Homogeneity and Heterogeneity in Western American English Joseph A. Stanley, Jessica Shepherd, & Auna Nygaard

The Low-Back-Merger Shift (Becker 2019)

Description

- BAT, BET, BIT lower and retract
- Arguably a chain shift
 - triggered by BOT-retraction
 - Typically BAT shifts the most
 - BET and especially BIT less shifted

Distribution

- Now widespread across North America
 - California (Eckert 2008), Oregon (Becker et al. 2016),
 - Washington (Swan 2019), Canada (Clarke et al. 1995), Kansas (Kohn & Stithem), Ohio (Durian 2012), Michigan (Nesbitt et al. 2019), Massachusetts (Stanford et al. 2019), Georgia (Stanley et al. this conference), etc.
- Common in, but not exclusive to, young people

However!

Previous accounts are based on isolated, independent studies.

"Clearly, collecting the same type of data from all sites would be optimal in allowing us the most reliable cross-region assessment." (Fridland et al. 2017:172)

This study is a direct response to that call.

Methods

Speakers

- Recruited via Amazon Mechanical Turk ("MTurk"; cf. Kim et al 2019)
- 85 speakers
- genders: 60 female, 4 non-binary, 21 male
- birth years: 1938–1998 (data collected in 2017)
- education: 8 no college, 46 some college, 31 finished college
- ethnicity: (unavailable due to error)
- 9 Western states
 - Washington, Oregon, Nevada, Idaho, Montana, Utah, Wyoming, Colorado, Arizona, New Mexico
 - (Funding limitations prohibited including California)

Procedure

- Read 132 sentences and a 300-item wordlist
- Submitted audio 10 sentences at a time.

Processing

- Transcribed by hand
- Force-aligned with MFA (McAuliffe et al. 2007)
- Formants extracted with Fast Track (Barreda 2021)
- Removed unstressed vowels, removed stopwords, removed outliers, normalized, isolated midpoints, removed vowels before liquids and hiatuses, and removed diphthongs—in that order (Stanley 2021)

Analysis

- Extracted LBMS Index following Becker (2019).
- Calculated Pillai scores of BAN vs. BAT to measure BAN-raising.





- Education level was not a significant predictor.
- Some potential regional patterns, though none were significant.

Findings of heterogeneity:

- There is a wide range of attested values for both the LBMS Index and BAT-BAN Pillai scores.
- Younger people, and sometimes women, had lower values for both, which suggests an apparent-time change in the LBMS Index and BANraising in the West.

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