

# Preaspiration following /æ/ in Southern Standard British English

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# Contents

- Background and methodology: BAD-LAD split investigation
- Preaspiration among young SSBE speakers
- Previous literature: preaspiration in the British Isles
- Queen Elizabeth II
- Conclusions
- Future work

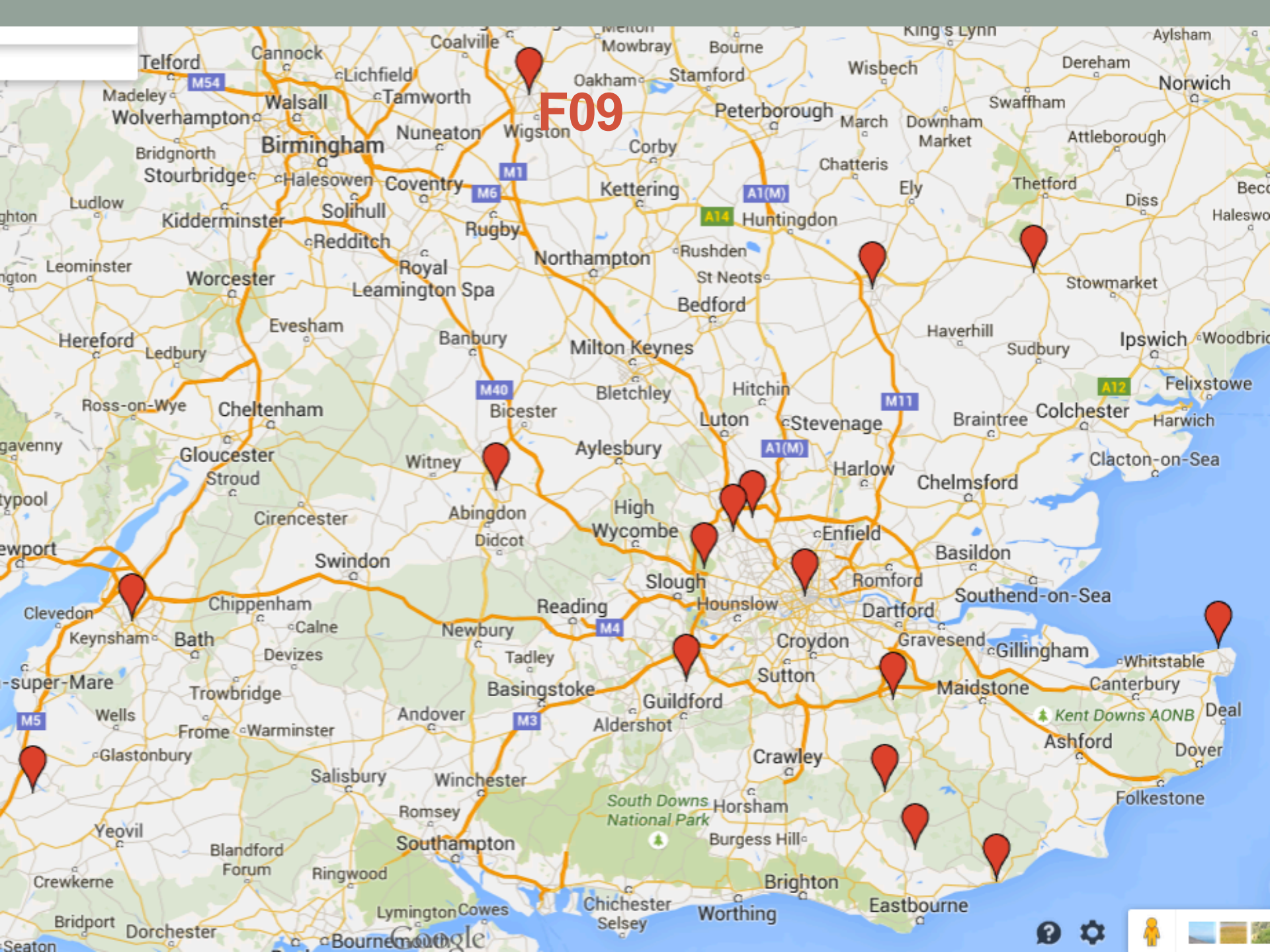
# Original investigation: BAD-LAD split

- Jones (1918) *An Outline of English Phonetics*
  - ‘short’ vowel: *lad, cat, lamp, pad*
  - optionally ‘long’ vowel: *glad, bag, man, jam*
  - adjectives ending in *-d* such as *bad, sad* singled out as being especially common lengthened words
- Wells (1982)
  - “marginally contrastive long /æ:/'” (p. 288)
  - ‘short’: *cad, dad, fad, pad*
  - ‘long’: *bad, glad, clad, sad*
- Fudge (1977)
  - Intuitions of complex lexical split between ‘long’ and ‘short’ /æ/
  - near-minimal triplets like p[æ]nder, g[æ:]nder, sl[ɑ:]nder

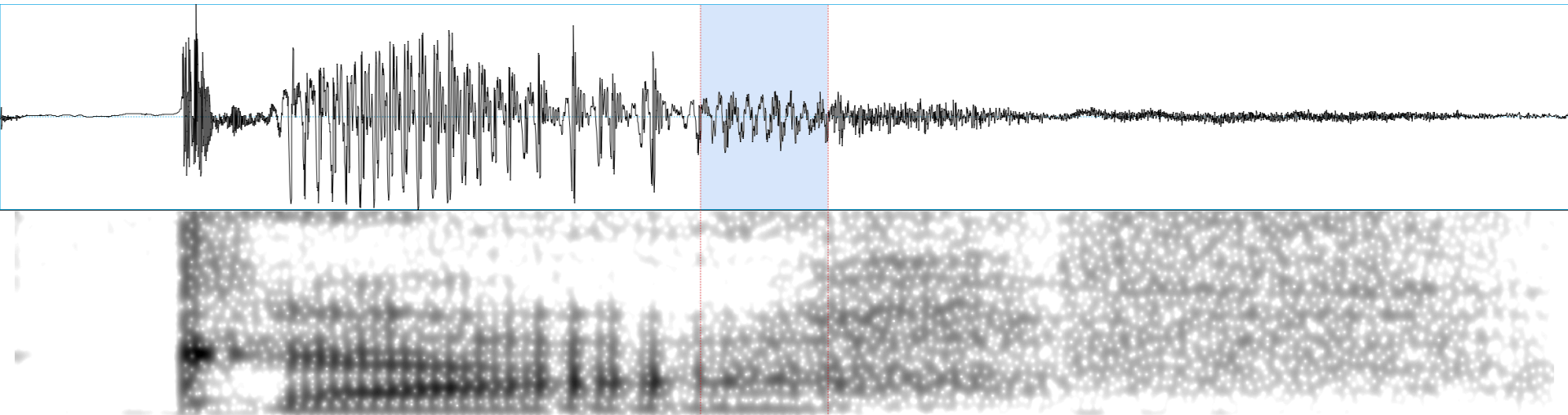
# Present Study

- Participants (n=21) all SSBE-speaking Cambridge students aged 18-24 (15 women, 6 men)
- Recorded in sound-attenuated phonetics booth reading 192 sentences off a screen
- Each sentence contained one target word embedded at the end of the sentence
- Utterances controlled for number of syllables
- Words selected mainly targeted pre-voiced stop environments





F09



159\_Though he tried to sound practiced, the speaker made a gaffe.

gaffe

gaffe

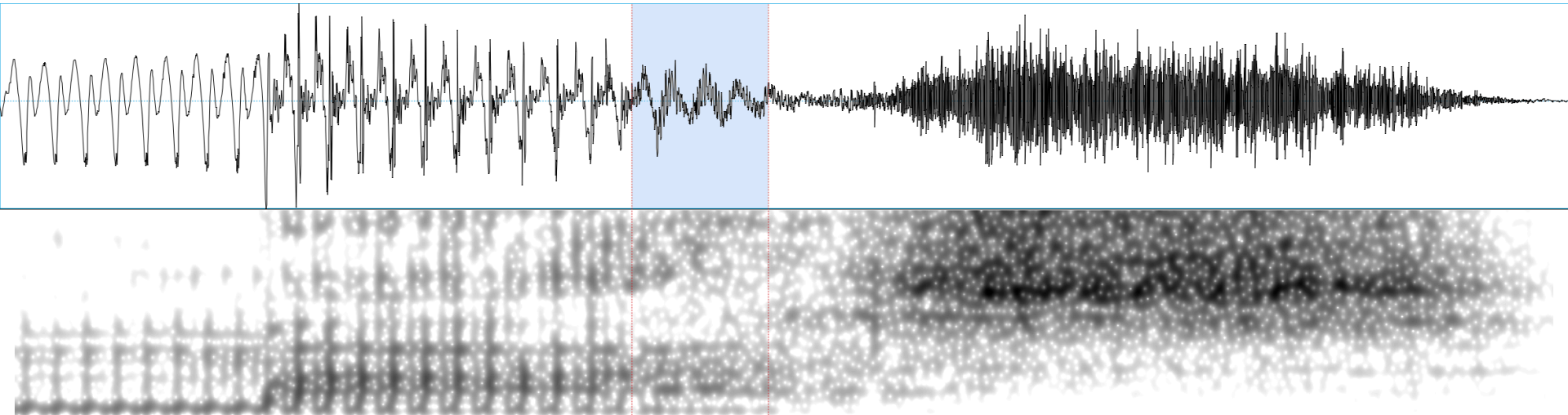
gaffe

br

pre

**F02 gaffe**





171\_The church isn't holding a wedding, in fact there's now a mass.

