

Social predictors of the *wine-whine* merger in the US South

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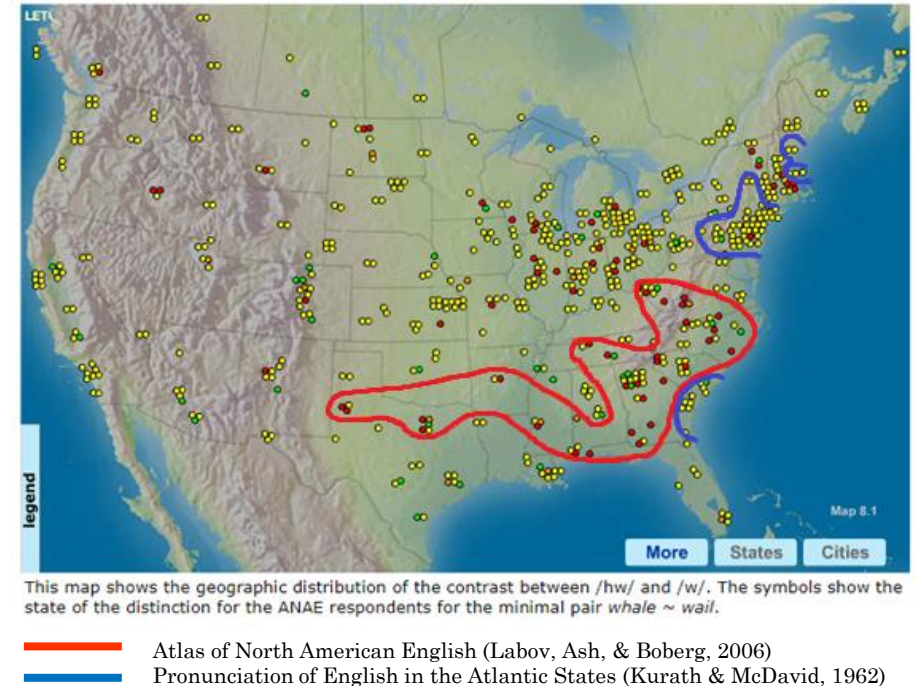
New Ways of Analyzing Variation (NWAV 49)

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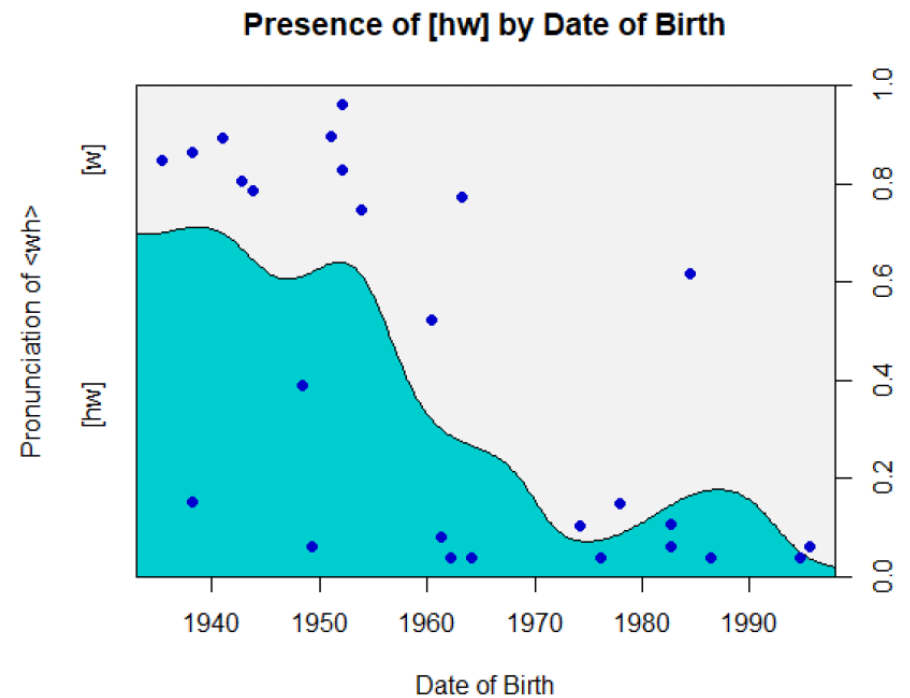
The *wine-whine* merger

- Historical distinction between /w/ and /hw/ (or /ʍ/)
- Wine-whine merger: /hw/ → /w/
 - Complete or nearing completion in many dialects of English worldwide (cf. Chambers, 2002; Minkova, 2004)
 - Present in the US since the American Revolution (Forgue, 1986), but only became widespread within the past ~70 years
- Dialect surveys show the spread of the merger from eastern port cities to throughout the continental US over the course of the 20th century (Kurath & McDavid, 1962; Labov, Ash, & Boberg, 2006)



Modern social correlates of [hw]

