

# New Directions in Sociolinguistic Methods

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# Methods and Research Questions

- How does what a listener believes about someone influence how they hear that person's speech?
- What speech forms do different people use, and what predicts these forms? → new technology

# SOLIS

- a server at UHM that houses interview and conversation corpora
- multiple languages including Pidgin, English, Hawaiian, Khmer, Indonesian, Hungarian, Spanish, and Korean
- 100 interviews with Hawai'i English speakers
- Uses LaBB-CAT (Fromont & Hay 2008)

[home](#) - [search](#) - [upload](#) - [participants](#) - [transcripts](#) - [layer managers](#) - [utilities](#)   
[corpora](#) - [transcript types](#) - [transcript series](#) - [projects](#) - [transcript attributes](#) - [participant attributes](#) - [word layers](#) - [segment layers](#) - [meta layers](#) -  
[free-form layers](#) - [text conversions](#) - [activity](#)

## filter




















select your filter criteria:

name	transcripts	layers	corpus	Language	Gender	Birth Year	Hawaii Born	City
anyone	Series: <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		[layers]				to <input type="text"/>	<div>No, not born in Hawai'i Yes, born in Hawai'i</div>	
<input type="button" value="Search"/>	<input type="button" value="Export"/>							

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<input checked="" type="checkbox"/> Keiko	 x1	HawaiiPlaceNames	English	Female	1991	Yes, bor
<input checked="" type="checkbox"/> Kent	 x4	ScholarSpace	Pidgin	Male		Yes, bor
<input checked="" type="checkbox"/> LanceBaptiste	 x1	SoundChange	English	Male	1987	Yes, bor
<input checked="" type="checkbox"/> Lei	 x1	SoundChange	English	Female	1991	Yes, bor
<input checked="" type="checkbox"/> Li	 x1	HawaiiPlaceNames	English	Female	1992	Yes, bor
<input checked="" type="checkbox"/> ManaiaAlalamus	 x1	SoundChange	English	Male	1984	Yes, bor
<input checked="" type="checkbox"/> Megan Pasco	 x1	HawaiiPlaceNames	English	Female	1991	Yes, bor
<input checked="" type="checkbox"/> Miltonsimang	 x1	SoundChange	English	Male	1970	Yes, bor
<input checked="" type="checkbox"/> Miss Nanakuli	 x1	HawaiiPlaceNames	English	Female	1991	Yes, bor
<input checked="" type="checkbox"/> MrKalihi	 x1	HawaiiPlaceNames	English	Male	1991	Yes, bor
<input checked="" type="checkbox"/> MsWaimea	 x1	HawaiiPlaceNames	English	Female	1990	Yes, bor
<input checked="" type="checkbox"/> Nathan	 x1	ScholarSpace	Pidgin	Male		Yes, bor
<input checked="" type="checkbox"/> Nathan's wife	 x1	ScholarSpace	Pidgin	Female		Yes, bor
<input checked="" type="checkbox"/> PaulSantos	 x1	SoundChange	English	Male	1943	Yes, bor
<input checked="" type="checkbox"/> Rachel	 x1	HawaiiPlaceNames	English	Female	1989	Yes, bor
<input checked="" type="checkbox"/> Sandy	 x1	SoundChange	English	Female	1989	Yes, bor
<input checked="" type="checkbox"/> Taka	 x1	HawaiiPlaceNames	English	Male	1986	Yes, bor
<input checked="" type="checkbox"/> TanniaCheung	 x2	SoundChange	English	Female	1989	Yes, bor
<input checked="" type="checkbox"/> WilliamTyndale	 x2	SoundChange	English	Male	1886	Yes, bor





Layered Search

Export

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Li, ManaiaAlalamus, Megan Pasco, MiltonIsimang, Miss Nanakuli, MrKalihi, MsWaimea, Nathan,  
Nathan's wife, PaulSantos, Rachel, Sandy, Taka, TanniaCheung, WilliamTyndale,

- ☐ language
- ☐  CELEX pronounce
- ☐ **ab** token frequency
- ☐  pronounce
- ☐ **ab** lexical
- ☐ **ab** orthography
- ☒  transcript
- ☒  segments

search across  words

*search regular expressions*

 **transcript**  followed by  
followed by ☐  **segments**  «

- ☒ Only search transcripts for which these are the main participants.
- ☐ Only show results from the first  transcripts.
- ☐ Only match words that are aligned.

Show:

- ☒  each match
- ☐ no matches, only a summary of results

[transcript types]

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\_^.\*like.\*\$

results

Found 3375 results in 4731 turns of total duration 87840 seconds (Search time: 0 minutes [20562ms])

[Export results to Excel \(CSV\) \[options\]](#)

 Abcde.trs - **Abcde:**

1. ☐  alot heavier . in some areas . **like** the way you pronounce things
2. ☐  had it recently too but **like** someone from Maui . hh like
3. ☐  like someone from Maui . hh **like** they said something I'm like .
4. ☐  like they said something I'm **like** . oh god you're . from Maui
5. ☐  yeah . 'cause I guess **like** maybe like what's happening on
6. ☐  'cause I guess like maybe **like** what's happening on Maui's . different
7. ☐  so I know that . **like** affects . they way people talk
8. ☐  hh. I can tell I'm **like** trying to go towards those .
9. ☐  will learn how . if not . **like** . one of my good friends .
10. ☐  speak fluent Hawaiian and so . **like** . teach me .
11. ☐  she- she d- gives me **like** . every . now and then . she
12. ☐  then . she tells me something **like** . okay but of course I
13. ☐  I forget . \$\$\$ . so . it's **like** god do I just get
14. ☐  remember she asked me where **like** I'm from . and I'm like .
15. ☐  like I'm from . and I'm **like** . ok . and I said Kona'she



