

Language Science Colloquium 2016

Upcoming Job Candidate Talks

Time: 2:30-4:00 pm

Location: 1321 Social and Behavioral Sciences Gateway Building

Refreshments will be served.

Robert Daland, UCLA MON, Feb 1st

Title: The relation between speech perception, phonotactics, and language acquisition: Insights from Korean

Abstract:

It has long been known that the native language exerts a profound effect on the speech production system (e.g. "shibboleth", Judges 12:4). More recently, it has become clear that the native language exerts an equally profound effect on the speech perception system. For example, Dupoux and colleagues have found that Japanese listeners hear [ebzo] as [ebuzo], perceiving an "illusory vowel" because Japanese does not allow /bz/ sequences within words. Phonotactics is the study of which speech sound sequences are likely, rare, and impossible within and across language. In this talk, I will discuss the phonotactics of Korean, and how they relate to speech perception in Korean adults and language acquisition in Korean infants.

I will begin with a case study of word segmentation, the perceptual process(es) by which infants (and adults) break speech into a sequence of words despite the absence of pauses (or other invariant acoustic cues) between most words. It will be shown that a purely phonotactic segmentation strategy is inadequate for segmenting Korean speech, but is nonetheless adequate for the early stages of lexical acquisition. In the second case study, I consider the "illusory vowel" effect in Korean. The results of several cross-linguistic experiments converge on the idea that the illusory vowel effect is driven by a combination of bottom-up and top-down expectations, including sub-phonemic detail (in particular, the presence/absence of an audible stop release burst and/or frication). In the final case study, I consider the relation between speech perception and loanword adaptation. Some theorists have argued that loanword adaptation is isomorphic to speech perception, with the implication that speech perception can be studied using loanword corpus studies; a widely-held assumption within this field is that source language orthography has no effect on the borrowing process. Using statistics derived from information theory, as well as an online adaptation study, I demonstrate that this assumption is false for Korean loanword adaptation.

Taken together, these studies reveal a rich relationship between the phonotactic structure of a language and how that knowledge is acquired and deployed in the speech perception systems of its speakers.