- **Age:**
 - Older speakers > younger speakers in the South and West dialect regions (Bridwell, 2018)
 - Decrease over time among Southern speakers (Bridwell, 2019a)
- **Region:**
 - South, West > Midlands, North Central, Inland North, New England (Bridwell, 2018)
- **Education and Locality:**
 - Older speakers: rural, less-educated > non-rural, highly educated
 - Younger speakers: non-rural, highly educated > rural, less-educated (Bridwell, 2019b)
 - Low local attachment > high local attachment



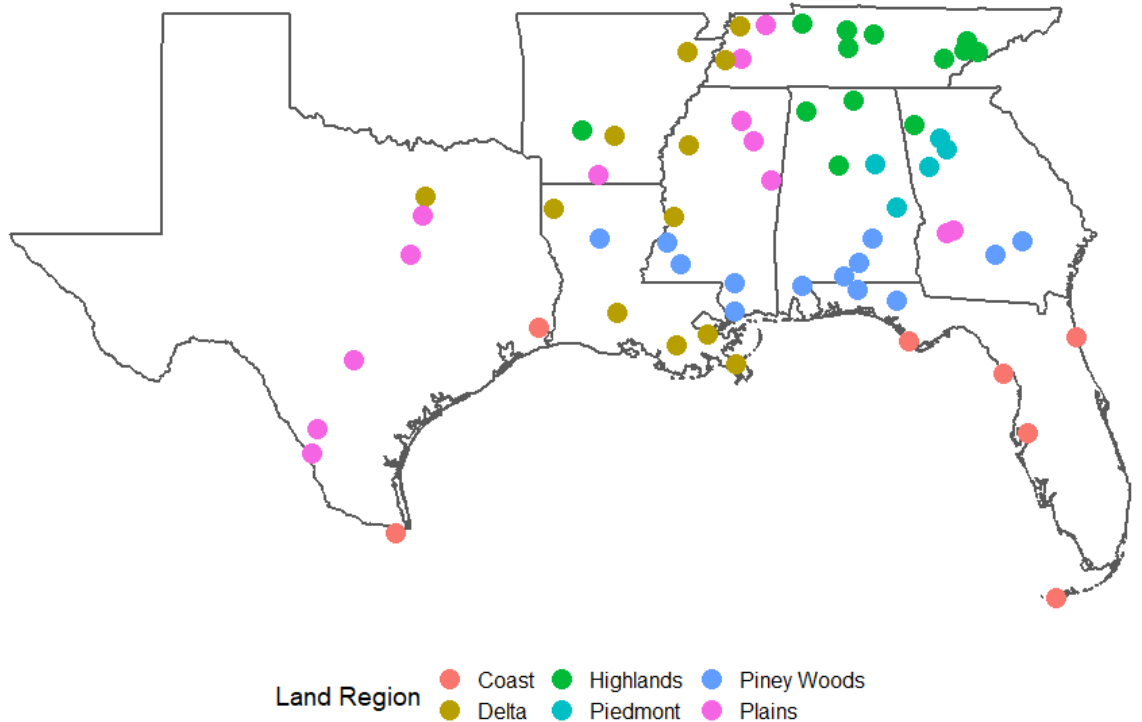
(Bridwell, 2019a)

Corpus: DASS

Digital Archive of Southern Speech (DASS)

(Kretzschmar et al. 2013)

- Subset of the Linguistic Atlas of the Gulf States (Pederson et al. 1986)
- Recorded 1968-1983
- Transcribed and forced-aligned at the University of Georgia (Kretzschmar et al., 2019)
- 64 speakers from eight Southern states (born 1886-1965)
- 372 hours of audio

