Abstract

The present paper is a descriptive study aimed at a preliminary phonological analysis of Rathvi spoken in the North-eastern tribal region of Gujarat. Even though considerable work has been done in the fields of literature, anthropology and folk tales, nothing significant has been done in terms of linguistic descriptions or analyses of the language. The current study, therefore, attempts to provide a preliminary phonological description of Rathvi, in the hope to provide a basic foundation for more advanced linguistic studies of an otherwise lesser-known and linguistically undocumented language.

Keywords: Rathvi, Phonological description, Lesser-known language, vowels and consonants

1. Introduction

Rathvi (also spelt Rathwi) is a Central Indo-Aryan language spoken in the Chhota Udepur, Jabugam and Nasvadi talukas of Baroda District in Gujarat. Choksi (2009) points out that Rathvi is also spoken in the neighbouring state of Madhya Pradesh, but with the added vocabulary of Hindi, so that the varieties of Rathvi spoken in Gujarat and Madhya Pradesh show a clear difference in terms of the influence of Gujarati and Hindi vocabulary, respectively. According to Grierson (2005) the Bhil dialects spoken in the Alirajpur and the Barwani states have been reported under the names of Bhilali and Rathvi Bhilali. He claims that it is a mixed form of speech and the characteristic features of these dialects merge into Rajasthani or more specifically with Nimadi.

Rathvi is a minority language which is on the records as a Non-scheduled language. According to the 2011 census (Report no. 543 of NSS) the population of Rathvi speakers in the Chhota Udepur district of Gujarat was 6,42,000.

2. A Brief Ethno-Linguistic Sketch of the Rathwa Community

The tribals of Central India are divided into Mundas and Gonds. The Mundas are further divided into Bhils, Savars and Korkuns. Rathwa (1999) classifies the Bhils into the Bhiloris, the Mankars and the Rathwas, while Singh (1998) further subdivides the Rathwas into Bamania, Thebaria and Mahania.
The Rathwa community has two religious sects - the Bhagat sect (the followers of Hinduism; the higher ‘priestly’ sect that abstains from consumption of non-vegetarian food and alcohol) and the Jagat sect (the ‘lower’ sect that freely consume alcohol and non-vegetarian food, and worship a deity called Baba Pithoro who is appeased by carrying out the rituals of Pithora painting and animal sacrifice).

3. Methodology

This paper uses the structural approach to present a preliminary study of the segmental phonology of Rathvi. The data provided in this paper has been mainly collected through intensive field work carried out over a period of six months. The direct and indirect elicitation methods were employed for collecting the data. The data set used for elicitation consisted of a word list of core vocabulary compiled using the CIIL list of basic vocabulary. Over one thousand words were transcribed using the IPA symbols. After each session of data collection, the data was cross-verified from other members of the community and the validated data was further sorted into separate inventories based on the distribution of the sounds in minimal pairs.

The primary informant selected for this work was a literate native speaker of Rathvi belonging to the Bhagat sect, who had his primary education in the Gujarati medium.

4. Phonological Analysis of Rathvi

This paper establishes the consonants and vowels of Rathvi, based on the principles of phonological analysis. The section on consonants includes the inventory, the description, and the contrast between consonants, as well as the rules for allophonic alternations. The section on vowels provides the inventory of vowel segments, their description and their contrast.

5. Consonants of Rathvi

This paper proposes thirty-one consonants of Rathvi, which were identified based on the principles of phonological analysis.

5.1 Inventory of Consonant Segments

As shown in the table below, the inventory of Rathvi consonants includes, sixteen plosives consisting of bilabials, dentals, retroflexes and velars showing contrasts between the voiced-voiceless, aspirated-unaspirated phonemes; four palatal affricates; alveolar and glottal fricatives; bilabial, dental and retroflex nasals; an alveolar lateral and trill; a retroflex flap and two semi-vowels - a bilabial and a palatal.

