾ is written as ɾ in the Panjabi script. Examples are

\[ \begin{align*}
\text{prem} & = \text{ ਪਰੇਮ } \text{ ‘love’, a name} \\
\text{prītam} & = \text{ ਪ੍ਰੀਤਾਮ } \text{ ‘sweetheart’, a name}
\end{align*} \]
But many writers have started using the full ਦ in most such words and use the subscript ਰ in names only and in a few “learned words”. The Sikh greeting ਸਤ ਸ੍ਰੀ ਅਕਾਲ, is written as ਸਤੁ ਸ੍ਰੀ ਅਕਾਲ. The first word of this greeting has older spelling. But it is now pronounced as ਸਤ, and not as ਸਤੀ.

### 3.7.3 Subscript ਰ

The use of this symbol is also going out of fashion. But some old-fashioned writers are still using it. It is used exactly like the Subscript ਰ, i.e., when the second consonant in a CCV cluster is ਰ. Examples are

\[
\begin{align*}
\text{svar} & = \text{sound, vowel} \\
\text{sval-jivani} & = \text{self-biography (i.e., autobiography)}
\end{align*}
\]

ਸਤ has retained its old spelling. But everywhere else, most writers have started using a full ਦ. The most common modern spelling of ਸਤਲ-ਜਿਵਾਨੀ is ਸਤੁ-ਜਿਵਾਨੀ.

See Appendix 1 for how the words with the subscript letters are entered in Panjabi dictionaries.

The CCV sequences with ਰ or ਲ as the second ਚ are the only consonant clusters found syllable-initially in the modern Panjabi dialect dealt with in this book. A consonant cluster is found within a syllable. There are no syllable-final consonant clusters in Panjabi (like the [ks] cluster in the English word marks). A consonant cluster is different from a consonant sequence, where the consonants occur across a syllable boundary. In the word ਧਾਤਮ ਕਹਾਤੰਸ ‘sour taste’, ਤ and ਰ occur in a consonant sequence with the intervening syllable boundary, as ਧਾਤ. ਤਮ ਕਹਾਤੰਸ.
So the word is not written as *क्ष्त्र. (When a * is added to a word or expression, it means that the expression does not occur in the language or is unacceptable to the native users of the language.) The eminent Panjabi poet Dhani Ram Chatrik (1876–1954) (who, as a printer, standardised the shapes of the modern Gurmukhi letters) pronounced his name as cā.trik and accordingly spelt it as چڈیک.

In Panjabi, there are no restrictions on which consonants can occur in consonant sequences.

**Summing up and looking ahead**

This chapter describes the salient phonological features of Panjabi in relation to the Panjabi (Gurmukhi) writing system. This system does not look like a repertoire of haphazardly arranged letters but an extremely logical system based on an in-depth analysis of the Indic languages going back nearly three thousand years. Gurmukhi is a script of the Brahmi family, whose design is based on more than two thousand years of phonetic analysis of the Indic languages. Such a systematic relation between the spoken and written forms of the language, or between pronunciation and spelling, does not exist between Panjabi and Shahmukhi, which was borrowed from Arabic and then adapted for Panjabi. The overall spirit of the Gurmukhi system has remained unchanged since the first preserved writings in Gurmukhi appeared in the 16th century. But some major changes have taken place in the pronunciation of Panjabi, resulting in making Panjabi a tone language, and thus unique among the major Indian languages. Within the Indo-European family of languages (to which Panjabi belongs), lexical tone is an extremely rare phenomenon. Norwegian, Swedish and Serbo-Croat are the only other major Indo-European languages with tones. There is some evidence that these changes in Panjabi pronunciation started almost imperceptibly (as all the linguistic changes do!) some time before the 16th century and are still going on. The evolutionary effects of these changes on Panjabi pronunciation and spelling are discussed in the next chapter.
For teachers and other more advanced users

As stated in the Preface and Chapter 1, this section is meant for those who wish to delve more deeply into the phonological and grammatical structure of the language. You can skip it. But you can return to it later on at any time if you wish. Theoretical linguists may also find these sections interesting and informative.

