

Preaspiration following /æ/ in Southern Standard British English

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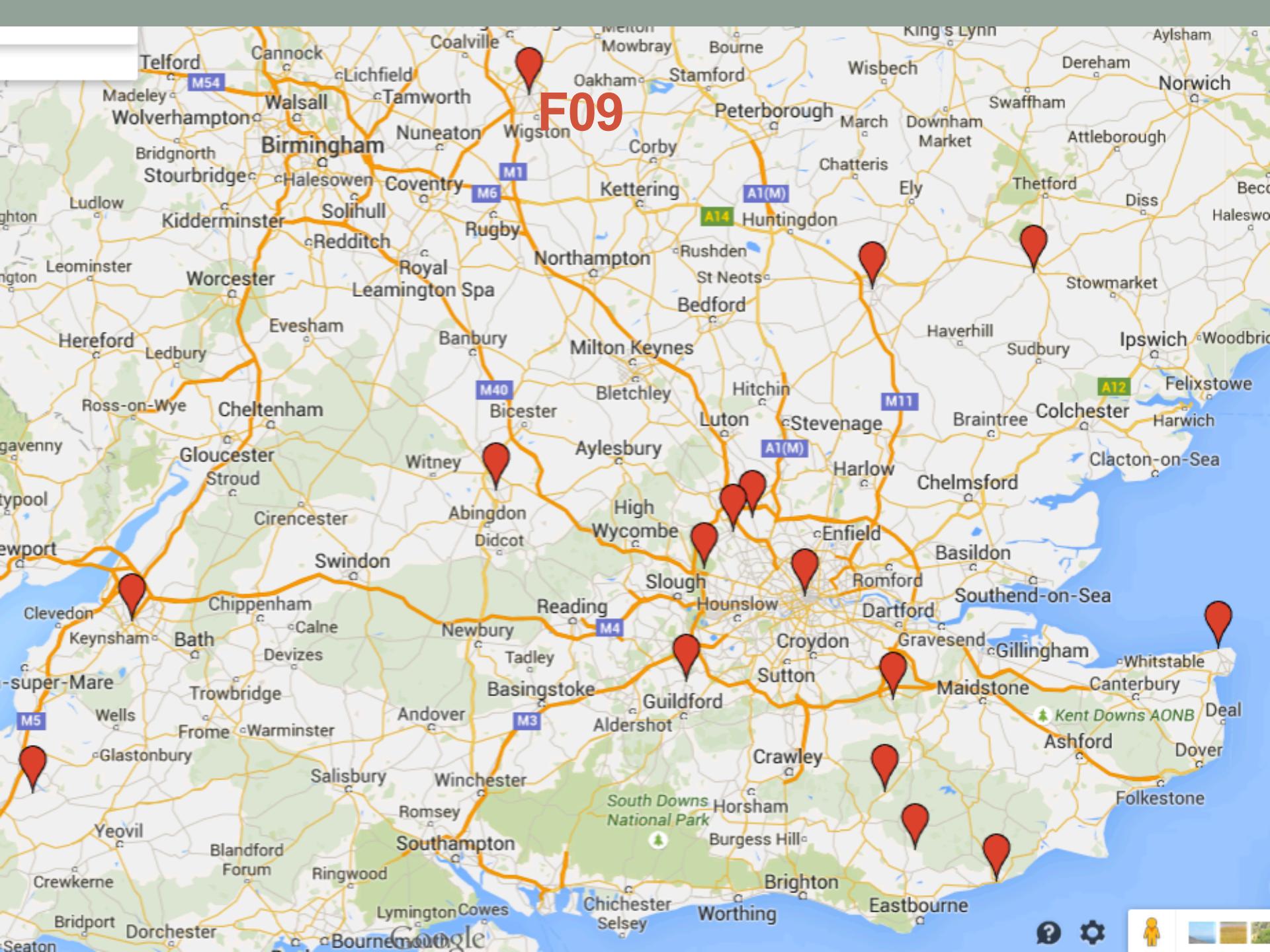
- Background and methodology: BAD-LAD split investigation
- Preaspiration among young SSBE speakers
- Previous literature: preaspiration in the British Isles
- Queen Elizabeth II
- Conclusions
- Future work

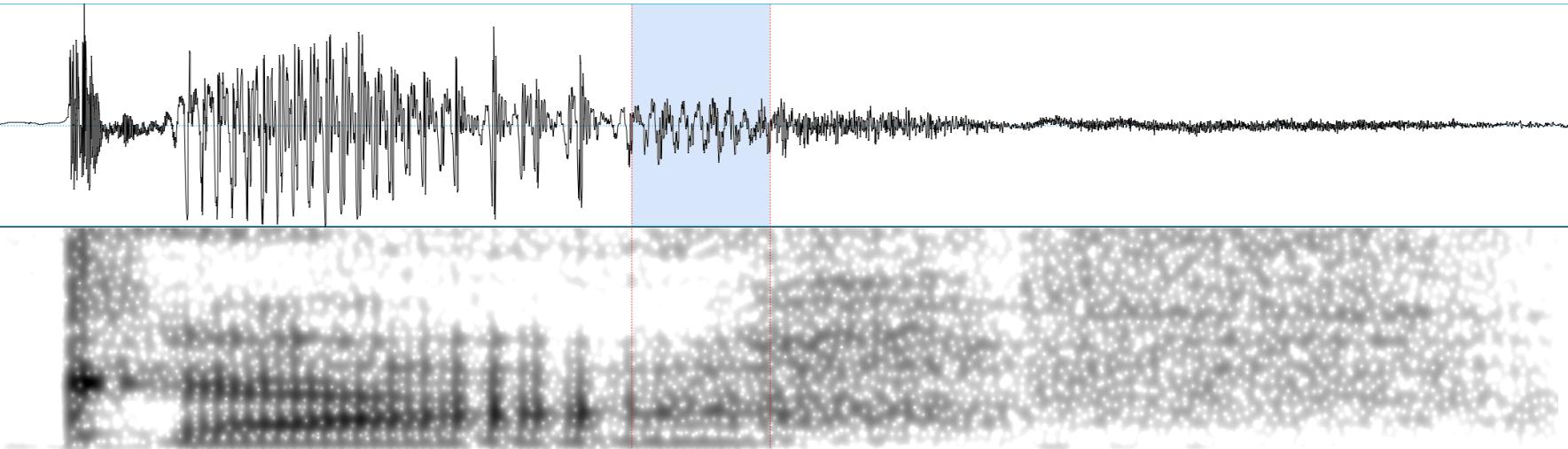
Original investigation: BAD-LAD split

- 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[a:]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





