**INTRODUCTION**

- There are systematic cross-linguistic differences in the acoustic realization of "shared" vowels across languages (e.g., Bradlow, 1995).
- Children as young as 2-year-olds can produce these systematic cross-linguistic differences in vowels (Chung et al., 2008).
- However, these language-specific phonetic details may or may not be perceptible to listeners.
- This study examines Korean listeners' perceptual sensitivity to "shared" vowels produced by native speakers of five different languages: Cantonese, English, Greek, Japanese, and Korean.
- The study also examines how the perception of native vs. non-native vowels changes in relation to the age group of speakers.

**VOWEL SYSTEM OF EACH LANGUAGE**

![Vowel System Diagram]

- 1 vowel system: 12 contrastive monophthongs
- 2) English
- 3) Greek & Japanese
- 4) Korean
- 5) Cantonese

**HYPOTHESES**

A) Participants

1. 20 Korean adult listeners (from Seoul, ages 18 to 50).
2. All listeners have a history of speech, language, or hearing impairments and have no professional training in either linguistics or speech acoustics.

B) Stimuli

- Word-initial CV sequences were extracted from speech samples collected by conducting a word repetition task with adults, 5- and 2-year-olds.
- Vowels produced by children were transcribed by a native phonetician.
- Only tokens that were transcribed as "correct" were used.

**RESULTS**

- There are systematic cross-linguistic differences in the acoustic realization of "shared" vowels across languages (Chung et al., 2008).
- Vowels of all five languages consistently mapped into the same vowel categories.
- Perception categorizations of /a/ and /i/ vowels of all languages were consistent across age groups, whereas categorization of /u/ vowels was less consistent.
- Categorization of Cantonese /i/ and Cantonese & Greek /u/ vowels show consistency.
- Categorization of vowels produced by 2-year-olds showed great similarity to patterns of adults (although more variable), suggesting the presence of language-specific phonetic details in the vowel production of 2-year-olds.

**DISCUSSION**

- Korean-speaking adults are sensitive to language-specific fine phonetic details present in "shared" vowels of different languages in a vowel categorization task.
- However, Korean-speaking adults are not sensitive to language-specific fine phonetic details present in "shared" vowels of different languages in a goodness rating task.
- Korean-speaking adults are sensitive to language-specific fine phonetic details present in "shared" vowels of different languages in a goodness rating task.

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