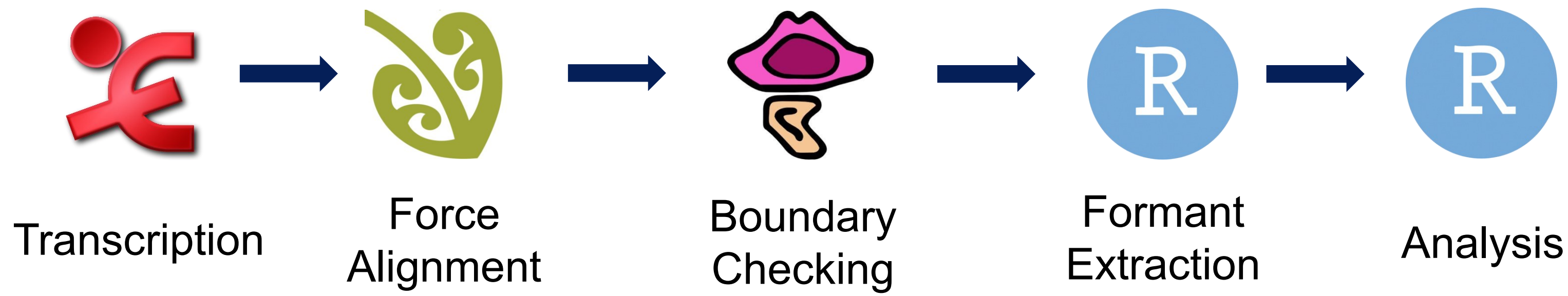


## RESEARCH QUESTION

**What is the origin of the realization of First Person Possessive (1POS) <my> as [mi] in Tyneside English?**

- Overlap with First Person Object (1OBJ) <me> → transfer from 1OBJ to 1POS? (Anderwald 2004, Childs, 2013)
    - Ahrens (2024): acoustically not the same
  - Residue of Great Vowel Shift (Anderwald 2004): /i:/ → /ei/ (or /eɪ/) → PRICE
    - Potentially visible in other instances of PRICE
- **Comparison of PRICE tokens and realizations of 1POS**

## DATA PROCESSING



## PROPORTIONAL ANALYSIS

Realizations	1POS	PRICE	Sum
[ɑ]	333 (34.9%)	295 (31.1%)	628 (33.0%)
[ai]	245 (25.7%)	638 (67.3%)	883 (46.4%)
[au]	1 (1.3%)	1 (0.2%)	2 (0.2%)
[e]	31 (3.2%)	0 (0%)	31 (1.6%)
[ei]	47 (4.90%)	9 (0.9%)	56 (2.9%)
[i]	281 (29.5%)	2 (0.2%)	283 (14.09%)
[ɪ]	0 (0%)	2 (0.2%)	2 (0.2%)
[e]	12 (1.3%)	1 (0.1%)	13 (0.7%)
<b>Sum</b>	<b>954 (100%)</b>	<b>948 (100%)</b>	<b>1 902(100%)</b>

**GLMM: all tokens of [ai] and [ɑ]** (Bates et al. 2022)

- 1POS vs. PRICE: n.s.
- Time Point: n.s.
- Panel: n.s.
- Realization conditioned by linguistic factors (stress, previous and following phonological context)

## LANGUAGE VARIATION AND CHANGE ACROSS THE LIFESPAN CORPUS (LAVALI)

- Panel corpus Dyadic interviews (~60 minutes)
- Same pairs at T1 and T2
- Speakers asked to revisit the same topics at T2:
  - childhood, life in Tyneside, social networks, attitudes towards language

I walked [mai]/[mi]/[ma]/[me] / [mɛ] dog yesterday.

My dog bit [mi]/[ma]/[me]/[mɛ] yesterday

Tyneside English  
Northeast England, UK

Panel	N	T1	T2
Young	6	Recording Years 2007 - 2010	2014
		Age of Speakers 19 - 22	24 - 29
Old	5	Recording Years 1971	2013
		Speakers Age 21 - 32	63 - 74

Moelders (2025a), Ahrens (2024)