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

gaffe

gaffe

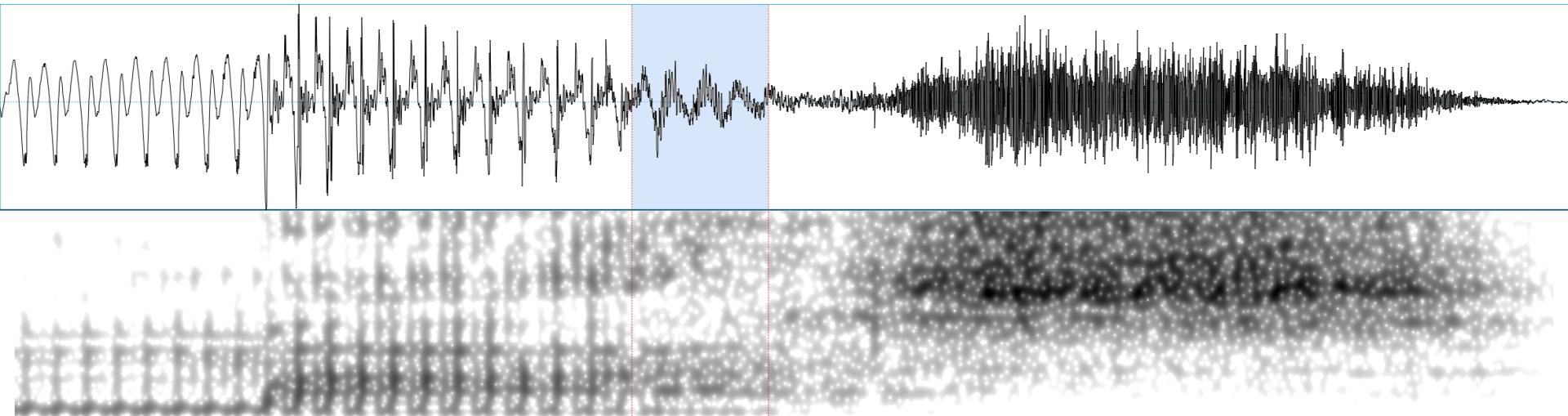
gaffe

br

pre

F02 gaffe





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

mass2

mass

mass2

br

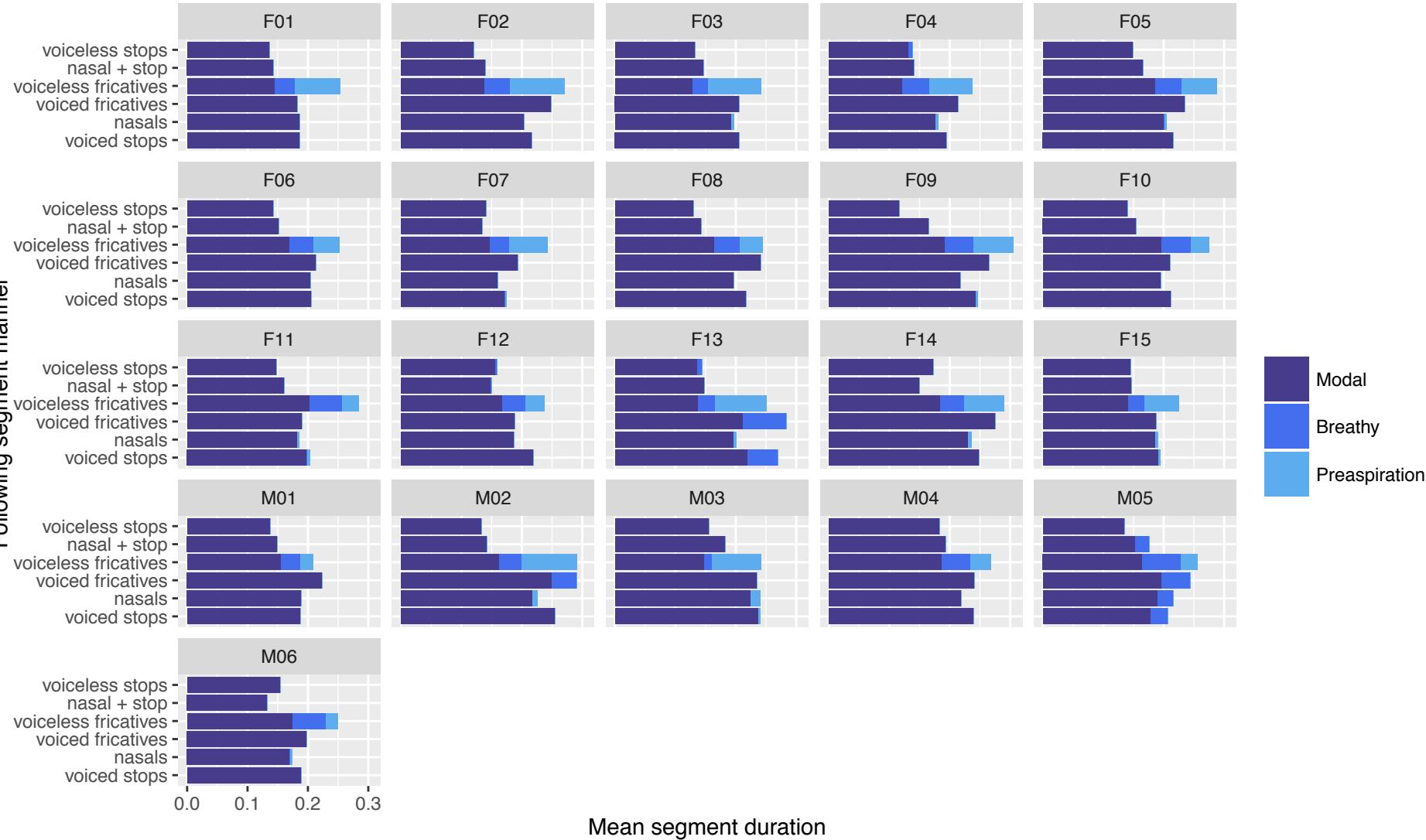
pre

M01 mass



Monosyllables

Presence of breathy voice and preaspiration, monosyllables



Monosyllables

Presence of breathy voice and preaspiration, monosyllables

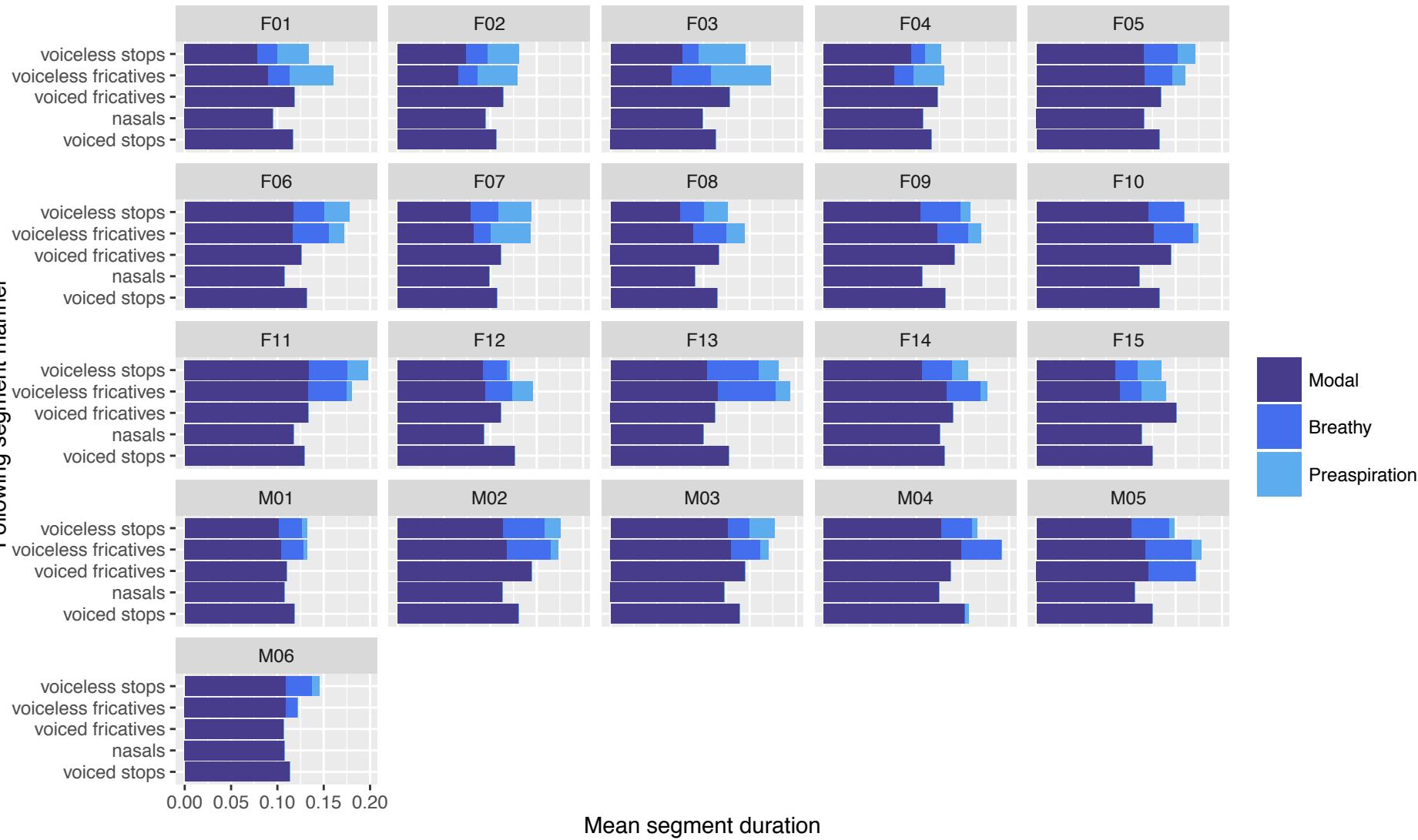


Monosyllabic, voiceless fricative

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

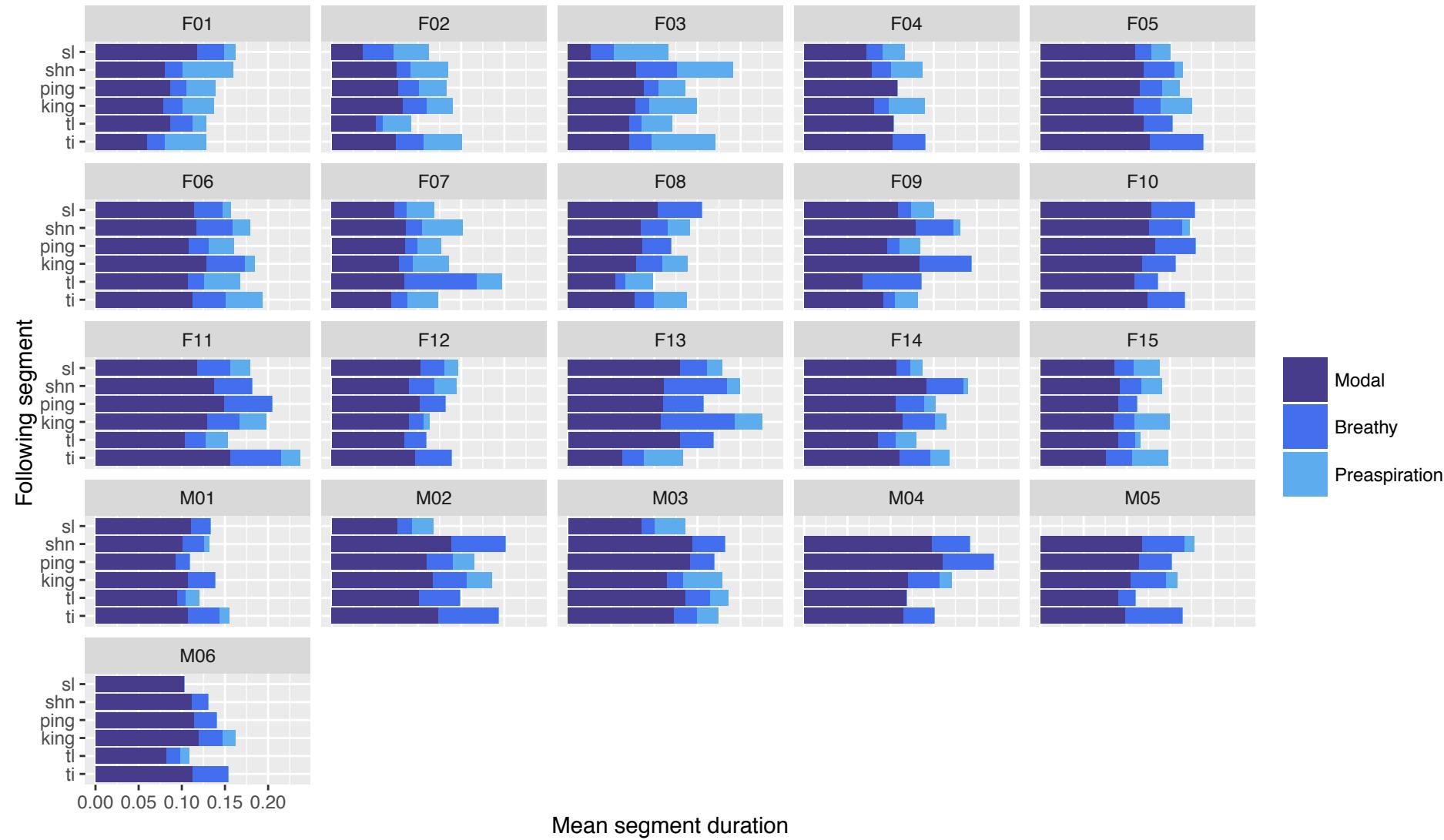
Disyllables

Presence of breathy voice and preaspiration, disyllables



Disyllables

Presence of breathy voice and preaspiration, disyllables

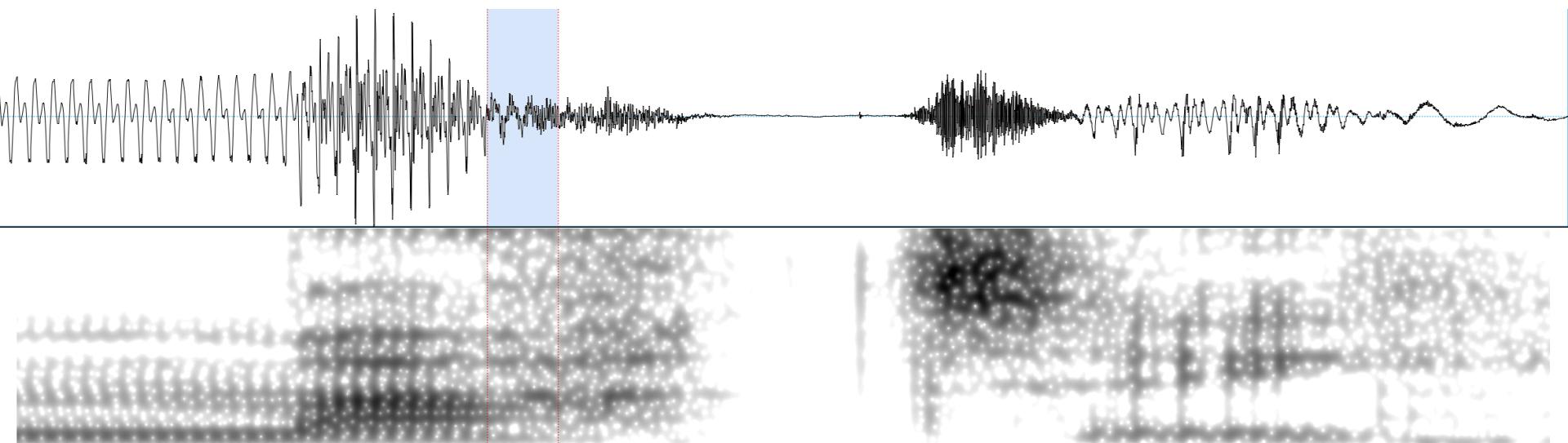


Disyllabic, voiceless fricative

