

Turn-final creaky voice across the life-span in Tyneside English

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Life-span change: theoretical background

- **Critical period hypothesis** (Lenneberg 1967, Penfield and Roberts 1959, Vanhove 2013)
- **Apparent time hypothesis:**
 - Works because speakers generally show stability across the life span
- **Panel studies:** follow the same individual over time
- **Refining the apparent time hypothesis:** intra-speaker linguistic lability
 - Post-adolescent linguistic malleability (Sankoff & Blondeau 2007, Harrington et al. 2000; Nahkola & Saanilahti 2004, Sankoff & Wagner 2006, 2011 inter alia)
 - “life-course perspective over a strict maturational explanation” (Donnellan & Lucas 2008:9)



Interactional aspects in panel data



To date: focus on phonetic & morphosyntactic features

- **Creaky voice – social and stylistic functions** (Dallaston & Docherty, 2020; Esling, 1978; Stuart-Smith, 1999; Podesva 2013)
 - Sex
 - Socioeconomic status
 - Region
 - Coolness, toughness, education, being knowledgeable
- **Turn-final use of creaky voice** (Henton & Bladon, 1988; Ogden 2006; Podesva, 2013)

Data



- Urban community: Tyneside, North East of England

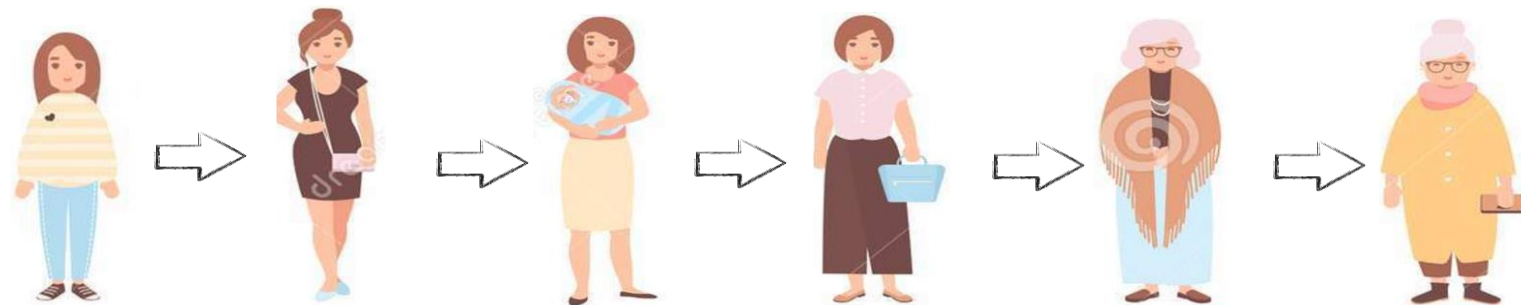
Panel sample:

- Interviews with the same speaker at 3 timepoints

Year of recording	1971	2013	2019
Age:	20-30	65-75	70-80

Old Panel

covering the stages that “give age meaning” (Eckert 1997: 167)



Turn-final creaky voice across the life span



Defining turns

a spate of talk produced by one participant while they are holding the floor (SSJ 1974, Schegloff 1995)

- **Length: Categorical coding for short/long**
 - Short ~ 1-3 TCUs, classical question-answer sequences
 - Long ~ >3 TCUs, more expansive answers, “doing being an interviewee”
- **Type of floor transition:**
 - “clear turns” = No overlap, no competition for the floor
 - “unclear turns” = Overlap, competition for the floor



Example of short clear turn (Aidan T1)

Talking about potentially moving out of the Tyneside area

INT: so you'd probably miss it [Tyneside] a bit but you wouldn't eh

AID: suppose I would eh
(.7)

INT: yeah (.) are most of your eh (.) friends and acquaintances you know do they mostly live around [here like]



Example of one long clear turn (Aidan T1)



INT: yeah and you're you're pretty close with your neighbours I
suppose

AID: that's it (.)