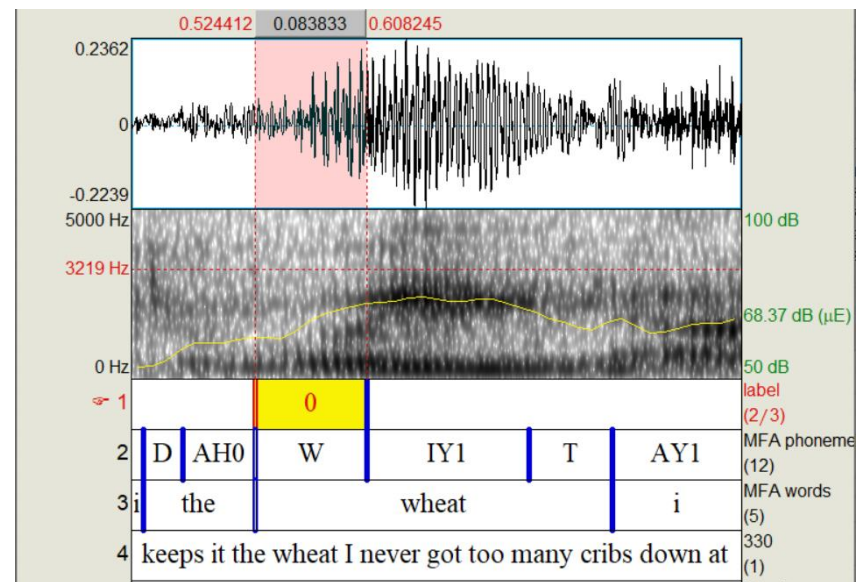
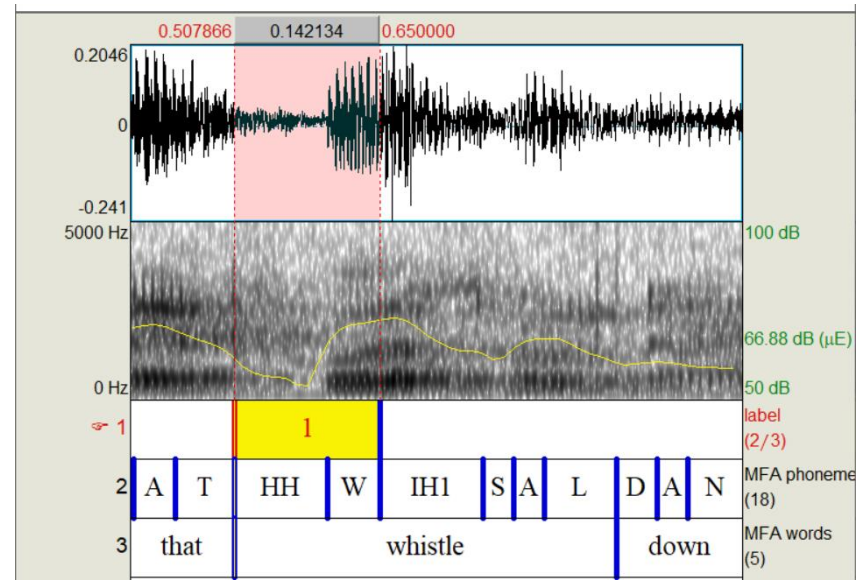


Research Questions

- How does [hw] use pattern with age in the DASS corpus?
 - Had the *wine-whine* merger begun in the US South by the 1970s?
 - Does [hw] decrease with age? When does this pattern begin?
- How does [hw] use vary across geographic regions within the South?
- What role does education play with respect to the *wine-whine* merger?
- How does [hw] pattern with race?
 - Pilot study using CORAAL (Kendall & Farrington, 2018) data indicated that that among Black speakers in Princeville, NC (Rowe et al., 2018), [hw] use decreased with age

Dataset

- Token selection
 - Searched transcriptions for words containing morpheme-initial <wh>, excluding /hV/ tokens (e.g. *who*, *whole*) (n>26000)
 - Limited list to lemmas with 15+ tokens, and the first 15 instances per speaker for words with over 1000 tokens (n=8284)
 - Listened to each token to confirm audio contained correct word (n=7927)
- Coding
 - Labeled each token as [w] or [hw] in Praat (Boersma & Weenink, 2017)
 - Discarded faulty clips discarded
 - Final total of 7702 tokens

