

## **Phonemic Study of Sarbazi Variant of Makorani Balochi Language**

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Historical changes and geographical dispersion make languages have different dialects and accents, and their linguistic study is one of the needs of today's human knowledge. Makorani Balochi, which is spoken in south of Sistan and Baluchistan and east of Hormozgan provinces in the south-east of Iran, belongs to the Western Iranian Languages. In all the theories of linguistics, "phonology is considered as an essential part in the description of the construction of language" (Meshkat Al-Dini, 1364: 29). According to Saussure, it is phonetic contrasts that allow us to distinguish a word from other words. In Halle and Chomsky's theory of generative phonology, the phonemic system is considered as a mental fact. The phonemic system of languages has two levels of phonemes and sounds. Berquest's phoneme extraction sample (2006) is a suitable model that is presented to describe the phonological system of languages in the framework of generative phonology. In this model, phonetic characteristics are first divided into major groups: characteristics of major classes, place of articulation, manner of articulation, and laryngeal characteristics. Then these major groups, in turn, are divided into smaller groups that represent distinctive characteristics based on their production features.

This research is a descriptive-analytical investigation on the sound inventory of Makorani Balochi of Sarbazi in the Generative Phonology based on Burquest's (2006) model of extracting phonemes. Sarbazi dialect is spoken in Sarbaz county of Sistan and Baluchistan province. About 40 hours of field data was obtained from 40 illiterate participants with average of 30 to 80 years old, by recording free speech and targeted questions from three villages of Sarbaz namely: Garag, Machhan and Bandigan. The library data that is about 3000 pages, have been collected from books and magazines published about Balochi language. The data was recorded with WAV format. Having analyzed the intended speech sound by the use of sound analyzing programs of Praat and Excel, the data were transcribed in IPA alphabet. Spectrum maps have been used to determine acoustic characteristics such as aspiration, voicing, raising, lowering, etc. Among the few phonological studies in the Balochi language, we can refer to Rossi (1979), Elfenbain (1990), Baran

Zahi (2003), Aksenov (2006), Jahani and Korn (2009), Okati (2012), Ahangar et al. (2013), and Mahmoudzahi (2013). This research has investigated the phonemic system of Sarbazi variety to report the presence/absence of phonemes and their features presented in these studies.

The sounds found in the data are: Simple vowels: u:, u, o:, o, a:, a, e:, e, i:, i, and compounds: [ie], [ue], Consonants: b, d, ɖ, g, p, t, t̪, k, P<sup>h</sup>, t<sup>h</sup>, t̪<sup>h</sup>, k<sup>h</sup>, s, z, ʃ, ʒ, h, dʒ, ʧ, ʧ<sup>h</sup>, m, n, ŋ, r, ɾ, l, w, j

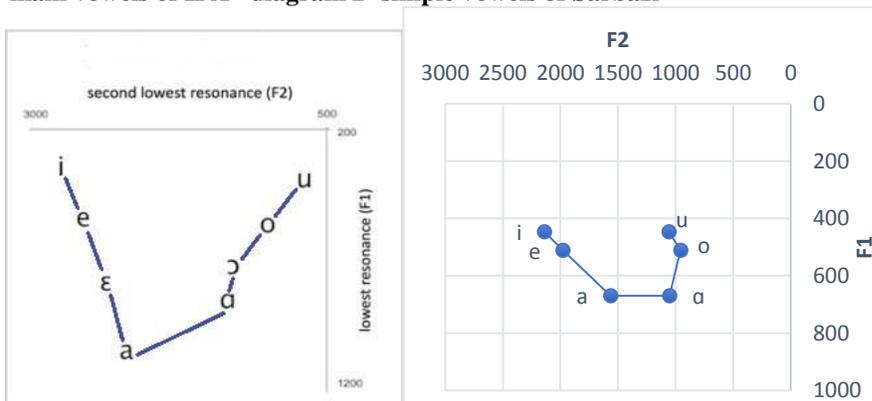
According to Berquest (2006), similar phonetic units have either a contrast relationship that indicates their distinction as phonemes, or a complementary distribution relationship in that two similar phonemes are not used in the same context. To prove the identity of similar sounds in the data, their phonemic/allophonic status and the corresponding phonological rules have been determined through the comparison of minimal pairs or checking their phonetic context.

