## Coming out on Youtube: /s/, pitch and vowel space before & after coming out

### Brad Mackay





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- perception V production
- features which people might use to index sexuality
- features which are likely to mean someone is more likely to be rated as gay-sounding



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|                    |             | Co | oming Out on        |  |  |



- Distinctive YouTube genre, videos may take a number of forms (Lovelock 2019: 73).
- Many YouTube coming out videos follow highly structured 'scripts' which are so common they have almost become clichés (Lovelock 2017: 88).
- ► Loosely follow Cass's (1979) 6 stage 'coming out' model (Craig & McInroy 2014).
- In [YouTube] videos, coming out becomes meaningful as a process of fulfilling the cultural mandate of 'being true to oneself' (Lovelock 2019: 80).

#### How far does coming out on Youtube actually generalise to real life contexts?

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#### Coming Out

- ► [A] fundamental means by which an individual undertakes the process of constructing a sexual identity that is non-heterosexual (Chirrey 2003: 24).
- Coming out is a matter of **degree** rather than of a **binary** opposition (Liang 1997: 291).
- It is processual, a continual process of self-naming required to assert group membership (Liang 1997: 293).
- [I] nterpersonal communication very much depends on whether someone intends to communicate their group membership (or not) (Fasoli & Maass 2018: 98).
   BUT...
  - Burden of having to decide with every interaction whether or not to self-disclose (Ibid)

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## What features are salient when communicating/ distancing from group membership?

#### Which of these "gay sounding" features are actually used (if any) to index sexuality?

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| The 'Am | azingphil'  | channel |                     |  |  |

- 2006 present
- ~636 million views (2019)
- Never discussed his sexuality online but made reference to heterosexual relationships & love interests
- Came out during pride month 2019





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2 vids. Refers to heterosexual love interests [1] Tyler Oakley [2] Conor Franta Sexuality foregrounded for the first time First vid since coming out. Makes reference to the other vids

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## /s/

#### The gay lisp

(Munson & Zimmerman 2006; Van Borsel et

al. 2009; Mack & Munson 2012) Hyper-articulated /s/

(Munson, Jefferson, & McDonald 2006) **Mis-articulated /**S/

(Mack & Munson 2012)

/s/- fronting

(Campbell-Kibler 2011; Levon &

Holmes-Elliott 2013)

Sibilant /s/

(Levon 2014) [s+], [s] & [s-]

(Boyd 2018)

## Moments Analysis

- Spectral moments of /s/ among the most consistently significant acoustic variables (Zimman 2013: 5)
- Moment 1: Centre of Gravity (CoG) → higher Moment 3: Skewness → more negatively skewed
- Skewness possibly more salient than CoG?

(Munson, McDonald, DeBoe, & White 2006; Munson & Babel 2007)

- Mixed findings for fricative duration:
- (Linville 1998)
- 📀 (Rogers, Smyth, & Jacobs 2000)
- <u> (</u>Levon 2007)
- 🐼 (Zimman 2010)

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## Spectral Analysis

- .wav files & aligned textgrids read into R (R Core Team 2019)
- Spectral slices generated through zero emuR (Winkelmann, Jänsch, Cassidy, & Harrington 2020)
- ▶ muR::dct() Discrete Cosine Transformation  $\rightarrow$  DCT coefficients
- emuR::moments()  $\rightarrow$  moments1-4
- /∫, θ/ included along with /s/

- Onset tokens of /s/
- Clusters of /str/ & /stj/ excluded (Bailey, Nichols, Baranowski, & Turton 2019)

|            |         | /s/<br>००●००००० | <b>VSA</b><br>00000 |  |  |
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| Spectral M | easures |                 |                     |  |  |



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|        |           | /s/<br>००००●००० | <b>VSA</b><br>00000 |  |  |
|--------|-----------|-----------------|---------------------|--|--|
| CoG (№ | 1oment 1) |                 |                     |  |  |



- ▶ *n* = 1,666
- Coming out contexthigher CoG
- No significant differences

| CI         |      | . 2)            |     |    |  |
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| Background | Data | /s/<br>00000●00 | VSA | F0 |  |





▶ *n* = 1,675

 /s/ significantly more negatively skewed for the Coming Out context (p <0.01)</li>

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| Skewnes | s (Mome | nt 3)           |                     |  |  |



