



Segmental features of Brazilian (Santa Catarina) Hunsrik

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Abstract

This paper explores the segmentals of Brazilian Hunsrik, Santa Catarina (SC). The account proposed here is merely the starting point for a more comprehensive analysis of this unique, under-resourced dialect of German for which no written standard and only limited prior linguistic descriptions exist.

The goal is to characterise the segmental features of SC Hunsrik and compare them to those reported for the Hunsrück of Rio Grande do Sul (RS). The description is based on two Praat-analysed recordings of three speakers: one saying prayers, and two chatting about daily chores.

The recurrent features include vowel raising, de-rounding and schwa epenthesis; consonantal aspects involve obstruent voicing assimilation, consonant deletion and /l/-velarisation. The next steps will involve unravelling the features of German Hunsrück and the Brazilian Portuguese influences as well as analysing the dialect's prosody.

Index Terms: segmental features, Brazilian Hunsrik, German dialect, minority language

1. Introduction

In recent times, language attrition and loss have been found to affect more languages than ever before. Minority languages have been in a particularly difficult position, when in direct contact with a popular majority language [1]. This holds for both entire languages, e.g., Irish Gaelic vs. English in Ireland [2], and language dialects, e.g., Sicilian vs. Italian in Italy [3]. The latter is often euphemized to language shift, rather than language loss, as the majority language acts as a superstrate to the disappearing substrate minority resulting in a loss of monolingual and overall native speakers of an affected (minority) language.

A similar trend can be observed in Brazil, which has one of the highest risks for future language loss [4]. With its large geographical expansion, many different languages are spoken by the people living in the biggest South American country. Apart from the numerous indigenous languages that are surviving in e.g., indigenous tribes in the Amazonian rainforest, other dialects and languages can be found in other parts of the country [5, 6]. During the times of colonialism between the 16th and the 20th centuries, settlers from several European countries migrated to Brazil bringing over their culture and language. The wave of non-Portuguese migration hit the southern part of Brazil in particular, with people entering the country from Italy, Luxembourg, and Germany [7].

The wave of German immigrants consisted of people who were originally from the *Hunsrück* region in the West of today's Germany, where the Hunsrück dialect of German is spoken.

Unlike the German Standard (*Hochdeutsch*, or High German), Hunsrück is a variety of *Plattdeutsch* (Low German). To this day, the Hunsrik dialect is spoken in some parts of South Brazil, especially in the southernmost states of Rio Grande do Sul (RS), Santa Catarina (SC) and Paraná (PR), where most German migrants settled down originally [8]. Despite complete linguistic isolation from German and the original Hunsrück dialect, the Brazilian Hunsrik has persisted exclusively orally with no standard variety and has been passed on through generations by speaking only. Even though some corpora of the dialect exist in written form, they do not adhere to a uniform linguistic standard and largely mimic German spelling with Hunsrik pronunciation interference [9, 10].

The Hunsrik dialect in Brazil is no exception when it comes to language loss and the predominance of Portuguese as the *lingua franca*. Seemingly, the German-speaking communities have suffered from language loss and the shift towards Portuguese as Brazil's primary language [11]. However, some of the Hunsrik communities in the South of Brazil have taken measures to preserve the dialect. For instance, the municipality of Antônio Carlos (SC) has declared Hunsrik as a co-official language and seeks to promote and support the dialect by offering optional education in the Hunsrik dialect for children in school [12]. Thus, the necessity of the maintenance and the investigation of Brazilian Hunsrik is becoming more urgent.

This paper offers a preliminary exploration of the most prominent segmental features of the Brazilian Hunsrik spoken in the state of Santa Catarina. The variety spoken here has been relatively little, if at all, studied unlike that of the neighbouring state of RS for which several linguistic descriptions are available [13-16]. For the purpose of this study, voice recordings of bilingual Portuguese/Hunsrik speakers are analysed impressionistically and acoustically to explore potential differences and similarities of SC Hunsrik compared to the segmental features of RS Hunsrik described in the literature. Due to the nature of the data (free, unscripted speech), this study will present the findings in a (mainly) descriptive manner, with acoustic (Praat-transcribed) illustrations provided. The initial hypotheses on the possible segmental aspects of interest are based on the literature on RS Hunsrik [13-16]. As will be shown in the results, the features found most numerously in SC Hunsrik include vowel raising, de-rounding and schwa epenthesis regarding vowel features, and intervocalic voicing, consonant cluster simplification and /l/-velarisation among the consonantal aspects.

