

Vowel patterning in Manitoba

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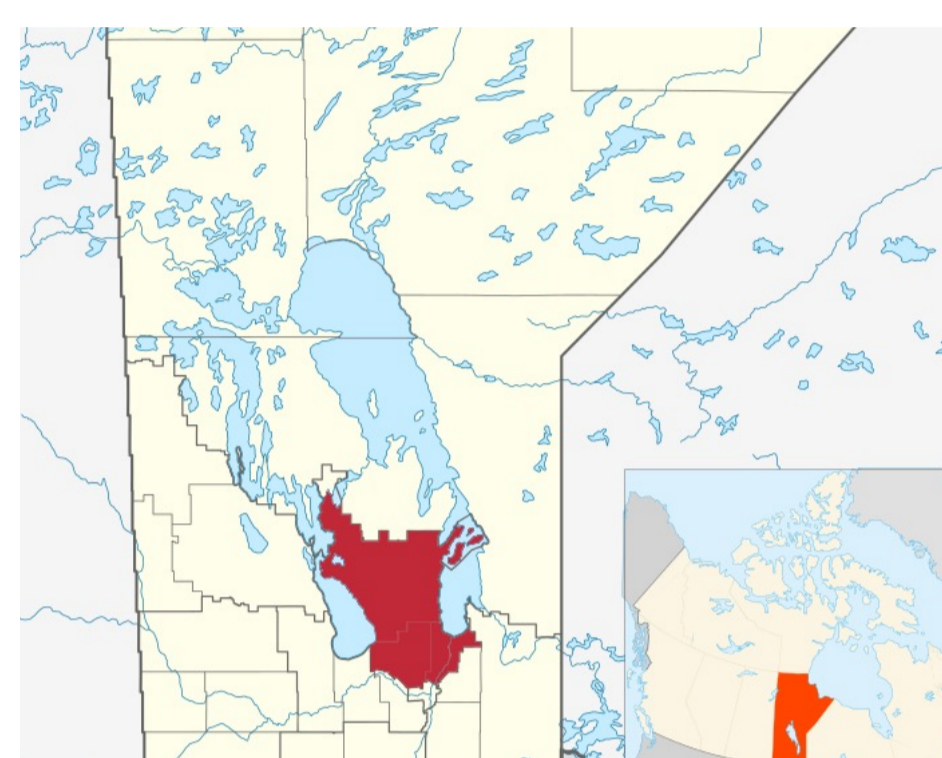
Introduction

Manitoba communities

Interviewed settler populations of the Interlake & Winnipeg, Manitoba

Interlake

- Primarily agricultural region settled after the 1880s, primarily by Ukrainians, Poles & Icelanders
- Sampling done primarily in Arborg (Pop. 1279) (2021 Census)



Winnipeg

- Provincial capital & centre of economic, social & educational activity since its settlement
- (Pop 749, 607; 834, 678 in metro area)

Vowel Features

- Low Back Merger Shift (LBMS):** widespread pull-chain shift in North America said to have occurred due to the instability of the English short vowel System. Front vowels retract and lower, with /æ/ as the first step, followed by /ɛ/ and /ɪ/ in turn (Becker 2019)
- /æ/-Raising:** /æ/ raises before /g/ across Canada (e.g. Boberg 2008), the Pacific Northwest (e.g. Freeman 2021), the Upper Midwest (e.g. Zeller 1997) and California (e.g. Esposito & Lake 2021)
- /e/-/i/ Overlap:** Degree of overlap between /e/ and /i/

Methods

Participants

Age	Interlake			Winnipeg			
	Female	Male	Total	Female	Male	Total	
Older	1925-1960	7	4	11	4	3	7
Middle	1961-1980	4	4	8	7	3	10
Young	1981-2000	5	1	6	14	5	19
Total		16	9	25	25	11	36

Socioeconomic Status

- Interlake:** 8 professional, 17 non-professional
- Winnipeg:** 26 professional, 10 non-professional

