The Use of Creaky Voice by Spanish Heritage Speakers in the US

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Background
• Cross-cultural transfer among bilingual speakers e.g., Transfer from high- to low-gesture languages (Pika et al., 2006; Schefflen, 1972; So, 2010).
• Creaky voice
  o A phonation type that occurs when the vocal cords are tightly approximated.
  o Results in vocal fold vibration at a very low frequency (25-50 Hz) (Laver, 1994).
  o Originally, voice quality of masculinity or authority in the English-speaking world (Pittam, 1987).
  o American English: adopted by female speakers, presumably as a strategy to sound authoritative (Coates, 1986; Dilley et al., 1996; Tajfel, 1974; Yuasa, 2010).
  o Now, speech of young American women (Yuasa, 2010).
  o Also found in Chicano English (Fought, 2003; Mendoza-Denton, 2011).

Research Questions
• Do US Spanish heritage speakers use creaky voice when they speak in Spanish?
• If so, is there any gender difference?

Participants

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Avg. Age</th>
<th>Avg. Prof.</th>
<th>Born (Sp. AOA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS</td>
<td>10 (6F,4M)</td>
<td>24.4 (22-28)</td>
<td>N/A</td>
<td>Mexico (0)</td>
</tr>
<tr>
<td>HS</td>
<td>10 (7F,3M)</td>
<td>20.01 (18-22)</td>
<td>69.27% (52-84%)</td>
<td>US (0)</td>
</tr>
<tr>
<td>L2</td>
<td>17 (11F,6M)</td>
<td>19.36 (18-22)</td>
<td>42.58% (22-62%)</td>
<td>US (9 or older)</td>
</tr>
</tbody>
</table>

Experiment
• A subset of production data from a previous study.
  o 32 Declarative sentences of emphatic structure e.g. Por la plaza paso yo. ‘Through the plaza I pass’
  o Effects of Group (NS/HS/L2) and Gender (M/F) on the Presence of Creaky Voice (Creaky/Non-creaky) in sentence-final position (Wolk et al., 2012).

Results
• Ceiling or Floor effect
  o Binary logistic regression not possible.
  o Test of frequency: Separate Chi-Squared Tests for Male and Female speakers (Male: \( \chi^2 = 41.9, df = 2, p < 0.001 (\phi = 0.318) \); Female: \( \chi^2 = 310.98, df = 2, p < 0.001 (\phi = 0.639) \)).

Discussion and conclusion
• Creaky voice was found in the speech of female HSs and L2s: cross-cultural transfer (Eng → Sp).
  o Grosjean (2010: 110): “one culture often plays a larger role, and so we can speak of cultural dominance in the same way that we speak of language dominance in bilinguals”.
• Individual variability was not explained by language background (non-linguistic factors).

Future Research
• Different measurement methods (e.g., H1-H2)
• Different sentence types
• Analysis of Spanish HSs’ English productions
• Correlation between the degree of biculturalism (Bicultural Identity Integration, Benet-Martínez et al., 2002) and the use of creaky voice in Spanish/English

References
• Refer to handout