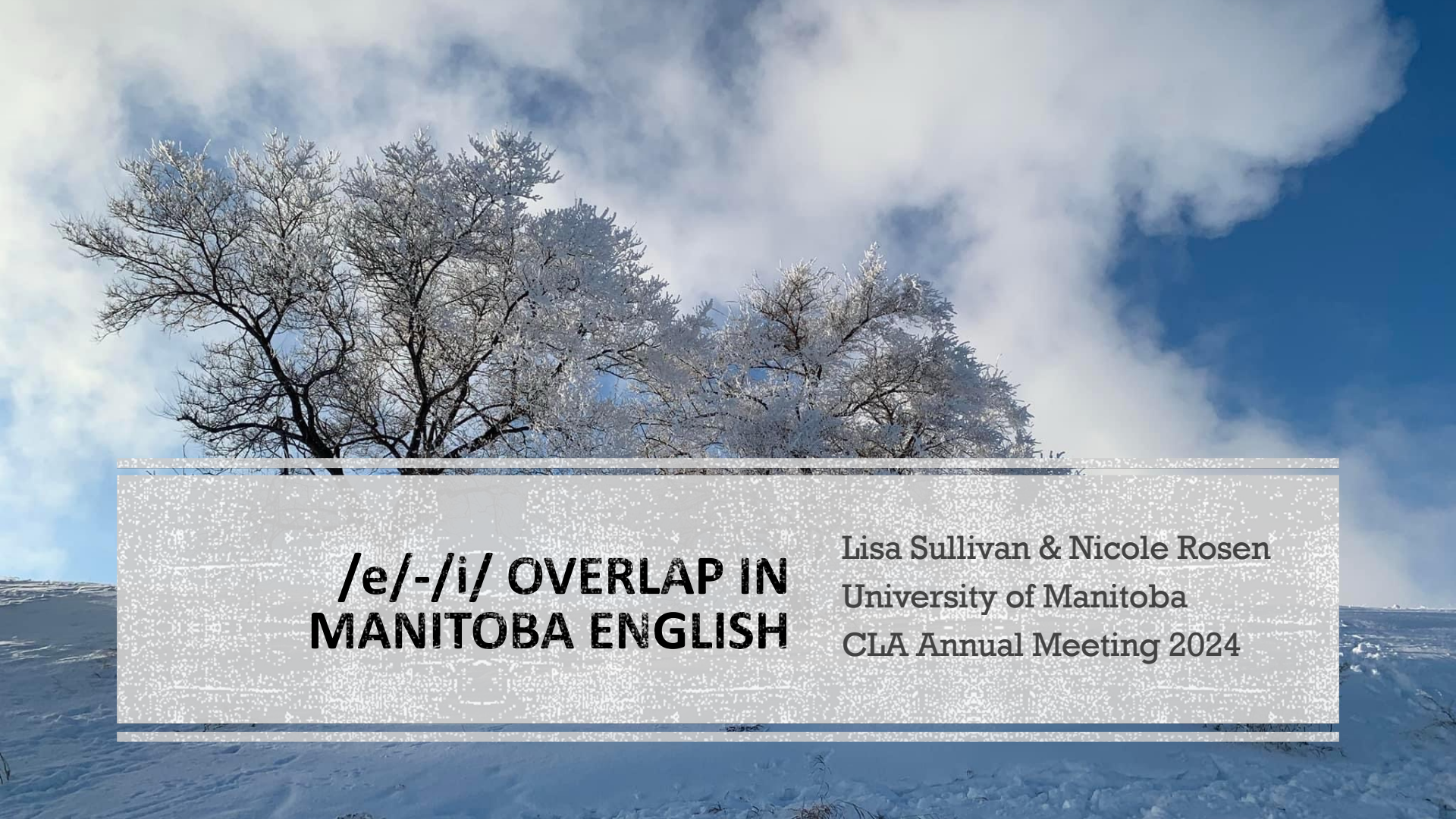
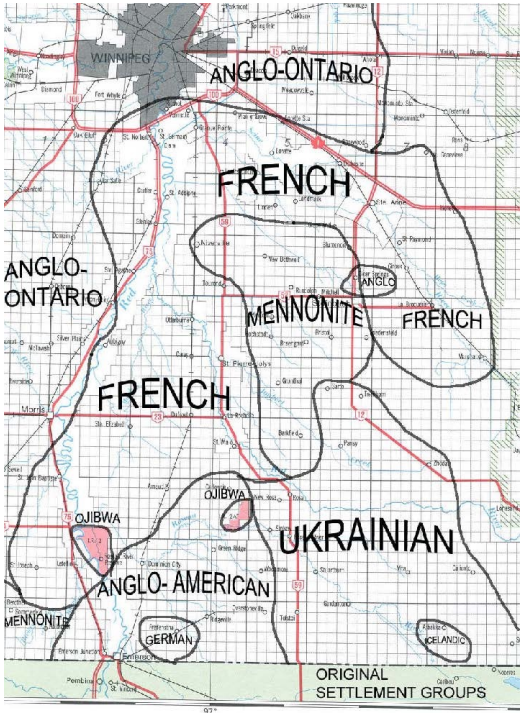


/e/-/i/ OVERLAP IN MANITOBA ENGLISH

Lisa Sullivan & Nicole Rosen
University of Manitoba
CLA Annual Meeting 2024

MANITOBA SOCIO-HISTORICAL SITUATION

- Canadian Prairies/Manitoba settled in ethnic blocks after 1880, in large part by Eastern/Northern European non-Anglophones
- Other work has uncovered interesting sociolinguistic patterns between these regions (stop voicing (Pfiffner & Rosen, 2023; in prep), sibilants (Rosen & Pfiffner, 2023), vowels (Sullivan & Rosen, 2023; Rosen & Sullivan, 2023))



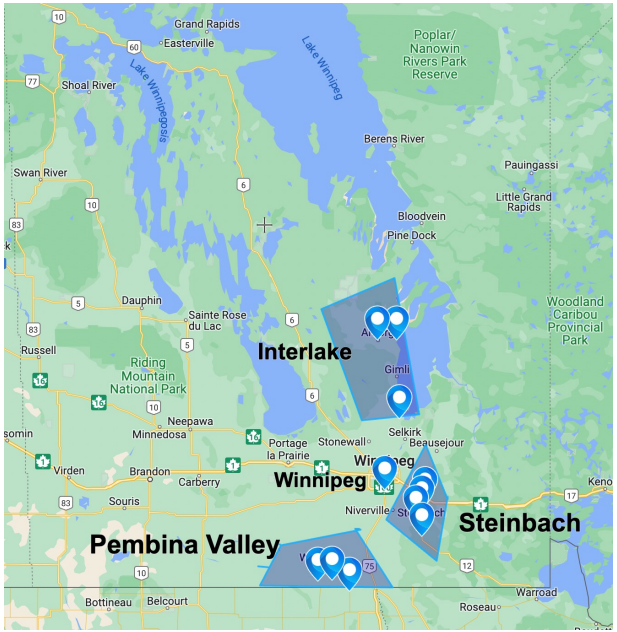
/E/-/I/ OVERLAP

- New feature observed among Manitoba English speakers (Sullivan & Rosen, 2023; Rosen & Sullivan, 2023)
  - Significant overlap observed in some speakers, and more overlap overall than in Ontario and Colorado (as observed in Sullivan, 2022)
- Also observed in Manitoba varieties of French (Rosen & Lacasse, 2014)
- The current study investigates this overlap in Manitoba English in more detail and situates it in a Canadian context by comparing it to GTHA English