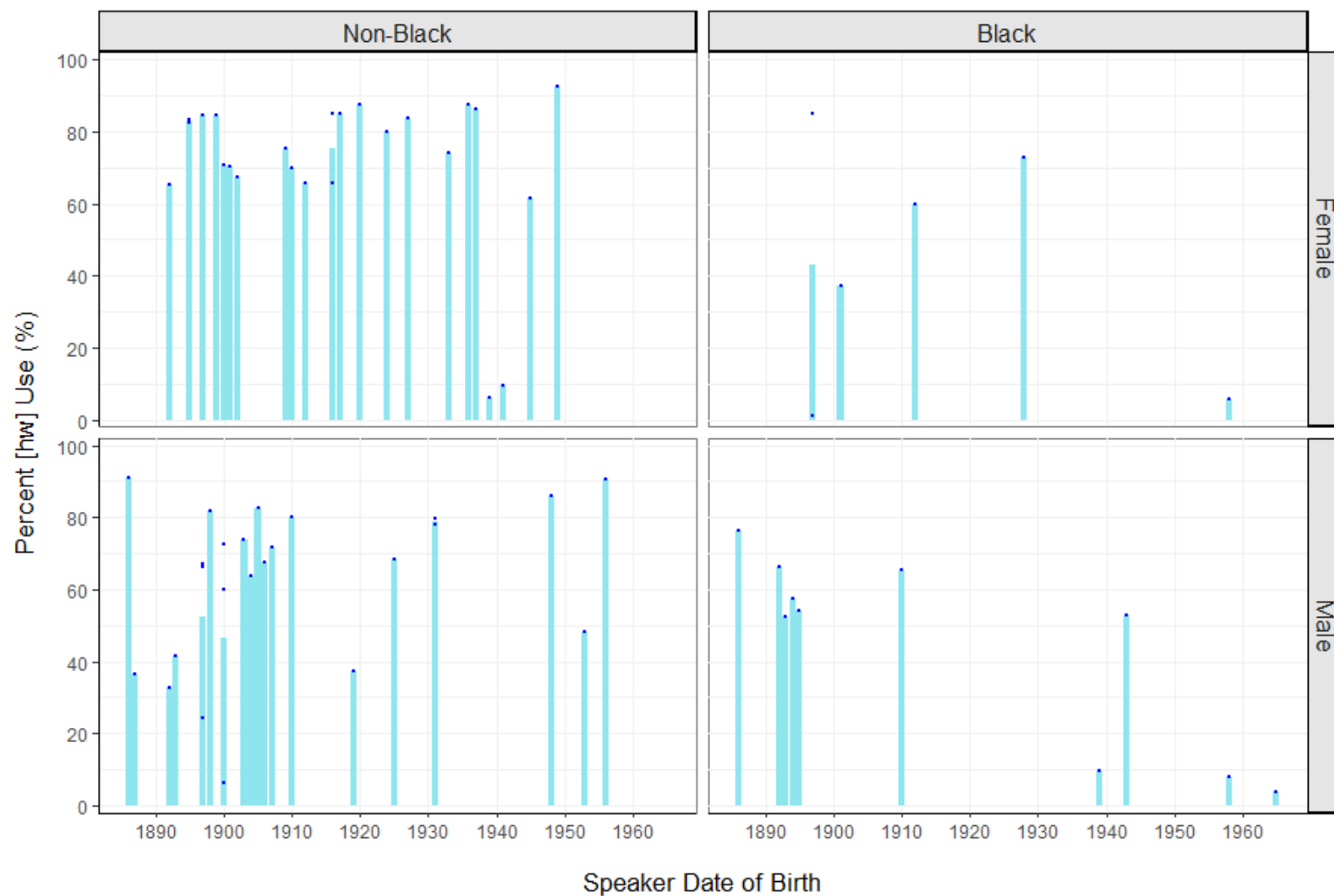


Variables

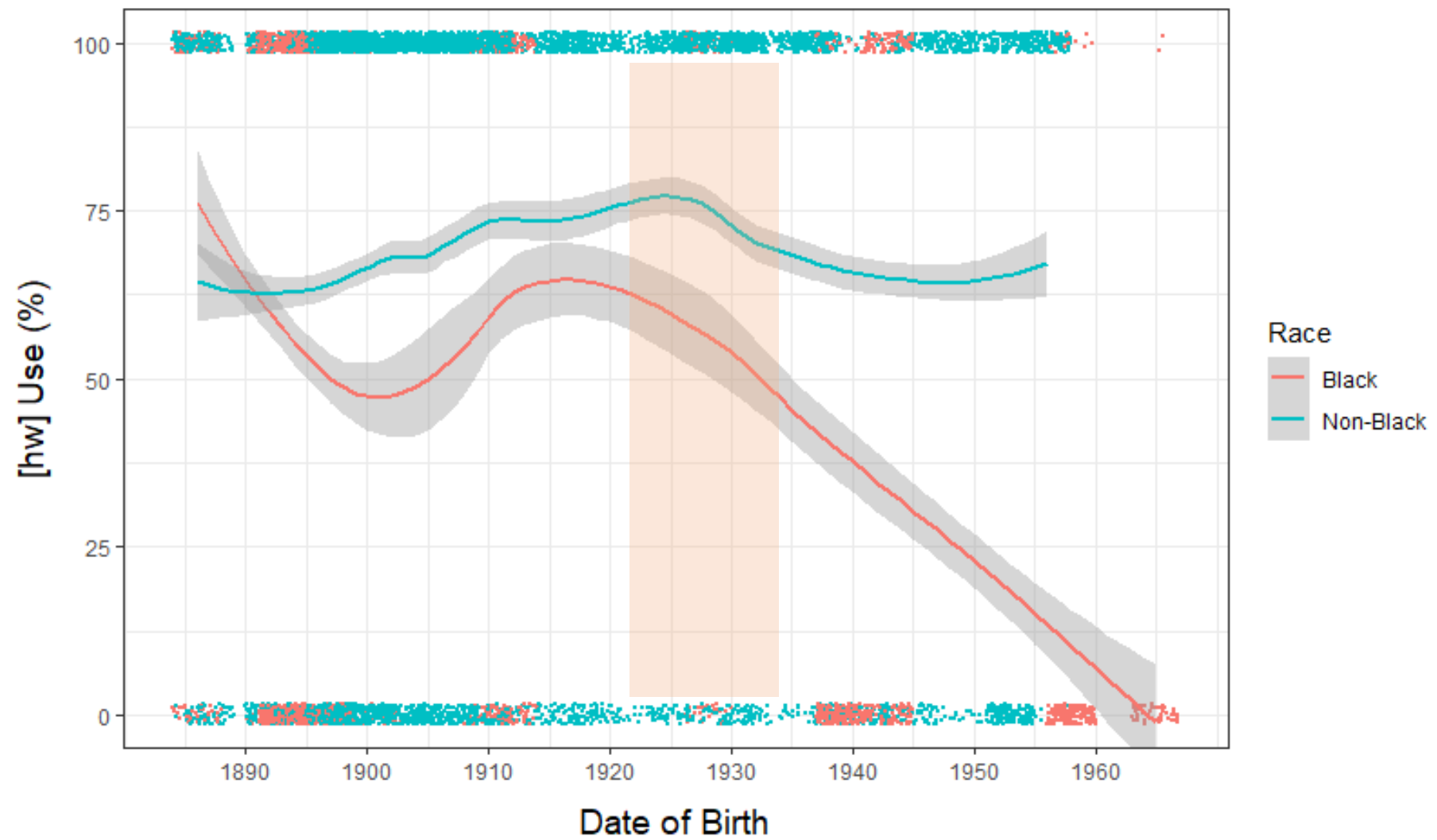
Social Variable	Levels
Date of birth (DOB)	1886-1965
Gender	female (30), male (34)
Land region	Coast (7), Delta (12), Highlands (13), Piedmont (5), Piney Woods (13), Plains (14)
Race	Black (16), non-Black (48)
Education	no college (45), college (19)
Social class	lower (11), lower middle (27), upper middle (18), upper (8)
Locality	rural (21), urban (43)
Worldview	insular (31), worldly (33)

