Saraiki (ISO 639-3:skr) is an Indo-Aryan language widely used in Pakistan and India (Bashir, Conners & Hefright 2019). The variety described here is Central Saraiki, spoken in the districts of Multan, Muzaffargarh, Bahawalpur and the northern parts of Dera Ghazi Khan in Pakistan, which form the largest of the Saraiki-speaking areas. Geographically, Pakistan is divided into four provinces, Punjab, Sindh, Khyber Pakhtoon Khaw (KPK) and Balochistan. Punjabi is spoken in Punjab, and Sindhi is the dominant language in Sindh. Most Pashto speakers live in KPK and Balochistan, while the inhabitants of Balochistan speak Balochi, Brahui and Saraiki. Other than Urdu, Saraiki is the only language which is spoken in all four provinces of Pakistan, with a majority of speakers in southern Punjab.

There are an estimated 20 million Saraiki speakers (Gordon 2005). Since Saraiki has been spoken in different regions of Pakistan for a considerable period of time, different dialects have developed. Shackl e (1976) distinguishes six varieties:

1. **SOUTHERN SARAIKI.** This variety is spoken in the Rahim Yar Khan district, including the southern parts of Dera Ghazi Khan (D.G. Khan), Bahawalpur and Muzaffargarh. It covers an area that is relatively small as compared to the Central variety, with which it borders at the former princely state of Bahawalpur. Having undergone influence from Punjabi, it is also considered a blend of Punjabi and Saraiki.

2. **NORTHERN SARAIKI.** This variety covers the districts of Mianwali and Dera Ismail Khan, and is geographically close to the Central variety, with which it shares certain features. On the other hand, being spoken in a Pashto-dominated region, it also shows significant influences from Pashto.

3. **SINDHI SARAIKI.** This variety is used in the Sindh province, and is a mixture of the Sindhi and Saraiki languages.

4. **JHANGI SARAIKI.** The Jhangi variety is spoken in the Jhang district of Punjab. It is different from the other Saraiki varieties because it has some phonological features of its own, such as dental and retroflex implosives (Shackle 1976: 8). One can observe a
frequent use of implosives in this variety, although it lacks the phonemic contrast between plain stops and dental implosives.

5. **SHAHPURI SARAIKI**. This variety is spoken in the Sargodha district of Punjab and some parts of Jhang. It shares some features with the Central variety, but is also closely related to Punjabi. It is sometimes considered a Punjabi dialect, with some Saraiki features.

6. **CENTRAL SARAIKI**. The Central variety is spoken in the districts of Multan, Muzaffargarh, Bahawalpur and the northern parts of Dera Ghazi Khan. It covers the largest area where Saraiki is spoken.

All these varieties have minor regional variations in pronunciations. For example, /æ/ and /o/ in some varieties are substituted by /e/ and /u/ in others (Grierson 1919). The Jhangi variety shows some consonantal differences because in this variety dental and retroflex implosives are frequently used. This variety tends to replace plosives by implosives (Grierson 1919). Since Saraiki is used in multilingual environment, so, all varieties are influenced by other, dominant regional languages such as Punjabi, Sindhi or Pashto.

However, Saraiki is different from other languages of its family (like Urdu, Sindhi and Punjabi) in many ways. The retention of HISTORICAL ASPIRATION and the advancement of four implosive phonemes makes Saraiki different from Punjabi and Urdu (Shackle 2003). Grierson (1916) divided Pakistani languages into two circles, an inner circle and an outer circle, and classified Saraiki under the name of Lahnda (‘language of the people residing in the west of Punjab’, because Lahnda denotes the direction where the sun sets). Later on, Grierson (1919) himself argued against using the term western Punjabi (Lahnda) for Saraiki, as he found that there was no sufficient relation between these two languages to prove that one is a dialect of the other. Likewise, Sindhi and Saraiki show some morphological and grammatical differences (Grierson 1919). In a recent study, Atta (2019) claims that Saraiki is a language of its own rather than a dialect of any other language. As an Indo-Aryan language, Saraiki has a basically Indo-European lexis, but with numerous loanwords from Urdu. The language is written from right to left, using the Perso-Arabic script, adding some letters of its own (specifically چ، گ، ہ، ڑ) to indicate the implosive sounds, which are not found in Urdu or Arabic (see below).

