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Georgia
Tech

Perspectives on Georgia vowels: From legacy to synchrony

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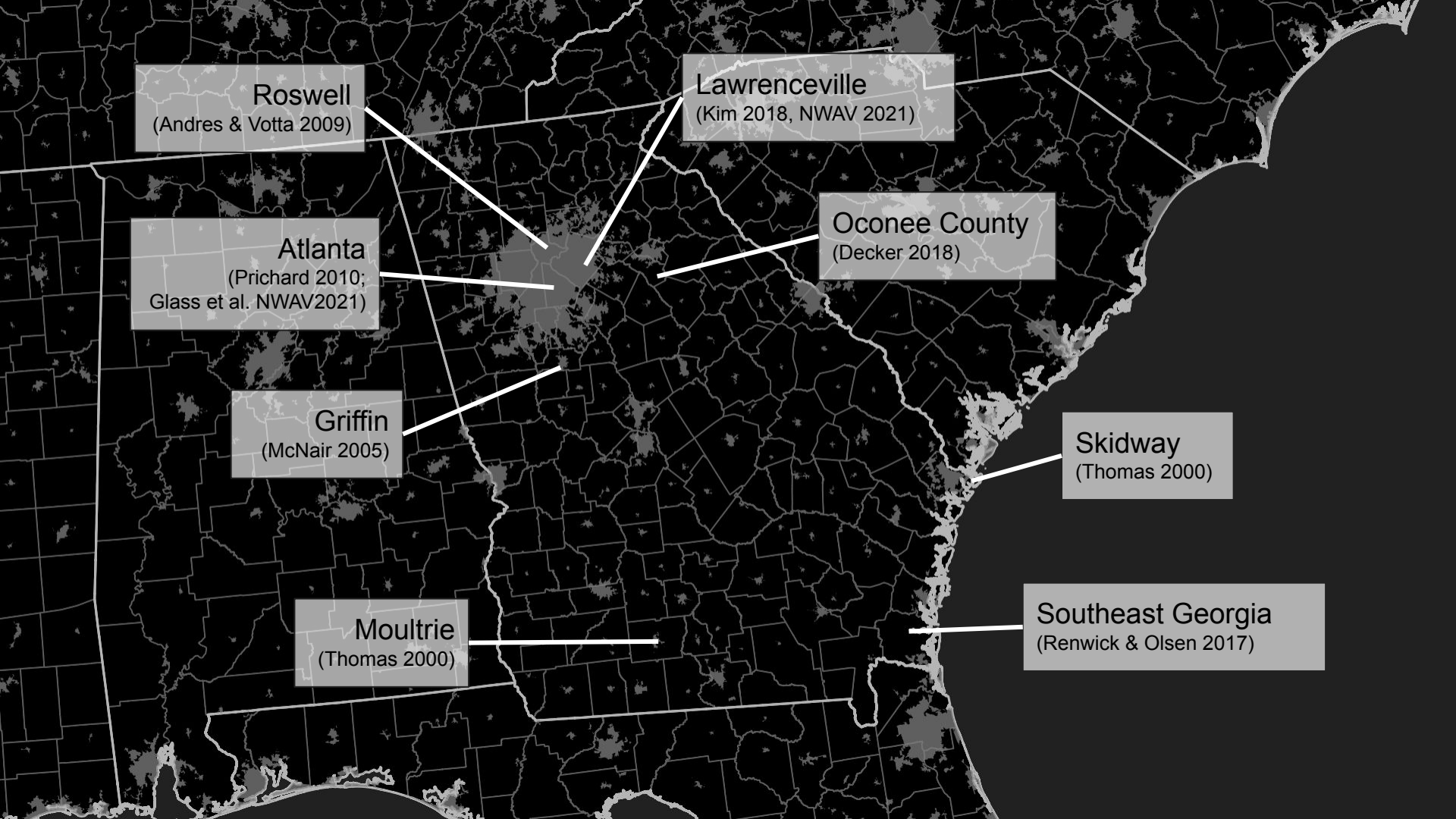
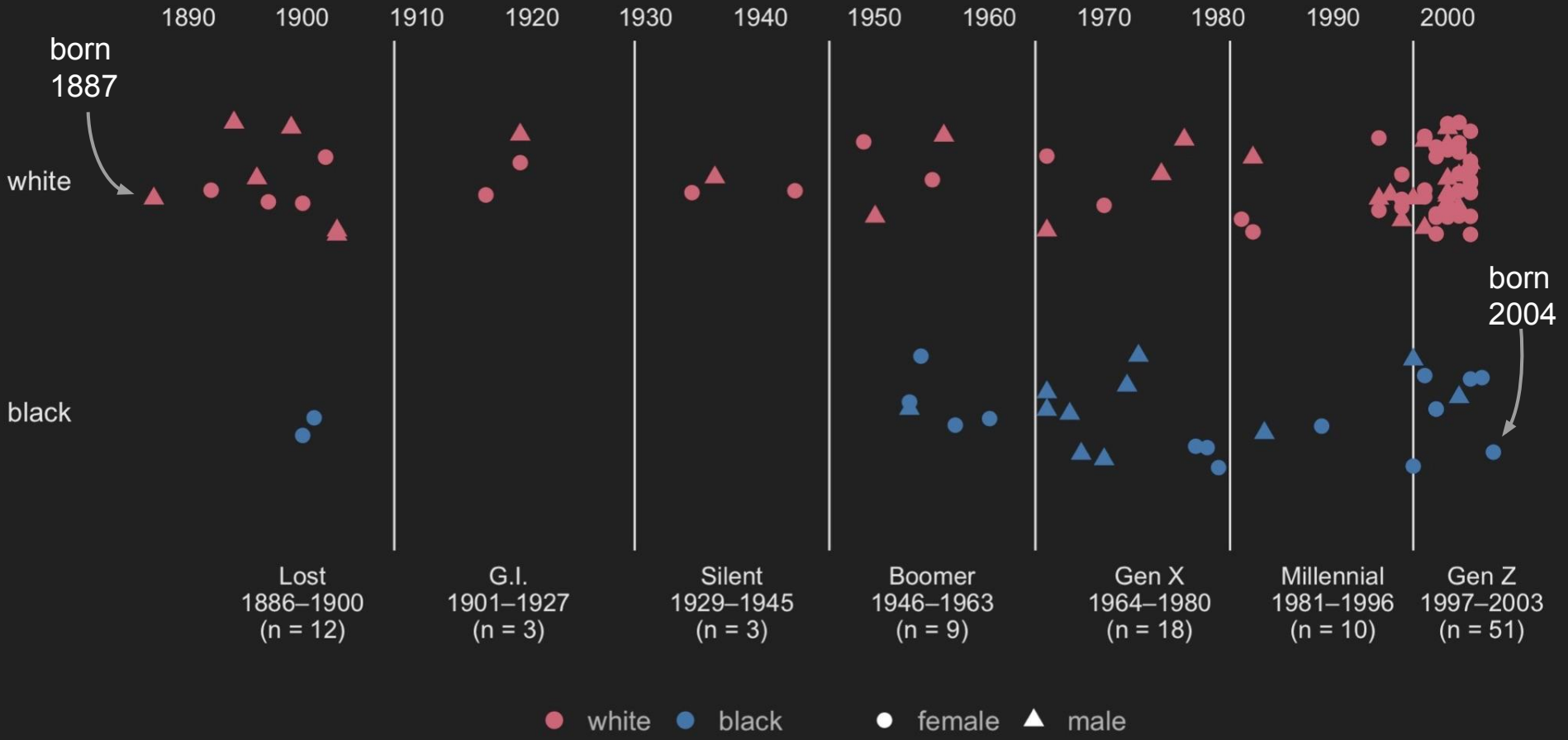

Roswell
(Andres & Votta 2009)
Lawrenceville
(Kim 2018, NWAV 2021)
Oconee County
(Decker 2018)
Atlanta
(Prichard 2010;
Glass et al. NWAV2021)
Griffin
(McNair 2005)
Skidway
(Thomas 2000)
Moultrie
(Thomas 2000)
Southeast Georgia
(Renwick & Olsen 2017)

Longitudinal study; five data collections

- **Linguistic Atlas of the Gulf States** (LAGS; Pederson et al. 1986)
  legacy collection including speakers from Georgia, born 1887-1965
- **Atlanta Survey Project** (2003; Lanehart & Kretzschmar): speakers born 1919-1979
- **Roswell Voices Project** (2003-2008; Kretzschmar et al 2007): speakers from northern Fulton County, born 1936-1984
- **University of Georgia, Georgia Tech** (2016-present; Stanley, Glass, Forrest): student speakers, raised all around Georgia, born 1989-2004

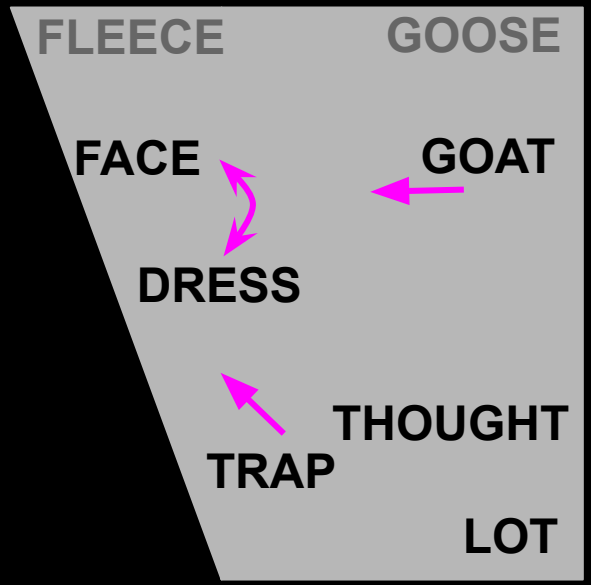
134 speakers total (106 Black and White speakers analyzed here)

