Chapter - II
Phonology of Kohistani
CHAPTER II

PHONOLOGY OF KOHISTANI

2.0 Introduction

This chapter discusses the basic phonetics and phonology of Kohistani spoken in Ganderbal district in Kashmir. In this chapter we provide a broad description of the vowels and consonants that are used by the speakers of Ganderbal Kohistani. The phonotactics of the phonological segments of Ganderbal Kohistani is discussed. An attempt is made to delineate the quintessential phonological processes that operate in Ganderbal Kohistani. The aim of this chapter is to see the relation of Ganderbal Kohistani with other Dardic languages, especially Kashmiri. In addition, we also try to observe whether bilingualism affects the basic phonology of Ganderbal Kohistani.

2.1 Dardic Phonology

Dardic languages are spread across the mountainous tracts in the Indian state of Jammu and Kashmir, northwestern Pakistan and northeastern Afghanistan. It is very difficult to assign or identify some phonological features as typical features of Dardic. Nevertheless, the existing research on Dardic characterizes some phonological characteristics of Dardic (Bashir 2003, Munshi 2006, Ganai 2012, Gutman and Avanzati 2013). It is reported that Dardic group underwent fewer of the Middle Indo-Aryan phonological developments and have retained many of the Old Indo Aryan (OIA) phonological features (See Bashir 2003). The three-way distinction of Old Indo-Aryan (OIA) fricatives/sibilants /ʃ/ (palatal), /s/ (dental), and /ʂ/ (retroflex) are retained in Dardic languages, such as, Pashai, Shumashti, Dameli, Shina, Khowar, Kalasha, Torwali, Indus Kohistani and Swat-Kohistani. However, in Kashmiri and
other varieties like Grangali and Tirahi, we find two sibilants /ś/ and /s/ only. The consonant clusters of OIA have been retained in many Dardic varieties. Another feature of Dardic that is observed in literature is the loss of aspiration of voiced stops. The development of retroflex affricates /ɾɬ/, /ɾɬʰ/, /ɾɬʃ/ and /ɾɬ/ from various OIA clusters is another feature observed in many Dardic languages. A contrast between voiceless and voiced fricatives /s/ vs. /z/ is found in many Dardic languages. This distinction is conspicuously absent in most Modern Indo-Aryan. Dardic languages also have a rich inventory of vowels. Some of the Dardic languages have developed tone.

2.2 Phonology of Ganderbal Kohistani

The phonology of Ganderbal Kohistani is discussed in the following sections. We first discuss the phonological segments: vowels and consonants in Ganderbal Kohistani. We also make an attempt to describe their distribution.

2.2.1 Vowels in Ganderbal Kohistani

There are thirteen vowels in the Kohistani spoken in Ganderbal. Table 2.1 shows the inventory of vowels in Ganderbal Kohistani (GK). There are five front vowels, four central vowels and four back vowels in Ganderbal Kohistani. There are five high, five mid and three low vowels as shown in table 2.1. The high and mid front and back vowels show vowel length differences. The Kohistani spoken in Kupwara possesses thirteen vowels as well (Ganai 2012). However, unlike Kupwara Kohistani, Ganderbal Kohistani seems to possess three diphthongs as shown in table 2.1. Kashmiri, the dominant language of the region has more vowels than Kohistani (Koul and Wali 2009). There are sixteen vowels in Kashmiri. The high and mid central vowels in Kashmiri show vowel length differences. This feature is not there in Kohistani.
Table 2.1 Vowels in Ganderbal Kohistani

<table>
<thead>
<tr>
<th>Vowels</th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td>i:</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>e:</td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td>æ</td>
<td>a</td>
<td>a:</td>
</tr>
<tr>
<td>Diphthong</td>
<td>et</td>
<td>ai</td>
<td>au</td>
</tr>
</tbody>
</table>

2.2.1.1. Articulation of Vowels in Ganderbal Kohistani

The distribution of vowels in Ganderbal Kohistani is discussed in this section. There are three front vowels in Ganderbal Kohistani. The high and mid front vowels show length differences as shown in examples (1) – (4).

(1) /i/ \( \text{high front unrounded short vowel} \)

(i) /bariʃ/ \( \text{summer} \)
(ii) /hivə:d/ \( \text{winter} \)
(iii) /sigal/ \( \text{sand} \)

(2) /iː/ \( \text{high front unrounded long vowel} \)

(i) /garmiː/ \( \text{heat} \)
(ii) /matiː/ \( \text{girl} \)
(iii) /giːlʲ/ \( \text{song} \)
(3) /e/  (mid front unrounded short vowel)
   (i) / sela:b /  flood
   (ii) / ek /  one
   (iii) / pēh /  stair

(4) /e:/  (mid front unrounded long vowel)
   (i) / me:k /  nail
   (ii) / be:vk:pu:/  fool
   (iii) / e:ji /  she sheep

(5) /æ/  (front low unrounded vowel)
   (i) / kæla /  banana
   (ii) / gæra /  elder
   (iii) / kæ̃ʈʰa /  husbands brother

There are three central vowels in Ganderbal Kohistani as illustrated in examples in (6) – (9). The high and mid central vowels do not reflect vowel length differences. Vowel length distinction is shown by the low central vowel ( /a/, /a:/) only as illustrated in (8) and (9).

