



ETHNOLINGUISTIC VOWEL DIFFERENTIATION IN MANITOBA ENGLISH

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Research Goal & Study Foci

GOAL: To document vowel production differences among ethnic groups in the English dialect spoken in Manitoba, Canada.

Phonological processes investigated:

1. Post-coronal /uw/-fronting
2. Pre-nasal and pre-velar raising of /æ/, i.e. *ban-* and *bag-*raising
3. *Canadian Raising*

Research Context

- While ethnolinguistic research in Canada is a growing area of study, the Canadian Prairies (Manitoba, Saskatchewan & Alberta) remain under-researched
- Prior research (Onosson et al., 2019) established that Filipinos in Winnipeg exhibit more lowered/retracted productions of the *Canadian Shift* vowels /æ, ε, ɪ/ than other Winnipeggers, but similar to larger centres e.g. Toronto

Mennonite Manitobans

- One of Manitoba's most important historical ethno-religious groups
- In 1870, two "Mennonite Reserves" established in Manitoba, attracting nearly 40% of ≈18,000 late 19th C. Mennonites migrating from Imperial Russia to N. America (Loewen, 2001)
- 25% of all Canadian Mennonites reside in Manitoba (Statistics Canada, 2016)
- German is the second-most widely-spoken L1 in Manitoba at 63,825 speakers

