

Stressed vowel sounds in Príncipe Cape Verdean Creole and their relation with Príncipe Portuguese

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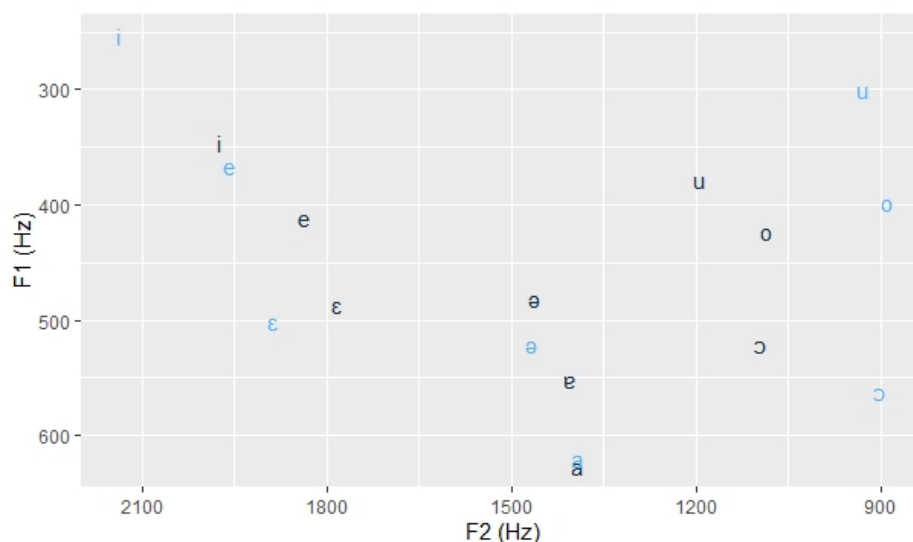
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Background: This study presents an acoustic phonetic description, accompanied by phonological insights, of the tonic vowels of Cape Verdean Creole spoken in Príncipe, a small Island in Gulf of Guinea, West Africa. It further compares these vowel realizations with those in Príncipe Portuguese (PP) (Balduino, 2022), a variety of Portuguese indigenous to the island. Cape Verdean (CP) Creole was transplanted to São Tomé and Príncipe from the beginning of the 20th century, coinciding with a significant influx of Cape Verdean immigrants who went to work in the coffee and cocoa fields of the archipelago. Most of these immigrants settled in Príncipe and have remained there to this day. However, the linguistic variety spoken by this community has received limited scholarly attention. Thus, this study aims to analyze stressed vowel sounds in CP, contributing to a better understanding of the intricate linguistic landscape of Príncipe, where multiple languages coexist with varying statuses and usages. **Methodology:** This study is composed of two sets of data. The first dataset used were collected in Príncipe in 2018 from recordings with four male speakers for whom Cape Verdean Creole was their first language. These speakers ranged in age from 43 to 62 years. In total, there are 523 realizations of tonic oral vowels in words in the basic lexicon of the CP. The second group of data were also collected *in loco* in 2019 and consists of 75 lexical items from PP, totalizing 450 occurrences produced by three monolingual male informants whose Portuguese is their native language. The data were analyzed using the Praat program, considering the duration measured in milliseconds, as well as F1 and F2 formant frequencies measured in Hertz. To mitigate potential acoustic variations arising from social and physical/physiological differences among the speakers, the data was subjected to normalization. Formants were then normalized using the Lobanov method, while duration was normalized using z-scores. The two groups of data were analyzed separately and, after that, together. **Results and Discussion:** In the Príncipe variety of CP, when examining stressed positions, we identified a total of nine distinct oral vocalic sounds [i, e, ε, ə, v, a, ɔ, o, u]. This vowel inventory contrasts with the descriptions of Santiago and Fogo Cape Verdean Creole (Upper Guinea, West Africa), which previously acknowledged only two central vowels [v, a] (Quint, 2000; Lang, 2002; Rodrigues, 2007). Mid vowels seem to exhibit closer proximity to one another, with a slight difference between F1 values – 75 Hz for the coronal vowels [e, ε] and 98 Hz for the dorsals [ɔ, o]. This fact can cause greater perceptual confusion between the two pairs. Comparing CP with PP, we observed that PP encompasses eight oral vowels [i, e, ε, a, ɔ, o, u] (Balduino, 2022). A comparison of the acoustic space between the two languages can be seen in the plot shown in figure 1. CP is the dark blue and PP light blue. In this image, it is possible to observe that the acoustic space of the CP is more compressed than that of the PP.

Figure 1 - Stress Vowels in CP and PP



Source: Authors.

Considering PP data, Balduino (2022) notes contrast loss between the mid stressed vowels in PP as well: ‘cérebro’ [‘sɛ.ri.bʊ] ~ [‘se.ri.bʊ] ‘brain’ and ‘abóbora’ [a.‘bɔ.bu.rɐ] ~ [a.‘bo.bu.rɐ] ‘pumpkin’. The behavior of mid and central vowels suggests that acoustic dispersion is a relevant aspect in defining the vowel inventory of the two languages spoken in Príncipe. Interestingly, CP and PP exhibit a more compressed acoustic space in comparison to languages like Brazilian and European Portuguese (Balduino 2022). It leads to the hypothesis that the rising phonological process that changes /a/ to [ə] might contribute to the confusion between mid-vowels, as it makes the acoustic space more compressed. This is an interesting hypothesis, since it also seems to be the case in other creole language such as Guinean (Chapouto, 2014; Costa, 201) (but not in other creole languages native to STP such as Lung’Ie, Angolar and Forro, languages that are in direct contact with the CP of Príncipe Island, but descend from a different ancestor to this language (Bandeira, 2017)). This study is a work in progress and, as future steps, we hope to expand the relative CP corpus, in order to test the perception of mid vowels, as well as collect and analyze data from Guinean in order to evaluate the acoustic dispersion of stressed vowels also in language.

Selected References

- CHAPOUTO, Sandra Maria da Costa. 2014. Contributo para a descrição de aspetos fonológicos e prosódicos do crioulo guineense. Dissertação (Mestrado em Linguística) – Faculdade de Letras, Universidade de Coimbra, Coimbra, 2014.
- COSTA, Paula Mendes. 2014. Descrição fonológica do crioulo guineense. Dissertação (Mestrado em Linguística) – Centro de Artes e Comunicação, Universidade Federal de Pernambuco, Recife, 2014.
- LANG, Jürgen. Gramática do Crioulo da Ilha de Santiago (Cabo Verde). Capítulo 1. 2002. Disponível em: <<http://iilp.wordpress.com/2012/11/14/umagramatica-do-crioulo/>>. Acesso em: 12 nov. 2013.
- QUINT, Nicolas. Grammaire de la Langue Cap-Verdienne. Paris: L’Harmattan, 2000.
- RODRIGUES, Ulisdete. Fonologia do caboverdiano: das variedades insulares à unidade nacional. Tese (Doutorado em Linguística) – Instituto de Letras, Universidade de Brasília, Brasília, 2007.