(6) /i/  (high central unrounded short vowel)
   (i) / maṭir /  pea
   (ii) / maːʃir /  teacher
   (iii) / takṭir /  tractor
(7) /a/  (mid central unrounded short vowel)

(i) / rənd /  widow
(ii) / vərd /  belly
(iii) / bətiː /  pebbles

(8) /a/  (low central unrounded short vowel)

(i) / dəv /  back
(ii) / marəd /  death
(iii) / am /  mango

(9) /aː/  (low central unrounded long vowel)

(i) / raːt /  blood
(ii) / haːd /  bone
(iii) / taːl /  forehead

There are two back vowels in Ganderbal Kohistani. The back vowels, both high and mid show length differences as we can see in examples (10) – (13).

(10) /u/  (high back rounded short vowel)

(i) / kukuj /  hen
(ii) / ʃahur /  father-in-law
(iii) / jũh /  moon

(11) /uː/  (high back rounded long vowel)

(i) / kuːd /  fence
(ii) / kʰuː /  well
(iii) / tutkuː /  flute
Chapter II

(12) /o/  (mid back rounded short vowel)

(i) / goh /   horse
(ii) / kʰora:k /   food
(iii) / maʃo /   mosquitto

(13) /o:/  (mid back rounded long vowel)

(i) / ɖo:l /   earth
(ii) / ko:r /   hill
(iii) / ʃo:lah /   flame

The Kohistani spoken in Ganderbal possesses three dipthongs, such as, /au/, /eu/ and /au/. Two of the dipthongs are front (/au/, /eu/), and one is back (/au/). It has been reported that dipthongs are not part of Kohistani spoken in Kupwara (See Ganai 2012). Dipthongs are not found in Kashmiri as well (Koul and Wali 2009). The distribution of dipthongs in Ganderbal Kohistani is exemplified in the following examples (14) - (16).

(14) /eu/  (front unrounded dipthong)

(i) / veɪ /   water
(ii) / teɪz ɔɹ /   wind
(iii) / pateɪr ɜɹ /   father's brothers son

(15) /au/  (front unrounded dipthong)

(i) / daraɪ /   window
(ii) / pitʃaɪ /   aunt$^3$
(iii) / maʃai /   aunt$^4$
Chapter II

(16) /au/     (back rounded dipthong )

(i) / talau /    rice
(ii) /  gau /    cow
(iii) / tʃɪtau / to cut

2.2.2. Consonants in Ganderbal Kohistani

The data collected for this study suggests that there are thirty-four consonants in Kohistani spoken in Ganderbal (See Khushboo and Laskar 2017). These consonants presented in table 2.2 are classified into different groups on the basis of the place and manner of articulation. However, in Kupwara Kohistani, there are thirty consonants (Ganai 2012). It has been observed that according to the “place of articulation”, there are six bilabial sounds, six dental sounds, five alveolar sounds, five retroflex sounds, six palatal-alveolar sounds, five velar sounds and one glottal sounds in Ganderbal Kohistani. There are fifteen plosives, five affricates, seven fricatives, three nasals, one trill, one lateral and two semi vowels. There are eighteen voiced and sixteen voiceless consonants.

Aspiration is also a feature of consonants in Ganderbal Kohistani. It is observed that there are certain differences between Ganderbal Kohistani and Kupwara Kohistani regarding aspiration. Ganderbal Kohistani possesses voiced aspirated bilabial, dental and velar plosives but these sounds are not found in Kohistani spoken in Kupwara (See Ganai 2012). The Kohistani spoken in Ganderbal also shows the presence of voiceless aspirated dental affricate. This is not found in Kupwara Kohistani. Kashmiri do not have voiced aspirated plosives as well (Koul and Wali 2009).
Table 2.2 Consonants in Ganderbal Kohistani

2.2.2.1 Articulation of Consonants in Ganderbal Kohistani

The voiceless unaspirated bilabial stop /p/ can occur in two environments i.e initially and medially in Ganderbal Kohistani as cited in example (17). However, the frequency of occurrences of /p/ is more in initial position in words. The voiceless aspirated bilibial stop /pʰ/ in Ganderbal Kohistani occurs in all the three positions i.e initially, medially and finally as illustrated in (18).

