Cross-Language Perception of Rate Induced Resyllabification

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MAIN POINTS

Examined
- Non-native perception of rate-induced resyllabification and consonant voicing in different syllable positions.

Found
- Non-native listeners exhibit perceptual resyllabification even more clearly than native listeners.
- Voicing categorizations is influenced by the existence of native categories and is syllable-position dependent.
- Subjective evaluation of performance is sensitive to length of stay in the U.S., but isn’t a good index of accuracy.

BACKGROUND

Perceptual resyllabification

As speech rates increase
- Coda (VC) syllables are perceived as onset (CV) structures.
- /p/ is perceived as /b/.

’sp’ / ’sp’ / ’sp’ (perceptual shift) ‘b’s / ‘b’s

Slow speech = = = = = = = Fast speech

Cross-language comparison

1. Syllable Structures

Japanese has fewer coda structures (CV-biases)

2. Voicing contrasts

- Different VOT values are used for categorizing voicing contrasts in different languages.
- Syllable initial three-way distinctions in Korean stops.
- No voicing contrast in Korean codas.

Listeners’ self-evaluation

It might be an alternative index of categorizability.

METHODS

Table 1. Cross-language comparison: syllable affiliation & voicing contrast

| English | Japanese | Korean
<table>
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<tbody>
<tr>
<td>Coda</td>
<td>Geminates</td>
<td>Neutralized</td>
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| Fig. 1. Schematic phonetic categorization for voicing on the VOT continuum. (from de Jong et al., 2001)

RESULTS - Confidence

1. Mean confidence level decreases as speech rate increases (Fig. 7).
2. Koreans are less confident, even though their voicing hits for CVs are similar to the English (Fig. 8).
3. Non-native listeners of English who stay in the U.S. longer showed higher mean confidence levels, even though their voicing hit rates do not improve (Fig 9).

REFERENCES


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