Young and older infants distinguish between native and foreign-accented rhythm but have different preferences

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I. Intro

Development of infants’ sensitivity to linguistic rhythm

- early discrimination of languages from different rhythmic classes and preference for native-language rhythm (9, 10, 11, 14)
- later discrimination of rhythmically similar languages [1, 12]
  o but see [4] for a different result
- sensitivity to dialectal differences decreases with age [2, 7, 13]
- sensitivity to foreign-accented speech maintained through childhood
  o infants and older children preferentially learn from and trust a native-accented than a foreign-accented speaker [3, 5, 6, 8]

Infants learn to ignore subtle differences in regional dialect but remain sensitive to – likely more salient – differences in foreign accent

- Do infants discriminate native- versus foreign-accented speech based solely on subtle prosodic changes?
- How does this ability develop over the first year of life?

II. Methods

Material:

- naturally-produced native (Czech) and foreign-accented (towards stress-timed rhythm, no segmental changes)

Procedure:

- 10 different sentences pseudo-randomized central fixation paradigm non-contingent on infant looking
- edit on duration: stressed syllable lengthened unstressed syllable shortened

Data collection and processing:

- collection with pyLab, looking off-line coded in ANVIL

III. Analyses

Infants can discriminate subtle prosodic differences between native- and foreign-accented speech, and seem to have different preferences at different ages:

- 4-month-olds prefer native-accented speech
- but when older (at 10-months) they prefer foreign-accented speech
  > in line with familiarity preference in younger and novitie preference in older infants.
- Possibly due to growing syntactic/lexical knowledge

Data collection ongoing (aiming at 16 per age group)...

Summary:

- interaction of accent and age for total looking
  > similar trend for first look

4-month-olds prefer native rhythm
- 4- to 8-month-olds variability, no preference?
- 10-months tend to prefer foreignized rhythm

Mean duration (s)

<table>
<thead>
<tr>
<th>Age (months)</th>
<th>Total looking (s)</th>
<th>First look (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0.36</td>
<td>0.24</td>
</tr>
<tr>
<td>6</td>
<td>0.33</td>
<td>0.24</td>
</tr>
<tr>
<td>8</td>
<td>0.34</td>
<td>0.25</td>
</tr>
<tr>
<td>10</td>
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IV. Discussion

Infants learn to ignore subtle differences in regional dialect but remain sensitive to – likely more salient – differences in foreign accent

- Does this ability develop over the first year of life?