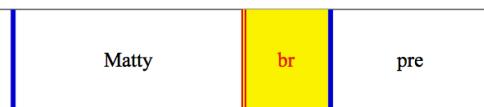
- ashen
- passion
- fashion
- tassel

Disyllabic, voiceless stop

- gapping
- Matty
- tacking
- snacking
- cattle

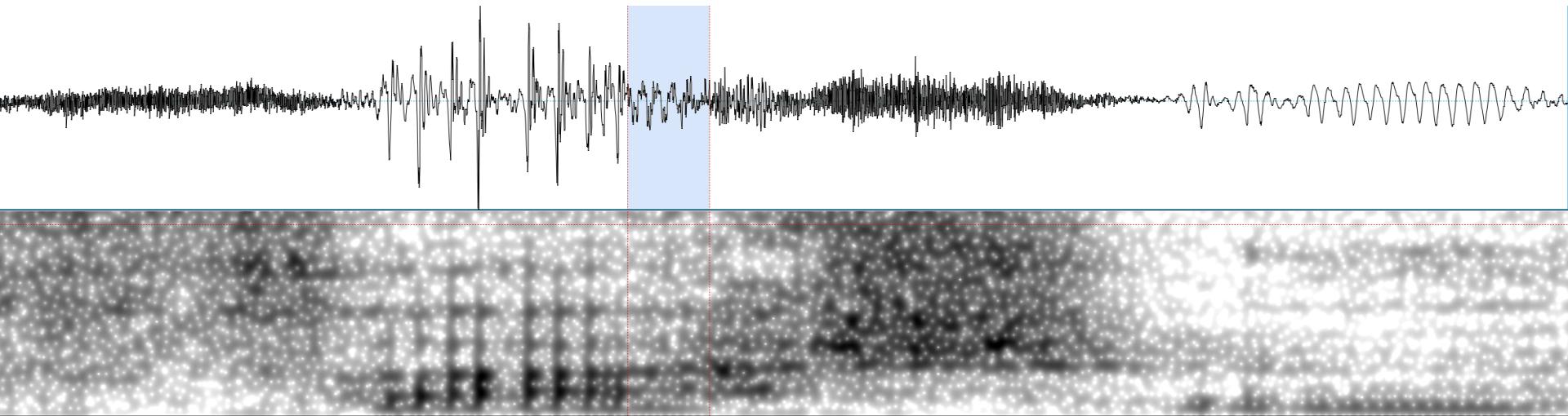


66_His name is Matthew, but we just call him Matty.



F07 Matty





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

fashion

fashion

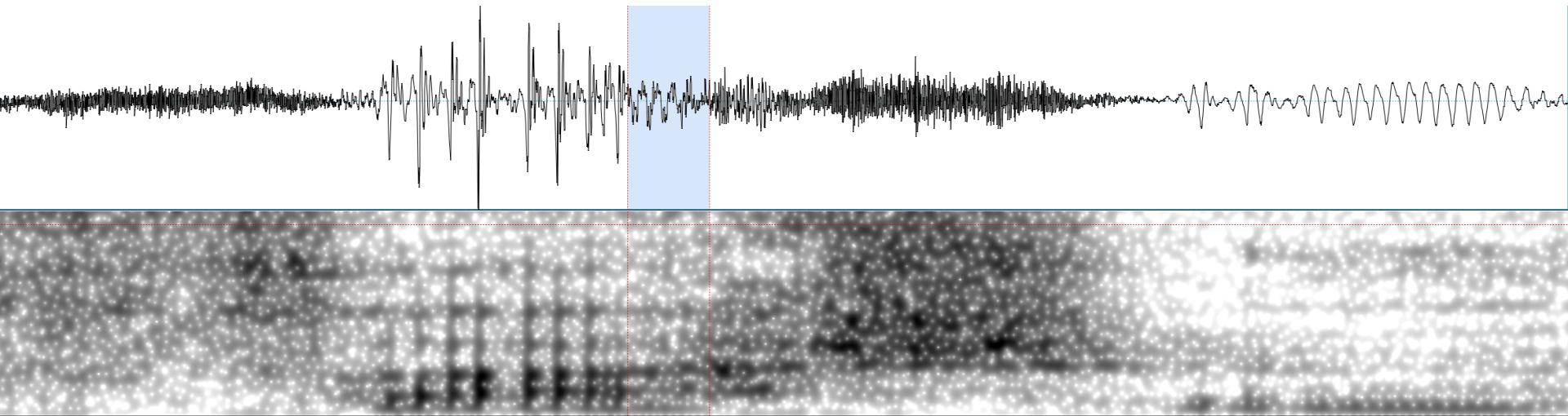
fashion

br

pre

F15 fashion

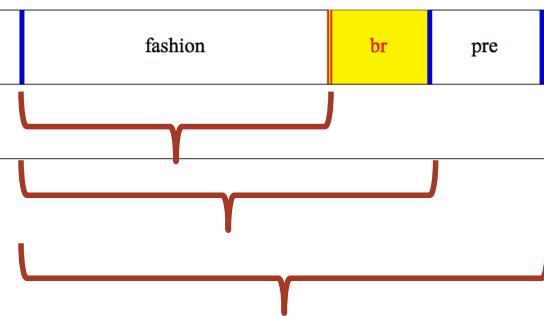




60_Don't wear that, you know it's out of fashion.

fashion

fashion



vowel duration?

Preaspiration (Hejná 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^ht^s] or *mass* [ma^hs]).” (Hejná 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” (Hejná 2015)

Preaspiration (Hejná 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)