RESEARCH QUESTIONS

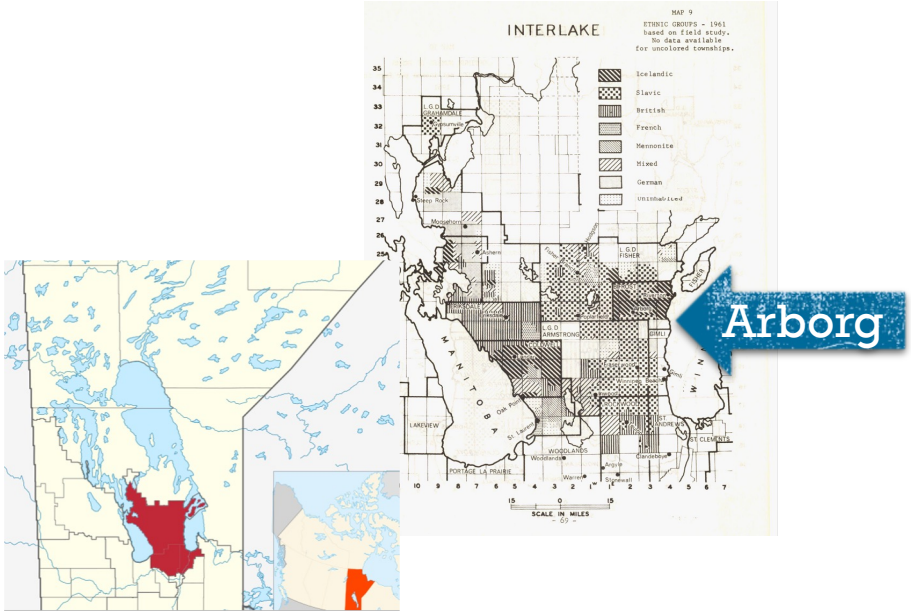
1. To what degree are /e/ and /i/ overlapping in Manitoba English?
2. Do we see any sociophonetic patterns?
3. How do Manitoba speakers compare to those from the GTHA?

LANGUAGES IN THE PRAIRIES PROJECT



- Sociolinguistic interviews (word list, reading passage, interview) in 8 communities in MB and AB between 2009-2019
- Social info includes age, (binary) gender presentation, ethnicity, socioeconomic status, rurality, first language
- Reporting on 2 of 4 MB locations: Interlake and Winnipeg

INTERLAKE REGION OF MANITOBA



- Marginal agricultural lands settled after the 1880s, primarily by Ukrainian and Icelandic with peasant/agricultural background
- Sampling done primarily around Arborg (Pop. 1279) (2021 Census)

WINNIPEG, MANITOBA

- Provincial capital and centre of economic, social, governmental and educational activity
- Diverse population, ~750K inhabitants

GTHA

- Greater Toronto Hamilton Area + some nearby cities (Brantford, Cambridge, Peterborough)
- Largest urban centre in Canada (~ 3M)
- Wordlist reading data collected in 2021 as part of a larger study investigating /æg/-raising including Ontario, more broadly, and Colorado

PARTICIPANTS

Manitoba

Socioeconomic Status

Interlake

- 8 professional
- 17 non-professional

Winnipeg

- 26 professional
- 10 non-professional

Age		Interlake			Winnipeg		
		F	*M*	***Total***	*F*	*M*	***Total***
Older	*1925-1960*	7	4	**11**	4	3	**7**
Middle	*1961-1980*	4	4	**8**	7	3	**10**
Young	*1981-2003*	5	1	**6**	14	5	**19**
Total		16	9	**25**	25	11	**36**

GTHA

- 22 participants: 12 female, 10 male
- Birth year 1990-2003

LIPP PROCEDURE & STIMULI

- Participants were interviewed in their homes using a Zoom H4N recorder with an external lapel microphone.
- Participants did the interview first, followed by the word list and reading passage
- The word list was done using a timed PowerPoint presentation
- Participants completed 1 repetition of the word list
  - **/i/:** see, seen, seed, seat, heed, heat
  - **/e/:** say, stain, state, stayed, hate

SULLIVAN (2022) PROCEDURE & STIMULI

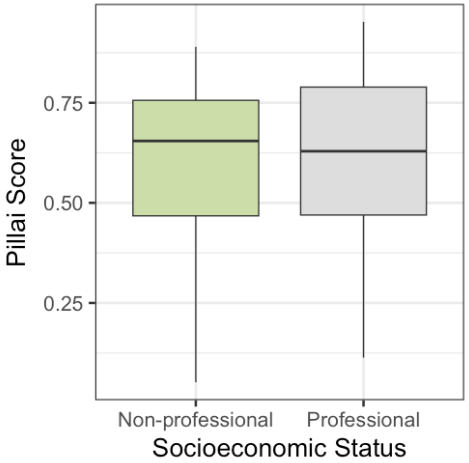
- Participants completed a reading task completed online using Gorilla platform (Anwyle-Irwine et al. 2020) using their computer microphones
  - Participants were required to use a computer & not a phone to maintain a reasonable level of audio quality
- 3 repetition of each word
  - **/i/:** beet, bead
  - **/e/:** bait, bade

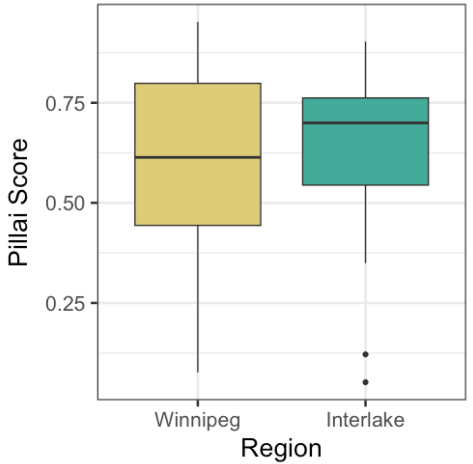
ACOUSTIC ANALYSIS

- Word list data was force aligned using FAVE-align (Rosenfelder et al., 2004) (LIPP) and the Montreal Forced Aligner (McAuffile et al., 2017) (Sullivan 2022)
  - Alignments were checked and manually corrected in Praat (Boersma & Weenink, 2022)
- F1 and F2 measurements were extracted using by-participant formant values at the midpoint of each vowel
  - F1 and F2 values were plotted and visually inspected for formant tracking errors (which were corrected or removed)
- Pillai Scores were calculated to measure /e/-/i/ overlap