Home Insert Page Layout Formulas Data Review View Acrobat

Clipboard Font Alignment Number Styles Cells Editing

Calibri 11 A<sup>A</sup>

B I U

General

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Conditional Formatting Format as Table Cell Styles

Insert Delete Format

Sort & Filter Find & Select

H6																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
43	42	Abcde.tr	Abcde	HawaiiPla	1923.006	253218 95	http://sol	sound anr like	like	like	1924.946	1925.046				
44	43	Abcde.tr	Abcde	HawaiiPla	1926.097	249802 95	http://sol	they're fal like	like	like	1926.777	1926.927				
45	44	Abcde.tr	Abcde	HawaiiPla	1939.002	251379 95	http://sol	English . 'c like	like	like	1939.392	1939.582				
46	45	Abcde.tr	Abcde	HawaiiPla	1940.408	250187 95	http://sol	didn't like . like	. like	. like	1940.528	1940.658				
47	46	Abcde.tr	Abcde	HawaiiPla	1944.934	251378 95	http://sol	hh and th like	like	like	1945.744	1945.904				
48	47	Abcde.tr	Abcde	HawaiiPla	1948.782	252845 95	http://sol	of person like	like	like	1948.892	1949.022				
49	48	Abcde.tr	Abcde	HawaiiPla	1950.271	249956 95	http://sol	persons" . like	like	like	1950.921	1951.011				
50	49	Abcde.tr	Abcde	HawaiiPla	1951.738	253232 95	http://sol	I hear that like .	like .	like .	1952.588	1952.778				
51	50	Abcde.tr	Abcde	HawaiiPla	1953.895	251258 95	http://sol	they're lik like .	like .	like .	1954.005	1954.135				
52	51	Abcde.tr	Abcde	HawaiiPla	1955.774	251845 95	http://sol	can . it's . like	like	like	1955.904	1956.364				
53	52	Abcde.tr	Abcde	HawaiiPla	1957.18	250825 95	http://sol	I'm like "r like .	like .	like .	1957.74	1957.95				
54	53	Abcde.tr	Abcde	HawaiiPla	1958.338	249493 95	http://sol	like "reall like	like	like	1958.498	1958.908				
55	54	Abcde.tr	Abcde	HawaiiPla	1963.047	252015 95	http://sol	hearing h like .	like .	like .	1964.647	1964.767				
56	55	Abcde.tr	Abcde	HawaiiPla	1967.772	252109 95	http://sol	\$\$\$ that' like	like	like	1968.472	1968.712				
57	56	Abcde.tr	Abcde	HawaiiPla	1990.294	250559 95	http://sol	even Haw like	like	like	1991.254	1991.394				
58	57	Abcde.tr	Abcde	HawaiiPla	1990.294	250542 95	http://sol	like I know like	like	like	1992.194	1992.344				
59	58	Abcde.tr	Abcde	HawaiiPla	1993.708	249977 95	http://sol	- and all like	like	like	1994.32	1994.474				
60	59	Abcde.tr	Abcde	HawaiiPla	2002.237	253504 95	http://sol	Hawaiian like	like	like	2002.797	2003.027				
61	60	Abcde.tr	Abcde	HawaiiPla	2022.301	250259 95	http://sol	kind of ha like .	like .	like .	2023.631	2023.801				
62	61	Abcde.tr	Abcde	HawaiiPla	2027.205	252580 95	http://sol	I would tr like .	like .	like .	2028.505	2028.765				
63	62	Abcde.tr	Abcde	HawaiiPla	2033.568	250834 95	http://sol	the same like	like	like	2036.168	2036.338				
64	63	Abcde.tr	Abcde	HawaiiPla	2048.497	252036 95	http://sol	aspects of like	like	like	2048.917	2049.017				
65	64	Abcde.tr	Abcde	HawaiiPla	2055.579	252279 95	http://sol	. 'cause so like	like	like	2055.609	2055.729				
66	65	Abcde.tr	Abcde	HawaiiPla	2076.6	250585 95	http://sol	like . like   like .	like .	like .	2076.65	2076.84				
67	66	Abcde.tr	Abcde	HawaiiPla	2076.6	249390 95	http://sol	like . like   like	like	like	2077.06	2077.2				
68	67	Abcde.tr	Abcde	HawaiiPla	2092.202	251490 95	http://sol	know if it' like	like	like	2092.592	2092.892				