Linguistic Variable	Levels
Lexical content	content word, function word
Following vowel	AH [ɑ], AY [aɪ], EH [ɛ], IH [ɪ], IY [i], UH [ʊ]
<wh> position	word initial, word internal

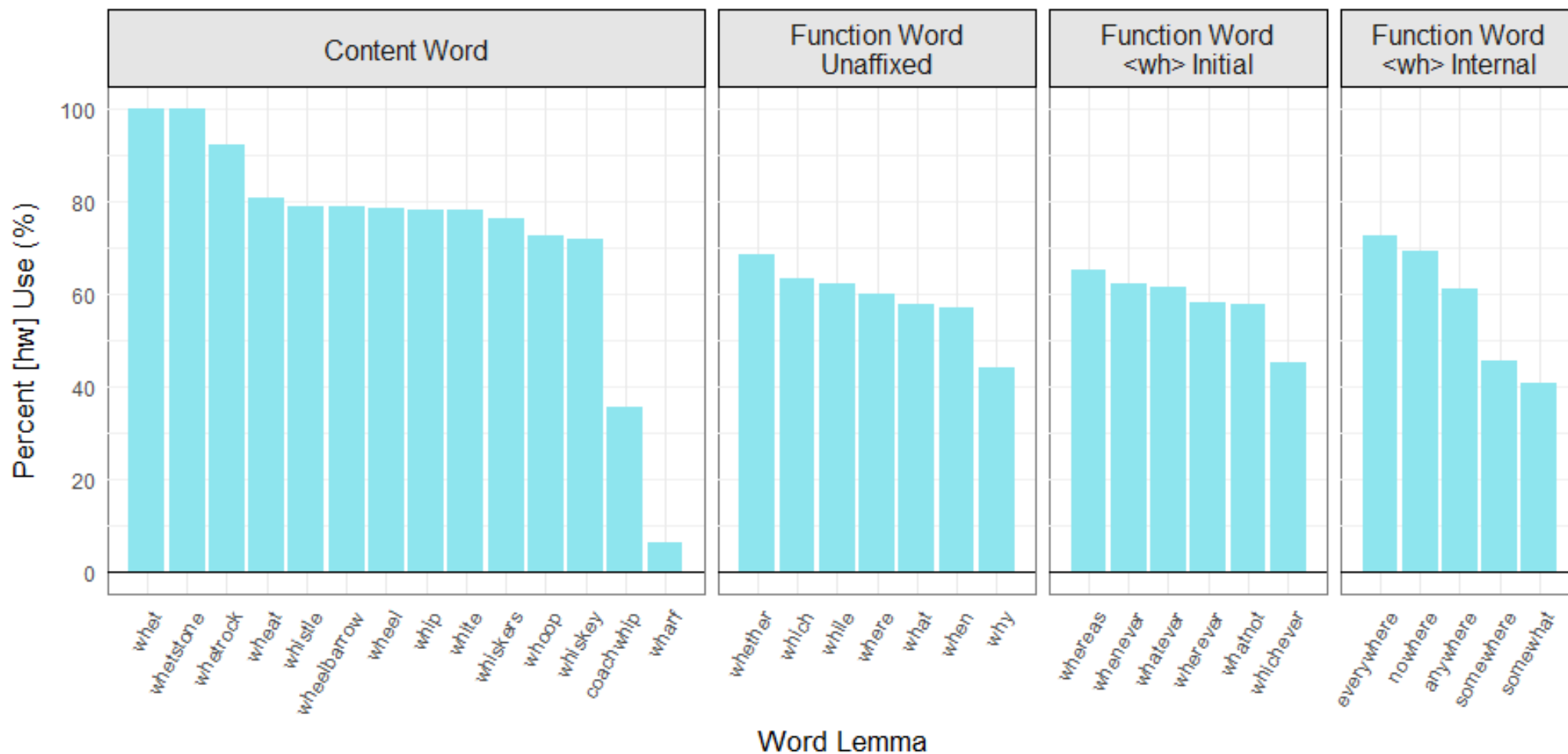
Speaker Results



Rate of [hw] Use by Date of Birth and Race



Word Results



Model

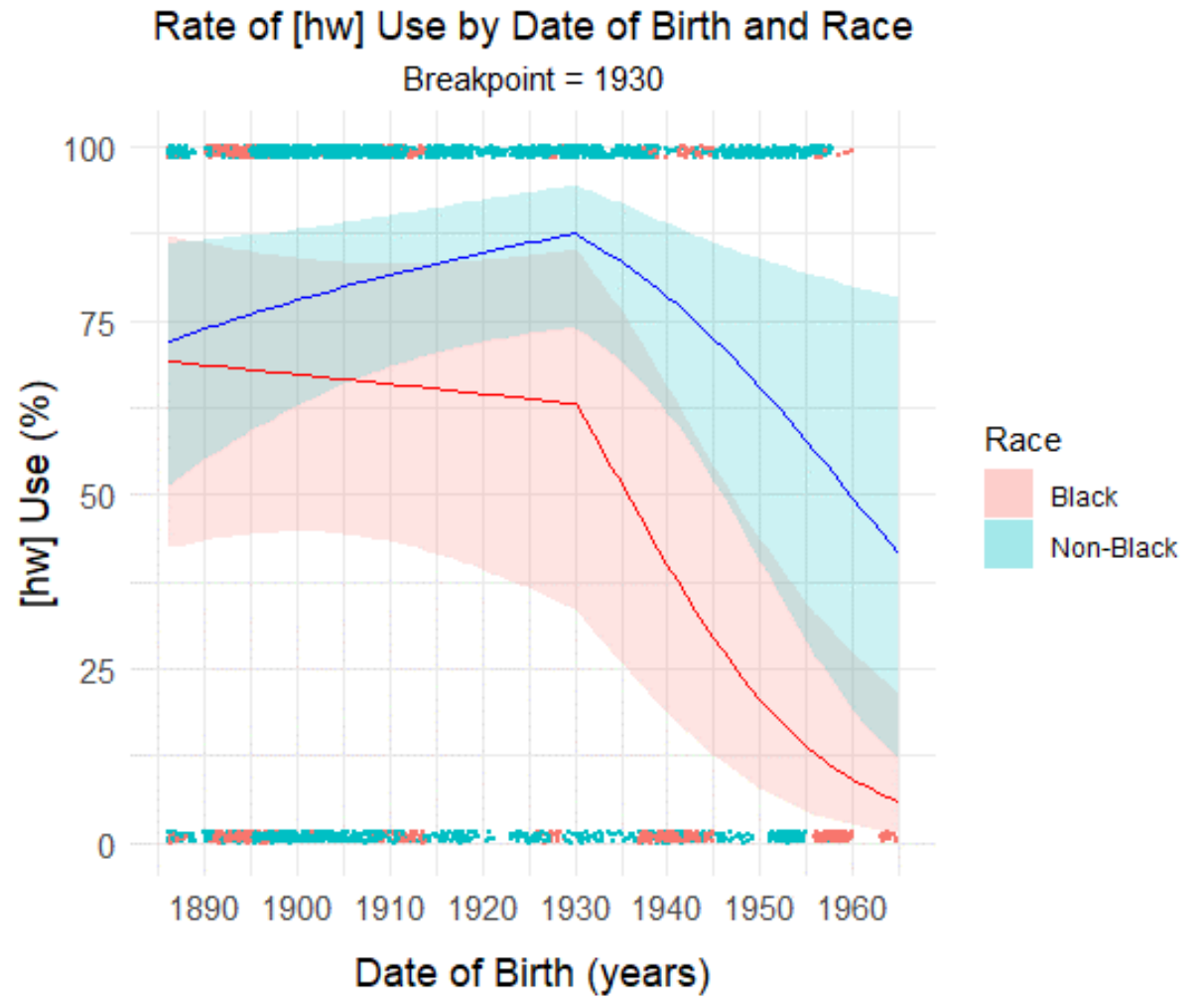
- Mixed-effects logistic regression model
 - Dependent variable of *phoneme*: [hw], [w]
 - Random effects: *speaker*, *word*, *coder*
 - Fixed effect candidates: *date of birth (DOB)*, *gender*, *land region*, *race*, *education*, *social class*, *locality*, *worldview*, *lexical content*, *following vowel*, *word position*
- Operationalization
 - Based on visual examination of the data, *DOB* was found to behave differently before and after ~1930
 - *DOB* treated as a continuous piecewise variable with a breakpoint at 1930 (as in Stanley, 2018)
 - Interaction of *DOB* with *race*
- Model of best fit:

phoneme ~ DOBrace* + DOB_shifted:is_older + content + vowel + land_region + education + (1|speaker) + (1|word) + (1|coder)**

