Qualifying Research Report

PhonDi

08 November 2019

Kelly E. Wright
LSA Department of Linguistics
On Peoria, Anishinabewaki, Potawatomi land



Overview

- Linguistic profiling
- Main experiment results
- Attribute assessment
- Questions



Linguistic Profiling

Baugh (2003) Rubin (2011)

- Operates similarly to racial profiling
- "Informal, on-the-spot, and largely nonconscious speech judgments," which are then linked to social stereotypes.



Purnell et al. (1999)

- Landmark study on dialect discrimination in housing
- Finds racial and socioeconomic neighborhood demographics predicted the number of appointments a given voice received



Purnell et al. (1999)

- Landmark study on dialect discrimination in housing
- Finds racial and socioeconomic neighborhood demographics predicted the number of appointments a given voice received
- Measuring a yes/no dichotomy of appointment types as evidence of linguistic profiling



Adapted Protocol

- Many changes in the market in 20 years
 - > Yelp! and Craigslist
- Introduce a more nuanced measure for appointment type to better fit the contemporary marketplace



Audit Study

Massey & Lundy (2001)

- Pre-Planned call protocol
- Pre-Planned list of target population
- Participants hear each voice only once.



Adapted Audit Study

- Search each session on Craigslist
- Randomized selection from returns
- One voice per session



 A means of testing for linguistic profiling in the contemporary market



Local Prestige

Trudgill (1972) Fuertes et al. (2012)

- Speakers of non-Standard accents can be upgraded on certain traits
- A non-Standard voice is always socially stigmatized, but it is not always locally stigmatized.



Local Prestige

- A given listener can assign local prestige to a speaker because they have personal pride in being a speaker of the variety themselves.
- Prestige mismatches can result in positive or negative outcomes for speakers given the stakes of the interaction.

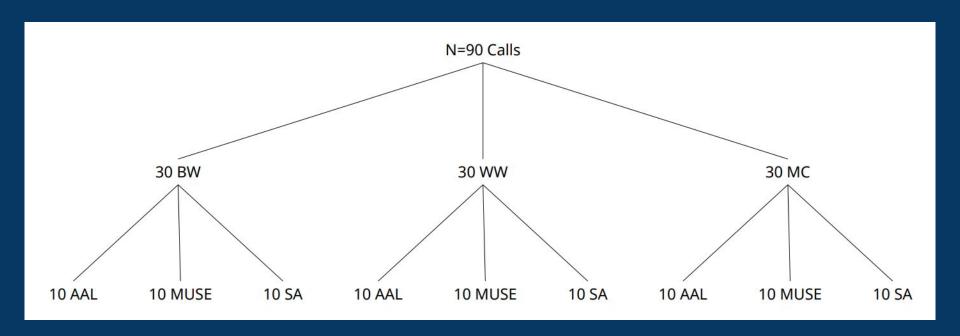


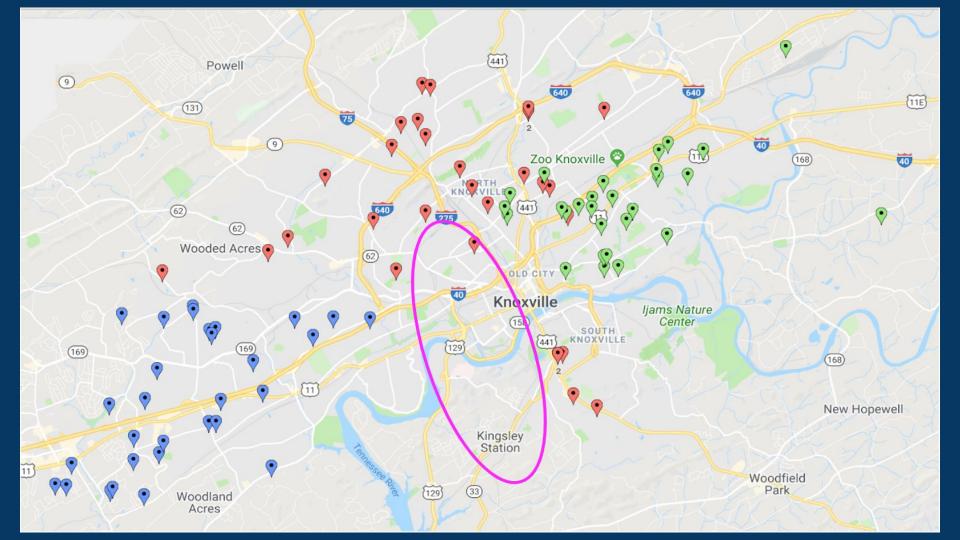
Target Neighborhoods

Racial and Socioeconomic demographics

- White Working Class (WW) \$18,000/year
- Middle Class (MC) \$22,000/year
- Black Working Class (BW) \$11,000/year







Call Protocol

- Google Forms
 - > Replicable, Reliable Storage
- * Research Data Services



Call Protocol

Target Blocks of Information

- Amenities (Does the unit have updated appliances?)
- Finances (Besides the base rent, what other fees can I expect to pay each month?)
- Area (How close is the nearest grocery store?)
- Safety (Do you employ a courtesy officer/What are my concerns for safety in the area?)
- Fit (Do I seem like a good fit for your property?)



