

The role of early linguistic exposure in the acquisition of phonological representations

Authors: Anna Lukyanchenko*, Kira Gor**, Svetlana Cook***

*Neurolinguistic Laboratory, National Research University Higher School of Economics, Moscow, Russia

**University of Maryland, College Park, MD, USA

***Center for advanced study of language, College Park, MD, USA

Abstract:

Formation of phonological representations and phonological “tuning” take place very early in life (Kuhl, 2004; Polka & Werker, 1994; Werker & Tees, 1984); therefore, early linguistic experience is crucial for the acquisition of native-like phonological system. Comparing sound perception and phonological processing of early starters with interrupted language exposure (Heritage speakers of Russian) and late starters (second language (L2) speakers of Russian) with matched language proficiency over a series of experiments, we show that early exposure to the language has long-lasting benefits for speech perception, although acquired phonological representations undergo a significant re-organization in order to accommodate L2 contrasts when L2 input becomes dominant. The results suggest that the brain shows selective plasticity after initial language learning.