Select destination and press ENTER or choose Paste

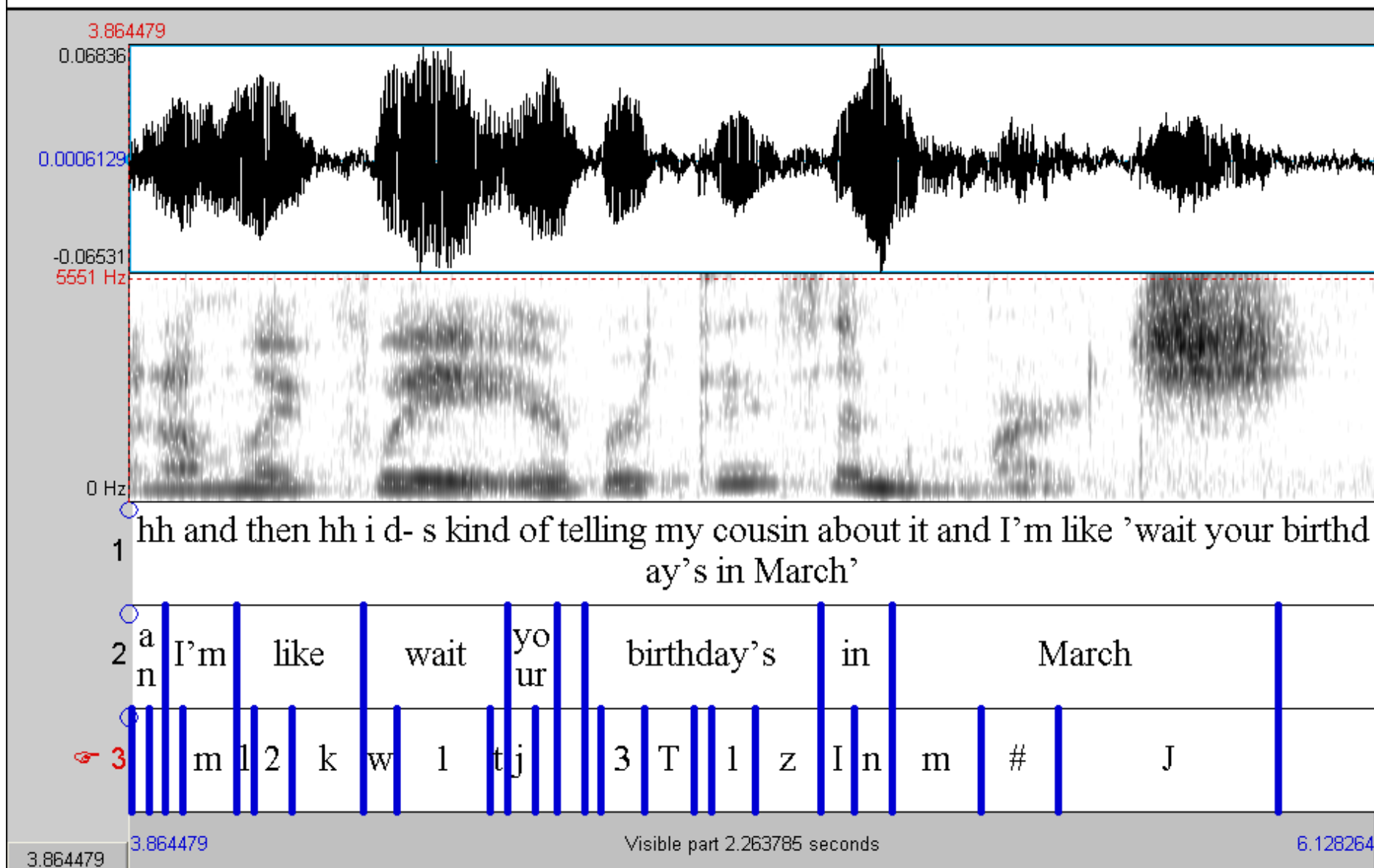
100%



## 2. TextGrid TanniaCheung\_4350\_118-4356\_316

File Edit Query View Select Interval Boundary Tier Spectrum Pitch Intensity Formant Pulses Help

{|



TanniaCheung  
(1)

transcript  
(26)

segments  
(41/66)

0.069736

Total duration 6.198000 seconds

all in out sel bak

Group

# Last Semester (SP12)

- 4 student researchers, 17 speakers
- 7,526 tokens, all of which were checked by hand
- F1 and F2 extracted at 7 points throughout the vowel using a Praat script

# Older female

## About Elsie

- From Kāneʻohe
- 66 years old
- Chinese & Hawaiian
- English
- Hawaiian Mission Academy (Private)

