

Phonological Attrition in Arabic-English-Speaking Bilinguals Living in Canada

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Whereas the body of literature on phonetic and phonological attrition has been growing in recent years (e.g., Celata & Cancila, 2010; Mennen, 2004; Mennen, Meyer & Price, 2011; Ulbrich & Ordin, 2015), to the best of our knowledge, very few studies that have examined the restructuring of a first language phonological system (e.g., De Leeuw, Tusha, Schmid, 2017). The first aim of this study is to examine phonological attrition of the Arabic singleton-geminate contrast (e.g., /ham:a:m/ "bathroom"), (/ħama:m/ 'pigeon'). in adults who moved to Canada after puberty. As such, we will contribute to the debate regarding brain plasticity outside of a proposed critical period (Lenneberg, 1969). The second aim of the study is to examine Arabic singleton-geminate production in heritage speakers. This will contribute to our understanding of sound change across generations in a contact situation (e.g., Hrycyna, Lapinskaya, Kochetov and Nagy, 2011; Rafat, Mohaghegh & Stevenson, 2017).

Participants consisted of (a) 5 first generation Arabic-English bilingual immigrants who had moved to Canada in adulthood and (b) 5 second generation heritage speakers who had been born in Canada. They performed a delayed word repetition task. The stimuli consist of 160 bi- and tri-syllabic Arabic words. Both geminate and singleton words include stops (/b, d, t, k, ʔ, q/) fricatives (/f, ð, ʕ, s, ʃ/) and sonorants (/m, n, r, l, j/) in the word-medial position. Target words were randomized and presented in a carrier phrase in Arabic.

1600 tokens were produced. Data was analyzed acoustically using Praat. Mean consonant duration was measured and compared across the two generations. The preliminary analysis of data shows that participants in the first and second generation exhibit a degree of reduction in duration in their production of geminates stop consonants when compared with monolingual data previously reported by Al-Ani (1970). For example, mean geminate /d/ duration was 156ms for the first-generation bilinguals, 127ms for second generation bilinguals, and 300ms for monolinguals. The difference between mean geminate duration between the first and second-generation bilinguals was significantly different ($p = 0.05$). We will also report and compare geminate-singleton consonant ratios.

This study is important because it makes an empirical and theoretical contribution to the field of phonological attrition by examining restructuring and change in an understudied bilingual community in Canada.

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