## ACOUSTIC ANALYSIS

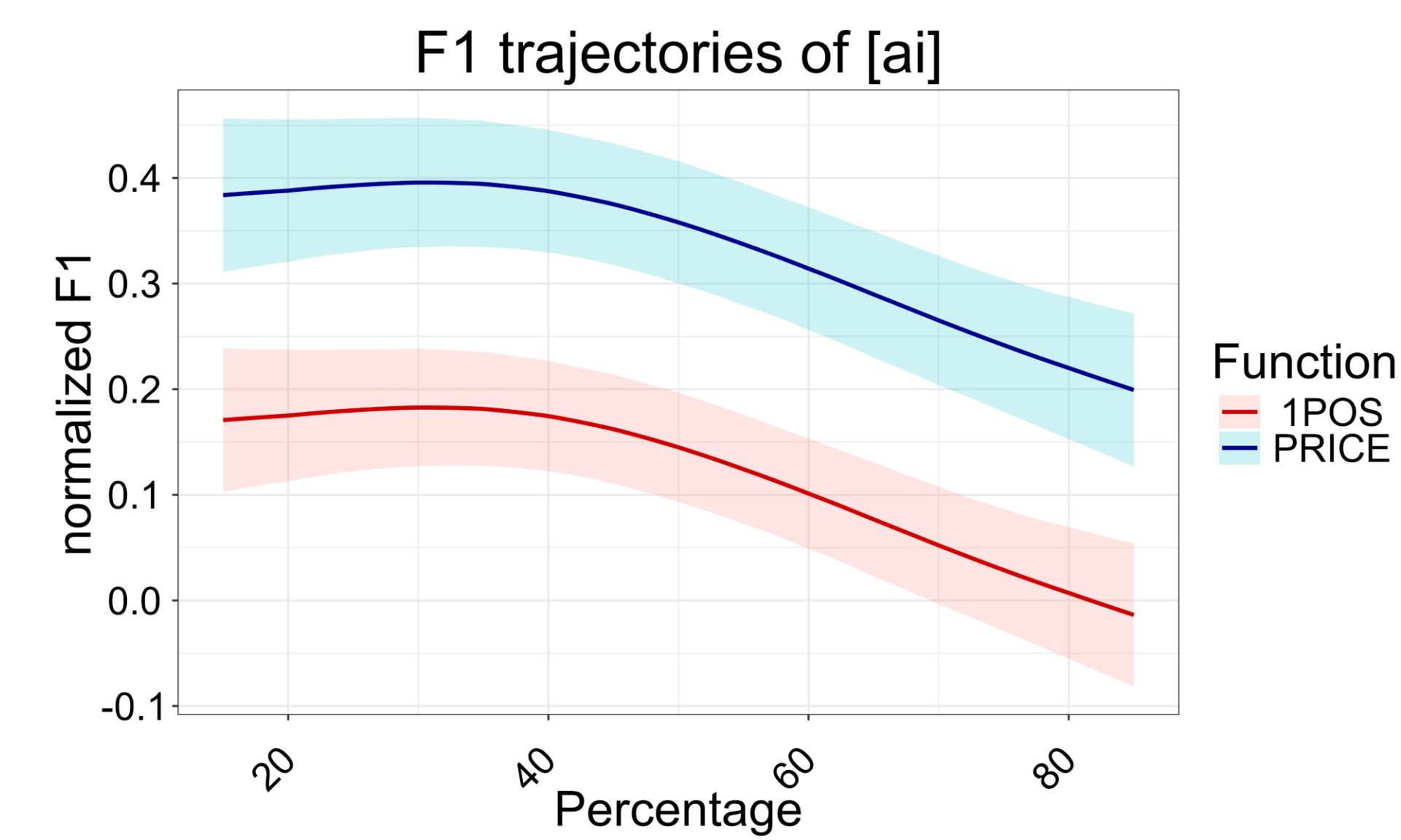
### Vowel Trajectories

- Extracted in 5% steps between 15% - 85%
- Normalized by speaker and time point
- [ai]: differences at onset
- [ɑ]: different placement in F1/F2 space