Acoustic Segment Durations in Prosodic Research

11

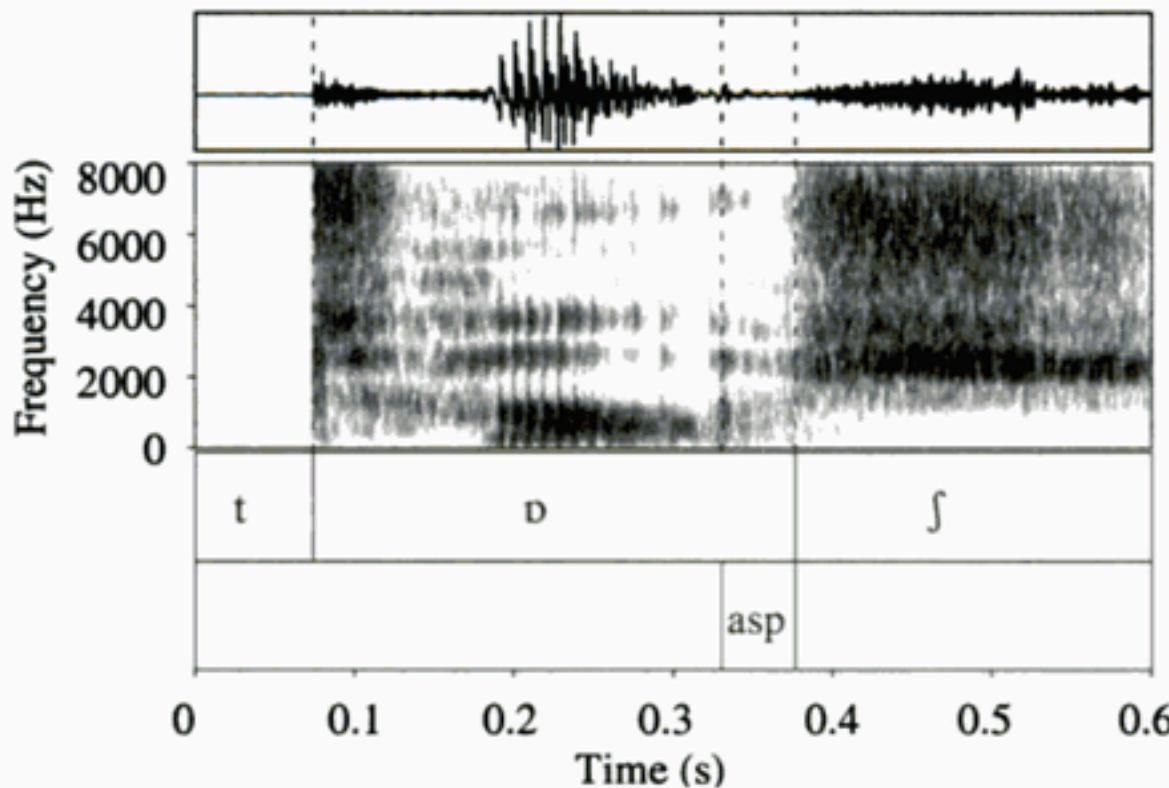


Figure 6: *Tosh*, spoken by a male Southern Standard British English speaker

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
 - Hejná (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