<table>
<thead>
<tr>
<th>Plosive</th>
<th>Bilabial</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiceless Unaspirated</td>
<td>p</td>
<td>ʈ</td>
<td>ʈʰ</td>
<td>ʈʰ</td>
<td>ʈʰ</td>
<td>ʈʰ</td>
<td>ʈʰ</td>
</tr>
<tr>
<td>Voiceless Aspirated</td>
<td>ʰp</td>
<td>ʰʈ</td>
<td>ʰʈʰ</td>
<td>ʰʈʰ</td>
<td>ʰʈʰ</td>
<td>ʰʈʰ</td>
<td>ʰʈʰ</td>
</tr>
<tr>
<td>Voiced Unaspirated</td>
<td>b</td>
<td>d̪</td>
<td>d̪̣</td>
<td>g̣</td>
<td></td>
<td></td>
<td></td>
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<td>--------------------</td>
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<td>----</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voiced Aspirated</td>
<td>bʱ</td>
<td>d̪ʱ</td>
<td>d̪̣ʱ</td>
<td>g̣ʱ</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Affricate**

<table>
<thead>
<tr>
<th>Voiceless</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaspirated</td>
<td>cʰ</td>
</tr>
<tr>
<td>Voiceless Aspirated</td>
<td>j</td>
</tr>
<tr>
<td>Voiced Unaspirated</td>
<td>jʱ</td>
</tr>
<tr>
<td>Voiced Aspirated</td>
<td>jʱ</td>
</tr>
</tbody>
</table>

**Fricative**

<table>
<thead>
<tr>
<th>Voiceless</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiced</td>
<td></td>
</tr>
</tbody>
</table>

**Nasal**

| m | ŋ | ŋ̃ |

**Lateral**

| l |

**Trill**

| r |

**Flap**

| ḅ |

**Semi-Vowel**

| v |

| Table 1: Inventory of Rathvi Consonants |

### 5.2 Description of Consonants and their Phonemic Contrast

#### 5.2.1 Plosives

Rathvi plosives include voiced and voiceless, aspirated and unaspirated segments of the bilabial, dental, retroflex and velar kind. These plosives occur in initial, medial and final positions of words.

The following minimal pairs illustrate the contrast between various plosives.

**Bilabial Plosives** /p/ /pʰ/ /b/ /bʱ/

- /p/: /b/  
  - /p/: /b/: ‘heel’
  - /b/: /b/: ‘blunt’
- /p/: /pʰ/  
  - /pʰ/: /pʰ/: ‘on’
  - /pʰ/: /pʰ/: ‘to turn, to revolve, to go for walk’
- /bʱ/: /pʰ/  
  - /bʱ/: /a:š/ ‘brother’
  - /pʰ/: /a:š/ ‘extremely intoxicated with drinks’
- /b/: /bʱ/  
  - /b/: /bʱ/: ‘grandmother’
  - /bʱ/: /bʱ/: ‘brother’s wife’


- /t̪/: /t̪/: ‘lock’
  - /t̪/: /t̪/: ‘sun’
- /d̪/: /d̪/: ‘thread’
  - /d̪/: /d̪/: ‘gutter’
- /ʈ/: /ʈ/: ‘yours/your’

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/ʈʰaːri:/ ‘plate’
/ɖʱaːk/ ‘fear’
/ʈʰaːk/ ‘fatigue’

Retroflex Plosives /ʈ/ /ʈʰ/ /ɖ/ /ɖʱ/

/ʈ/ : /ɖ/ /məto/ ‘big’ (masc.)
/moːdo/ ‘late’
/ʈʰ/ : /ɖʱ/ /kaːʈʰo/ ‘hard’
/kaːɖʱo/ ‘remove’ (imperative)

Velar Plosives /k/ /kʰ/ /ɡ/ /ɡʱ/

/k/: /kʰ/ /ciːkuː/ ‘fruit’
/ciːkʰuː/ ‘spicy’
/g/: /ɡʱ/ /ugaːɾiː/ ‘to grow’ (past participle)
/ugʱaːɾiː/ ‘open’
/k/: /ɡ/ /kaːkɾiː/ ‘thin cucumber’
/kaːɡɾiː/ ‘crow’ (fem.)
/kʰ/: /ɡʱ/ /kʰuːtʰiː/ ‘peg’
/ɡʱuːtʰiː/ ‘ankle’

5.2.2 Affricates

Rathvi affricates include voiced and voiceless, aspirated and unaspirated segments of the palatal kind. Affricates occur in initial, medial and final positions of words. The following minimal pairs illustrate the contrast between the palatal affricates.

Palatal Affricates /c/ /cʰ/ /ʃ/ /ʃʱ/

/c/: /ʃ/ /pɔːcca/ ‘fun fair’ (pl.)
/pɔːcʰa/ ‘money’
/ʃ/: /ʃʱ/ /baːʃ/ ‘hawk’
/baːʃʱ/ ‘a plate made by sewing together large leaves’
/ʃ/: /c/ /ʃiːruː/ ‘cumin seed’
/ʃiːruː/ ‘a slice’
/ʃʱ/: /cʰ/ /ʃʱiːthra/ ‘long hair of a male child grown for the fulfillment of a vow’
/cʰiːthra/ ‘garment’ (pl.)