(17) /p/  (voiceles unaspirated bilabial stop)

(i) /pihili:/  ant
(ii) /pind/)  leg
(iii) /pija:di:/  cup
(iv) /kʰo:pah/  coconut
Chapter II

(18) /pʰ/ (voiceless aspirated bilabial stop)

(i) /pʰũ:d/ flower
(ii) /pʰa:ju:/ father’s sister
(iii)/pʰũg/ moustache
(iv)/ pupʰer bʰijũ:/ father’s sisters daughter
(v) /be:vku:pʰ/ fool

The voiced unaspirated bilabial stop /b/ in Ganderbal kohistani can occur in all the three environments i.e initially, medially and finally as in (19). The counterpart, that is, voiced aspirated bilabial stop /bʰ/ occurs only in initial position as seen in example (20).

(19) /b/ (voiced unaspirated biliable stop)

(i) /ba:l/ hair
(ii) /ba:di/ kitchen garden
(iii)/ba:/ father
(iv)/kumba/ family
(v) /bʰa:b/ apple

(20) /bʰ/ (voiced asprirated bilabial stop)

(i) /bʰa:/ house
(ii) /bʰa:b/ apple
(iii)/bʰada:s/ steam

The voiceless unaspirated dental stop /t/ and the voiceless aspirated dental stop /tʰ/ can occur in all the three positions in words i.e initially, medially and finally as illustrated in (21) – (22). The dental sound /t/ is more likely to occur in initial position, whereas /tʰ/ occurs more in final position in words.
Chapter II

(21) /t/  (voiceless unaspirated dental stop)

(i) /talau/  rice (un-cooked)
(ii) /ta:r/  star
(iii) /tʃitau/  to-cut
(iv) /ra:t/  blood

(22) /tʰ/  (voiceless aspirated dental stop)

(i) /tʰurʲ/  heel
(ii) /ha:tʰi:/  elephant
(iii) /ba:tʰ/  rice (cooked)
(iv) /hatʰ/  hand

The voiced unaspirated dental stop /d/ is found to occur in all three environments i.e initially medially and finally (example (23). But the voiced aspirated dental stop /dʰ/ occurs in two positions only i.e initially and medially as illustrated in (24). It is observed in our data that both /d/ and /dʰ/ occur more in medial positions in words.

(23) /d/  (voiced unaspirated dental stop)

(i) /daraɪ/  window
(ii) /ä:dah/  egg
(iii) /pija:di:/  cup
(iv) /dad/  pain

(24) /dʰ/  (voiced aspirated dental stop)

(i) /dʰõ/  smoke
(ii) /gadʰau/  donkey
(iii) /pʰaidʰa/  profit
In Ganderbal Kohistani, the voiceless unaspirated retroflex stop /ʈ/ can occur in medial and final position as shown in (25). The voiceless aspirated retroflex stop /ʈʰ/ on the other hand can occur in all the three environments, initial, medial and final as seen in (26). Both sounds /ʈ/ and /ʈʰ/ are more common in word final positions.

(25) /ʈ/  (voiceless unaspirated retroflex stop)

(i) / maʈɨr /    pea
(ii) / ko:t/     coat
(iii) / kʰaʈ/    lid
(iv) / ba:t/     rock

(26) /ʈʰ/  (voiceless aspirated retroflex stop)

(i) /ʈʰi:k/    correct
(ii) / kæʈʰa/    spine
(iii) / ku:tʰ/    knee
(iv) / aːtʰ/    eight

In Kohistani of Ganderbal, the voiced unaspirated retroflex stop /ɖ/ occurs in all the environments i.e. initial, medial and final as shown in (27). Though retroflex stop /ɖ/ can occurs in all three environments in words, it is more probable in word initial position. It is found to occur in final position in a few words only.

(27) /ɖ/  (voiced unaspirated retroflex stop)

(i) /ɖoːl/    earth
(ii) /ɖaːv/    back
(iii) / bʊdjaːl/    husband’s sister’s husband
(iv) / naːdʒoːɖ/    patient
The voiceless unaspirated and aspirated velar stop /k/ and /kʰ/ occur in all the three positions, initial, medial and final as exemplified in (28) and (29).

(28) /k/  (voiceless unaspirated velar stop)

(i) /kutʃur/  dog
(ii) /karav/  lion
(iii) /makaɪ/  maize
(iv) /atsʰek/  bad

(29) /kʰ/  (voiceless aspirated velar stop)

(i) /kʰo:pah/  coconut
(ii) /bakʰũːj/  arm
(iii) /lekʰ/  younger

In Ganderbal Kohistani, the voiced unaspirated velar stop /ɡ/ is found to prevail in all the environment as shown in (30). But the aspirated counterpart /ɡʰ/ occurs only in the initial position as illustrated in (31).