- I cannot claim that every manager had a choice between all levels of commitment for each call.
 - It is assumed that a Traditional appointment is always available, as is the right of refusal.



Traditional (N=23)

the manager and the caller choose a day, time, and place to meet where the understanding is that they will be the parties involved.

Online (N=7)

the caller chooses a day and time to meet on a manager-provided, digital schedule where the understanding is that the caller may meet with the manager or with another available employee.



Office Hours (N=1)

the caller is instructed to come to the property during a given window of time where the understanding is that they will meet with available employees who may not be expecting the caller specifically



❖ Later (N=36)

- the caller is instructed to call the manager back at a later time—specified or not—to schedule a traditional appointment.
- ❖ NA (N=18)
 - the caller is told that the property is not available
- **❖** No (N=3)
 - the caller is explicitly told "No" when an appointment is requested





verifying the caller's identity online before independent access to the property is granted (usually via a key box)

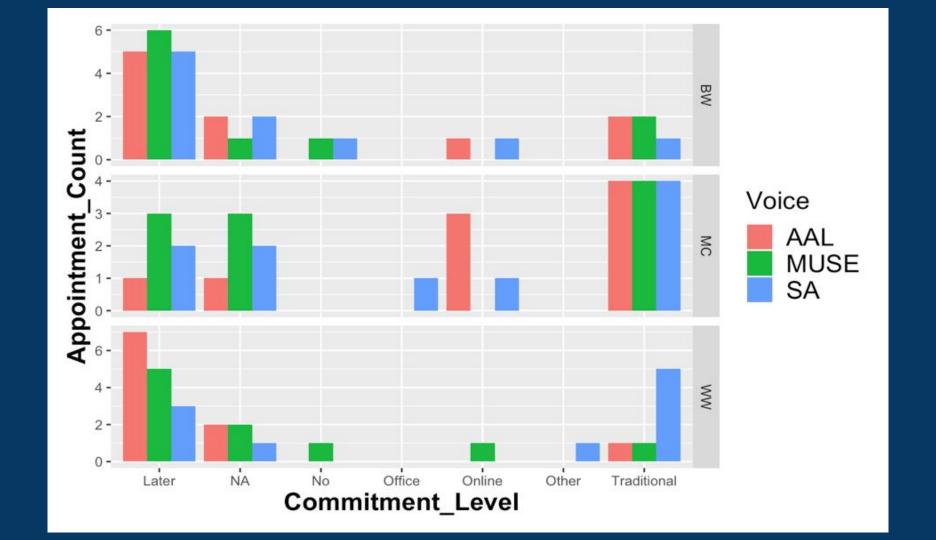


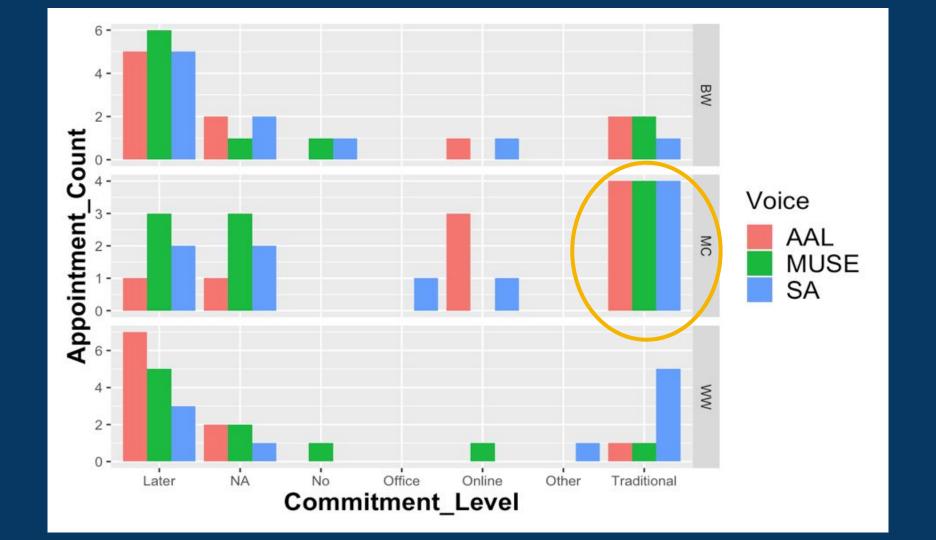
Predictions

Local Prestige, Higher Commitment Level

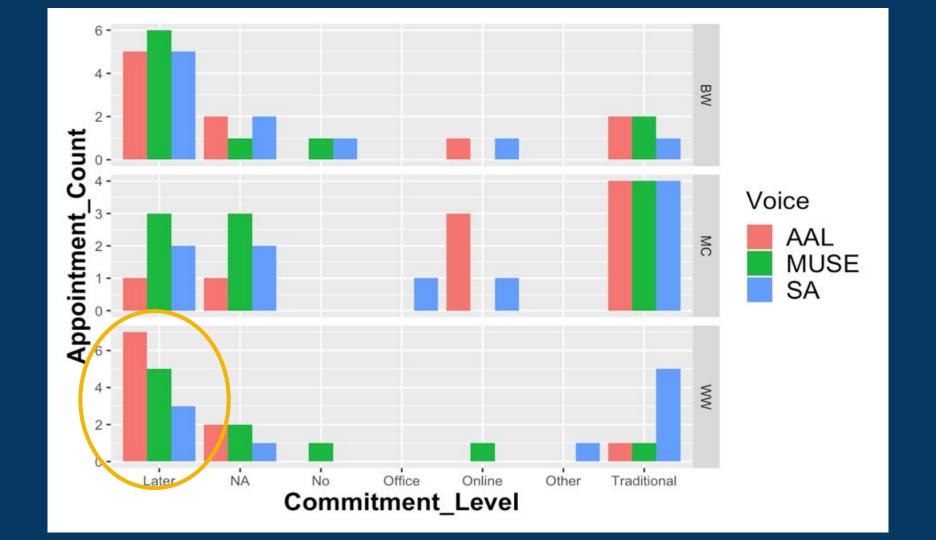
- ❖ SA voice: WW > MC > BW
- ❖ MUSE voice: MC > WW > BW
- AAL voice: BW > MC > WW











Predictive Model

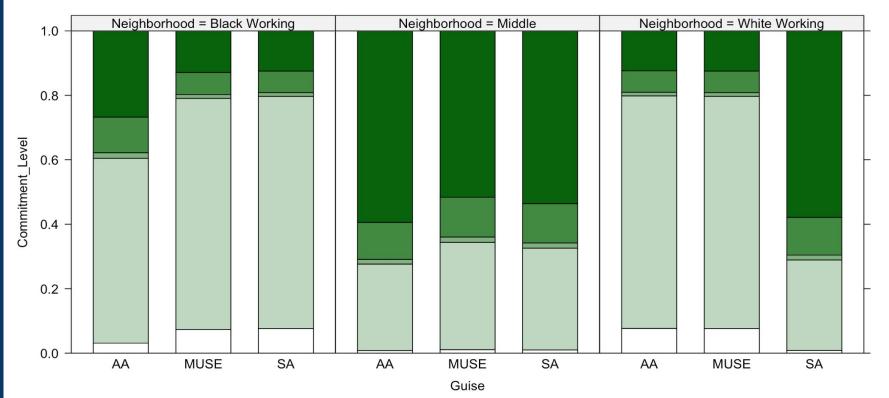
- Small subsets
- Given these conditions, what is the likelihood an appointment will fall above a given commitment level
- Removed Other and NA appointments



Guise*Neighborhood effect plot

Traditional Online Office Hours Later No

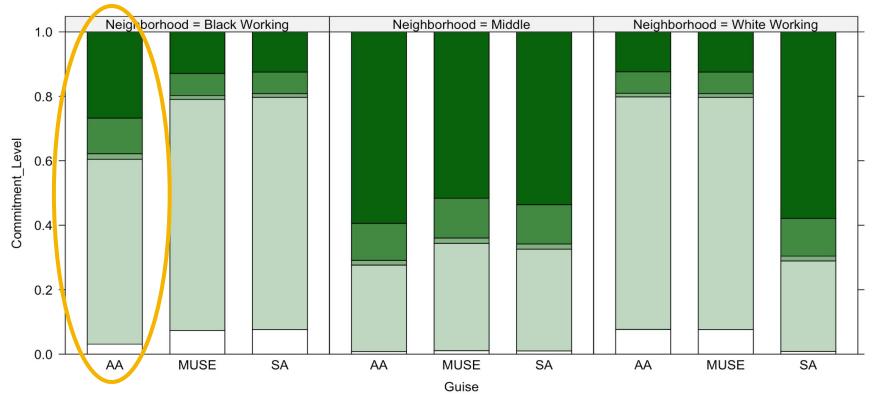




Guise*Neighborhood effect plot

Traditional Online Office Hours Later No

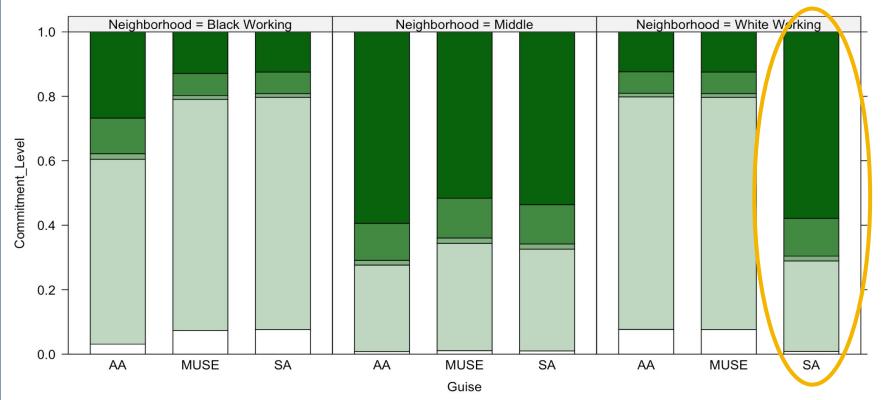




Guise*Neighborhood effect plot

Traditional Online Office Hours Later No





Predictive Model

Replicates patterns we see in the raw data

➤ Yay!