mass2

mass

mass2

br

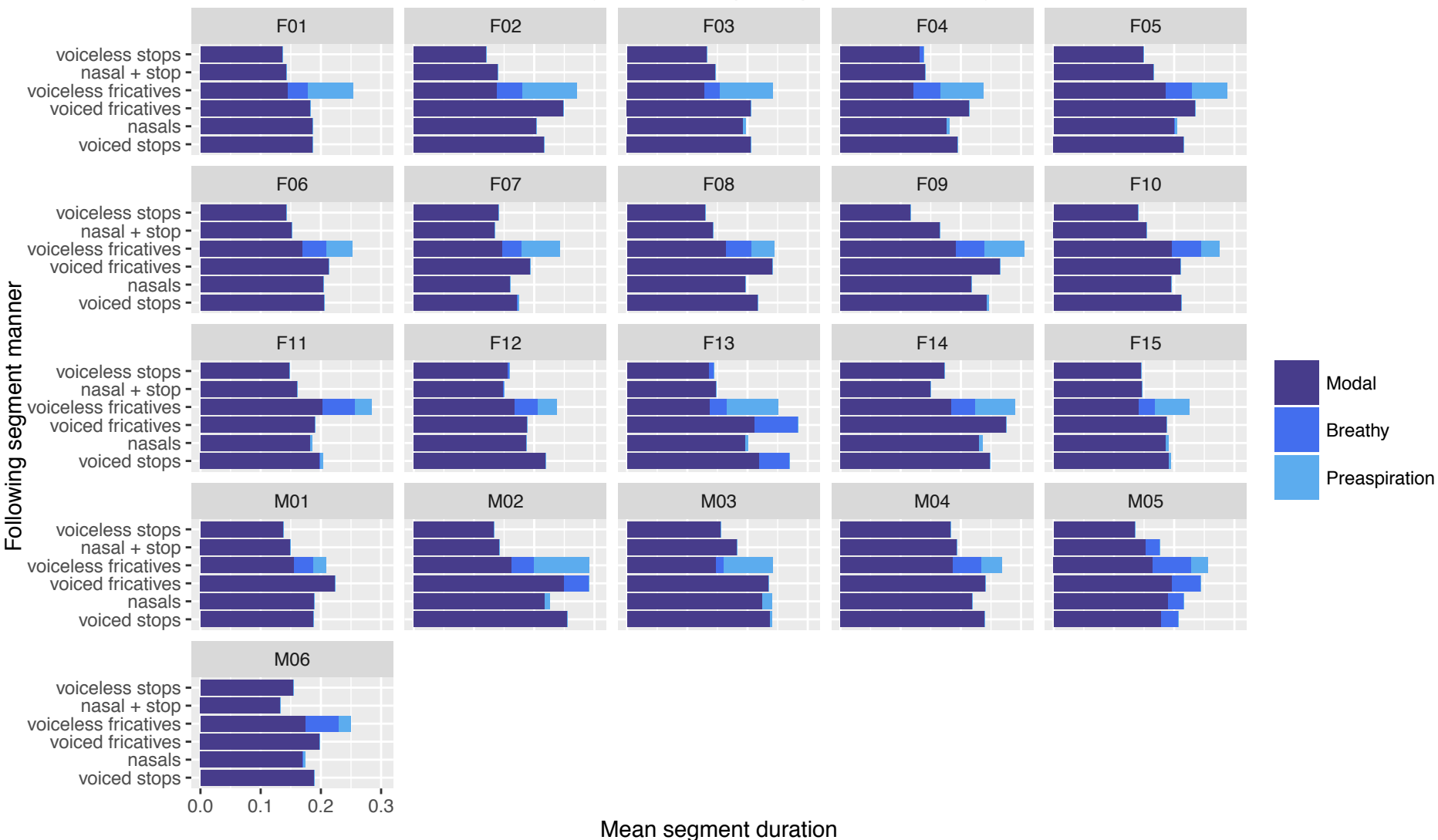
pre

# M01 mass



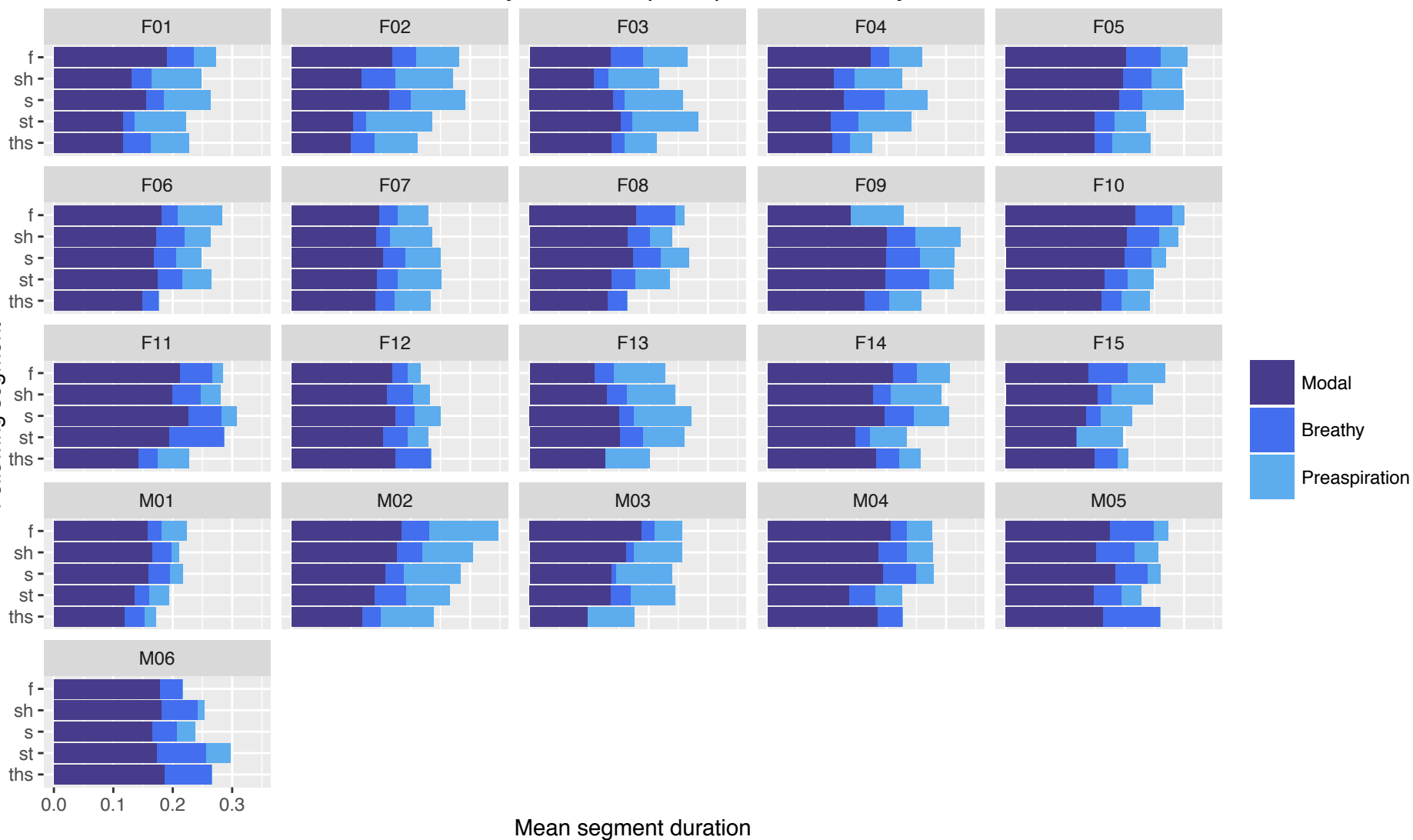
# Monosyllables

Presence of breathy voice and preaspiration, monosyllables



# Monosyllables

Presence of breathy voice and preaspiration, monosyllables

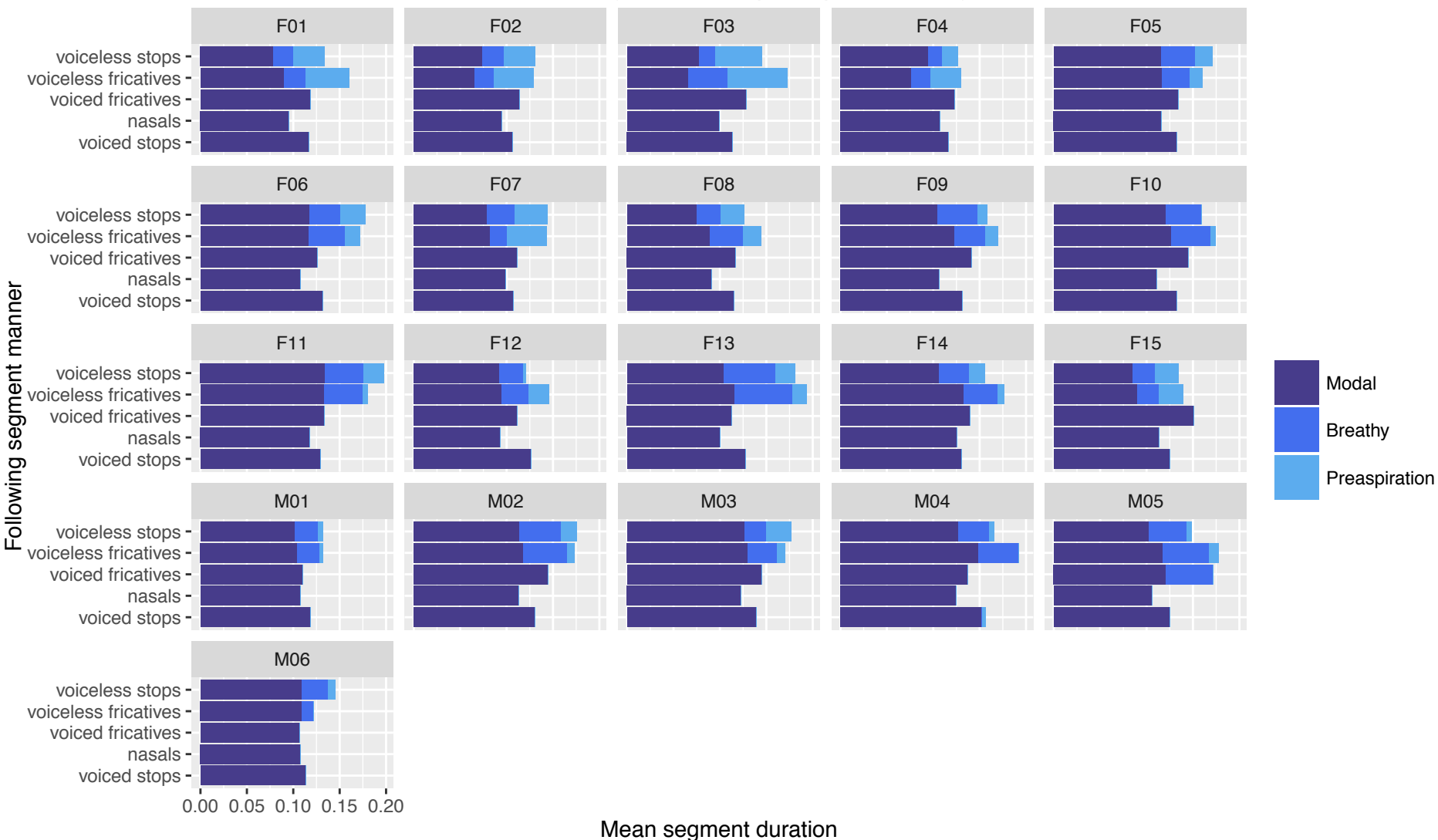


# Monosyllabic, voiceless fricative

- gas
- ass
- gaffe
- sash
- gash
- cash
- ash
- mass (amount)
- mass (Church)
- CLAS (acronym)
- maths
- mast
- massed

# Disyllables

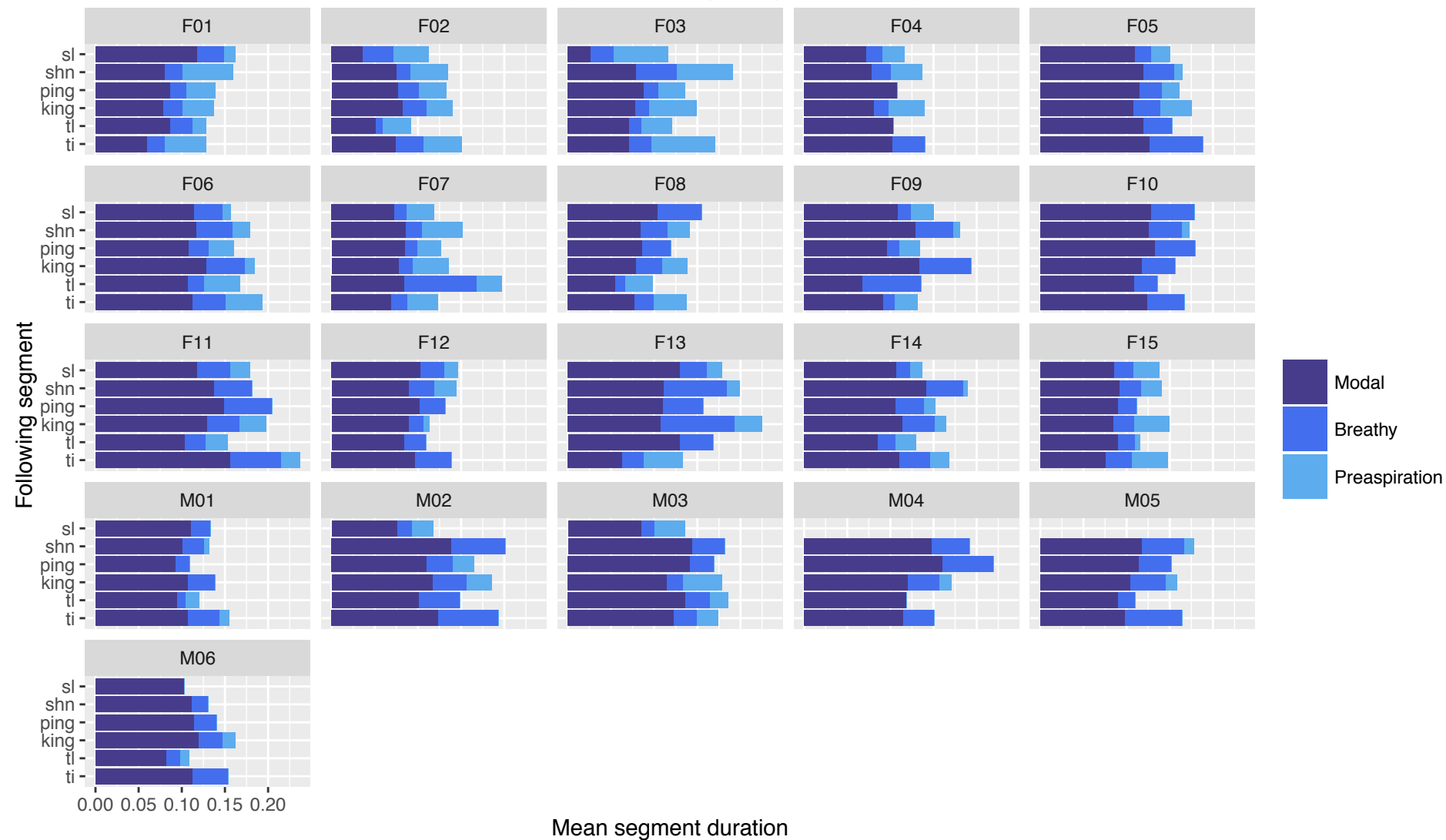