AID: [course I've] lived along here all me life I know everybody

INT: [mhm]
(1.1)

INT: yeah

AID: more than eh eh on a (.) f- first name basis you know [eh

INT: [yeah yeah

Distribution of turns by type and length

	Short	Long	<i>Sum</i>
Clear	1171	985	2156
Unclear	114	122	236
<i>Sum</i>	1285	1107	2392

Distribution of turns by type and timepoint



T1 (1971):
classical interview
question-answer style,

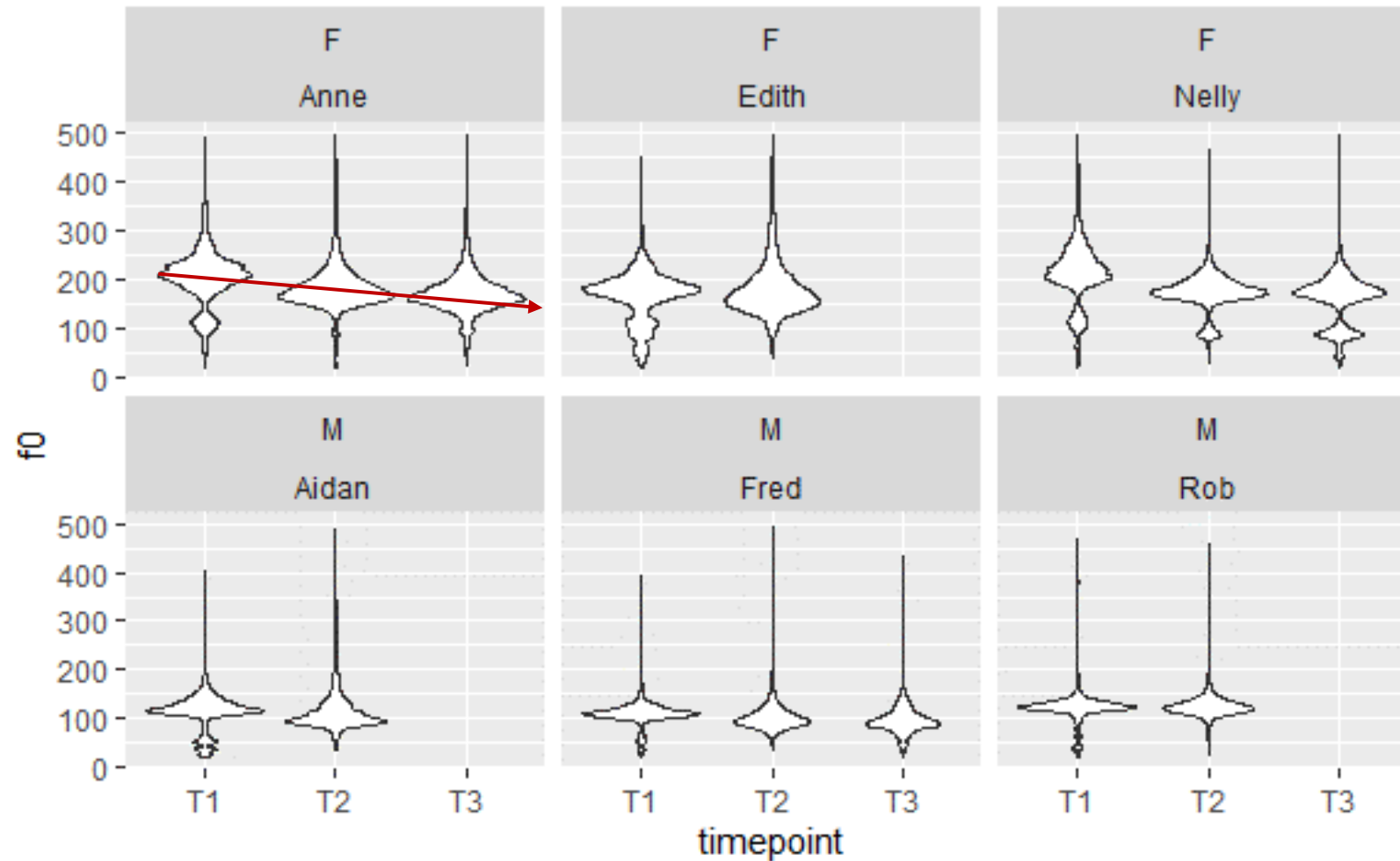
T2&3 (2013 & 2019):
more conversational



Data prep and extraction

- Interviews transcribed and time-aligned in ELAN
- Uploaded to LaBB-CAT and force-aligned (Fromont & Hay 2012)
- F0 extraction via REAPER (Talkin 2015)
 - Min set to 20 Hz because the priority was accurate detection of low f0 characteristic of creak (cf. Dallastan & Docherty 2019)
 - 3 million f0 measurements at 5ms intervals
- Data analysis and visualisation in R