Previous work on Saraiki includes a general description (Wagha 1990), a grammar which describes a variety that is slightly different from the one recorded and described here (Shackle 1976, 1977), and one study on the acquisition of English as a second language by Saraiki speakers (Syed 2013). A recent volume on Hindko, Panjabi and Saraiki (Bashir et al. 2019) offers a description based on Shackle (1976). Hussain (2018) presents acoustic data on the Saraiki stops. The present Illustration may be compared to other studies of languages spoken in the same region, including Sindhi (Nihalani 1995) and Hindi (Ohala 1994).

The speaker recorded for this Illustration is a 29-year-old male native speaker of Saraiki. He is a lecturer at a university in Pakistan and at the time of recording he was pursuing his Ph.D. degree in Shanghai, China. He grew up in a small village (Sokar3) in district D.G. Khan, Punjab, Pakistan, using Saraiki to communicate with his parents, siblings and friends, as Saraiki is the lingua franca in this village. Apart from Saraiki, he is also fluent in Urdu and English. Recordings were made in a sound-proof booth at the Institute of Linguistics at Shanghai International Studies University, using a SONY laptop with a Terratec DMX 6Fire external sound card. The resulting sound files (44.1 kHz) were analyzed using Praat (Boersma & Weenink 2017).

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2 Only Jhangi variety has phonemic contrast of alveolar/dental and retroflex implosives while the variety discussed here lacks retroflex implosives.

3 This is the area on Google Maps: https://www.google.com/maps/@30.6571282,70.6029448,14z?hl. See also https://www.ecp.gov.pk/Documents/delimitation2018/With%20Watermark/National%20Assembly/Punjab/D.G.%20Khan.jpg.
Consonants

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Dental and Alveolar</th>
<th>Retroflex</th>
<th>Palatal&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive/Affricate</td>
<td>p b</td>
<td>pʰ bʰ</td>
<td>t̪ d̪</td>
<td>t̪ʰ d̪ʰ</td>
<td>tˢ dˢ</td>
<td>k g</td>
<td>kʰ gʰ</td>
</tr>
<tr>
<td>Implosive</td>
<td>b̃</td>
<td>d̃</td>
<td></td>
<td></td>
<td>j</td>
<td>f̃</td>
<td>j̃</td>
</tr>
<tr>
<td>Nasal</td>
<td>m m̃</td>
<td>n ñ</td>
<td>η̃ η̃</td>
<td>η̃ η̃</td>
<td>η̃ η̃</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tap or Flap</td>
<td>r</td>
<td>r̃</td>
<td>t̃ t̃</td>
<td>tⁿ tⁿ̃</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f s z</td>
<td>f z s̃</td>
<td>j x γ f̃</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>ʋ ʋ̃</td>
<td>l l̃</td>
<td>j</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Nihalani (1995) uses the symbols [c ɟ ch ɭ] for palatal plosives in Sindhi (an Indo-Aryan language), but Hussain (2018: 286) argues that in Indo-Iranian languages ‘palatals are the only stop series that are produced as postalveolar affricates’ and thus transcribes them as [ʧ ʧʰ ʤ ʤʰ]. In this article, we follow Hussain (2018).