(30) /ɡ/  (voiced unaspirated velar stop)

(i) /giːl/  song
(ii) /ɡũː/  wheat
(iii) /garmiː/  heat
(iv) /zaŋɡal/  forest
(v) /pʰũɡ/  moustache
(31) /gʰ/  (voiced aspirated velar stop)

(i)  /gʰiːl/      butter
(ii) /gʰaːr/      cave
(iii) /gʰarjũ:/    wife

The voiceless unaspirated dental affricate /ts/ can occur in initial and medial positions in words in Ganderbal Kohistani as seen in (32). It is not found to occur in word final position in our data. The voiceless aspirated dental affricate /tsʰ/ occurs in medial and final positions as cited in (33).

(32) /ts/  (voiceless unaspirated dental affricate)

(i)  /tsamtsaː:/     spoon
(ii) /tsandæri/      blanket
(iii) tsapli/        chapal

(33) /tsʰ/  (voiceless aspirated dental affricate)

(i)  /atsʰek/      bad
(ii) /maːtsʰ/      clay

The voiceless unaspirated as well as aspirated plato-alveolar affricate /tʃ/ and /tʃʰ/ can occur in all three positions, initial, medial and final as seen in (34) – (35). It has been observed that /tʃ/ is equally distributed in all the three positions in Kohistani words, whereas /tʃʰ/ is more prone to occur in word initial position.
(34) /tʃ/  (voiceless unaspirated palato-alveolar affricate)

(i) /tʃitaʊ/ to-cut  
(ii) /pɪtʃaɪ̯/ aunt  
(iii) /puːtʃ/ son  

(35) /tʃʰ/  (voiceless aspirated palato-alveolar affricate )

(i) /tʃʰiːr/ milk  
(ii) /tʃʰa:li/ goat  
(iii) /tʃʰai/ axe  
(iv) /maːtʃʰiː/ house fly  
(v) /antʃʰ/ tears  

The voiced unaspirated palato-alveolar affricate /dʒ/ occurs in all the three positions i.e. initially, medially and finally in Ganderbal Kohistani words as illustrated in (36).

(36) /dʒ/  (voiced unaspirated palato-alveolar affricate)

(i) /dʒaːmah/ gown  
(ii) /dʒumə:tʰ/ mosque  
(iii) /dʒelɔːs/ bridegroom  
(iv) /naːdʒoːd/ patient  
(v) /miliːbadkudʒ/ lightening  

In Ganderbal Kohistani, we find both voiceless and voiced alveolar fricatives /s/ and /z/. The alveolar fricatives /s/ and /z/ occur in all the three environments, initial, medial and final as shown in (37) and (38).
(37) /s/  (voiceless alveolar fricative)

(i) /sasu:/  mother-in-law
(ii) /sela:b/  flood
(iii) /sigal/  sand
(iv) /bʰada:s/  steam

(38) /z/  (voiced alveolar fricative)

(i) /zaŋgal/  forest
(ii) /zar/  gold
(iii) /zimda:r/  farmer
(iv) /zalzalah/  earthquake
(v) /teɾɪz/  fast

The voiceless retroflex fricative /ʂ/ occurs in word initial and word final positions but the voiced counterpart /ʐ/ occurs in word final position alone.

(39) /ʂ/  (voiceless retroflex fricative)

(i) /siʃʃ/  head
(ii) /luʂ/  thief
(iii) /tʃjaʃ/  mother–in-law

(40) /ʐ/  (voiced retroflex fricative)

(i) /azʃ/  cloud/rain
(ii) /haliːʐ/  turmeric
Chapter II

The voiceless palato-alveolar fricative /ʃ/ is found to occur in word initial, medial and final positions in Ganderbal Kohistani but the voiced palato-alveolar fricative /ʒ/ does not occur in final positions.

(41) /ʃ/  (voiceless palato-alveolar fricative )

(i) /fuhr/ lungs
(ii) /maːfuri:/ honey bee
(iii)/maʃo/ man
(iv)/kahâːʃ/ slope

(42) /ʒ/  (voiced palato-alveolar fricative )

(i) /ʒa:/ brother
(ii) /ʒe:/ brother’s wife
(iii)/dʒavâːʒah/ son-in-law

The voiceless glottal fricative /h/ occurs in all the three positions i.e word initial, medial and final positions. The possibility of occurrence is more in medial position than initial and final position as shown in (43).

