



When Hearing Is Believing: Perceptions of Speaker Style, Gender, Ethnicity, and Pitch

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Exploring how linguistic variables have social meanings for listeners demonstrates how people make judgments about a speaker based only on hearing their voice

(Preston 1999; Purnell et al. 1999; Levon 2006; Campbell-Kibler 2007; Kirtley 2011)



Perceived Style

- Linguistic variables work together in the formation of a perceived style and social characteristics associated with that style.
- Consistent with concept of an indexical field, where speakers use certain linguistic variants (and other stylistic components) to construct their style (Eckert 2008).
- Listeners seem to be using the indices (based on stereotypes from experience and ideology) in attributing a style to a speaker.

Research questions:

Is pitch a linguistic resource that people associate with the linguistic performances of gender and ethnicity?

If so, how do these associations relate to one another and to the listeners' perceptions of other aspects of the speaker's style?

Procedure

- Clips of speech extracted from spontaneous speech of 8 speakers
 - 2 clips for each voice
- Pitch manipulated using Praat so there were two versions for every voice
 - female voices: 1 unmodified and 1 lowered
 - male voices: 1 unmodified and 1 raised
- 2 participant groups - varied only in which guise a voice was played
- NEW: all voices and participants were from Hawai‘i
- NEW: rated responses as positive, neutral, or negative

Questions about each voice



What word would you use to describe this person's **style**?



What are **three words** you would use to describe this person's **personality**?



What do you think this person **looks like** (hair, build, clothes, etc)?

4. What **gender** would you guess this speaker identifies with?
5. Please provide a guess regarding this speaker's **sexual orientation**.
6. What **ethnicity/ethnicities** would you guess this speaker identifies with?
7. Where do you think this speaker is from (please be as specific as possible)?
8. What high school do you think they went to?
9. Do you think you know or have met this person? If so, what is the person's name?

Why Hawai'i?

- Geographically remote: some local different styles are different than those found elsewhere
- Ethnically and culturally diverse
- Linguistically diverse

note: the term *Hawaiian* is used to refer to people with native Hawaiian ancestry, not to people from Hawai'i (Local)

The Voices

Pseudonym	Age	Where from?	Ethnicity
Female voices:			
Abcde	22	Kaneʻohe, Oʻahu	Hawaiian, Japanese, Chinese & German
Fiatuina	22	Hilo, Hawaiʻi	Hawaiian, Samoan, Filipino & Portuguese
IceCream	19	Kaneʻohe, Oʻahu	Japanese
Kamamalu	19	Halawa, Maui	Japanese, Hawaiian & Okinawan
Male voices:			
Jeffrey	23	Honolulu, Oʻahu	Filipino
Kealopiko	21	Aliamanu, Oʻahu	Japanese, Irish, Swedish, French & English
Kent	18	Hawaiʻi	
Stanchmonsta	20	Waiehu, Maui	Hawaiian, Chinese, Portuguese & Italian

The Listeners

(n = 83)

ethnicities listed	n		
Filipino	17	Hawaiian, Filipino	1
Japanese	13	Hawaiian, Chinese, Filipino, Portuguese	1
Chinese	8	Hawaiian, Chinese, Japanese, Caucasian	1
Korean	6	Hawaiian, Chinese, Japanese, Portuguese	1
Filipino, Chinese	5	Hawaiian, Chinese, Portuguese	2
Filipino, Spanish, Chinese	1	Hawaiian, Chinese, Portuguese, Caucasian	1
Filipino, Okinawan	1	Norwegian, Chinese, Hawaiian, Portuguese	1
Filipino, Puerto Rican	1	Hawaiian, Japanese, Filipino	1
Korean, Filipino	1	Hawaiian, Thai	1
British, Filipino	1	Hawaiian, White	1
Portuguese, Filipino	1	Israeli, Russian	1
Hapa	1	Asian/Caucasian	1
Mix	2	Haole (white)	3
		Caucasian, Brazilian	1
		Japanese, Hawaiian, Chinese	1
		Japanese, Chinese	1
		Taiwanese	1
		Samoan, Irish	1
		Pacific Islander	1
		American	1
		no answer	2