Model Results

Significant results:

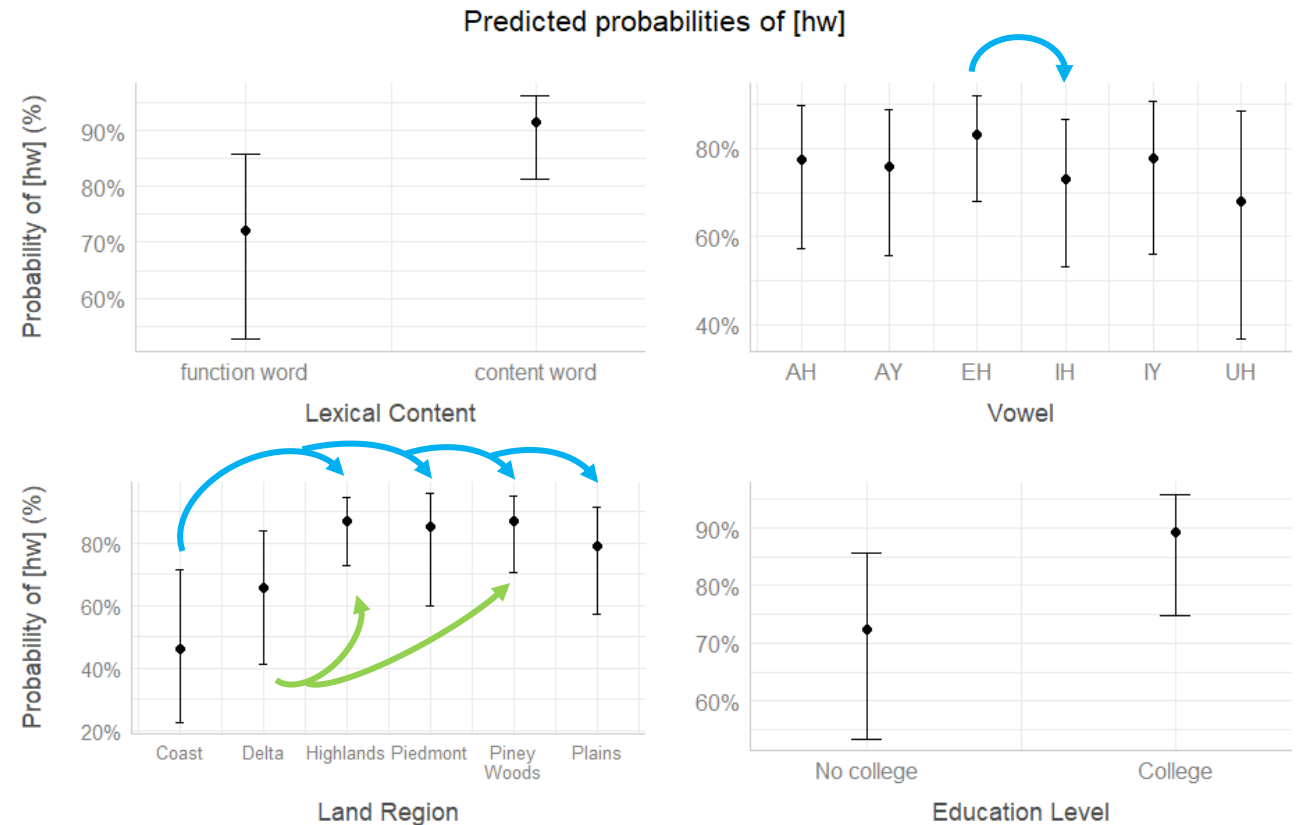
- Interaction between DOB and race ($p < .05$)
- Main effect of race ($p < .01$)
- Main effect of DOB ($p < .05$)



Model Results

Significant effects:

- Lexical content:
 - content >> function ($p < .0001$)
- Following vowel:
 - EH >> IH ($p < .0001$)
- Land region:
 - Coast << Highlands, Piedmont, Piney Woods, Plains ($p < .01$)
 - Delta << Highlands, Piney Woods ($p < .01$)
- Education:
 - college >> no college ($p < .001$)



Discussion

- Corpus study highlights variation in [hw]
 - All DASS speakers used [hw] in variation with [w]
 - Most sampled words varied between [hw] and [w]
- Date of birth
 - Approximately stable variation between [hw] and [w] among people born until 1930, after which [hw] decreased
 - Rapid acceleration of the *wine-whine* merger among Black speakers, possible beginning among non-Black speakers
- Race
 - Sharp decrease in [hw]-use among Black speakers after 1930, approaching 0% by 1965
 - Early versions of African American Language were more aligned with local European American varieties (Wolfram & Thomas, 2002)
 - During the Great Migration, AAL started to orient toward urban centers (Farrington, 2019)
 - Wolfram & Thomas (2002): Black speakers in Hyde County, NC moved away from local phonetic variants toward AAL norms over time
 - Cukor-Avila (1995): Intensification of AAL syntactic features in rural Texas post-WWII