**GAMM:**

- F1: vowel height
- F2: vowel frontness

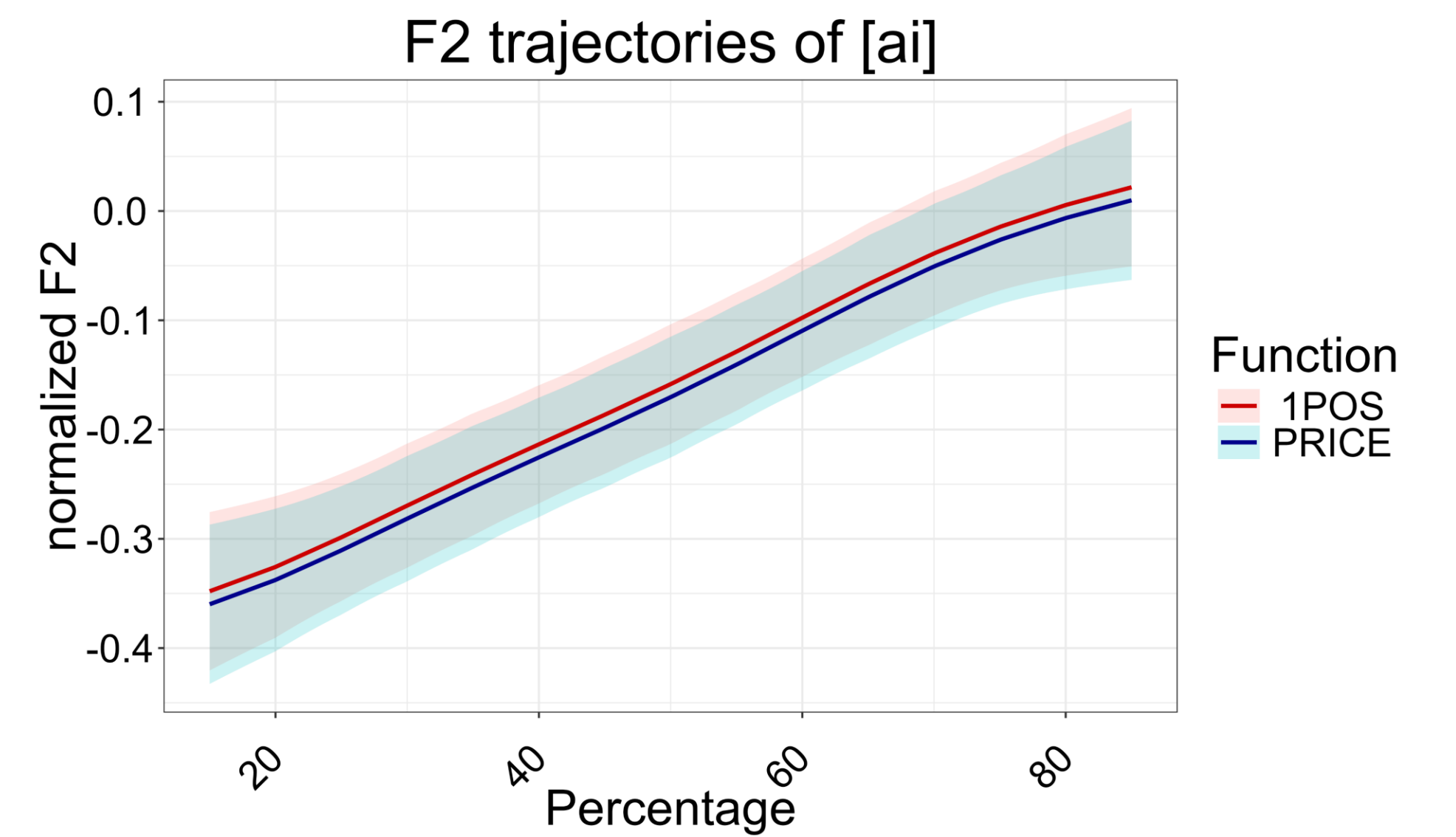
## REALIZATION AS [ai]



