Experimental evidence for perceptual hypercorrection in American r-dissimilation

Nancy Hall, Bianca Godinez, Megan Walsh
California State University Long Beach

What causes dissimilation?

<table>
<thead>
<tr>
<th>Traditional Views</th>
<th>Perceptual hypercorrection theory</th>
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<tbody>
<tr>
<td>Repeated articulations are difficult to produce</td>
<td>Ohala 1993: Listeners perceptually hypercorrect for coarticulation</td>
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<tr>
<td>Repeated articulations are difficult to mentally serialize</td>
<td>Sounds like /r/ coarticulate over several syllables (Heid &amp; Hawkins 2000), creating ambiguity as to how many /r/s are present</td>
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American /r/-dissimilation
Americans tend to drop /r/ in words containing two /r/s.
- surlprise be(r)serk cate(r)pillar par/ticular

Our goal
We test whether American /r/-dropping can be produced in a perceptual task, through manipulating presence / absence of a later ‘trigger /r/’, as well as intervening /r/-coarticulation.

Stimuli
34 sets of 4 nonce words, spliced from multiple natural productions.

Target /r/ Middle Trigger /r/ or Control (no /r/)

- pubnisher
- pumbernicher
- pumernicher
- pumerneture
- pummernitscher
- puminature
- pumernitcher
- pumincher

Condition    # Target /r/ drops
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<tr>
<td>pumnatʃə</td>
<td>20 (+21 trigger /r/ drops)</td>
</tr>
<tr>
<td>pumnatʃik</td>
<td>8 (+27 trigger /r/ drops)</td>
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Participants & Procedure
60 English speakers typed nonce words (4 counterbalanced lists), heard in frame sentences accompanied with pictures.

Audio: Pass me the [ˈpumnətʃə]
Responses coded for dropping of target /r/

Results

Predictions & Findings
We predicted that a later /r/ should perceptually mask an earlier /r/, especially when there is /r/-coarticulation on intervening segments.

Target /r/ did drop more before trigger /r/, but only when intervening /r/-coarticulation was absent (contra prediction).

Results are compatible with the perceptual hypercorrection theory: listeners were more likely to miss an /r/ when another /r/ was present.

Results support the importance of /r/-coarticulation on neighboring syllables for perception of American /r/.

However, presence of /r/-coarticulation does not affect dissimilation in the way we expected. Perhaps what’s important is its expected presence: when actual coarticulation is weak, listeners are more likely to interpret the first /r/ as the expected coarticulation.

Discussion

References


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