Ordinal Logistic Regression

- Voice and Neighborhood as fixed effects
- Reports odds ratios
- Three X Three comparison necessitated several model rotations



	Value	Std.Error	T value	P value		OR	CI 2.5%	CI 97.5%
GuiseMUSE	0.01	1.10	0.01	0.99				
GuiseSA	2.27	1.08	2.11	0.03	GuiseMUSE	1.0	0.1	8.8
Neighborhood	2.34	1.01	2.31	0.02	GuiseSA	9.7	1.3	92.0
Middle					Neighborhood Middle	10.4	1.6	85.1
Neighborhood BlackWorking	0.95	1.03	0.92	0.36	Neighborhood	2.6	0.3	20.9
GuiseMUSE:	-0.32	1.48	-0.22	0.83	BlackWorking			
NeighborhoodMiddle					GuiseMUSE:	0.7	0.0	13.6
GuiseSA:	-2.51	1.41	-1.78	0.07	NeighborhoodMiddle			
NeighborhoodMiddle					GuiseSA:	0.1	0.0	1.2
GuiseMUSE: NeighborhoodBlackWorking	-0.91	1.51	-0.60	0.55	NeighborhoodMiddle			
					GuiseMUSE:	0.4	0.0	7.7
GuiseSA: NeighborhoodBlackWorking	-3.22	1.52	-2.12	0.03	NeighborhoodBlackWorking			
					GuiseSA:	0.0	0.0	0.7
					NeighborhoodBlackWorking			

0	Value	Std.Error	T value	P value		OR	CI 2.5%	CI 97.5%
GuiseMUSE	0.01	1.10	0.01	0.99	GuiseMUSE	1.0	0.1	8.8
GuiseSA	2.27	1.08	2.11	0.03	GuiseSA	9.7	1.3	92.0
Neighborhood	2.34	1.01	2.31	0.02		5.1		
Middle					Neighborhood Middle	10.4	1.6	85.1
Neighborhood BlackWorking	0.95	1.03	0.92	0.36	Neighborhood	2.6	0.3	20.9
GuiseMUSE:	-0.32	1.48	-0.22	0.83	BlackWorking	2.0	0.5	20.9
NeighborhoodMiddle	-0.32	1.40	-0.22	0.03	GuiseMUSE:	0.7	0.0	13.6
GuiseSA:	-2.51	1.41	-1.78	0.07	NeighborhoodMiddle			
NeighborhoodMiddle					GuiseSA:	0.1	0.0	1.2
GuiseMUSE:	-0.91	1.51	-0.60	0.55	NeighborhoodMiddle			
NeighborhoodBlackWorking					GuiseMUSE: NeighborhoodBlackWorking	0.4	0.0	7.7
GuiseSA:	-3.22	1.52	-2.12	0.03				
NeighborhoodBlackWorking					GuiseSA: NeighborhoodBlackWorking	0.0	0.0	0.7
					Treignoornoodblackvorking			

Ordinal Logistic Regression

- SA is 10 times more likely to receive a higher commitment level appointment in the WW neighborhood
 - As compared to AAL in WW neighborhood
- Helps us place local prestige effects in perspective.



Ordinal Logistic Regression

- Consistent with raw data and predictive modeling
- Consistent with predictions
 - > SA voice: WW > MC > BW
 - AAL voice: BW > MC > WW
- ❖ MUSE voice: MC > WW, BW



Voices and Variation

- Driving these local prestige effects
- Ideological schema activation in the listener



Voice Assessment

- Attribute assessment
 - > Ideological schema activation



Stimuli

	Voices			
Initial Property Inquiry Phonecall Greetings	AAL	<u>MUSE</u>	SA	



How many speakers?

- 38/40 participants (or 95%) report hearing three distinct speakers
- Does not suggest conscious dialect knowledge
- Participants believed they were hearing three separate people



Race and Region

- Better than chance
 - Voices are representative samples of the target dialects
- SA is a regional dialect, so Southern regional assignments are the target.
- AAL is a racial dialect, so Black racial assignments are the target.