## Elsie's Vowels in Brief

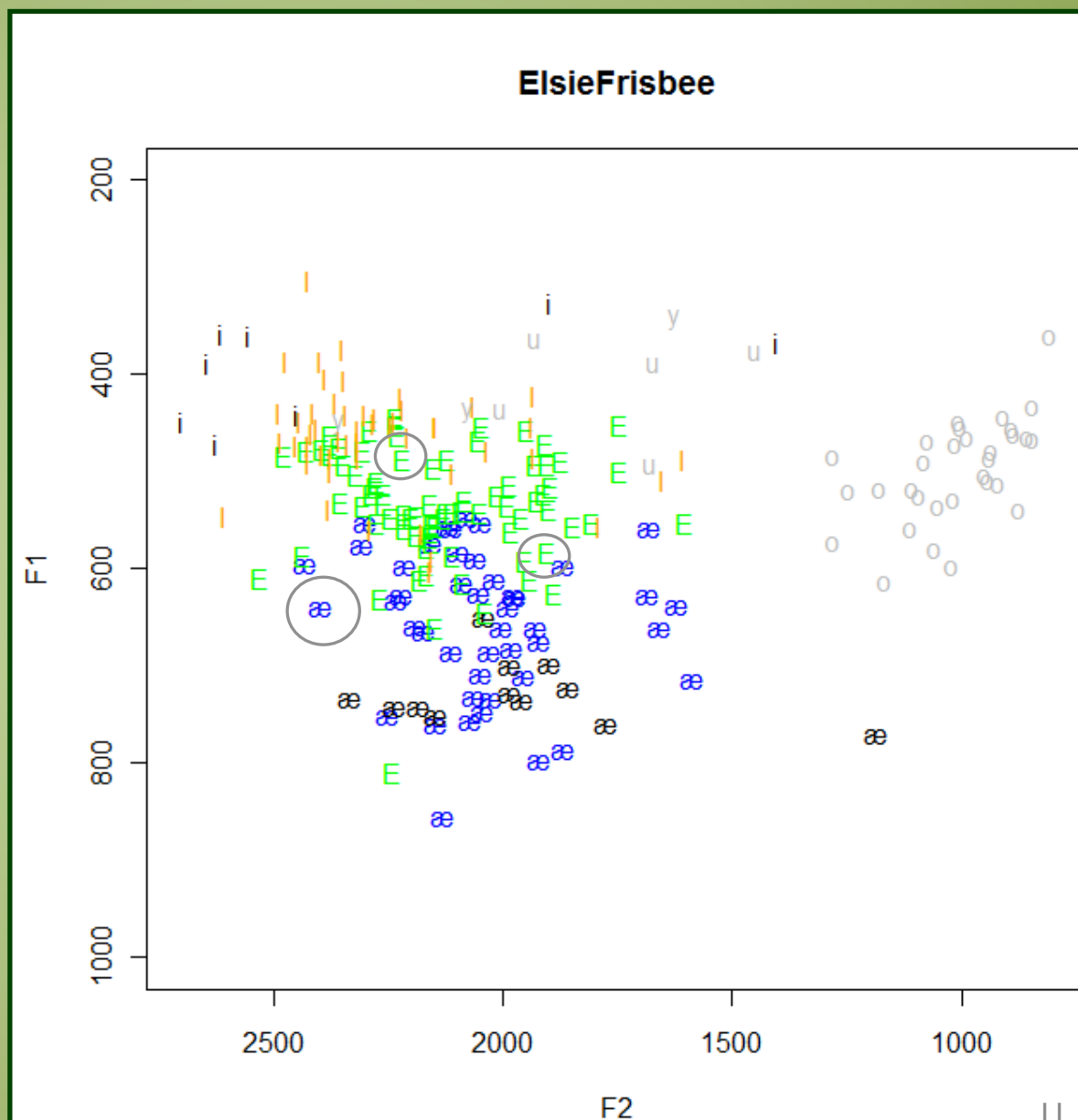
### DRESS

*friendly vs. respectful*



### TRAP

*family  
happy  
mad*



# Younger Female

## About Lei

- From Kāneʻohe
- 21 years old
- Hawaiian
- English & Pidgin
- Castle High School (Public)

# Lei's Vowels in Brief

## DRESS

*definitely*

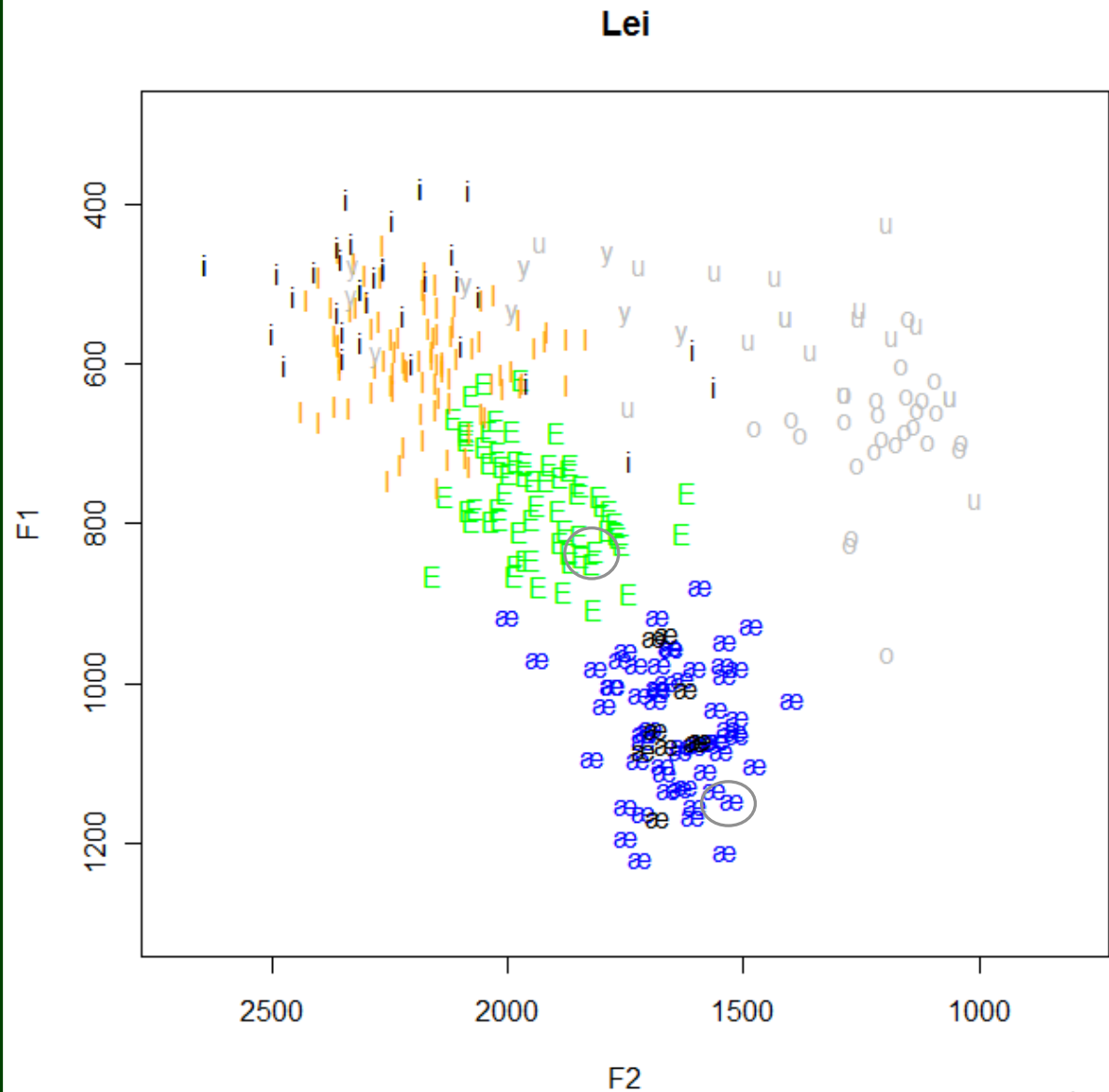
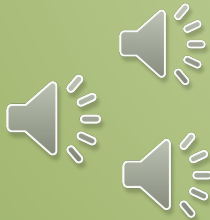


