

## Falsetto and the Use of Phonation Type as a Stylistic Variable

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1

## Goals

- Encourage shift toward *intraspeaker* variation in research paradigm.
- High f0 (pitch), in the form of falsetto, can be used to perform gayness.
- Creaky voice is used along with falsetto to increase f0 range to its extremes.
- Gayness is constructed by speakers, hearers, and their shared ideologies.

2

## Work on Gay Speaking Styles

- *Gaudio (1994)*  
Listeners were able to identify sexual orientation, but f0 properties did not provide sufficient cues for gay identity.  
⇒ f0 not the only phonetic resource for performing gayness.
- *Jacobs, Rogers & Smyth (1999)*  
Listeners were more inclined to identify a speaker as gay if their speech exhibited wide f0 ranges, but identifications of gayness did not coincide with actual orientation.  
⇒ f0 may play a role in perception of gayness, but its use by gay men remained unattested.

3

## First Shift in Research Paradigm

Examine conversational speech rather than read speech, in order to enable speakers to achieve their social goals.

4

## More Work on Gay Speaking Styles

- *Podesva, Campbell-Kibler & Roberts (2002)*  
Gay activist lawyer had same f0 range and *lower* absolute f0 than political opponent.  
⇒ f0 not used to perform gayness due to demands of situation – speaker's desire not to sound too gay to a mostly straight audience.

5

## Second Shift in Research Paradigm

Look at *intraspeaker* variation to get a window into how speakers manipulate variables to negotiate identity across situations.

6

## The Study

- Speaker:  
Heath, 25-year-old gay man attending medical school.
- Data:  
30 minutes of speech from each of three speaking situations:
  - at barbecue with friends
  - on phone with family
  - in meeting with patient
- Variables:
  - maximum f0
  - f0 range
  - duration of falsetto
  - duration of creaky voice
  - rate of f0 change
  - f0 contour (rising vs. falling)

7

## Falsetto Examples

- *Why do you think they charge you thirty bucks for it?*
- *And this other kid, like, two minutes later has a little gun, completely separate area.*
- *I like it.*

8

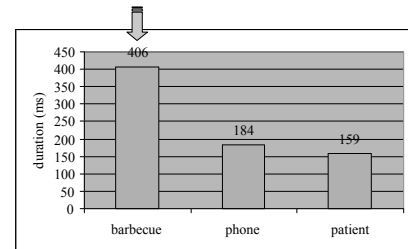
## Percent of Falsetto Utterances

	at barbecue	on phone	with patient
falsetto utterances (N)	35	10	15
total utterances (N)	386	260	403
percent of utterances	9.07%	3.85%	3.72%

Speaking situation is a significant factor ( $\chi^2 = 12.70$ ,  $df = 2$ ,  $p \leq 0.010$ ).

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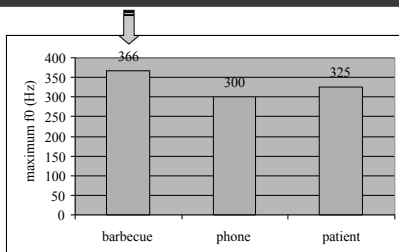
## Mean Duration of Falsetto



Speaking situation is a significant factor (ANOVA:  $F(2, 57) = 4.58$ ,  $p \leq 0.014$ ).

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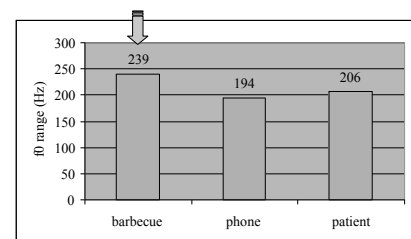
## Mean Maximum f0



Speaking situation is a significant factor (ANOVA =  $F(2, 57) = 6.77$ ,  $p \leq 0.002$ ).

11

## Mean f0 Range



Speaking situation is a significant factor (ANOVA:  $F(2, 57) = 3.44$ ,  $p \leq 0.039$ ).

12

## Summary of Differences in the Phonetic Character of Falsetto

- Duration, maximum  $f_0$ , and  $f_0$  range are all greater when Heath speaks to his friends at the barbecue.
- No significant falsetto differences were found between the phone conversation and the meeting with a patient.

13

## Functions of Falsetto Utterances

- When speaking with friends (at the barbecue), Heath uses falsetto on a wide variety of utterances, including but not limited to discourse markers, questions, quotations, and evaluative exclamations.
- The landing sites for falsetto in the other two situations are much more restricted, as falsetto appears on discourse markers and questions only.

14

## Summary of Heath's Falsetto Use

- When speaking with friends, Heath's use of falsetto is more frequent, more phonetically salient, and attaches to a wider variety of utterances.
- Analysis (for now): Heath performs stereotypical gayness at the barbecue, both through the way he talks (with falsetto) and what he talks about.

15

## Gay Male Stereotypes that Heath Perpetuates

- Image Conscious  
Issey Miyake isn't like that type of cologne, like where, where you can put, like, a lot on, you have to, because it fades, but Versace is just like, 'Phhhooo'.
- Resistant to Manual Labor  
In response to being asked to help set up a grill: [Eliza], I love you, but I'm gonna get sticky.
- Authority on Home Decorating  
I don't like the fact that they have the Christmas lights up there...You should leave them an anonymous note on their door...That's just not acceptable.