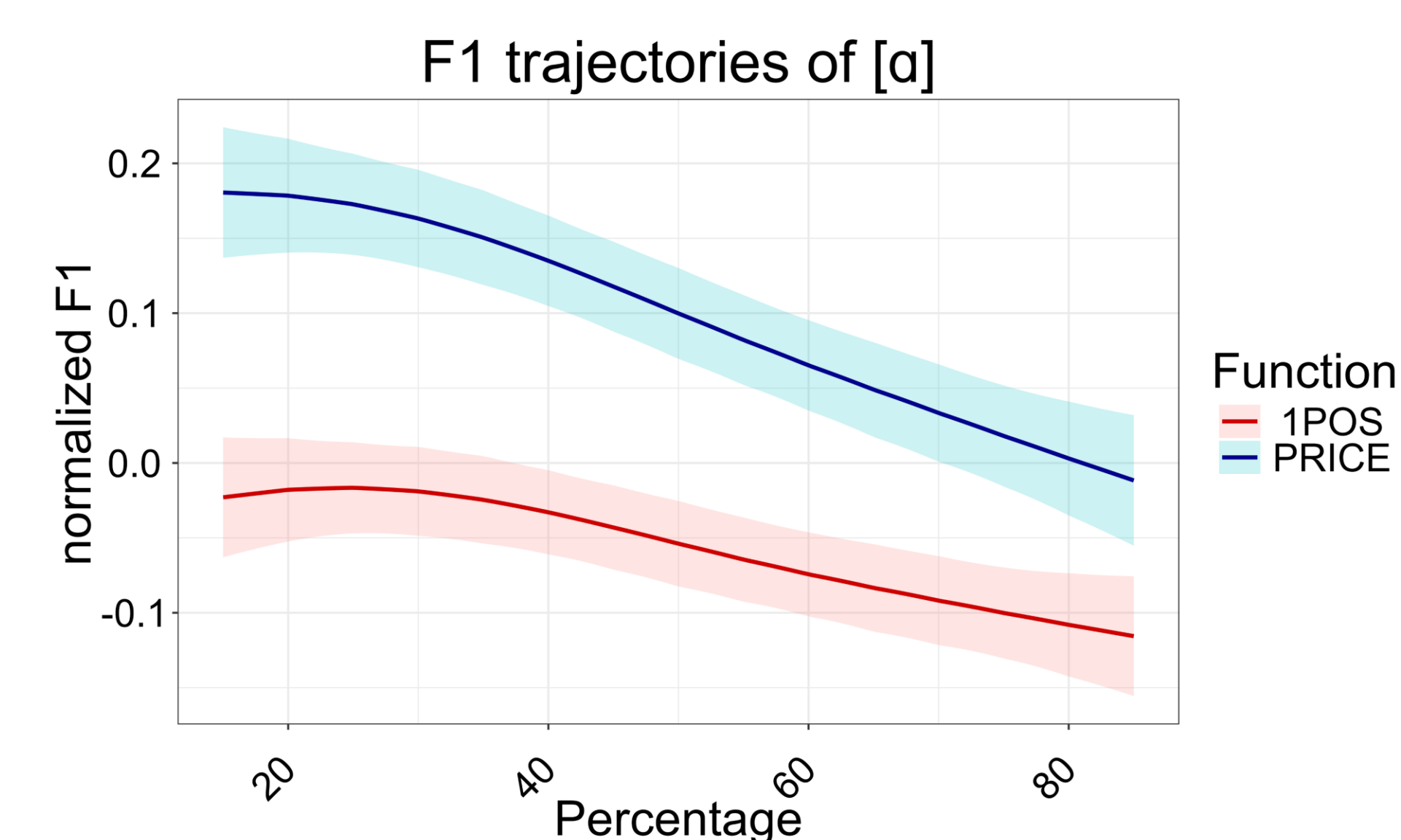
- Formant 1:**
- Unstressed PRICE = lower F1 values compared to stressed PRICE
  - Stressed 1POS = lower F1 values than stressed PRICE
  - Conditioned by linguistic factors
  - GAMM predict significant difference of full trajectory
    - Variation between individuals
    - Duration influences shape

### Formant 2:

- Conditioned by linguistic factors
- GAMM predict significant difference of full trajectory
  - Variation between individuals