STATISTICAL ANALYSIS

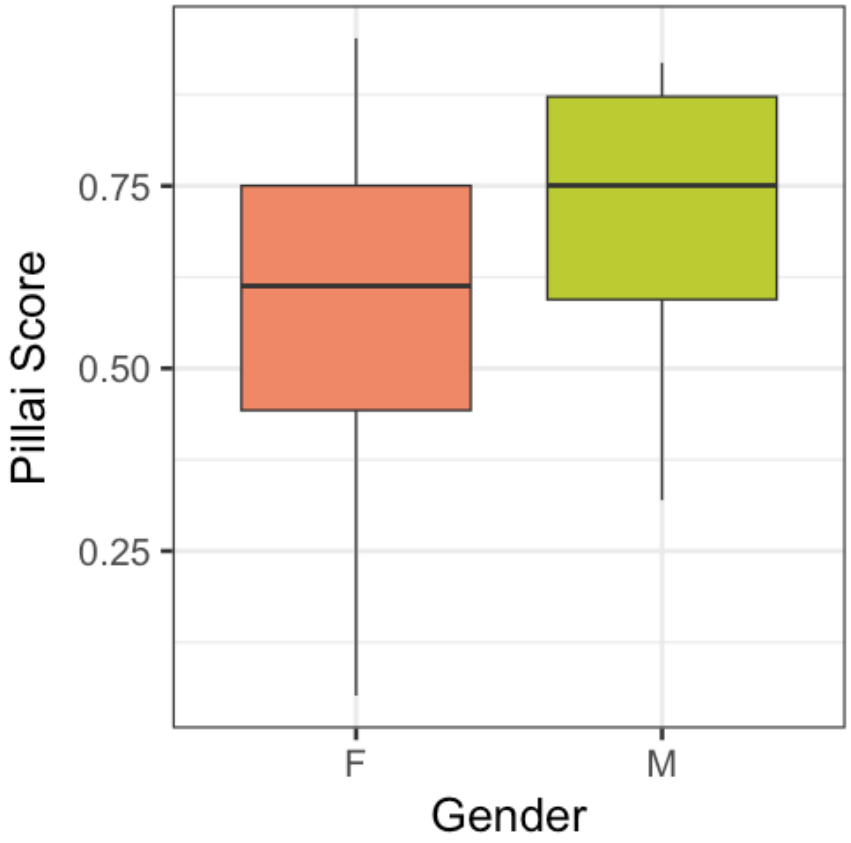
- Buildmer (Voeden, 2023) with log-likelihood ratio test to build models from full interaction models with the following variables, as appropriate in R (R Core Team, 2020)
  - **Response Variable**: Pillai Score
  - **Predictor Variables**: Age, Gender, SES, Region
  - **Random Intercepts**: Ethnicity, L1
- **Manitoba Model:** lm(Pillai~Gender)
- **MB vs GTA Model**: lm(Pillai~Gender+Region)





MANITOBA RESULTS: REGION, SES

- No Significant Differences



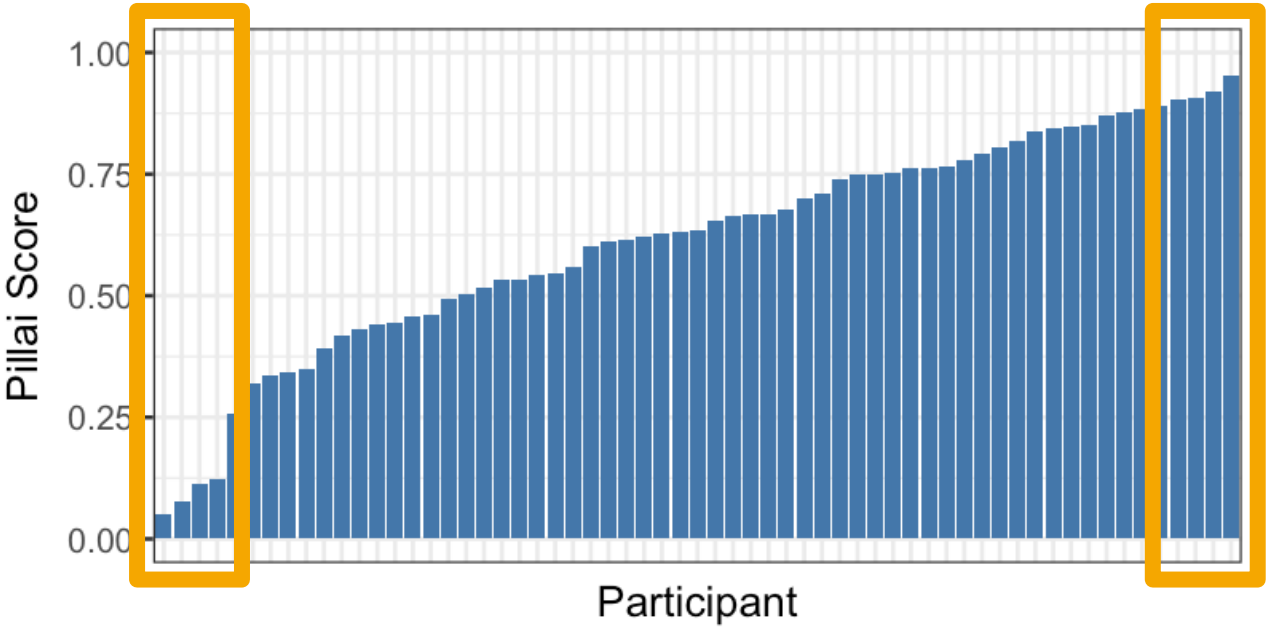
MANITOBA RESULTS: GENDER

- Female speakers have more overlap than male speakers (sig.)