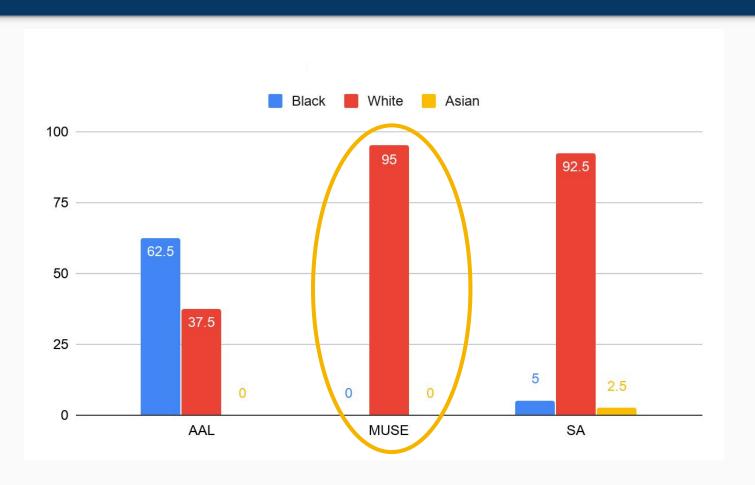


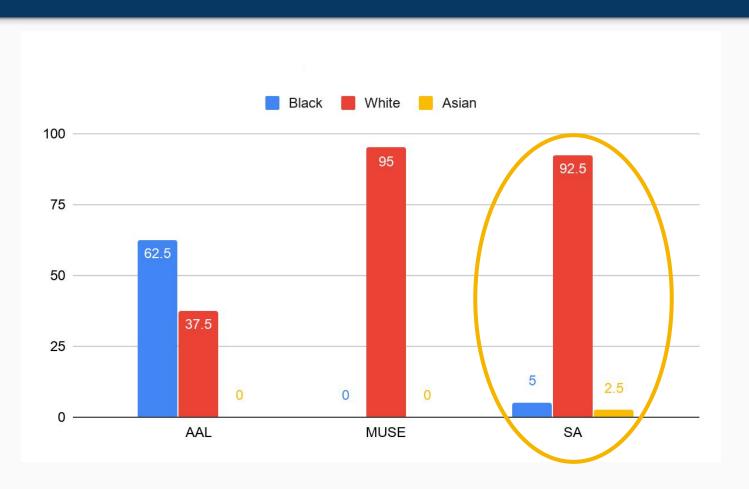
Race and Region

MUSE is explicitly racially and regionally unmarked, but is indexed to Whiteness and Midwestern and Coastal regions, so these assignments are the target.











AAL Racial Percepts

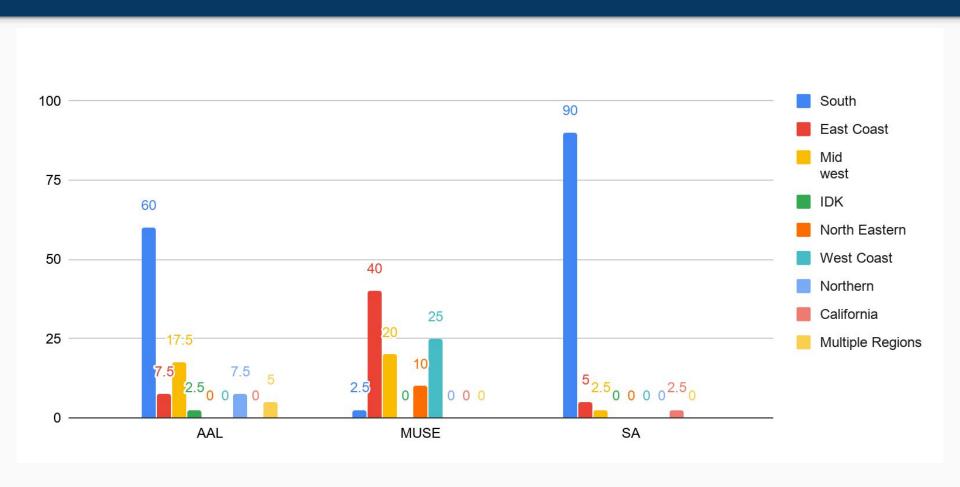
- Better than chance, but lower than expected
- In Purnell et al. (1999) and in my previous work using created greeting stimuli, not stimuli from the IPIP experimental context
 - ➤ Baugh 85%
 - ➤ Me (2015) 89.5%

