

Title: Acoustic explorations towards a sociophonetics of Afrikaans /r/ variation

Either 20 or 40 minute presentation

This paper is a sociophonetic exploration into variation of Afrikaans /r/ as used by participants from the George region in the South Cape (Western Cape Province). There is a dearth of research on rhotic variation in Afrikaans; the alveolar trill [r] is generally considered to be standard Afrikaans and uvular realisations of /r/ are generally regional dialect features. The quantitative analyses are based on interview data from seventy-two participants, who were grouped according to macro-social categories. I start by describing the frequency of two variants of (r) – alveolar trill and uvular trill – used in the area and provide a breakdown of the statistical results from regression and cluster analyses. I then proceed with an acoustic analysis of the (r) variants.

De Villiers (1970:115) states that the liquids /r/ and /l/ differ *acoustically* from other consonants because they contain a resonating element similar to vowels and constriction similar to consonants. He refers to this feature of /r/ and /l/ as *'n gemengde karakter* ('a mixed character'). The resonance of *r*-sounds allows for acoustic description and instrumental analysis. I explore instrumental analyses of alveolar and uvular trill with the software *PRAAT* (Boersma and Weenink 1992-2013) and *SFS/WASP* (Huckvale 2013). These programmes generate spectrograms and waveforms, which are acoustic time-frequency representations of speech sounds. Tops (2009:33-50) and Ladefoged and Maddieson (1996:217-230) show how waveforms and spectrograms illustrate the acoustic differences between the alveolar and uvular trills. These instruments also show the effect of phonetic contexts and sound duration.

The (r) tokens are extracted from picture description tasks performed during the interviews (similar to word-list style). I will explore different measurements, inspired by previous research of /r/ variation in Dutch (e.g. Van de Velde and Van Hout 2001) and Flemish (e.g. Tops 2009). My initial results indicate that there is a difference between the F1 and F2 formants of alveolar and uvular trills, which can be represented on a scatterplot that illustrates the respective sounds' different in tongue positions. Furthermore, Ladefoged and Maddieson (1996:226) state that 'there is a consistent distinction in the spectral domain between uvular and apical trills, with the uvular trills showing a much higher third resonance (between 2500 and 3000 Hz in these examples).' I will also compare my results with Tops' (2009:24) finding that with alveolar trills, a higher third formant can indicate articulation towards the front of the mouth.

References

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