Distribution of transcribed speakers by generation, ethnicity, and gender

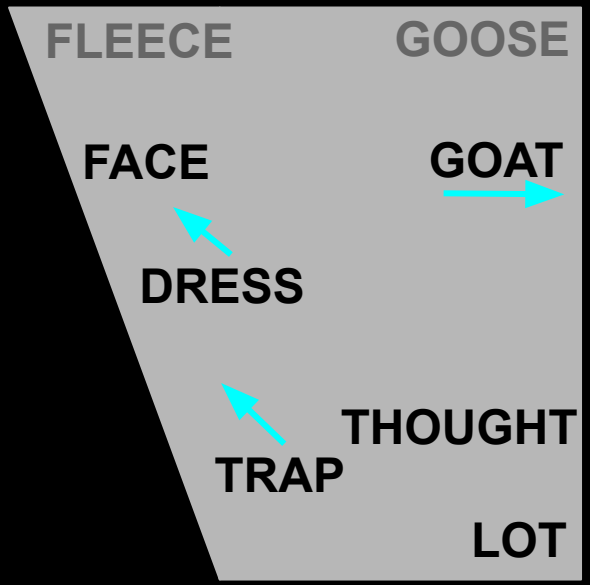


Speakers of additional ethnicities not shown

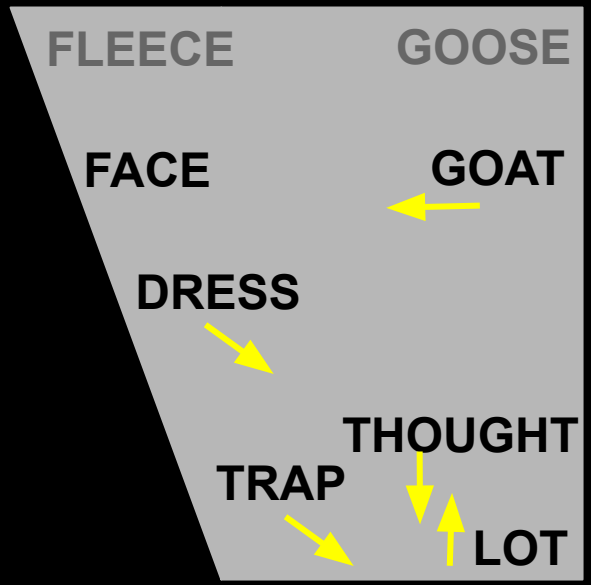
The three vowel shifts of Georgia English?



Southern Vowel Shift
(Labov 1991)



African American Vowel Shift
(Thomas 2007, Farrington et al. 2021)



Low Back Merger Shift
(Eckert 2008, Becker 2019)

Yeah that's right

Nexuses of change in Georgia English

Mid vowels

- How are FACE and DRESS distinguished over time?
- Which speakers show DRESS raising/fronting (SVS, AAVS)?
- When does DRESS lowering/backing begin (LBMS)?
- Which speakers show GOAT fronting (SVS, LBMS vs. AAVS)?

Low vowels

- Which speakers show TRAP raising/fronting (SVS, AAVS)?
- When does TRAP lowering/backing begin (LBMS)?
- Which speakers have the LOT/THOUGHT merger (LBMS)?

Data

corpus	speakers	hours	vowels
LAGS	17	72	24,515
Atlanta Speech Project	14	14	7,325
Roswell Voices	15	15	9,533
GA Tech	54	27	14,093
UGA	6	13	2,976
total	106	141	58,442

vowel	tokens
FACE	11,437
DRESS	15,240
GOAT	7,676
TRAP	10,447
LOT	9,492
THOUGHT	4,150
total	58,442

Methods

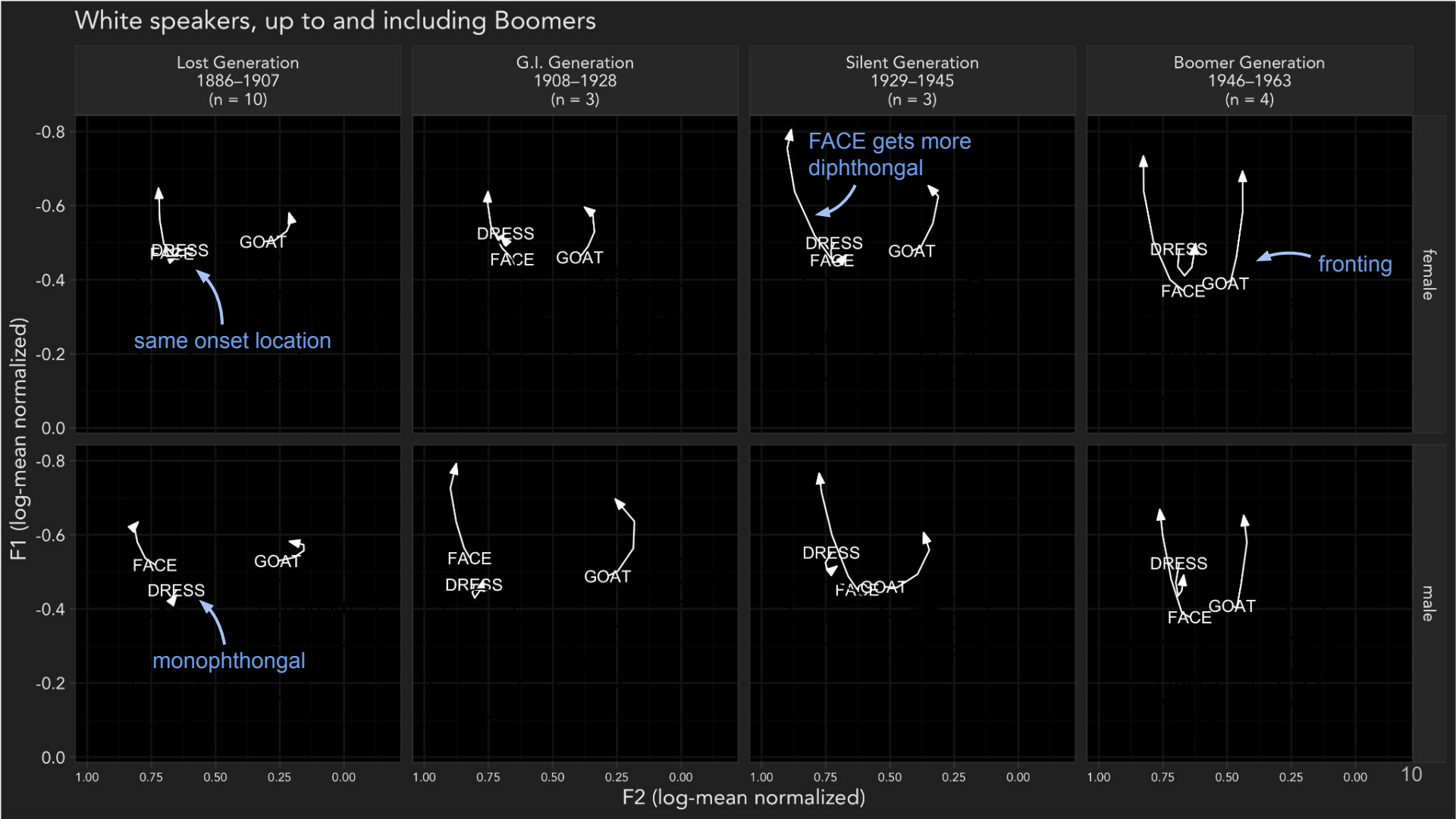
Acoustic analysis	**transcription**	manual
	forced alignment	Montreal Forced Aligner (McAuliffe et al. 2017) via DARLA (Reddy & Stanford 2015)
	formant extraction	FAVE (Rosenfeld et al. 2014), via DARLA, extracted F1-F2 at 20%, 35%, 50%, 65%, and 80% of vowel duration
Number crunching (in this order, cf. Stanley 2021)	**remove stopwords**	`stopwords::stopwords(source = "marimo")`
	remove outliers	Modified Mahalanobis Distance (Stanley 2020)
	normalize	Log-means (Barreda & Nearey 2018)
	exclusions	kept pre-obstruent tokens only For TRAP, LOT, THOUGHT: midpoints only For FACE, DRESS, GOAT: full trajectories
Tools	**Software**	R (R Core Team 2018), tidyverse (Wickham 2018)
	Visuals	ggplot2 (Wickham 2015)

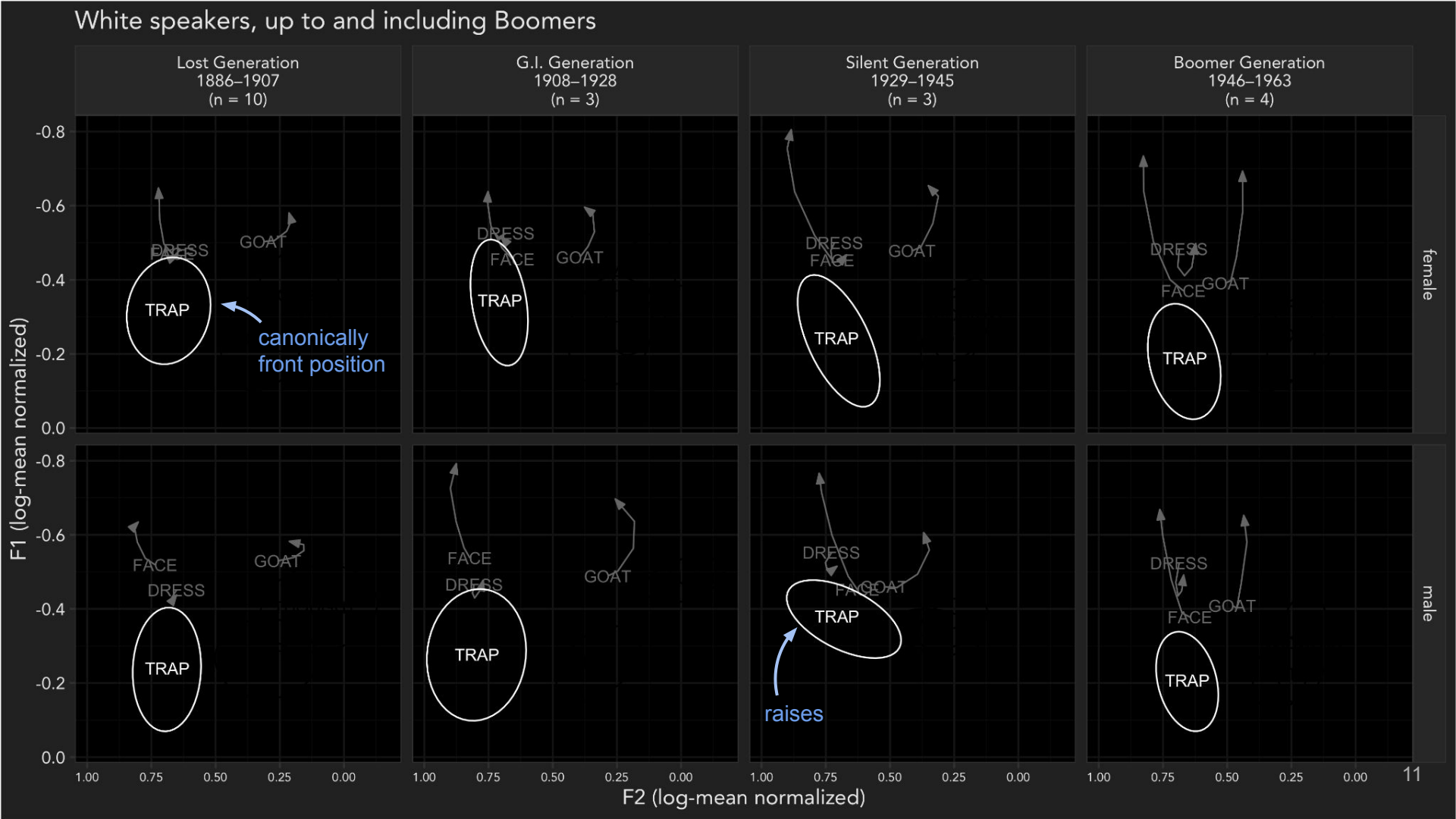
Results: building the vowel space, across generations