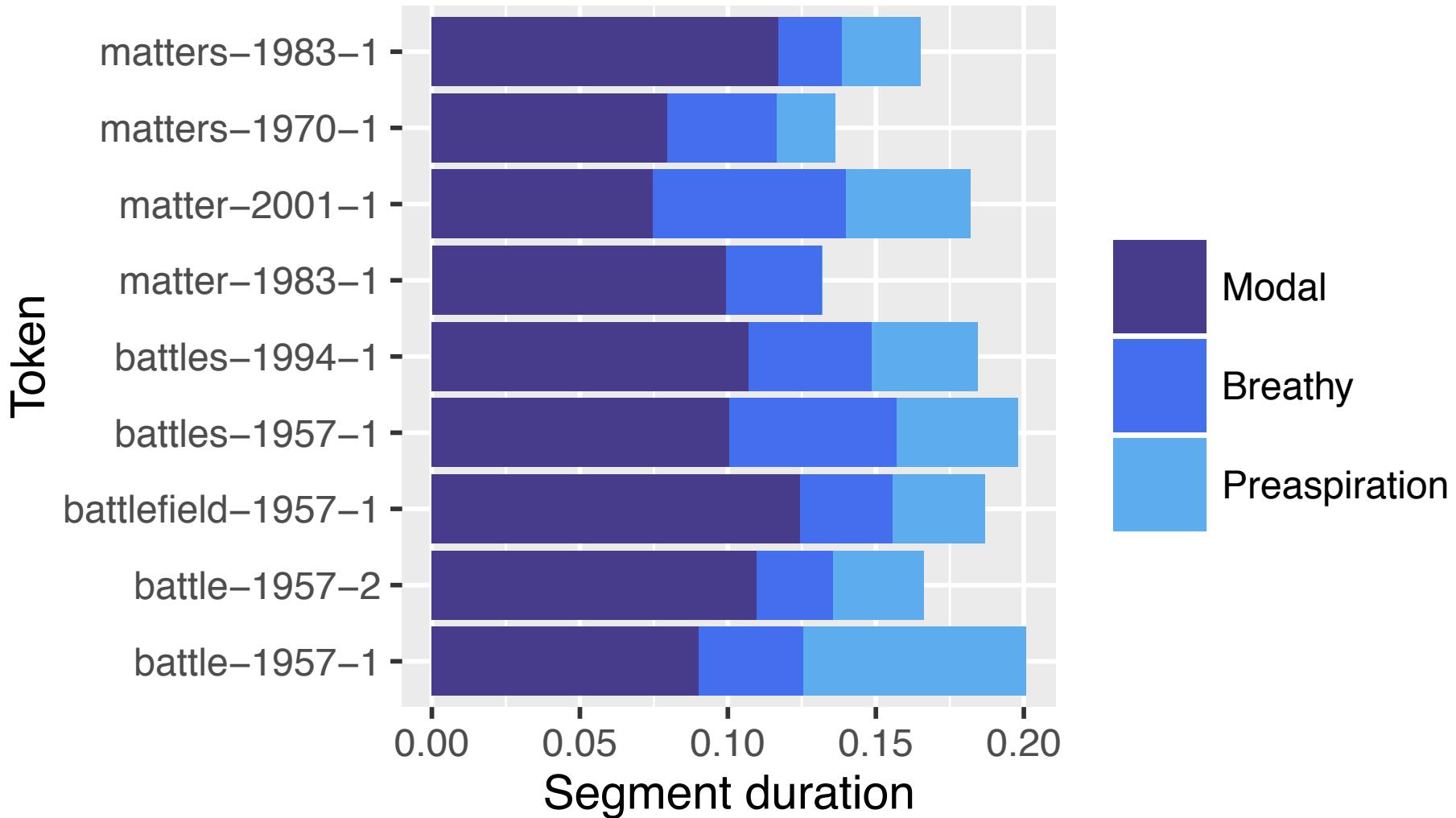


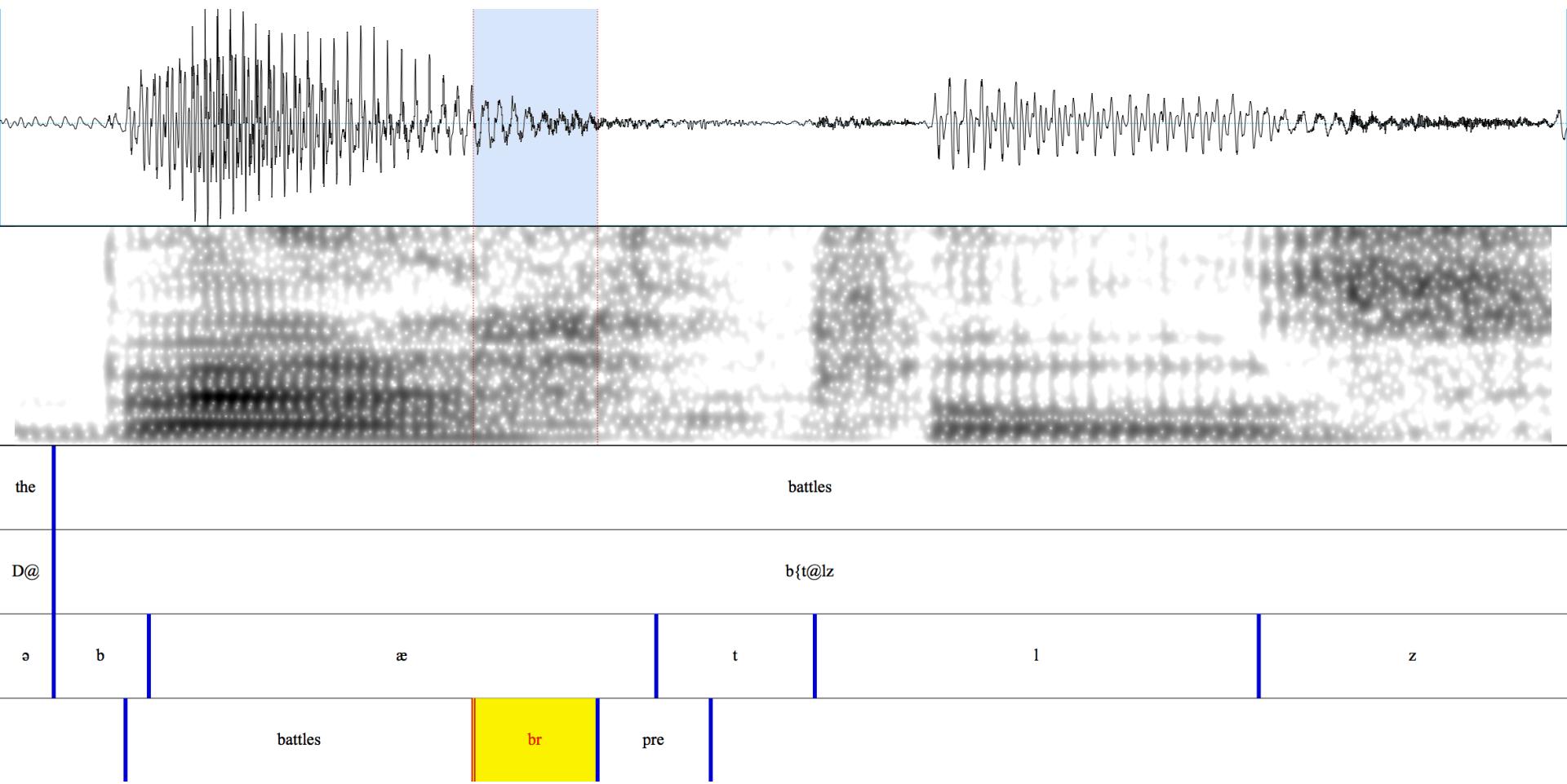
Christmas broadcasts

- 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



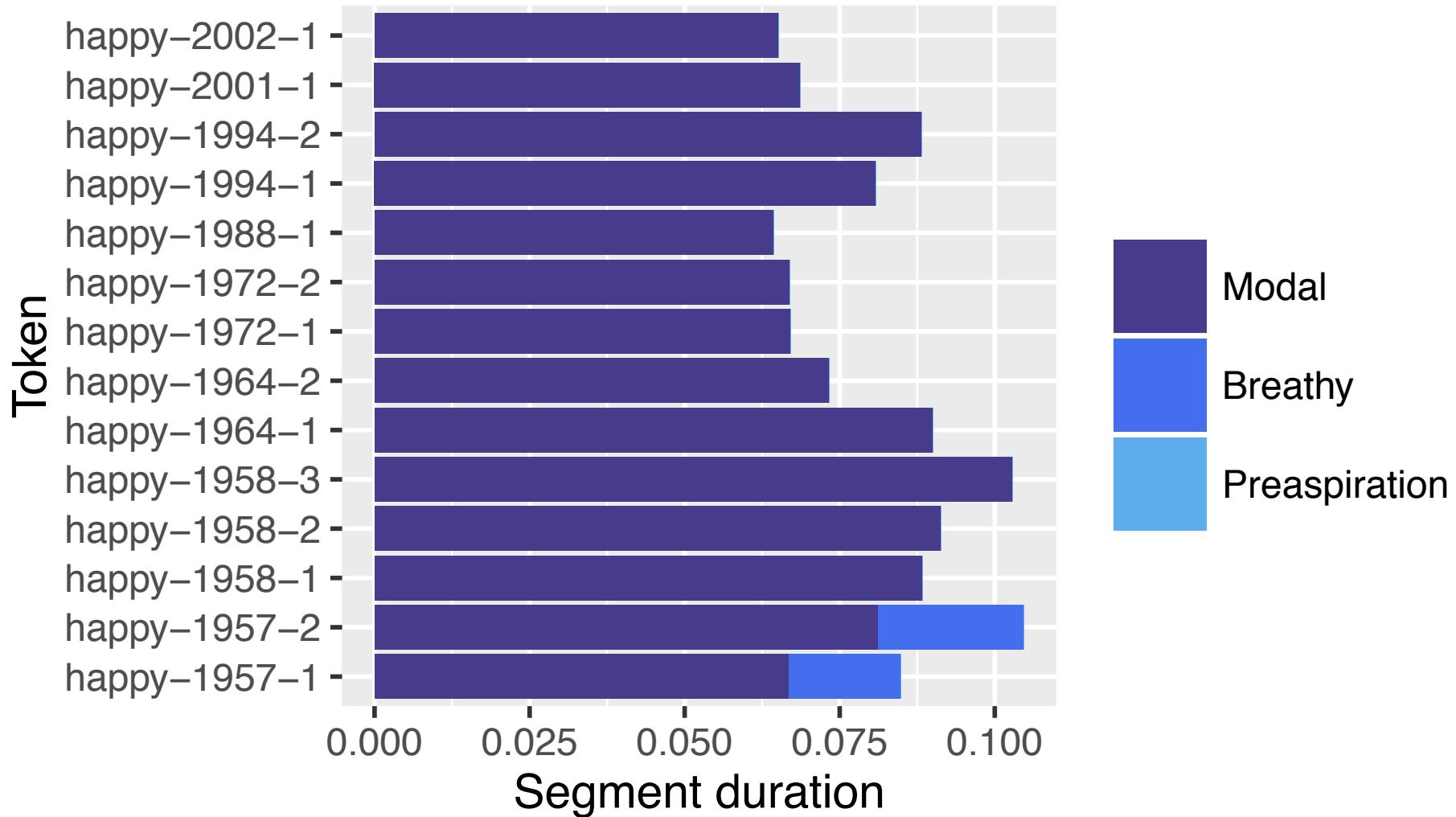


QE1994 battles



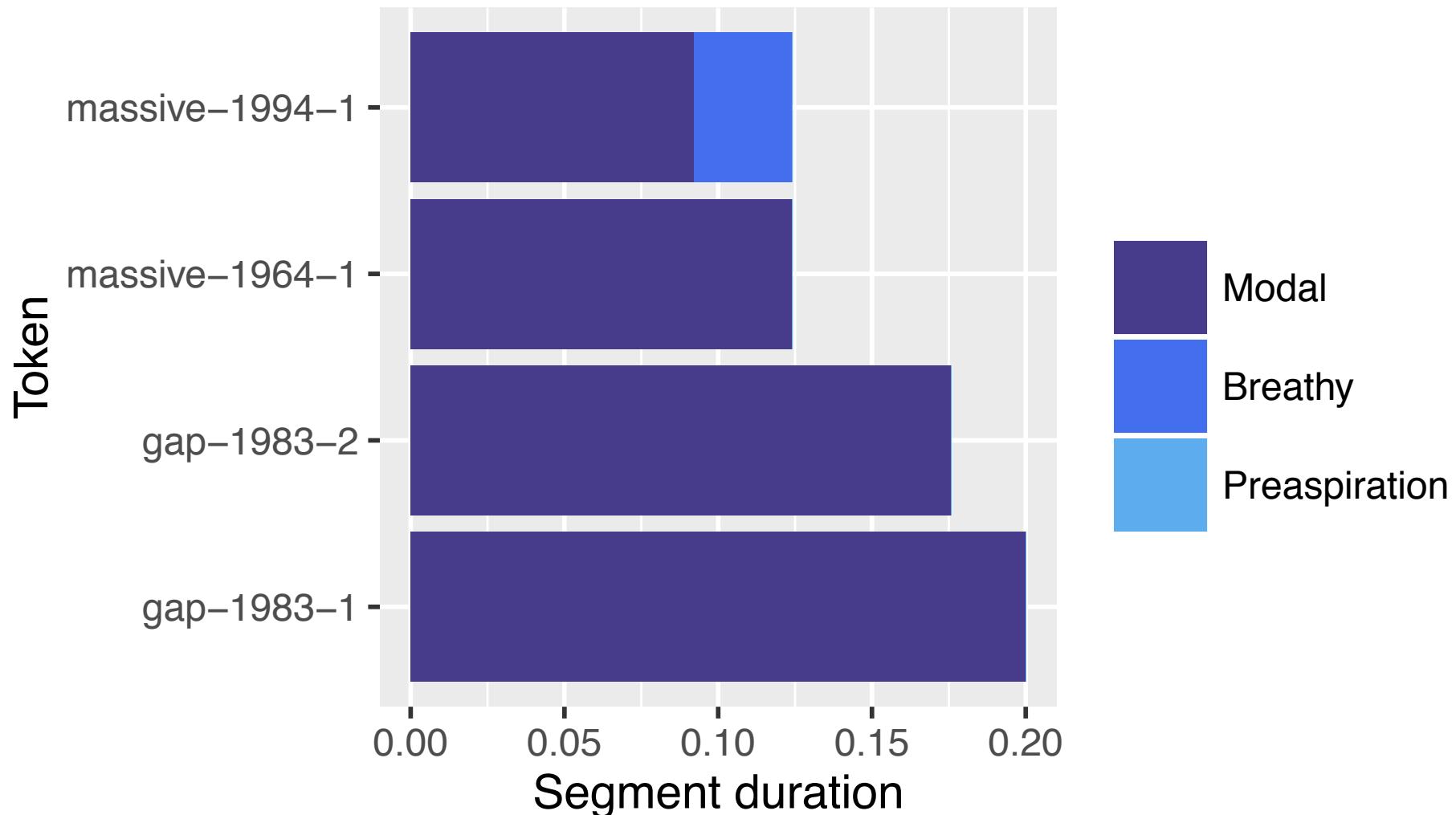
