

**Development of a spontaneous speech corpus for the articulatory study
of cross-dialectal consonantal weakening**

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Although it is generally assumed that the loss of coda consonants is articulatorily motivated, the bulk of the research, particularly within Romance, has focused on either the extra-linguistic variables conditioning the variation or on some of the contextual factors accounting for the allophonic patterns, with little work on the articulatory characteristics of the resulting segments, and even less research exploring the connections between onset and coda weakening (e.g. Lipski 2011). The two weakening processes studied here – the velarization/assimilation of alveolar nasals and the aspiration and deletion of /s/ in codas – crucially distinguish Western Romance varieties (e.g. Hajek 1997). In French, coda nasals have resulted in vowel nasalization and coda /s/ has been lost. Within Spanish, some varieties are approaching the French pattern (i.e. Caribbean varieties), while others show extensive weakening of /s/ (in all coda contexts), but limited weakening of the nasal (before consonants only).

To investigate articulatory patterns of coda weakening and a possible relation between the realization of coda and onset consonants, we have been developing a corpus of semi-spontaneous speech containing electropalatographic (EPG) recordings of 9 speakers of 3 varieties of Spanish. These varieties represent different stages of the processes: generalized weakening (Havana); /s/ and /n/ weakening before consonants but maintenance pre-pausally or prevocally (Buenos Aires); and preservation of codas, except for /n/ preconsontally (Madrid) (e.g. Lipski 2011; Terrell 1978). In this paper we report data from 3 female speakers representing each dialect. Words containing /s/ and /n/ in coda (before a pause, a vowel and a consonant) and onset positions were extracted from the narratives, giving approximately 120 tokens per speaker. Target sounds were analyzed using a standard set of EPG measurements of constriction location and degree (Fontdevila et al. 1994), as well as of duration and overall within-context variability.

Beyond the overall expected differences in the realization of coda consonants, results showed gradient onset-coda differences within speaker's productions and differences in the overall degree and location of contact across speakers. For /s/ (Figure 1), the Madrid speaker showed a tight constriction in codas and onsets alike, with hardly any contextual differences; the Buenos Aires speaker had a highly constricted articulation in all contexts, but pre-consonantly, where [h] was the default realization; the Cuban speaker, albeit displaying an unexpected high proportion of /s/ realizations, exhibited an overall less constricted articulation in all positions. As for /n/ (Figure 1), the expected cross-dialectal place differences were found (alveolar realizations in Madrid and Buenos Aires vs. velarization in Havana Spanish), including the assimilatory patterns reported in other studies (e.g. Honorof 1999; Ramsammy 2011). Interestingly, the Cuban speaker also showed a less constricted articulation in onsets (Figure 2) compared to the Argentine and Peninsular speakers, as well as greater overall contextual variability. Results suggest that the two consonants under study differ in their variability patterns within and across speakers, with the nasal being overall more variable and more prone to contextual variation than /s/. The hypothesized onset-coda weakening relations are apparent when comparing the Cuban data against the other varieties (Figure 2). Our further work on the corpus will determine to what extent these findings are representative of the three dialects.

In summary, our results speak to the importance of supplementing sociolinguistic and acoustic studies with articulatory work to capture more gradient patterns in well-known processes (as coda weakening) as well as not previously described cross-dialectal differences in the degree of consonantal constriction.

Speaker	/s/			/n/			
	Onset	Coda_#V, ##	Coda_#C	Onset	Coda_#V, ##	Coda_#C	
Madrid							alveolar
							velar
Buenos Aires							alveolar
							velar
Havana							alveolar
							velar

Figure 1: Contextual variability in the realization of /s/ and /n/ by speaker (linguopalatal contact profiles over 20 tokens per category; black = contact in all tokens, white = no contact).

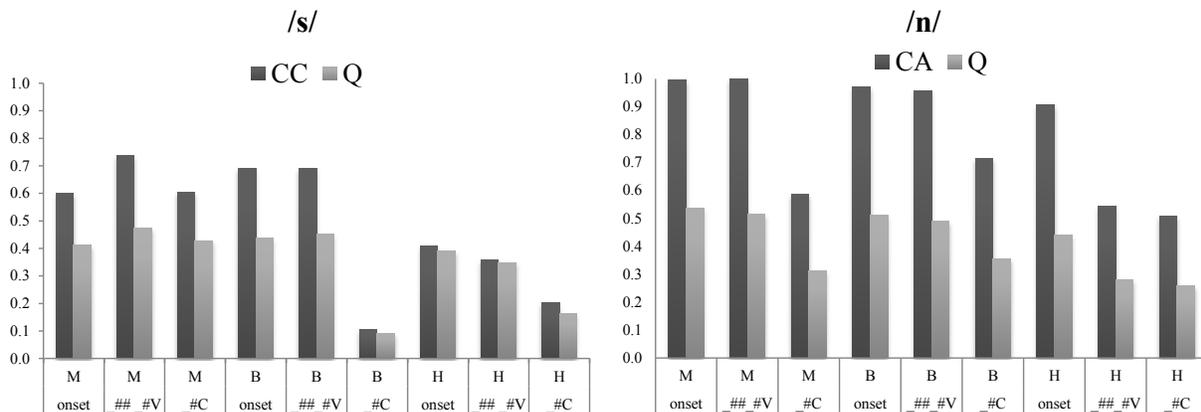


Figure 2: Mean values for contact centrality (CC) and degree of contact (Q) for /s/ (left) and for contact anteriority (CA) and degree of contact (Q) for /n/ (right), by context and speaker (Madrid, Buenos Aires, and Havana).

Selected references:

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