Pitch across the life-span by timepoint and speaker

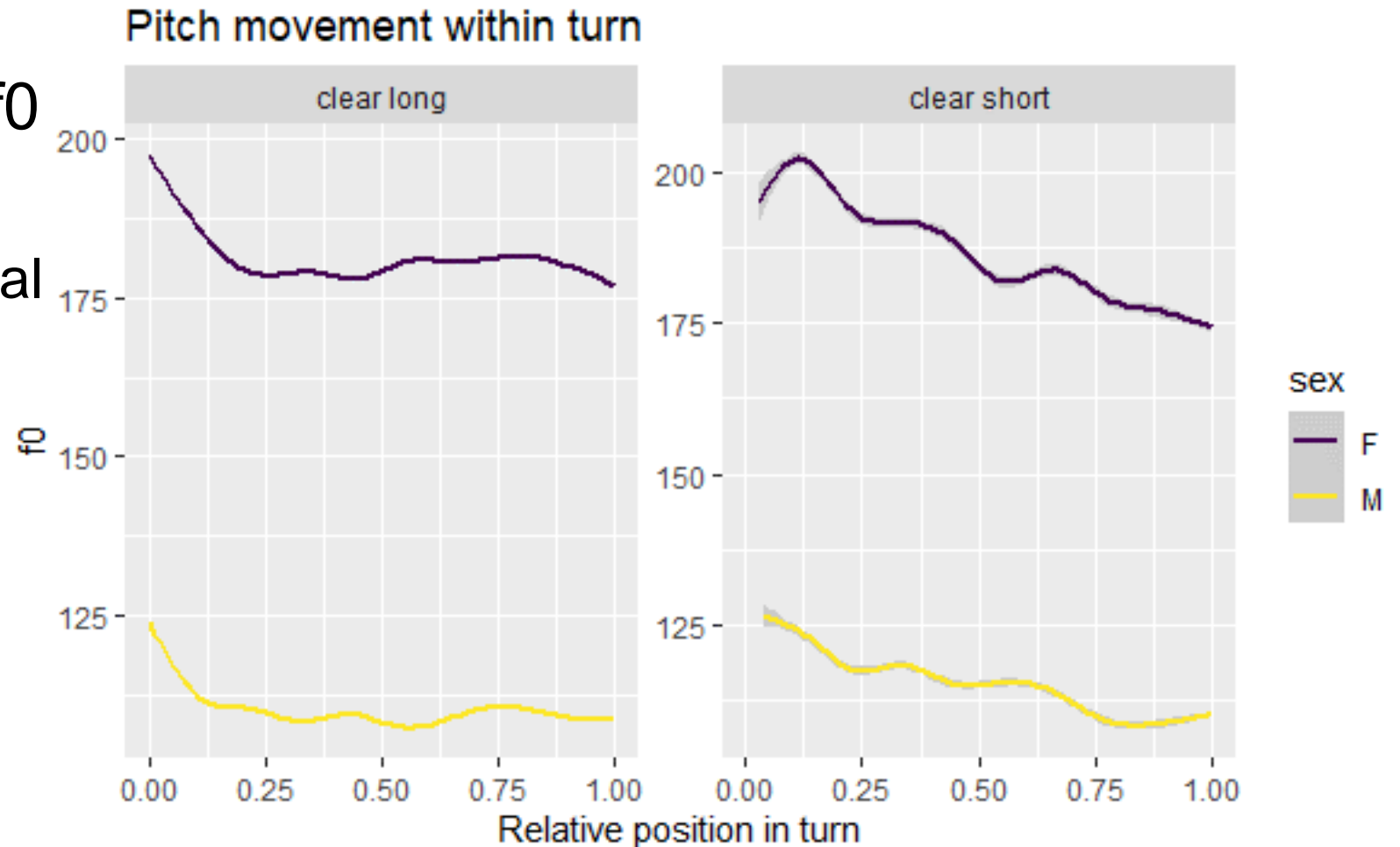




Pitch over the course of the turn

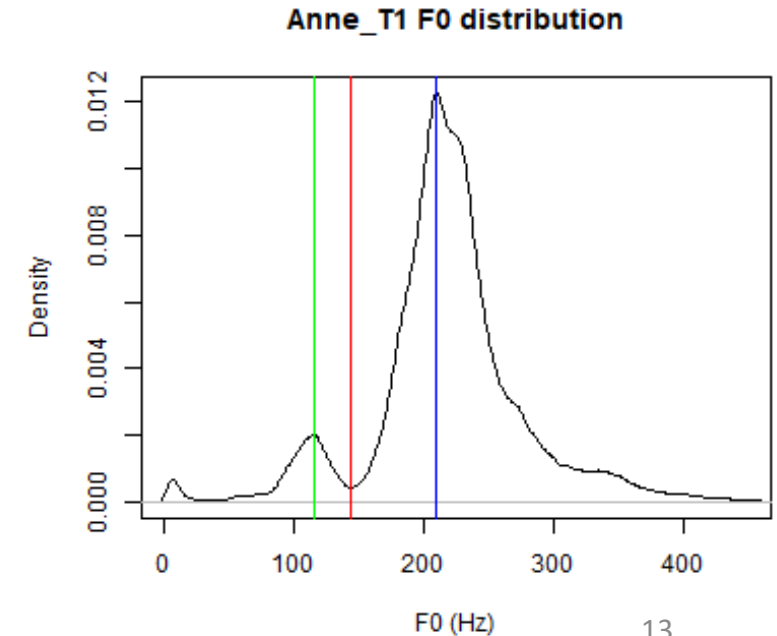
- Women's $f_0 >$ men's f_0
- Clear long:
Higher onset, plateau, final fall
- Clear short:
Overall fall

How about creak?