MANITOBA RESULTS AGE

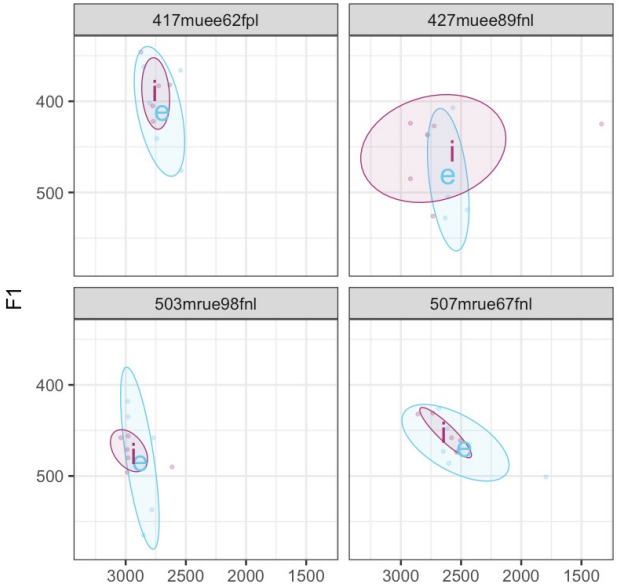
- Overlap increases with age (n.s.)

MANITOBA RESULTS: MOST VS LEAST OVERLAP



MANITOBA RESULTS: MOST OVERLAP

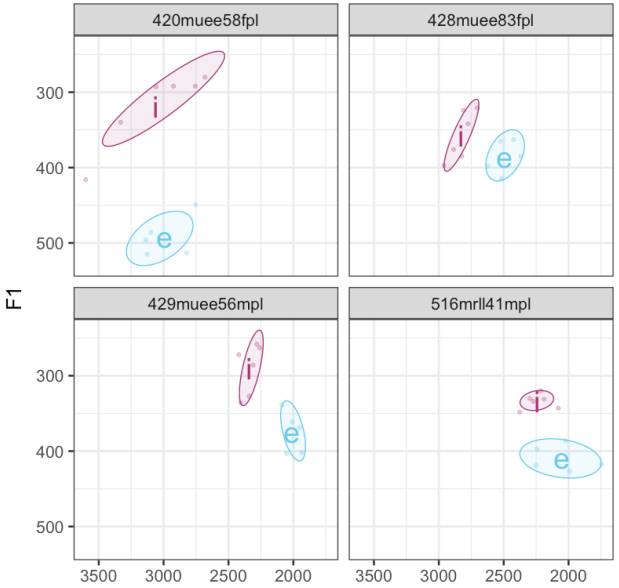
- Participants with the **most** overlap tend to be female non-professionals
- Those with the most extreme overlap are also in the youngest age group
- Interlake speakers with the most overlap are Ukrainian



ID	Pillai	Region	Ethnicity	L1	Gender	Age	SES
417	0.11	WPG		ENG	**F**	1962 (M)	P
427	**0.08**	WPG		ENG	**F**	**1989 (Y)**	**NP**
503	**0.05**	INT	**UKR**	ENG	**F**	**1998 (Y)**	**NP**
507	0.12	INT	**UKR**	ENG	**F**	1967 (M)	**NP**

Key: M = middle, Y = younger, P = professional, NP = non-professional, INT = Interlake