Presence of breathy voice and preaspiration, disyllables





# Disyllables

Presence of breathy voice and preaspiration, disyllables



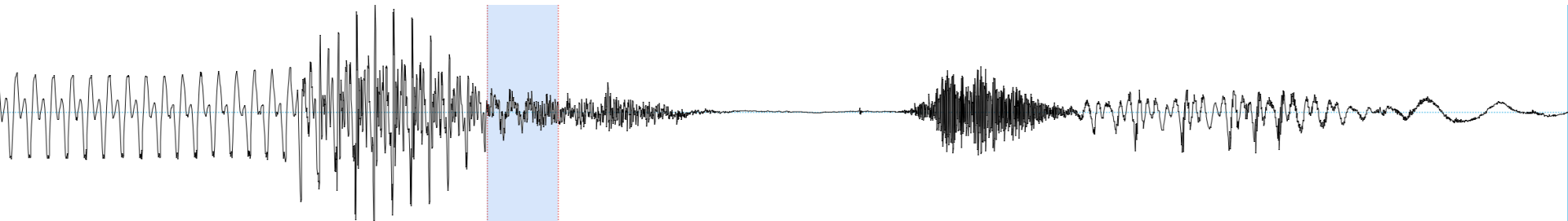


# Disyllabic, voiceless fricative

- ashen
- passion
- fashion
- tassel

# Disyllabic, voiceless stop

- gapping
- Matty
- tacking
- snacking
- cattle



66\_His name is Matthew, but we just call him Matty.

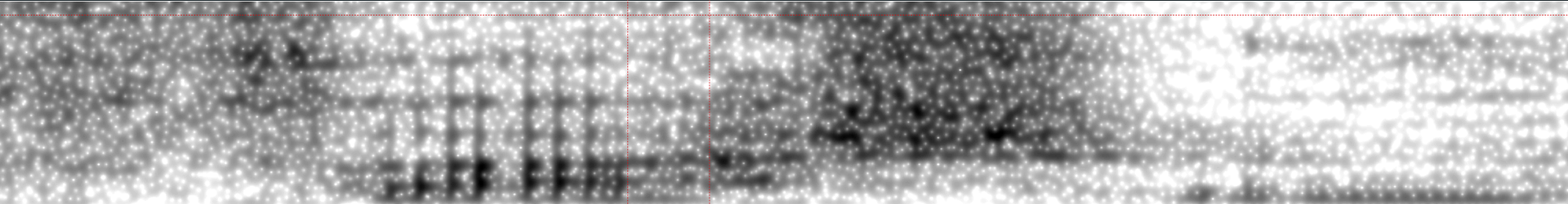
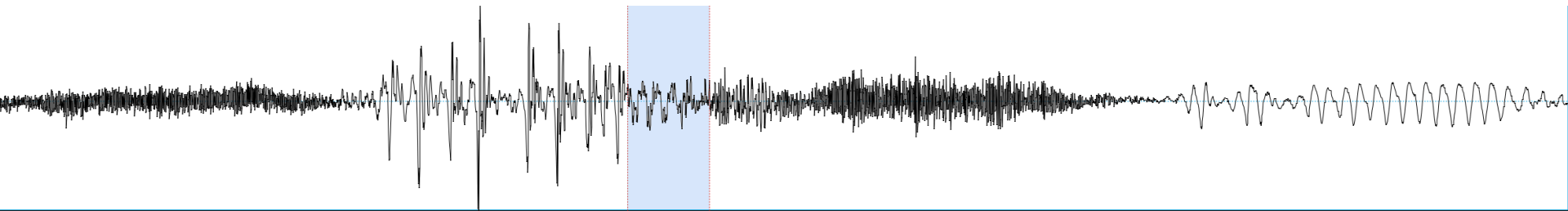
Matty

br

pre

**F07 Matty**





60\_Don't wear that, you know it's out of fashion.