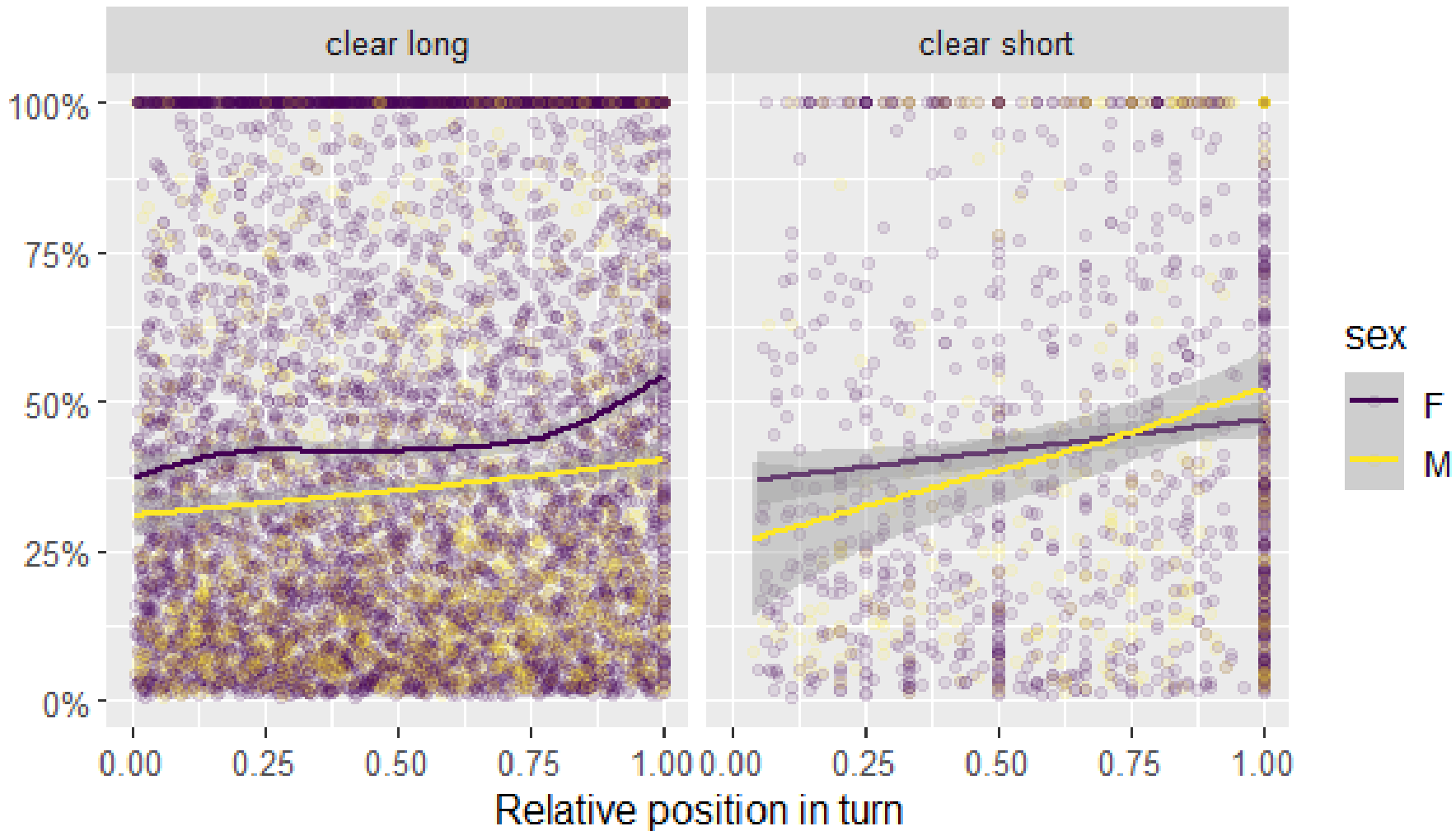


From pitch to creak

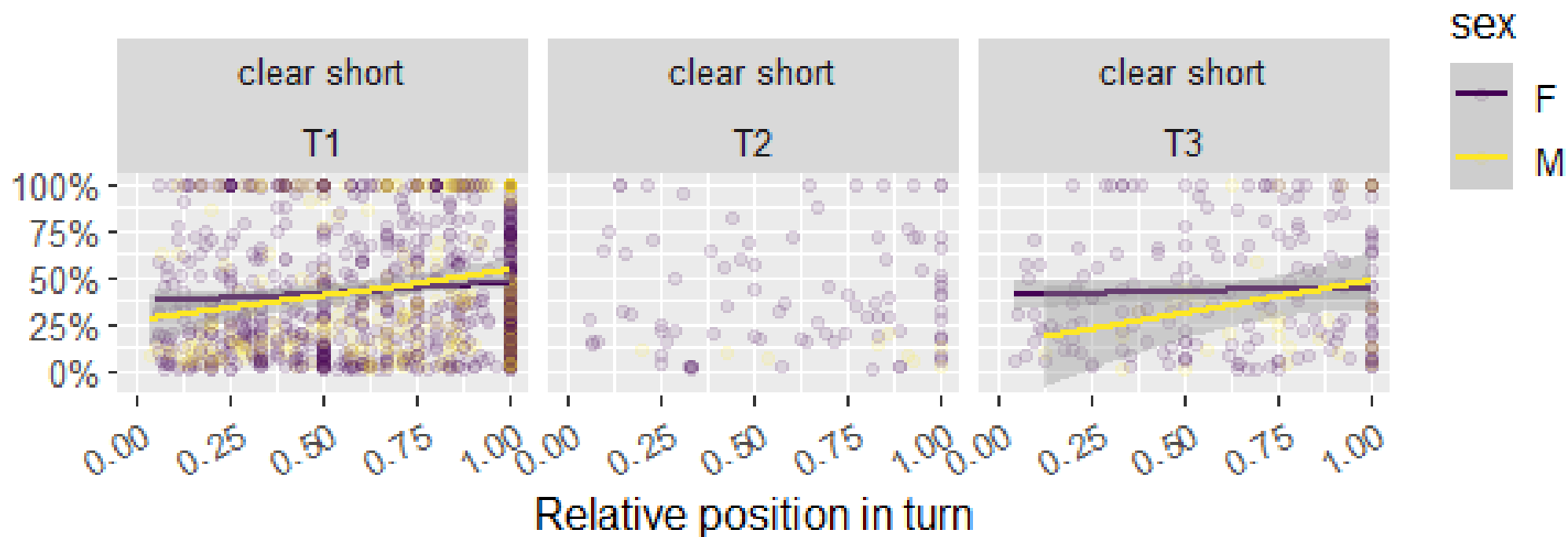
- **Creak:** Non-modal phonation characterised by low f_0 (Dallaston & Docherty 2019)
- **F_0 decreases with age** (Harrington, Palethrope & Watson 2007; Reubold, U., Harrington, J., Kleber, F., 2010; Reubold, U., Harrington, J., 2017)
- **Speaker- and time-point specific measure to determine cut-off for creak** (Dallaston & Docherty 2019)
 - Mode
 - 2nd peak (lower)
 - Antimode (minimum between the modes)