Mid vowels + TRAP + Low-Back Vowels

Three visualizations:

1. White speakers, from Lost to Boomers
2. White speakers, from Boomers to Gen Z
3. Black speakers, from Boomers to Gen Z


White speakers, up to and including Boomers
Lost Generation
1886–1907
(n = 10)
G.I. Generation
1908–1928
(n = 3)
Silent Generation
1929–1945
(n = 3)
Boomer Generation
1946–1963
(n = 4)
female
male
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.8
-0.6
-0.4
-0.2
0.0
1.00
0.75
0.50
0.25
0.00
DRESS
FACE
GOAT
same onset location
FACE gets more diphthongal
fronting
monophthongal
10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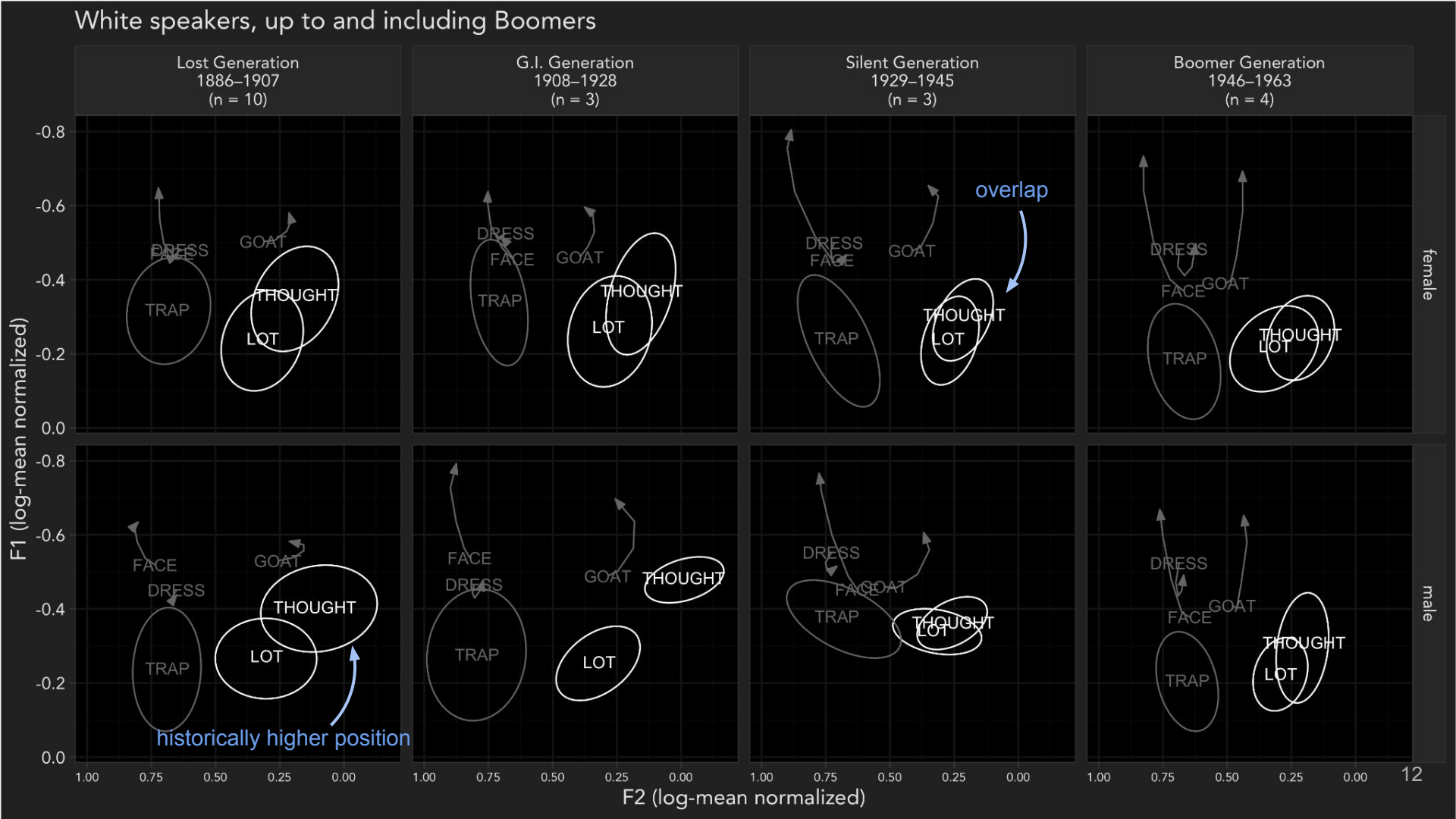
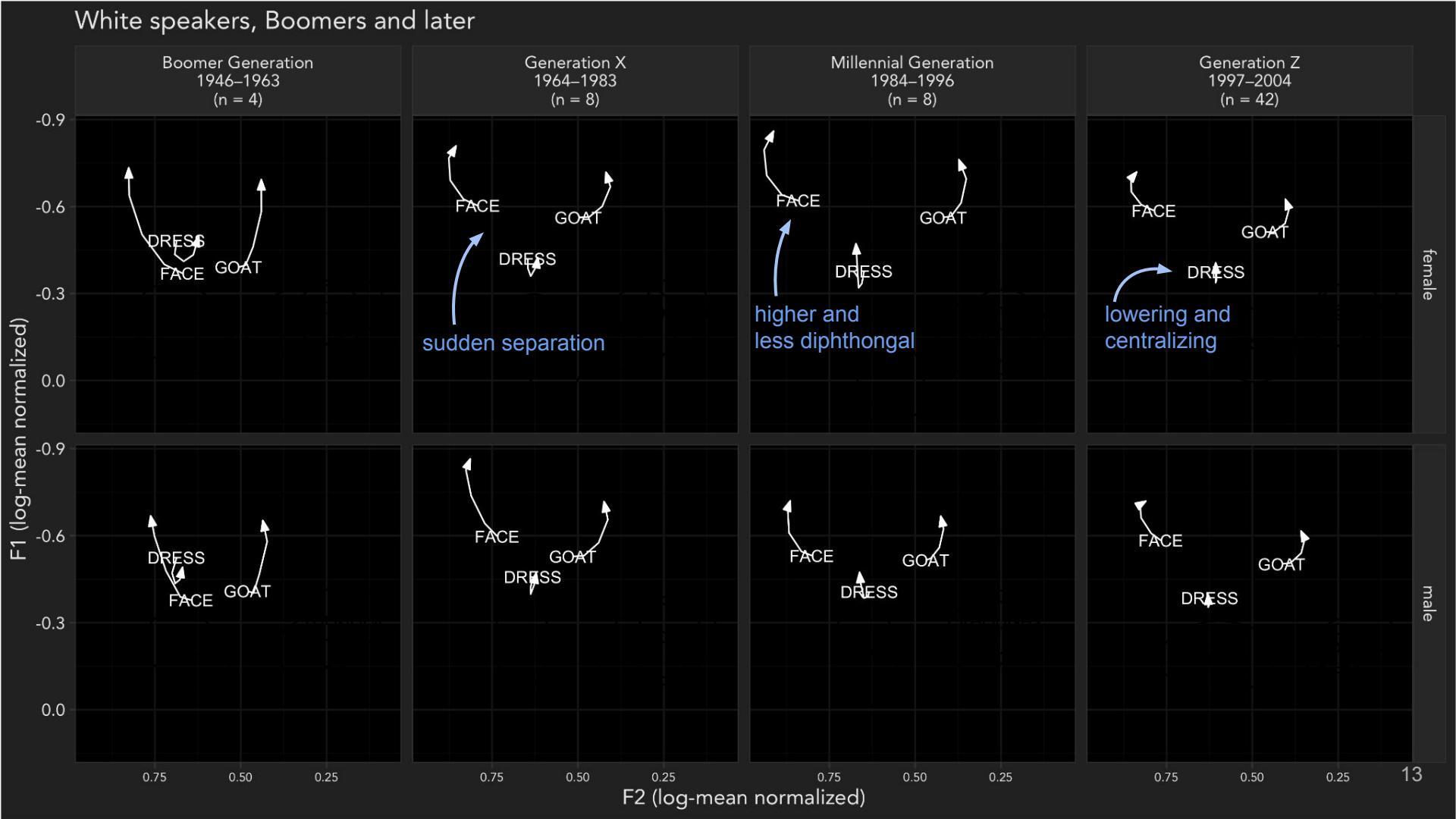
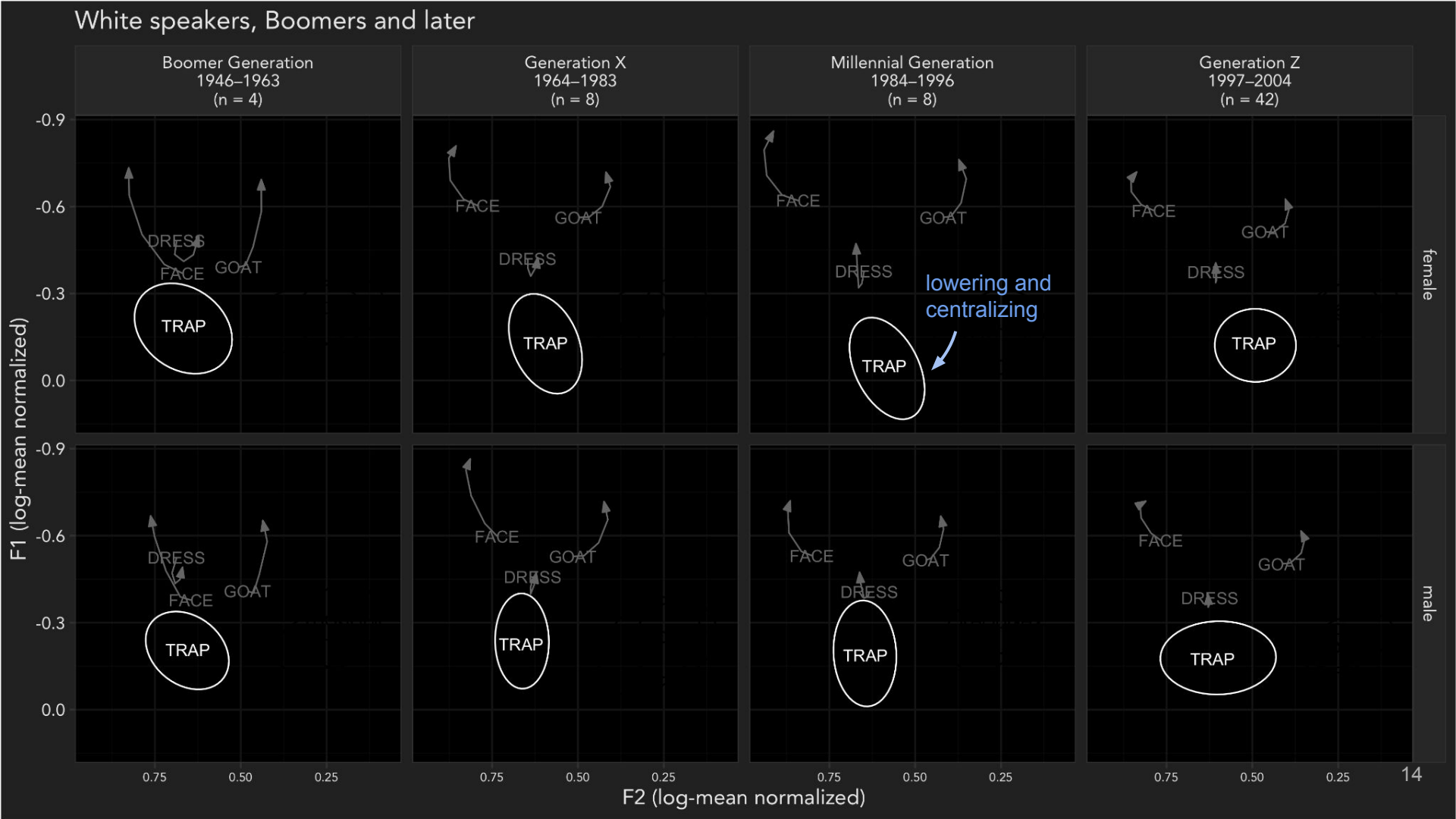
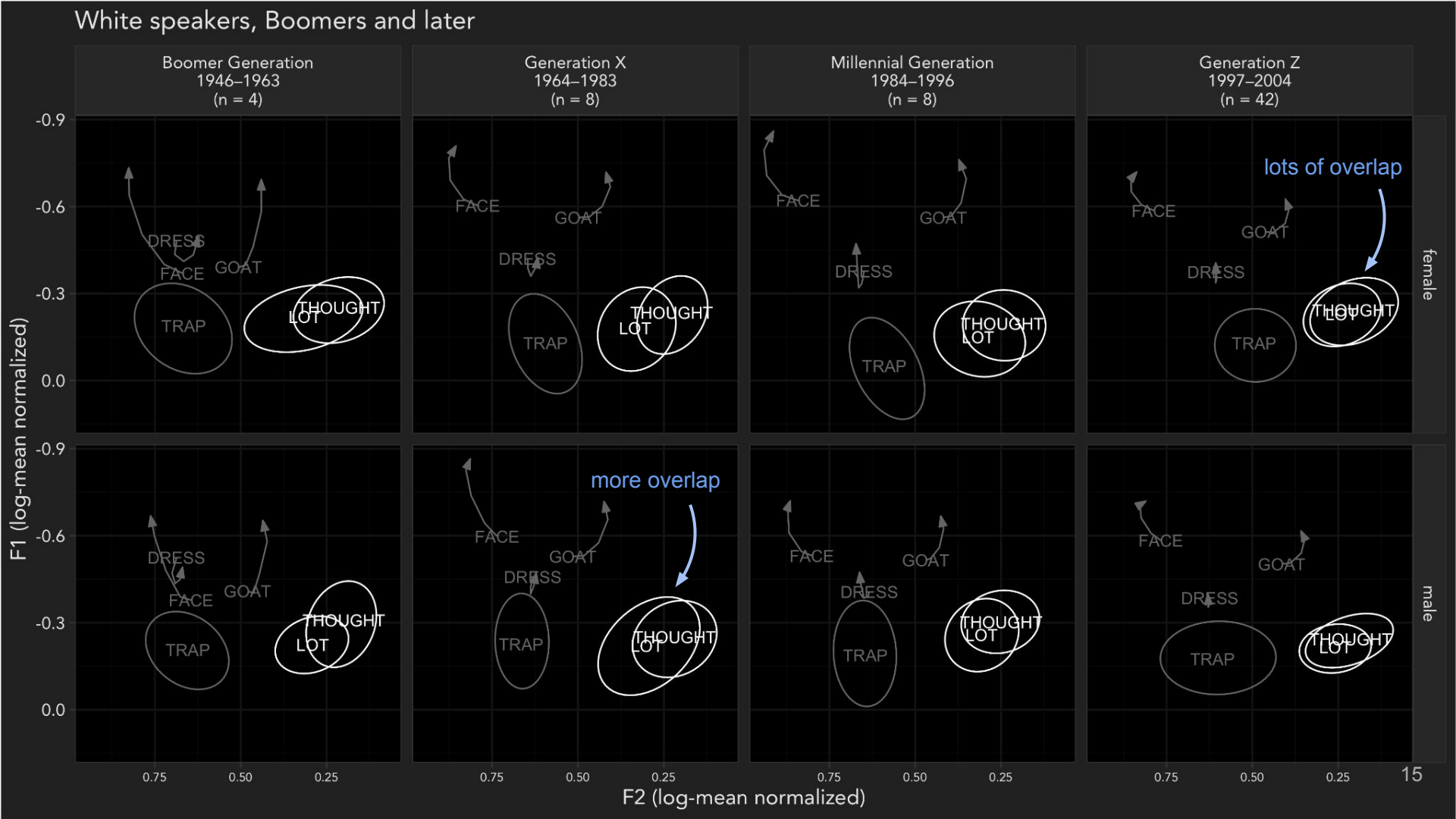
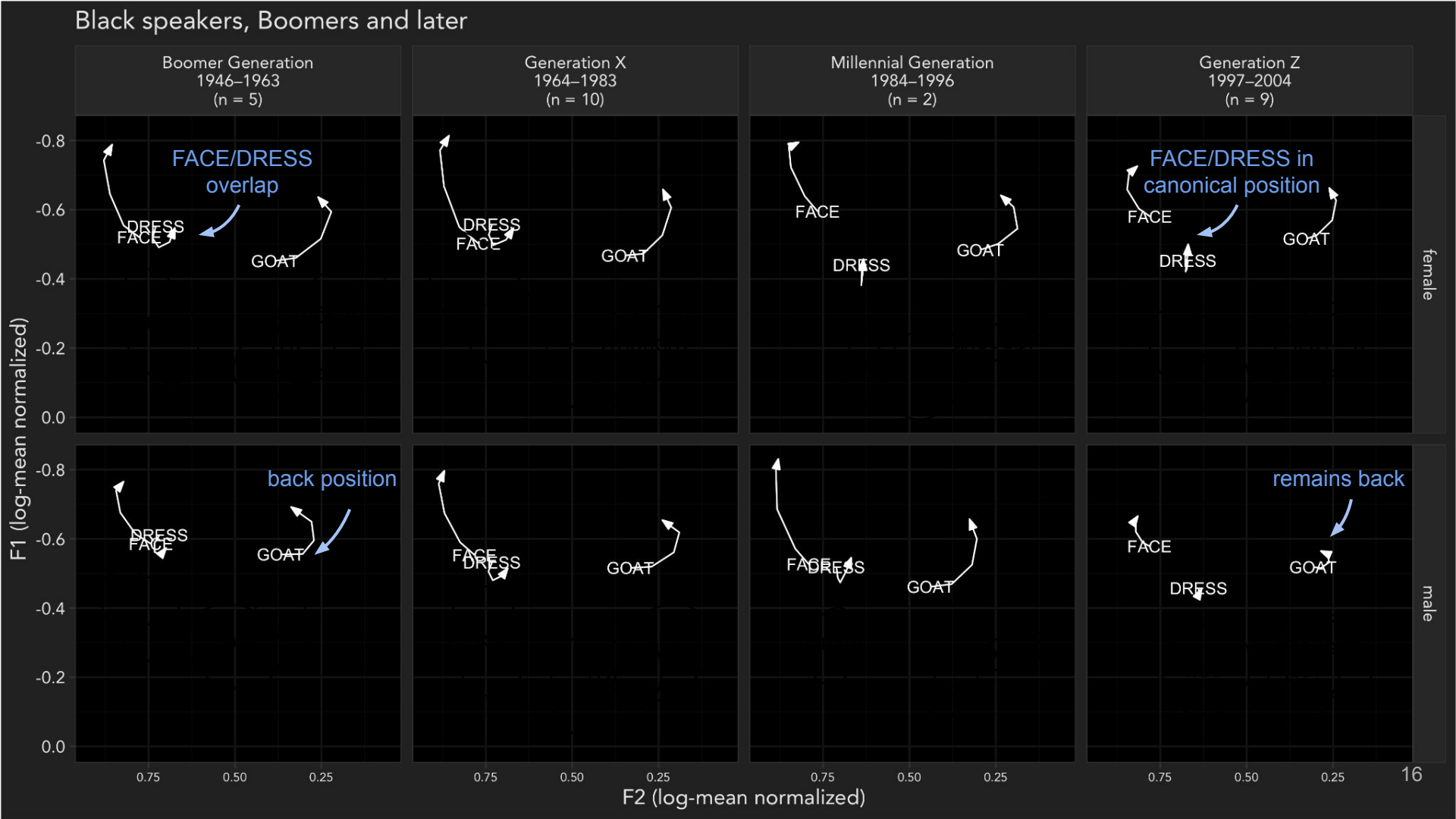
(n = 3)
Silent Generation
1929–1945
(n = 3)
Boomer Generation
1946–1963
(n = 4)
female
male
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.8
-0.6
-0.4
-0.2
0.0
1.00
0.75
0.50
0.25
0.00
TRAP
DRESS
FACE
GOAT
canonically
front position
raises
11


