Making a merger: Social and linguistic factors in the low back merger in New Orleans English

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Background:
- New Orleans English has historically featured raised THOUGHT (Labov 2007)
- There is a change in progress towards merger of LOT and THOUGHT (Carmichael 2014)

Methodology:
- Lobanov-normalized vowel tokens for 57 white NOLA speakers (sample balanced across age/gender)
- F1/F2 for THOUGHT and LOT extracted & plotted in F1/F2 space (N=3912; ~69 per speaker)
- Examined patterning of THOUGHT and LOT according to age and ethnicity

Findings, part 1:
The merger was most advanced in pre-/l/ environments (p<0.001), due to THOUGHT being lower and fronter for all speakers in this environment (FIGURES 1-3)
- This contrasts with THOUGHT patterning in other communities (e.g. Labov et al 2006; Dinkin 2016) – thus appears to be specific to the New Orleans English low-back system

Findings, part 2:
- Women merge mostly by lowering THOUGHT (p<0.001) while for men movement of LOT is more relevant

Discussion:
- Raised THOUGHT is marked in New Orleans as ‘yatty’ and working class (Mucciaccio 2009; Carmichael & Dajko 2016)
- We argue that the stigmatized associations with raised THOUGHT motivates its lowering
- Women are lowering more dramatically than men, similar to patterns observed in Philadelphia (Labov, Rosenfelder & Fruehwald 2013).
- So although men and women both participate in the merger of THOUGHT and LOT, men are doing this mostly via movement of LOT.
- As a result, younger men have both LOT and THOUGHT higher than younger women.

Conclusions:
- The striking lowering effect of following /l/ on THOUGHT seems to be a distinctive property of New Orleans English, though it is being lost in apparent time as speakers shift towards low-back merger.
- Women and men are arriving upon the merger in different ways; we posit this is due to the social meaning of raised THOUGHT in NOLA English.
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Mixed-effects regression models, calculated using lme4 in R;
random effects: speaker and lexical item
baseline values: female, no following L
Differences between following consonants other than L not significant, except for F1 of LOT.

THOUGHT F1:

<table>
<thead>
<tr>
<th>factor</th>
<th>coefficient</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>following L × age interaction</td>
<td>+0.093 / decade</td>
<td>&lt; 10^{-3}</td>
</tr>
<tr>
<td>male</td>
<td>-0.76</td>
<td>0.01</td>
</tr>
<tr>
<td>age</td>
<td>-0.18 / decade</td>
<td>0.02</td>
</tr>
<tr>
<td>following L</td>
<td>-0.18</td>
<td>0.03</td>
</tr>
<tr>
<td>male × age interaction</td>
<td>+0.13 / decade</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Intercept: +0.79; n = 2091

LOT F1:

<table>
<thead>
<tr>
<th>factor</th>
<th>coefficient</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>following L</td>
<td>-0.18</td>
<td>0.01</td>
</tr>
<tr>
<td>male</td>
<td>-0.80</td>
<td>0.02</td>
</tr>
<tr>
<td>male × age interaction</td>
<td>+0.16 / decade</td>
<td>0.02</td>
</tr>
<tr>
<td>age</td>
<td>-0.10 / decade</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Intercept: +1.4; n = 1821

LOT F1 also has significant age interaction for following nasal consonants, with a slope of –1.2 / decade compared to voiceless stops (so older speakers have LOT higher before nasals).

References: