Tracking sociophonetic variation in one individual over the lifespan
FACE and GOAT

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Tracing Language Variation and Change across the Lifespan

BACKGROUND

Tyneside English:

(Corrigan et al. 2012)

- 3 variants associated with region

Variants:

	FACE	GOAT
Closing diphthong	[eɪ]	[oʊ]
Monophthong	[e:]	[o:] / [ə:]
Centring diphthong	[ɪə]	[ʊə]

(adapted from Wells 1982; Watt 2000, 2002)

Emerging Adulthood:
- Stage of life between the ages 18 and 25
- Transition between childhood and adulthood Characterised by exploration of self, orientation within semiotic landscape (Arnett 2000)
- "rapid and complex changes in beliefs, behaviours, and overall self-identity" (Bigham 2012: 534)

Linguistic Marketplace Pressures:
- Underlying pressures for individuals to shift towards a variety regarded as a more appropriate or elite variety (Bourdieu & Bolanski 1975; Sankoff & Laberge 1978)

DATA

Real time panel study:
- 3 waves (2010, 2014 & 2019)

Speaker:
- Charlotte (from Northeast England)
  - T1 = 2010: 20 years old, student
  - T2 = 2014: 24 years old, PhD candidate
  - T3 = 2019: 29 years old, lecturer (humanities)

RESEARCH QUESTIONS

1. Does the speaker exhibit linguistic malleability as she moves into emergent adulthood?
2. What are the factors influencing intra speaker variability?

METHODS

- Forced aligned with LABB-CAT (Fromont & Hay 2012)
- Formant extraction in R
→ Script (James Grama & Simon Gonzalez)
  - F1/F2 measurements extracted at 7 points 20-80%
→ Lobanov (1971) normalised
- Variants coded auditorily

Statistical Analysis:
- Chi-Square (for auditory changes)
- Linear mixed effect models for acoustic work: lmer in R (Bates et al. 2021)
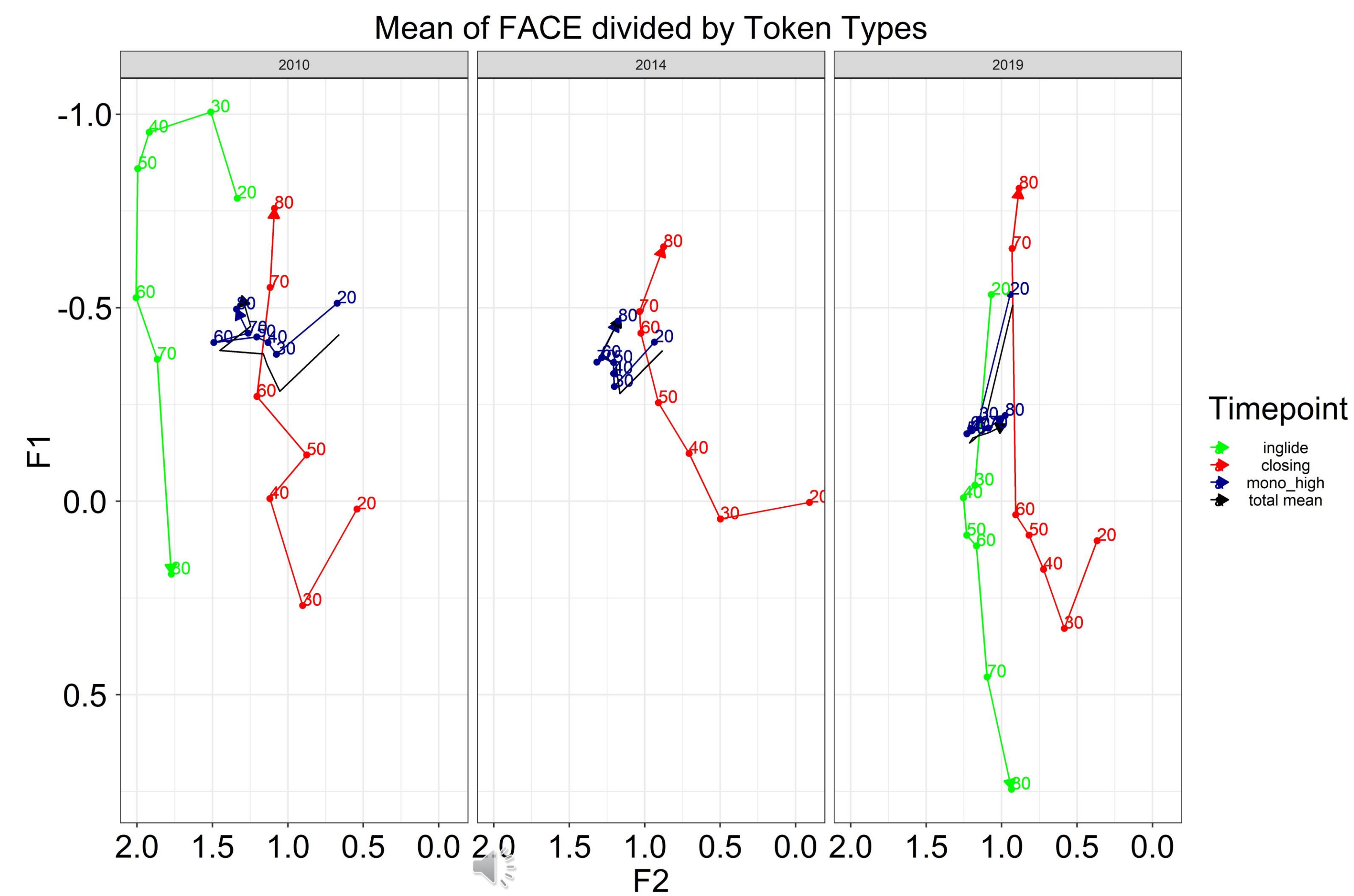
DISCUSSION & CONCLUSION

