Children’s classification of regional dialect

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Background

• Adults can classify unfamiliar talkers by their regional dialect with above-chance performance (van Beuningen and Gooskens, 1999; Clopper and Pisoni, 2004).

• 5- and 6-year-olds can distinguish their own speech from foreign-accented speech, but cannot reliably distinguish their own speech variety and a regional variety (Girard, Floccia, & Goslin, 2008; Wagner, Clopper, & Pate, 2014).

• Forced-choice categorization tasks limit participants’ responses and do not capture fine-grained differences of individual interpretation.

Research Question

• How do children classify individual talkers of different dialects in relation to each other, and how do children’s ages affect their patterns of talker classification?

Methods

Participants

• Tested in the Language Sciences Lab at COSI in Columbus, Ohio

• 170 native American English speakers, 125 from Midwest:
  - 40 4- & 5-year-olds (20 female)
  - 44 6- & 7-year-olds (24 female)
  - 45 8- & 9-year-olds (22 female)
  - 41 10- & 11-year-olds (18 female)

Materials

• Sentence: “She had your dark suit in greasy wash water all year.”

• Talkers were represented with identical smiley face icons

• Talkers: 3 female adults from each of 4 dialect regions of the United States:
  - Midland (MID), New England (NE), North (NOR), and South (SOU).

Procedure

• Listeners were presented with all talker smiley face icons and asked to sort talker icons into groups based on where talkers were from.

• Listeners were able to listen to talkers in any order, and as many times as they desired.

Research Question

• How do children classify individual talkers of different dialects in relation to each other, and how do children’s ages affect their patterns of talker classification?

Grouping Statistics

Results

• Single factor ANOVAs revealed age group as significant predictor of talker grouping and overall accuracy.

• Participants in the 4- and 5-year-old age group made significantly fewer groups than all of the older participants, as shown by post-hoc two-sample T-tests (p < .05).

Table: Grouping Statistics

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Mean number of groups</th>
<th>Proportion Correct Pairings</th>
<th>Proportion Errors</th>
<th>Difference score (%Correct - %Errors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 &amp; 5 yrs</td>
<td>3.40 (SD=1.92)</td>
<td>0.45 (0.25)</td>
<td>0.39 (0.21)</td>
<td>0.06 (0.14)</td>
</tr>
<tr>
<td>6 &amp; 7 yrs</td>
<td>4.77 (1.87)</td>
<td>0.31 (0.21)</td>
<td>0.22 (0.17)</td>
<td>0.09 (0.14)</td>
</tr>
<tr>
<td>8 &amp; 9 yrs</td>
<td>4.67 (2.15)</td>
<td>0.42 (0.25)</td>
<td>0.19 (0.15)</td>
<td>0.23 (0.21)</td>
</tr>
<tr>
<td>10 &amp; 11 yrs</td>
<td>4.56 (1.80)</td>
<td>0.39 (0.27)</td>
<td>0.16 (0.10)</td>
<td>0.23 (0.26)</td>
</tr>
</tbody>
</table>

• Difference scores of the two younger age groups were significantly lower than difference scores of the two older age groups as shown by post-hoc two-sample T-tests (p < .05).

Cluster Analysis

• The 4- and 5-year-olds formed fewer groups, showing that they perceive fewer dialectal differences between talkers of different dialects than older children do.

• Mean listener accuracy improves with age, but begins to level-off at 8 to 9 years old. Still, high schoolers and adults are more accurate with same stimuli than the oldest children in the current study (Yan, Clopper, Wagner, CCBS Retreat 2013).

Discussion

• Results are the first to show that children as young as four have the ability to classify talkers on the basis of dialect.

• Classification is consistent with children’s perception of dialect localness (Clopper, McCullough, & Wagner, SRCD Meeting 2015).

• At 4 & 5 years old, children sort-out talkers of the New England dialect region, the least local to Ohio.

• At 6 & 7 years old, children classify talkers with a local vs. non-local distinction.

• Older children combine Midland & Northern talkers into one group, consistent with the perception of those varieties as both local to Ohio.

Acknowledgments

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