fashion

fashion

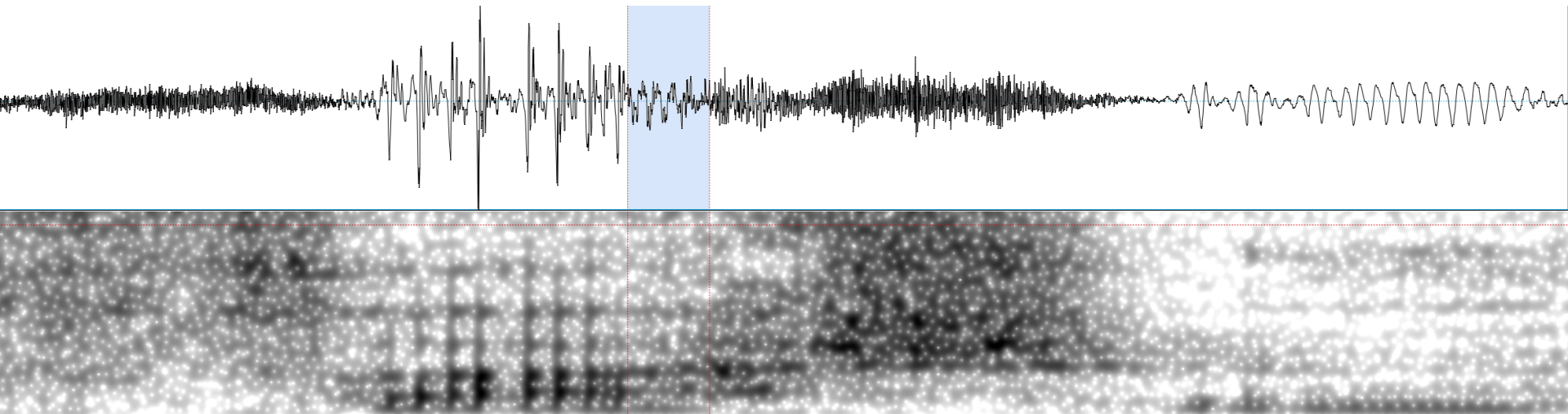
fashion

br

pre

# F15 fashion

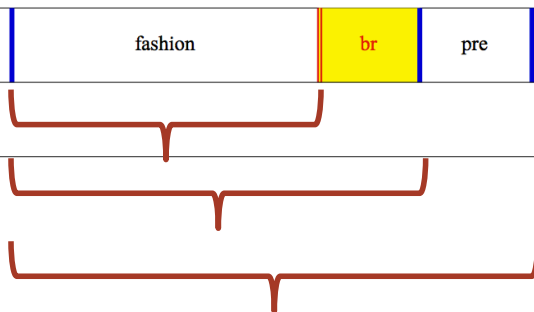




60\_Don't wear that, you know it's out of fashion.

fashion

fashion



**vowel duration?**

# Preaspiration (Hejrná 2015)

- Welsh English (Aberystwyth)
- “Pre-aspiration refers to a period of voiceless (primarily) glottal friction occurring in the sequences of sonorants and phonetically voiceless obstruents (e.g. in *mat* [ma<sup>h</sup>t<sup>s</sup>] or *mass* [ma<sup>h</sup>s]).” (Hejrná 2015)
- “Where pre-aspiration is found, breathiness is found as well in the vast majority of cases. Nevertheless, it is not the case that where breathiness is found so is pre-aspiration. This points to breathiness being a precursor to pre-aspiration.”

# Preaspiration vs. breathy voice

- Often not distinguished in studies
  - Counted together (Árnason 1986; Keer 1998; van Dommelen 1999; van Dommelen 2000; van Dommelen, Holm & Koreman 2011)
  - Not distinguished (Helgason 1998; Tronnier 2002)
- “Distinguishing the two enables us to discover patterns that would remain obscured otherwise – such as breathiness being a possible precursor to pre-aspiration” (Hejrná 2015)

# Preaspiration (Hejrná 2015)

- Delving into voiceless stops...
- Finds that Aberystwyth English preaspiration is sensitive to phonological vowel height (low vowels = more preasp)
- “...only four speakers show at least some impossible environments for pre-aspiration (ABE12: /ɪp/ in disyllables; ABE14: /ɪp/, /ep/; ABE17: /ɪp/ in disyllables; ABE50: /o:p/)”
  - Indicates that /p/ is least favourable environment of stops



# Scottish English (Gordeeva & Scobbie 2010)

- “SSE female speakers often produce word-final fricatives with preaspiration of substantial duration”
- Variable in frequency of occurrence but observed in all speakers (41% of tokens)
- “...in the more open vowels, preaspirated transitions could be as long as the modal vowel itself.”
- “Phrase-final location of target words increased the frequency of occurrence and yielded longer duration of preaspiration.”
  - Clayards & Knowles (2015): focus increases preaspiration of /s/ and /ʃ/ in North American English

# Preaspiration in SSBE

- Turk, Nakai & Sugahara (2006: 10) *Methods in Empirical Prosody Research* - re: SSBE, Japanese
- “Relatively long periods of aspiration noise (equivalent to a partially voiceless vowel) or breathiness can sometimes occur before or after the onset of voiceless frication”
- “This aspiration noise is spectrally different from the adjacent fricative noise, and often contains voiceless formant energy.”
- Claim American English does not appear to have heavily pre-aspirated voiceless consonants as opposed to many British varieties (at least for some speakers)

# Turk, Nakai & Sugahara (2006)

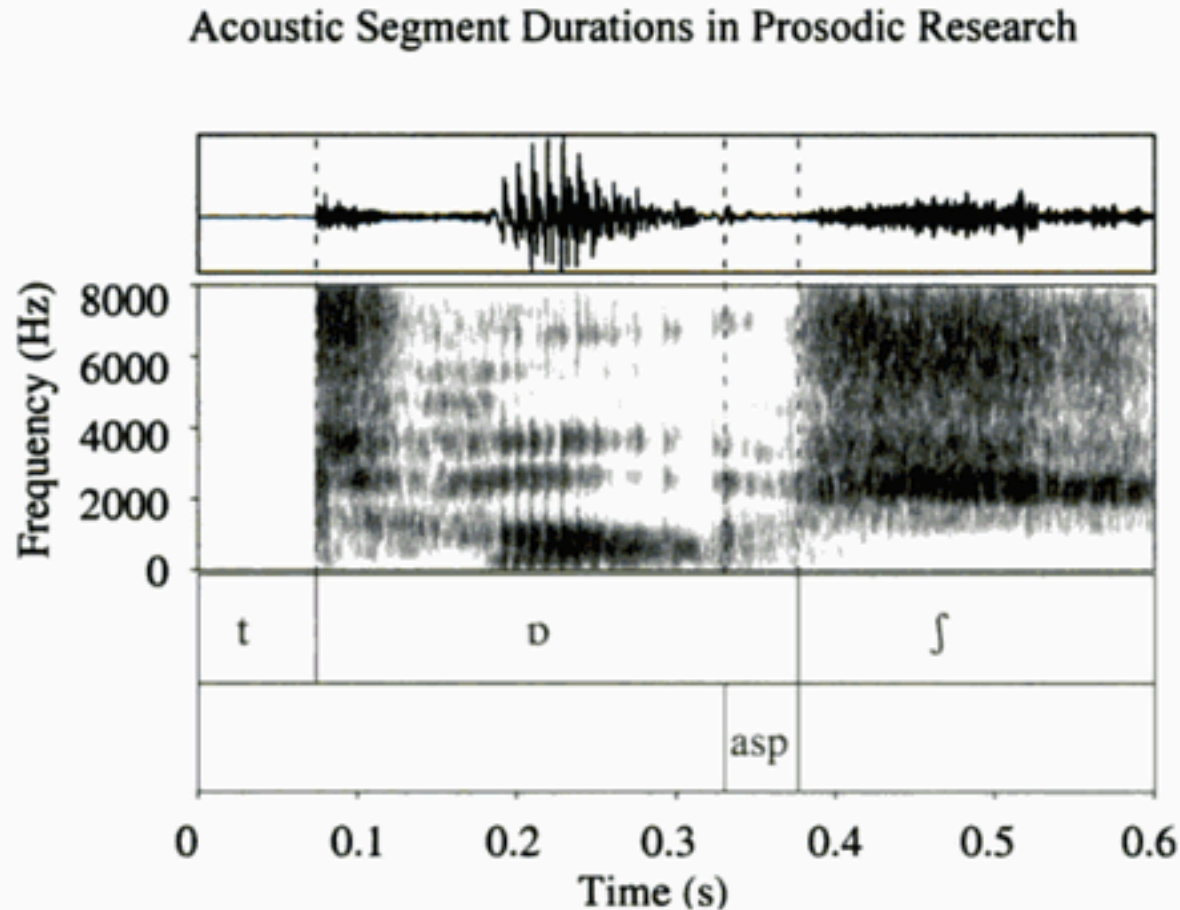


Figure 6: *Tosh*, spoken by a male Southern Standard British English speaker

# Preaspiration in SSBE

- What does the lack of previous literature mean?
- If it reflects an actual lack of preaspiration, could be rapid change from below
  - If preaspiration is indexed with Northern/Scottish/Welsh varieties, interesting that this feature has gained (covert?) prestige
  - Hejrná (2015) finds in Aberystwyth that both preaspiration and breathy voice are sensitive to age – only young speakers in this sample, so no window into age grading or apparent time shift
- Also possible that this feature has just evaded description