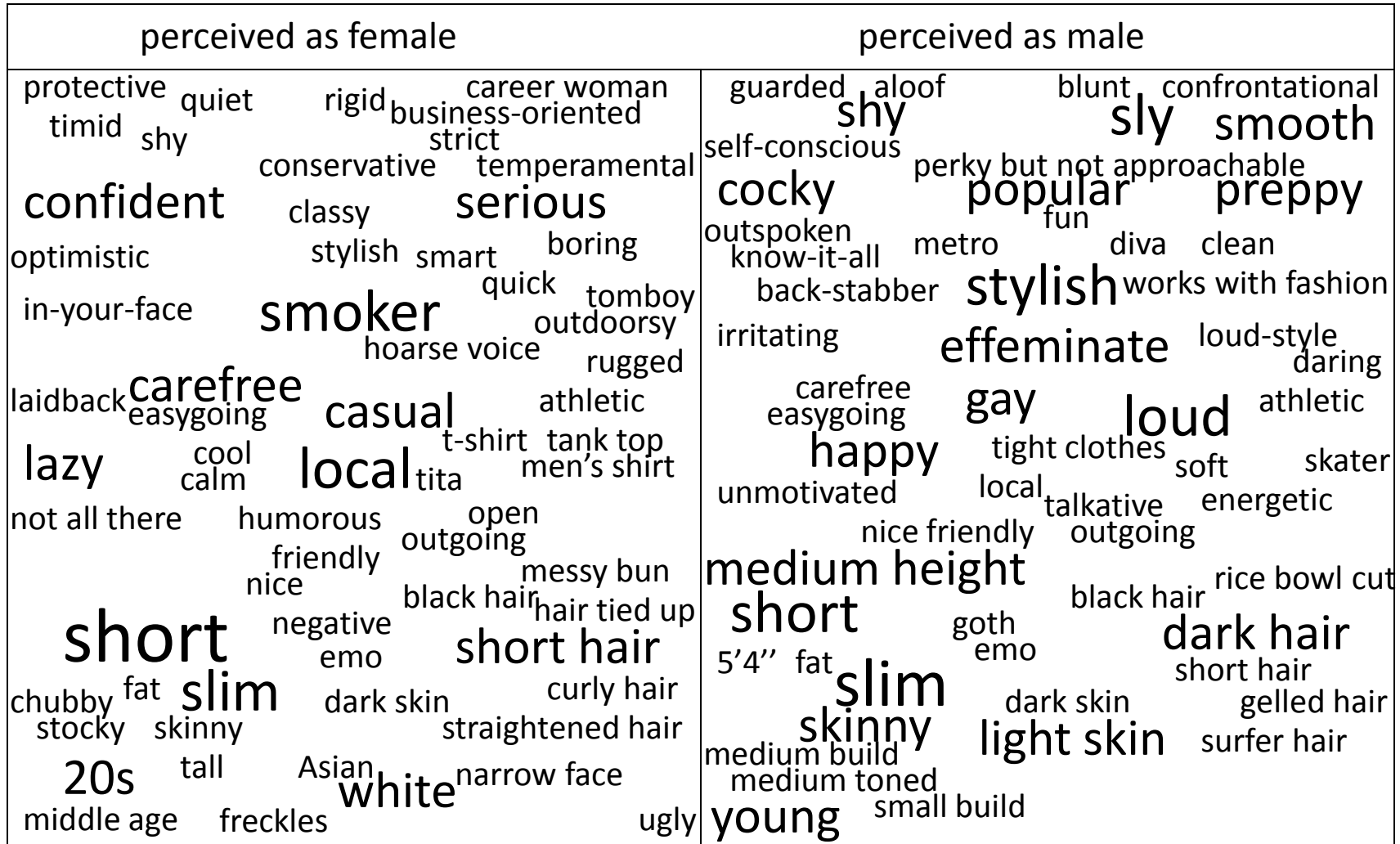
Gender results

- Female voices with a lower pitch and male voices with a higher pitch were described more negatively ($p < 0.001$) unless the speaker was identified as a gender other than their self-identified gender
- Female voices were more likely to be perceived as male when in the lower pitched guise ($p < 0.0001$), and male voices were more likely to be perceived as female when in the higher pitched guise ($p < 0.0001$)
- But it's more complicated than this...

Gender

- For some voices, there was no shift (Abcde was perceived as female 100% of the time)
- Whereas for others there was a shift (Kamamalu was more likely to be identified as male in the lower pitched guise ($p < 0.0001$))
- And for others there was barely a shift (only two speakers identified Fiatuina as male)
- Some voices (Kamamalu & Jeffrey) were more likely to be perceived as transgender when in the manipulated guise, but Kealopiko was sometimes identified as transgender regardless of guise.