5.2.3 Fricatives

There are two types of voiceless fricatives, alveolar/s/ and glottal/h/, which have been established as phonemes, through minimal pairs.

/s/: /h/ /siːro/ ‘shade’
/hiːro/ ‘actor’
5.2.4  **Nasals**

There are three basic nasals in Rathvi - bilabial, dental and retroflex. The bilabial /m/ and dental nasal /n/ occur in all positions but the retroflex nasal /n/ has restricted distribution in that it does not occur word initially. The following minimal pairs illustrate the contrast between the nasals.

<table>
<thead>
<tr>
<th>/m/</th>
<th>/n/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/kɔm/</td>
<td>‘work’</td>
</tr>
<tr>
<td>/kɔn/</td>
<td>‘ear’</td>
</tr>
<tr>
<td>/ma:ro/</td>
<td>‘nest’</td>
</tr>
<tr>
<td>/ŋa:ro/</td>
<td>‘coal’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/n/</th>
<th>/ŋ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/va:ŋa/</td>
<td>‘vehicle’</td>
</tr>
<tr>
<td>/va:ŋə/</td>
<td>‘vessel’</td>
</tr>
<tr>
<td>/bəiːːŋiː/</td>
<td>‘sister’s daughter’</td>
</tr>
<tr>
<td>/bəiːːŋiː/</td>
<td>‘plate’</td>
</tr>
</tbody>
</table>

5.2.5  **Laterals, Flaps and Trills**

There is one basic lateral available in Rathvi and it is the voiced alveolar lateral /l/, which occurs in all distributions. Similarly, the voiced alveolar trill /r/ occurs in all positions. However, the retroflex flap /ṛ/ occurs in restricted distribution; it occurs in word final and word medial positions only and never occurs word initially. Since the trill /r/, flap /ṛ/ and lateral /l/, belong to the class of liquids, they are contrasted with each other through minimal pairs. The voiced retroflex plosive /ḍ/ and flap /ṛ/, both being retroflex are also contrasted, in order to establish the flap /ṛ/ as a phoneme.

<table>
<thead>
<tr>
<th>/l/</th>
<th>/ṛ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɡaːliː/</td>
<td>‘clap’</td>
</tr>
<tr>
<td>/ɡaːriː/</td>
<td>‘toddy’</td>
</tr>
<tr>
<td>/ɡaːɾ/</td>
<td>‘mixture of cow-dung and sand used to make floor’</td>
</tr>
<tr>
<td>/ɡaːɾ/</td>
<td>‘cheek’</td>
</tr>
<tr>
<td>/leːːʒiː/</td>
<td>‘take’(past, feminine)</td>
</tr>
<tr>
<td>/reːːʒiː/</td>
<td>‘sand’</td>
</tr>
<tr>
<td>/hɔlkuː/</td>
<td>‘light’</td>
</tr>
<tr>
<td>/hɔɾkuː/</td>
<td>‘similar’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/ṛ/</th>
<th>/ḍ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/mɔːɾuː/</td>
<td>‘tasteless’</td>
</tr>
<tr>
<td>/mɔːɾuː/</td>
<td>‘mouth’</td>
</tr>
<tr>
<td>/dɔːɾo/</td>
<td>‘cob of corn’</td>
</tr>
<tr>
<td>/dɔːɾo/</td>
<td>‘eye’</td>
</tr>
</tbody>
</table>

5.2.6  **Semivowels (glides)**

There are two types of semivowels –voiced bilabial semivowel /ʋ/which occurs in all distributions while the voiced palatal semi vowel /i/ does not occur in word initial position and hence
has restricted distribution. The following minimal pairs illustrate the contrast between the two semivowels.

\[ /ʋ/ : /j/ \]
\[ /vaːru:/ \] ‘storm’
\[ /vaːru:/ \] ‘to sweep’ (past)
\[ /paːv/ \] ‘bread’
\[ /paːj/ \] ‘drink’ (Causative)

5.3 **Allophonic Alternations**

Phonemes in Rathvi have single allophones which get realised, in all contexts, in their respective phonemic form. However, the dental nasal /ŋ/ and the alveolar fricative /s/ have more than one allophonic alternation in different distributions.