## TRAP

*families*

*dad*

grandfather



# Other research with LaBB-CAT

- English (NZE: Docherty et al. 2006, Hay & Bresnan 2006; Scotland: Smith & Stuart-Smith)
- Māori (Maclagan et al. 2009)
- German (Jannedy 2010; work by Heidi Quinn)

Increasingly, sociolinguistics are looking at variation in speech perception in addition to production...

What social characteristics are attributed to a speaker based on how they talk?

- **ethnicity** (Purnell et al. 1999)
- **regional origin** (Clopper & Pisoni 2004)
- **vowels and perceived sexuality** (Munson et al 2006)



Can social information affect how speech is perceived?

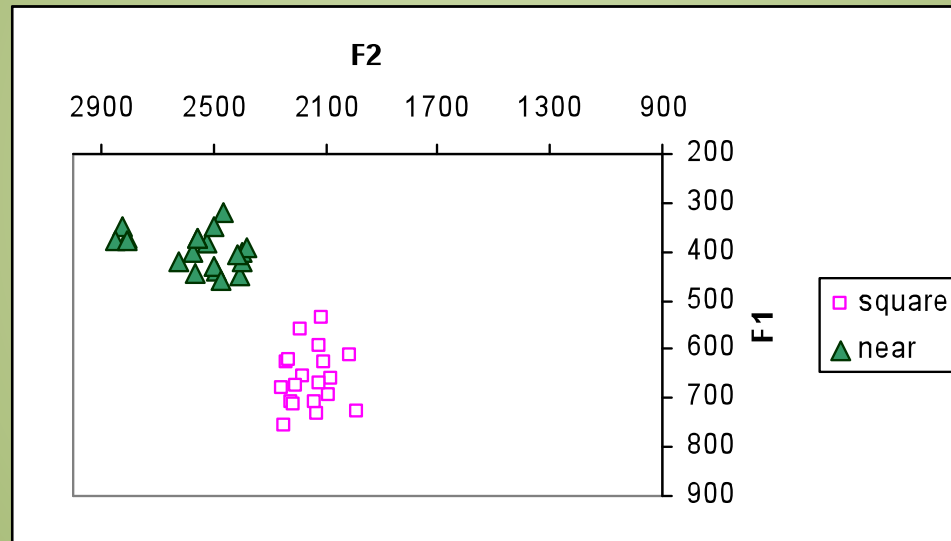


# Identification Task with Photo Manipulation

- Different photos are paired with the same token, for different groups of participants
- Example: Hay et al. (2006b) NEAR-SQUARE merger

