A Cross Linguistic Examination of Geminate Consonant Attrition

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What is attrition?
“A loss or gradual decline in the proficiency of the L1 mainly caused by an interference from a second language (Schmid & Kopke, 2007).

This study
• We explored the phenomenon of language attrition (Schmid & Kooke, 2007, Celata & Cancilla, 2010; Chang, 2012; De Leeuw, Tusha, & Schmid, 2017).
• Explored acoustic properties of consonant gemination across three groups: monolinguals, late bilinguals, and heritage speakers.

Predictions
1. Geminate durational properties will change in Italian-English and Arabic-English bilinguals living in the United States. Specifically, these sounds will become shorter across generations.
2. Universal phonetic factors will determine the degree of geminate change across generations (the extent to which this happens may depend on the specific language).

Procedure
1. Language background questionnaire
2. Delayed word repetition task (Bassetti, 2017)

Stimuli
Italian-English: 60 bi-syllabic/tri-syllabic Italian minimal and near minimal pair.
/zitti/ “pasta” /ziti/ “quiet
Stops: /b,d,t,k,g,p/
Arabic-English: 60 bi-syllabic/tri-syllabic Arabic minimal and near minimal pair.
/sadaq/ “he said the truth” /sad:aq/ “he approved
Stops: /b,d,t,k,g,p/

Participants

Italian-English
4x Monolingual Italian speakers control (Native)
5x First Generation immigrated to U.S. after puberty (late bilinguals)
4x Second Generation born in the U.S. (Heritage)
Age: 19-24; Mean age: 24

Arabic-English
5x Monolingual Arabic speakers control (Native)
4x First Generation
7x Second Generation
Age: 20-45; Mean age: 25

Conclusion
Language contact leads to phonological change
Significant main effects of group, voicing, and consonant type were found on duration
Geminate attrition is real, but not very clear differences between First and Second generation bilinguals