Voice Onset Time and gemination in Italian heritage speakers

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The phonological systems of heritage speakers (HSs) are understudied. The few existing studies show that HSs sound different from monolinguals, while having advantages over late L2ers (e.g. Au et al. 2012). Several proposals suggest that HSs abide by markedness, that they avoid alternating forms or have difficulties with similar but not identical sounds in their two languages. However, it is still unclear under which conditions these processes apply (Kehoe 2015).

We present two studies with Italian HSs who speak German as their dominant language, investigating consonant gemination and VOT. In Italian, geminates have longer durations and shorter preceding vowels than singletons. This difference is contrastive, resulting in pairs like fato [fa:to] 'fate, destiny' and fatto [fat:o] 'done'. In German, the geminate-singleton contrast does not exist, but vowels are inherently long or short, the latter being generally followed by ambisyllabic consonants. VOT also differs between the languages, voiceless stops being produced with long lag in German and with short lag in Italian. Given these differences between the target phonological systems, cross-linguistic influence, convergence or deflection is expected (Lleó 2015).

We collected naturalistic data from 12 adult bilinguals and six L1 controls speaking Italian. All bilinguals had been exposed to both languages from birth, but half of them grew up in Germany (the HSs) and the other half in Italy. We measured duration of 597 geminates and 257 singletons, as well as that of the preceding vowels. For VOT, 467 instances of /k/ were analysed. The results show that the HSs produced larger contrasts between singletons and geminates and between the vowels preceding them – i.e., overstressing the target contrast. On the other hand, the HSs produced significantly longer, i.e., more German-like VOTs. Based on the results, we discuss the prediction of cross-linguistic influence and effects of heritage language exposure during childhood.

Keywords: gemination, heritage bilinguals, Italian, VOT, cross-linguistic influence.