(43) /h/  (voiceless glottal fricative )

(i) /ha:/ hand
(ii) /fuhr/ lungs
(iii)/aːhina/ mirror
(iv)/kʰoːpah/ coconut

The voiced bilabial nasal /m/, alveolar nasal /n/ and velar nasal /ŋ/ occur in all environments i.e they can occur word initially, medially and finally in Ganderbal
Kohistani as we can see in (44) – (46). The nasals /m/ and /n/ occur more in word initial positions, whereas /ŋ/ is preferred in medial positions.

**Chapter II**

**Kohistani**

As we can see in (44) – (46). The nasals /m/ and /n/ occur more in word initial positions, whereas /ŋ/ is preferred in medial positions.

**44) /m/ (voiced bilabial nasal)**

(i) /matu:/ boy  
(ii) /mâ:j/ person  
(iii)/kamrah/ room  
(iv)/makʰa:m/ evening

**45) /n/ (voiced alveolar nasal)**

(i) /na:kʰ/ nail  
(ii) /nau/ name  
(iii)/ganda:/ onion  
(iv)/asma:n/ sky

**46) /ŋ/ (voiced velar nasal)**

(i) /ŋgu:li/ ring  
(ii) /bangad/ bangle  
(iii)/zaŋgal/ forest  
(iv)/kaŋ/ comb

The voiced alveolar trill /ɾ/ and the voiced alveolar lateral /l/ occur in all the three positions i.e. initially, medially and finally.
The semi-vowels both voiced bilabial /v/ and the voiced palatal /j/ are found to occur in all the three positions in words, word initial medial or final as shown in (49) –(50).
2.2.3 Consonant Clusters

A consonant cluster (-cc-) is a group of two or more consonant sounds, which have no intervening vowel between them. Kohistani spoken in Ganderbal District allows consonant clusters in initial, medial and final positions in words. However, there is just one consonant cluster /ŋg/ that occurs in word initial position as shown in table 2.3. It is to be noted that Kupwara Kohistani does not allow the occurrence of any consonant cluster in initial position (See Ganai 2012). Although, Ganderbal Kohistani allows consonant clusters in all environments, clusters are more preferred in medial position as shown in table 2.4. Table 2.4 lists the consonant clusters that occur in medial positions in Ganderbal Kohistani. There are certain restrictions on consonant clusters in medial position. Two aspirated consonants do not form clusters in Ganderbal Kohistani as shown in table 2.4. This is true of Kashmiri as well (Koul and Wali 2009). The alveolar and velar nasal /n, ŋ/ do not occur as a second member of the cluster in Ganderbal Kohistani. A very few word final consonant clusters occur in Ganderbal Kohistani as we can see in table 2.5. The first member of word final consonant cluster is alveolar nasal /n/ or glottal fricative /h/.

<table>
<thead>
<tr>
<th>S. no</th>
<th>Initial consonant cluster</th>
<th>Kohistani word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>-ŋg-</td>
<td>ěŋguj</td>
<td>Finger</td>
</tr>
<tr>
<td>02</td>
<td>-ŋg-</td>
<td>ěŋgu:li:</td>
<td>Ring</td>
</tr>
</tbody>
</table>

*Table 2.3 Initial Consonant Clusters in Ganderbal Kohistani*

<table>
<thead>
<tr>
<th>S. no</th>
<th>Medial consonant cluster</th>
<th>Kohistani Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>-dk-</td>
<td>mili:badkudʒ</td>
<td>Lightening</td>
</tr>
<tr>
<td>02</td>
<td>-dr-</td>
<td>müdri:</td>
<td>Ear-ring</td>
</tr>
<tr>
<td>03</td>
<td>-kd-</td>
<td>tʃakda:</td>
<td>Mud</td>
</tr>
<tr>
<td>04</td>
<td>-lz-</td>
<td>zalzalah</td>
<td>Earth quake</td>
</tr>
<tr>
<td>05</td>
<td>-mb-</td>
<td>kumba</td>
<td>Family</td>
</tr>
</tbody>
</table>
Chapter II

Table 2.4 Medial Consonant Clusters in Ganderbal Kohistani

<table>
<thead>
<tr>
<th>S.no</th>
<th>Final Consonant Cluster</th>
<th>Kohistani Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>-nd-</td>
<td>ɾənd</td>
<td>Widow</td>
</tr>
<tr>
<td>02</td>
<td>-ndʲ-</td>
<td>ɬiɲdʲ</td>
<td>Leg</td>
</tr>
<tr>
<td>03</td>
<td>-nd-</td>
<td>kaːnd</td>
<td>Ear</td>
</tr>
<tr>
<td>04</td>
<td>-ntʃʰ-</td>
<td>antʃʰ</td>
<td>Tears</td>
</tr>
<tr>
<td>05</td>
<td>-hr-</td>
<td>fuhr</td>
<td>Lungs</td>
</tr>
</tbody>
</table>

