

## Resistance to resyllabification in Yucatecan Spanish: effects of prosodic structure and contact dynamics

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Spanish is reported to resyllabify across word boundaries. Evidence is drawn from many varieties, although resyllabification has been shown to be gradient to some extent both in its acoustic realization and in the production of speakers ([1], [2], [3], [4]). Resyllabification across word boundaries is a process by which the syllabic affiliation of a word-ending sound changes when followed by a word-initial vowel. Thus, a word-final consonant becomes the onset of the following syllable (see examples 1 and 2), whereas for word-final vocalic sequences, a new syllable is created, either by means of vowel deletion (*se hace* ‘it is done’ [se.ʼa.θe] > [ʼsa.θe]), coalescence (*nombre exacto* ‘precise name’ [ʼnom.bre.e.ʼsak.to] > [ʼnom.bre.ʼsak.to]) or diphthongization (*fuego y* ‘fire and’ [ʼfwe.ʏo.i] > [ʼfwe.ʏo̠]). However, Yucatecan Spanish seems to resist to it, maybe because of Yucatec Maya influence.

The current study focuses on the prosodic word, which is defined as the domain of word stress [5] in which unstressed function words merge with following content words [5], [6]. We analyze Yucatecan Spanish, a Mexican variety in contact with Yucatec Maya. Since Maya has both glottalized vowels and consonants [7], and Yucatecan Spanish is characterized by glottalization—thought to be rare in Spanish [8]—which can block resyllabification [9], this variety may show greater resistance to resyllabification than others, particularly for Spanish–Maya bilingual speakers. The study explores i) whether resistance to resyllabification differs within and across prosodic words, and ii) whether knowledge of Maya has an effect on said resistance.

Sequences with a potential for resyllabification were coded for its presence or absence by a native speaker of Spanish based on auditory inspection. They were also coded for glottalization based on visual inspection of the waveforms and spectrograms. The data analyzed consisted of 150 observations per speaker taken from a semi-spontaneous speech corpus of interviews about language and culture. (1) is an example with a potential for resyllabification within the prosodic word, whereas (2) is another example across prosodic words (with/without resyllabification).

(1) *en agua* [e.ʼna.ʏwa] / [en.ʼa.ʏwa] ‘in water’

(2) *todos andaban* [ʼto.ðo.san.ʼda.βan] / [ʼto.ðos.an.ʼda.βan] ‘all walked’

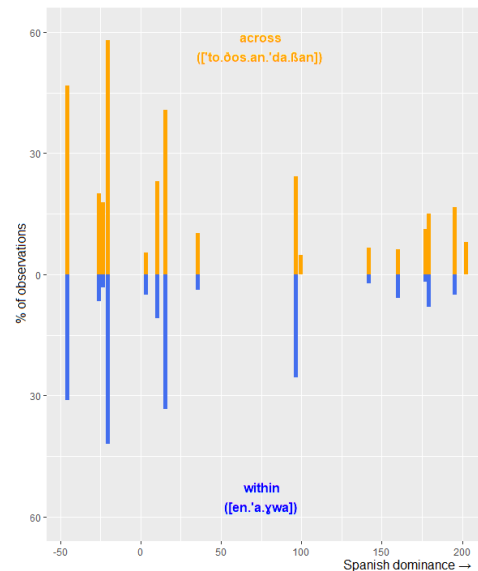
Speakers’ language knowledge was assessed by means of the Bilingual Language Profile questionnaire [10], which yields a score about language dominance (in this case, Maya–Spanish). Sixteen participants (8 female, 8 male) received each a BLP score that placed them on a continuum from Maya dominance to only knowledge of Spanish. Just one speaker reported knowledge of another language (English). Prosodic position was coded as *within* the prosodic word and *across* prosodic words. Bayesian regression models with weakly informative priors were fitted using the `brms` package [11] in R [12], with resyllabification as the binomial dependent variable, prosodic position and BLP score (scaled) as independent variables, speaker as random intercept, and by-subject random slopes for the effect of prosodic position, and checked for a two-way interaction. Results (Table 1 and Figure 1) show evidence for an effect of prosodic position and knowledge of Maya. Resistance to resyllabification is greater across than within prosodic words (orange bars vs. blue bars), and it is also greater the more Maya-dominant the scores are (bars to the left are higher than bars to the right). There is no interaction between prosodic position and BLP score. 81.5 % of sequences perceived as resisting resyllabification presented cues to glottalization (creakiness, burst and/or silence).

To sum up, prosodic position and knowledge of Maya play a considerable role in resistance to resyllabification in Yucatecan Spanish, with the productions of all participants being affected by prosodic position and language knowledge.

Table 1. Main effects of prosodic position and BLP score (scaled) and their interaction.

	Estimate	Lower CrI	Upper CrI
Intercept	-2.60	-3.25	-1.98
pros_pos(across)	0.93	0.57	1.34
blp_score_s	-0.66	-1.26	-0.04
pros_pos(across) :blp_score_s	0.11	-0.23	0.48

Figure 1. Resistance to resyllabification in the prosodic word domain. Each bar represents a speaker. Speakers are ordered from Maya dominance (left) to Spanish dominance (right).



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