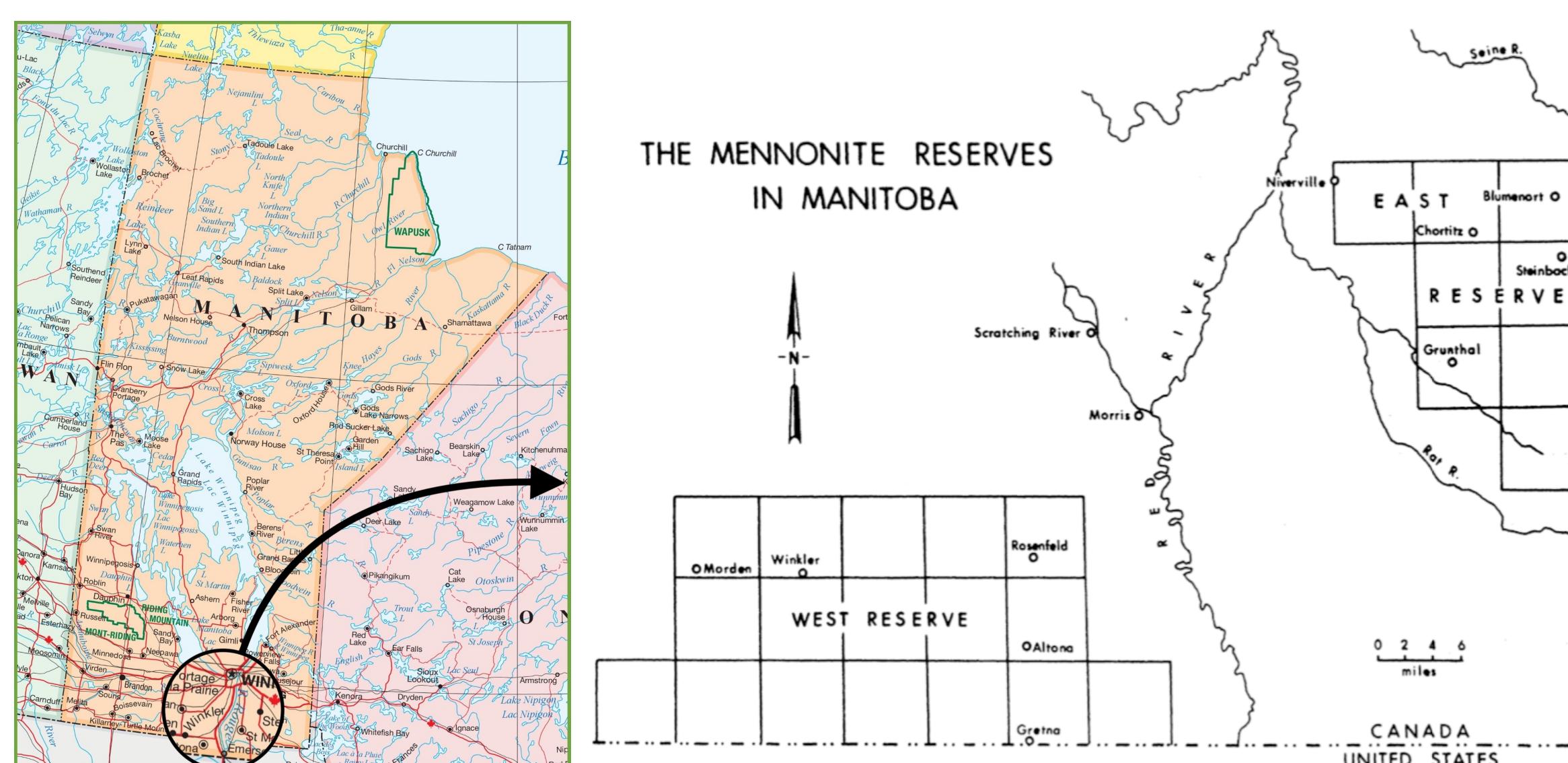


Fig. 1: The Mennonite Reserves in Manitoba (Ledohowski, 2003)

Filipino Winnipeggers

- One of the largest ethnic groups in Manitoba's capital, Winnipeg
- Regular migration from the Philippines began in late 1960s; remaining the current #1 source of migrants to the province
- 9.7% of Winnipeg's population (cf. 2.3% nationally), with the largest concentration in the north-west quadrant of the city
- Tagalog is the second-most widely-spoken L1 in Winnipeg at 48,530 speakers