happy

Presence of breathy voice and preaspiration



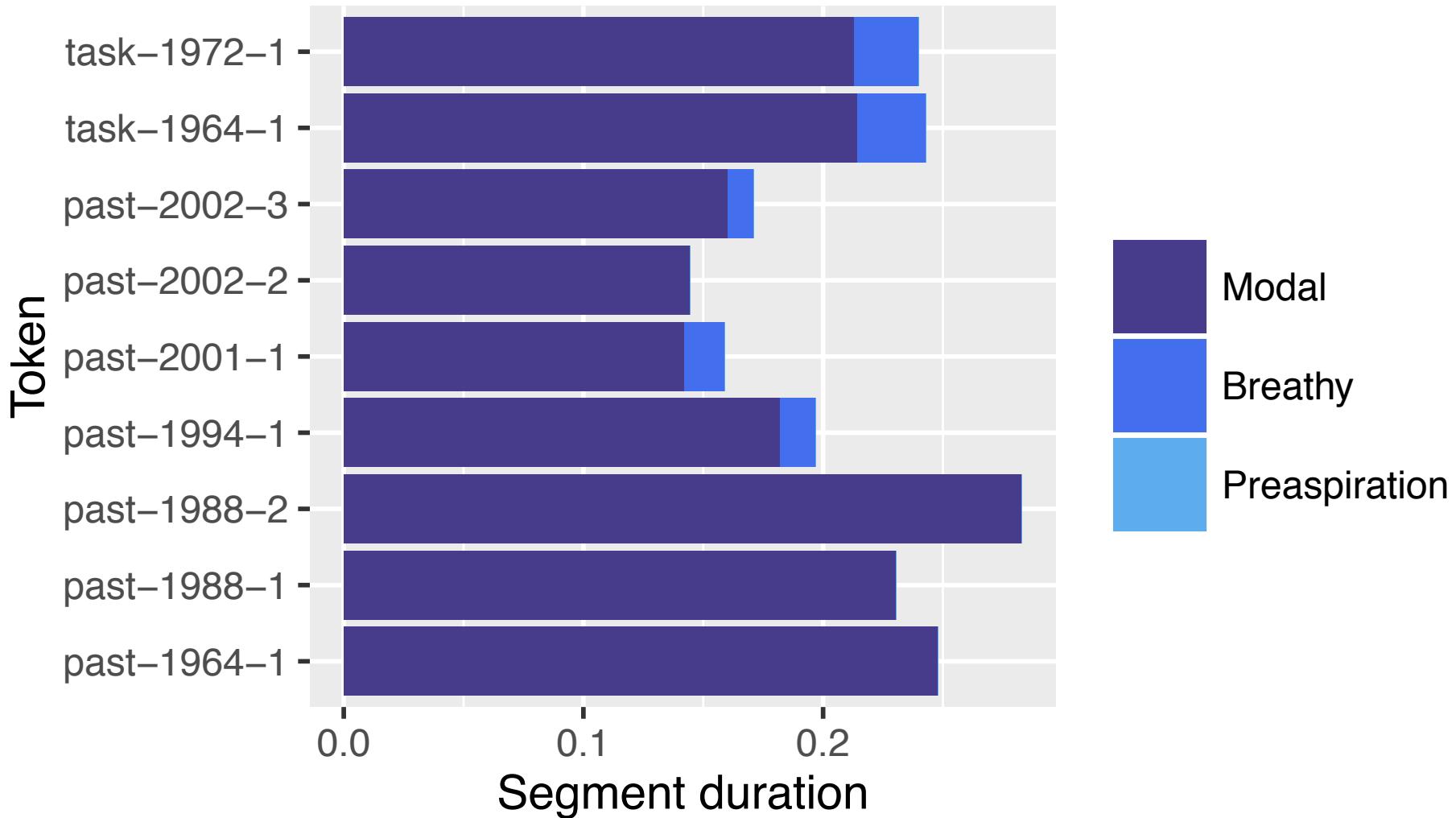
massive, gap

Presence of breathy voice and preaspiration



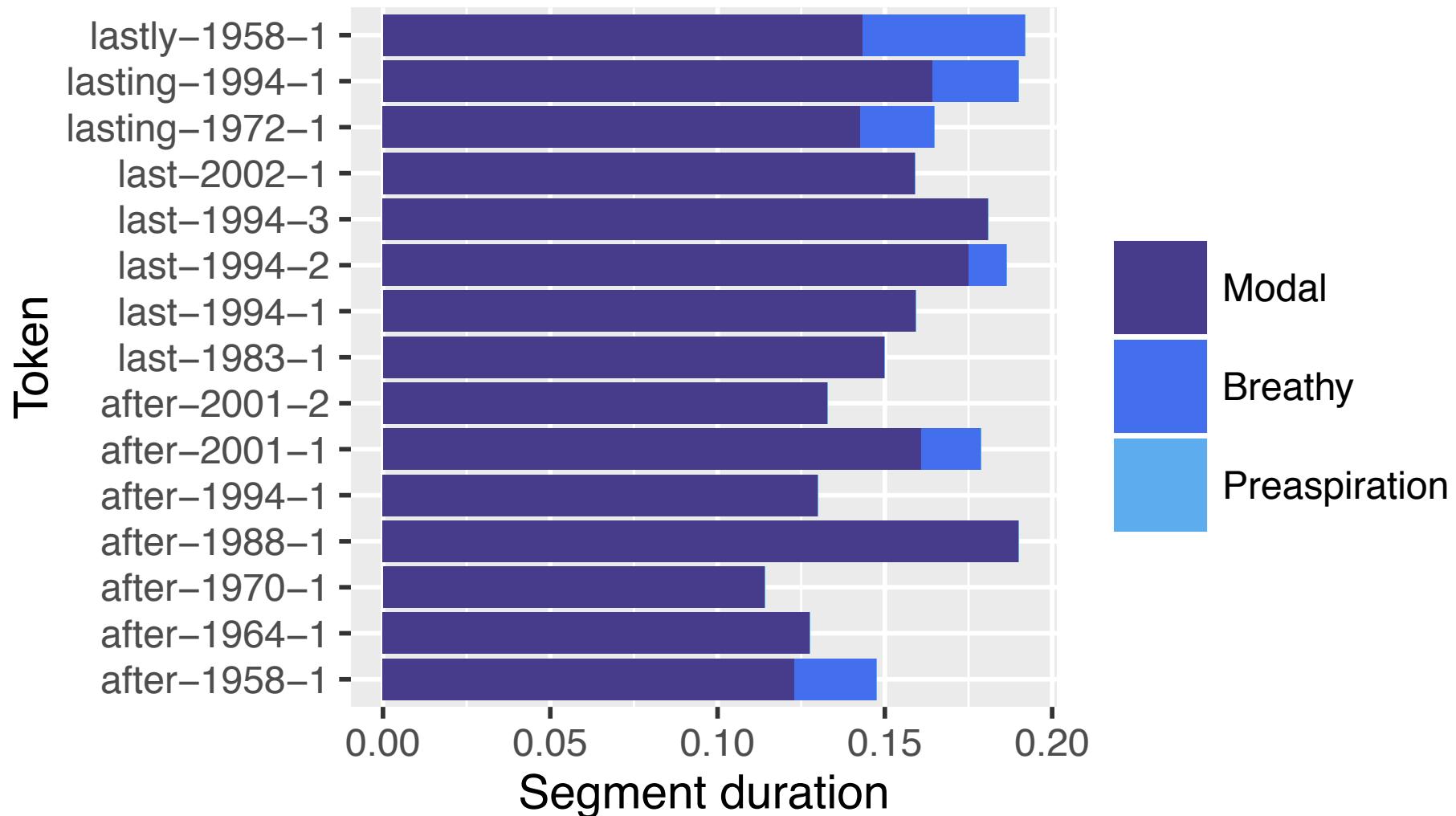
task, past

Presence of breathy voice and preaspiration



