Does a single session of exposure to a particular speaker with a foreign accent result in long-term changes in language comprehension processes?

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METHODOLOGY

SUBJECTS: 16
- Recruited from Andrews University
- Native speakers of English
- Have a Midwestern American accent
- No exposure to Cantonese Chinese accent on a regular basis

SUBJECTS HAD TO:
1. Listen to descriptive sentences:
   - Containing a target noun
   - Recorded by 2 different speakers (Cantonese Chinese or Midwestern American)
2. Simultaneously, view an object array as shown below:
   (Recorded eye movements to objects relative to hearing the target noun.)
3. Determine whether each sentence matches the corresponding object array (both matching and non-matching fillers sentences were included)
4. Tested in 2 sessions separated by 1 week (session 1 and 2) using 2 different sets of unique English sentences.

DATA ANALYSIS

A 2 (sentence segment: noun vs. shape) x 2 (accent: Midwestern American vs. Cantonese Chinese) x 2 (Experiment 1 vs. Experiment 2) analysis of variance was conducted on the probability of fixation for each of the five images in the display.

RESULTS

- Subjects were more likely to look to the rhyme competitor when listening to the Cantonese accent than when listening to the Midwestern accent during session 1.
- In session 2, subjects listening to the Cantonese accent looked to the rhyme image less than in session 1.
- Subjects listening to the Midwestern accent were more likely to look at the target object in session 1 than session 2 while hearing the noun.
- In session 2 there was a decrease in fixation on the shape image when hearing the shape during both accents.

CONCLUSIONS

- The results suggest that subjects compensate for their difficulty in understanding the Cantonese accent by using the object array as a guide. By session 2, this behavior decreased, suggesting that an adaptation that had occurred during session 1 was retained a week later. Also, the results indicate that after participating in session 1, subjects learned the task, and could hold the target object in memory, thus decoupling the expected link between language comprehension and eye movements.
- These results support the hypothesis and suggest that learning also occurs in novel situations involving speakers with familiar accents.
- Future research should examine whether such learning is specific to a particular speaker, or whether it generalizes to specific accents.

REFERENCES