Stimuli

Word list including target words for /æ/-raising (/æɡ/), /e/-/i/ overlap (/e, i/), and LBMS (/ɪ, ɛ, æ/) and fillers

Procedure

Participants were recorded saying 1 repetition of the word list as part of a longer sociolinguistic interview conducted in their home

Analysis

Acoustic Analysis

- Force alignment with FAVE-align and manually corrected in Praat
- F1 & F2 extracted at the midpoint of each vowel and normalized using z-scores. Pillai scores calculated for /e/-/i/ overlap

Statistical Analysis: Mixed effects linear regression models

- Response Variable:** F1, F2 (/æɡ/, LBMS) or Pillai scores (e-i overlap)
- Predictor Variables:** Region*Context(/æɡ/ only)*(Age + Gender + SES)
- Random Intercepts:** participant, item

Results & Discussion

Low Back Merger Shift

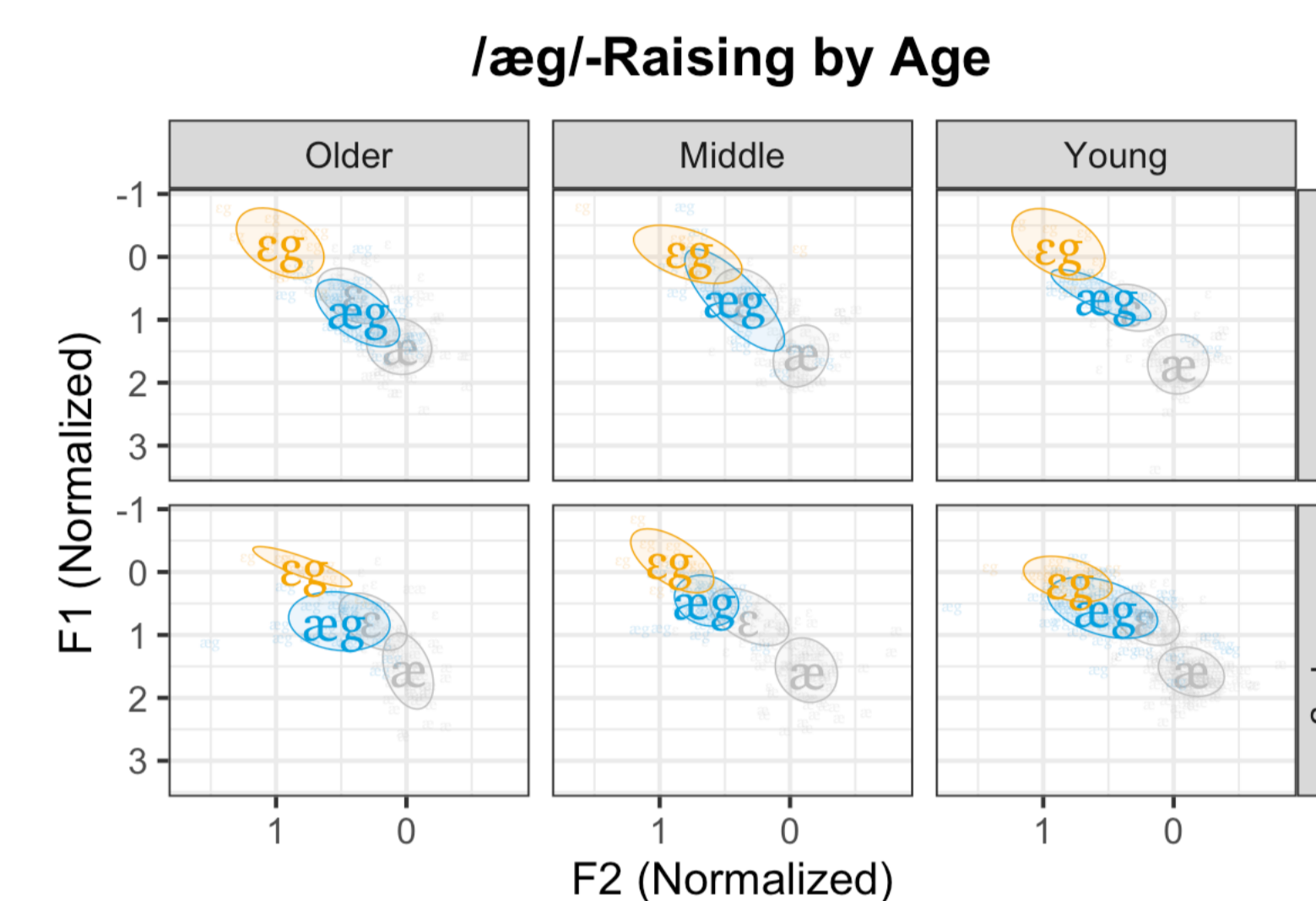
- Figure shows the mean F1 and F2 for /ɪ ɛ æ/ by age, region and socioeconomic status.
- Both regions show evidence of the LBMS:** vowels appear more retracted and/or lower for younger speakers than older speakers
- There is also a socioeconomic effect. **Professionals have more retracted vowels than non-professionals**, suggesting that they are more advanced in the LBMS.