3.8 Panjabi vowel and consonant diagram and chart

The Panjabi vowel and consonant diagram and chart are given below for the benefit of linguists without any comments except that the uvular .reactie is not included among the Panjabi consonants because hardly any speaker of Panjabi uses it. Exactly how the vowels (especially the centralised lax ones) are pronounced differs from dialect to dialect, person to person and context to context.

![Panjabi vowel diagram IPA style](image-url)

Figure 3.4 Panjabi vowel diagram IPA style
### Panjabi Consonants Chart (IPA Style)

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Dental</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voiceless</strong></td>
<td>p</td>
<td>b</td>
<td>t²</td>
<td>d</td>
<td>q</td>
<td>k</td>
</tr>
<tr>
<td><strong>Voiced</strong></td>
<td>pʰ</td>
<td>bʰ</td>
<td>tʰ</td>
<td>dʰ</td>
<td>qʰ</td>
<td>kʰ</td>
</tr>
<tr>
<td>Affricate</td>
<td>tʃ</td>
<td>dʒ</td>
<td>dʒʰ</td>
<td>ʔʃ</td>
<td>ʔʒ</td>
<td>ʔʒʰ</td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>η (flap)</td>
<td>η (flap)</td>
<td>η</td>
<td>η</td>
</tr>
<tr>
<td>Trill/tap/flap</td>
<td>r (trill/tap)</td>
<td>r (flap)</td>
<td>f (flap)</td>
<td>f (flap)</td>
<td>f (flap)</td>
<td>f (flap)</td>
</tr>
<tr>
<td><strong>Fricative</strong></td>
<td>(f)</td>
<td>s</td>
<td>(z)</td>
<td>(x)</td>
<td>(y)</td>
<td>(fi)</td>
</tr>
<tr>
<td>Lateral approximant</td>
<td>l (flap)</td>
<td>l</td>
<td>l (flap)</td>
<td>l (flap)</td>
<td>l (flap)</td>
<td>l (flap)</td>
</tr>
<tr>
<td>Semi Vowel</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>j</td>
</tr>
</tbody>
</table>

**Note:** The ‘voiced aspirated’ (breathy voiced) bʲ, dʲ, qʲ, dʒʲ and qʲ have disappeared from the Eastern Panjabi dialects; f, z, x and y are used in words borrowed from other languages. The breathy voiced fi is not pronounced in many positions. The loss of these consonants has given rise to the Panjabi tones.

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Figure 3.5 Panjabi consonants chart IPA style
3.9 There are more things in Panjabi...

Among the major languages of the Indian sub-continent, Panjabi has a unique phonetic and phonological character. Its major feature, the Panjabi tones, is dealt with in the next chapter. But some less known and unique features of the system, known as the “Panjabi Accent” often colour the speech of the speakers of Panjabi when they speak other languages.

The pronunciation of some words with a short (lax) vowel in spelling is notable. Words now spelt as ग्यान and स्वाद/स्वाद are actually pronounced as [gyā.ān] [gja.an] and [svā.ād] [swa.ad] respectively. A century ago, the spellings were ज्ञान and स्वद respectively, which represent the pronunciation more closely. (The truncated form ज of ज is a typographical equivalent of a subscript form.) Earlier still, this word was spelt differently, with ज written as a subscript character (as in ग्नु) in the Sikh holy book completed in 1604. This word has always had two syllables, and not three as the modern spelling indicates. The pronunciation has not changed over the last five centuries, but spellings have. (Also see the next chapter.)

The Sanskrit/Hindi word विरेंद्र virendra is pronounced as वरिंदर varindar by most speakers of Panjabi. Several features of the Panjabi phonological system are involved in this change. We shall look at them in the next chapter.

We have to stop here because syllable stress is involved in the explanation, and we are going to discuss it in the next chapter.