The role of accents and names in the familiar language advantage

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Lab website: http://speechincontext.arts.arts.ubc.ca/
Familiar language advantage (FLA)

- Listeners have an easier time processing familiar voices or accents (some such work presented at SVALP).
- Familiar accents and voices are more intelligible (Nygaard & Pisoni, 1998).
Example voice memory paradigm

“Bob”  “John”  Who am I?

Training  Test
Accent/language familiarity in the FLA

- **Thompson (1987): Native English listeners**
  - Native English voices > Spanish-accented English voices > Native Spanish voices

- **Goggin et al. (1991): Spanish-English bilingual listeners**
  - English voices = Spanish-accented English = Spanish voices
This seems to be about attending to and assigning meaning to phonetic variation.

Listeners must know what variation is language-specific and what is talker-specific.

- Language-specific: properties that signal phonetic cues and events in a particular language.
- Talker-specific: properties that are indicative of a particular talker.

Our project

- Listeners’ perception of accentedness and intelligibility are affected by social cues

- Can social cues affect voice memory?

- We explore this through the names used in the task.
Our research: Why UBC?

- 1 out of every 5 students at UBC is an international student
  - 60% from Asia (UBC Planning and Institutional Research, 2014-15)
- General student population: 39% of students identify as Chinese, 35% as White
- UBC is a linguistically and culturally diverse campus.
  - Students have names and exhibit phonetic variation.
Experiment 1

● **10 speakers (2 sets):**
  ○ 5 native English speakers
  ○ 5 native Mandarin speakers
  ○ Recorded speakers reading sentences in English

● **Listeners**
  ○ n = 127
  ○ Experience with Mandarin? Mandarin-English bilingual = 64, No Mandarin experience = 63
Conditions

- **Names:**
  - Stereotypical North American names
    - Gabriel, Connor, John, Luke, Steven
  - Romanized Chinese names
    - Chen, Hong, Liu, Peng, Wei

- **Speaker accents:**
  - Native English speakers
  - Mandarin-accented English speakers
Conditions

1. Congruent name-accent pairings
   a. stereotypical NA* name + native English speaker
   b. romanized Chinese name + Mandarin-accented English speaker

2. Incongruent name-accent pairings
   a. romanized Chinese name + native English speaker
   b. stereotypical NA* name + Mandarin-accented English speaker

*NA = North American
Procedure

Exposure
- five voices + names

Training
- same sentences
- feedback

Practise Quiz
- new sentences
- feedback

Final Test
- new sentences
- no feedback
Procedure

Exposure
- five voices + names

Training
- same sentences
- feedback

Practise Quiz
- new sentences
- feedback

Final Test
- new sentences
- no feedback
Exposure

See:

Hear: *People wear shoes on their feet.*
Exposure

See: Connor

Hear: *People wear shoes on their feet.*
Procedure

Exposure
- five voices + names

Training
- same sentences
- feedback

Practise Quiz
- new sentences
- feedback

Final Test
- new sentences
- no feedback
Training, Practise Quiz, and Final Test

Hear: *People wear shoes on their feet.*

Using the response box, indicate which speaker you think it is.
Results

- Listeners performed better on the Native Accent

- Mandarin-English bilinguals were overall better at the task
  - Mandarin-English bilinguals = 59%
  - No Mandarin Experience = 54%

- Interaction of Name and Accent Congruency
Interim Conclusion

- If participants’ performance relies solely on the language being familiar, the names used should have **no effect**

- Interaction between name-accent pairings challenges this.
  - Names **do** affect voice memory

- Why do incongruent names seem to affect the native accented voices more than the Mandarin accented voices?
● Are native accents perceived as having more of a foreign accent with Chinese names?
  ○ Include perceived foreign accent rating

● Is it harder to associate a Native Accent with a Chinese name than it is a Mandarin Accent with a North American name?
  ○ Look at error types when names/accents co-occur in a block
Experiment 2: Mixed Blocks

- To determine why the incongruency had a greater effect on Native Accents, we created a within-block manipulation.
- In a single block, listeners get 2 Mandarin-accented, 2 native-accented voices, and 4 names.

<table>
<thead>
<tr>
<th>Chen</th>
<th>Connor</th>
<th>Gabriel</th>
<th>Hong</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
1. Voice Memory task
   ○ Counterbalanced congruent and incongruent blocks
   ○ 4 voices per block
   ○ Different voices and names each block

2. Visual Analogue Scale for Foreign Accent Rating
   ○ Congruent/Incongruent name assignment
When you get it wrong, how do you get it wrong?

- **Congruent Blocks**
  - E.g., Chen’s Mandarin accented voice
    - Call him Hong = **Same Accent error**
    - Call him Connor = **Different Accent error**

- **Incongruent Blocks**
  - E.g., Connor’s Mandarin accented voice
    - Call him Hong = **Different Accent error**
    - Call him Gabriel = **Same Accent error**
  - E.g., Chen’s Native accented voice
    - Call him Hong = **Same Accent error**
    - Call him Connor = **Different Accent error**
When you get it wrong, how do you get it wrong?

- **Congruent Blocks**
  - E.g., Chen’s Mandarin accented voice
    - Call him Hong = **Same Accent error**
    - Call him Connor = **Different Accent error**

- **Incongruent Blocks**
  - E.g., Connor’s Mandarin accented voice
    - Call him Hong = **Different Accent error**
    - Call him Gabriel = **Same Accent error**
  - E.g., Chen’s Native accented voice
    - Call him Hong = **Same Accent error**
    - Call him Connor = **Different Accent error**

- If Native accents with Chinese names are harder than Mandarin accents with NA names, we expect to see more Different Accent errors for Native voices in Incongruent blocks.
Discussion

- **Voice memory is better for the Native Accent.**
  - Familiar language advantage, local-dominant language advantage, expected language advantage?

- **Individuals with Mandarin experience are better at both Native and Mandarin accents.**
  - Diverse language experiences aid listeners in processing variation.

- **Name/Accent match affects voice memory, particularly so for Native Accents.**
  - Why?
Discussion

- Name/Accent match affects voice memory, particularly so for Native Accents.
  - Why?

- Our Mixed Block experiment intends to explore this issue.
  - Native accents may be more susceptible to perceived accentedness changes with incongruent name associations.
  - Incongruent Name/Accent associations may be harder for Native accents.
Conclusion

- Voice memory is affected by listeners’ abilities to assign the appropriate meaning (e.g., language-general or talker-specific) to phonetic variation.
- And by non-linguistic information like names.
- It could be that this non-linguistic information biases how listeners perceive that phonetic information with phonetic predictions clouding faithful phonetic analysis.
Thanks for listening!

Questions?