p p̣l ‘childcare’  pʰ pʰ̣l ‘hanging’
b ḅr ‘weight’  bʰ bʰ̣l ‘observe’
t̪ ṭl ‘delicate’  tʰ tʰ̣l ‘tray’
d̪ ḍl ‘beans’  dʰ dʰ̣l ‘screaming’
t̪ʰ ṭʰl ‘ignore’  tʰ tʰ̣l ‘family’
d̪ʰ ḍʰl ‘theft’  dʰ dʰ̣l ‘piece of prickle’
tʃ tʃ̣a ‘pickup’  tʃʰ tʃʰ̣a ‘buttermilk’
dʒ dʒ̣a ‘place for guest’  dʒʰ dʒʰ̣a ‘shade of colour’
k̩ k̩l ‘shortage’  kʰ kʰ̣a ‘eat’
g̩ g̩r ‘lost’  gʰ gʰ̣r ‘true friendship’
b̄ b̄l ‘kids’  d̄ d̄l ‘crack’
f̄ f̄l ‘name of tree’  f̣̄ f̣̄l ‘talk’
m̩ m̩l ‘stock’  mʰ mʰ̣l ‘name of month’
n̩ n̩l ‘near’  nʰ ḅ̄nʰ̣l ‘servant’
ŋ  yurkənə ‘bark’  ɲəŋ  länŋū  ‘relation’
ɲ  uŋnə ‘may I go’  j̥iŋ  kəŋ̥  ‘out of season’
ŋ  uŋŋ  ‘bangle’
ɾ  raf  ‘route’  r̥i  kur̥ e  ‘drought’
ʈ  rɔɾ  ‘cry’  t̥iɾ  rəɾi  ‘crop’
f  fɔl  ‘lucky draw’  s  sɔl  ‘year’
ž  zɔl  ‘wife’  ʃ  ʃɔl  ‘shawl’
ʃ  xɔl  ‘game name’  ɣ  ɣɔʃ  ‘shoots of trees’
ɦ  hɔl  ‘well-being’
ʋ  uəl  ‘hair’  v̥i  niu̥i  ‘you are not’
l  ləl  ‘lovely’  l̥i  ɬəl̥i  ‘cheek’
j  jar  ‘friend’

[ʃ] is a voiceless palato-alveolar fricative. A trill [ɾ] sometimes occurs as a free variant of the tap/flap, and as a syllabic consonant, see (12) below. The palatal plosives may be realized as palato-alveolar affricates. Aspirated flaps, approximants and nasals are realized as C+/h/ as shown in the spectrograms below.

Minimal pairs illustrating the aspiration contrast in plosives are given in (1). Here and below, phonemic symbols are used unless otherwise indicated.

(1) Aspiration contrast in plosives

pala  ‘cold’  pʰala  ‘door’
tɔɾ  ‘fever’  tʰɔɾ  ‘slap’
tokəɾə  ‘to interrupt’  tʰokəɾə  ‘to hit’
kala  ‘black’  kʰala  ‘ford’

The pronunciation of relevant examples listed just below the consonant table by our speaker shows that unaspirated voiceless plosives of Saraiki mostly have a VOT under 50 ms, while the aspirated ones usually have a VOT between 80 ms and 150 ms (see also discussion in Hussain 2018). This is illustrated in Figure 1. Figures 2 and 3 illustrate the aspiration contrast.
Figure 1 VOT of voiceless plosives and affricates in Saraiki (based on pronunciation of relevant examples under the consonant table by one male speaker, each for three times, in ms).

Figure 2 Waveforms of [t̪ǝ] 'fever' and [t̪ʰǝ] 'slap'.

Figure 3 Waveforms of [kɑlɑ] 'black' and [kʰɑlɑ] 'ford'.

We also illustrate the contrast between modal-voiced and breathy-voiced plosives:

(2) Contrast between modal-voiced and breathy-voiced plosives and affricates

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>bo</td>
<td>‘smell’</td>
<td>b̩o</td>
</tr>
<tr>
<td>d̥aka</td>
<td>‘theft’</td>
<td>d̥aka</td>
</tr>
<tr>
<td>b̩o</td>
<td>‘chaff’</td>
<td>b̩o</td>
</tr>
<tr>
<td>d̥aka</td>
<td>‘prison’</td>
<td>d̥aka</td>
</tr>
</tbody>
</table>
While the phonetic features of Saraiki breathy-voiced plosives and affricates need to be further explored, we have found in our data that the VOTs of these sounds are normally in between those of the modal-voiced plosives and affricates on the one hand and implosives on the other (Figure 4). Of course, they have an extra breathy-voiced part, often above 100 ms, from release to the onset of the following vowel. The waveforms in Figure 5 (of the first pair of words in (2)) illustrate the contrast.

Figures 4 and 5 illustrate the contrast between plosives and implosives in Saraiki.