White speakers, up to and including Boomers
Lost Generation
1886–1907
(n = 10)
G.I. Generation
1908–1928
(n = 3)
Silent Generation
1929–1945
(n = 3)
Boomer Generation
1946–1963
(n = 4)
female
male
overlap
historically higher position
DRESS
FACE
GOAT
TRAP
THOUGHT
LOT
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.8
-0.6
-0.4
-0.2
0.0
1.00
0.75
0.50
0.25
0.00
12

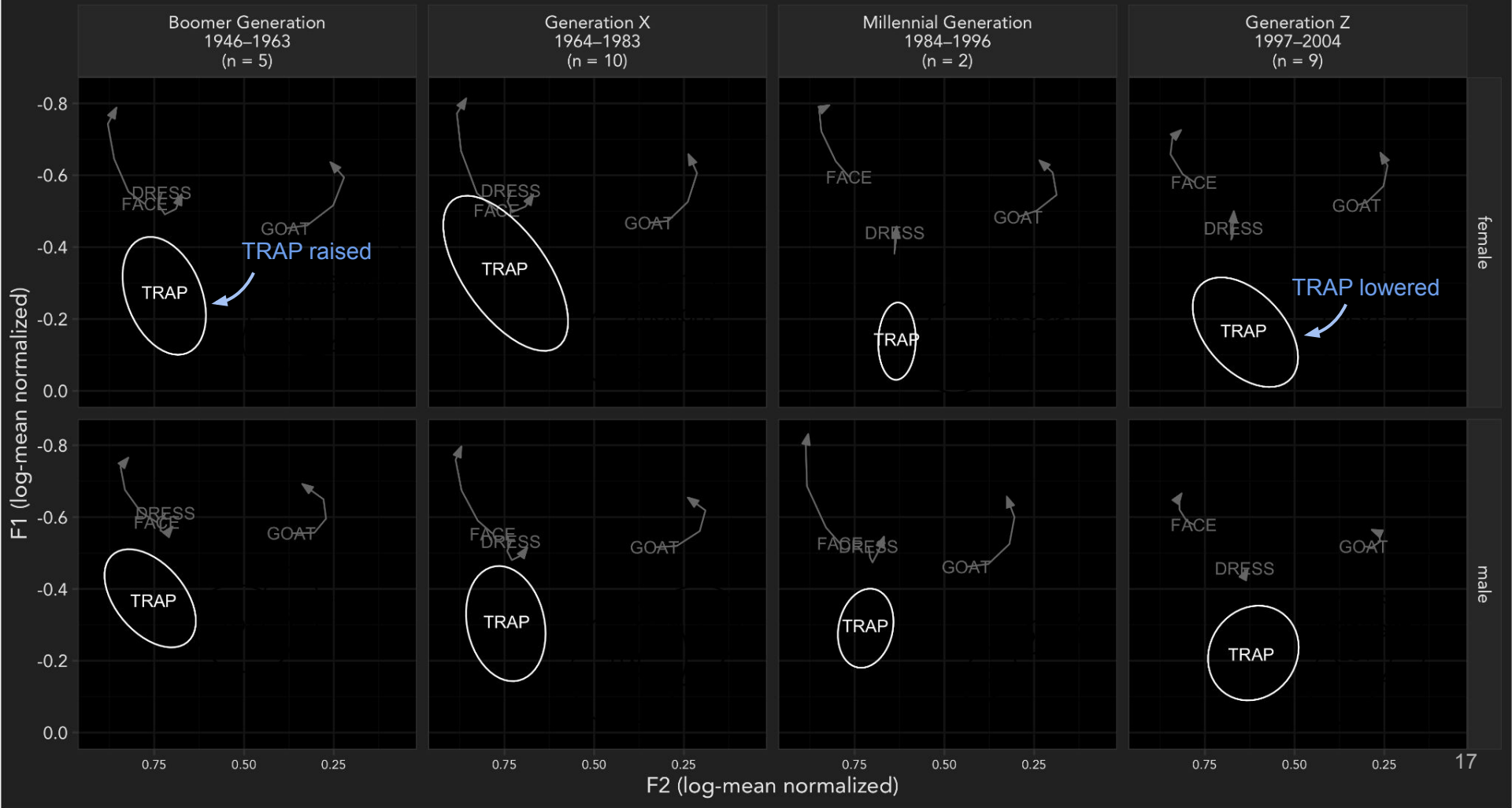

White speakers, Boomers and later
Boomer Generation
1946–1963
(n = 4)
Generation X
1964–1983
(n = 8)
Millennial Generation
1984–1996
(n = 8)
Generation Z
1997–2004
(n = 42)
female
male
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.9
-0.6
-0.3
0.0
0.75
0.50
0.25
DRESS
FACE
GOAT
sudden separation
higher and
less diphthongal
lowering and
centralizing
13


White speakers, Boomers and later
Boomer Generation
1946–1963
(n = 4)
Generation X
1964–1983
(n = 8)
Millennial Generation
1984–1996
(n = 8)
Generation Z
1997–2004
(n = 42)
female
male
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.9
-0.6
-0.3
0.0
0.75
0.50
0.25
FACE
GOAT
DRESS
TRAP
lowering and
centralizing
14

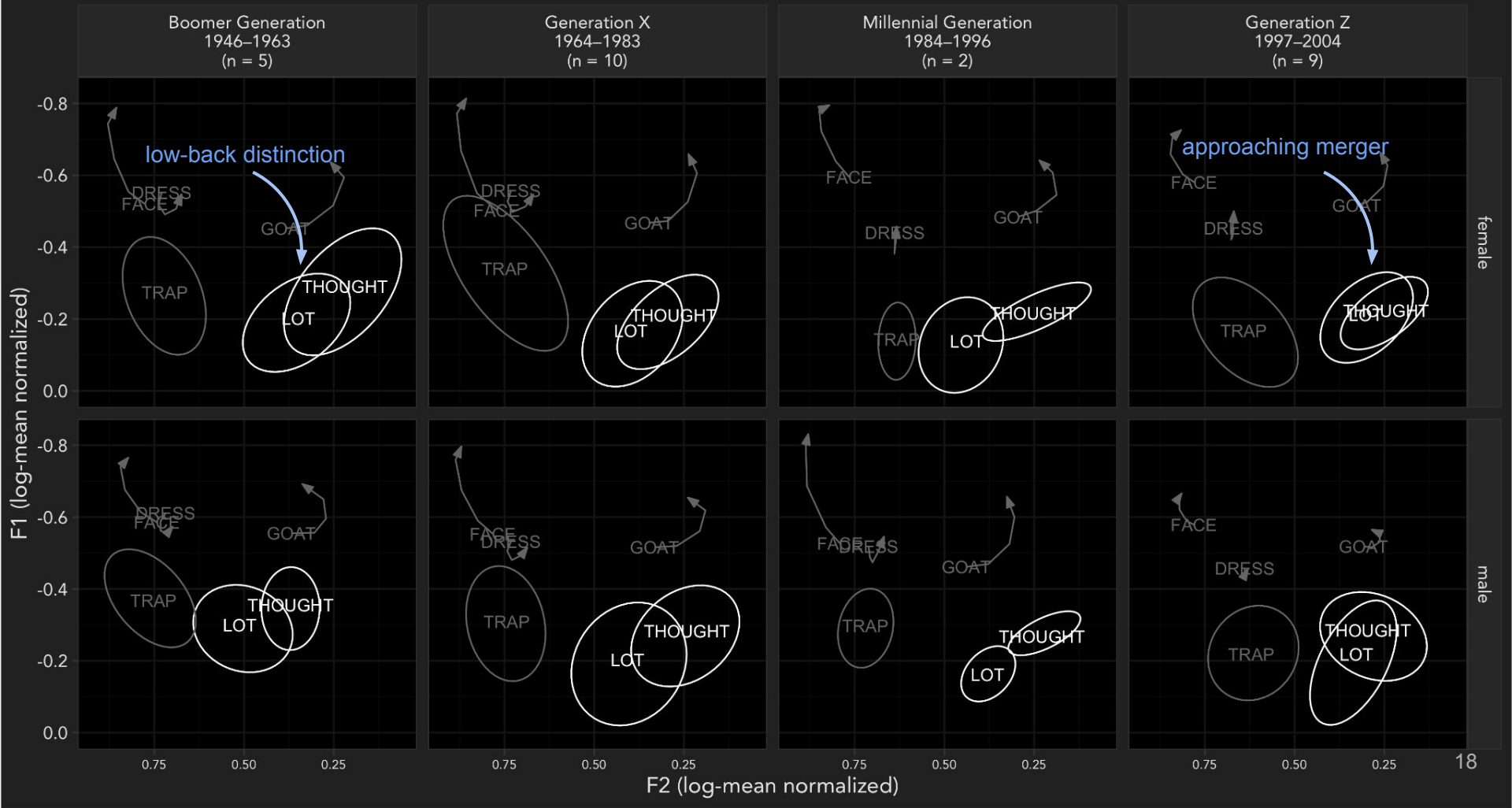

White speakers, Boomers and later
Boomer Generation
1946–1963
(n = 4)
Generation X
1964–1983
(n = 8)
Millennial Generation
1984–1996
(n = 8)
Generation Z
1997–2004
(n = 42)
lots of overlap
more overlap
female
male
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.9
-0.6
-0.3
0.0
0.75
0.50
0.25
FACE
GOAT
DRESS
TRAP
THOUGHT
LOT
15


Black speakers, Boomers and later
Boomer Generation
1946–1963
(n = 5)
Generation X
1964–1983
(n = 10)
Millennial Generation
1984–1996
(n = 2)
Generation Z
1997–2004
(n = 9)
FACE/DRESS
overlap
FACE/DRESS in
canonical position
back position
remains back
DRESS
FACE
GOAT
female
male
F1 (log-mean normalized)
F2 (log-mean normalized)
-0.8
-0.6
-0.4
-0.2
0.0
0.75
0.50
0.25