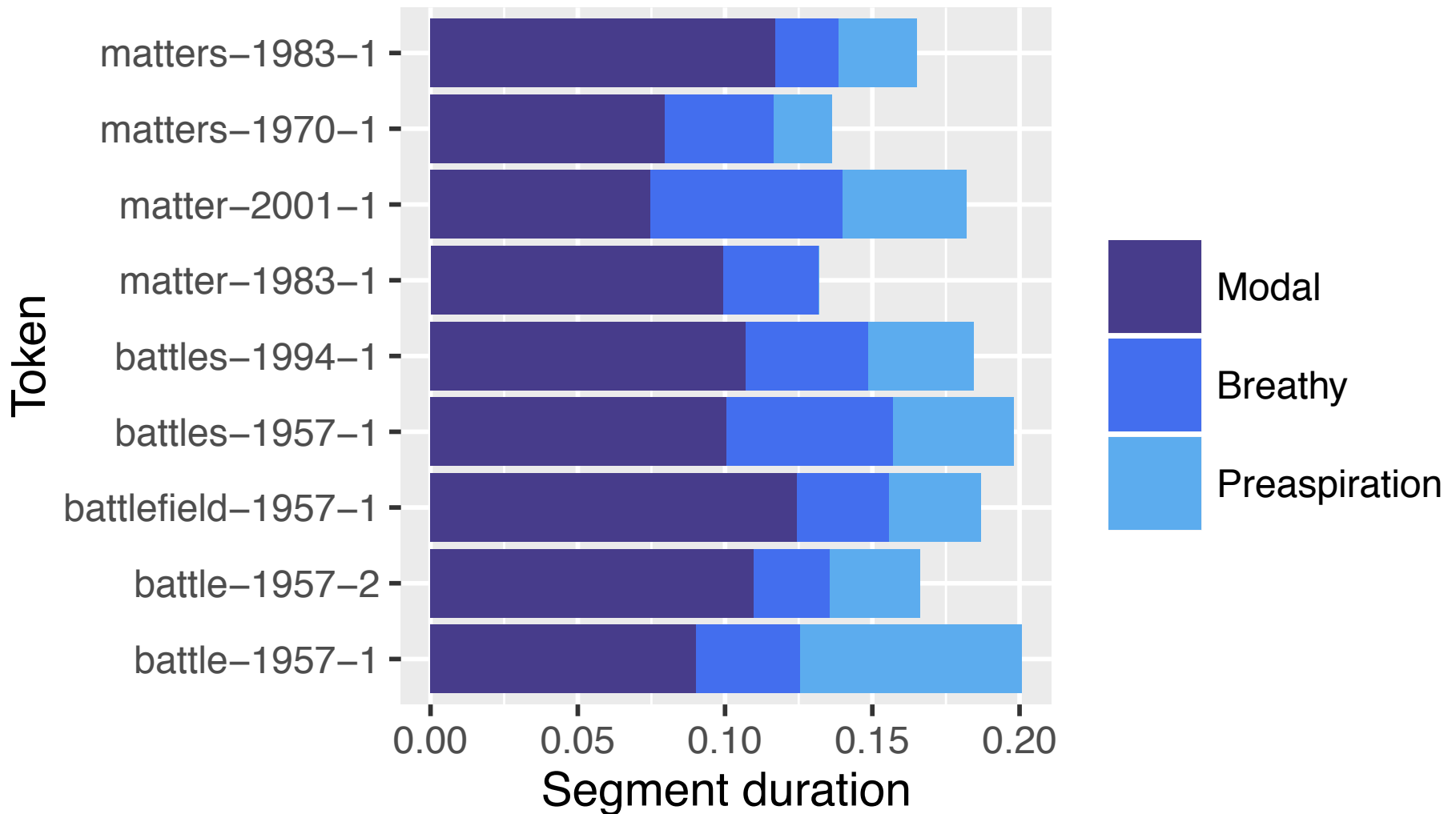


# Christmas broadcasts

- Single speaker over 50+ years of aging
- Ultimate “traditional” RP
- Used for various analyses before
  - Vowel quality (Harrington, Palethorpe & Watson 2000)
  - Discourse (Kredátusová 2009)
- Obtained pre-aligned corpus from Ulrich Reubold (Munich)
  - Special thanks for this!!
- Focused on specific words that appear multiple times across speeches

