

The role of lexical frequency and phonetic context in the weakening of syllable-final lexical /s/ in the Spanish of Barranquilla, Colombia

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The Spanish phoneme /s/ has been of particular interest to Hispanic linguists and to Linguistics in general because it is produced in different ways across different varieties of Spanish, depending on linguistic, social, and stylistic factors (c.f. Poplack 1979, Terrell 1975, Cedergren 1973). In many varieties of Spanish, the sound undergoes a process of weakening. Only recently has research been carried out regarding the role of lexical frequency in *s*-lenition (Brown 2006, Eddington 2002, Bybee 2002). Furthermore, the research regarding the phonetic context that surrounds /s/ and its role (if any) on lenition has been limited to the most general categories.

This study focuses on the influence of lexical frequency and phonetic context on *s*-lenition. The lexical factors examined are lexical frequency, stress, and word length. Lexical frequency was determined by consulting the Real Academia Española's (RAE) online corpus "Corpus Diacrónico del Español" (CREA) and recording the raw number of occurrences. The search was confined to the years 1975-2006. The raw numbers were subsequently converted into a relative logistic frequency scale in order to run a binary logistic regression analysis. The study also examines several phonological factors yet to be considered involving the sounds that neighbor /s/. This includes the preceding vowel as well as the phonological characteristics of the following consonant, including the point of articulation, manner of articulation (MOA), and voicing.

An experiment was conducted in which 33 speakers from Barranquilla, Colombia read sentences that were selected specifically to elicit the production of syllable-final lexical /s/ across all possible sC sequences. The participants, both male and female, were all university students between the ages of 20-26. Productions of /s/ were submitted to auditory acoustical analysis; visual inspection of spectrograms was carried out for ambiguous cases in which the strong sibilance that characterizes the /s/ was not clear.

The data were submitted to a stepwise multiple regression analysis. The factor group that was selected first was lexical frequency. High-frequency words favor *s*-lenition at .67 while low-frequency words favor disfavor lenition at .33. The results indicate that lexical frequency is the most powerful predictor of *s*-lenition, a variable that has been overlooked in the previous research. The more frequent the lexeme, the more likely it is to undergo lenition. Furthermore, new findings in this study suggest that surrounding sounds also strongly condition lenition. MOA, which has not previously been considered, was selected as the third factor group. A following fricative strongly favors lenition at 0.711, whereas a following nasal only slightly favors lenition at 0.555. Conversely, stops and laterals disfavor lenition at 0.473 and 0.392 respectively.

These results provide evidence for the Exemplar Model as proposed by Bybee (2000, 2002). Lenition occurs more in high-frequency words because these words are easier in terms of processing and production; they are more predictable from context than low frequency words and require less time and cognitive effort. On the other hand, higher rates of retention occur with low-frequency words for the opposite reasons: these words are less predictable and require more effort.

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