BACKGROUND

Perceptual resyllabification

- Perceptual resyllabification is a phenomenon that codes (VC) structures are perceived as onset (CV) structures as speech rate increases. (Stetson, 1951)
- Perception of resyllabified CV structures isn’t 100%.
- Does extensive exposure to English have an influence on Japanese perceptual resyllabification?

RESULTS

1. Monolingual Japanese listeners show perceptual resyllabification?
- At fast rate, the older monolingual Japanese (JMO) structures are perceived as onset (CV) structures as speech rate increases. (Stetson, 1951)
- The older group (JMO) show CV-bias as strong as Japanese with a lot of exposure to English (JE), while the younger Japanese (JMY) show VC-bias.

2. Bias at Fast rate speech
- Is speech rate effect stronger in monolingual Japanese than bilingual Japanese?
- Is the degree of bias stronger in monolingual Japanese than bilingual Japanese?

3. Voicing Perception
- Perception of resyllabified CV structures isn’t 100%.

METHODS

Stimuli:

- Four original utterances were spoken by four native speakers of American English.
- Repetition rate started slow (450 ms/s) and ended fast (200 ms/s).
- Rate was controlled with a metronome.
- 21 stimuli were selected from each original utterance.
- Each stimulus contained three syllables.
- Total number of stimuli was 336.

Subjects:

- Four groups: JMO, JMY, JE, ENG.
- JMO = Japanese Monolingual Older group
- JMY = Japanese Monolingual Younger group
- JE = Japanese Experienced
- ENG = English natives

Subjects:

- Subjects were tested individually.
- Subjects were seated in a sound isolated booth.
- Subjects were tested for their native voiced category.
- Subjects were tested to see how they perceived the slow and fast VC inputs.

RESULTS

1. Perceptual resyllabification
- All groups exhibit perceptual resyllabification at the same shifting points (indicated by red arrows).

2. Fast rate effects
- Bias towards CV responses at fast rate by JE and JMO.
- JE tends to show bias towards VC responses (except Speaker AH).

3. Voicing
- Bias towards CV for fast rate (016 to 021).

Table. Sheffe’s post-hoc test results (* indicates significant results)

<table>
<thead>
<tr>
<th>Groups</th>
<th>Fast rate (JE, ENG, JMY, JMO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG</td>
<td>Y</td>
</tr>
<tr>
<td>JE</td>
<td>Y</td>
</tr>
<tr>
<td>JMY</td>
<td>Y</td>
</tr>
<tr>
<td>JMO</td>
<td>X</td>
</tr>
</tbody>
</table>

REFERENCES


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SUMMARY

1. Monolingual Japanese listeners show perceptual resyllabification.
2. At fast rate, the older monolingual Japanese (JMO) show CV-bias as strong as Japanese with a lot of exposure to English (JE), while the younger Japanese (JMY) show VC-bias.
3. Monolingual Japanese show stronger bias toward native voice.

DISCUSSION

- How can Japanese monolinguals perceive the slow VC inputs almost perfectly if they don’t have such a category in Japanese?
- Why did the younger group (JMY) show bias toward VC identification than the older group (JMO), for fast speech?
- We consider this is due to perceptual ‘hyper-correction’. Listeners with knowledge of English devoid of spoken content tend to associate any oddity in spoken stimuli with alien category.

CONCLUSIONS

- Perceptual resyllabification is a robust phenomenon.
- Influence from Japanese seems stronger when the listeners have little to no exposure to English.
- However, the effects of native language is weaker before a new category has fully developed.