# *matter, battle*

## Presence of breathy voice and preaspiration

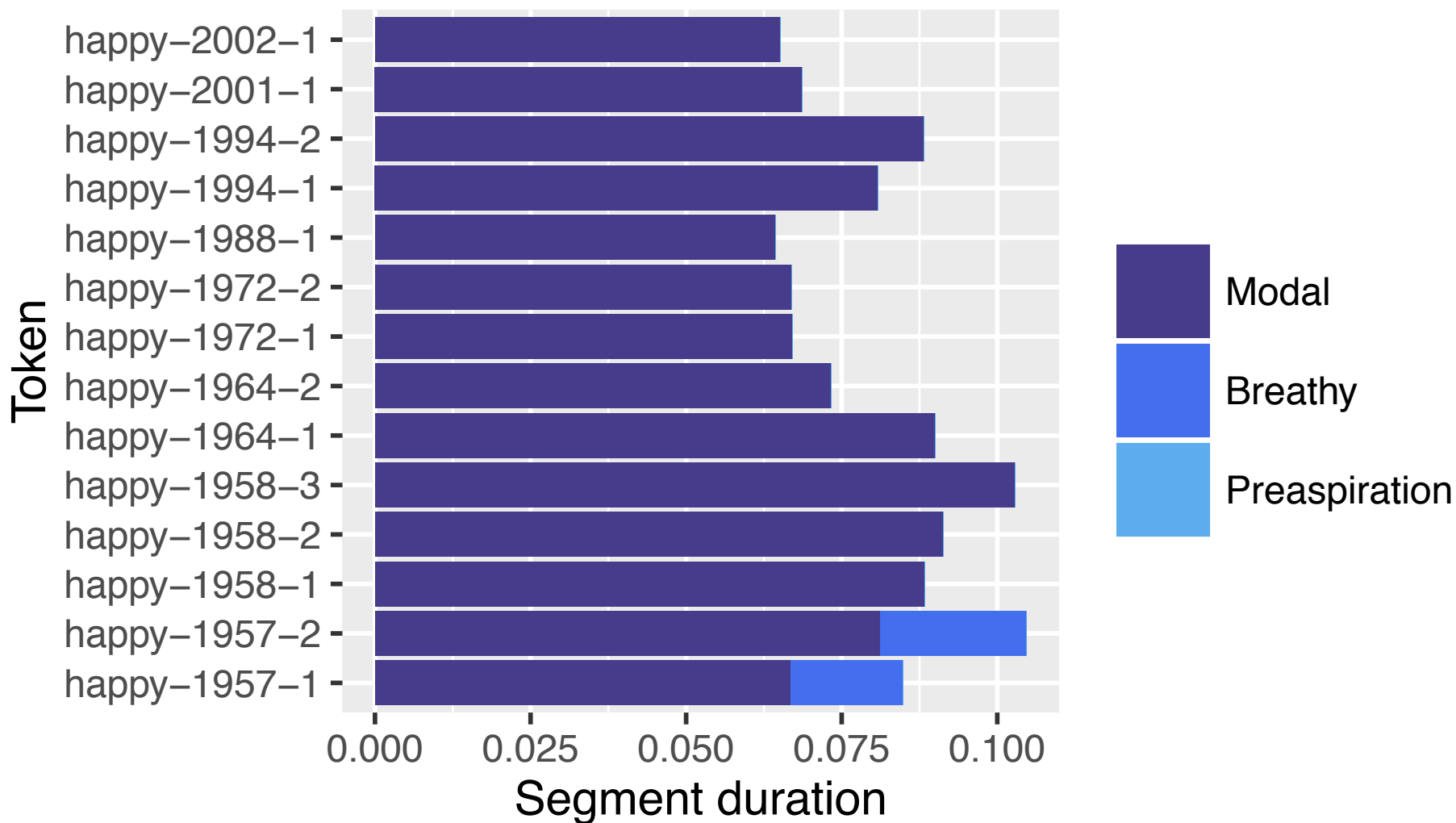






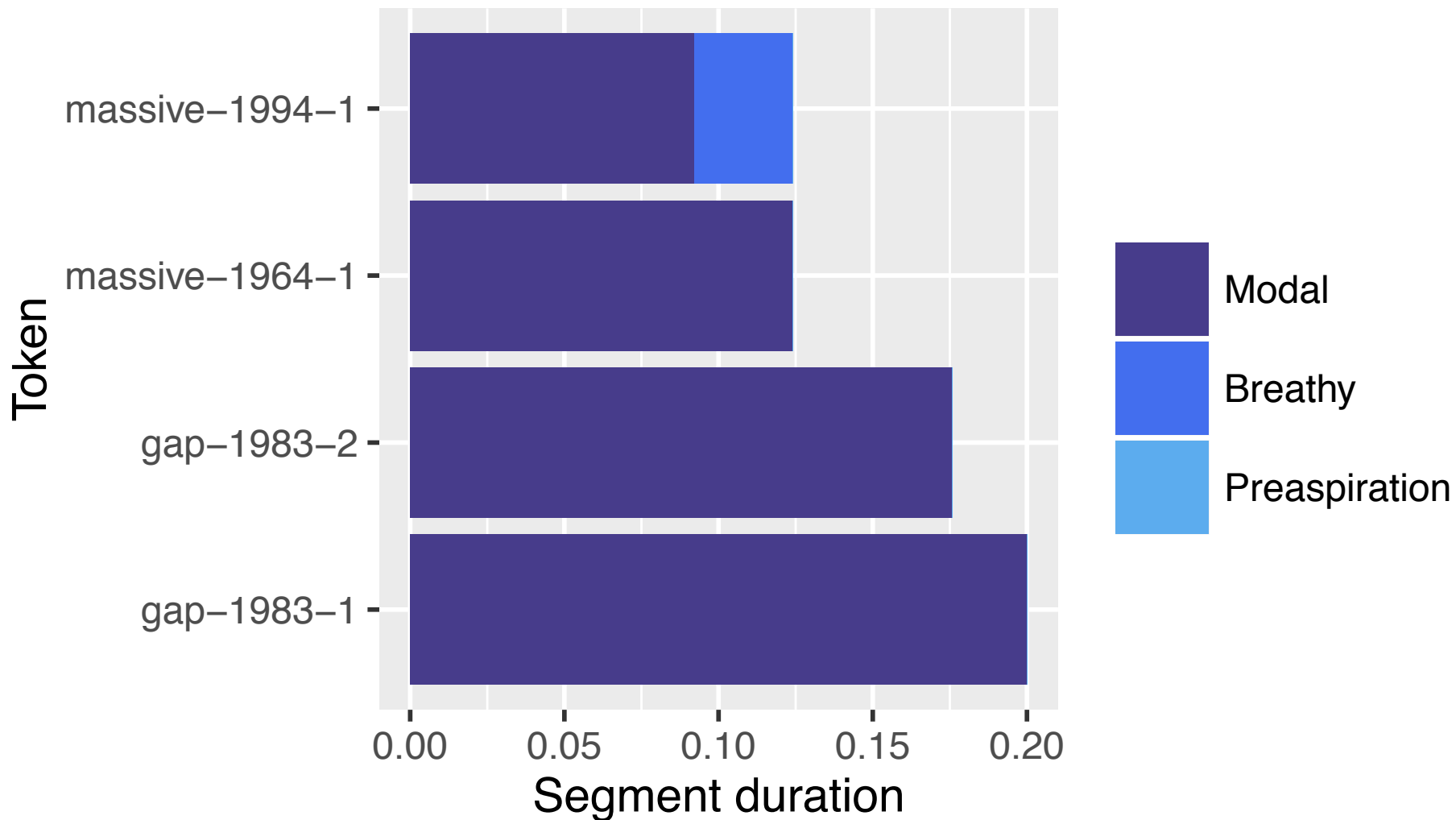
# *happy*

## Presence of breathy voice and preaspiration



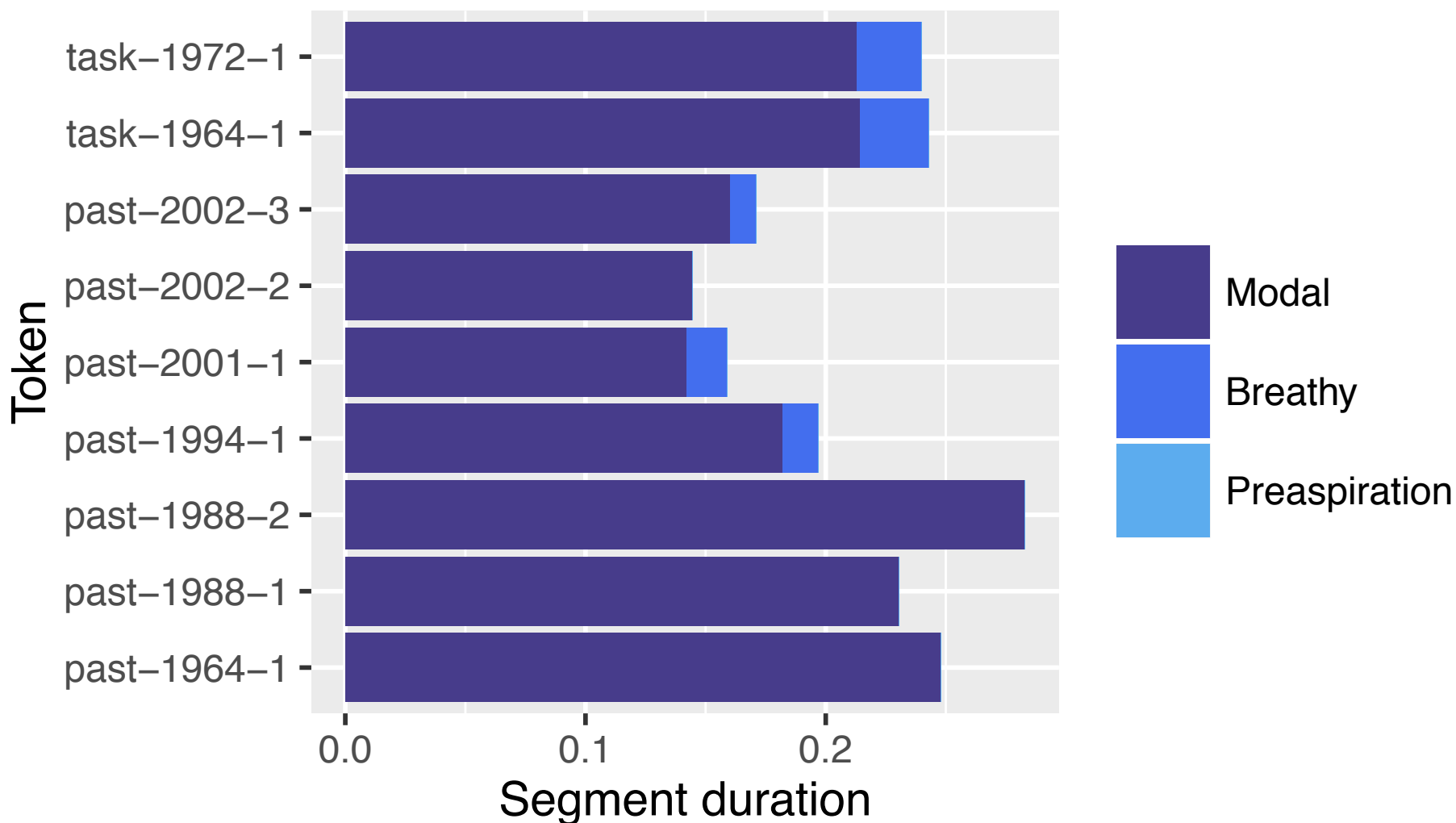