2. Background

The original German Hunsrück is a dialect spoken in the region between the Rhine and the Moselle Franconian region (Rhineland-Palatinate) in the West of Germany (Figure 1, from

[17]). The migration of Germans from this area to South America in the 19th and 20th centuries led to a spreading of the dialect in Brazil at first, and later in other countries such as Paraguay [18, 19]. In 1824, the first German colony settled in Rio Grande do Sul, where the dialect is most commonly found nowadays [20]. Five years later, the state of Santa Catarina was settled by German immigrants in the municipality São Pedro de Alcântara, which prompted the establishment of the German language there [21] (Figure 2, from [22]).

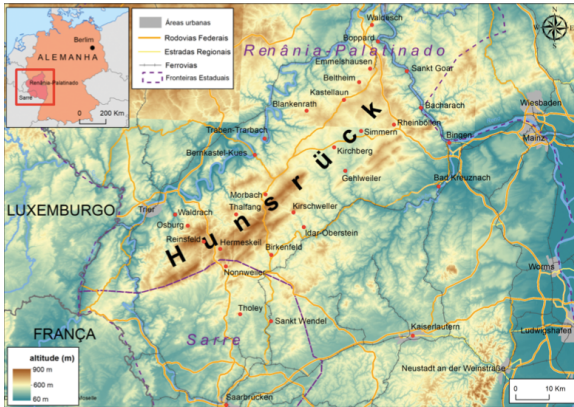


Figure 1: Hunsrück Region, West Germany.

After the first settlement, the German immigrants lived relatively isolated from the Brazilian people in remote areas, which obviated the need to speak and learn Portuguese in school. This allowed for German to become the primary language and establish itself in the areas settled by German migrants [23]. Nonetheless, even though the settlers were also fluent in standard German, it was the dialect that was passed on through the generations, as the Hunsrück dialect was used specifically as the vernacular everyday language over High German.

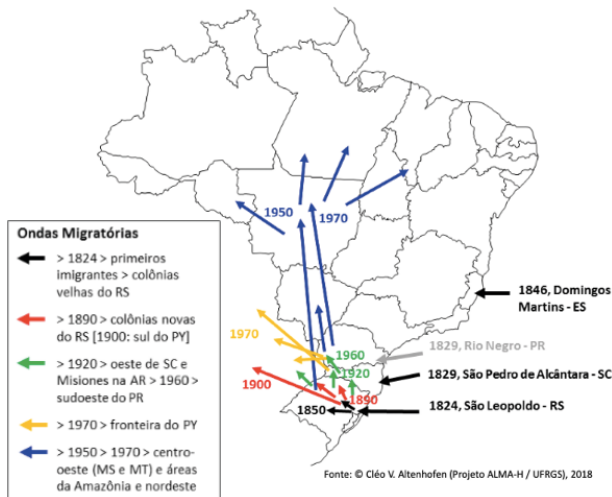


Figure 2: German Migration Waves in and outside of Brazil.

The Hunsrück dialect spoken in RS shows many phonetic particularities, being of unique descent from (Low) German and having been in close contact with Brazilian Portuguese over the centuries [24]. Some of these will be discussed in this paper

with special regard to the Hunsrück spoken in Santa Catarina, as there is little to no information on this variety. At this early stage, the features of SC Hunsrück will be presented in more general terms, insofar as the focus remains on how much SC Hunsrück shares with the neighbouring RS variety which already has received some, even if limited, research interest.