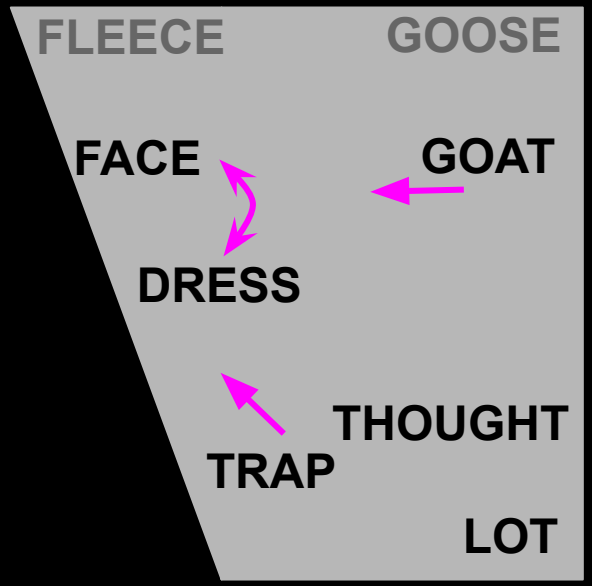
Black speakers, Boomers and later



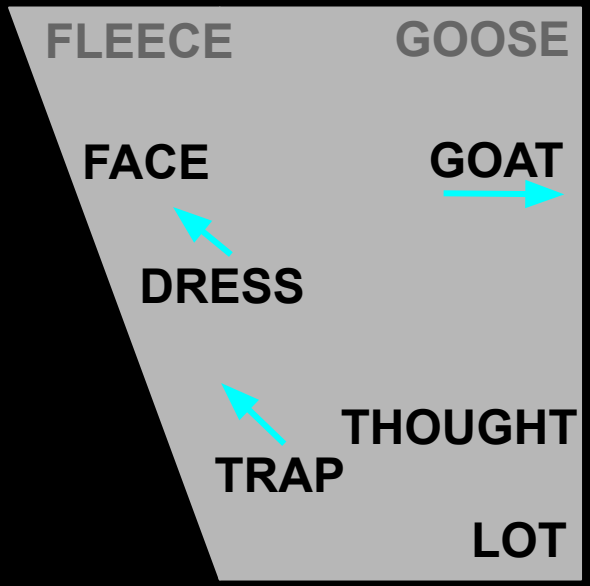
Black speakers, Boomers and later



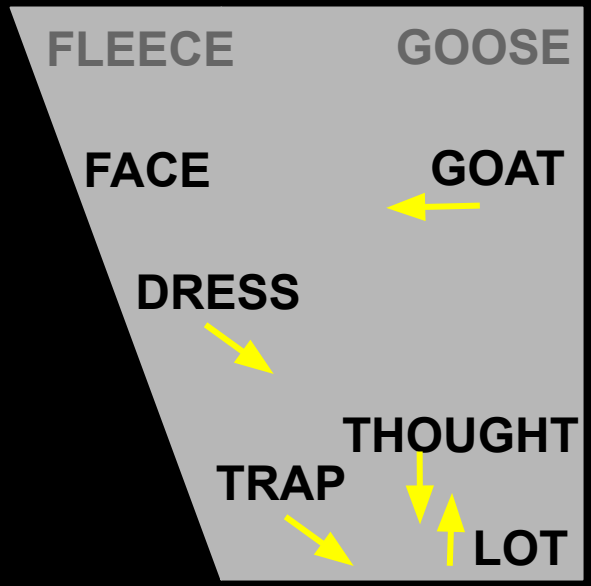
The three vowel shifts of Georgia English?



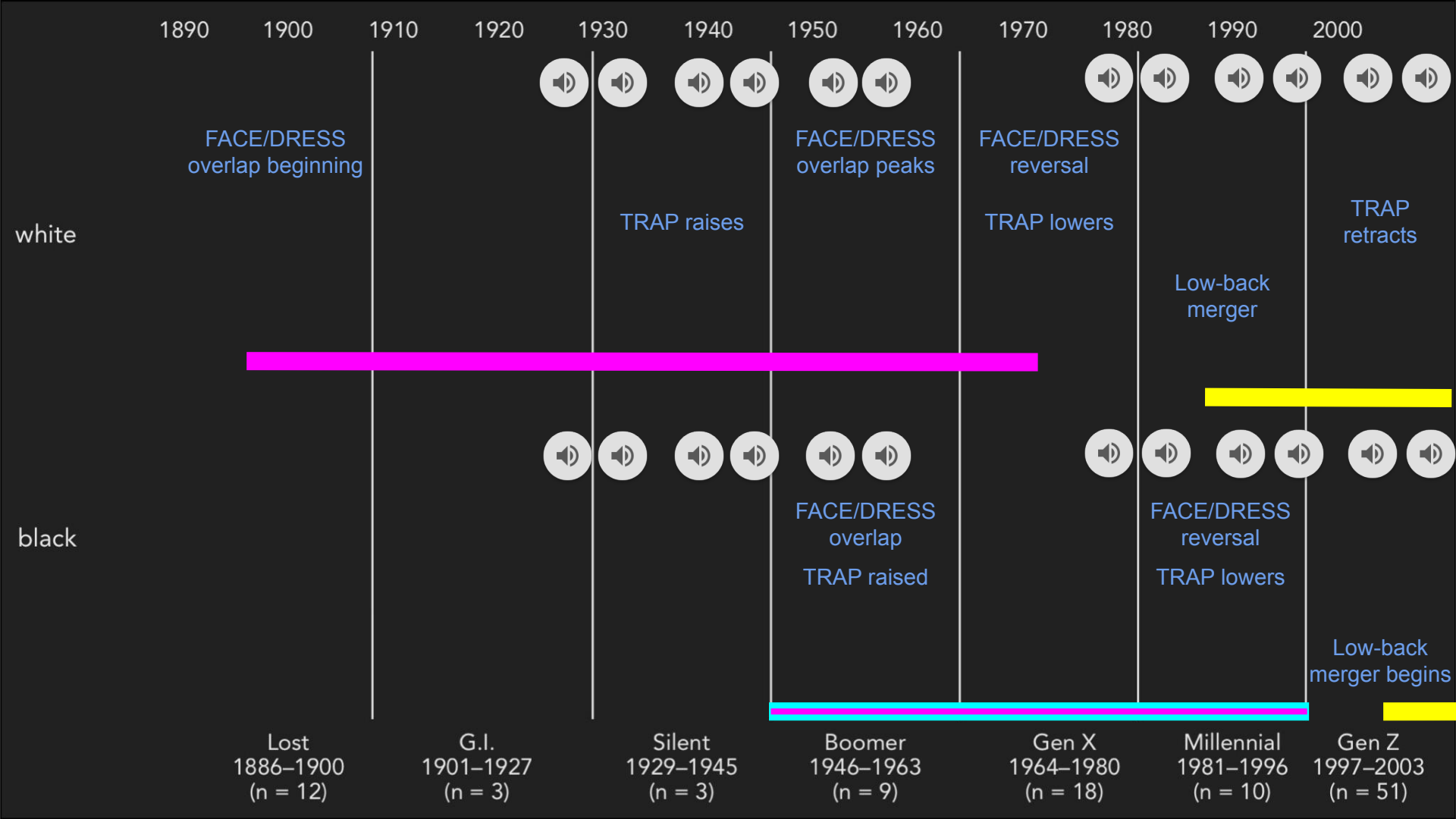
Southern Vowel Shift
(Labov 1991)



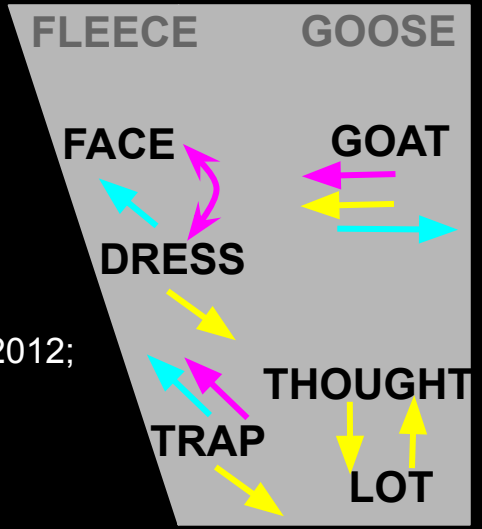
African American Vowel Shift
(Thomas 2007, Farrington et al. 2021)



Low Back Merger Shift
(Eckert 2008, Becker 2019)


1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
white
FACE/DRESS
overlap beginning
TRAP raises
FACE/DRESS
overlap peaks
FACE/DRESS
reversal
TRAP lowers
TRAP
retracts
Low-back
merger
black
FACE/DRESS
overlap
TRAP raised
FACE/DRESS
reversal
TRAP lowers
Low-back
merger begins
Lost
1886–1900
(n = 12)
G.I.
1901–1927
(n = 3)
Silent
1929–1945
(n = 3)
Boomer
1946–1963
(n = 9)
Gen X
1964–1980
(n = 18)
Millennial
1981–1996
(n = 10)
Gen Z
1997–2003
(n = 51)

Discussion



White speakers

- Southern Vowel Shift partially present in oldest speakers, peaks with Boomers
- Southern Vowel Shift proceeding, then reversing (Dodsworth and Kohn 2012; Fridland 1999; Prichard 2010, etc.)
- Beginnings of the Low-Back Merger Shift

Black speakers

- Similar reversal of regional vowel shifts
- Southern Vowel Shift vs. African-American Vowel Shift?
- Back GOAT as a regional feature for Black speakers? (Thomas 2007; Farrington et al. 2021)
- Low-Back Merger Shift?

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Thanks to….

- All the speakers who shared their language and time.
- The members of the Language & Politics in the New South Vertically Integrated Project Team at Georgia Tech for recording interviews and transcribing data.

These slides are available at joeystanley.com/ads2022.

Bonus Slides

What do these shifts sound like, across generations?

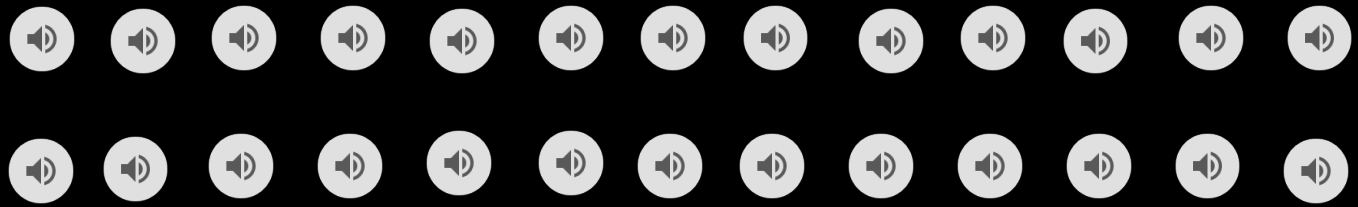
ATL 001 (White woman from Tucker, b. 1949) “taste”, “best”, “back”

GT 5148 (White woman from Savannah, b. 2002) “organizations”, “next”, “back”

GT 6081 (White man from Dunwoody, b. 2000) “math”

ATL 006 (Black woman from Decatur, b. 1960) “communication, “wedding”, “last”

GT 3002 (Black woman from Acworth, b. 1999) “Stacy”, “credits”, “path”



Front vowels

FACE: down-up pattern!