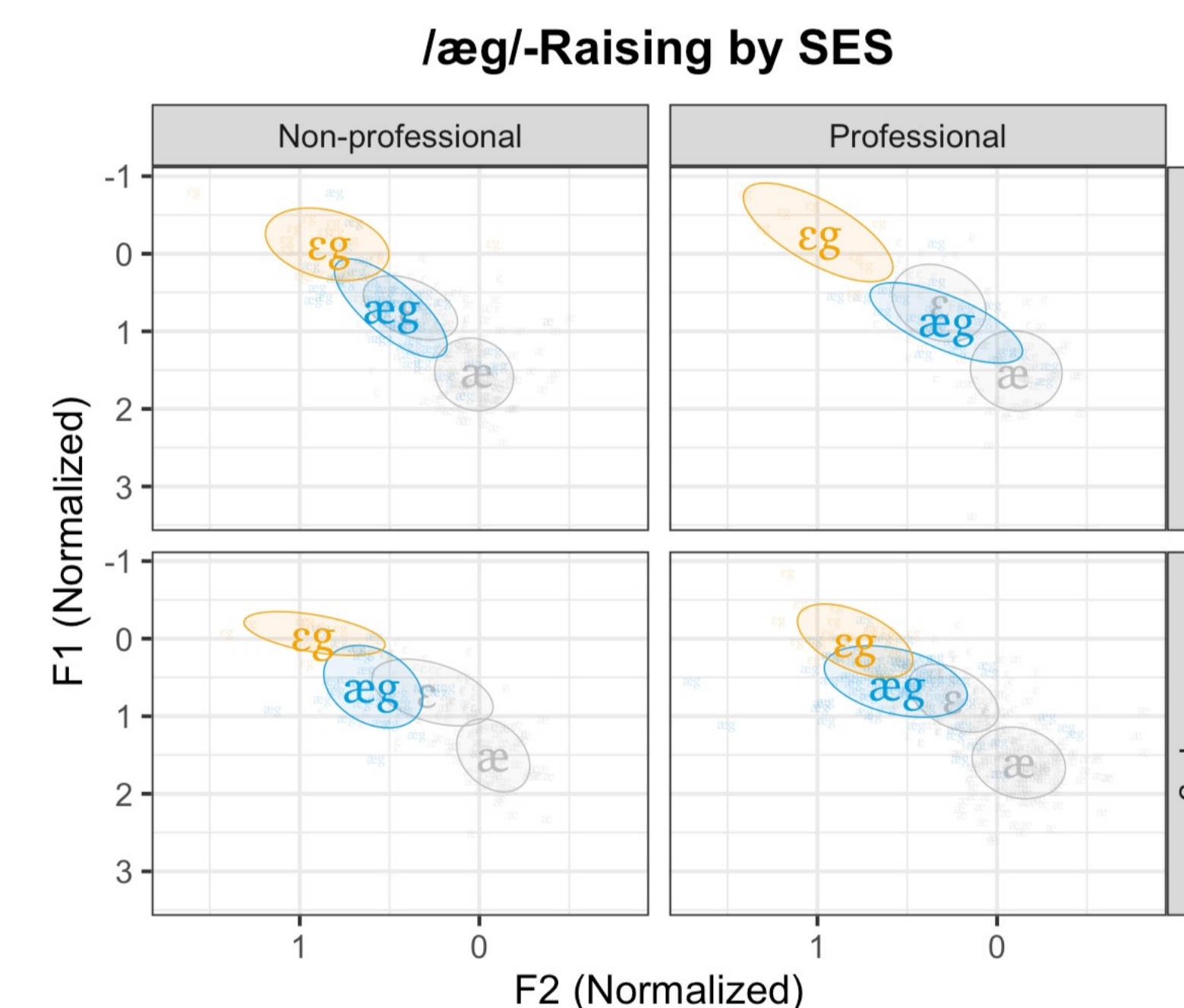
- Males retract and lower /æ/ less than female**, suggesting that they are less advanced in /æ/-retraction (c.f. Boberg 2008)
- Young non-professionals in the Interlake seem to be retracting /æ/ less than older speakers, suggesting they may be reversing the LBMS