MANITOBA RESULTS: LEAST OVERLAP

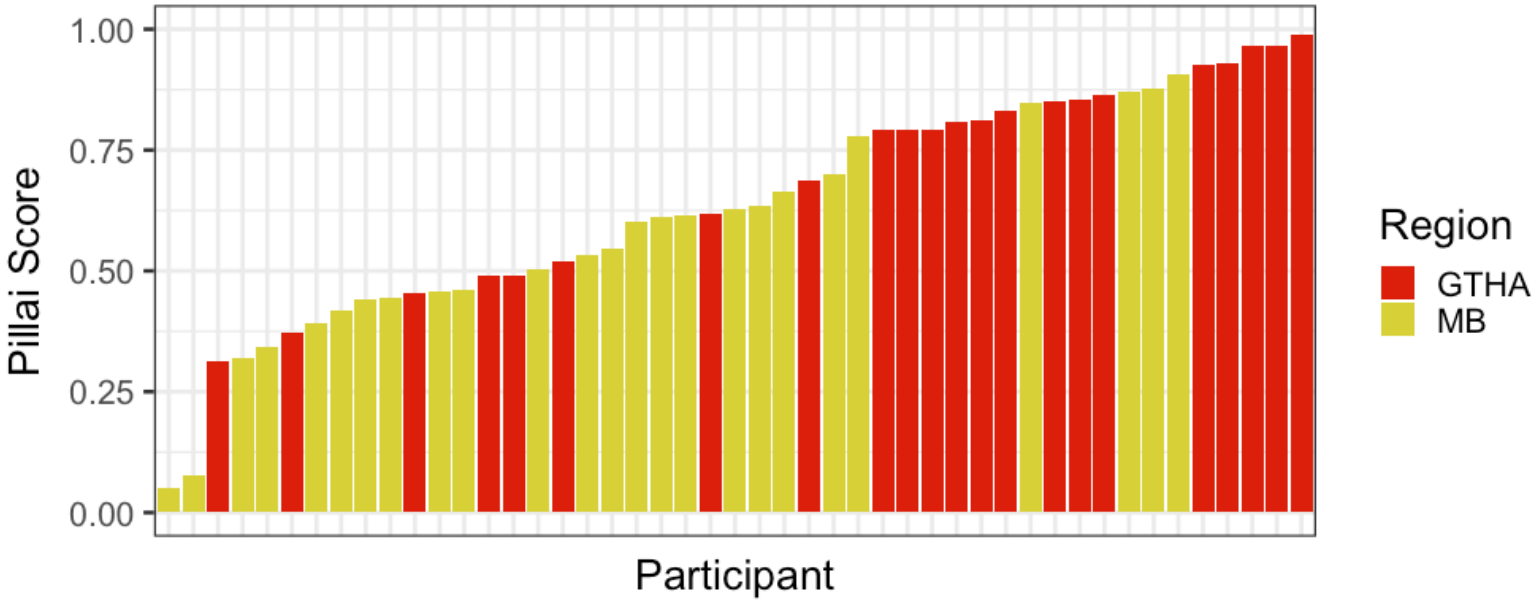


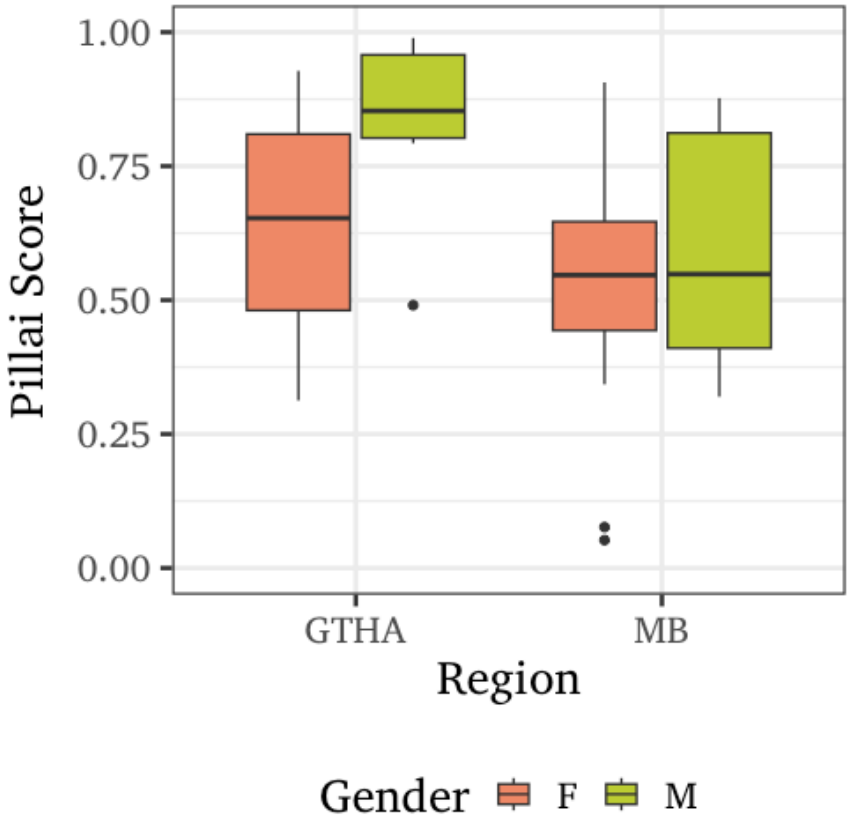
- Participants with the **least** overlap tend to be older professionals from Winnipeg
- The participant from the Interlake region is a native speaker of Icelandic

ID	Pillai	Region	Ethnicity	L1	Gender	Age	SES
420	0.95	**WPG**		ENG	F	**1958 (O)**	**P**
428	0.91	**WPG**		ENG	F	1983 (Y)	**P**
429	0.92	**WPG**		ENG	M	**1956 (O)**	**P**
516	0.90	**INT**	**ISL**	**ISL**	M	**1941 (O)**	**P**

Key: O = older, M = middle, Y = younger, P = professional, NP = non-professional, INT = Interlake

VARIATION IN MB (YOUNG) VS GTHA





MB VS GTHA

- MB more overlap than GTHA
- Female speakers have more overlap than male speakers (at least in GTHA)

SUMMARY

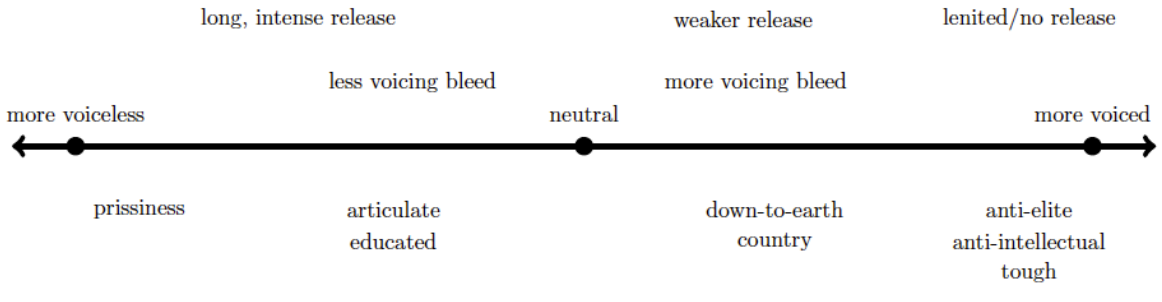
- /i/~/e/ overlap more prevalent in MB than the GTHA, but there is variation between speakers
- In MB, overlap seems to be strongest among the youngest, female, non-professional
- Non-sig, but see trend of change-in-progress; more overlap in each generation in MB

DISCUSSION

- Generalizations surrounding /e/-/i/ overlap are reminiscent of other trends occurring in the region
- Rosen & Sullivan (2023) argue that non-professionals seem to be drivers of change in rural Interlake
- Pfiffner & Rosen (2023; in prep, Rosen & Pfiffner 2023) show that stop consonants and sibilants pattern differently in MB
  - Much lower CoG for /s/ than elsewhere in N. America
  - Much more voicing in stops than elsewhere in N. America
- /e/-/i/ overlap may reflect similar covert prestige/anti-elitist stance in the region

SOCIAL WORK OF /E/-/I/ OVERLAP?

- Podesva (2021) argues that embodiment can be a driver of sociophonetic change: long t-release is hyper-articulated, which comes to represent prissy, hyper-articulate stances
- Pfiffner & Rosen (in prep) propose a cline where lesser articulation represents an anti-elite/anti-formal education stance

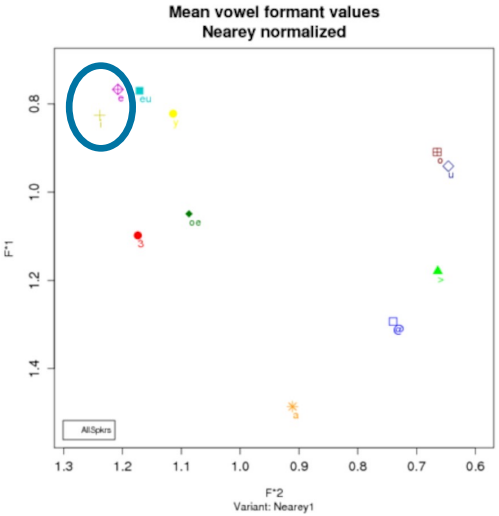


Proposed stop-articulation cline (Pfiffner & Rosen in prep)

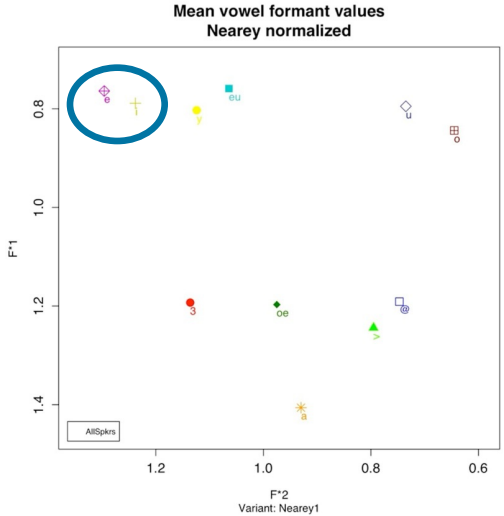
- The /e/-/i/ overlap seen here could also be seen as less articulation in vowel space, i.e. a similar embodiment of similar stances

/E/- /I/ OVERLAP SEEN ELSEWHERE

Michif French



Manitoba French



Rosen & Lacasse 2014

CONCLUSIONS

- /e/-/i/ overlap appears to be a change in progress in Manitoba but either not so in the Greater Toronto area, or possibly later in development
- Possibly driven by phonetic embodiment of an anti-elitism ethos emerging from a peasant culture reliant on agriculture, resource extraction and of collective organizing (ie 1919 Winnipeg General Strike), as seen in other sociolinguistic variables (Pfiffner & Rosen, Podesva, etc.)