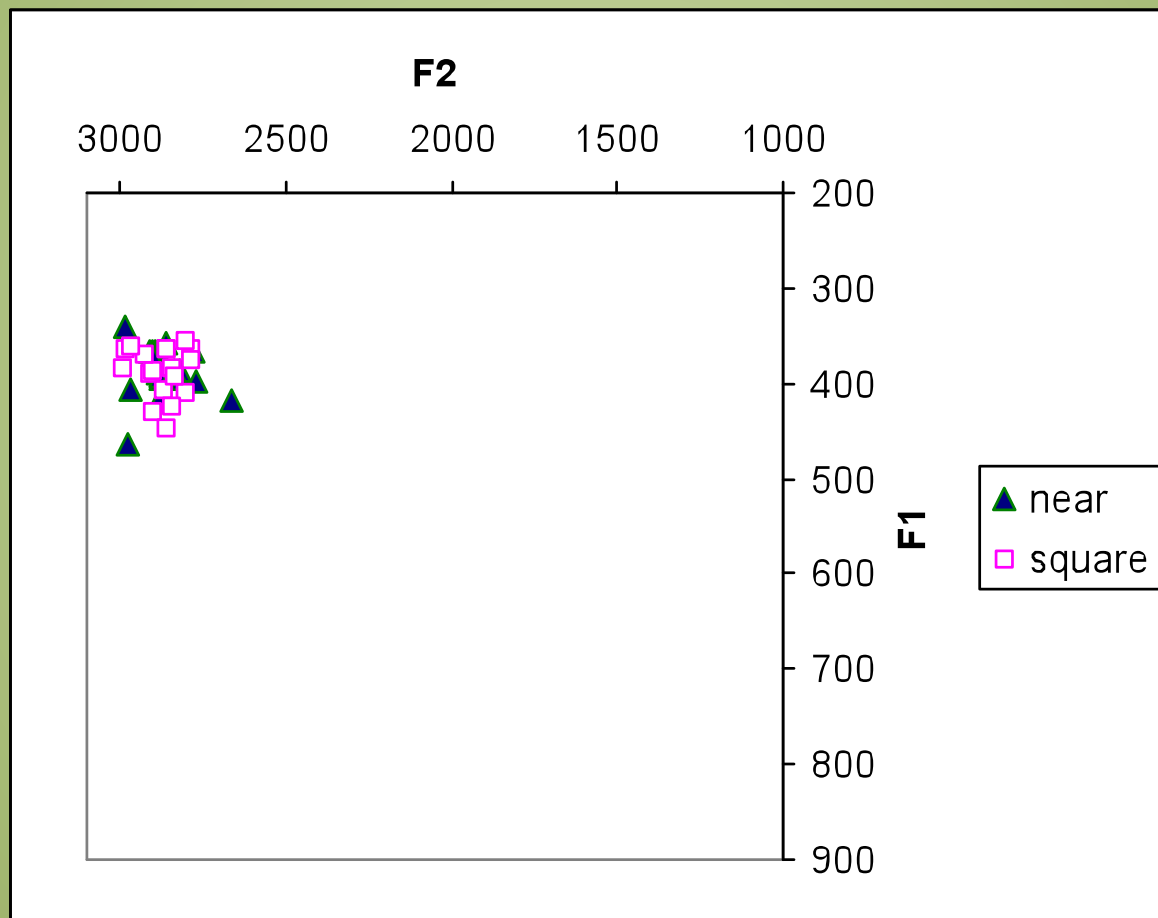
# NEAR/SQUARE Merger

-distinct speaker- 📢



# NEAR/SQUARE Merger

-merged speaker- 🗣️



The NEAR-SQUARE merger is led by young females from lower socioeconomic groups

Prediction:

If a listener believes a speaker is from this group (and therefore likely to merge) they may be less accurate at identifying tokens of  
NEAR and SQUARE

beer

bare





beer

bare



- Subjects rate characteristics about the people in the photographs
- The test whether these ratings predict accuracy
- Results provide evidence that social info attributed to the person in the photo affects perception of a sound undergoing merger.



# Lexical Ambiguity Task

- Staum Casasanto (2010)

Is this a sensible sentence?

heard: “The mas’/mass probably lasted...”

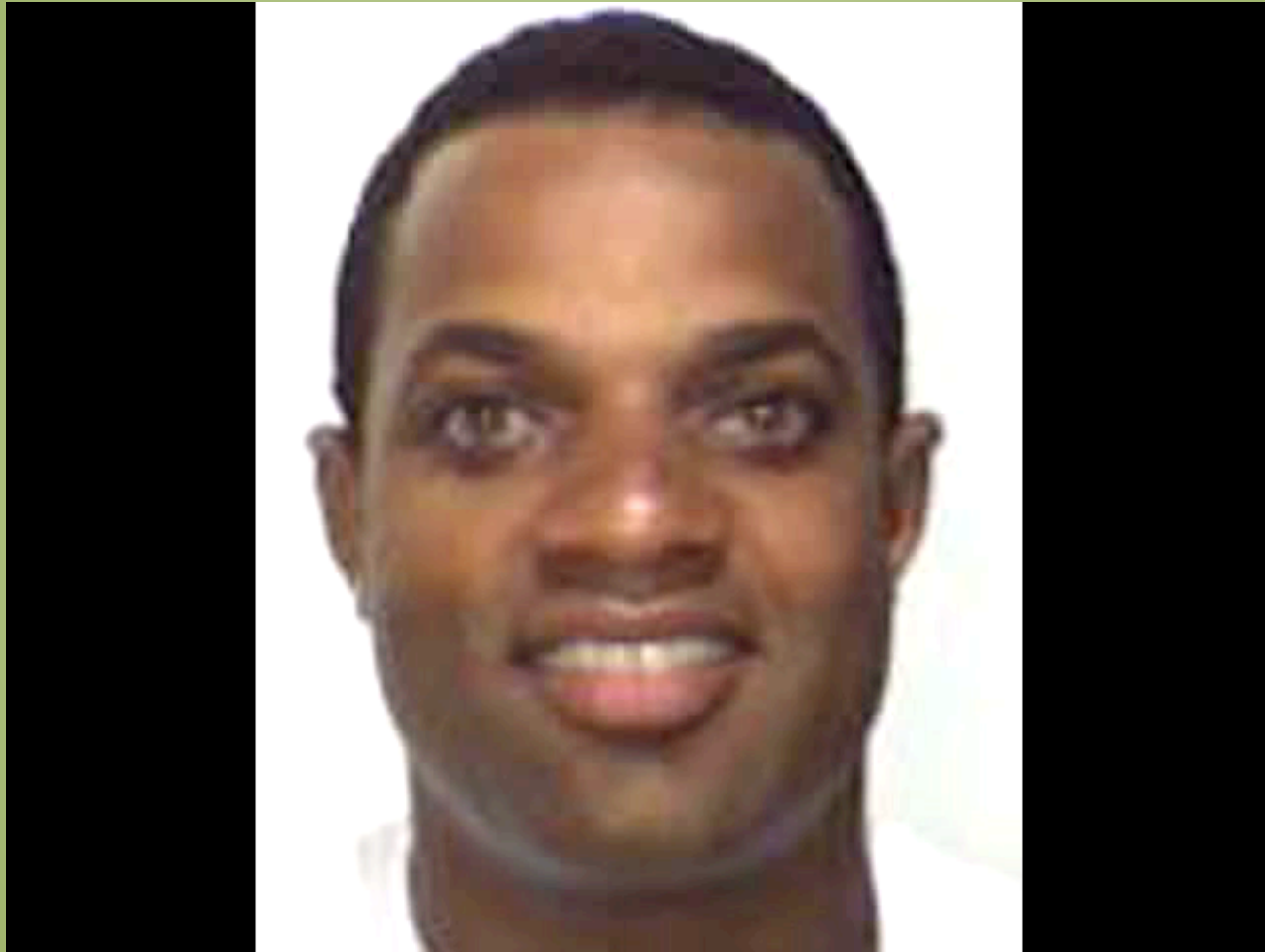
saw: ...*through the storm.*  
...*an hour on Sunday.*

