

# 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).

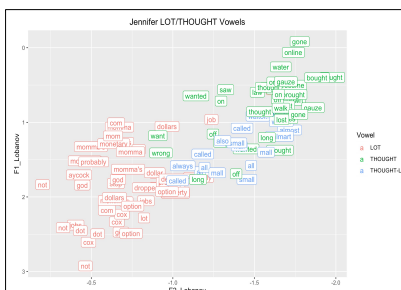


FIGURE 1: Jennifer, b. 1970, unmerged with lower pre-/l/ THOUGHT

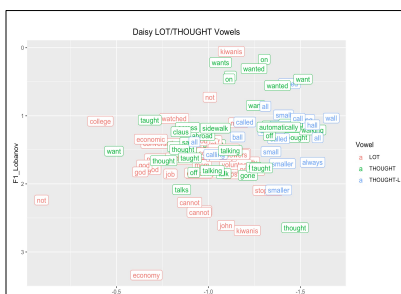


FIGURE 2: Daisy, b. 1994, merged

## 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

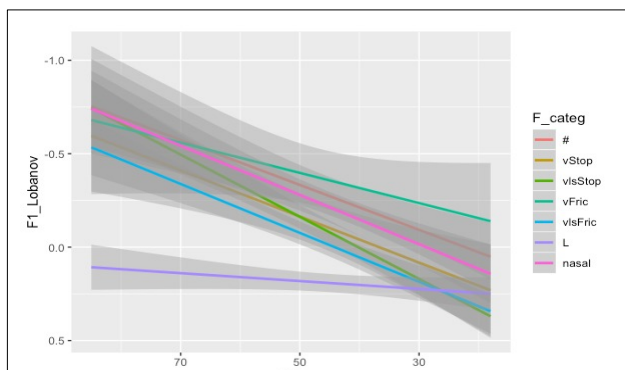


FIGURE 3: THOUGHT F1 by age and following sound

## Findings, part 2:

Two paths towards merger (FIGURE 4):

- Women merge mostly by lowering THOUGHT ( $p < 0.001$ ) while for men movement of LOT is more relevant

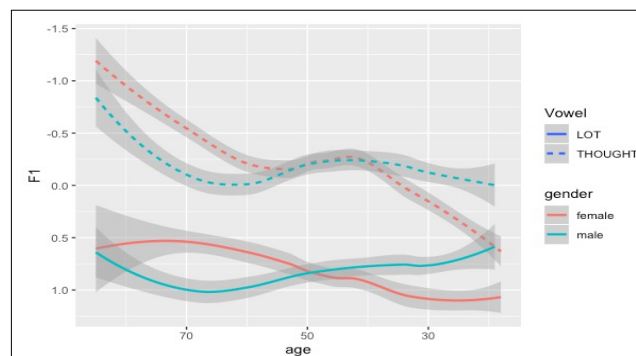


FIGURE 4: THOUGHT and LOT F1 by age and gender

## 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:

| factor                               | coefficient     | <i>p</i>           |
|--------------------------------------|-----------------|--------------------|
| following <i>L</i> × age interaction | +0.093 / decade | < 10 <sup>-3</sup> |
| male                                 | -0.76           | 0.01               |
| age                                  | -0.18 / decade  | 0.02               |
| following <i>L</i>                   | -0.18           | 0.03               |
| male × age interaction               | +0.13 / decade  | 0.03               |

Intercept: +0.79; *n* = 2091

THOUGHT F2:

| factor                               | coefficient     | <i>p</i>           |
|--------------------------------------|-----------------|--------------------|
| following <i>L</i> × age interaction | +0.079 / decade | < 10 <sup>-3</sup> |
| following <i>L</i>                   | -0.30           | < 10 <sup>-3</sup> |
| male                                 | -0.19           | 0.005              |
| age                                  | -0.028 / decade | 0.5                |

Intercept: -0.24; *n* = 2091

LOT F2:

| factor             | coefficient     | <i>p</i>           |
|--------------------|-----------------|--------------------|
| following <i>L</i> | -0.41           | < 10 <sup>-3</sup> |
| age                | +0.050 / decade | 0.003              |
| male               | -0.11           | 0.05               |

Intercept: +0.41; *n* = 1821

LOT F1:

| factor                 | coefficient    | <i>p</i> |
|------------------------|----------------|----------|
| following <i>L</i>     | -0.18          | 0.01     |
| male                   | -0.80          | 0.02     |
| male × age interaction | +0.16 / decade | 0.02     |
| age                    | -0.10 / decade | 0.5      |

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:

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