THANK YOU!

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Canada

Petersfield sunset

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PARTICIPANTS - INTERLAKE

Age		Professional (F/M/All)	Non-Professional (F/M/All)	Total (F/M/All)
Older	1925-1960	3/1/4	4/3/7	7/4/**11**
Middle	1961-1980	1/1/2	3/3/6	4/4/**8**
Young	1981-2000	2/0/2	3/1/4	5/1/**6**
Total		6/2/**8**	10/7/**17**	16/9/**25**

PARTICIPANTS - WINNIPEG

Age		Professional (F/M/All)	Non-Professional (F/M/All)	Total (F/M/All)
Older	1925-1960	3/3/6	1/0/1	4/3/**7**
Middle	1961-1980	4/3/7	3/0/3	7/3/**10**
Young	1981-2000	10/3/13	4/2/6	14/5/**19**
Total		17/9/**26**	8/2/**10**	24/11/**35**

PARTICIPANTS – ALL MANITOBA

Age		Professional (F/M/All)	Non-Professional (F/M/All)	Total (F/M/All)
Older	1925-1960	6/4/10	5/3/8	11/7/**18**
Middle	1961-1980	5/4/9	6/3/9	11/7/**18**
Young	1981-2000	12/3/15	7/3/10	19/6/**25**
Total		23/11/**36**	18/9/**27**	40/20/**61**

YOB: TORONTO VS YOUNG MB

Toronto

- 90-2
- 91-1
- 93-2
- 94-1
- 96-1
- 97-5
- 99-2
- 00-2
- 01-2
- 02-2
- 03.3

Mean: 1997

Winnipeg

- 81 - 1
- 82 – 1
- 83 – 2
- 86 – 1
- 87 – 1
- 89 – 1
- 92 – 1
- 95 – 6
- 97 – 1
- 99 – 2
- 00 – 1
- 01 – 1

Mean: 1992

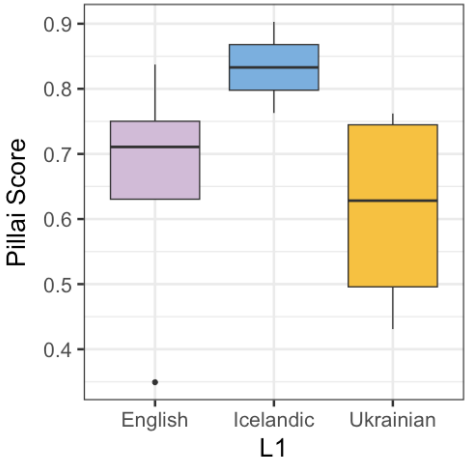
Interlake

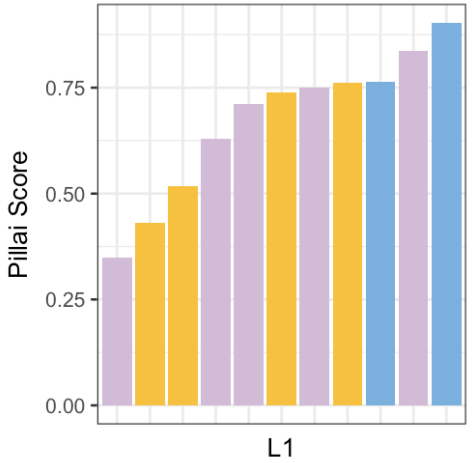
- 90 – 1
- 97 – 2
- 98 – 2
- 00 -1

Mean: 1997

Total MB mean: 1993 (7 participants pre 9990)

Note: results are the same regardless of if 80s participants are included or excluded