# Predictions

People will respond faster to the *mass* interpretation when it is seen with a black face than with a white face.

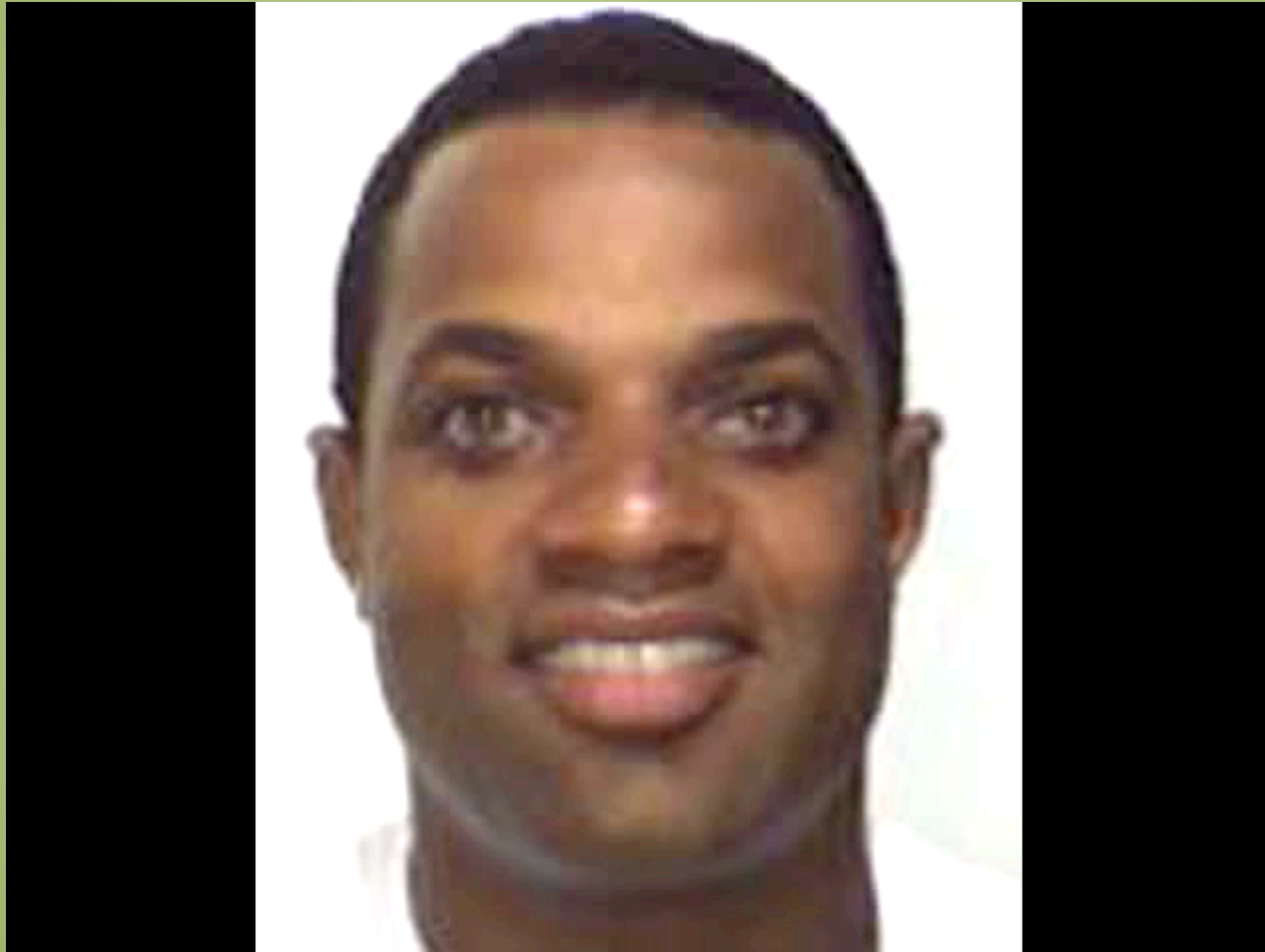
People will respond faster to the *mass* interpretation when it is seen with a white face than with a black face.