Firstly, this study will focus on the realisation of selected vowel segments in SC Hunsrück. Prior research suggests that, in some cases, vowels are raised in RS Hunsrück [13]. This holds particularly for the open centralized /a/ being raised to a more closed [ɔ]. Concerning front rounded vowels, these are likely to undergo de-rounding [14]. This is observed particularly in the German *Umlaut* sounds, where written <ü> and <ö> (phonologically /y/ and /ø/) will be de-rounded to its unrounded counterparts [i] and [e]. Furthermore, epenthesis of [ɐ, ə, ɪ] (depending on the environment) to break up heavy consonant clusters (3 or more consonants) has been reported for RS Hunsrück [16]. In word-final position, however, unstressed vowels (mostly /ə/) are frequently deleted [13].

Regarding consonants, Brazilian Hunsrück also exhibits a few peculiarities. Quite like schwa, /n/ is also often deleted word-finally [13]. This is particularly the case for inflectional morphemes such as infinitive or past participle suffixes. In addition, voiceless obstruents are often voiced intervocally [14]. Interestingly, this can happen not only within a word, but also across word boundaries.

3. Methods

The speech data recorded for this study was obtained from three female speakers of Hunsrück from Antônio Carlos, Santa Catarina. All three informants were born in Florianópolis, SC, and raised and schooled in Antônio Carlos; they are bilingual native speakers of Hunsrück and Brazilian Portuguese and speak in the dialect on a daily basis. All three informants are in their 60+. Importantly, they belong to a tight-knit community: two of them are relatives and the third is a close friend.

The speech data consists of two types of unscripted speech. The first is a recording of the prayers “Vater Unser” and “Ave Maria” (speaker AS); the second is a short conversation between the two friends (speakers VR and ZP) chatting about the chores they did when they were young. The prayers contain 79 word tokens, while the conversation – over 200 word tokens (excluding overlap and a few phrases in Brazilian Portuguese) – which were included in the analysis.

The two recordings were made remotely onto Samsung S9+ using the Voice Recorder app, converted to the .wav format and subsequently analysed and annotated in Praat.

The Praat annotation included two interval tiers (Figures 3-5): *orthographic* where the speech was transcribed word by word in Standard German (due to the lack of a standard orthography of Hunsrück), and *phonetic* which contained the corresponding segmental transcription of the Hunsrück dialect spoken by the informants. The phonetic transcription was carried out by listening to and observing the spectrograms of the spoken phrases. The analysis/transcription process was overseen by a junior trained linguist who speaks Standard German natively. The final stage of the analysis included compiling a summary of the segmental processes observed in the SC Hunsrück data with the relevant examples – these are presented in the next section.

4. Results

This section presents the segmental features of SC Hunsrik which occur most frequently in the present data. The processes observed in the data are illustrated with the relevant (Praat-annotated) examples; the description will cover vowels first.

Vowel raising: The data includes numerous examples of vowel raising, specifically /a/ → [ɔ], e.g., *nachher* [nɔxɐ] and /a:/ → [ɔ], e.g., *waren* [vɔɐrə], *Haare* [hɔɐr] (Figure 3) in which a schwa-like offglide is clearly audible. Raising of /a/ can also occur in the /aʊ/ diphthong in word-initial position, in which it becomes [ɔ], e.g., *aufstehen* [ɔfʃtɛn], *auswringen* [ɔsfɪŋɐr]. Interestingly, /a/ does not always undergo raising, e.g., *Fleisch* [flaɪʃ], *Bereitung* [bɛraɪdun] vs. *steif* [ʃtɛɪf], *weiß* [veɪs].

Vowel de-rounding: This phenomenon is observed for /y/ and /ø/ (which have <ü> and <ö> in the spelling, respectively). While speakers VR and ZP have /y/ → [i], e.g., *für* [fi] and presumably /ø/ → [ɛ], in speaker AS's data both vowels are de-rounded to [e], e.g., *erlöse* [ɐləs] (Figure 4), *(ge)grüßet* [gɛrɛzət] (Figure 5). Note that the latter example also involves schwa epenthesis and intervocalic obstruent voicing (discussed with regard to the consonantal processes later in this section).

