

Availability of Production-Based Representations for Non-native Speech Perception

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Previous studies have suggested a dissociation between speech production and perception for non-native speakers. Being able to reliably produce non-native sound distinctions does not entail accurate perceptual categorization of the same sounds. This dissociation may not be surprising because of the different nature of the production and perception tasks. Reliable production requires a motor plan while perception requires classification of incoming acoustic properties into categories. A crucial question is: In the case of non-native speakers, are the representations used for production and perception tasks the same?

In this study, we examined whether L2 speakers' production-based representations can subserve their perception as well. Specifically, we examined if Japanese learners of English who can reliably produce the English /r/-/l/ sound distinction show the same ability with non-word repetition in two different conditions: (1) repetition after audio stimuli (2) repetition after visual stimuli. Here, visual stimuli were used as explicit support for the L2 speakers' production target, and audio stimuli were used as less explicit support. Results show that Japanese speakers' repetition performance was less reliable after audio stimuli than after visual stimuli. The results add support to the previous studies that propose that speech production and perception of nonnative sounds may take different mechanisms and strategies.