# Ambiguity



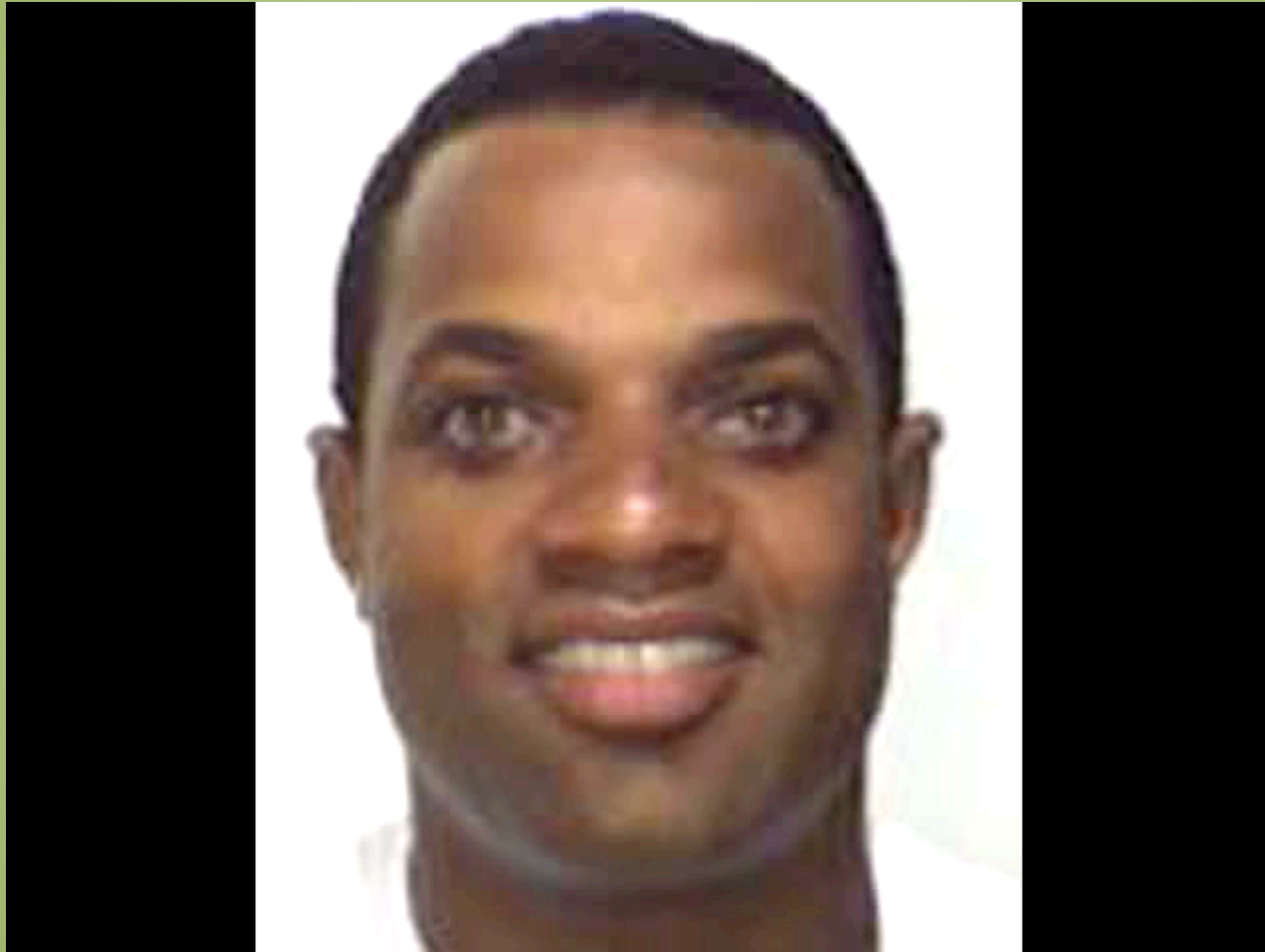
...an hour on Sunday.

# Ambiguity



...through the storm.

# Ambiguity



...through the storm.

# Ambiguity



...through the storm.

## Other work in this area

- **gender** (Strand & Johnson 1996; Johnson, Strand & D'Imperio 1999)
- **region** (Niedzielski 1999; Hay et al. 2006a)
- **social class** (Hay et al. 2006b)
- **ethnicity** (Staum Casasanto 2010)
- **age** (Hay et al. 2006b; Drager 2011)
- **toys** (Hay & Drager 2010)





- Experimental methods and mining of datasets are both increasingly being used to explore questions relevant to sociolinguistics
- To date, few sociolinguistic studies combine these methods... but it's only a matter of time.

# Happy Birthday, LDC!

## And thank you to:

- Robert Fromont
- Kurt Brunner
- Joelle Kirtley, James Grama, Sean Simpson, and Rebecca Clifford
- Jen Hay and Paul Warren

# References

- Docherty, Gerry, Jen Hay, and Abby Walker 2006. Sociophonetic patterning of phrase-final /t/ in New Zealand English. Paper presented at ASSTA.
- Fromont, Robert and Jennifer Hay. 2008. ONZE Miner: the development of a browser-based research tool. *Corpora* 3, 173-193.
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