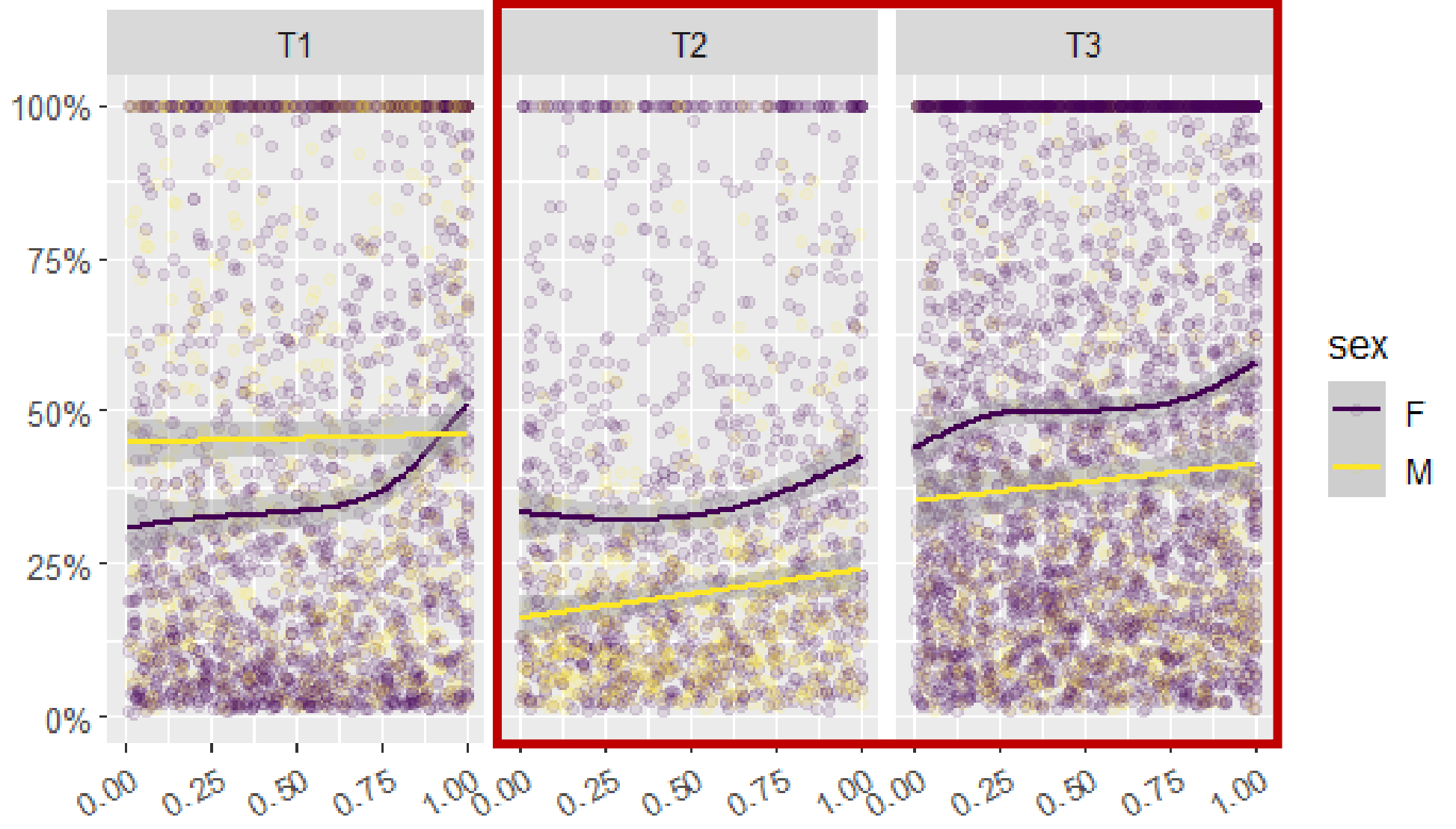
Creakiness by position in turn across all timepoints