Table 2.5 Final Consonant Clusters in Ganderbal Kohistani

<table>
<thead>
<tr>
<th>S.no</th>
<th>Final Consonant Cluster</th>
<th>Kohistani Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>-md-</td>
<td>zimdaːɾ</td>
<td>Farmer</td>
</tr>
<tr>
<td>07</td>
<td>-mr-</td>
<td>kamraːɾ</td>
<td>Room</td>
</tr>
<tr>
<td>08</td>
<td>-mts-</td>
<td>tsamtsaːː</td>
<td>Spoon</td>
</tr>
<tr>
<td>09</td>
<td>-nd-</td>
<td>tsandaɾi</td>
<td>Blanket</td>
</tr>
<tr>
<td>10</td>
<td>-ng-</td>
<td>bəŋɡad</td>
<td>Bangle</td>
</tr>
<tr>
<td>11</td>
<td>-pl-</td>
<td>tsaplí</td>
<td>Chappal</td>
</tr>
<tr>
<td>12</td>
<td>-rkʰ-</td>
<td>tıɾkʰəːd</td>
<td>Carpenter</td>
</tr>
<tr>
<td>13</td>
<td>-rm-</td>
<td>gʰirmaːʃ</td>
<td>Woman</td>
</tr>
<tr>
<td>14</td>
<td>-rtʃ⁻</td>
<td>martʃakːiː</td>
<td>Chilly</td>
</tr>
<tr>
<td>15</td>
<td>-rz-</td>
<td>ɗarziː</td>
<td>Tailor</td>
</tr>
<tr>
<td>16</td>
<td>-sm-</td>
<td>asmaːn</td>
<td>Sky</td>
</tr>
<tr>
<td>17</td>
<td>-st-</td>
<td>reːɡistaːn</td>
<td>Desert</td>
</tr>
<tr>
<td>18</td>
<td>-ʃt⁻</td>
<td>maːʃtir</td>
<td>Teacher</td>
</tr>
<tr>
<td>19</td>
<td>-tk⁻</td>
<td>tutkuː</td>
<td>Flute</td>
</tr>
<tr>
<td>20</td>
<td>-tʰɾ⁻</td>
<td>baːɾtruːm</td>
<td>Bathroom</td>
</tr>
<tr>
<td>21</td>
<td>-vk⁻</td>
<td>beːvkuːpʰ</td>
<td>Fool</td>
</tr>
</tbody>
</table>

2.2.4 Syllable Patterns

A syllable is a unit of organisation of speech sounds, which consists of an obligatory vowel and an optional consonants. A syllable can occur with or without preceding or following consonants. The minimum possibility of a syllable in Ganderbal Kohistani
consists of a vowel and a consonant. The syllabic patterns that are possible in Ganderbal Kohistani is presented in table 2.6.

<table>
<thead>
<tr>
<th>S. no</th>
<th>Syllabic Patterns</th>
<th>Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>VC</td>
<td>aẓ̣</td>
<td>Rain</td>
</tr>
<tr>
<td>02</td>
<td>CV</td>
<td>ẓaː</td>
<td>Brother</td>
</tr>
<tr>
<td>03</td>
<td>CVC</td>
<td>ʃiʃ</td>
<td>Head</td>
</tr>
<tr>
<td>04</td>
<td>VCC</td>
<td>antʃʰ</td>
<td>Tears</td>
</tr>
<tr>
<td>05</td>
<td>CCVC</td>
<td>nguj</td>
<td>Finger</td>
</tr>
<tr>
<td>06</td>
<td>CVCC</td>
<td>ʃuhr</td>
<td>Lungs</td>
</tr>
<tr>
<td>07</td>
<td>CCVCV</td>
<td>nguːli</td>
<td>Ring</td>
</tr>
</tbody>
</table>

Table 2.6 Syllabic Patterns in Ganderbal Kohistani

2.3. Phonological Processes in Ganderbal Kohistani

There are some phonological processes that operate in Ganderbal Kohistani. These processes are discussed in this section. Ganderbal Kohistani is in close bilingualism with Urdu and Kashmiri. We would like to see the nature of the relationship Ganderbal Kohistani shares with Kashmiri, the dominant language of the region. The Urdu words that Ganderbal Kohistani uses undergo a number of phonological changes that is in tune with other Dardic languages.

(I) Palatalization

Palatalization is the addition of a high front tongue position to another articulation (Ladefoged 2001: 217). Ganderbal Kohistani shows lot of palatalization as illustrated in (51). However, palatalization in Ganderbal Kohistani is not as distinct as in Kashmiri (Ganai 2012; Koul and Wali 2009). Palatalization is very frequent in word final segments in Ganderbal Kohistani. In Ganderbal Kohistani palatalization is however not phonemic. Ganai’s study on Kupwara Kohistani reports a few cases of
palatalization that are phonemic and are in line with Kashmiri. This is not the case in Ganderbal Kohistani.

