

L3 French Voice-Onset Time at first exposure by Spanish-English bilinguals.

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Abstract

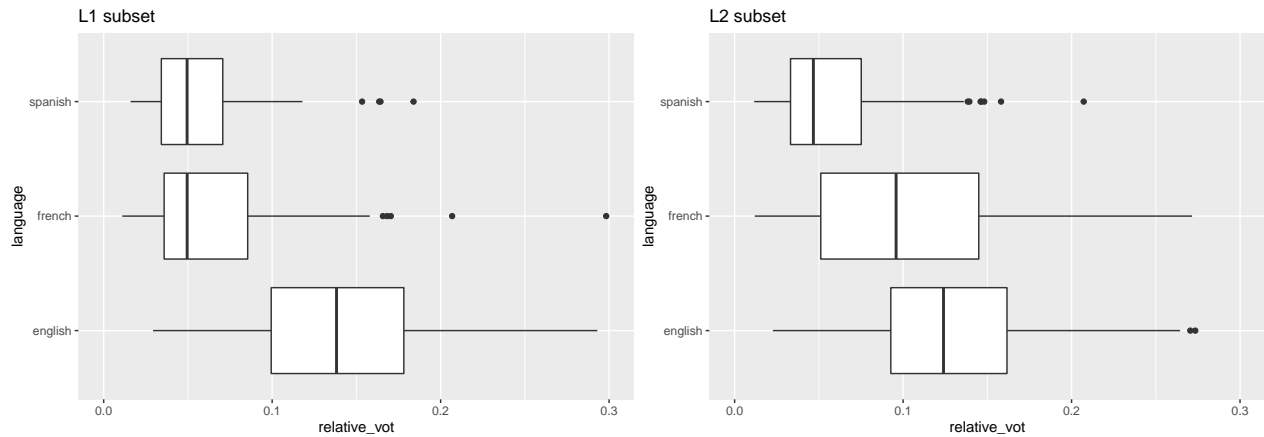
The present study investigates bilinguals' first exposure to an L3 that they do not yet know in order to inform debates in L3 phonological acquisition. Specifically, participants who speak L1 Mexican Spanish and L2 English were given French words to repeat in order to examine whether the phonology of their first language or their second language plays a greater role in the starting point of L3 phonological acquisition. Previous studies have shown that, in the case of voice-onset time (VOT), L3 learners are primarily influenced by the L2 (Wrembel, 2010; Llama et al., 2010), or by hybrid values between the L1 and the L2 (Wrembel, 2011; Llama & Cardoso, 2018). One potential reason for the variation in findings may stem from small sample sizes in L3 research. Small sample size is associated with an increased risk of committing type 1 or type 2 errors (Brysbaert, 2020), and it is possible that the variation in the effects found in the literature to date could be explained by sampling error, in addition to varied methodology. To address these potential issues, the present study employs a higher sample size ($n = 75$) of absolute beginners and uses tests of equivalence (Lakens, 2017) in order to determine whether a group trend of the use L1 and/or L2 phonology exists in the pronunciation of L3 words at the first exposure.

A total of 91 participants completed an L3 shadowing task in which they repeated 8 voiceless stop-initial words in all three places of articulation, and elicited production tasks in Spanish and English of 9 words each. All stimuli were either one or two syllable words and were stressed on the first syllable. Words were presented in isolation and in a random order in language specific blocks. Stimuli were intended to be balanced per vocalic context.

The data were analyzed using generalized linear mixed effects models, two sample tests of equivalence (Lakens, 2017) and two sample t-tests. The results revealed that L3 relative VOT value fell inbetween L1 and L2 values, in line with previous research which found hybrid VOT values in L3 learners. At the same time, practical equivalence was not found in any language pair. However, additional post-hoc analyses of subsets of the dataset revealed two distinct group trends. Out of 54 subset participants, 18 showed evidence of primary L1 (Spanish) influence on L3 French productions, whereas the remaining 36 participants' L3 VOT was more heavily affected by their L2. These two group trends were not, however, equal in the magnitude of their effect. L1 influence was less variable, where the L2 group showed simultaneous impact of both L1 and L2, but a clear and heavy influence of the L2. The present data suggest that, with an even higher sample size or meta-analysis, it is possible that L3 learners choose just one primary source of influence on L3 productions at first exposure. However, the relative impact of that primary choice of language is not equal in the case of the L1 and the L2. The results of the present study underscore the need for higher sample sizes in order to examine potential individual differences in cross-linguistic influence of previously learned languages on initial L3 production.

Word List

English	Spanish	French
tipping	tiro	tir
teller	tema	terre
tacky	talla	tasse
penny	quiso	quitte
pass	queja	quelle
parrot	cama	pile
kitten	piso	pere
kennel	pena	patte
cabbage	pato	



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