Preaspiration following /æ/ in Southern Standard British English

Thomas Kettig
University of Cambridge, University of Hawaiʻi at Mānoa
tkettig@gmail.com
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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 /æː/” (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[æː]nder, sl[ɑː]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.

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171. The church isn’t holding a wedding, in fact there’s now a mass.

mass2

mass
Monosyllables

Presence of breathy voice and preaspiration, monosyllables

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Mean segment duration
### Monosyllables

#### Presence of breathy voice and preaspiration, monosyllables

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#### Mean segment duration

- **Modal**
- **Breathy**
- **Preaspiration**

**Note:** The chart illustrates the presence of breathy voice and preaspiration across different phonemes for monosyllables, with the mean segment duration shown on the x-axis.
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

Following segment manner
- Modal
- Breathy
- Preaspiration

Mean segment duration
Disyllables

Presence of breathy voice and preaspiration, disyllables

Mean segment duration

- Modal
- Breathy
- Preaspiration
Disyllabic, voiceless fricative

- ashen
- passion
- fashion
- tassel
Disyllabic, voiceless stop

• gapping
• Matty
• tacking
• snacking
• cattle
His name is Matthew, but we just call him Matty.
60. Don't wear that, you know it's out of fashion.
60. Don't wear that, you know it's out of 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 [maʰts] or mass [maʰs]).” (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: /oːp/)
   • 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

- “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)
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
Presence of breathy voice and preaspiration

Token: matters−1983−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: matters−1970−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: matter−2001−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: matter−1983−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: battles−1994−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: battles−1957−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: battlefield−1957−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: battle−1957−2
Segment duration: 0.00 0.05 0.10 0.15 0.20

Token: battle−1957−1
Segment duration: 0.00 0.05 0.10 0.15 0.20

Legend:
- Modal
- Breathy
- Preaspiration
QE1994 battles
Presence of breathy voice and preaspiration

- happy–2002–1
- happy–2001–1
- happy–1994–2
- happy–1994–1
- happy–1988–1
- happy–1972–2
- happy–1972–1
- happy–1964–2
- happy–1964–1
- happy–1958–3
- happy–1958–2
- happy–1958–1
- happy–1957–2
- happy–1957–1

Segment duration

- Modal
- Breathy
- Preaspiration

0.000 0.025 0.050 0.075 0.100
Presence of breathy voice and preaspiration

Segment duration

Token

massive–1994–1

massive–1964–1

gap–1983–2

gap–1983–1

Modal
Breathy
Preaspiration
Presence of breathy voice and preaspiration

- Task-1972-1
- Task-1964-1
- Past-2002-3
- Past-2002-2
- Past-2001-1
- Past-1994-1
- Past-1988-2
- Past-1988-1
- Past-1964-1

Segment duration

Modal
Breathy
Preaspiration
Presence of breathy voice and preaspiration

- **lastly–1958–1**
- **lasting–1994–1**
- **lasting–1972–1**
- **last–2002–1**
- **last–1994–3**
- **last–1994–2**
- **last–1994–1**
- **last–1983–1**
- **after–2001–2**
- **after–2001–1**
- **after–1994–1**
- **after–1988–1**
- **after–1970–1**
- **after–1964–1**
- **after–1958–1**

Segment duration

- **Modal**
- **Breathy**
- **Preaspiration**
Measurement issues

• Echo makes it difficult in some recordings to distinguish breathy voice from preaspiration
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QE1957 happy
The farmer owned some animals, in fact he had some 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


References