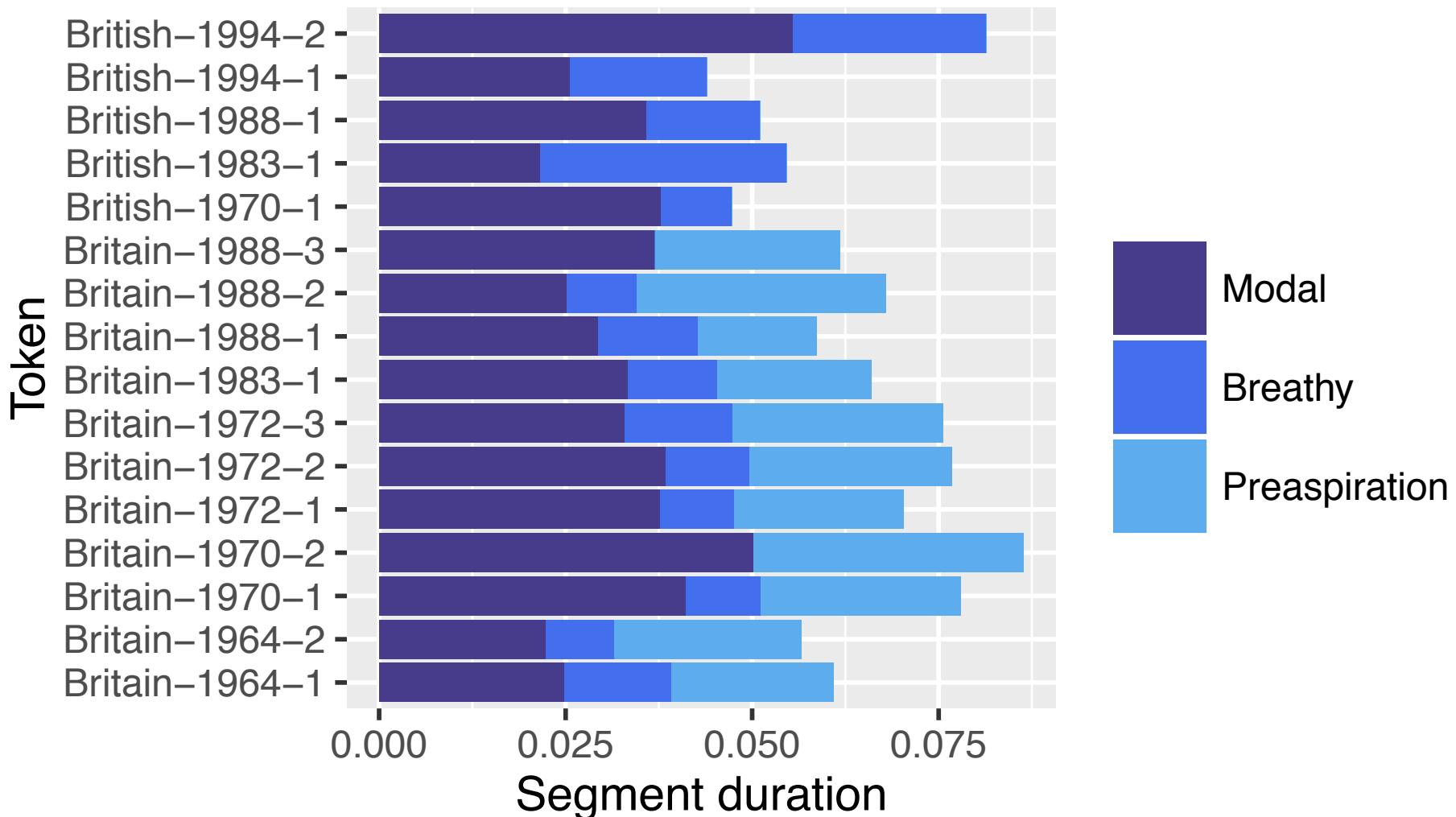
last, after

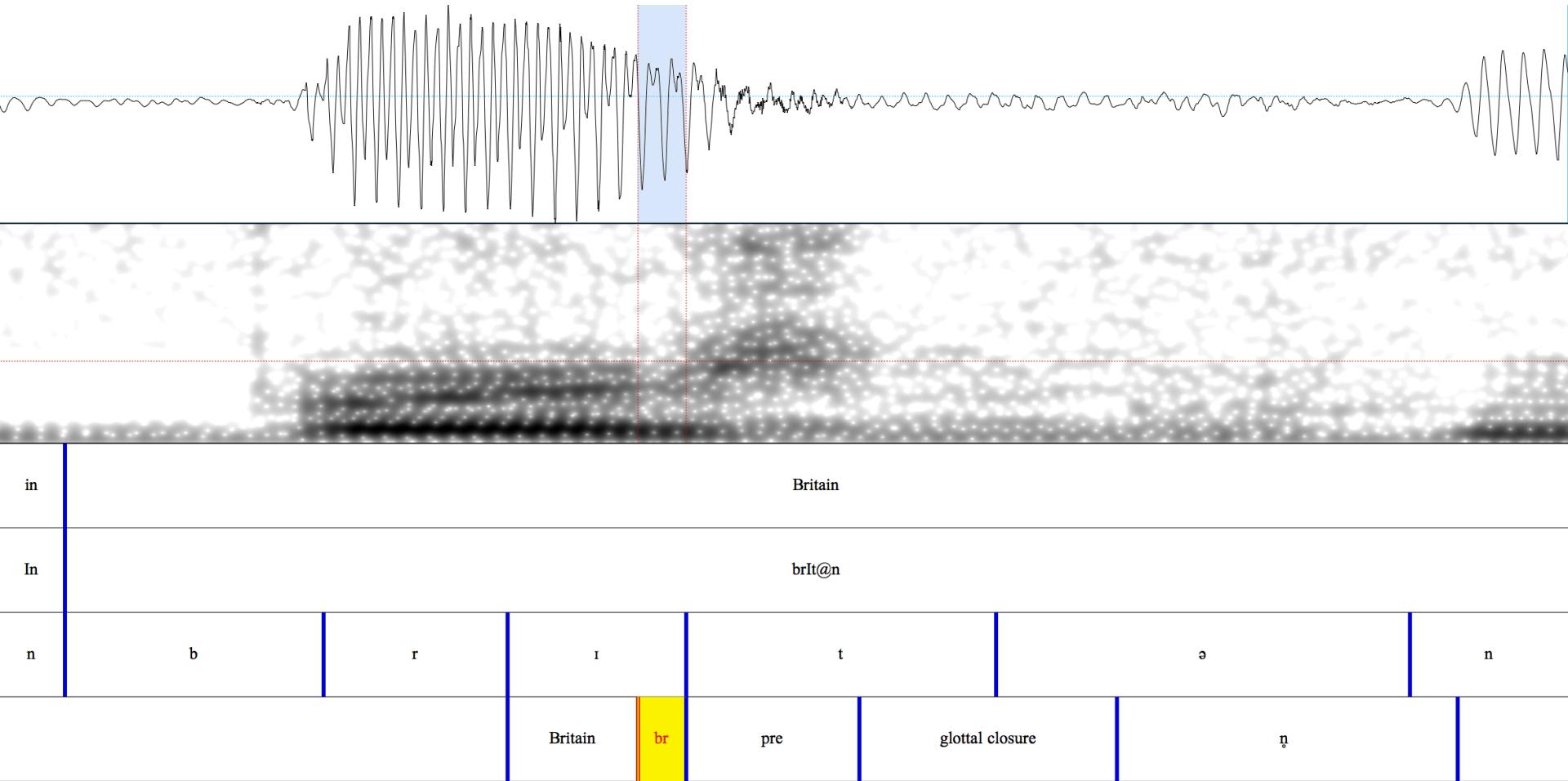
Presence of breathy voice and preaspiration



British, Britain

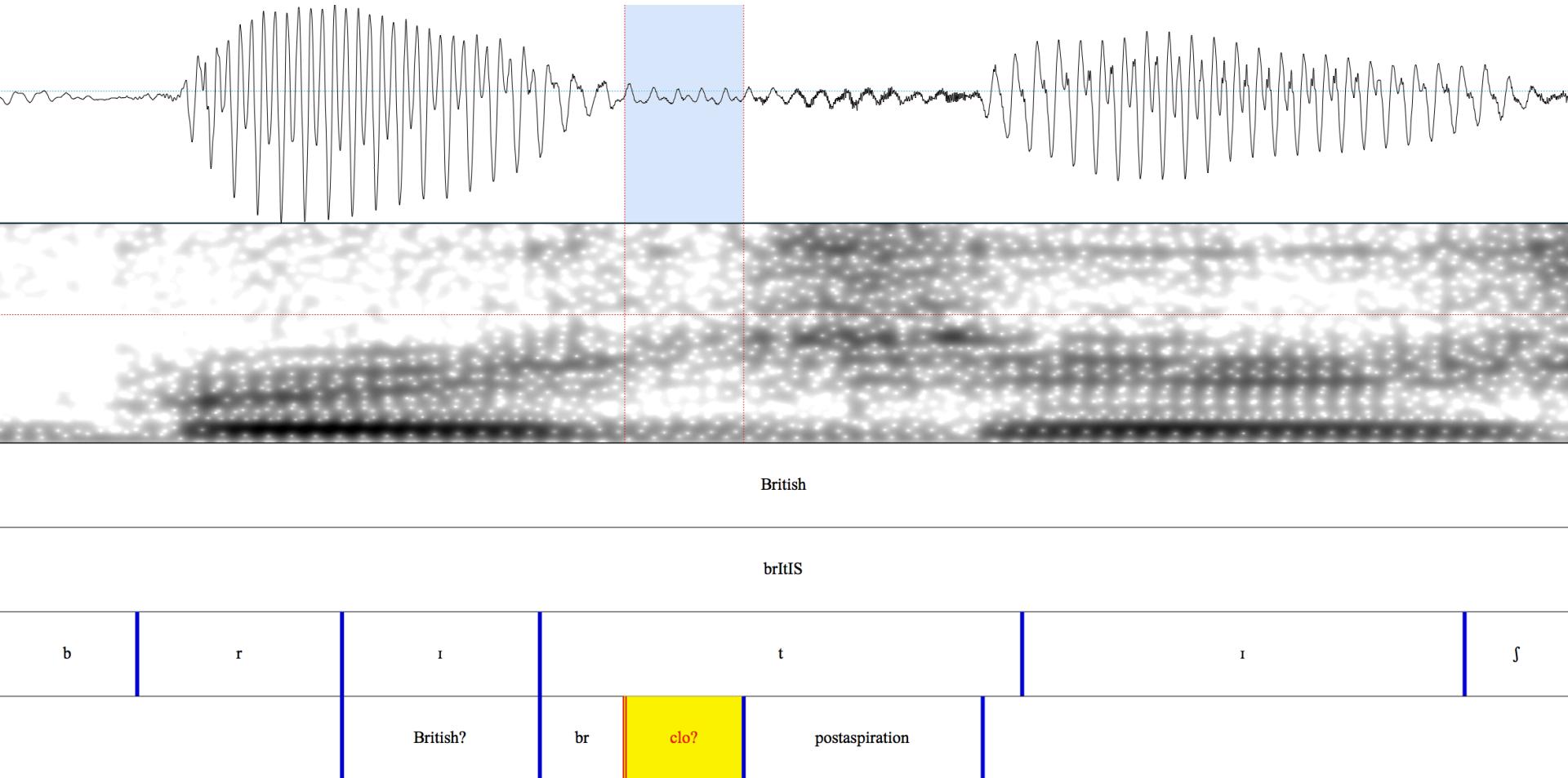
Presence of breathy voice and preaspiration





