Tracking the acquisition of L2 phonetic contrast

James Kirby1, Alan C. L. Yu2
1Linguistics and English Language, University of Edinburgh  2Phonology Lab, Department of Linguistics, University of Chicago
1j.kirby@ed.ac.uk, 2alcyu@uchicago.edu

Summary

This study investigated the persistence of phonetic cue restructuring in a naturalistic learning environment. 17 native English speaking L2 learners of Korean were tracked over an 8 week period to explore the time course of acquisition of novel phonological contrasts signaled by VOT and f0. Production and perception results suggest that learners can quickly learn to direct attention to a novel dimension even in the absence of explicit feedback, and that continued exposure has a small but significant impact on performance: participants were able to exert more accurate control over L2 phonetic dimensions over the course of the experiment.

Methods

Participants: 17 naive K2 learners (9 female) from an Introductory Korean course meeting ~ five hours per week for 10 weeks. Participants took part in 8 consecutive weeks of production and perception testing.

Production: 9 items × 5 repetitions

Perception: 3AFC & AX
- Stimuli: male and female productions of /pha pa ppa/
- 3AFC: 2 blocks × 6 repetitions
- AX: 8 blocks × 9 pair combinations; RTs converted to perceptual distances and input to multidimensional scaling [5]

Results: Production

Figure 5: Participant-normalized VOT and f0 by session.

Figure 6: Participant-normalized VOT and f1 by talker. Row 1: males; row 2: females.

Figure 7: MDS weights vs. participant-normalized f1 (row 1) and VOT (row 2) by session.

Conclusions

- K2 learners can perceive and (to some extent) control f0 in a relatively short time without explicit feedback
- Production and perception accuracy improves with continued exposure (though considerable between-subject variation obtains)
- Production-perception relationship becomes increasingly apparent over multiple test sessions

References