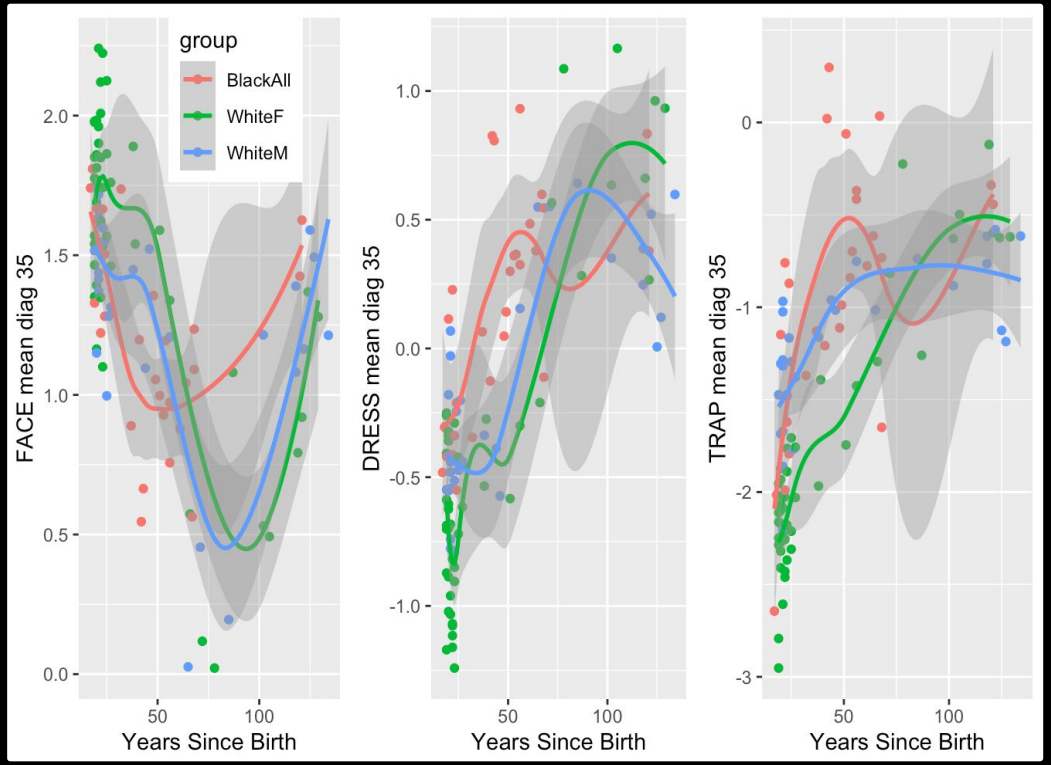
SVS advances, then retreats?

DRESS: younger -> lower/backer

SVS retreats, LBMS advances

TRAP: younger -> lower/backer

SVS retreats, LBMS advances; young White gender split



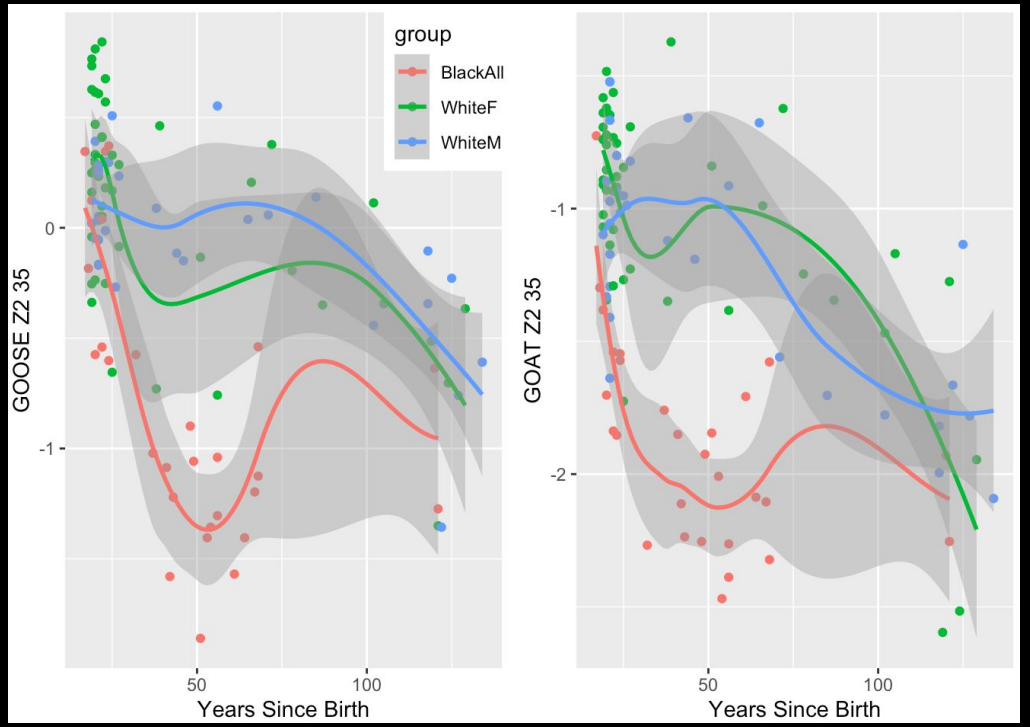
Back vowels

GOOSE, GOAT: younger -> fronter

- SVS, LBMS go the same way!

Black speakers converging towards White? Largest split b. 50 years ago

- But, little data from those born before then
- Sampling bias? Youngest Black speakers are college students



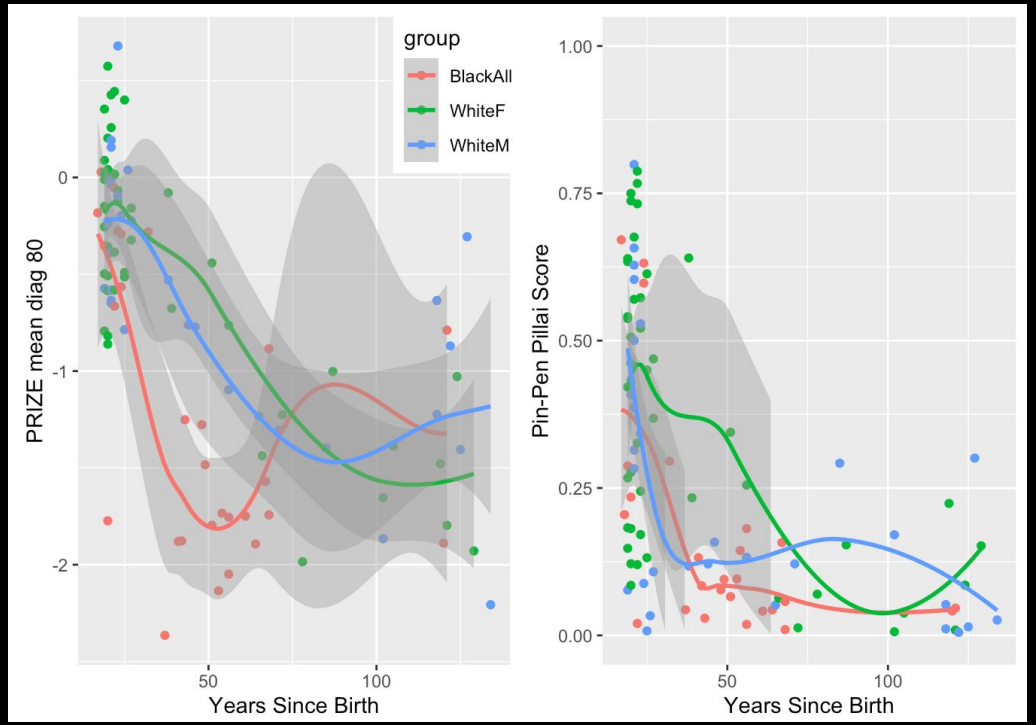
Other SVS elements

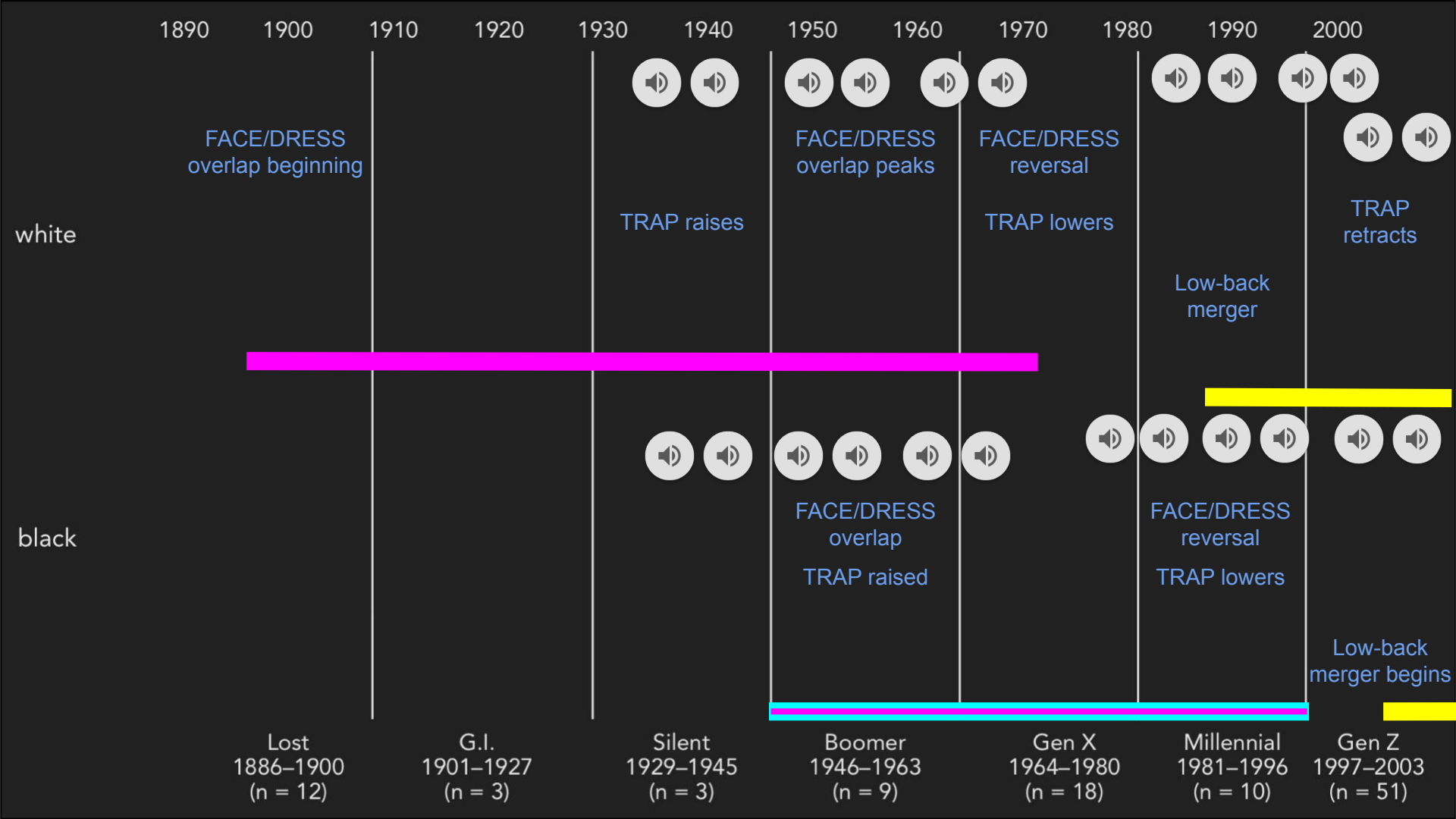
PRIZE: younger -> more diphthong

SVS retreat

PIN/PEN: younger -> less merged, but a lot of variation!