The following examples illustrate the contrast between plosives and implosives:

(3) *Egressive plosives vs. implosives*

<table>
<thead>
<tr>
<th>Plosive (IPA)</th>
<th>Saraiki Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>‘smell’</td>
</tr>
<tr>
<td>ɓoe</td>
<td>‘sow’</td>
</tr>
<tr>
<td>ʤǝt̪</td>
<td>‘camel driver’</td>
</tr>
<tr>
<td>ʄǝt̪</td>
<td>‘body hair’</td>
</tr>
<tr>
<td>b</td>
<td>‘smell’</td>
</tr>
<tr>
<td>ɓoe</td>
<td>‘sow’</td>
</tr>
<tr>
<td>ʤǝt̪</td>
<td>‘camel driver’</td>
</tr>
<tr>
<td>ʄǝt̪</td>
<td>‘body hair’</td>
</tr>
</tbody>
</table>
The implosives are clearly distinguished from the egressive plosives by their gradually increasing amplitude during the occlusion phase, as illustrated by Figures 6–8. The egressive plosives, in contrast, usually show a decreasing amplitude because of the pressure build-up in the oral cavity (Lindau 1984).

![Figure 6 Waveforms of [ɓo] 'smell' and [ɓo] 'sow'.](image1)

![Figure 7 Waveforms of [ɗɑl] 'pulse' and [ɗɑl] 'crack'.](image2)

![Figure 8 Waveforms of [ʤǝt̪] 'camel driver' and [ʄǝt̪] 'body hair'.](image3)

The examples in (4) show that implosives can appear in different positions of the word or syllable:

(4) Implosives in different positions

<table>
<thead>
<tr>
<th>Implosive</th>
<th>Meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>ɓɑl</td>
<td>'kids'</td>
</tr>
<tr>
<td>lǝɓ</td>
<td>'rotten'</td>
</tr>
<tr>
<td>ɗɑɗɑ</td>
<td>'paternal grandfather'</td>
</tr>
<tr>
<td>kʰɑɗf</td>
<td>'hole'</td>
</tr>
</tbody>
</table>
Compared with word-initial implosives, word-final implosives do not show gradual increase in amplitude (Figures 9–11).4

4 We are grateful to an anonymous reviewer for pointing this out.
The examples in (5) show that non-aspirated nasals (in the left column) contrast with aspirated nasals (in the right column), which are followed by a nasalized copy of the vowel to their left.

(5) **Aspirated nasals**

<table>
<thead>
<tr>
<th>Non-aspirated nasal</th>
<th>Aspirated nasal</th>
</tr>
</thead>
<tbody>
<tr>
<td>mǝn     ‘agree’</td>
<td>mǝ̃nɦǝ̃ ‘hut’</td>
</tr>
<tr>
<td>kǝɲ     ‘ear’</td>
<td>kǝ̃ɲʱǝ̃ ‘out of season’</td>
</tr>
<tr>
<td>nem     ‘name of tree’</td>
<td>nemɦẽ ‘disagree’</td>
</tr>
<tr>
<td>mâmǝ ‘maternal uncle’</td>
<td>mâmɦǝ name of month</td>
</tr>
<tr>
<td>nânǝ ‘maternal grandfather’</td>
<td>bânɦ ‘servant’</td>
</tr>
</tbody>
</table>

Aspirated nasals never occur initially. A final aspirated nasal is often followed by an epenthetic vowel which is a copy of the vowel preceding the nasal (as shown in Figures 12–14) and which the native speaker does not normally perceive as syllabic. Aspirated nasals are often divided across syllables but in fact, they do not occur where true clusters occur (beginning of the word). This argues against their (underlying) status as clusters. The native speakers cannot differentiate between these two forms (as cluster or aspirated nasals). Therefore, it can be said that the aspirated nasals are variably realized as either pure aspirated nasals or nasal +/h/ clusters. Keeping all these facts in mind, we will still refer to them as ‘aspirated nasals’.