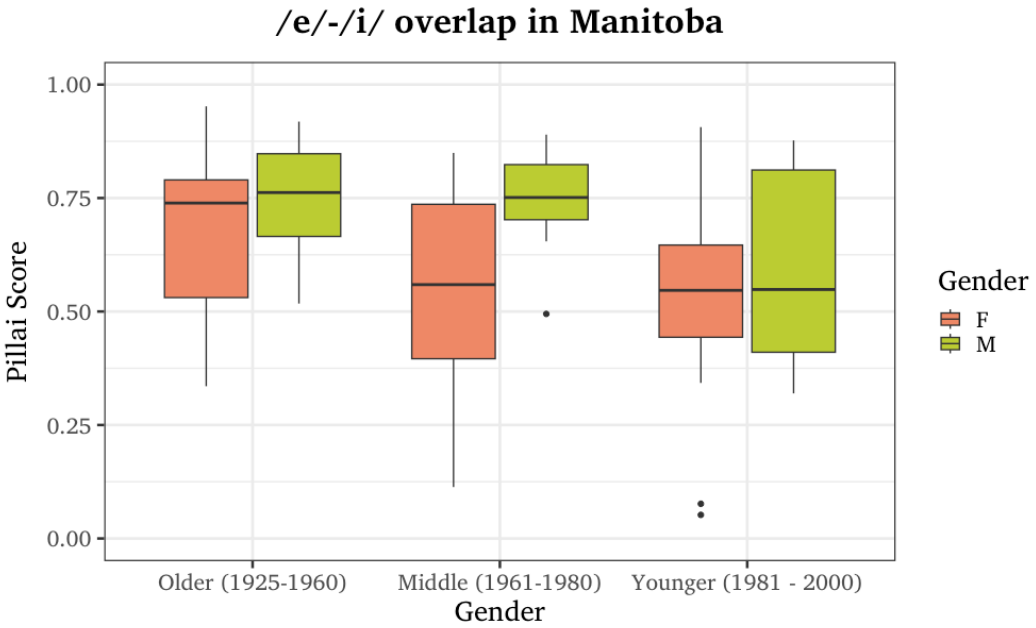




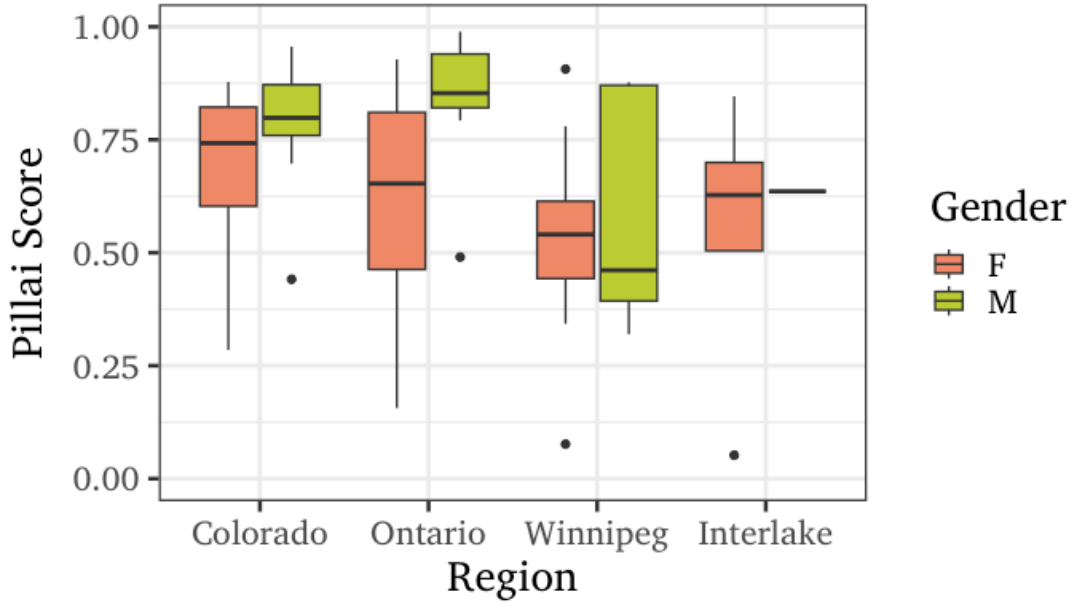
MANITOBA RESULTS: L1

- Interlake Older Speakers only
- Not tested for statistical significance
- Ukrainian > English > Icelandic