Comparative study of simple vowels in minimal pairs [hirr]- [herr] "throw-baby camel", [patt̪] - [pet̪t̪] "plain-drop", [har]- [ħar] "donkey-flood", [sar] - [sor] "intelligence-method", and [kott̪]- [kutt̪] "skirt-bald" indicate that [i], [e], [a], [ɔ], [o], [u] can be considered six independent phonemes. But the long forms of these vowels are tied to the context and have phonetic roles, for example the long [i:] is found only in the final position such as [pasi:], [ʃokki:] "sheep, childish", and before [r] and [h] as in [si:h], [si:r] "skewer, wedding", while [i] appears in other contexts. This allophonic relationship is given in the following formula:

$$\begin{array}{l} /i/ \rightarrow [i:] / \_\_\_ [r, h] \\ \quad \quad \quad \_\_\_ \# \\ \quad \quad \quad [i] / \text{elsewhere} \end{array}$$

A comparison of the simple vowels' quality of Sarbazi with the main vowels of IPA shows that in Sarbazi the formant features of front [i] is getting closer to the ones of [e], and of back [u] to [o], and this can lead to the neutralization of their distinction in the future. This issue has also been reported for some Balochi dialects by Okati et al. (2013). Another difference is the production of [u] in Sarbazi, i.e., unlike diagram 1, it moves to the left of diagram (2) which means production of [u] moves to the front of the mouth, the beginning of [u] fronting process:

diagram 1- The main vowels of IPA    diagram 2- simple vowels of Sarbazi

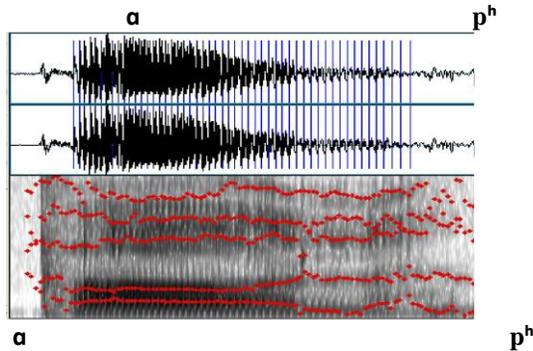


The minimal pairs [diək] - [dik] "old woman - encounter" and [suek] - [suk] "together - low" also show that the compound vowels /ie/ and /ue/ are independent phonemes.

Examining the minimal pairs of consonants shows that all the consonants found in the data are placed in the phonemic system of Sarbazi dialect, except for the aspirated sounds like [p<sup>h</sup>], and [ŋ] and [r], which are allophones. The following formula is example of allophonic context:

/p/ → [p<sup>h</sup>] / # \_\_\_ v  
 [p] / elsewhere

Sample spectrogram: aspirated [p<sup>h</sup>] in the initial position before the vowel in [p<sup>h</sup>ɑl]:



In conclusion, identified phonemes for Sarzabi Balochi dialect are: simple vowels: u, o, ɑ, a, e, i, and compounds: [ie], [ue], consonants: b, d, ɖ, g, p, t, ʈ, k, s, z, ʃ, ʒ, h, ɖʒ, ʈʃ, m, n, r, l, w, j.

This dialect has 21 consonants, including plosives, reflexives, fricatives, affricates, nasals, trills, lateral, and glides, 6 simple vowels and 2 compound vowels, which are similar to the relevant reports about some Balochi dialects in studies such as Jahani and Korn (2009) and Okati (2012). The length of vowels, dissimilar to the other Balochi dialects is not phonemic and has allophonic role, i.e., long vowels [i:], [e:], [:a], [ɑ:], [o:], [u:], as well as aspirated consonants [p<sup>h</sup>], [t<sup>h</sup>], [k<sup>h</sup>], [ʃ<sup>h</sup>], [t<sup>h</sup>], and [ŋ] and [r] are allophones of this dialect. Unlike from cardinal vowels, the vowels quality figure of this dialect shows the tendency of [u] towards fronting process as well as highly probable neutralization of [i] / [e] and [u] / [o] in the future. The findings report course of vowel changes and moving towards having a more economical phonemic system for this variant.

**Keywords:** Generative Phonology, Makorani Balochi, Sarbazi dialect, Sound inventory, Length, Neutralization

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