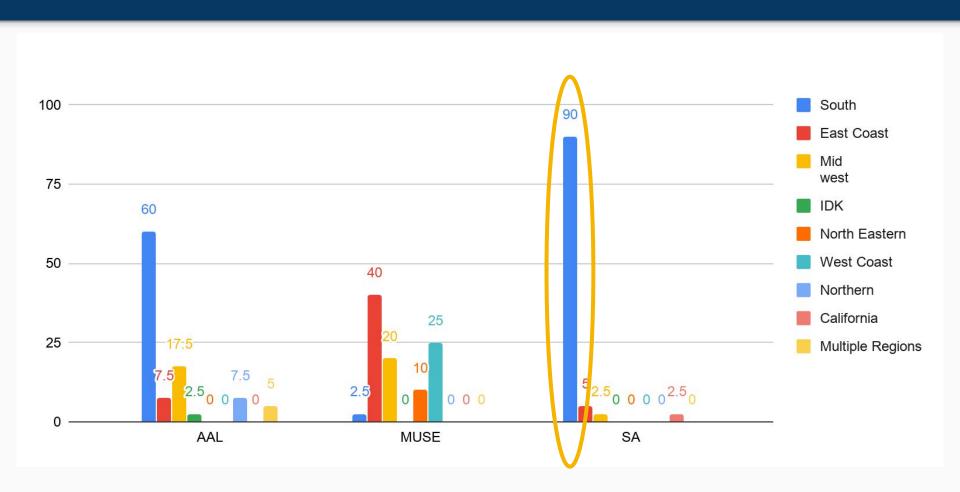


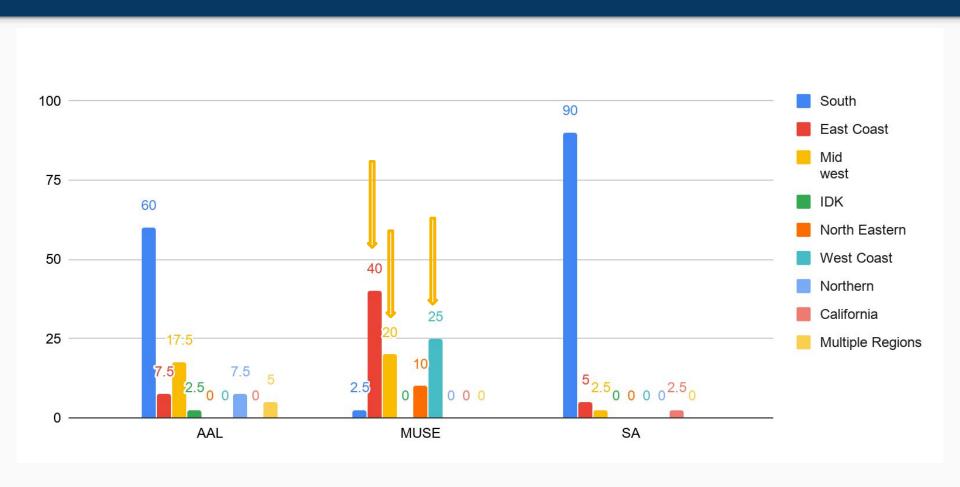
AAL Racial Percepts

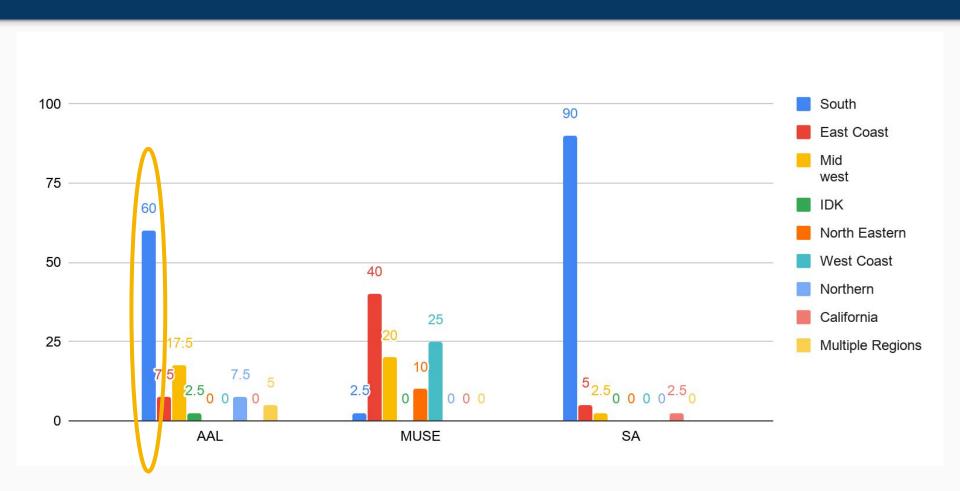
- Better than chance, but lower than expected
- In Purnell et al. (1999) and in my previous work (2015) using created greeting stimuli, not stimuli from the IPIP experimental context
- Speaking live, projecting professionalism, not indexical features

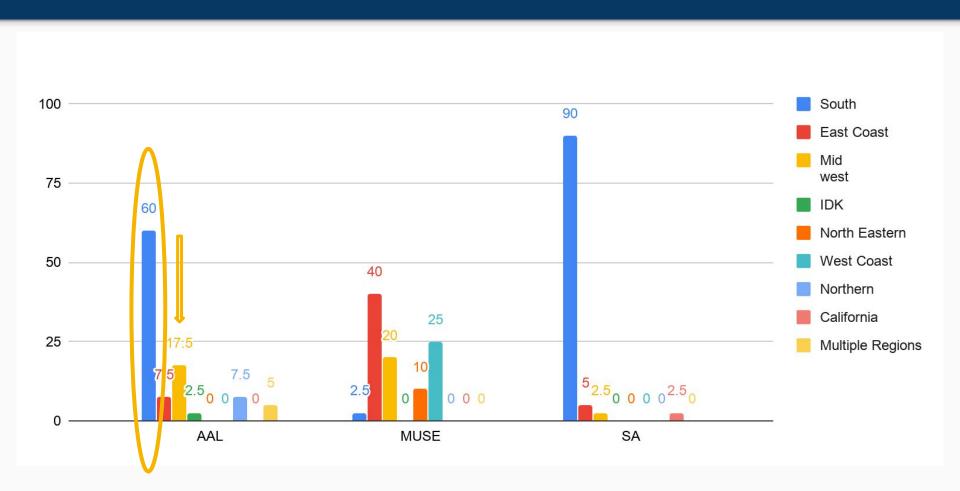












Regional Percepts

- The SA voice is clearly Southern sounding.
 - ➤ Yay!
- The MUSE voice is assigned to Midwestern and Coastal regions.
 - ➤ Yay!



Regional Percepts

- AAL is also assigned Southern frequently.
 - Special history of AAL indexes this variety as Southern speech for many listeners.
- Listeners familiar with both would not mistake one for the other.