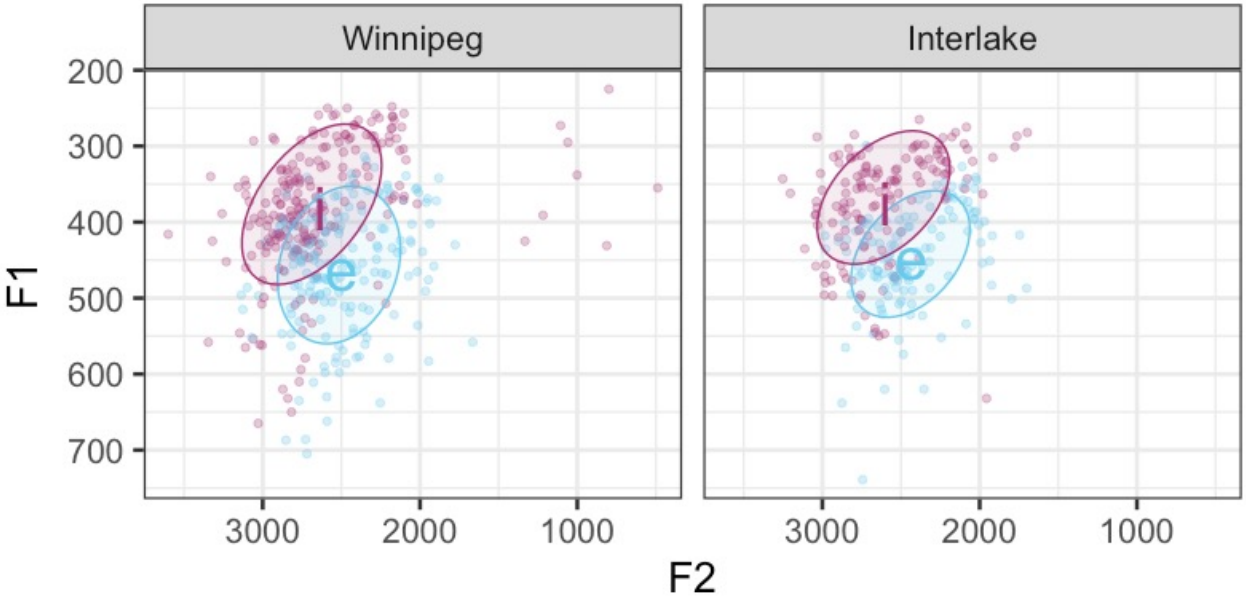
MANITOBA RESULTS: GENDER BY AGE



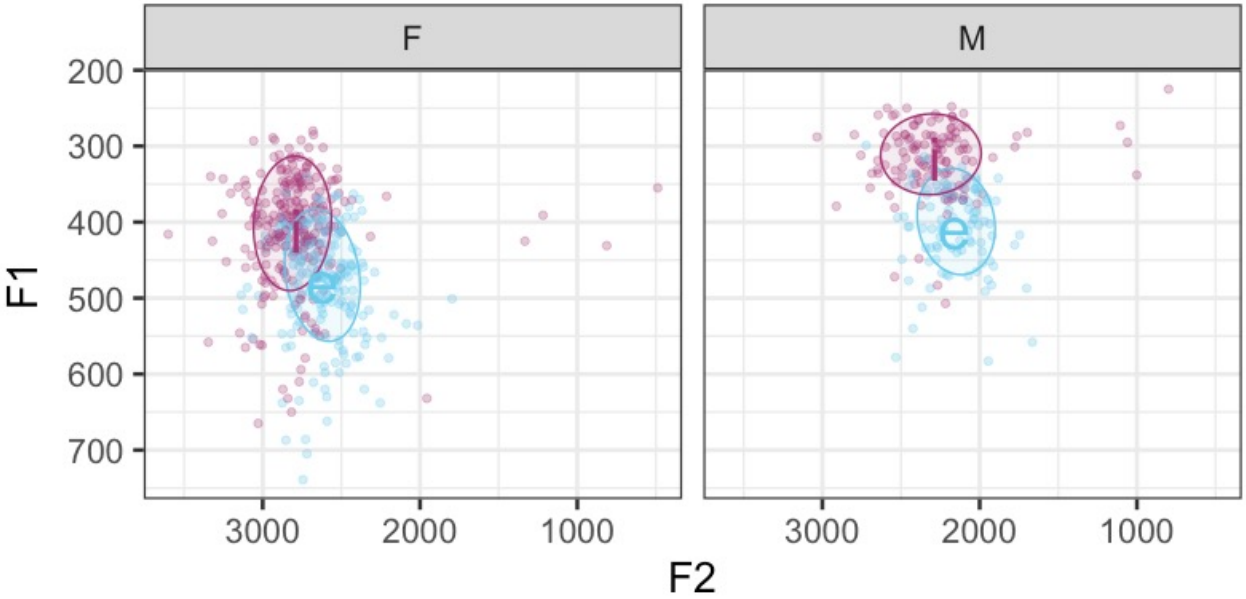
REGION BY GENDER



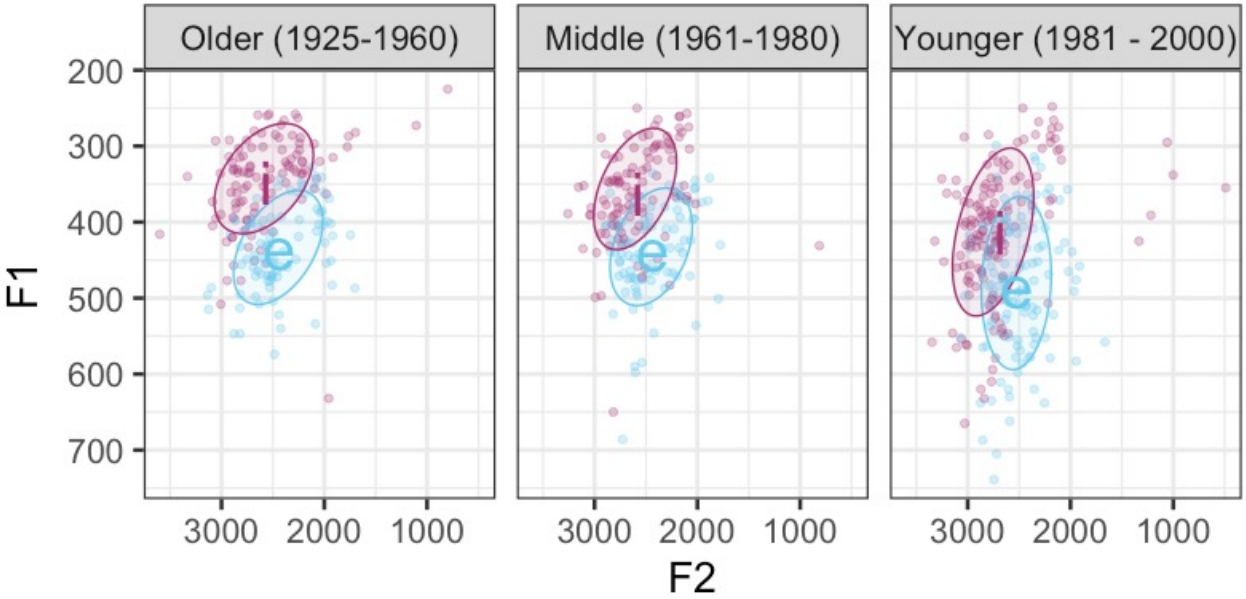
MANITOBA REGION VOWEL SPACE



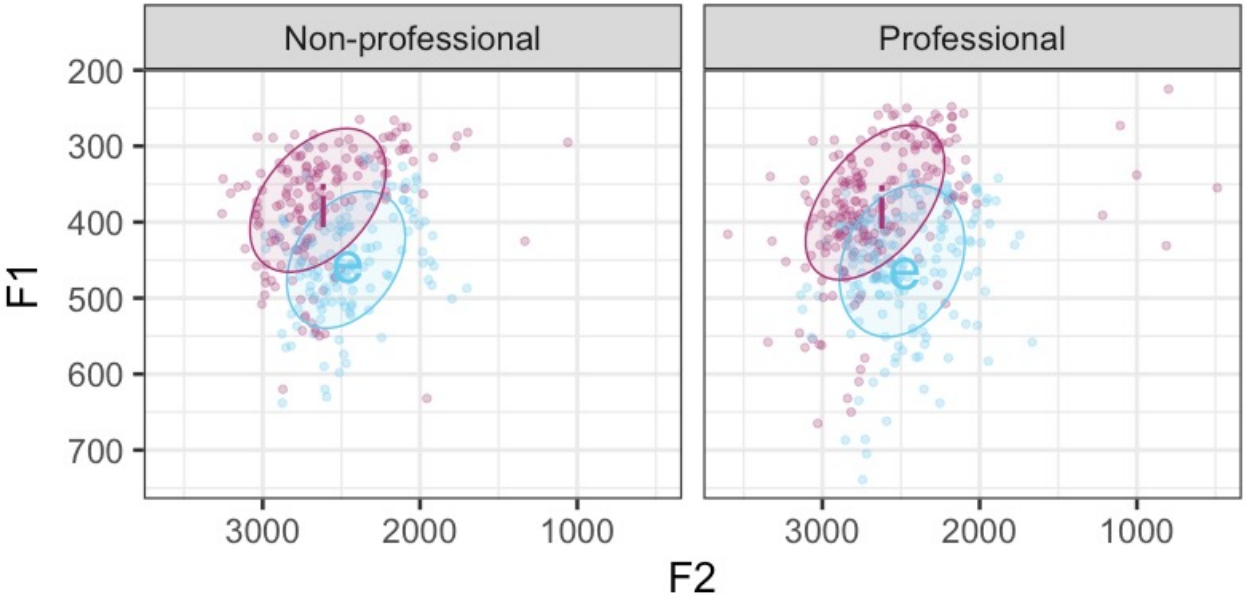
MANITOBA GENDER VOWEL SPACE



MANITOBA AGE VOWEL SPACE



MANITOBA SES VOWEL SPACE



MANITOBA MODEL RESULTS

```
Call: stats::lm(formula = pillai ~ 1 + Gender, data = pillai_ei)
Residuals:
     Min       1Q   Median       3Q      Max
-0.51903 -0.12841  0.04319  0.17858  0.38108
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.63473    0.02961  21.437   <2e-16 ***
GenderM      0.12742    0.05922   2.152   0.0355 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2171 on 59 degrees of freedom
Multiple R-squared:  0.07276,      Adjusted R-squared:  0.05704
F-statistic:  4.63 on 1 and 59 DF,  p-value: 0.03553
```

MB VS GTA MODEL RESULTS

```
Call:
stats::lm(formula = pillai ~ 1 + RegionB + Gender, data = cantmb_ei)
Residuals:
     Min       1Q   Median       3Q      Max
-0.46352 -0.12356  0.02074  0.14570  0.39082
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.59246    0.03784  15.656   <2e-16 ***
RegionBMB   -0.15391    0.06213  -2.477   0.0172 *
GenderM      0.13979    0.06543   2.137   0.0382 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Residual standard error: 0.2071 on 44 degrees of freedom
Multiple R-squared:  0.2387,       Adjusted R-squared:  0.2041
F-statistic: 6.898 on 2 and 44 DF,  p-value: 0.002478
```

RANDOM FOREST RESULT MB DATA