The effects of linguistic contact on the phonology of an immigrant language have been extensively documented on long-term time scales in studies of historical contact. Languages may, for example, lose contrastive features that the dominant language lacks, and may acquire features from the dominant language that had not existed in the native language (e.g., Wutun Chinese and Asia Minor Greek, respectively; Thomason and Kaufman (1988)). The course of these processes on shorter time scales, using current contact situations, is an area of active research (Sankoff (2001)).

This paper examines phonological loss and borrowing in a current contact situation: Latvian bilinguals in Chicago. Approximately 40,000 Latvians settled in the U.S. shortly after World War II, and established schools and summer camps to pass on their language and cultural identity to their descendants (Zake (2011)). There are now three generations of adult Latvian speakers in the U.S: the original immigrants, their children, and their grandchildren. Many members of the younger generations are natively fluent in both Latvian and English, providing an opportunity to study the apparent-time effects of language contact in this community.

I focus on the phonemic length distinction in Latvian, which is primarily signaled by vowel duration. English lacks a strict vowel length distinction, as its (historical) length distinction is now primarily carried by vowel tenseness (e.g., /iː/ - /ɪ/). The historical literature on borrowing through contact suggests that Latvian, in contact with English, will lose its vowel length distinction and may borrow a tense/lax distinction from English. To test this, I conducted a production study of 16 Latvian speakers spanning three generations of Latvians in Chicago, using two wordlists: one illustrating the Latvian vowel length distinction (144 tokens/speaker), and one featuring similar English vowels (264 tokens/speaker).

Mixed-effects regression of the duration of Latvian vowels shows that the third generation of speakers exhibits less of a duration cue to the Latvian length distinction; they produce long vowels with shorter duration (p < 0.01), and short vowels with longer duration (p < 0.001), than do older speakers, though they still maintain the distinction.

At the same time, the third generation appears to have developed a tenseness cue to phonemic length in Latvian high vowels; mixed-effects analysis of vowel dispersion (Wright (1997)) shows greater separation, in the F1-F2 space, of /uː/ - /u/ (p < 0.001) and /iː/ - /ɪ/ (p < 0.05) relative to first- and second-generation speakers. Analyses of each speaker’s inter-language spectral overlap (Wassink (2006)) shows that the third generation exhibits more vowel space overlap between their Latvian and English vowel spaces than do older speakers, suggesting that the vowel space changes are due to contact with English.

This study confirms that loss of native contrasts, and structural borrowing of non-native contrasts, can happen over the course of just three generations of bilingualism. It further suggests that, in the process of losing one cue (duration) to a native contrast, speakers of a minority language in contact can borrow a related cue (tenseness) from the majority language in order to maintain their native contrast.