Regional Percepts

- The index of Whiteness with the SA variety presupposes there is a Black Southern variety to distinguish it from.
- Regional variation in AAL often indexed to cities
 - Jacksonville, Chicago,Philadelphia, Huston, Atlanta, DC



Regional Percepts

- AAL is also assigned to the Midwest
 - Perhaps due to my practicing this variety in everyday scenarios in the Midwest.



Attribute Assessment

- We know race and region percepts occur rapidly and often accurately
- Can we also develop variant ideological schema as quickly based on the voice alone?



Attribute Assessment

- Participants asked to rate each voice on ten character attributes
- 100-point, non-binary slider
 - Endpoints 0 and 100



Attribute Percepts

	Pleasant	Feminine	Educated	Attractive	Poor
SA	72.90 (16.90)	84.10 (15.78)	55.75 (23.18)	66.53 (19.61)	38.45 (25.38)
MUSE	77.92 (13.48)	86.50 (13.10)	74.10 (19.37)	74.95 (13.07)	20.13 (17.92)
AAL	62.95 (22.15)	75.44 (21.97)	48.48 (27.80)	55.27 (23.67)	45.67 (27.31)
	Masculine	Confident	Trustworthy	Rich	Difficult
	Masculine	Confident	Trustworthy	Rich	Difficult
SA	Masculine 12.60 (21.04)	Confident 65.97 (20.14)	Trustworthy 66.70 (18.12)	45.10 (23.03)	29.80 (25.25)
SA MUSE	12.60	65.97	66.70	45.10	29.80
	12.60 (21.04) 12.22	65.97 (20.14) 66.00	66.70 (18.12) 70.65	45.10 (23.03) 60.52	29.80 (25.25) 25.48

Green = Possesses Positive Characteristics; Red= Possess Negative Characteristics, meaning this table is NOT color coded for voice. Values presented as means out of 100, Standard Deviations in parenthesis; N=40

AAL Voice

- The least pleasant, the least trustworthy, the least attractive, and the least confident sounding
- The most poor, the most masculine, and the most difficult sounding



MUSE Voice

- The most rich (and least poor) and the most educated sounding.
- Receives the most positively valenced ratings in other categories, however...



SA Voice

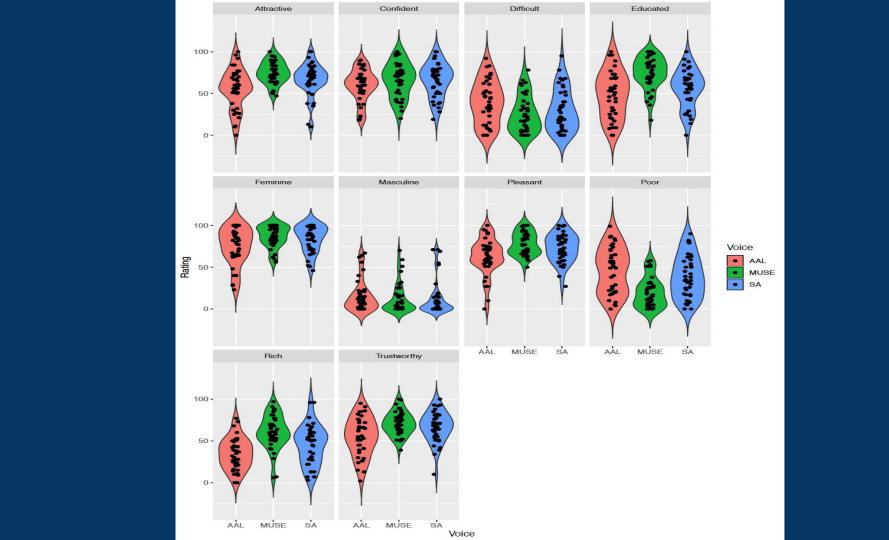
Standard deviations make the SA voice ostensibly on par with MUSE in terms of confident, masculine, feminine, difficult, trustworthy, and pleasant.

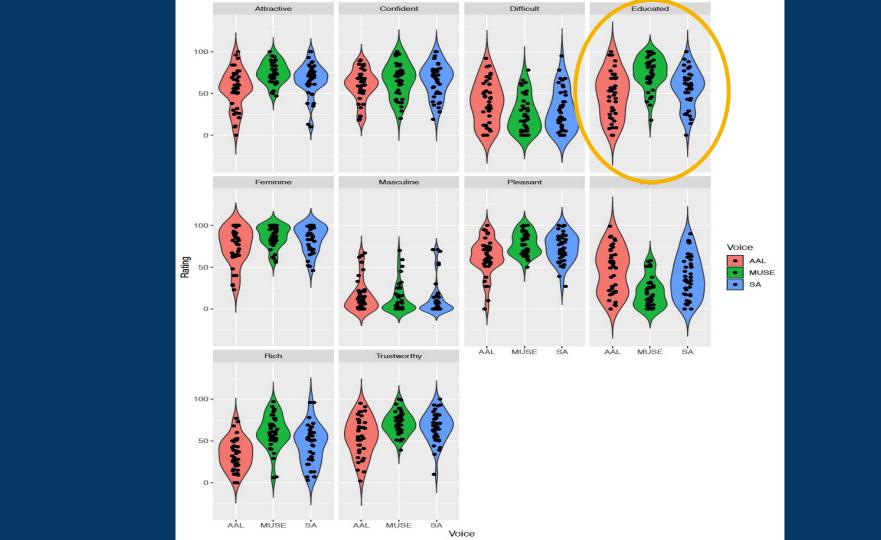


SA Voice

Distinctiveness playing out in ratings for rich and poor, educated, and attractive.



