

An acoustic study of /s/-retraction in Trinidadian English

Philipp Meer (University of Münster, Germany) and Wiebke Ahlers (University of Münster, Germany)

Sociophonetic research in the last decade observed a possible non-regional, non-variety-specific sound change affecting sibilants. Specifically, /s/ in (triple) consonant clusters is produced in a retracted position, approximating the palato-alveolar fricative [ʃ], esp. in /str/ (e.g. [ʃtuit] rather than [stuit] for *street*). Retraction has been observed in British English, New Zealand English, and, most notably, different varieties of American English (e.g. Stevens & Harrington 2016:118).

In sociophonetic research on Trinidadian English (TrinE) and other New Englishes, however, variability in the production of sibilants has received little attention. While previous impressionistic descriptions of TrinE suggest that affrication of /(s)tr/-clusters is common in some speakers (Youssef & James 2008), evidence on the realization of /s/ in /str/-clusters is lacking.

This study presents the results of a large-scale acoustic study of /s/-retraction in TrinE, using word list, reading passage, and interview recordings from 100 students and teachers from secondary schools across the island that were overall balanced for gender, region, ethnic distribution, and school type. The recordings were manually transcribed, automatically force-aligned using a version of FAVE calibrated to TrinE (Meer & Matute Flores 2018), subjected to a Praat script that extracted Center of Gravity (CoG) for all sibilants, and subsequently z-transformed. Likely outliers (approx. 8%) were excluded before analysis (final N=17,097). CoGs of singleton /s/ were compared to those of /s/ in /sk skr sp spr st str/-clusters using linear mixed effects modeling, with a fixed factor of /s/-cluster type and random factors of speaker (intercept and slopes) and word (intercept). Sociolinguistic effects were analyzed in a separate model.

The results show that /s/ in /str/-clusters is retracted in TrinE and approaches /ʃ/: CoG in /str/ is significantly lower than in singleton /s/ and all other /s/-clusters, whose CoGs were all high and undifferentiated. Although there is considerable overlap in CoG between /str/ and /ʃ/ across many tokens, a small but significant difference is maintained. Variability in the degree of retraction in /str/ is generally larger than in the other /s/-clusters: speakers differ in apparent time, with the two youngest age groups having considerably (but not significantly) lower CoGs comparable to /ʃ/. The degree of retraction was significantly higher in more formal speech. Both these observations might indicate change in progress toward full /s/-retraction in TrinE.

References

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