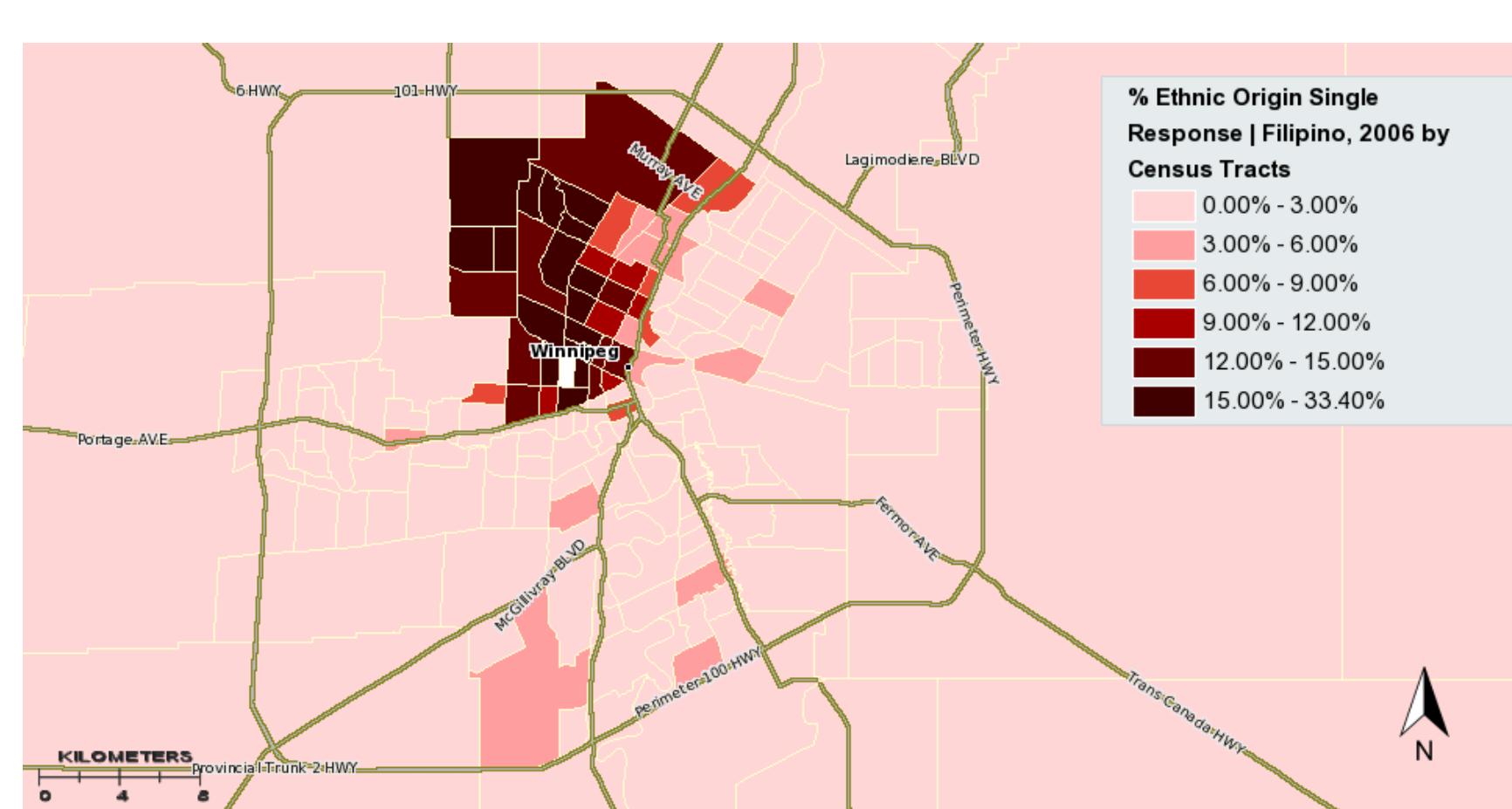


Fig. 2: The Filipino Population in Winnipeg (Kelly, 2007)

Data & Methods

- $N = 108$ sociolinguistic interviews with Manitobans in the *Languages In the Prairies Project* (LIPP; Onosson et al., 2019) corpus: 60 Mennonites; 29 Filipinos; 19 undifferentiated European ancestry
- Audio processing in FAVE (Rosenfelder et al., 2014) yielded $n = 505,870$ vowel tokens
- Statistical analysis conducted in R (R Core Team, 2019)
- Plots generated with ggplot2 (Wickham & Winston, 2019)

/uw/-fronting

- Manitoba speakers lag behind N. American /uw/ F2 averages (i.e. more retracted; Labov et al., 2006) by -97 Hz for non-post-coronal [Kuw], -81 Hz for post-coronal [Tuw]
- ANOVA: sig. diff. in /uw/ F2 by *ethnicity* for [Tuw] ($F=9.823, p<0.05$) but not [Kuw]
- Post-hoc test: **greater post-coronal fronting among Mennonites by +45 Hz ($p<0.05$)** vs. Europeans; Filipinos show no sig. difference from other ethnicities