Aspirated nasals never occur initially. A final aspirated nasal is often followed by an epenthetic vowel which is a copy of the vowel preceding the nasal (as shown in Figures 12–14) and which the native speaker does not normally perceive as syllabic. Aspirated nasals are often divided across syllables but in fact, they do not occur where true clusters occur (beginning of the word). This argues against their (underlying) status as clusters. The native speakers cannot differentiate between these two forms (as cluster or aspirated nasals). Therefore, it can be said that the aspirated nasals are variably realized as either pure aspirated nasals or nasal +/h/ clusters. Keeping all these facts in mind, we will still refer to them as ‘aspirated nasals’.

This epenthetic vowel is not only nasalized, but also breathy, with a higher H₁–H₂ and a steeper decline in high-frequency energy. This is shown both in Figures 15 and 16, which contrast the final vowel in [mûmǝ] ‘maternal uncle’ and the final epenthetic vowel in [mǝ mǝ̃] ‘name of month’, and in Figures 17 and 18, which contrast the middle vowel and the final epenthetic vowel in [mǝnǝ̃] ‘hut’. The status of vowel nasalization is not completely clear. There are no clear-cut minimal pairs with oral vowels, and nasalized vowels often occur in free variation with sequences of oral vowel followed by a nasal consonant. Moreover, vowels are often nasalized in the vicinity of retroflex consonants. Tentatively, we will assume that nasal vowels are not phonemic in Saraiki but the issue needs further investigation.

The examples in (6) show that aspirated flaps and approximants may occur at the end of the word. In fact, they never occur at the beginning of the word:

(6) **Aspirated flaps and approximants**

<table>
<thead>
<tr>
<th>Non-aspirated flap</th>
<th>Aspirated flap</th>
</tr>
</thead>
<tbody>
<tr>
<td>ɾǝɽ     ‘cry’</td>
<td>ɾǝɽɦ ‘crop’</td>
</tr>
<tr>
<td>ɠǝl     ‘lost’</td>
<td>ɠǝlɦ ‘cheek’</td>
</tr>
<tr>
<td>nɪʋẽ nɪʋɦẽ ‘you are not’</td>
<td>bânɦ ‘servant’</td>
</tr>
</tbody>
</table>

A final flap is often followed by an epenthetic vowel, while a final aspirated flap is often realized with the aspiration voiced so that a breathy-voice vowel occurs finally, as shown in Figures 19 and 20. In neither case is the final vowel perceived as syllabic by the native speaker.
Figure 12  Waveforms and spectrograms of [mǝn] ‘agree’ and [mǝnʱǝ̃] ‘hut’.

Figure 13  Waveforms and spectrograms of [kǝɲ] ‘ear’ and [kǝɲʱǝ̃] ‘out of season’.

Figure 14  Waveforms and spectrograms of [nem] ‘name of tree’ and [nemʱẽ] ‘disagree’.
Figure 15  Spectrum of final [ä] in [mämä] ‘maternal uncle’ in the middle of the vowel.

Figure 16  Spectrum of final [ä] in [mämɦä] ‘name of month’ 30 ms after the start of the vowel.

Figure 17  Spectrum of the first [o] in [mänɦɔ] ‘hut’ in the middle of the vowel.
Figure 18 Spectrum of final [ɨ] in [mənɨ] 'hut' 30 ms after the start of the vowel.

Figure 19 Waveforms and spectrograms of [ɾəɾ] 'cry' and [ɾəɾɨ] 'crop'.

Figure 20 Waveforms and spectrograms of [ɠəl] 'lost' and [ɠəlɨ] 'cheek'.
Gemination

The process of gemination is frequently observed in Saraiki (/əmːmɑː/ ‘mother’). Mostly this process occurs in word-medial position to satisfy the onset of the second syllable. However, gemination is not phonemic but rather consists of two identical consonants that are pronounced as one lengthened consonant.

Vowels

\[
\begin{array}{ccc}
\text{i:} & \text{ɪ} & \text{u:} \\
\text{i} & \text{ɪ} & \text{ʊ} \\
\text{e} & \text{ɛ} & \text{o} \\
\text{æ} & \text{æ} & \text{ɑ} \\
\end{array}
\]

\[
\begin{array}{ll}
i: & \text{mɪl} \quad \text{‘mile’} \\
i & \text{mɪl} \quad \text{‘meet’} \\
e & \text{mɛl} \quad \text{‘harmony’} \\
æ & \text{mæl} \quad \text{‘dirty layer’} \\
\end{array}
\]

\[
\begin{array}{ll}
u: & \text{muːl} \quad \text{‘root’} \\
ʊ & \text{muːl} \quad \text{‘price’} \\
o & \text{mɔl} \quad \text{‘value’} \\
ɑ & \text{mɑl} \quad \text{‘goods’} \\
\end{array}
\]

Minimal pairs are presented in (7).

