

## Gender Agreement and Assignment in Spanish Heritage Speakers: Does Frequency Matter?

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Heritage Speakers (HS) have shown an unstable knowledge of gender agreement experiencing more difficulty with feminine than with masculine nouns and with non-canonical than canonical ending nouns (Montrul, Foote & Perpiñán, 2008; Montrul, Davidson, De La Fuente & Foote, 2014; Martínez-Gibson, 2011). However, lexical frequency in the input seems to be an additional factor that brings variability among HSs in their use of the heritage language (Giancaspro, 2017; Hur, submitted). This study aims to uncover the extent to which lexical frequency affects the acquisition of gender assignment and gender agreement.

Previous research suggests that the instability and variability of HSs are due to incomplete acquisition or attrition (Montrul 2004; Montrul & Bowles, 2009; Polinsky, 2006), given that heritage speakers and monolinguals may receive different input (Montrul & Sánchez-Walker, 2013; Rothman, 2009; Rothman & Kupisch, 2017). However, Putnam and Sánchez (2013) suggest that instead of focusing on quantity or quality of input, the frequency of activation (processing for comprehension and production that results in intake of the heritage language) is a crucial factor in heritage language acquisition and maintenance. In the present study, we test Putnam and Sánchez's (2013) activation approach by using lexical frequency and proficiency as proxies for frequency of activation. We also explore productive vocabulary knowledge and proficiency as possible factors contributing to variability. We posit the following questions:

RQ1: Are there lexical frequency effects that result in variability in the acquisition of gender assignment and gender agreement among heritage speakers?

RQ2: Does the acquisition of assignment and agreement correlate with a productive vocabulary knowledge measure (MINT) and/or with proficiency (DELE)?

Thirty-two heritage speakers (ages 18-35) completed a language experience questionnaire, a lexical knowledge task (MINT; Gollan, Weissberger, Runnqvist, Montoya, & Cera, 2012), a proficiency task (DELE; Cuza, Pérez-Leroux, & Sánchez, 2013), and two experimental tasks: a) an Elicited Production Task (EPT), and b) a Forced Choice Task (FCT) (see Figure 1) to examine gender assignment and agreement respectively. All noun frequencies were determined using the Davies' Spanish corpus (2018). Both tasks were adapted from Grüter, Lew-Williams, and Fernald (2012) and included 32 test items (36 distractors), which were divided into four conditions ( $k = 8$ ): canonical masculine, canonical feminine, non-canonical masculine and non-canonical feminine. We tested these conditions to look at the participants' knowledge of gender without relying on morphology (e.g., canonical masculine *queso* 'cheese' vs non-canonical masculine *arroz* 'rice'). Finally, participants completed a Spanish self-rating vocabulary frequency task, measuring use and exposure to lexical items using a Likert scale.

The EPT results show that canonicity ( $p < .01$ ), gender ( $p < .01$ ), and proficiency ( $p < .01$ ) modulate gender assignment in heritage Spanish. Results from the EPT also show that target-like gender assignment is influenced by lexical frequency, as measured by the participants' self-ratings. This effect is restricted to feminine nouns ( $p = .03$ ). No correlations were found between the EPT results and the Davies' Spanish corpus (2018) frequency counts. The FCT results yield similar results on the heritage speakers' gender agreement. The effects of lexical frequency and proficiency in accuracy in gender assignment and agreement in heritage Spanish are consistent with the activation approach that claims that lexical frequency, used as proxy for frequency of activation, and proficiency have an effect on heritage language acquisition and maintenance.

Figure 1. Samples of the EPT and the FCT testing a non-canonical masculine noun

¿Qué tip de arroz comen en el campo?

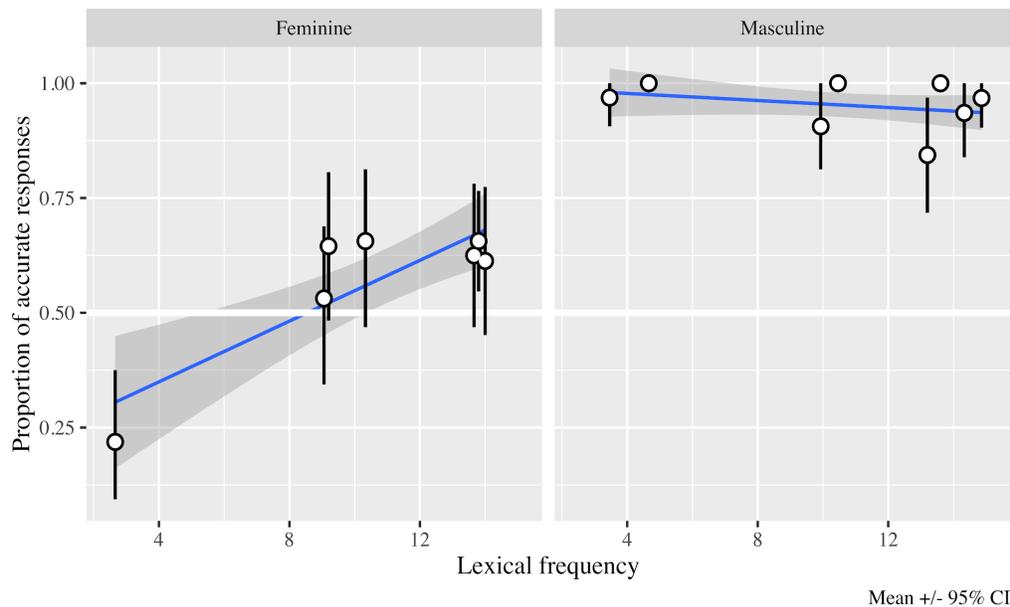


a) El arroz blanco



b) El arroz blanca

Proportion of accuracy as a function of self-reported lexical frequency in non-canonical nouns



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