Zuzanna Cal
Adam Mickiewicz University
zuzanna.cal@amu.edu.pl

Magdalena Wrembel
Adam Mickiewicz University
magdala@amu.edu.pl

Categorising perception of VOT continuum in multilingual learners

Abstract

Although research on speech perception has been common for a few decades, L3 perception has received scant attention with the existing data pointing to possible cross-linguistic interactions in multilingual perception (e.g., Wrembel et al. 2019, Nelson 2020, Wrembel et al. 2020). However, no study to date has been devoted to categorical perception of plosives in L3 learners. The objective of the current study was, thus, to see how multilingual learners categorise fortis and lenis stops in their three languages. In particular, we aimed to investigate whether patterns of categorisation of VOT continua are specific to a language and place of articulation, as well as to see which language might be a driving force in this process. The languages under investigation were Polish, English and Norwegian. The study design involved preparation of VOT continua with the use of Praat script (Winn 2020) based on one-syllable minimal pairs with word initial stop sounds (/p,b,t,d,k,g/) that were obtained from recording native speakers of Polish, English and Norwegian. Each step of the continua differed from the other by 10 ms. The study was conducted on L1 Polish – L2 English – L3 Norwegian speakers (n=22), who had just started studying Norwegian at two Polish universities. The participants took part in three separate experimental sessions (one per language) conducted in PsychoPy, in which they were asked to listen to the words from the continua and decide whether they hear a voiced or voiceless sound at the beginning of each word. A MANOVA was run to compare the main effects of language, place of articulation, step and voicing on response accuracy and response time. The results show unique patterns of categorisation of VOT continua for each language and place of articulation. A comparative analysis with native speakers' performance will allow us to trace CLI patterns in L3 perception.

References

Nelson, C. (2020). The younger, the better? Speech perception development in adolescent vs. adult L3 learners. *Yearbook of the Poznan Linguistic Meeting, 6*, 27-58.

Winn, M. B. (2020). Praat script.

Wrembel, M., Marecka, M., & Kopečková, R. (2019). Extending perceptual assimilation model to L3 phonological acquisition. *International Journal of Multilingualism*, *16*(4), 513-533.

Wrembel, M., Gut, U., Kopečková, R., & Balas, A. (2020). Cross-Linguistic Interactions in Third Language Acquisition: Evidence from Multi-Feature Analysis of Speech Perception. *Languages*, *5*(4), 1-21.