The gradient nature of /s/-lenition in Caleño Spanish

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Previous research on /s/-lenition in Spanish has relied almost exclusively on impressionistic coding for the independent variable "/s/-realization" (cf. Brown 2008, File-Muriel 2009, Poplack 1979, Terrell 1979, among others). In these studies, researchers are limited to the available devices accorded to them by the International Phonetic Alphabet (e.g. /s/ as [s], [z], [h], Ø, etc.). Although auditory acoustic analysis (i.e. transcription) is an extremely useful descriptive device, it can be influenced by the transcriber's background and expectations. Additionally, acoustic details are lost when tokens are forced into categorical groupings, such as short vs. long duration. The present study examines the production of /s/ by eight university students from Cali, Colombia in informal sociolinguistic interviews. This research departs from the audio transcription tradition, proposing a metric for quantifying the realization of /s/ by employing three scalar dependent variables: center of gravity, /s/ duration, and percentage of voicing. Such a method is less vulnerable to bias, given that it is based on acoustic measurements that are not necessarily perceptible to the human ear. The results of the linear regressions indicate that the dependent variables are significantly conditioned by a variety of linguistic factors: lexical frequency, local speaking rate, stress, speaker, position within the syllable, the preceding and following phonological context, word length, and lexical class. The magnitude of effect trends are elucidated by predicted probability plots. For example, as lexical frequency increases, /s/ duration decreases, center of gravity decreases, and percentage of voicing increases, all indicative of lenition. We argue that /s/ lenition is better explained in gradient terms, rather than categorical ones. This paper contributes to the growing body of literature documenting the influence of frequency effects on this otherwise well-studied phenomenon of phonological variation and change.

References

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