5.3.1 **Allophonic alternations of dental nasal /ŋ/**

The dental nasal /ŋ/ has three allophones – [n], [ŋ] and [ɲ].

\[ /ŋ/ \] assimilates with the following palatal segment as [n], as in
\[ [pənJo] \] ‘foot/palm’
\[ [pəncu] \] ‘five paise coin’
\[ [kaɲja:] \] ‘hair’

\[ /ŋ/ \] assimilates with the following velar segment as [ŋ], as in
\[ [ɾəŋɡ] \] ‘colour’
\[ [ɔ̃ŋɡri:] \] ‘finger’

\[ /ŋ/ \] remains as [ŋ] in all other contexts.
\[ [bɔŋdi] \] ‘close’
\[ [kɔɾ] \] ‘ear’
\[ [ŋaːkʰ] \] ‘to throw’ (imperative)

5.3.2 **Allophonic alternations of alveolar fricative /s/**

The alveolar fricative /s/ has two allophones – [s], and [ʃ].

\[ /s/ \] assimilates with the following front, high vocalic segment /i/ as a palatalized fricative [ʃ], as in
\[ [ʃiho] \] ‘lion’ (pl.)
\[ [oʃiːɡu] \] ‘pillow’
\[ [pʰopəʃi:] \] ‘soft’

\[ /s/ \] remains as [s] in all other contexts, as in
\[ [səɾdo] \] ‘a black diving bird’
\[ [hɔs] \] ‘swan’ (pl.)
\[ [hɔs] \] ‘swan’
5.3.3 The issue of the glottal fricative /ɦ/

A voiced glottal fricative [ɦ], often surfaces in the speech of the native speakers. However, from the available data the phonemic status of the[ɦ] is not clear. On the one hand there are no minimal pairs found in the data to establish the contrast between [ɦ] and the other fricatives like [h] or [ʃ]. On the other hand, the occurrence of [ɦ] shows no restriction as it is seen occurring in all distributions like the other fricatives:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[ɦo:lu]</td>
<td>‘dove’</td>
<td></td>
</tr>
<tr>
<td>[ci:fi]</td>
<td>‘bottle’</td>
<td></td>
</tr>
<tr>
<td>[ma:fi]</td>
<td>‘flesh’</td>
<td></td>
</tr>
</tbody>
</table>

For the present, one could perhaps view the occurrence of the voiced glottal fricative [ɦ] as part of an emerging subsystem. However, this claim needs to be investigated further by collecting more data.

6. Vowels of Rathvi

This paper proposes fifteen vowels in Rathvi. These include eight oral vowels and seven nasalized vowels.

6.1 The Inventory of Distinctive Vowel Segments

The vowels show contrast in the tongue position, the tongue height and the rounding of the lips. Based on a cursory observation it appears that vowels in Rathvi get relatively longer when they occur in stressed syllables. However, length of vowels and the stress pattern of Rathvi have not been dealt with in this work.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>Central</td>
<td>Back</td>
</tr>
<tr>
<td>High</td>
<td>i</td>
<td>U</td>
</tr>
<tr>
<td>Mid High</td>
<td>e</td>
<td>ə</td>
</tr>
<tr>
<td>Mid Low</td>
<td>ɛ</td>
<td>ɔ</td>
</tr>
<tr>
<td>Low</td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Inventory of Rathvi Vowels

6.2 Description of Vowels and their Phonemic Contrast

6.2.1 Front Vowels

Front vowels in Rathvi include unrounded segments that occur in high /i/, mid high /e/ and mid low /ɛ/ positions. The following minimal pairs illustrate the contrast between them:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>/i:/ /e/</td>
<td>/si:ro/</td>
<td>‘shade’</td>
</tr>
<tr>
<td>/ɛ:/ /ɛ/</td>
<td>/ɔela:/</td>
<td>‘creepers’(pl.)</td>
</tr>
<tr>
<td>/ɛ:/ /a/</td>
<td>/ge:r/</td>
<td>‘canal’</td>
</tr>
</tbody>
</table>
/ŋa:r/ ‘drain pipe’

### 6.2.2 Central Unrounded Vowels

Central vowels in Rathvi include unrounded segments that occur in mid high /ə/ and low /a/ positions. The following minimal pairs illustrate the contrast between them:

- /ə/ /a/: /pəɾ/ ‘on’
- /pəɾ/ ‘across’
- /ʋəɾu/ ‘wolf’
- /ʋəɾu/ ‘good’
- /ə/ /畋/: /ɡəɾ/ ‘swallow’ (imperative singular)
- /ɡəɾ/ ‘jaggery’
- /ɡʱəɾo/ ‘hold’ (imperative plural)
- /ɡʱəɾo/ ‘white’ (masculine singular)