/æɡ/-Raising

- All speakers /æɡ/-raise, regardless of age, gender or socioeconomic status
- Younger speakers raise more than older speakers**



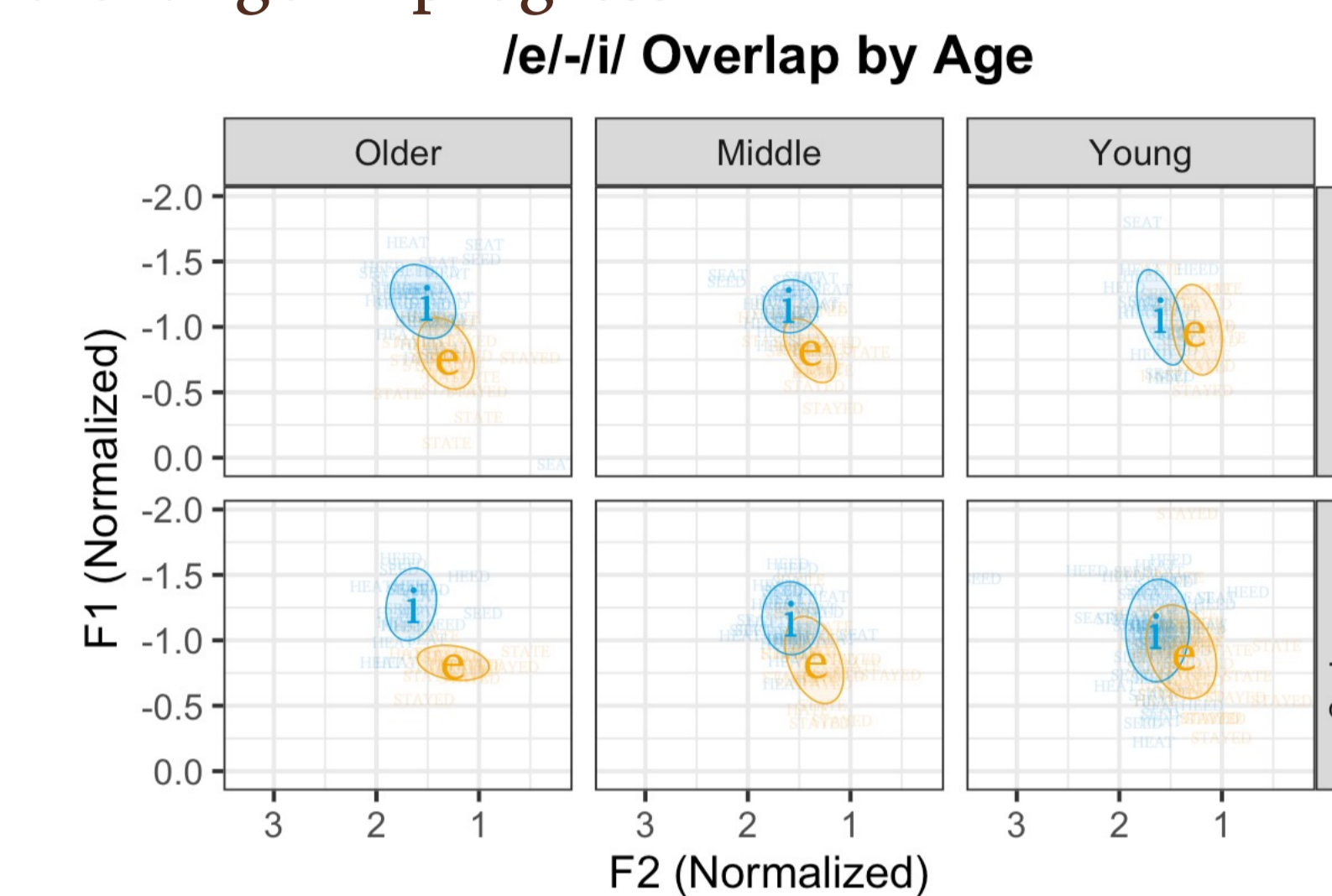
- Non-professionals /æɡ/-raise more than professionals, but only in the Interlake (not Winnipeg)**