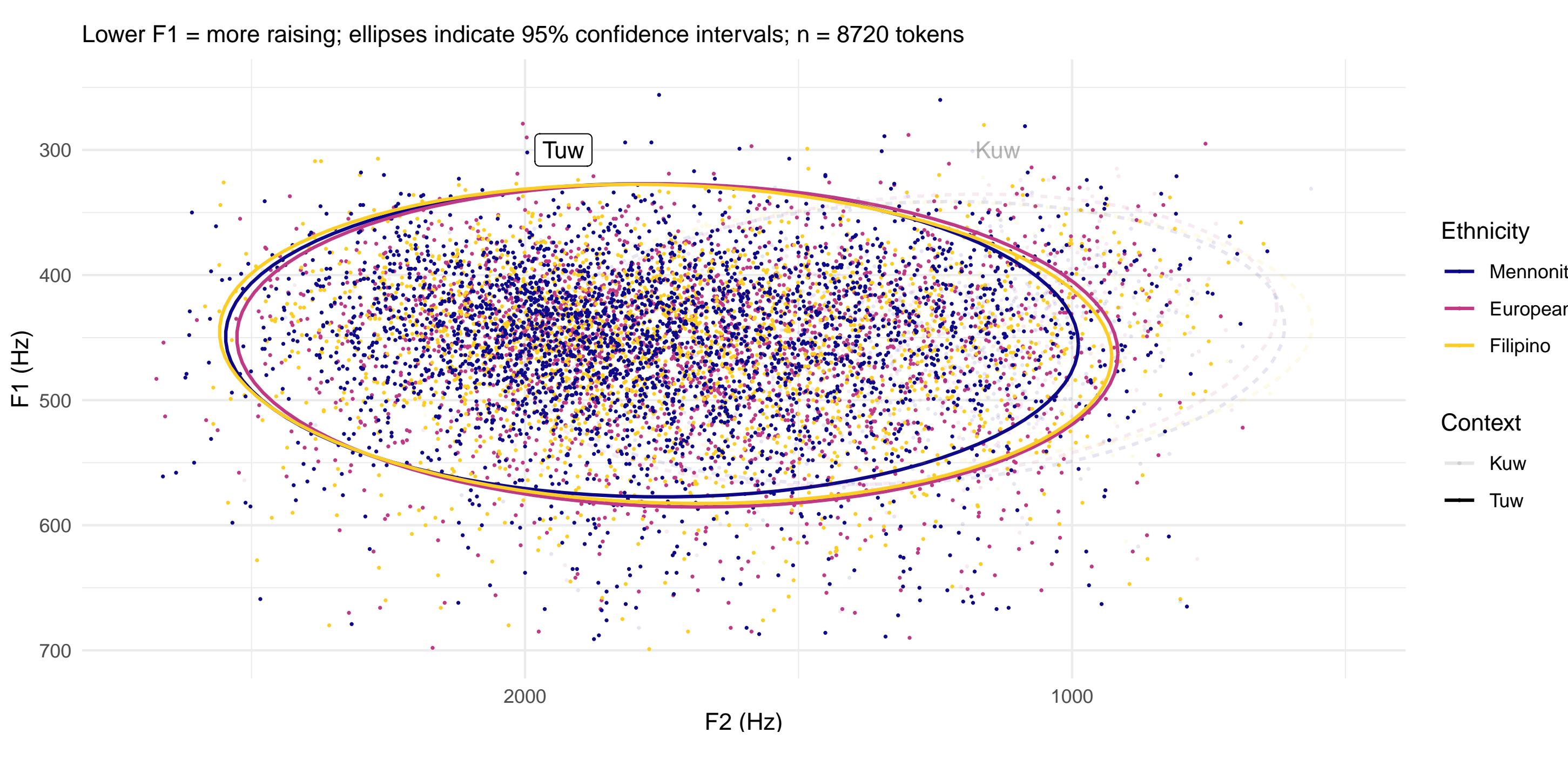


Fig. 3: Plot of /uw/ tokens by ethnicity

/æ/-raising

- Unique Prairie /æ/ pattern: pre-velar F1 < pre-nasal F1 (i.e. more raised; Boberg, 2008)
- ANOVA of /æ/ F1 by *coda segment*: $F=628.5, p<0.05$
 - Post-hoc testing: nasals /m, n, ɳ/ all sig. different from each other; "**pre-nasal**" = /n/
 - Voiced velars /g, ɳ/ not sig. different; "**pre-velar**" = /g/ or /ɳ/
- ANOVA of /æ/ F1 by *ethnicity* significant ($F=19.67, p<0.05$) for coda /n/
 - **Mennonites: less pre-nasal /æ/-raising vs. Europeans;** F1 +10.2 Hz ($p<0.05$)
 - **Filipinos: less pre-nasal /æ/-raising vs. Europeans;** F1 +15.8 Hz ($p=0$)