Vowels – schwa epenthesis: A few examples of schwa insertion are found in the SC Hunsrik data – these appear to break up a word/syllable-initial stop+/r/ cluster, e.g., *dran* [dɔran], *(ge)grüßet* [gɛrɛzət] (Figure 5).

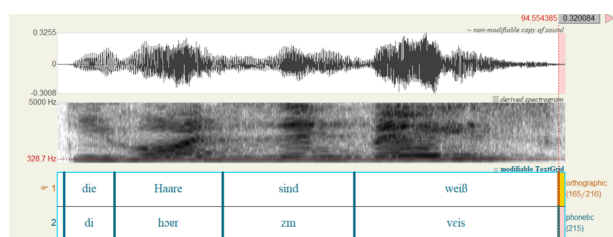


Figure 3: Spectrogram and Praat annotation of the phrase “die Haare sind weiß”, speaker VR.

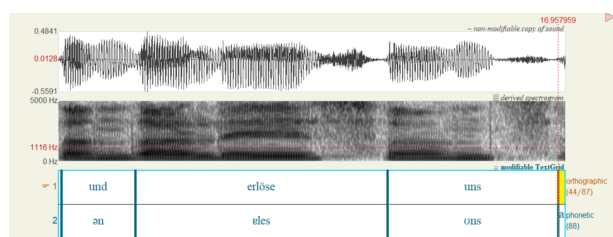


Figure 4: Spectrogram and Praat annotation of the phrase “(...) und erlöse uns”, speaker AS.

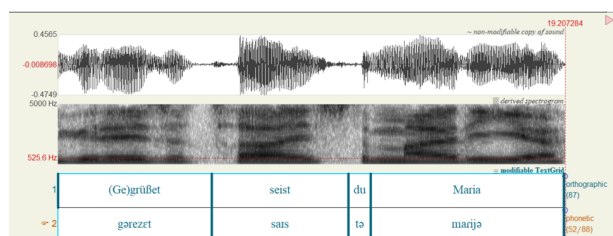


Figure 5: Spectrogram and Praat annotation of the phrase “(Ge)grüßet seist du Maria”, speaker AS.

Consonants – assimilation of voicing: Amongst the recorded data this process is well represented; moreover, two subtypes are found. Firstly, obstruents are frequently voiced intervocally, regardless of whether they occur word-medially (e.g., *Vater* [fade(r)] (Figure 6), *Bereitung* [bɛraɪdun]) or across word boundaries (e.g., *Brot und* [brɔd ʊnt], *raus ist* [raʊz ɪs], *muß er* [mʊz ɐ]). Secondly, obstruents can match their voicing to the preceding consonant, either by becoming voiced (e.g., *halt gehen* [hɔld ɡɛn]) or unvoiced (e.g., *ist (ge)gangen* [ɪs ɡanɡɛn]).

Consonant deletion: Cases of consonant deletion are frequently found in the present SC Hunsrik data. Consonant cluster reduction is observed for all three speakers, e.g., *sind weiß* [zɪn veɪs] (Figure 3), *ich nichts* [ɪ nɪts], *und noch* [ʊn nɔx], as is word-final /n/-deletion (typically in the grammatical -en endings), e.g., *schälen* [ʃɛlə], *im kalten (...)* [ɪm kaltə], *verbrennen* [fɛbrɛnɐ], *Kasten* [kastɐ]. One may hypothesise that other segments, such as non-nasals or schwa, may also be subject to deletion, especially in faster speaking styles.

Consonants – /l/-velarisation: Finally, l-velarization is found in the data of all three speakers. Notably, while [ɭ] is used most frequently in several contexts (word-finally, before a consonant and even intervocally) by speaker VR, it is only produced word-finally by speakers AS and ZP. The examples of /l/-velarisation in the data include *Buckel* [bukɛɭ] (Figure 7), *schälen* [ʃɛlə], *kalten* [kaltɛ], *im Kessel* [ɪm kesɛɭ].

