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Exploring the trajectories of development of foreign language phonologies in adolescent multilingual learners: the production and perception of rhotics in L2 and L3

This paper aims to contribute to further understanding of the acquisition of speech from a multilingual perspective, thus going beyond the traditional L2 research bias, as advocated by some scholars (cf. Hammamberg 1997, Cabrelli Amaro 2012, Gut et al. 2015). Although third language acquisition (TLA) has been recognized as a separate field of investigation for two decades or so (e.g. Cenoz et al. 2001, de Angelis 2007), the L3 phonological acquisition has long remained an underexplored domain and only recently has the discipline witnessed a dynamic growth (cf. Wrembel and Cabrelli Amaro 2018). However, as the methodologies employed advance, certain aspects continue to pose a challenge, including e.g. longitudinal designs; varied types of L3 learners or comprehensive measures of production and perception abilities in multilinguals.

In this contribution we will present selected findings from a recent longitudinal “Multi-Phon” project, focusing here on the trajectories of acquisition of rhotic sounds (for earlier analyses cf. Balas et al. 2019, Wrembel et al. 2019). The participants of this substudy were 16 adolescents sequential multilinguals (aged 12-13) selected as a lesser studied group compared to adult learners or children. Their language repertoire involved L1 Polish, L2 English (learnt at school for 6 years) and L3 German (in the first year from the onset of learning in a formal school setting). They were tested with a battery of production and perception tasks in their L1, L2 and L3 at three data collection points (T1 - after five weeks into learning L3 German, T2 - after five months, T3 - after eight months), thus resulting in the diversity and richness of the emerging data. Production involved delayed repetition tasks in the respective languages, in which target words with rhotics were embedded in a carrier phrase. The recordings were analysed auditorily by three phonetically-trained raters. The perception test involved a forced-choice goodness task in both L2 and L3, submitted in E-prime, including two renditions of the same phrases which differed minimally on the last stimulus items. The rate of target-like productions of rhotics as well as the accuracy of perception and RTs in L2 and L3 were calculated and submitted to statistical testing.

The results show that performance was generally better in the L2 than L3 in both modalities, yet the perception accuracy always prevailed over production in the two languages. The analysis of variance demonstrated the effects of time and task for both L2 and L3, however, the trajectories of development were reverse and there was high individual variation. Amongst the major findings, we report a non-linear development of foreign language phonologies; transitory stages of L3 phonology reflected in intermediate realisations; and cumulative ('hybrid') cross-linguistic influence (CLI) yet with a prevalence for L1 transfer. Finally, implications and future recommendations for more inclusive research designs in the field will be discussed.

Keywords: L3 acquisition, phonetics and phonology, rhotics, adolescent multilinguals

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