A cross-dialectal model of voicing assimilation in Peninsular Spanish
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This paper analyzes and models /s/ voicing assimilation before voiced consonants in Spanish from a cross-dialectal perspective (e.g. [ra\textit{zgo}] ‘feature’ vs. [ra\textit{s}ko] ‘scratch”). This phenomenon has been shown to be gradient, and the current study elucidates the factors that condition the assimilation, taking advantage of a comparative approach. More precisely, I experimentally show that /s/ voicing behaves differently in Northern and Central Peninsular Spanish and that the linguistic factors that regulate the process vary in each dialect. Furthermore, working within Articulatory Phonology (AP), I analyze Spanish voicing assimilation as an instance of gestural blending and elaborate on how this model captures dialectal differences.

Assimilation within AP derives from increased gestural overlap among adjacent gestures, resulting in gestural blending when the gestures are specified for the same articulator (Brown & Goldstein 1989). Thus, I model /s/ voicing assimilation in Spanish as gestural blending of the conflicting glottal gestures for /s/ and a following voiced consonant. This conceptualization makes predictions about what factors might be relevant in the assimilation. I explore the role of stress, prosodic boundaries, and manner of articulation of the triggering consonant, factors that have been shown to influence gestural overlap (Beckman et al. 1992, Byrd & Salzman 1998, Recasens & Mira 2012). The dialectal comparison is between Basque Spanish and Madrid Spanish more precisely, two varieties that present differences in their degree of voicing for a different process that affects word final /d/ (Gonzalez 2002), with Madrid Spanish displaying less voicing. Based on this, I predict that Basque Spanish will show a lesser degree of /s/ voicing assimilation, and that the conditioning factors will be different from one dialect to another. With this mind, an experiment was designed to obtain production data from 10 speakers of each dialect, including the target /s/ in different environments to test the effect of stress, manner of articulation of the triggering consonant and different prosodic boundaries. Tokens of /s/ were acoustically analyzed for percent voicing.

Results show that Madrid Spanish displays a higher degree of voicing assimilation than Basque Spanish, as hypothesized. Furthermore, the factors that condition this degree do not behave identically in both dialects. Stress is significant only for Basque Spanish, with /s/ in post-stress positions displaying the highest degree of voicing. From the point of view of our model, this is expected since post-stress positions are the weakest from an articulatory perspective. On the other hand, the manner of articulation of the triggering consonant plays a similar role in both dialects: more assimilation occurs before obstruents than before sonorants. Finally, the effect of prosodic boundaries shows dialectal differences, with stronger effects for Basque Spanish. Overall, Basque Spanish, the variety with less assimilation, shows a higher influence from phonological factors.

These results are coached within the gestural blending model and the effects of the different factors are explained from an articulatory perspective. I claim that the dialectal differences are related to the fact that Madrid Spanish displays /s/ weakening, a process absent from Basque Spanish, and the higher degree of assimilation is the result of the weaker articulatory strength of /s/ in this dialect. Overall, this study presents intriguing evidence regarding the differences between two varieties of Peninsular Spanish which are oftentimes grouped together. Moreover, it contributes to the growing body of research that addresses gradience in phonology and develops theoretical models based on instrumental data to thoroughly explain the assimilatory facts.
References


