1. Introduction

Objective: Within a variationist approach, to investigate the effects of markedness and input frequency in the acquisition of non-native /s/ + coronal onset clusters (sl, sn, st = sC sequences) by Brazilian Portuguese (BP) speakers learning English as a second language (L2).

Developmental order of sC – 2 hypothetical learning paths:

- Markedness effect: sl ⇔ sn ⇔ st
- Frequency effect: st ⇔ sl ⇔ sn

2. Markedness: Predictions

- sl is the most marked structure: It violates sonority sequencing and the sonority distance between its members is not maximal (Clements 1990).
- sn is more marked than sl: The sonority distance between s and n is smaller than that of s and l (Onsets prefer clusters with a maximal rise in sonority).

Assuming that unmarked structures are acquired before more marked ones, the following learning path for sC clusters is predicted:

Markedness effect: sl ⇔ sn ⇔ st

3. Frequency: Study & Predictions

- 2 ESL classes (university-level: beginners, intermediate) taught by 1 proficient English speaker – João Pessoa, Brazil (L1 = BP).
- Audio recording of entire classes over a 2-month period: ~ 30h.
- Analysis: All instances of sC in student-directed teacher speech.

<table>
<thead>
<tr>
<th>sC sequences:</th>
<th>st</th>
<th>sl</th>
<th>sn</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=837</td>
<td>731 (87.4%)</td>
<td>54 (6.4%)</td>
<td>52 (6.2%)</td>
</tr>
</tbody>
</table>

Assuming that “the productivity of a pattern […] is largely determined by its type frequency: the more items encompassed by a schema, the stronger it is, and the more available it is for application to new items” (Bybee 2001:13), the following learning path for sC clusters is predicted:

Frequency effect: st ⇔ sl (⇔) sn

4.1. Production: Methodology

- Task/Style 1: Naming pictures (15)
- Task/Style 2: Interview with pictures (15)

- 10 Participants: ~23yo
- UFPB, João Pessoa
- 2 Proficiency Groups:
  - Advanced (4)
  - Low Intermediate (6)
  [All from Frequency Study]

4.2. Production: Results

Likelihood of sC production: Goldvarb X Results

<table>
<thead>
<tr>
<th>GROUPS</th>
<th>FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency</td>
<td></td>
</tr>
<tr>
<td>Low Intermediate</td>
<td>.38</td>
</tr>
<tr>
<td>Advanced</td>
<td>.68</td>
</tr>
<tr>
<td>Sonority</td>
<td></td>
</tr>
<tr>
<td>st</td>
<td>.39</td>
</tr>
<tr>
<td>sl</td>
<td>.61</td>
</tr>
<tr>
<td>sn</td>
<td>.54</td>
</tr>
<tr>
<td>Input probability</td>
<td>.47</td>
</tr>
</tbody>
</table>

Frequency or Markedness?

- Chi-square/cell 0.070

5. Concluding Remarks

- The study examined the effects of frequency and markedness in the development of sC sequences: Each predicts a different learning path.
- The results showed that markedness plays a role is determining the development course for sC clusters, not input frequency.
- These results do not suggest that a role for a frequency-based analysis for sC development should be ruled out. Instead, they suggest that the task of explaining L2 acquisition phenomena is a complex one, one that requires a wider variety of analytical tools.

Research funded by FQRSC (NC-96880) & SSHRC (410-2006-1920).

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Not everything that can be counted counts:
Input frequency and markedness in the development of second language /s/ + consonant onset sequences

References


Treiman, Rebecca, Jennifer Gross & Annemarie Cwikiel-12 (1), 76-95.