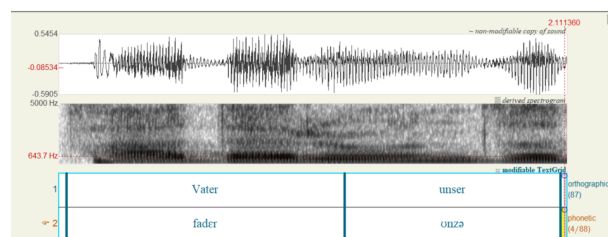


Figure 6: Spectrogram and Praat annotation of the phrase “Vater unser”, speaker AS.

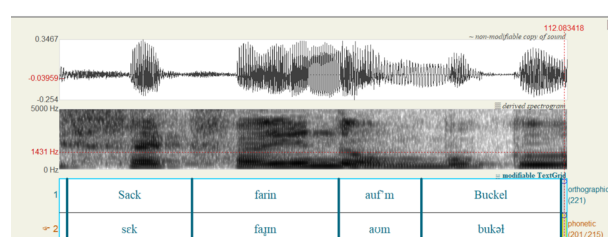


Figure 7: Spectrogram and Praat annotation of the phrase “Sack farin auf dem Buckel”, speaker ZP.

5. Discussion

This section will discuss the results on the most prominent features of SC Hunsrik in view of what has been reported in the literature on RS Hunsrik, seeking to assess the extent to which the two varieties may be similar.

First, concerning vowel raising, the present data show similarities between SC and RS Hunsrik regarding the raising of open /a/ to more closed [ɔ] [13], e.g., *nachher* [nɔxɐ]. Interestingly, it appears that SC Hunsrik speakers may strive to encode the phonemic length distinction of /a:/ vs. /a/ (present in

Standard German) by adding a schwa-like offglide to the raised vowel (as in e.g., *Haare* [høər]) – which to date has not been attested for RS Hunsrik. Also, the two varieties may differ in the realisation of /aʊ/, whereby instead of the monophthongised [ɔ] variant reported for RS Hunsrik [13], the SC speakers exhibit [ɔ̯] (e.g., *aufstehen* as [ɔ̯ftən]). Presumably, this may be due to a primary monophthongisation of /aʊ/ to [a] with subsequent raising to [ɔ]. It also appears that raising of /a/ is accompanied by rounding, potentially due to the lack of unrounded back vowels in German [25].

The next feature investigated was the de-rounding of rounded front vowels. While the German *Umlaut* sounds <ü> and <ö> are typically pronounced as /y/ and /ø/, RS Hunsrik has been noted to use the unrounded [i] and [e] counterparts instead [14]. Our data confirms that this is true for SC Hunsrik also. While AS's speech included cases of de-rounding of both /y/→[i] and /ø/→[e] (e.g., *Sünder* [sinda], *erlöse* [ɐləs]), the conversation between VR and ZP only had instances of the former (e.g., *für* [fi]). Nonetheless, one unusual instance of de-rounding was found in AS's data, where the high front rounded vowel /y/ in (*Ge*)*grüßet* was additionally lowered to [e] resulting in [gəreʒət], even though the remaining cases of /y/ were expectedly de-rounded to [i] or [ɪ] (e.g., *Sünder* [sinda]). This could potentially be explained by the quantity difference between the rounded vowel in *grüßet* (long /y:/) compared to the other high rounded vowels in AS's data, which would correspond to the Standard German short /ʏ/, as in *Sünder*.

The insertion of unstressed vowels in between consonant clusters as a common feature of the Hunsrück dialect in general [16] is also present in SC Hunsrik (e.g., (*ge*)*grüßet* [gəreʒət] (AS), *Schreibmaschine* [ʃrəbməʃin] (VR)). Nonetheless, based on these presently limited data it is difficult to establish which consonant cluster types are more likely to condition vowel epenthesis (here, schwa insertion mostly occurred in the stop+/t/ sequences).