Contrary to previous research FACE and GOAT do not behave in lockstep (Watt 2000, 2002; Haddican et al. 2013)

Influences:
- Emerging adulthood
  → receptive to change
- Linguistic marketplace pressures (university context)
  → T1 to T2: movement towards supralocal variant
- Peer pressure: monophthongs (Watt 2002)
- Dialect awareness & dialect as identity: lecturer in humanities still North England
  → T2 to T3: movement back towards local forms

RESULTS

FACE

Mean of FACE divided by Token Types

Auditory Coding:

Vowel Types	T1	T2	T3
Closing Variant	17 (16%)	9 (5%)	7 (4.24%)
Ingliding Variant	1 (1%)	0 (0%)	8 (4.85%)
Monophthongal Variant	91 (83%)	162 (95%)	150 (90.91%)
	109	171	165

$X^2 = 172.98$, df = 4, p < 2.2e-16: significant (p < 0.05) for influence of the time point
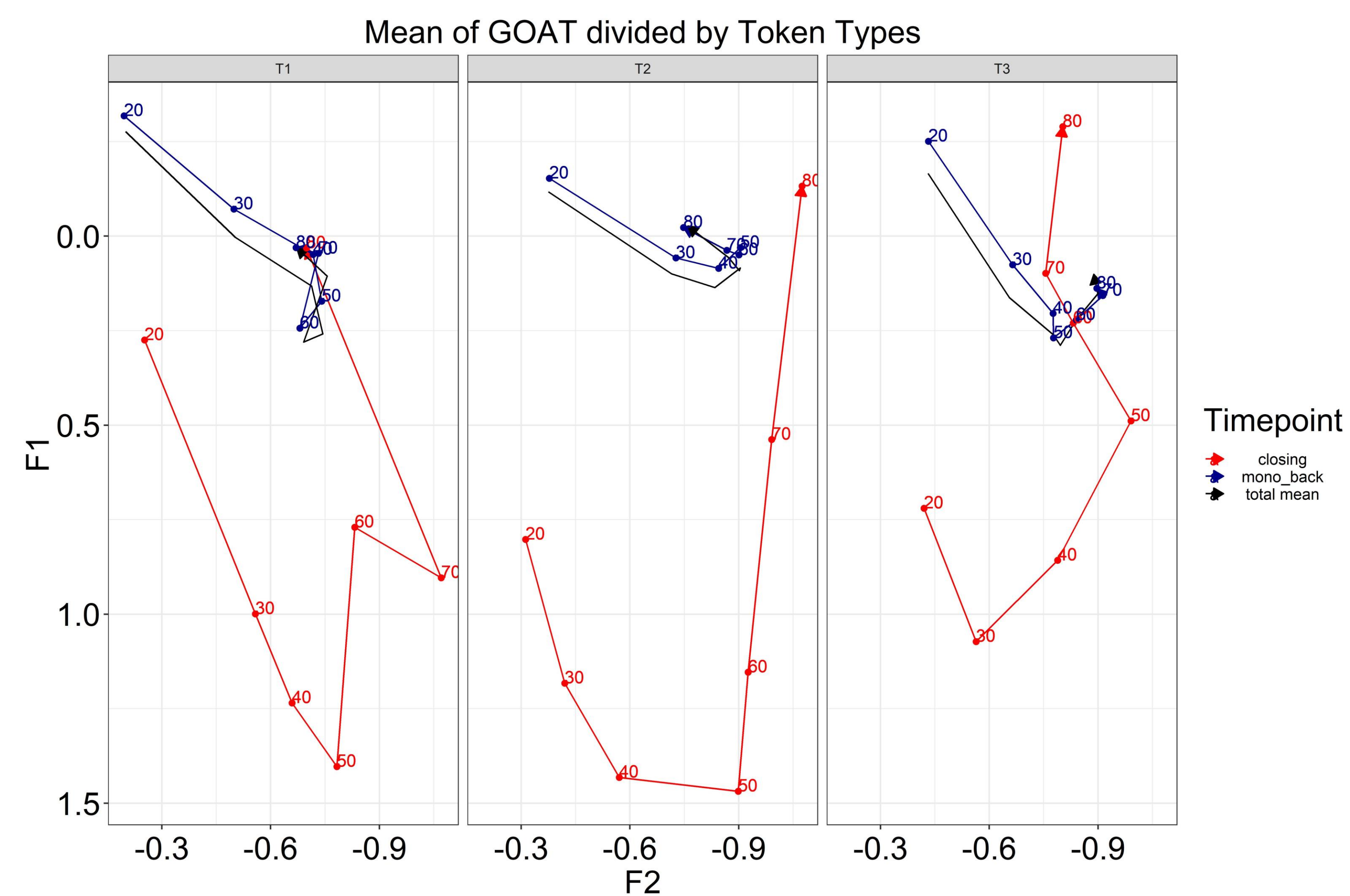→ **change over life-time**

Findings auditory coding:
- Mostly monophthongs
- Closing variant:
  → decreasing over time
- Indgliding variant:
  → increasing over time
→ Change towards local variant over time

Findings lmer:
- Influence of phonological context

Influence Time Point:
F1:
- Monophthongs: T2 to T3

Euclidean Distance:
- Inconclusive
- Unusual high onset in monophthongs in T3

GOAT

Mean of GOAT divided by Token Types

Auditory Coding:

Vowel Types	T1	T2	T3
Closing Variant	12 (7%)	7 (4%)	16 (9%)
Monophthongal Variant	159 (93%)	179 (96%)	167 (91%)
	171	186	183

$X^2 = 27.247$, df = 2, p-value = 1.212e-06: significant (p < 0.05) for influence of the time point
→ **change over life-time**

Findings auditory coding:
- Mostly monophthongs
- Closing variant:
  - Decreasing in T1 to T2
  - Increasing in T2 to T3
  - No centring diphthongs

Euclidean Distance:
- Significant changes:
  - T2 to T3
  - T1 to T3

Findings lmer:
- Influence of phonological context

Influence of time point:
F1:
- Closing variant: T2 to T3
- Monophthongs: T1 to T2 & T2 to T3
- Higher vowels in T2 and lowered again in T3
F2:
- Monophthongs: T1 to T3
- Backer vowels in T2