# *massive, gap*

## Presence of breathy voice and preaspiration



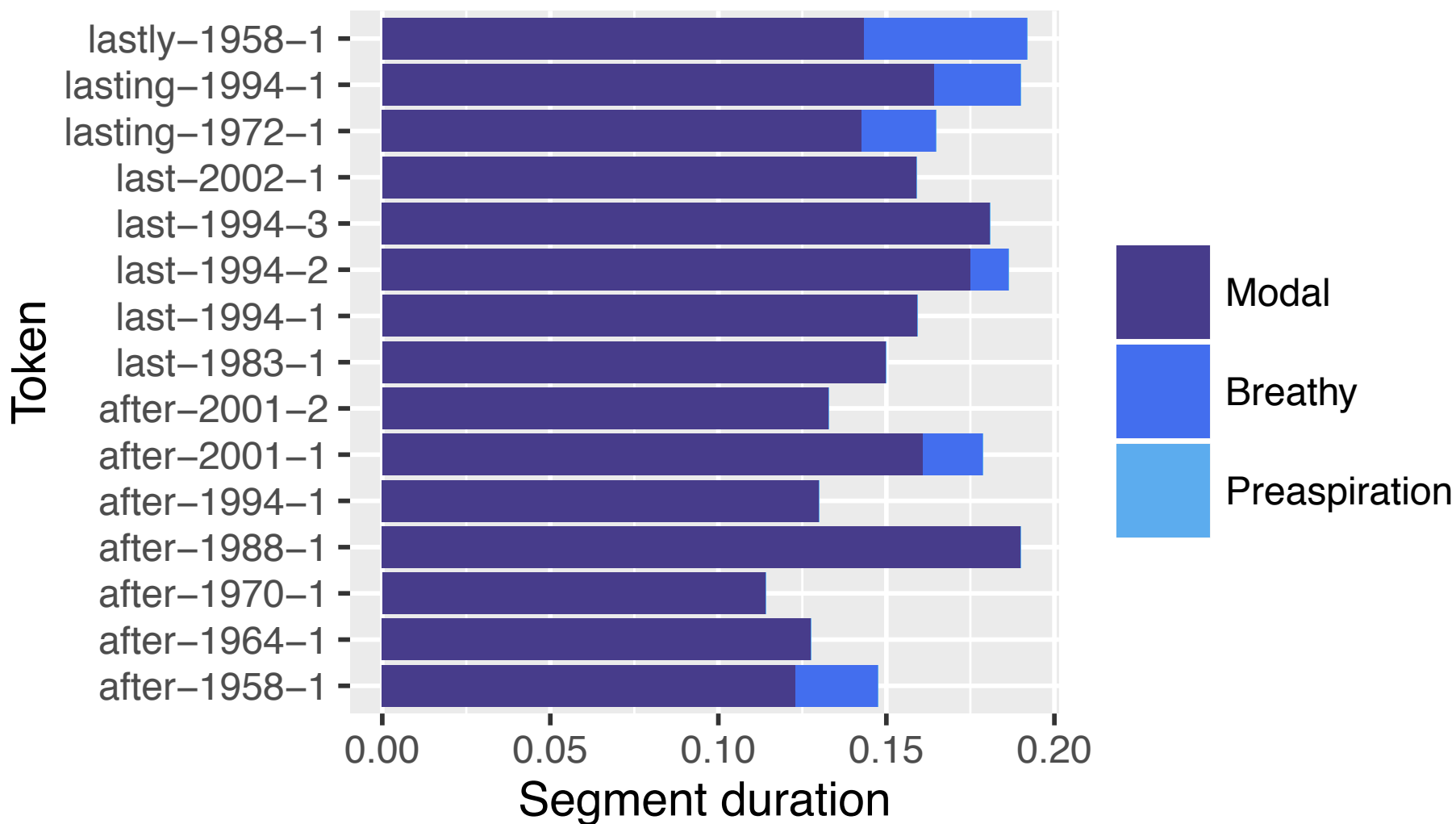
# *task, past*

## Presence of breathy voice and preaspiration



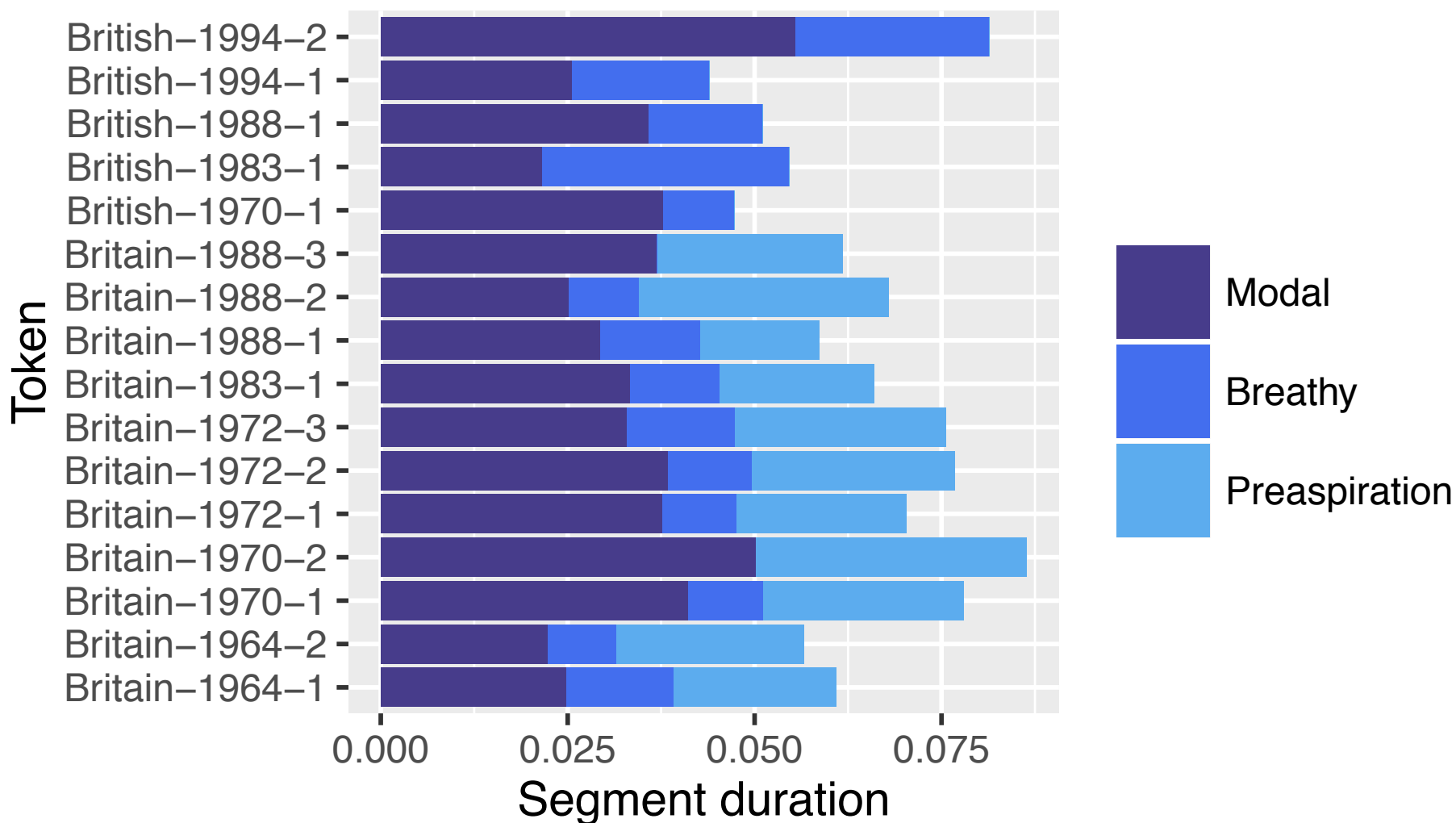
# *last, after*

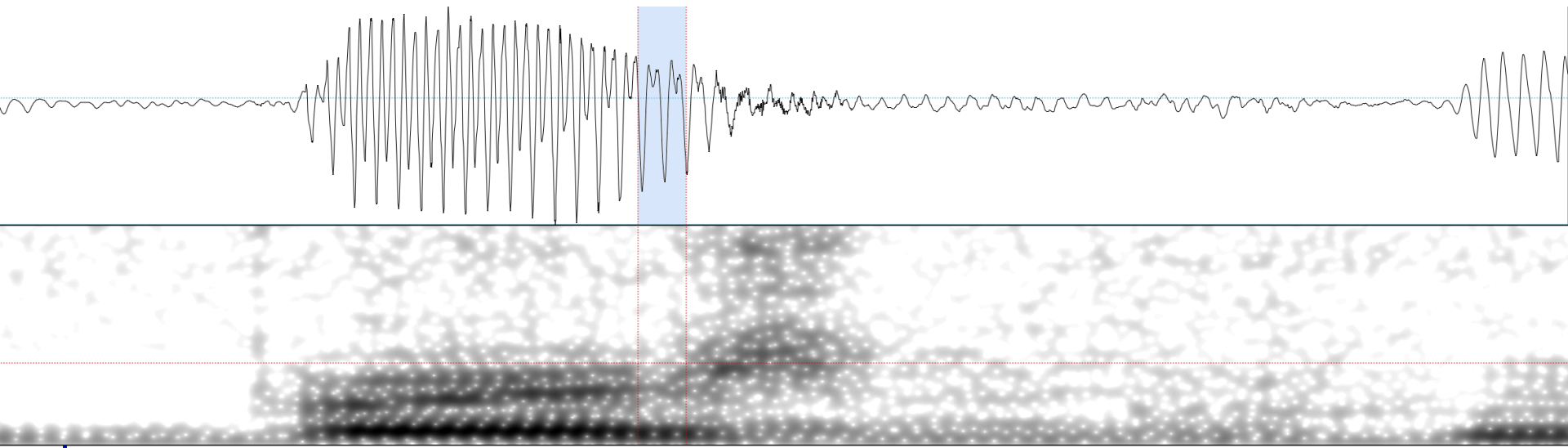
## Presence of breathy voice and preaspiration



