

## The production of /d/ by Spanish native speakers and English-speaking learners: A sociophonetic approach.

Giulia Cortiana<sup>1</sup>

Olga Tararova<sup>1</sup>

<sup>1</sup> Western University

The present sociophonetic acoustic study compares the production of /d/ in Spanish past participle *-ar* verbs (e.g., *bailado*, [bai.'la.ðo], ‘danced’) among Cuban and Colombian Spanish native speakers and English-speaking learners of Spanish as a second language (L2). Previous literature on the production of /d/ among Spanish native speakers suggests that complete elision [Ø] happens in Cuban Spanish [1], while it happens at a lower frequency in Colombian Spanish [2]. Previous literature on the acquisition of Spanish as L2 suggests that English-speaking Spanish learners produce the approximant [ð] at a lower rate because of articulatory difficulties [3], that L2 learners produce [Ø] at a lower rate than their native speakers counterparts [4], and that, regardless of their language knowledge level, L2 learners hardly show the same parameters as native speakers [5]. Previous literature regarding social and linguistic criteria suggests that women produce more [ð] than their male counterparts [6], [7], as well as that [Ø] is more favored if the /d/ is preceded by /a/, regardless of speakers’ gender [8]. Therefore, the present study examines 3 Colombians and 4 Cubans (NS), and 6 English-speaking Spanish learners (NNS) by comparing their productions of /d/ in Spanish past participle *-ar* verbs. English-speaking participants were both graduate and undergraduate students at Western University. The mean age for NNS was 26.3, while for NS was 30.5. Participants performed a linguistic background questionnaire, a Bilingual Language Profile questionnaire (T2), a preference forced choice (T3), and a reading task (T4). Twenty Spanish three-syllabled past participle *-ar* verbs (no distractors) were tested, used alternatively as adjective or verbs. The dependent variable was the production of /d/, either as [Ø], as [ð]. The independent social variables were sex, age, and country of origin for NS and country of learning for NNS. The independent linguistic variables were the grammatical function of the stimuli, the task, and the position in the sentence. Acoustic analyses were carried out with PRAAT, and the production of /d/ was classified as complete elision [Ø], as approximant [ð], or as ‘other’. In total, 780 tokens (17 were excluded) were collected. Results show that NS speakers produced [Ø] at a rate of 35%, while NNS produced [Ø] at a lower rate of 13%. Moreover, step-up/step-down multivariable analyses were carried out with Goldvarb statistical software, for each dependent variable. Preliminary results indicate that sex and age across the NS group, and the country of learning for NNS, had a significant effect for the production of [Ø]. As for the acoustic analyses, when NNS did not produce complete elision, they produced 1.39 times longer approximants [ð] than their NS counterparts. Furthermore, a preliminary correlation between the NNS participants’ dominance score obtained by Task 2, the Bilingual Language Profile, and the percentage of [ð] productions was carried out. The correlation analyses showed a  $R^2$  that equals .55; that is, 74% of the variation in the production of approximant can be accounted for by the participants’ language dominance score. The standardized correlation coefficient 0.74 indicates a strong positive correlation between language dominance and production of approximant. Results seem to suggest that the more Spanish dominant a NNS participant is, the more native-like their [ð] productions are. This study is the first to report a comparison between NS and NNS regarding the production

of /d/ and, therefore, it can contribute to our understanding of production differences among native and non-native speech.

*Keywords: Spanish, sociophonetic, complete elision, past participle -ar verbs*

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