### 6.2.3 Back Rounded Vowels

Back vowels in Rathvi include rounded segments that occur in high /u/ mid high /o/ and mid low /ə/ positions. The following minimal pairs illustrate the contrast between them:

- /u/: /o/: /pəɾɲu/ ‘five paisa coin’
- /pəɾɲo/ ‘palm’
- /pəɾɲcu/ ‘garment worn around the waist’
- /pəɾɲco/ ‘village jury’
- /o/: /ə/: /kɔɾi:/ ‘a bundle of twenty wooden logs used to make a roof’
- /kɔɾi:/ ‘axe’
- /ə/: /u/: /ɡaːɾɔ/ ‘day’
- /ɡaːɾu/ ‘sun’

### 6.3 Nasalised Vowels

It is found that all the oral vowels in Rathvi, except /o/, have nasalised counterparts, such as /i/, /u/, /i/, /o/, /a/, /e/, /ɛ/, /ɔ/. The nasalised vowels occur at three levels, i.e., Allophonic level, Phonemic level, Morpho-phonemic level.

#### 6.3.1 Allophonic level

The occurrence of certain nasalised vowels seems contextual, i.e. they occur as nasalised allophonic alternants of the oral vowels, when a nasal consonant occurs in the immediate environment, as seen in the examples below:

- /i/ gets nasalised as /sʰŋoɾu/ ‘water chestnut’
- /u/ gets nasalised as /mʊду/ ‘head’
- /ɛ/ gets nasalised as /mɛŋaːp/ ‘plain’ (noun)
/ə/ gets nasalised as /n̪ə/ ‘river’
/ɑ/ gets nasalised as /m̪ɑː/ ‘fish’
/ɛ/ gets nasalised as /ɡɛ̃do/ ‘rhinocerus’
/o/ gets nasalised as /c̃o/ ‘moon’

6.3.2 Phonemic level

Nasalized vowels are also found in contexts, where there are no nasal consonants in the immediate environment. Since it has not been possible to establish contrasts between oral and nasalized vowels through minimal pairs, it appears that these nasal vowels are surface level phenomena and that they are derived through a historical process from an underlying nasal consonant /N/. As Campbell (1998) notes, vowels often become nasalized in the environment of nasal consonants. The typical scenario is for the nasalized vowels to become phonemic (contrastive) when later in time the nasal consonant is lost. The derivation is as follows:

UR   /vĩNṭi/
Nasalization /vĩNṭi/
Nasal deletion /vĩṭi/

S R   /vĩṭi/

The following nasal vowels can be said to have been realized through the kind of derivation described above.

/i/   /vĩṭi/    ‘finger ring’
/u/   /q̃ũcjo/ ‘crow pheasant’
/o/   /q̃oṭu:/ ‘sheep’
/ɔ/   /kɔc̃o/ ‘Monday’
/ɑ/   /hãːsḍi/ ‘necklace’
/ɛ/   /bɛkro/  ‘bench’
/o/   /kɔhko/  ‘comb’

6.3.3 Morphophonemic level

The nasalized vowel /ɔ/ occurs, at the morphophonemic level as a plural marker. Words ending in /u/ take /ɔ/ as their plural marker, as seen in the examples below:

/haːrkũ/ ‘bone’ (sg.)     /haːrkɔ/ ‘bone’ (pl.)
/vaːrũ/  ‘sky’ (sg.)     /vaːrɔ/ ‘sky’ (pl.)
/ṭapocũ/ ‘eyebrow’ (sg.)  /ṭapocɔ/ ‘eyebrow’ (pl.)

At the morphophonemic level, only /ɔ/ occurs as a nasalised vowel. This may be seen as the beginning of the phonemic process of vowel nasalisation in the language.

7. Conclusion

Most writers of grammars agree that grammatical description is never finished, and that allowing a progressive approach opens up the possibility for modifications, corrections and
additions. The present study, therefore, attempts a preliminary description of the segmental phonology of Rathvi, in the hope that it can open up possibilities for more advanced linguistic studies of an otherwise lesser-known and linguistically undocumented language.

The present study establishes thirty-one consonants and fifteen vowel phonemes of Rathvi based on the principles of phonological analysis. It also provides the inventory, description, and the contrasts found among consonants and vowels as well as the allophonic alternations observed in the consonants.

References