16

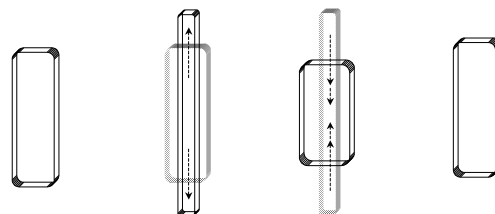
## Co-Occurrence of Falsetto and Creaky Voice: Internal Factors

- Glottal Onsets  
Ooh, ooh, a little vent thing.
- Ends of (Long) Utterances  
And this *other* kid, like, two minutes later, has a little gun, completely separate area.
- Elastic Properties of Vocal Folds

17

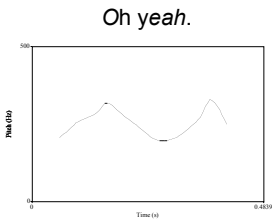
## Elasticity Effects on Vocal Folds

(1) modal (2) falsetto (3) creaky (4) modal



18

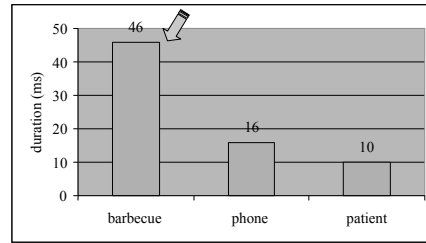
## Gradual Transitions between Modal and Falsetto Phonation Types



- Heath uses his laryngeal muscles to counterbalance the elastic properties of the vocal folds, showing smooth transitions from modal voice to falsetto.
- Creak is not an automatic consequence of using falsetto.
- Interpretation: Heath uses creaky voice to expand his f0 range downward.

19

## Stylistic Use of Creaky Voice: Mean Duration in Falsetto Utterances



Creaky voice longer at barbecue than on phone ( $t = 1.69$ ,  $df = 33$ ,  $p \leq 0.05$ ) or with patient ( $t = 2.34$ ,  $df = 48$ ,  $p \leq 0.012$ ).

20

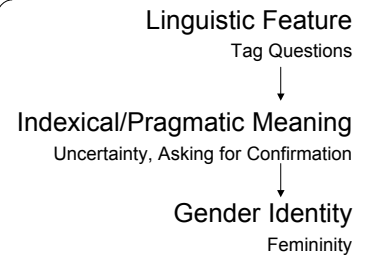
## Discourse Functions of Falsetto

- express surprise or excitement  
I'm so *excited* about your little *vent* thing.
- yell  
*Ahhh! Stop it!*
- offer evaluative commentary  
*You people* are just so screwed up.
- liven up a direct quotation  
Like, '*I haven't studied for an hour now. I'm gonna fail!*'
- engage his audience when telling a narrative  
And this *other* kid, like, two minutes *later*, has a little *gun*, *completely* separate area.

21

## Indexing Gender (after Ochs 1991)

The links between these different levels are mediated by ideological conventions and knowledge about the speaker.

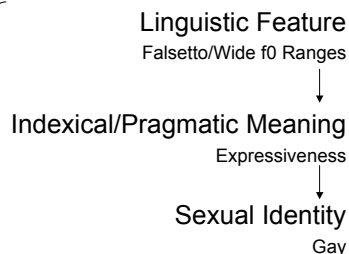


22

## Indexing Stereotypical Gayness

Ideology  
Men are inexpressive.

Speaker Knowledge  
Heath is a man.  
Heath is gay.



23

## Limitations of Agency in Identity Construction

- Speakers initiate the construction of identity by speaking in a way they feel will successfully accomplish its construction.
- Identity is not fully established until the perceiver interprets the speaker's speech.
- Thus identity construction is a joint endeavor undertaken by speakers and hearers alike.

24

## Conclusion

- Summary

Heath uses high f0 levels and wide f0 ranges to perform expressive discourse functions. Expressiveness, through ideological conventions, indexes gay identity.

- Further Issues

How does Heath's use of wide f0 ranges relate to their use by women? What does it tell us about the relationship between language, gender, and sexuality?

What are the social mechanisms by which linguistic features become endowed with (different) social meanings?

25

## Wide f0 Ranges and the Speech of Women

It has often been suggested that women, like Heath, use f0 as a linguistic means for performing expressiveness, for instance to

1. Get attention of infants in child-directed speech (Masataka 1992)
2. Engage audience when telling a narrative.  
*This one time, at band camp...*
3. Simultaneously express content and an affective stance.  
A: When will dinner be ready?  
B: Six o'clock?  
B can mean 'Is 6 okay with you?', 'Why do you need to know?', and 'Are you listening?' (McConnell-Ginet 1983)

26

## Gender vs. Sexuality

- The way that women do expressiveness is the same as Heath does it – by expanding f0 ranges.
- The place where the meaning diverges is in the interpretation of expressiveness (informed by ideology and knowledge of the speaker).
- Gender and sexuality can be constructed out of the same linguistic material (wide f0 ranges), but they are distinguished from one another by ideology.

27

## Meanings of Phonation Types

### *Falsetto*

- Gayness
- Indignation among African American girls (Kortenhoven p.c.)
- Motherhood (Blount and Padgug 1976)

### *Creaky Voice*

- Gayness
- Latina gang girls (Mendoza-Denton and Jannedy 1998)
- Men with high SES in Edinburgh (Esling 1978)
- Fatherhood (Blount and Padgug 1976)

What are the social mechanisms that enable the same linguistic features to become endowed with such different social meanings?

28