(51) Palatalization in Ganderbal Kohistani

(i) /giːlʲ/  
   Song

(ii) /vərʲ/  
   Belly

(iii) /pindʲ/  
   Leg

(iv) /tʰurʲ/  
   Heal

(v) /tʃaːlʲ/  
   Goat

(vi) /naːlʲ/  
   Gun

(vii) /huːɡʲ/  
   Garlic

(viii) /radʒuːlʲ/  
   Rope

(ix) /suːrʲ/  
   Sun

(x) /buːrʲ/  
   Deaf

(xi) /adʲraːl/  
   Mid-night

(II) Nasalization

Vowels are said to be nasalized if the soft palate is lowered to let part of the air stream escape through the nose (Ladefoged 2002: 213). Nasalization is a feature of both long and short vowels in Ganderbal Kohistani as shown in (52). Nasalization though a common feature of vowels in Ganderbal Kohistani is not phonemic. Nasalization is phonemic in Kashmiri (Koul and Wali 2009).
(52) Nasalization in Ganderbal Kohistani

(i) /jũh/ Moon
(ii) /kahãːʃ/ Slope
(iii) /hivã:d/ Winter
(iv) /marõ/ Death
(v) /pitʃaːl/ Aunt
(vi) /pʰũːd/ Flower
(vii) /pʰũg/ Mustache
(viii) /kãːtʰɔː/ Husband’s brother
(ix) /kãːtʰa/ Spine
(x) /ɡũ:/ Wheat
(xi) /dʒavãːʒah/ Son –in-law
(xii) /mãːʃ/ Person
(xiii) /pajõ/ Cook

(III) Fortition or Strengthening

Fortition involves strengthening of consonant sounds (Trask 1996). Fortition is a consonantal change from a weak sound to a strong sound and in a way it opposes the effects of lenition. Fortition operates in Ganderbal Kohistani. The fricatives /ʃ/ is realized as bilabial stop /pʰ/ as illustrated in (53). The velar fricative /x/ becomes velar stop /kʰ/ respectively as we can see in (54).
(53) /f/ is realized as /pʰ/

<table>
<thead>
<tr>
<th>Urdu</th>
<th>Kohistani</th>
</tr>
</thead>
<tbody>
<tr>
<td>/f/</td>
<td>/pʰ/</td>
</tr>
</tbody>
</table>

Gloss

(i) /farq/ → /pʰarak/ Difference
(ii) /faeda/ → /pʰaeda/ Profit
(iii) /sirf/ → /siripʰ/ Only
(iv) /sa:f/ → /sa:pʰ/ Clean

(54) /x/ is realized as /kʰ/

<table>
<thead>
<tr>
<th>Urdu</th>
<th>Kohistani</th>
</tr>
</thead>
<tbody>
<tr>
<td>/x/</td>
<td>/kʰ/</td>
</tr>
</tbody>
</table>

Gloss

(i) /xa:li:/ → /kʰa:li:/ Empty
(ii) /xa:s/ → /kʰa:s/ Special
(iii) /səxt/ → /sakʰt/ Hard
(iv) /ʃox/ → /ʃokʰ/ Wish

(IV) Anaptyxis

Anaptyxis is a type of epenthesis in which an extra vowel is inserted between two consonants (Cambell 2013: 30). The process of Anaptyxis operates in Ganderbal Kohistani in many of the Urdu loan words. The examples in (55) suggests that a vowel is inserted to break final or initial consonant clusters in many Urdu loan words that Ganderbal Kohistani uses.
Another type of sound change that Urdu loan words in Ganderbal Kohistani undergoes is Apocope. Apocope refers to the loss or deletion of a sound, usually a vowel in word final position (Campbell 2013: 29). The vowels at the end of the word in many Urdu loan words are deleted in Ganderbal Kohistani as shown in (56).

(VI) /q/ is realised as /k/

The uvular plosive /q/ is realized as velar plosive /k/ in Ganderbal Kohistani as shown in (57).
(57) Urdu Kohistani

<table>
<thead>
<tr>
<th>/q/</th>
<th>→</th>
<th>/k/</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/qəlam/</td>
<td>→</td>
<td>/kalam/</td>
<td>Pen</td>
</tr>
<tr>
<td>/fərq/</td>
<td>→</td>
<td>/pʰarək/</td>
<td>Difference</td>
</tr>
</tbody>
</table>

(VII) Vowel lowering

Vowel lowering is another sound change that results in high vowels becoming mid or low vowels, or mid vowels becoming low (Campbell 2013: 37). In many Urdu loan words in Ganderbal Kohistani, the mid central vowel /a/ is realized as low vowel /a/ as shown in (58).