(7) Vowel length contrast for high vowels

<table>
<thead>
<tr>
<th>pɪɾ</th>
<th>‘saint’</th>
<th>pɪɾ</th>
<th>‘pain’</th>
</tr>
</thead>
<tbody>
<tr>
<td>pɪp</td>
<td>‘peak’</td>
<td>pɪp</td>
<td>‘pus’</td>
</tr>
<tr>
<td>mʊl</td>
<td>‘cost’</td>
<td>mʊl</td>
<td>‘root’</td>
</tr>
<tr>
<td>tʊl</td>
<td>‘determined’</td>
<td>tʊl</td>
<td>‘long’</td>
</tr>
</tbody>
</table>

Of interest is the vowel /ɔ/, which is not included in the vowel inventory presented by Shackle (1976). Examples of this vowel are presented below, as well as one minimal pair:
Diphthongs

Figure 21 illustrates the oral diphthongs of Saraiki.

Saraiki has a large number of vowel–vowel combinations, both intra- and hetero-
morphemically (see Shackle 1976: 13–16). We regard intramorphemic vowel combinations
as diphthongs. The examples in (9) illustrate rising diphthongs, a centring diphthong, backing
diphthongs and fronting diphthongs, respectively. These are all oral.

(9) **Oral diphthongs**

<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th>u</th>
<th>o</th>
<th>a</th>
<th>ə</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>iu</td>
<td></td>
<td></td>
<td></td>
<td>iə</td>
<td></td>
</tr>
<tr>
<td>u</td>
<td>oi</td>
<td>əu</td>
<td>əə</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o</td>
<td>oi</td>
<td></td>
<td></td>
<td>oe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>əe</td>
<td></td>
</tr>
<tr>
<td>ə</td>
<td></td>
<td>əi</td>
<td>əe</td>
<td>oe</td>
<td>əe</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>əe</td>
</tr>
</tbody>
</table>

Figure 21 Oral diphthongs of Saraiki.

a. piʊ ‘father’ soi ‘needle’ (rising)
   koɪ ‘anyone’ məi ‘lady’

b. buə ‘aunt’ (centering)

c. məd̪əʊ ‘threaten’ (backing)
   d̪ʊɑ ‘pray’
   nəokər ‘servant’
d. pəe  ‘husband’  (fronting)
mǝrsie  ‘elegies’
ʧǝɽɦoe  ‘washer man’

An isolated example of a diphthong with a nasal element appears in (10).

(10) *Nasal diphthong*

nəɔdi  ‘nail’

Figures 22 and 23 show a comparison of the average spectra of the [ɪ] and [ʊ] parts in [pɪʊ] ‘father’ and the corresponding parts in [pɪʊ̃] ‘let’s drink’, where in the latter word
there is a morpheme boundary between both vowels: the morpheme /ū/ contributes a plural meaning. The figures suggest that both elements in the vowel–vowel combination of [pjū] are nasalized, since their resonances are conspicuously weakened in the high frequencies. Further analysis of the nasal airflow and vowel nasalization in general are called for.

**Prominence**

Syllables that are perceived as stressed by native speakers display a pitch rise and increased intensity, but do not necessarily have the longest duration (see Figures 24 and 25).

Examples of disyllabic and trisyllabic nouns are given in (11).