▶ *n* = 1,675

- /s/ significantly more negatively skewed for the Coming Out context (p <0.01)</li>
- Post-Hoc testing: significant variation between 3 contexts
- Gay Interlocutor Out only just significant p = 0.0495

|            |    | /s/<br>○○○○○○○ | <b>VSA</b><br>00000 |  |  |
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| /s/ durati | on |                |                     |  |  |



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|-----------|------------|-------------|--------------|--|--|
| Mixed fin | ndinas for | vowel space | e            |  |  |

#### No overall difference in vowel spaces

(Pierrehumbert, Bent, Munson, Bradlow, & Bailey 2004; Smyth & Rogers 2008)

- Greater vowel dispersion (Smyth & Rogers 2002)
- Stylistic use of vowels → ongoing vowel changes at the community level (Podesva 2011)

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| Mixed fir | ndinas for | vowel space | e            |  |  |

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#### FLEECE higher F1 lower F2

Pierrehumbert et al. 2004)

#### FLEECE F1 more peripheral

(Avery & Liss 1996)

TRAP higher F2 Marginally higher F1 (Pierrehumbert et al. 2004)

#### TRAP higher F1

(Munson, McDonald, et al. 2006)

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| Vowel space | ce area |                     |  |  |



In line with GOOSE fronting findings for both Lancashire (Ferragne & Pellegrino 2010) & Manchester

(Baranowski & Turton 2015)

(日本本語を本語を本語を入自)

|          |          |              | VSA<br>00●00 |  |  |
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| Bootstra | nned vow | el snace are | a            |  |  |



100 bootstrapped VSAs, using the boot package (Canty & Ripley 2020)

- Bark transformed for analysis
- Vowel space calculated using vowelMeansPolygonArea() from the phonR package

(McCloy 2016)

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| Vowel spa | ace area |                     |  |  |



- n = 1,200 (from 582)
- Coming out context larger than others
- Mainly due to:
   F1 TRAP lowering
   (~ 50Hz/ 0.13 Bark)
   F2 TRAP fronting
   (~ 40Hz/ 0.006 Bark)

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| Vowelsr | nace area |                     |  |  |



 gay interlocutor?? slower speaking rate = better chance of hitting articulatory target (Moon & Lindblom 1994)

 connection with sounding gay & sounding articulate

# Background Data /s/ VSA F0 Summary References F0 as an acoustic correlate of pitch

Higher pitch  $\rightarrow$  common stereotype of *gay-sounding* speech

- Saeck, Corthals, and Van Borsel (2011)
- Podesva (2007)
- A Gaudio (1994)
- A Smyth, Jacobs, and Rogers (2003)
- 🕂 Rendall, Vasey, and McKenzie (2008)

## Might actually index

- flamboyance (Podesva 2007)
- effeminacy (Campbell-Kibler 2011)

|         |  | VSA<br>00000 | F0<br>0●00 |  |
|---------|--|--------------|------------|--|
| Mean F0 |  |              |            |  |

F0 taken at 0.05 sec intervals

20 15 F0 (semitones) 10 5 0 Not Out Gay Interlocutor Coming Out Out

▶ *n* =5,573

|         |  | <b>VSA</b><br>00000 | F0<br>00●0 |  |
|---------|--|---------------------|------------|--|
| Mean F0 |  |                     |            |  |

 F0 taken at 0.05 sec intervals

▶ *n* =5,573



|          |  | VSA<br>00000 | F0<br>000● |  |
|----------|--|--------------|------------|--|
| F0 Range |  |              |            |  |

- 5th 95th percentile
- Range almost identical
- ► Gay Interlocutor max/min raised by ≈3 semitones
- Larger SD in Gay Interlocutor context- possibly more 'lively' speech

(Traunmüller & Eriksson 1995)



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What features are salient when communicating/ distancing from group membership?

#### Which of these "gay sounding" features are actually used (if any) to index sexuality?

- Skewness, rather than CoG
- Fronting of /s/ but not lisping?
- Overall VSA
- Mean pitch
- Pitch range

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What features are salient when communicating/ distancing from group membership?

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- Mean pitch
- Pitch range

Even with a single speaker, identity construction is a complex issue

| Background | Data |   | VSA          | Summary |  |
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#### Thanks!



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