

A Sociophonetic Approach to Mid Vowel Raising in the Spanish of Michoacán, Mexico

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I present a variationist analysis of mid vowel raising in the Spanish of rural Michoacán, Mexico, i.e., the realization of /e,o/ as [i,u], respectively, in post-tonic unstressed positions (e.g. *grande* ‘big’ as [gránde] or [grándi]). Previous studies on vocalic variation in Mexico either do not explain the contexts that influence raising (e.g. Moreno de Alba 1994, Parodi and Santa Ana 1997) or focus instead on a different process, unstressed vowel reduction (UVR) (e.g. Canellada de Zamora and Zamora Vicente 1960), which is the reduction of duration or voicing of unstressed vowels. Nearly all previous studies of other dialects, namely northwestern Spain and Puerto Rico (Holmquist 1985, 1998, 2005 & Oliver Rajan 2008), use auditory judgments to determine raising. In order to provide the first systematic account of mid vowel raising, I present an analysis of the linguistic and social factors that condition this variable raising in Michoacán Spanish, using acoustic information. Including acoustic measurements allows me to take into account the gradient nature of vowel raising. I view unstressed vowel raising, alongside UVR, as an instance of vocalic weakening. By using the weakening framework I can make several hypotheses, for instance, I expect to find more vowel raising in closed syllables and utterance-finally since these positions favor shorter, weaker vowels.

I performed an acoustic analysis of the unstressed mid vowels from the spontaneous speech of 31 participants from the rural town of Colongo. The first two formants (F1 and F2) of each target vowel were measured and those values were used to create continuous variables, i.e. F1 and F2, as well as a categorical raised/non-raised distinction. I considered the following linguistic factors: open vs. closed syllable, location within the utterance, previous and following sounds, and tonic vowel, among others. The social factors, age, occupation, education, and mobility, i.e. time spent in and out of Colongo, were used to create closed and open social networks, which are expected to show different linguistic behavior.

The results show that /e/ is significantly more likely to be raised than /o/, which suggests a distinct pattern of vowel raising in Mexico, since the opposite is true in other Spanish dialects with vowel raising. Closed syllables and utterance final words favor raising, supporting my weakening analysis of vowel raising. Raising is more prevalent in speakers from closed networks, meaning participants with less mobility. In summary, this study shows that there are specific linguistic and social factors that condition vowel raising in Michoacán and it is one of the first studies of vowel raising to include an acoustic analysis of each target vowel. This analysis provides insights into the nature of a vowel process that has been overlooked in an understudied dialect of Mexican Spanish and further contributes to our understanding of how social factors play a role in phonological weakening.

References:

- Canellada de Zamora, María Josefa & Alonso Zamora Vicente. 1960. Vocales caducas en el español mexicano. *Nueva Revista de Filología Hispánica*, 14, 222-241.
- Delforge, Ann Marie. 2008. Unstressed vowel reduction in Andean Spanish. *Selected proceedings of the 3rd Conference on Laboratory Approaches to Spanish Phonology*, ed. by Laura Colantoni and Jeffrey Steele, 107-124. Somerville, MA: Cascadilla Proceedings Project.
- Holmquist, Jonathan C. 1985. Social correlates of a linguistic variable: A study in a Spanish village. *Language in society*, 14, 192-203.
- Holmquist, Jonathan C. 1998. High-lands high vowels: A sample of men's speech in rural Puerto Rico. *Papers in Sociolinguistics: NWAVE-26 a l'Université Laval*, ed. by Claude Paradis, Diane Vincent, Denise Deshaies & Marty LaForest, 73-79. Quebec: Université Laval.
- Holmquist, Jonathan C. 2005. Social stratification in women's speech in rural Puerto Rico: A study of five phonological features. *Selected Proceedings of the Second Workshop on Spanish Linguistics*, ed. by Lotfi Sayahi and Maurice Westmoreland, 109-119. Somerville, MA: Cascadilla Proceedings Project.
- Moreno de Alba, José G. 1994. *La pronunciación del español en México*. México D.F.: El Colegio de México.
- Navarro Tomás, Tomás. 1948 [1999]. *El español en Puerto Rico*. San Juan: Editorial de la Universidad de Puerto Rico.
- Oliver Rajan, Julia. 2008. *Vowel raising in Puerto Rican Spanish*. Chicago, IL: University of Illinois at Chicago, doctoral dissertation.
- Parodi, Claudia & Otto Santa Ana. 1997. Tipología de comunidades de habla del español rural al estándar. *Nueva revista de filología hispánica*, 45 (2), 305-320.