

A new look at the aspiration and vowel formants: Corpus of Caracas

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Some recent acoustic and perceptual studies of Caribbean varieties of Spanish have shown no evidence for vocalic phonemic change in the context of an aspirated or deleted /s/ (Hammond, 1978; Alemán, 1977; Figueroa, 2000). Formant frequency data did not reveal open-close vowel alternations /a-A, e-E, o-O/ as reported first in the impressionistic study by Navarro-Tomás (1966) for Puerto Rican Spanish and by Morales (1979) for Caribbean dialects. The acoustic data demonstrated that the morphemic ambiguity between singular and plural forms (1), and the 2nd - 3rd person (2), triggered by /s/ deletion, was compensated by other mechanisms, such as vowel lengthening, the use of subject pronouns (Poplack, 1980), the retention of /s/ of determiners (Terrell, 1977) and others: (1) *juguete* 'toy'- *juguetes* 'toys', (2) *habla* 'he speaks'- *hablas* 'you speak'.

The present paper is focused on Spanish spoken in Venezuela, the variety where the rate of /s/ aspiration is very high (Lipsky, 1994). The main goal is to analyze the correlation between aspiration (deletion), morphemic status of /s/, vowel quality, and sociolinguistic factors. The data comes from thirty four speakers from the sociolinguistic corpus of Caracas (Bentivoglio and Sedano, 1993), representing three social classes, three age groups and two genders. Word tokens were collected for each vowel /i,e,a,o,u/ in the context of syllable-final /s/. For this study only items with an aspirated or deleted /s/ were selected. The formant frequency values F1 and F2 were normalized (Labov et al., 2006) and plotted into Plotnik10 (Labov 2001). The data was codified for social class, gender, age, stress, frequency, vowel duration, s-deletion or aspiration, morphemic status of /s/ and preceding context. The codification of F1 and F2 was based on the mean values calculated for the morphemic and non-morphemic context separately.

The results have shown a fronting of all vowels and a raising of /a/ before the morphemic aspirated-deleted /s/ (see Figure1). This pattern differs from a traditional open- close vocalic alternant for /e/ and /o/. The statistical analysis demonstrated that the

social class of speakers and the stress had a significant effect on the vowel fronting. The Goldvarb results also showed that /s/-deletion and aspiration, age as well as frequency were significant for the /a/ raising. The findings suggest that Venezuelan Spanish has no phonemic changes in the vocalic inventory, however there are consistent significant patterns found in the value of F2 for all vowels, and in the value of F1 for /a/ depending on the morphemic status of /s/.