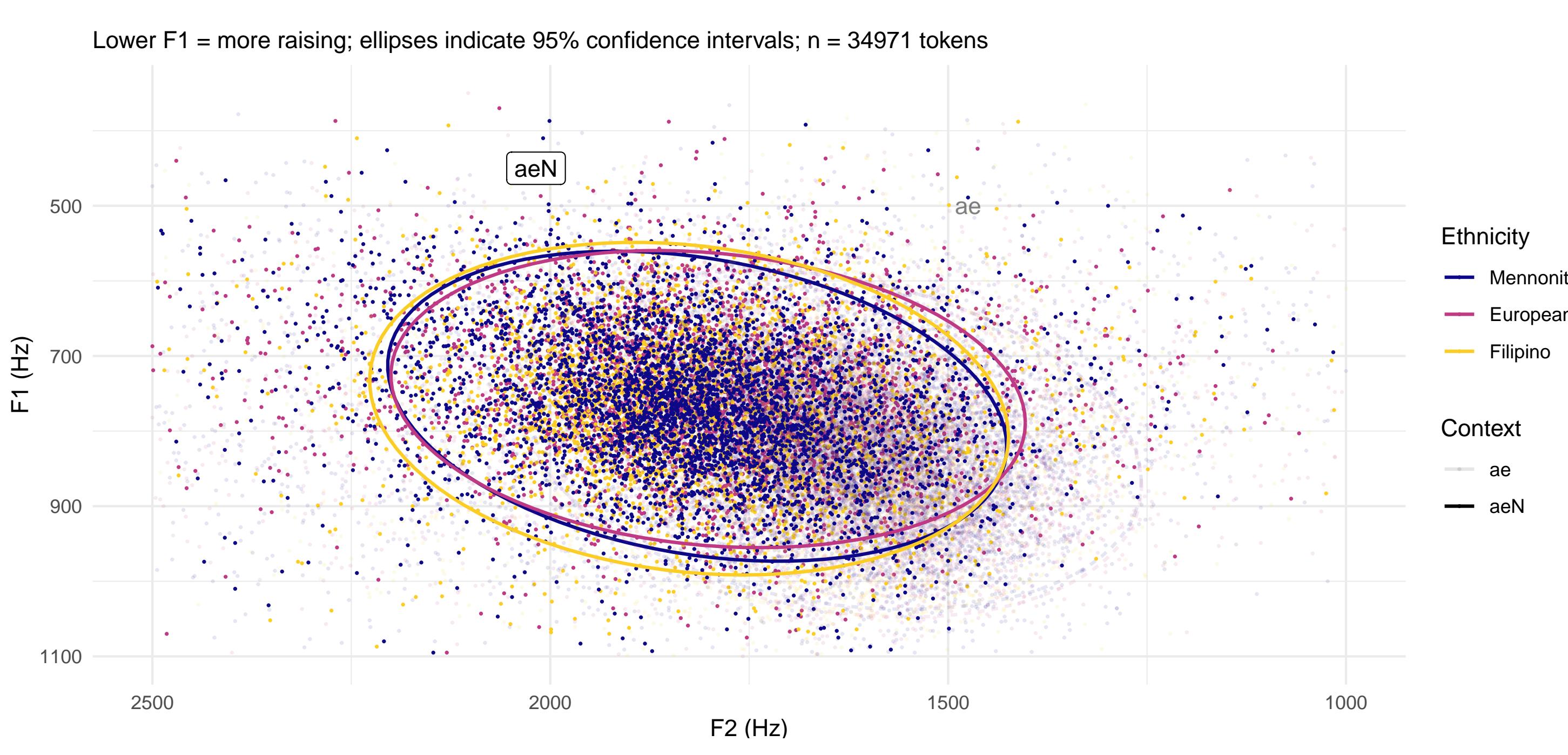


Fig. 4: Plot of /æ/ tokens by ethnicity

Canadian Raising

- Formant trajectory differences compared using GAMs (Hastie & Tibshirani, 1990)
- Canadian Raising of pre-voiceless /aj, aw/ observed for all groups
- Robust ethnolinguistic differentiation only for /aw/ F1 trajectories
- **Mennonites exhibit the greatest degree of /aw/-raising (lower F1), and Filipinos the least; Europeans fall in between**