(11) a. *Disyllabic nouns*

| 'pasa | ‘side’   | 'nani: | ‘grandmother’ |
| 'əmmā | ‘mother’ | 'əbbā | ‘father’ |

![Figure 24](https://www.cambridge.org/core) Waveform, spectrogram, pitch contour and intensity contour of ['pasa] ‘side’. 
Figure 25 Waveform, spectrogram, pitch contour and intensity contour of [sɪ.ˈɾɑ̃.ɽɑ̃] ‘pillow’.

b. *Trisyllabic nouns*

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>suː.ˈɦɑ̃ʤ.ɽɑ̃</td>
<td>moringa tree</td>
</tr>
<tr>
<td>sɪ.ˈɾɑ̃.ɽɑ̃</td>
<td>pillow</td>
</tr>
<tr>
<td>kuːˈɦɑɽɑ</td>
<td>axe</td>
</tr>
</tbody>
</table>

**Syllable structure**

Saraiki has a wide variety of syllable structures, maximally up to CCVCC, e.g. [drɔxt] ‘tree’ and [sust] ‘lazy’. There is some variation between speakers: some have an epenthetic vowel in the initial cluster. Of interest are disyllabic words with syllabic trills, shown in (12) and Figures 26 and 27. The trills only occur after alveolar plosives.

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ˈsotːr</td>
<td>cousin</td>
</tr>
<tr>
<td>ˈtʃɔndːr</td>
<td>moon</td>
</tr>
</tbody>
</table>
Figure 26 Waveform and spectrogram of ‘cousin’.  

Figure 27 Waveform and spectrogram of ‘moon’.  

Recorded passage  

Phonetic transcription  
Double vertical lines indicate major pauses; single vertical lines indicate brief breaks. The pauses and brief breaks are reflected in the orthographic and transliterated passages.  

\[ \text{uːˈbɨː\, fəwət̠ē\, səd̠ɨ\, də\, uət̠ar\, bəhɨːs\, tʃət̠ ər\, fɛi |} \]

\[ \text{dʒo\, kəʊn\, də ər\, təkət̠uə\, ɦe |} \]
Orthographic version

أبِهِ بَا | تِئِ سِجَدَةً وَجَكَرًا | بِحَتِّ چِھُر گَنِی

جُو گُون ہُبِہ طَاقَت وَر بَا ۔

أَوْنِی وَیلِهِ | بِک ۂپانِدِہِ | گُرم جُہِب پِتِی | آ و بِنِہِ

تاَن ۂدوُبْتِانِ | اِیں گُالْہِ تِئِ رَاضِی تِہی وَیِنَدِن | جُو چِہُرْہا اِیْن پِنْدِہِرُو دَا ۔

جُبِہ ۂبیِّسِیِ | اوُبِہ تُؤَجَّہِ تَکُون طَاقَت وَر بُوُسِی

تاَن اِبِهِہ بَا | زُور نَال ۂہِلِی | اِیْن ثُوُن بِنْہِ | جُو اَنِہ بَا | اِیْن ثُوُن وَی ہُبِہ طَاقَت وَر لِنِدِی

جُو بِلِانِدِہِ اَنَّا جُبِہ | اِنَّ ۂبِہْہ تِئِ نَال بَہِہ گُہِدا

تاَن آخَر بَا | اِنَّی گُرُوشِہ بَند گُر ڈِ تِی

تِئِ وَل سِجَہِ | پُورِی شِدت نَال ۂکُہِہئِانِی | تَاَن اِوْنِی وَیلِہِ ۂپانِدِہِ | جُبِہ ۂبیِّسِیِ

مُدُعاَ گُالْہِہ دَا | اِبِهِہ بَا مَن گُہِدا | جُو سِجَهہ ۂبیِہ طَاقَت وَر هَا ۔
Transliterated version
ubhi hva | ten sijh de vichar | bahs chir gai |
jo kaon dher takatvar he ||.

onhin velehy | hik pandhi | garam jubbah pati | a vende |
tan dohaen | en gal ten razi thi vendin | jo jerra en pandhero da |
jubbah laha desi | oho dujhay kanon takatvar hosí ||.
tan ubhi hva | zor.nal ghuli | een ton pahley | jo a hva |, een ton vi dher zor landi |
jo pandhi apran jubah | apren juse nal badh gida ||.
tan akhir hva | aprin koshish band kar ditti ||.
tan val sijh | pori shidat nal akh dikhai | ta onhin velehy pandhi | jobbah laha satya ||.
muda gal da | ubhi hva man ghidha | jo sijh dhair takatvar he ||.

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Supplementary material
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References


