Politics and phonetics: Assessing the influence of party membership on rhotic sounds among Scottish politicians

Previous studies have shown that pronunciation can index political identity (Hall-Lew et al. 2010; Podesva et al. 2012; Hall-Lew et al. 2012; Boyd 2012; Hall-Lew et al. 2017). Yet, these investigations predominantly analyzed open vowels in American and British politics applying linear mixed effects models for statistical analysis. The present study takes a new approach towards analyzing the influence of political affiliation on phonetic variation. It investigates the production of onset /r/ among Scottish politicians implementing the decision tree based resampling and prediction method PrInDT (Weihs and Buschfeld 2021). Scotland provides a very interesting context as the three major parties (Conservatives, Labour, SNP) are divided on the question of independence. Whereas Labour and the Conservatives are UK-wide unionist parties, the SNP only represents Scottish constituencies and continuously campaigns for Scottish independence. Thus, whereas the Conservatives and Labour identify as British and Scottish at the same time and need to negotiate these identities, the SNP is solely Scottish (Leith and Soule 2011). The present investigation therefore addresses the question in how far party membership influences pronunciation in Scotland while controlling for other intralinguistic and extralinguistic factors.

Data was retrieved from the Scottish Parliament and comprises 24 opening speeches held between 2013 and 2020. Following the approach of Hall-Lew et al. 2017, a superficially homogenous speaker sample was selected to account for sociolinguistic factors as well as possible. That is, eight politicians were selected for each party and all of them are male, white, middle-aged and born and raised in Scotland. All received their education in Scotland and they are all in a comparable socioeconomic situation. Data transcription was supported by IBM Watson STT and forced aligned using WebMAUS (Kisler et al. 2017). In the next step, /r/ tokens in onset position were retrieved applying LaBB-CAT search routines (Fromont and Hay 2012).

I then conducted an auditory and spectrographic analysis on each eligible token (N=2290) and sorted them into two groups (approximant/pharyngealized fricative vs. tap/trill realization) applying the categorization scheme provided by Meer et al. 2021. The data was then further annotated for intralinguistic factors (*syllable number*, *word duration*, *segment duration*, *preceding sound*, *phrase position*, *word type*, *cluster context*) and extralinguistic factors (*political party*, *regional background*). The statistical analysis was conducted in R applying the PrInDT function which is designed to handle imbalanced response variables. The method uses undersampling to find the conditional inference tree with the highest balanced accuracy that is still linguistically interpretable (Weihs and Buschfeld 2021).

The results show that the Conservative politicians pronounce significantly less taps/trills than their SNP and Labour colleagues. Further significant predictors include *preceding sound*, *word type*, *phrase position* and *regional background* (see Fig.1) which corroborates recent findings on rhoticity in Scottish Standard English (Meer et al. 2021). Due to the high balanced accuracy of the model (0.7553), I conclude that phonetic variation in the realization of onset /r/ indexes political affiliation among Scottish politicians.

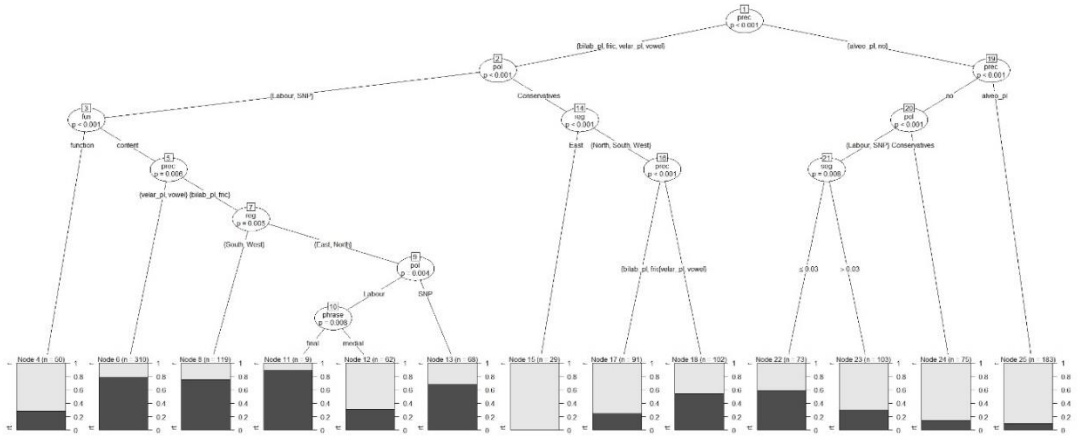

Figure 1: *Best tree for onset /r/ realization with a balanced accuracy of 0.7553.*

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