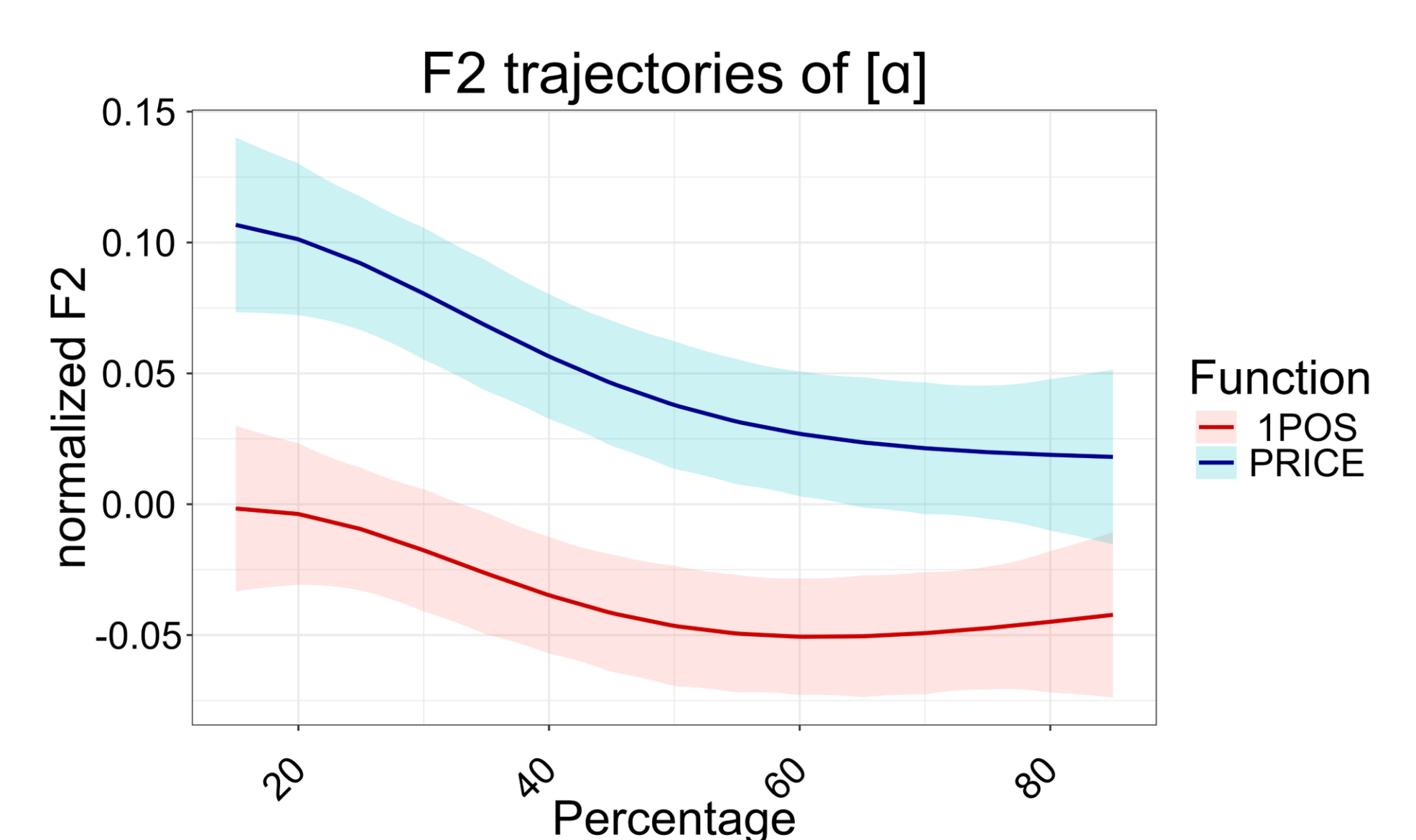
## REALIZATION AS [ɑ]



- Formant 1:**
- Unstressed PRICE vowels = higher F1 values
  - older speakers at T2 = higher F1; younger speakers high at T1 and T2
  - Time point: Price lower F1 at T2 than T1
  - Conditioned by linguistic factors
  - GAMM predict significant difference of full trajectory
    - Variation between individuals
    - Duration influences shape
    - Function specific trajectory: 1POS changes shape

### Formant 2:

- Differences across function\*time\*panel
- GAMM predict significant difference of full trajectory
  - Variation between individuals
  - Function specific trajectory: 1POS changes shape



## CONCLUSION: PROPORTIONAL ANALYSIS

- 1POS and PRICE show differences:**
- Categorical distribution
    - [mi] mostly found in 1POS
    - [ai] vs. [ɑ]:
      - similar in 1POS and PRICE
      - Conditioned by linguistic factors
  - 1POS [mi] ≠ PRICE
- 1POS shows unique behavior**
- [mi] unlikely residue of Great Vowel Shift?
    - External influence?
  - [mi] salient feature of Tyneside English (Moelders 2025b)

## CONCLUSION: ACOUSTICAL ANALYSIS

- 1POS and PRICE trajectories show differences:**
- Acoustic realization of [ai] and [ɑ]
    - Stress influences 1POS and PRICE differently
    - 1POS vs. PRICE trajectories differ
      - Influences by phonological environment
    - Trajectory shape
      - [ɑ] significant for 1POS (F1 and F2)
      - Large differences between individuals
- Differences in [ai] and [ɑ]**
- 1POS differs from PRICE
    - Resistance to Great Vowel Shift?
    - Change over time?

## FUTURE WORK

- Add Data:**
- Include middle panel (LaVaLi corpus)
  - Expand data collection to investigate future development
    - Additional recordings
- Expand analysis:**
- Look at Euclidean Distance
    - Cumulative and stepwise
  - Duration
  - Include factors:
    - Speech rate
    - Position in phrase

References upon request