Discussion

- Region: areas that tend to pattern linguistically with Southern American English used [hw] more frequently; areas that tend to behave differently (e.g. Florida, Louisiana) used [hw] less
- Education: higher use of [hw] among college-educated speakers suggests that it was considered an indicator of education
 - Perceived as the prestige form
 - Matches patterns in more recent data
- Social factors are able to explain a large amount of the variation between [hw] and [w] in the DASS corpus

References

- Boersma, Paul & David Weenink. 2017. Praat: doing phonetics by computer [Computer program]. Version 6.0.36. Retrieved from <http://www.praat.org/>.
- Bridwell, Keiko. 2018. *The distribution of [ɹ]: Geographic and age-related factors governing the wine-whine merger*. Paper presented at LCUGA 5, University of Georgia.
- Bridwell, Keiko. 2019a. *The distribution of [ɹ]: An acoustic analysis of sociophonetic factors governing the wine-whine merger in Southern American English*. Columbia, SC: University of South Carolina master's thesis.
- Bridwell, Keiko. 2019b. *When 'hwen' appears: Social and linguistic variables governing the wine-whine merger in Southern American English*. Paper presented at LCUGA 6, University of Georgia.
- Chambers, Jack. 2002. 14 Patterns of Variation including Change. In Jack Chambers, Peter Trudgill, & Natalie Schilling-Estes (Eds.), *The handbook of language variation and change*, 349-372. Blackwell Publishing Ltd.
- Cukor-Avila, Patricia. 1995. "The Evolution of AAVE in a Rural Texas community: An ethnolinguistic study." Ann Arbor, MI: University of Michigan Ph.D. dissertation.
- Farrington, Charles Ryan. 2019. *Language Variation and the Great Migration: Regionality and African American Language*. Eugene, OR: University of Oregon Ph.D. dissertation.
- Fergie, Guy Jean. 1986. American English at the Time of the Revolution. In Allen, Harold B. & Michael D. Linn (Eds.) *Dialect and Language Variation* (pp. 511-523). Academic Press.
- Kendall, Tyler & Charlie Farrington. 2018. *The Corpus of Regional African American Language*. Version 2018.10.06. Eugene, OR: The Online Resources for African American Language Project. <http://oraal.uoregon.edu/coraal> (3 May 2020).
- Kretschmar, William A., Paulina Bounds, Jacqueline Hettel, Lee Pederson, Ilkka Juuso, Lisa Lena Opas-Hänninen, & Tapio Seppänen. 2013. The Digital Archive of Southern Speech (DASS). *Southern Journal of Linguistics* 27(2), 17–38.

References

- Kretzschmar, William A., Margaret E. L. Renwick, Lisa M. Lipani, Michael L. Olsen, Rachel M. Olsen, Yuanming Shi, & Joseph A. Stanley. 2019. "Transcriptions of the Digital Archive of Southern Speech." Linguistic Atlas Project, University of Georgia.
- Kurath, Hans, & Raven I. McDavid. 1961. *The Pronunciation of English in the Atlantic States: Based upon the Collections of the Linguistic Atlas of the Eastern United States*. Ann Arbor: University of Michigan Press.
- McDavid, Raven I., & Virginia Glenn McDavid. 1952. h before Semivowels in the Eastern United States. *Language* 28(1), 41-62.
- Labov, William, Sharon Ash, & Charles Boberg. 2006. *The Atlas of North American English: Phonetics, phonology and sound change*. Walter de Gruyter.
- Minkova, Donka. 2004. Philology, linguistics, and the history of [hw]~[w]. In Curzan, Anne & Kimberly Emmons (Eds.), *Studies in the History of the English Language II: Unfolding Conversations*, 7-46. Walter de Gruyter.
- Pederson, Lee, Susan L. McDaniel, and Carol M. Adams, eds. 1986-93. *Linguistic Atlas of the Gulf States*, University of Georgia Press, Athens, GA, Vols. 1-7.
- R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria.
- Rowe, Ryan, Walt Wolfram, Tyler Kendall, Charlie Farrington, & Brooke Josler. 2018. *The Corpus of Regional African American Language: PRV (Princeville, NC 2004)*. Version 2018.10.06. Eugene, OR: The Online Resources for African American Language.
- Stanley, Joseph A. 2018. Changes in the timber industry as a catastrophic event: BAG-raising in Cowlitz County, Washington. *University of Pennsylvania Working Papers in Linguistics* 24(2), 16.
- Wolfram, Walt, and Erik R. Thomas. 2002. *The Development of African American English*. Malden/Oxford: Blackwell.