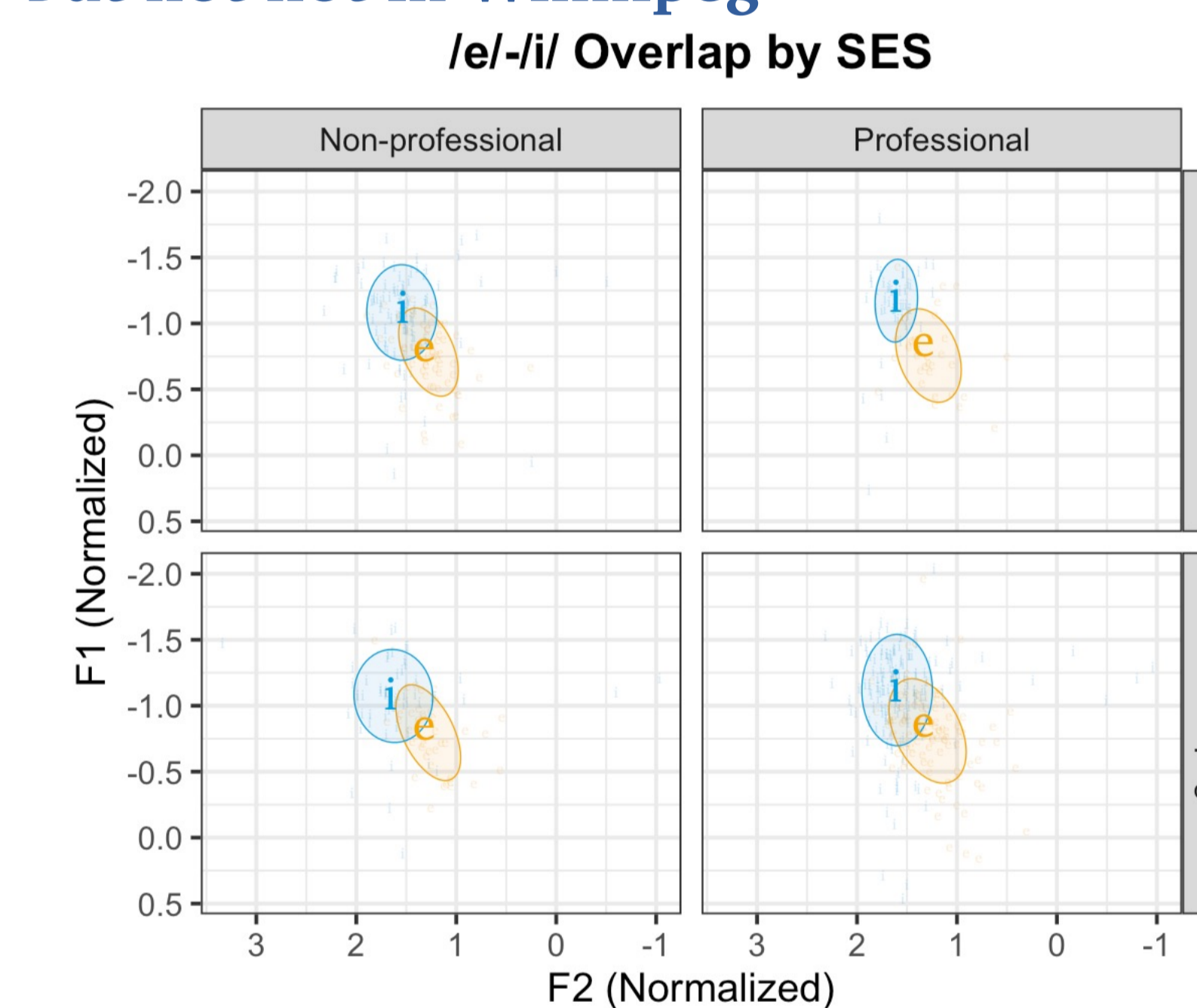
- Suggests drivers of change may be different in rural communities than urban ones (Stanley 2018, Podesva et al. 2015)