# *British, Britain*

## Presence of breathy voice and preaspiration

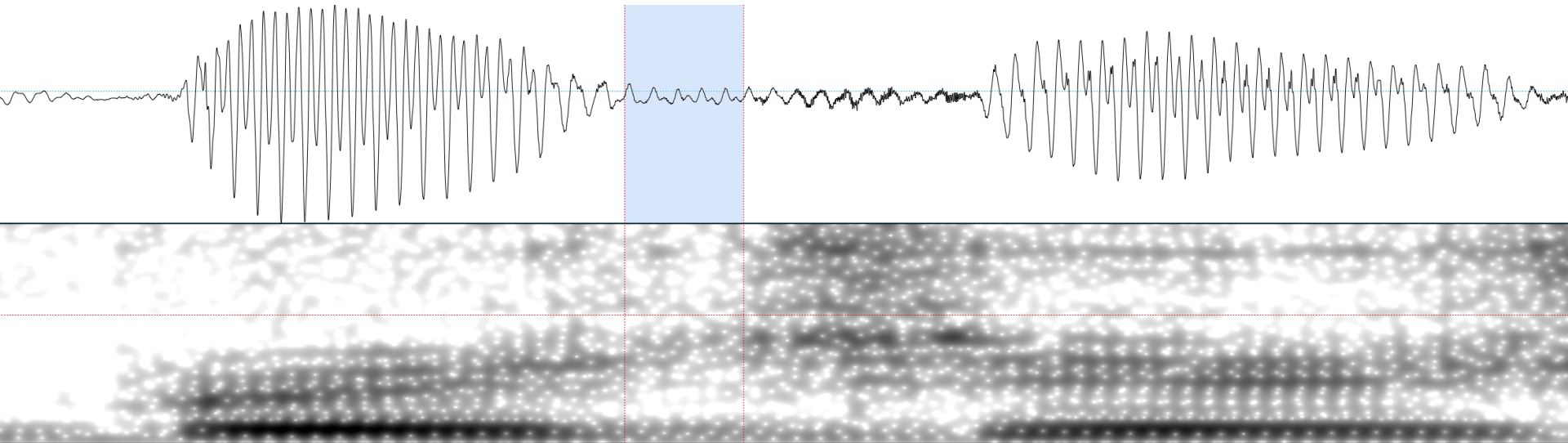




in	Britain					
In	brIt@n					
n	b	r	r	t	ə	n
	Britain		br	pre	glottal closure	ŋ

# QE1988 Britain





British

brɪtɪʃ

b	r	ɪ	t	ɪ	ʃ
	British?	br	clo?	postaspiration	

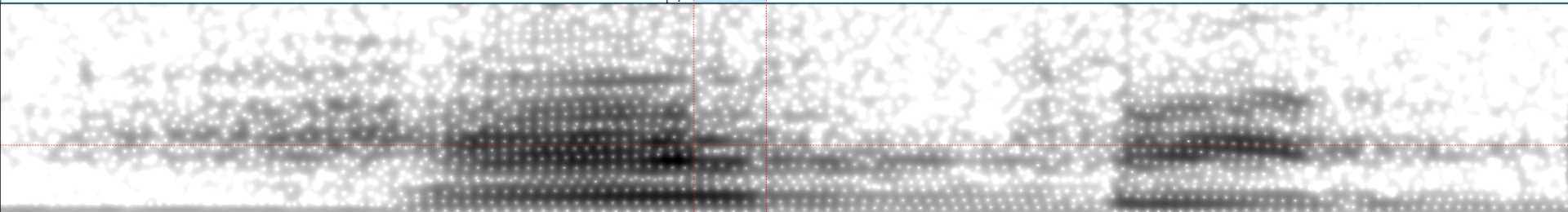
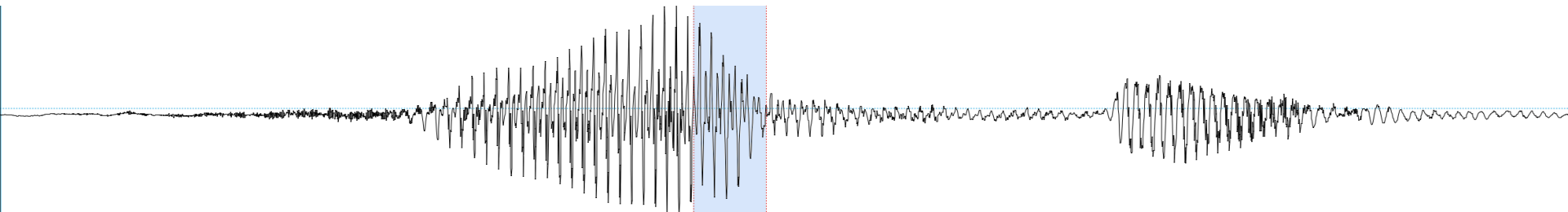
# QE1988 British



# Measurement issues

- Echo makes it difficult in some recordings to distinguish breathy voice from preaspiration

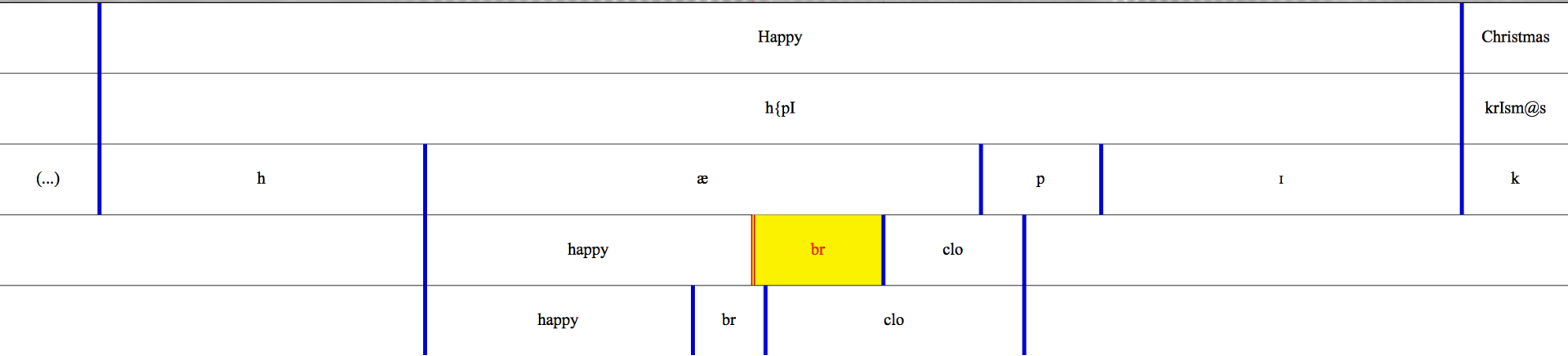
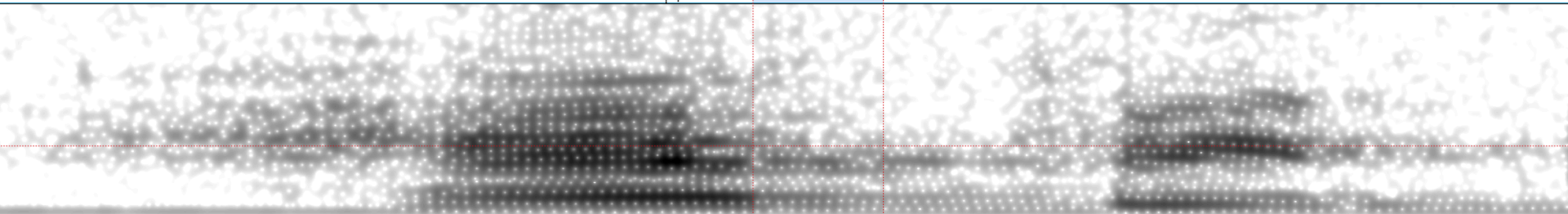
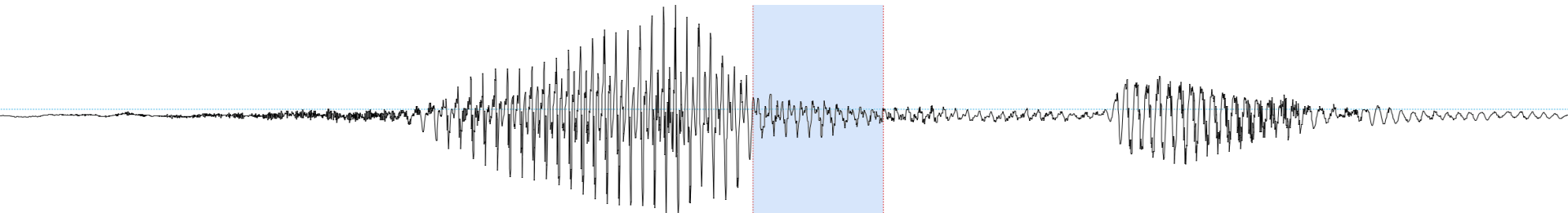




	Happy				Christmas
	h{pI				krIsm@s
(...)	h	æ	p	ɪ	k
	happy	br	clo		
	happy	br	clo		

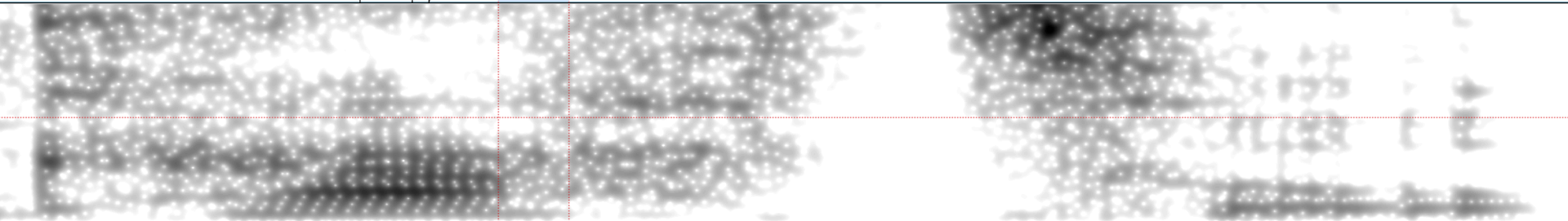
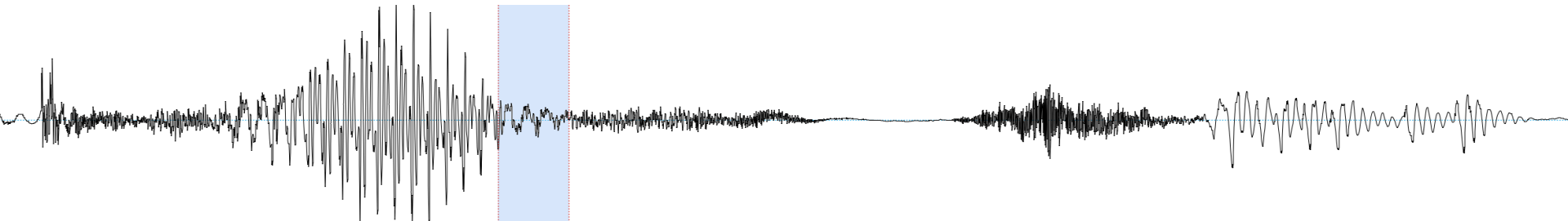
**QE1957 happy**





**QE1957 happy**





40\_The farmer owned some animals, in fact he had some cattle.

cattle

br

pre

**F03 cattle**



# Conclusions

- Young SSBE speakers preaspirate, at least in the favourable environment of /æ/ + focus
- For these speakers, breathy voice and often preaspiration occurs before voiceless fricatives and voiceless stops
- In monosyllables the glottalisation of voiceless stops may bleed/block preaspiration (so absent in *Matt* and *gap*, but present in *Matty* and *gapping*)

# Conclusions

- Breathiness/preaspiration can be heard in archival recordings and measured (tentatively)
- The environments in which HRH preaspirates are not identical to the sample of young SSBE speakers
  - Only preaspirates in disyllables before /t/
  - Unclear what else conditions it, since possibly present in *Britain* but not *British*
    - Preaspiration or preaffrication after high vowels?
- This suggests that preaspiration may have been present in RP/SSBE and perhaps earlier Southern English dialects, but its patterning may be evolving and spreading into new environments

# Future work

- Full investigation still needs to be carried out!
- Larger studies needed
  - Age
  - Gender
  - Vowel
  - Class
  - Region
  - Archival lab speech
  - Attention to other dialects of English, too

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