

**One speaker, two languages:  
Within-speaker variation of [s] across L1 Dutch and L2 English**

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The voiceless alveolar fricative [s] is phonetically similar but not identical in the Dutch and English language. This makes it one of the most difficult English segments to pronounce correctly for native (L1) speakers of Dutch (Flege, 1995). If second language (L2) speakers fail to realize that the Dutch and English [s] have phonetic differences, they may place them into one phonetic category and use their Dutch [s] also when speaking English. Such L1 transfer would be useful for forensic speech science, as it would allow for the inclusion of these segments in cross-linguistic comparisons.

According to Quené et al. (2017), who looked into read speech [s] by L1 Dutch speakers with a relatively high proficiency of L2 English, different [s] realizations are found in L1 Dutch than in L2 English. This implies that [s] is not useful as a feature to perform cross-linguistic speaker comparisons. However, these same speakers have also been recorded producing spontaneous speech, which may be considered more representative for forensic casework data and may evoke less formal language use. Hence, this study investigates the language-dependency of [s] in spontaneous speech.

The language-dependency of [s] was evaluated by comparing the Centre of Gravity (CoG), its standard deviation (SD), and spectral tilt of [s] productions in the same speakers' L1 Dutch and L2 English (N = 45). Analyses are underway and will be presented at the conference.

## References

- Flege, J. E. (1995). Second language speech learning: Theory, findings, and problems. *Speech perception and linguistic experience: Issues in cross-language research*, 92, 233-277.
- Quené, H., Orr, R., & van Leeuwen, D. (2017). Phonetic similarity of/s/in native and second language: Individual differences in learning curves. *Journal of the Acoustical Society of America*, 142(6), EL519-EL524.