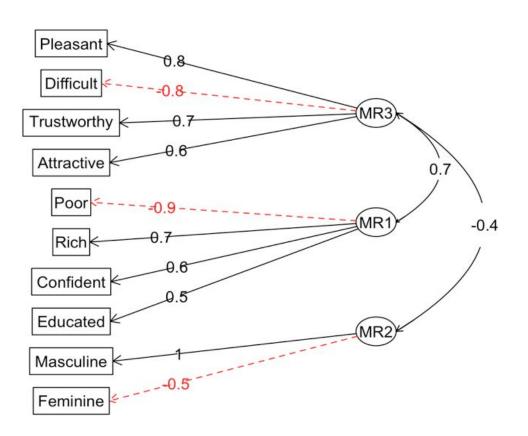


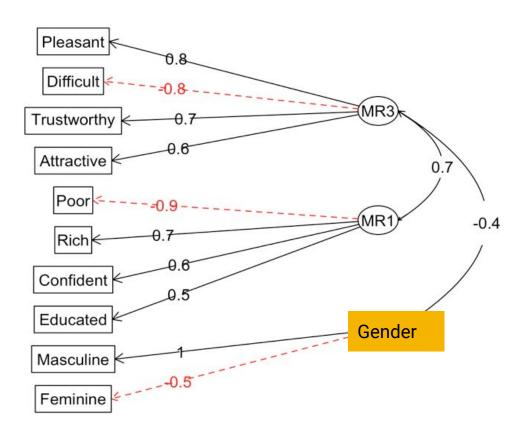


Highly Correlated Attributes

- Attributes are not independent
- Masculine and feminine; rich and poor; pleasant and difficult are expected to covary
- Exploratory Factor Analysis



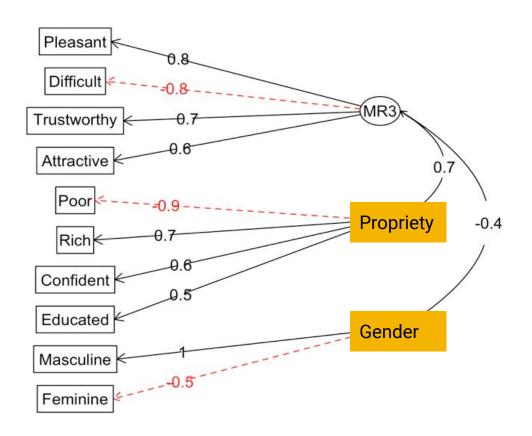




Gender

Masculine and Feminine should be highly correlated.





Propriety

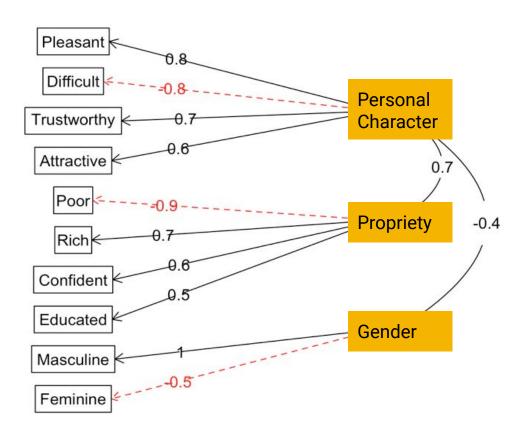
- Attributes that correspond to the qualification of the speaker for the property.
- Experiment 1 asked property managers to list their protocols for accepting new tenants.
 - having sufficient income
 - filling out an application
 - having a clear rental history



Propriety

- Listeners likely had not activated the IPIP register,
 - simply judging how confident or educated the speaker sounded, and not their fit for renting a property.
- Qualities of character related to points of qualification for rental properties are perceptible in the voice.





Propriety

- Attributes perhaps less perceptible through indexed features in speech
 - > an impression of the whole person
- Experiment 1 asked property managers to list qualities of their ideal tenants.
 - Being well spoken and considerate on the phone
 - Providing accurate information



So what?

- Observe the effects of factor weighting
 - Linear mixed model and ANOVA
- For a any voice, a one point increase in masculinity creates a five point reduction in trustworthiness
 - > P value 9.88e-05 ***
 - A masculine sounding female voice is less trustworthy!



Ideological Schema

- General agreement among participants on the built schema for each voice.
- Factor analysis suggests that perceiving even one negatively-valenced social trait can have consequences for the entire schema.



Linguistic Profiling

With these results combined

- Commitment Levels exhibit local prestige effects
- Attribute ratings exhibit variant ideological schema
- Linguistic profiling is operating in the IPIP context.



Questions?

Thanks to Pam, Robin, and Lab mates!!
Thanks to PhonDi!!

@raciolinguistic kellywri@umich.edu