Creakiness by turn length over time



Creakiness for clear long turns



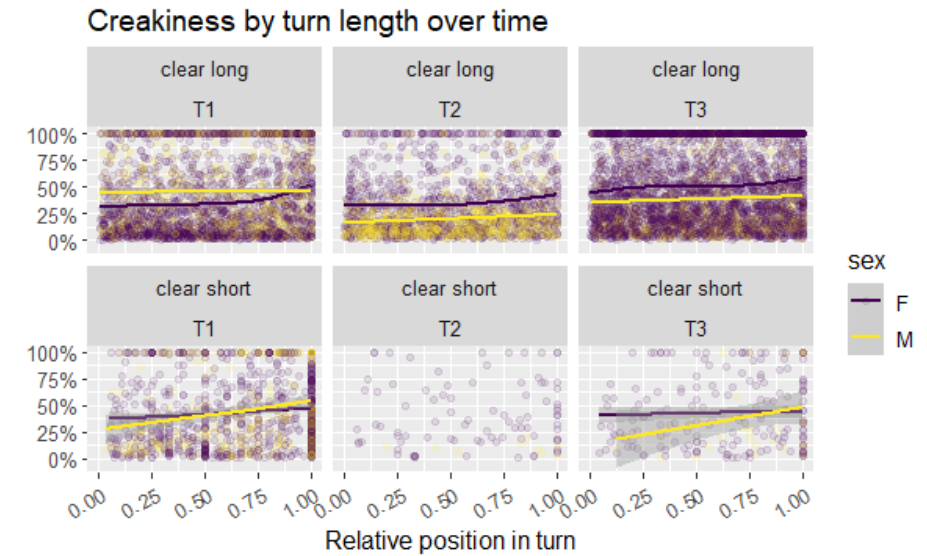
Results summary

- **Overall f0:**

- Decreases with age
- Women's f0 > men's f0

- **Turn-final creak:**

- Short turns: creak used by men turn-finally, women throughout (trend for more creak turn-finally)
- Long turns:
 - Creak used by women turn-finally at T1, T2, T3
 - Creak used by men turn-finally at T2, T3
- T1 (1971) != T2 (2013) and T3 (2019)
- Different social and interactional affordances by sex





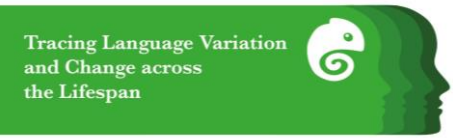
Conclusion and Discussion



- **Overall f0:**
 - Physiology
 - Individual grammar
- **Turn-final falling intonation & creak:**
 - Related to interactional social performance (1970s vs. 2013/19)
 - Sex difference
 - Community grammar
- **Changing social meaning of the interview & changing interview methods**

Our contributions

- Analysis of **turn-final creak in a panel sample** (1971 – 2013 – 2019)
 - Use of creak relates to:
 - Turn-final position (sex difference!)
 - Social context and performance (sex difference!)
- Speaker- and time-point specific definition of creak
- Use of **interactional resources over the life-time**
- Accounting for **changes in interview methods and social context**



Thank you!



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Thank you for your attention!

Any

Questions?