/e/-/i/ Overlap

- More overlap between /e/ and /i/ is observed in Winnipeg and the Interlake than elsewhere (e.g. Ontario, Colorado, see Sullivan 2022)
- Younger speakers show more overlap than older speakers in both regions**, suggestive of a change in progress



- Non-professionals display more overlap than professionals in the Interlake region, but not in Winnipeg**



- As with /æɡ/-raising, this suggests non-professionals may be drivers of change in rural communities (Stanley 2018, Podesva et al. 2015)

Conclusions

- Both rural and urban regions of Manitoba follow expected regional sociophonetic patterns of LBMS and /æɡ/-raising
- Possible change in progress of more overlap between /e/ & /i/ than has not been observed elsewhere
- Interlake non-professionals patterning with innovative patterns suggest that drivers of change may differ between rural and urban communities
- At the least, the Interlake results show similarities to the regions studied in Podesva et al. (2015) and Stanley (2019), and may, therefore, provide support for Podesva et al.'s finding of differences between those who live off the land and those who don't and/or Stanley's finding that those with positive associations to a rural region pattern differently than those with more negative associations

References & Acknowledgements

References: Becker, K. (2019). The low-back-merger shift: Uniting the Canadian vowel shift, the California vowel shift, and short front vowel shifts across North America. ♦ Boberg, C. (2008). Regional phonetic differentiation in Standard Canadian English. *Journal of English Linguistics* 36(2), 129-154. ♦ Esposito, L., & Lake, E. (2021). Complicating prevelar raising in the West. *American Speech*, 1-45. ♦ Freeman, V. (2021). Vague eggs and tags: Prevelar merger in Seattle. *Language Variation and Change*, 33(1), 57-80. ♦ Podesva, R. J., D'Onofrio, A., Van Hofwegen, J., & Kim, S. K. (2015). Country ideology and the California vowel shift. *Language Variation and Change*, 27(2), 157-186. ♦ Stanley, J. 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. ♦ Sullivan, L. (2022). *Pre-velar /æ/-raising in Ontario and Colorado English: Production, perception and metalinguistic awareness*. [Doctoral Dissertation, University of Toronto]. Dissertations & Theses @ University of Toronto. ♦ Zeller, C. (1997). The Investigation of a Sound Change in Progress: /æ/ to /e/ in Midwestern American English. *Journal of English Linguistics*, 25(2), 142-155.

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