

# Sexual orientation, phonetic variation and the roots and accuracy of perception in the speech of Northern England English-speaking men

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## Background

- Sexual orientation and the voice research dominated by the USA
- Previous studies explore both actual phonetic differences and perception with various approaches: laboratory; matched guise/digital manipulation; ethnography
- Common correlates: /s/; fundamental frequency (F0); vowels.
- Extra-linguistic factors: context (Podesva 2007, 2008); topic/ideology (Levon 2009, 2010).

## Methodology

### Phonetic variation

- Speakers: two pairs gay + two pairs straight pre-acquainted Northern England English-speaking men, controlled for physique, age, gender identity and ethnicity
- Recorded reading a passage and in conversation as a pair
- Analysed 30 seconds per speaker per environment
- Variables: /s/ (duration; intensity; low-cut-off frequency; peak frequency; centre of gravity; standard deviation; skewness; kurtosis); F0

**Research question:** How does sexual orientation affect phonetic variation in Northern England English and how does this interact with style and exposure to LGBT people?

### Perception

- 45 listeners of which 17 were from the UK, eight Belarus, eight Malaysia, nine elsewhere and three undisclosed
- Scalar judgement of sexual orientation (gay -> not gay) in conversation, passage and low-pass-filtered conversation (focus obfuscated by inclusion of other judgements)
- Forced-choice judgement of mixed-orientation pairs

**Research question:** How accurate are perceptions of sexual orientation based on Northern England English speech and how does this interact with phonetic variables, style, speaker and listener exposure to LGBT people, listener linguistic and cultural background, segmental features and judgemental constraints?

## Results

### Phonetic variation

- Sexual orientation does affect phonetic variation in Northern England English:
  - Supporting USA findings: /s/ peak frequency effect
  - Contradicting USA findings: lack of /s/ duration and /s/ spectral skew effects; presence of F0 effect
  - Novel: /s/ standard deviation a good correlate
- Inconclusive evidence of style effect: some phonetic variables correlate only in conversation, others only in read passage
- No interaction with exposure to LGBT people

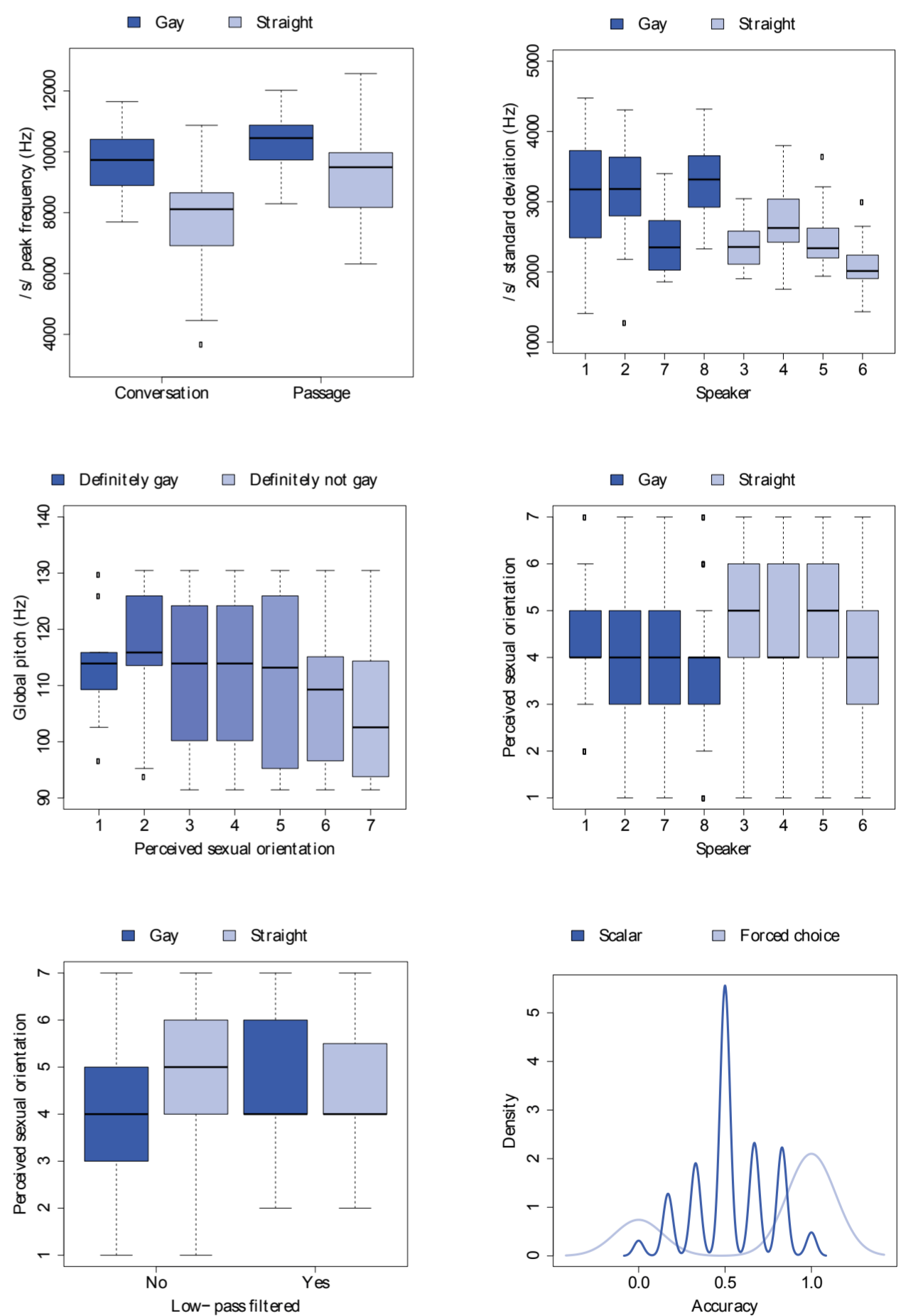
### Perception

Perceptual accuracy:

- Greater than chance
- Greater for straight speakers
- Greater with high judgemental constraints
- Segmental features key
- Inconclusive evidence of speaker and listener exposure effect
- Unimportant:
  - Style
  - Listener linguistic and cultural background

Perceptual correlates:

- Supporting USA findings: correlation with /s/ duration; /s/ spectral skew; /s/ peak frequency; global pitch (evidence both ways)
- Contradicting USA findings: direction of correlation with /s/ duration; global pitch (evidence both ways)
- Novel: correlations with /s/ centre of gravity, /s/ standard deviation and /s/ kurtosis



## Discussion

- Sexual orientation important factor in speech production in Northern England English
- Revisit speaker and listener exposure
- Explore interactions
- More studies with novel ethnolinguistic subjects

## References

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