That's /s/o gay: the role of /s/ in cueing the percept of gay sounding male speech

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Introduction

Research Questions:

1. Can the manipulation of sound patterns and lexical characteristics evoke the perception of gay-sounding male speech (GSMS)?

2. Are the sound patterns and lexical characteristics associated with GSMS invariant across languages?

Past research

- Studies have relied on explicit comparisons of recorded speech from self-identified samples of gay and straight speakers
- This research has identified a number of potential acoustic correlates of GSMS, among them **longer /s/ duration[1,2,3], higher peak /s/ frequency[1,2,4], and larger pitch range[1]**.
- These studies included no experimental manipulation, despite the fact that multiple known, and likely unknown, correlates interact simultaneously. This renders assignment of relative influence to each correlate in evoking the percept of GSMS difficult, if not impossible.

The Present Study

- In contrast to previous studies, we have experimentally manipulated an acoustic variable identified above (/s/ duration), and crucially, we have done so in isolation to eliminate any possible confounding influences.

Materials

Materials

- 60 English words
  - 40 filler and 20 target items per set
    - Filler: non /s/-initial (e.g., telephone, buffer, coin)
    - Target: /s/-initial, evenly split between two onset cluster groups
      - /skV/ (e.g., skunk, school, scamper)
      - /spV/ (e.g., spite, spurious, spore)
- Lexical characteristics
  - Variation along several dimensions:
    - Number of syllables, length in segments, HAL frequency, phonological neighborhood density
- Recordings made by male L1 speaker of American English, voice rated neutral along a gayer/straighter sounding continuum in a pretest norming study

Paradigm

Experiment 1: Sibilant Duration

Manipulation 1

- Modification of target items
  - duration of word-initial /s/ increased
    - 2.5 * standard deviation of the average initial-/s/ duration in an onset cluster category
      - /spV/: +64ms
      - /skV/: +52ms

Manipulation 2

- Modification of instructions
  - *Condition 1*
    - "The speaker is gay and will try to speak in a "straighter-sounding" voice.
  - *Condition 2*
    - "The speaker is straight and will try speak in a "gayer-sounding" voice.

Participants

- 52 Penn State Undergraduates
  - 24 male, 28 female
  - 18-34 years (M: 20.0)

Procedure

- Words presented auditorily
  - 10 modified target items
  - 10 unmodified target items
    - mod/unmod status counterbalanced across participants
- Binary judgment for each word: "Gayer-sounding" or "Straighter-sounding"

Experiment 2: Non-native perception of /s/

Participants

- 16 Chinese-English bilinguals
  - 2 male, 14 female, 18-25 years (M: 19.8)
  - Average English AoA: 8.4 years

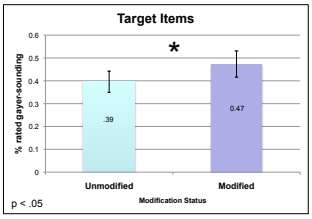
Procedure

- Identical to Experiments 1 & 2
- For analysis, participants split into two groups based on English AoA
  - High Experience (HE): Five or younger (N = 8)
  - Low Experience (LE): Six or older (N = 8)

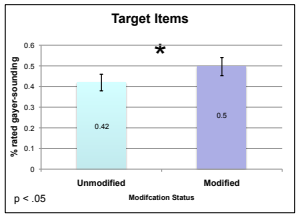
Results

Experiment 1: Sibilant Duration

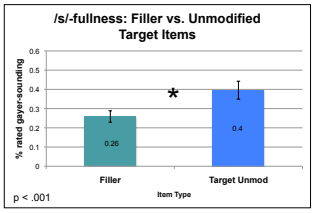
Condition 1

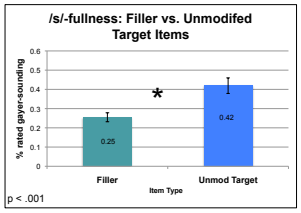


Condition 2



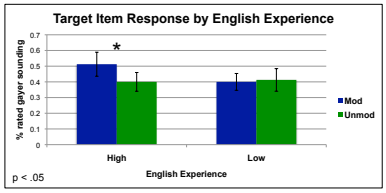
- Modified target items (increased /s/ duration) more often rated as gayer-sounding
- No statistically significant difference in this effect between Conditions 1 & 2



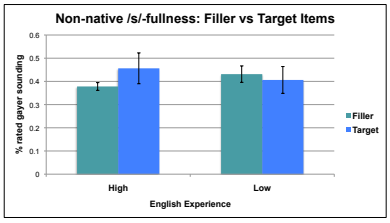


- /s/-initial items (target), compared to non /s/-initial (filler) items, more often rated as gayer sounding
- No statistically significant difference in this effect between Conditions 1 & 2

Experiment 2: Non-native perception of /s/



- Significant effect of /s/ duration in high English experience group
- No effect in low English experience group



- No significant effect of /s/-fullness in either experience group
- But trend is evident (high experience rate /s/ initial items as gayer sounding, low experience show no rating difference

Conclusions and Future Directions

Experiment 1: /s/ duration

- Listeners are sensitive to the duration of initial-/s/ when judging gayness
- Knowledge of speaker's sexuality does not influence rating distribution
- Mere presence of initial-/s/ cues stereotype of GSMS
  - "sociophonotactics" - /s/ is gayer than non-/s/

Experiment 2: non-native /s/ duration

- Bimodal distribution of gayness ratings based on English AoA
  - Early acquisition of English → sensitivity to /s/ as correlate of GSMS
  - Later acquisition of English → no sensitivity to /s/ as correlate of GSMS

For the Future

- Does initial-/s/ elicit the perception of "semantic gayness"?
  - i.e. do words that start with /s/ seem gayer than non-/s/ initial words?
  - Purely visual task – no acoustic component
- What are the salient cues to speaker sexuality in other languages?

References

1. Gaudio, R. (1994) Sounding Gay: Pitch Properties in the Speech of Gay and Straight Men. *American Speech* 69.1:30-57.
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4. Avery, J. and J. Liss (1996) Acoustic Characteristics of Less-Masculine-Sounding Male Speech. *Journal of the Acoustical Society of America* 99.6:3738-48.