"Southern" feature going strong!; merger vs. vowel space features?

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TRAP lowers
Low-back
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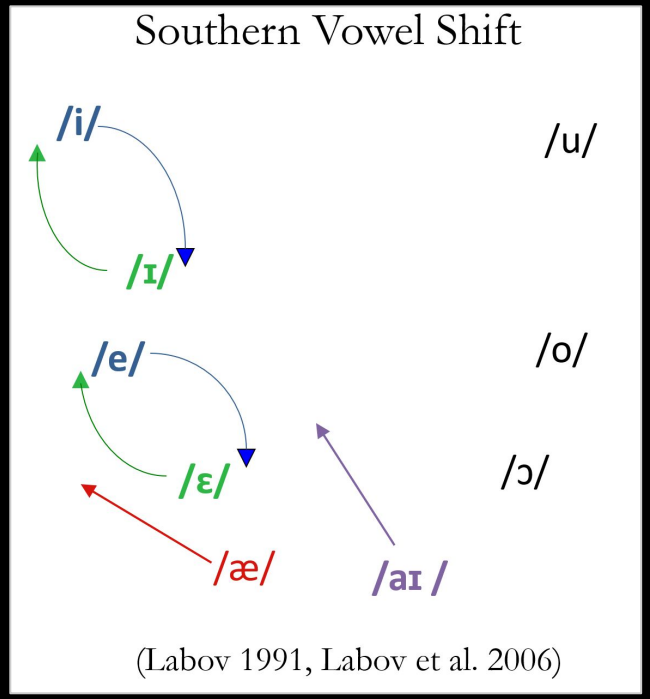
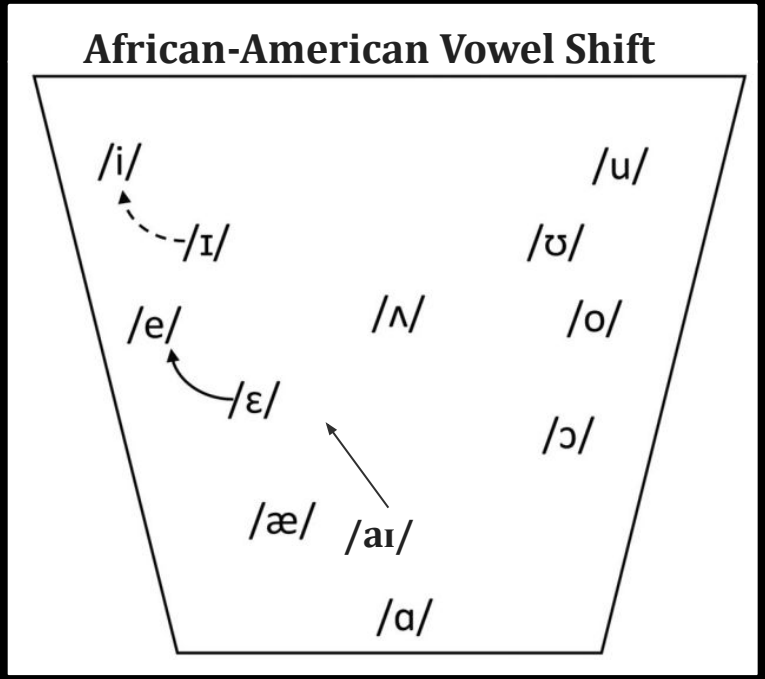
(n = 18)
Millennial
1981–1996
(n = 10)
Gen Z
1997–2003
(n = 51)

INTRODUCE VOWEL SHIFTS AND COLOR-CODING





Speakers b. 1887-2004!

Linguistic Atlas of the Gulf States (LAGS; Pederson et al. 1986): legacy collection including speakers from Georgia, b. 1887-1965

Atlanta Speech Project (2003): speakers from Atlanta, b. 1919-1979

Roswell Voices project (2003-2008): speakers from Fulton County, b. 1936-1984

UGA, GT (2016--present): student speakers, grew up all around Georgia, b. 1989-2004

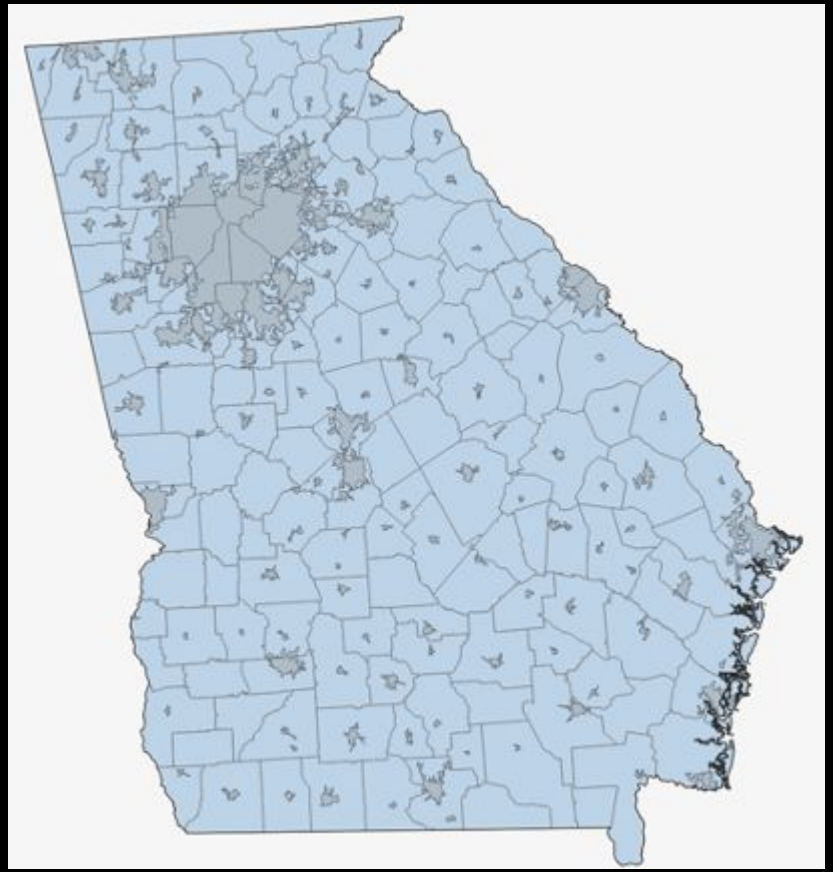
Spoken English in Georgia

Speech in Georgia is understudied

Georgia's urban areas typically shows few features of the SVS, according to Labov et al. 2006

Studies focusing on vowels have used data from around the state:

- rural Southern GA (Moultrie and Skidaway, Thomas 2000; St. Marys, Renwick & Olsen 2017)
- Atlanta (Prichard 2010)
- Atlanta's suburbs (Roswell, Andres & Votta 2009, Lawrenceville, Kim 2018)
- small towns (Griffin, McNair 2005; Oconee County, Decker 2018).



Overview

110 speakers from Georgia b. 1887–2004 (White, Black; women, men)

Large-scale, ongoing enterprise!

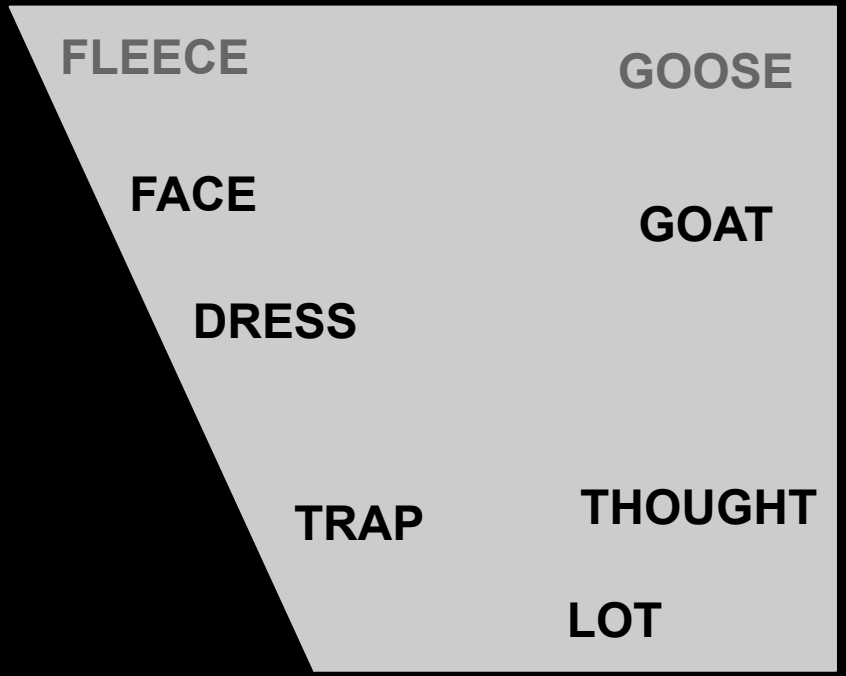
Show changes in FACE/DRESS, TRAP, GOAT, LOT/THOUGHT

Across genders, ethnicities, time

Illuminate diachronic trajectories of Southern Vowel Shift, African American Vowel Shift, Low Back Merger Shift

Map of Georgia 2

Vowels implicated in regional, ethnic, diachronic shifts



FACE: lower in SouthVS

DRESS: higher/fronter in SouthVS, AfrAmVS; lower in Low Back MS

GOAT: fronter in SouthVS, Low Back MS; backer in AfrAm VS

TRAP: higher/fronter in SouthVS, AfrAm VS; lower/backer in Low Back MS

LOT, THOUGHT: merged in Low Back MS