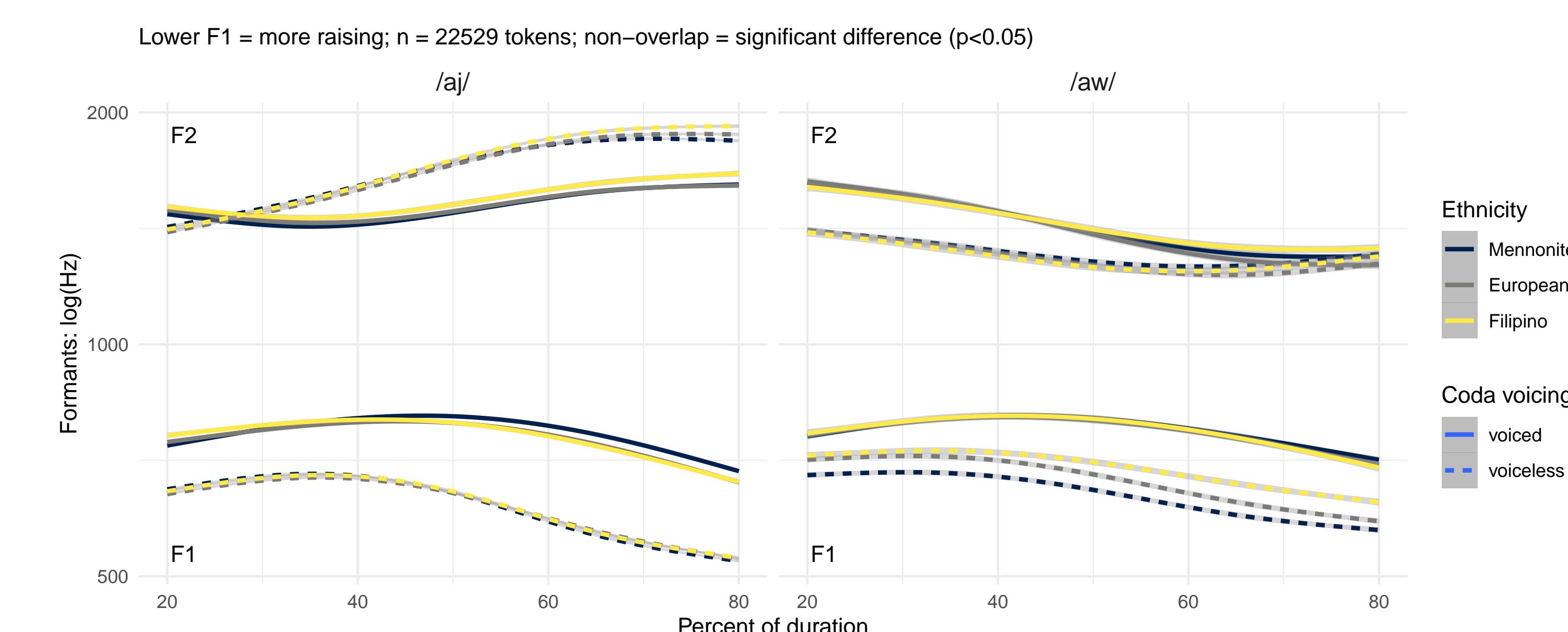


Fig. 5: GAMs comparison: Formants of /aj, aw/ by speaker ethnicity and coda voicing; 95% CIs

Conclusion

- Ethnolinguistic studies in Eastern Canada connect variation to ethnic identity (Hoffman & Walker, 2010), high rates of bilingualism (Boberg, 2014)
- Studies in other regions (Umbal, 2016; Smith, 2018) find more ethnic homogeneity
- In The Prairies, Rosen & Skriver (2015) argue that strong religious networks influence conservative productions among southern Alberta Mormons
- Manitoba's ethnolinguistic situation appears to be unique & complex:
 - Mennonites *least* conservative group for /uw/-fronting, more so for /æ, aw/-raising
 - Filipinos aligned more with *national* trends vs. *local* variants for /æ/- and /aw/-raising, in line with previous findings (Umbal, 2016; Onosson et al., 2019)

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