QE1988 Britain



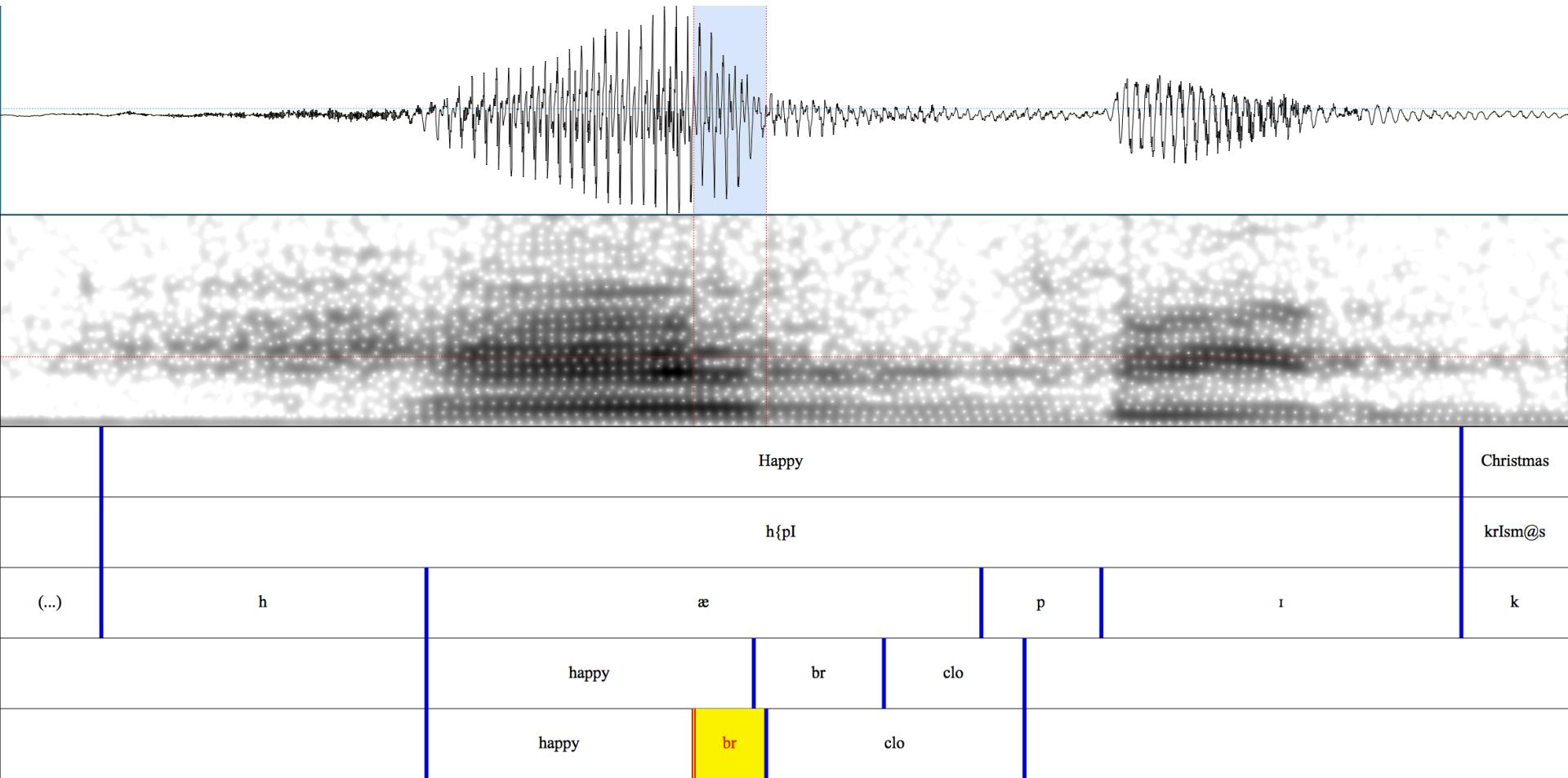


QE1988 British



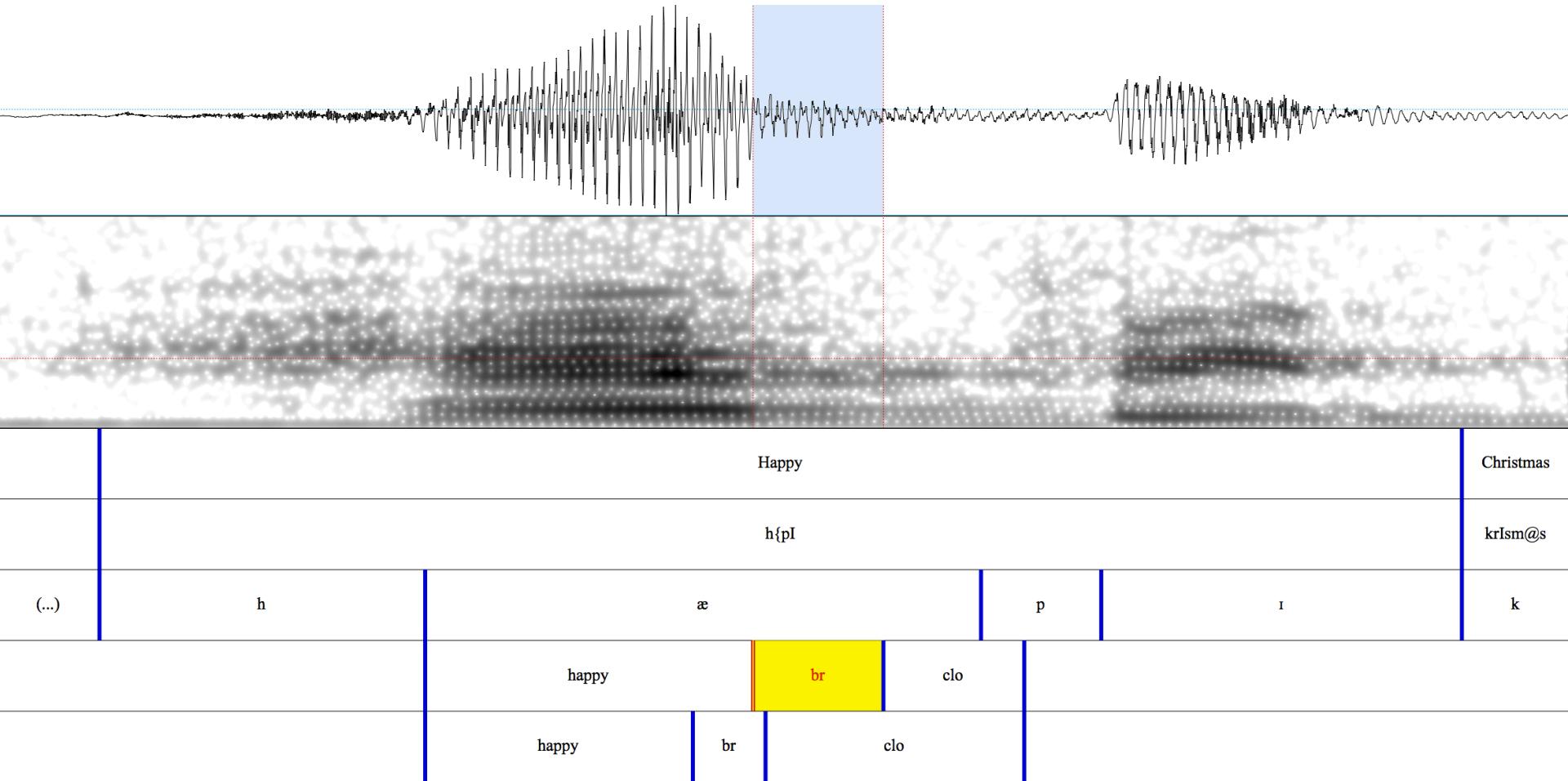
Measurement issues

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



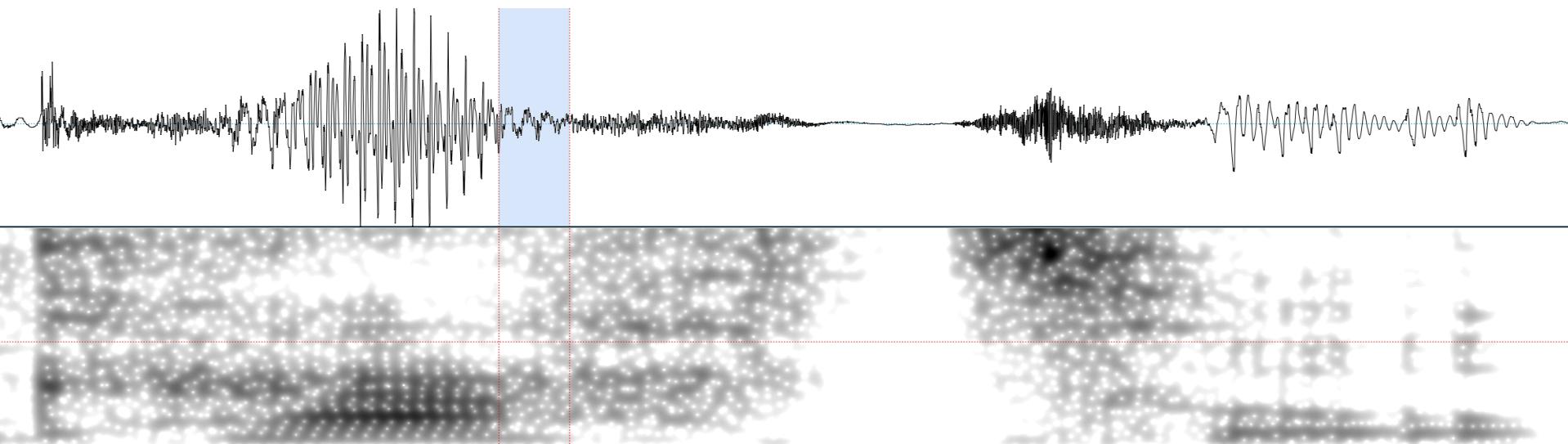
QE1957 happy



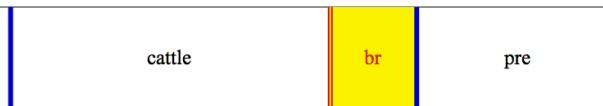


QE1957 happy





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



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

References

- Árnason, K. (1986) The segmental and suprasegmental status of preaspiration in Modern Icelandic. *Nordic Journal of Linguistics* 9(1): 1–23.
- Clayards, M. & T. Knowles (2015) Prominence Enhances Voicelessness and not Place Distinction in English Voiceless Sibilants. *Proceedings of ICPHS 2015*.
- Fudge, E. (1977) Long and short [ae] in one Southern British speaker's English. *Journal of the International Phonetic Association* 7(2): 55–65.
- Gordeeva, O. & J. Scobbie (2013) A phonetically versatile contrast: pulmonic and glottalic voicelessness in Scottish English obstruents and voice quality. *JIPA* 43: 249–71.
- Harrington, J., S. Palethorpe & C. I. Watson (2000) Does the Queen speak the Queen's English? *Nature* 408(6815): 927–928.
- Hejná, M. (2015) *Pre-aspiration in Welsh English*. Ph.D. Dissertation, University of Manchester.
- Helgason, P. (1998) Preaspiration in Swedish and its implications for historical sound change. *FONETIK 1998, Stockholm*: 16–19.
- Jones, D. J. (1972 [1918]) *An Outline of English Phonetics*, Ninth Edition. Cambridge: W. Heffer & Sons.

References

- Keer, E. (1998) Icelandic preaspiration and the moraic theory of geminates. *Proceedings of the 10th Conference of Nordic and General Linguistics*.
- Kredátusová, M. (2009) *Queen's Christmas Speeches 1952-2007: Discourse Analysis*. Diploma Thesis, Masaryk University Faculty of Education, Brno, Czech Republic.
- Tronnier, M. (2002) Preaspiration in Southern Swedish dialects. *FONETIK 2002, Stockholm*. 44: 33–36.
- Turk, A., S. Nakai & M. Sugahara (2006) Acoustic segment durations in prosodic research: A practical guide. *Methods in Empirical Prosody Research* 3: 1–28.
- van Dommelen, W. A. (1999) Preaspiration in intervocalic /k/ vs. /g/ in Norwegian. *14th ICPHS, San Francisco*: 2037–40.
- van Dommelen, W. A. (2000) Preaspiration in Norwegian: some results on speakers age, gender, and linguistic factors. *FONETIK 2000, Skövde*: 141–4.
- van Dommelen, W. A., S. Holm, J. Koreman (2011) Dialectal feature imitation in Norwegian. *17th ICPHS, Hong Kong*: 599–602.
- Wells, J. C. 1982. *Accents of English* (Vols. 1-3). Cambridge: Cambridge University Press.