Introduction

Prior work has demonstrated that young children and adults can adapt to unfamiliar accents; however, little is known about how the type of accent influences adaptation and language processing.

How does accent distance influence perceptual adaptation?

Adaptation mechanisms:

- **Linguistically-based strategy**: phonoeme-specific adjustments based on pronunciation shifts heard in the input.
- **General expansion strategy**: relaxing criteria for what is considered a permissible match between input and representation.

A Far Accent, containing multiple pronunciation changes and considerable variability, may induce a general expansion strategy:

- May enhance tolerance of pronunciation deviations overall, even to ones which they had never been exposed.

Method

**Participants**: 26-28 month old Canadian English-learning toddlers (n=48)
Native English adults (n=48)

**Stimuli**: familiar words produced in either a near or far accent by a phonetically-trained female native English speaker.

**Exposure Phase**

<table>
<thead>
<tr>
<th>Near Accent</th>
<th>Far Accent</th>
</tr>
</thead>
<tbody>
<tr>
<td>hand</td>
<td>hand</td>
</tr>
<tr>
<td>fish</td>
<td>fish</td>
</tr>
<tr>
<td>apple</td>
<td>apple</td>
</tr>
<tr>
<td>horse</td>
<td>horse</td>
</tr>
</tbody>
</table>

**Test Phase**

![Images of stimuli with labels]

Mean difference in proportion target fixations between baseline (pre-naming) and a 2 second post-naming period. Positive values indicate greater fixation on target image. Bars denote +/-1 standard error.

- Above chance recognition of real words and items with trained pronunciation change for all groups (both adult and children).
- Far Accent groups less accurate at recognizing real words relative to Near Accent groups.
- Toddlers exposed to Far Accent more likely to consider items with untrained change as referring to novel object.

Results

**Discussion**

The current results demonstrate a flexibility within the linguistic system of both toddlers and adults, as all groups learned to recognize the trained pronunciation change. These findings also suggest that exposure to a highly variable accent with multiple pronunciation changes (Far Accent) enhances listeners’ uncertainty about the identity of unaccented, standard pronunciations relative to those exposed to a Near Accent.

This work indicates that a general expansion strategy may not loosen listeners’ willingness to accept just any pronunciation changes. Such deviations may need to be phonologically-related or of a similar magnitude (e.g., 1-feature or 2-feature change) to ones heard during exposure. Ongoing work introduces larger deviation patterns into the exposure phase to examine whether that would facilitate generalization to the untrained pronunciation change.

angela.cooper@utoronto.ca  http://akcooper.wordpress.com  LabPhon 2018, Lisbon, Portugal