**INTRODUCTION**

- Transcription is the tool of choice of clinicians and researchers studying phonological development and disorder.
- However, problems with transcription include:
  - Sometimes the "s" sound is not transcribed correctly.
  - Children do not always progress directly from clear substitutions to correct productions.
- Non-categorical nature of development:
  - Covert contrast (subphonemic differences that are not perceptible to adults)
  - Intermediate productions (productions that are in between two phoneme categories)
- These productions may have lower transcription reliability (Pye et al., 1988).
- Do we need an "intermediate" transcription category?
- Slow-Grammer (2001) suggested using "intermediate" to improve the reliability of transcription.

**RESULTS**

**DISCUSSION AND CONCLUSIONS**

- Transcription is the tool of choice of clinicians and researchers studying phonological disorders.
- Listener judgments are influenced by their expectations.
- Significant difference between correct productions and clear substitutions.
- Intermediate productions were more likely to be rated incorrectly.
- Do we need an "intermediate" transcription category?
- Thanks especially to: the children who took part in the study and the parents who gave their consent.

**EXPERIMENT 1**

**SUBJECTS**

- 20 adult listeners (English-speaking females)

**STIMULI**

- Productions of the carrier phrase "I really like" were elicited from a 5-year-old boy who was a native speaker of American English.

**PROCEDURE**

- Carrier Phrases were presented to listeners in two separate tasks.
  - Task 1: Listeners judged how old the child sounded using a 7-point scale.
  - Task 2: Listeners judged how old the child sounded using a 7-point scale.
  - The order of the two tasks was counter-balanced across listeners.

**EXPERIMENT 2**

**PARTICIPANTS**

- 30 adults, both male and female;
  - All were students in the Communicative Disorders Department at the University of Wisconsin-Madison.
  - All were native English speakers.

**STIMULI**

- 200 word-initial consonant-vowel (CV) syllables beginning with /s/ and /θ/ were elicited from single-word productions excised from single-word productions of 5-year-old children using a word-elicitation task as part of a larger study (Edwards & Beckman, 2008).
- All CV sequences were transcribed by the first author.

**PROCEDURE**

- Carrier Phrases were presented to listeners in two separate tasks.
  - Task 1: Listeners judged how old the child sounded using a 7-point scale.
  - Task 2: Listeners judged how old the child sounded using a 7-point scale.
  - The order of the two tasks was counter-balanced across listeners.

**DISCUSSION AND CONCLUSIONS**

- Transcription is the tool of choice of clinicians and researchers studying phonological disorders.
- Listener judgments are influenced by their expectations.
- Significant difference between correct productions and clear substitutions.
- Significant difference between “intermediate” and all other transcription categories.
- Do we need an “intermediate” transcription category?
- Not surprising for correct productions or clear substitutions.
- Less clear why there was no effect for ambiguous, intermediate productions, which are known to be more affected by listener expectations.

**FUTURE DIRECTIONS**

- Elicit judgments from individual listeners.
- Use rating systems, including Direct Magnitude Estimation and Visual Analog Scales.
- Perform acoustic analysis of consonants in different transcription categories.
- Analysis of spectral moments and relative amplitude of the fricative noise.
  - Compare /s/ and [s] for /T/.
  - Compare /θ/ and [θ] for /T/.
  - Describe intermediate productions.
- Design similar experiments with alternate methods of providing expectations.
  - Tall listeners whether the child is suspected of having a phonological disorder.
  - Use vocode segments of CVs to synthesize carrier phrases that match the CVs’ in terms of vocal source qualities.
  - Provide listeners with a case history for the child.

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- Children who took part in the study.
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