Cases of voiceless consonant voicing have been attested to RS Hunsrik, especially intervocalically [14]. Similarly, the SC Hunsrik data showed several instances of obstruent voicing between vowels (e.g., *Vater* [fəde(r)]) and also across word boundaries (e.g., *raus ist* [raʊz ɪs]). However, it appears that in SC Hunsrik assimilation of voicing occurs more generally, i.e., not only can phonologically voiceless obstruents become voiced, but also vice versa. In VR's phrase *ist gegangen*, the word-initial stop of *gangen* (after deletion of the grammatical prefix *ge-*) is devoiced most likely due to the lack of voicing in the word-final fricative *is* (after deletion of word-final /t/). As a result, the phrase *is(t) (ge)gangen* is pronounced as [ɪs kənən].

Next, consonant deletion was investigated. Crucially, /n/-deletion word-finally (especially in grammatical endings) manifested in RS Hunsrik [13] was also found in the SC variety (e.g., *verbrennen* [fəbrənə], *Kasten* [kastə]). Additionally, as is often the case in connected speech, deletion of word-final consonants occurred in cases of clusters with a sequence of multiple consonants (e.g., *und noch* [ʊn noχ]). Unfortunately, as was the case with vowel epenthesis, no systematic set of environments which would trigger consonant deletion could be established, as the present data also included occasional instances of longer consonant clusters produced without deletion. Nonetheless, consonant deletion in SC Hunsrik goes beyond the scope of word-final /n/ deletion reported for RS Hunsrik, especially in fast speech.

Lastly, velarisation of the alveolar lateral approximant /l/ to 'dark' [ɫ] was found in SC Hunsrik. Possibly, this feature may

be unique to the SC variety, as it has not been attested for RS Hunsrik (either due to limited research on, or the feature being absent from the RS variety). Considering that dialects of German typically use the 'clear' [l] as the default variant, /l/-velarisation in SC Hunsrik has likely been transferred from Brazilian Portuguese which commonly uses [ɫ] [26].

Overall, the findings on SC Hunsrik (based on the available data) largely mirror the observations concerning the segmentals of RS Hunsrik described in the literature. Both dialects feature vowel raising, de-rounding and schwa epenthesis, as well as intervocalic consonant voicing and word-final /n/-deletion. On top of that, a few, more nuanced, features were found in SC Hunsrik exclusively. Among these there are: raising and monophthongisation to [ɔ] of the Standard German /aʊ/, assimilation of voicing of obstruents involving both voicing and devoicing, consonant deletion encompassing consonants beyond word-final /n/ and, lastly, /l/-velarisation as the feature yet unattested for Hunsrik (be it RS or SC).

6. Conclusion

This paper examined the segmental features of the German Hunsrück dialect as spoken in Santa Catarina (SC), Brazil. Prior research has only been conducted on the Hunsrik spoken in Rio Grande do Sul (RS) – the neighbouring state with most of the German-speaking communities. The goal was to provide a preliminary description of the most frequent features of SC Hunsrik and compare these to those already described for RS. The features investigated included vowel raising, de-rounding and epenthesis alongside consonant voicing assimilation and deletion. Most of the segmental features found for RS Hunsrik were also found in SC Hunsrik, such as raising of [a] > [ɔ], front vowel de-rounding [y] > [i] / [ø] > [e], intervocalic obstruent voicing and word-final /n/-deletion. Importantly, a few additional features were found in SC Hunsrik – these included the realisation of /aʊ/ as [ɔ], progressive voicing assimilation (devoicing) of obstruents, word-final consonant deletion not being limited to /n/ and, finally, /l/-velarisation.

The study has been the first step for a more encompassing investigation of Hunsrik spoken in Santa Catarina. Future work will include collecting more data with a larger number of speakers in order to establish clearer patterns for the features examined, particularly for vowel epenthesis and consonant deletion. Further investigation is also aimed at exploring which features can be linked to the original German Hunsrück dialect, and which ones are likely to have been influenced or directly transferred from Brazilian Portuguese. Crucially, even though this paper has focused on the segmental features, there is much more to uncover about SC Hunsrik regarding suprasegmentals: during the analysis process it became evident that SC Hunsrik differs remarkably from Standard German in its prosody (intonation and rhythm alike). It is hoped that these next steps will provide a fuller picture of spoken SC Hunsrik and enable comparisons with the German Hunsrück and the variants of Hunsrik spoken in other parts of Brazil.

7. References

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