**Bunny? Banana? Late Development of Sensitivity to the Pitch Cue to Lexical Stress**

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**Question**

When can children exploit the pitch cue to stress?

Four cues indicate stress: location of the pitch target, amplitude, duration, and vowel quality.

- **Early acquisition?** Infants are sensitive to emotional prosody in speech, can encode stress in words (Curtin, Mintz, & Christiansen, 2005), and can learn minimal stress pairs (Curtin, in press).

- **Late acquisition?** The pitch cue to lexical stress is acoustically subtle and occurs in combination with other cues. Like pitch cues to emotions (Quam, Swingley, & Park, 2009), it may be exploited much later than pitch cues to phrase boundaries, etc.

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**Methods: Pitch Resynthesis**

- **BA n a n a**
- **B U n n y**
- **b a N A na**
- **b u N N Y**

**Eye Tracking**

**Where’s the BUnny?**

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**Adults (N=32)**

- **Target Fixation**
  - 360-2000 Ms Post-Noun Onset
  - Diff: .078 (p < .01)
  - Diff: .085 (p < .01)

**4- to 5-Year-Olds (N=46)**

- **Target Fixation**
  - 360-2000 Ms Post-Noun Onset
  - Diff: .053 (p = .13)
  - Diff: .017 (p = .67)

**2- to 3-Year-Olds (N=47)**

- **Target Fixation**
  - 360-2000 Ms Post-Noun Onset
  - Diff: .005 (p = .88)
  - Diff: .067 (p = .08)

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**Discussion**

Adults show robust mispronunciation effects for both banana and bunny; they can exploit the subtle pitch cue to lexical stress in word recognition. Children are still developing sensitivity to the pitch cue; their mispronunciation effects are weak. Children may also weight the other cues more strongly, hence interpreting /bʌ/ as too long and unreduced for schwa / banana.

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**References**


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