(58) /a/ is realised as /a/

<table>
<thead>
<tr>
<th>Urdu</th>
<th>Kohistani</th>
</tr>
</thead>
<tbody>
<tr>
<td>/a/</td>
<td>→ /a/</td>
</tr>
</tbody>
</table>

| (i) /duʃmən/ | → /duʃman/ | Enemy        |
| (ii) /maka:n/ | → /maka:n/ | House        |
| (iii) /zindəgi/ | → /zindagi/ | Life        |
| (iv) /nəzər/ | → /nazar/ | View        |
| (v) /fərq/ | → /pʰarək/ | Difference  |
Chapter II

(VIII) /y/ is realised as /dʒ/  

<table>
<thead>
<tr>
<th>Urdu</th>
<th>Kohistani</th>
</tr>
</thead>
<tbody>
<tr>
<td>/y/</td>
<td>/dʒ/</td>
</tr>
</tbody>
</table>

Gloss

(i) /jism/ → /dʒisam/  Body  
(ii) /jiv / → /dʒi:b/  Tongue  
(iii) /ji:t/ → /dʒi:t/  Win  

(IX) /c/ or /cʰ/ is realised as /tʃ/  

<table>
<thead>
<tr>
<th>Urdu</th>
<th>Kohistani</th>
</tr>
</thead>
<tbody>
<tr>
<td>/c/ or /cʰ/</td>
<td>/tʃ/</td>
</tr>
</tbody>
</table>

Gloss

(i) /cʰat/ / → /tʃa:/  Tea  
(ii) /mocʰi/ → /motʃi:/  Cobbler  
(iii) /cʰokida:r/ → /tʃokda:r/  Watchman  
(iv) /xarač/ → /kʰaritʃ/  Spend  

Summary

In this chapter, we have provided a discussion on the vowels and consonants of Ganderbal Kohistani. An exploration of the phonological segments of Ganderbal Kohistani throws light on number of facts about Dardic languages spread in the state of Jammu and Kashmir in India. Unlike Kashmiri, which has rich inventory of oral and nasal vowels, Ganderbal Kohistani has only thirteen vowels. However, Ganderbal Kohistani has developed diphthongs that are absent in Kashmiri and in the other varieties of Kohistani spoken in Kupwara. In contrast to Kashmiri, the high and mid central vowels in Ganderbal Kohistani do not show length contrast. This feature Ganderbal Kohistani shares with Kupwara Kohistani as well. Ganderbal Kohistani has
a rich inventory of consonants. There are thirty-four consonants in Ganderbal Kohistani. Like the other Kohistani varieties spoken in Indus Kohistani, Ganderbal Kohistani has retained three sibilants \( s, ʂ, ʃ \) of the OIA. Though, voiced aspirates are lost in many Dardic languages, Ganderbal Kohistani possess the series of voiced aspirates \( b h, d h, g h \). Voiced aspirates are also present in a few Dardic languages, such as, Indus Kohistani, Torwali, Palula and Kalasha (Bashir 2003). It is plausible that the loss of voiced aspirates is a recent development. Like many other Dardic languages, Ganderbal Kohistani too developed voiced fricatives. It have been reported that many Dardic languages have developed retroflex affricates. But we do not find retroflex affricates in both Ganderbal Kohistani and Kashmiri. Ganderbal Kohistani also lacks tone.

The consonant clusters are favored in medial positions. The process of nasalization and palatalization operate in Ganderbal Kohistani as well. However, unlike Kashmiri, these processes are not phonemic in Ganderbal Kohistani. The processes of nasalization and palatalization are observed in many other Dardic languages (Munshi 2006).

The Urdu loan words in Ganderbal Kohistani undergo a number of sound changes like epenthesis, fortition, apocopation and others.

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1 Dardic languages like Pashai and Grangali lack voiceless aspirated obstruent as well (Gutman and Avanzati 2013).
2 See Bashir (2003).
3 Paternal aunt is called as, ‘\( piːʃaː \)’.
4 Maternal aunt is called as, ‘\( maʃu \)’.
5 Male address his mother-in-law as, ‘\( saʃu \)’.
6 Female address her mother-in-law as, ‘\( tiʃu \)’.
7 Due to the size of the data, there are table-breaks.
8 For a detail discussion on palatalization in Kashmiri see Ganai (2012).
9 Male deaf is called as ‘\( buːr发展机遇)’.
10 Lenition involves weakening of consonants. It may include changes of stops or affricates to fricatives, of two consonants to one, of full consonants to glides (Campbell 2013: 37, Trask 1996: 55).
11 This vowel is called ‘parasitic vowel’ or ‘\( svarabhakti \)’ vowel (Campbell 2013).
12 See Bashir (2003).