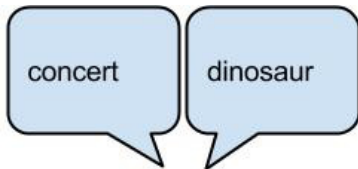


Attention and salience in lexically-guided perceptual learning

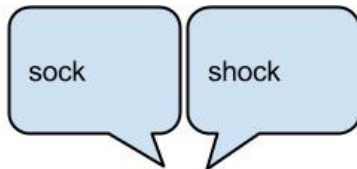
Michael McAuliffe

2015 Research Report

Perceptual learning



Exposure



Categorization

Research question:

How do changes to a listener's attentional set in exposure affect perceptual learning in future categorization?

Attentional set

Perception-oriented

- Phoneme-monitoring tasks
- Discrimination of non-speech stimuli
- Perceptual learning in psychophysics
 - Perceptual learning effects don't generalize to new stimuli

Comprehension-oriented

- Word recognition tasks
- Word identification tasks
- Perceptual learning in speech perception
 - Generalization to new items (and sometimes new speakers)

Hypothesis:

Comprehension-oriented attentional sets allow for greater generalization than perception-oriented attentional sets.

Attentional set manipulation

Explicit instructions

- "This speaker's 's' sounds are ambiguous"

Positional salience

- Sounds earlier in the word need to be perceived accurately
- Sounds later in the word just need to confirm expectations from earlier sounds

Category typicality

- Productions that match a listeners expectations are less likely to be noticed
- Productions that are unexpected for a category are more likely to be noticed

Experiment 1

Exposed to ambiguous /s/

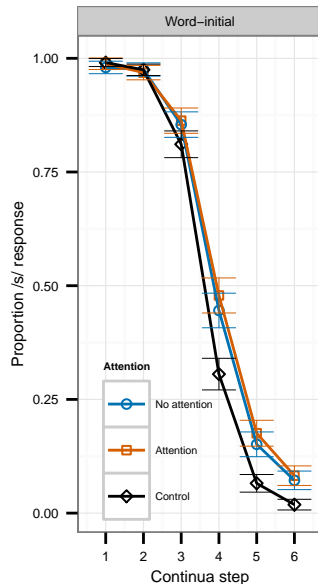
- 50% between /s/ and /ʃ/

Attention

- No /s/-oriented instructions
- Told /s/ would be ambiguous

Position of /s/

- *Word initial*
- *Word medial*



Experiment 1

Exposed to ambiguous /s/

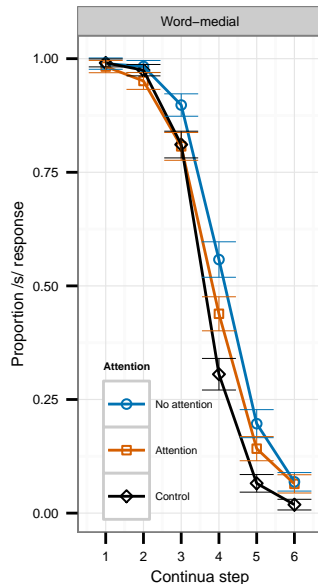
- 50% between /s/ and /ʃ/

Attention

- No /s/-oriented instructions
- Told /s/ would be ambiguous

Position of /s/

- Word initial
- *Word medial*



Experiment 2

Exposed to ambiguous /s/

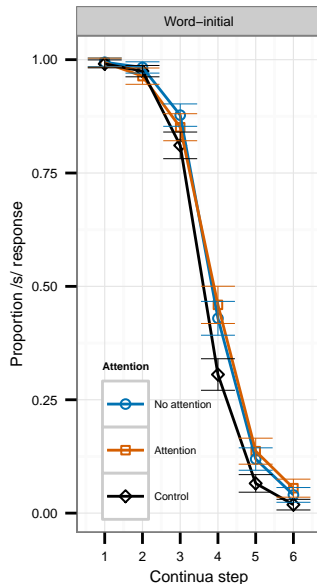
- More like /ʃ/ than /s/

Attention

- No /s/-oriented instructions
- Told /s/ would be ambiguous

Position of /s/

- *Word initial*
- *Word medial*



Experiment 2

Exposed to ambiguous /s/

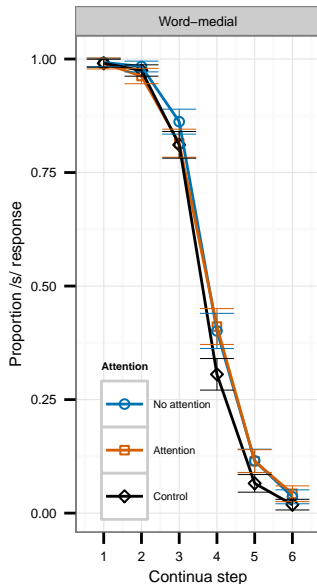
- More like /ʃ/ than /s/

Attention

- No /s/-oriented instructions
- Told /s/ would be ambiguous

Position of /s/

- Word initial
- *Word medial*



Comprehension-oriented

- Default for the task
- Most likely to be maintained when category atypicality and positional salience are low
- Largest perceptual learning effects observed

Perception-oriented

- Perceptual learning effects are still present
 - The exposure task as a whole was comprehension-oriented
- Manipulations are not additive
 - Equal amount of learning in the most salient, attended condition as in the others