Kamamalu: lower pitch talking about the weather

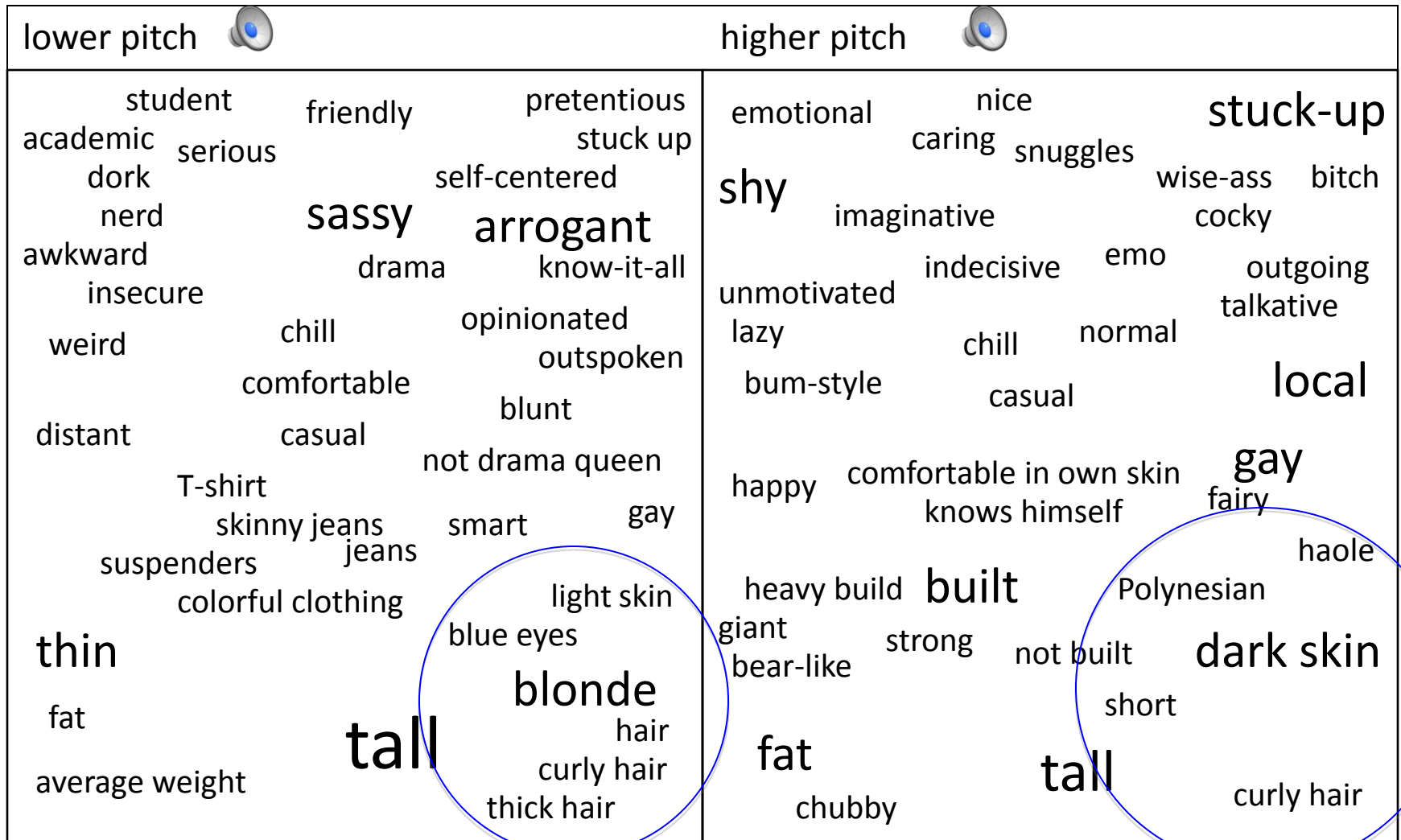


Though more subtle, we see styles shift across the guises when gender and sexuality are held constant...

Ethnicity

- The shift in perceived ethnicity for female voices differed depending on voice and clip.
- Participants were more likely to identify males as having Pacific Islander ancestry when in the higher pitch guise ($p < 0.0001$)
 - not true for female voices ($p > 0.5$)
 - nor for identifying the male speakers as Hawaiian ($p > 0.5$)

Stanchmonsta: when perceived as male and gay



Claim:

- A lower pitch increases the likelihood you will be perceived as larger and taller (van Dommelen and Moxness 1995) and more physically dominant (Puts et al. 2007)

Our data:

- Not necessarily. Some male voices were actually perceived as produced by smaller and weaker men when in lower pitched guise

Stanchmonsta: when perceived as male and gay

lower pitch	higher pitch
<p>student academic dork nerd awkward insecure weird distant T-shirt skinny jeans suspenders colorful clothing</p> <p>friendly sassy drama chill comfortable casual jeans jeans colorful clothing</p> <p>pretentious stuck up self-centered arrogant know-it-all opinionated outspoken blunt not drama queen smart light skin blue eyes blonde hair curly hair thick hair</p> <p>thin fat average weight</p> <p>tall</p>	<p>emotional shy unmotivated lazy bum-style happy heavy build giant bear-like fat chubby</p> <p>nice caring snuggles imaginative indecisive chill casual comfortable in own skin knows himself strong not built short tall</p> <p>stuck-up wise-ass bitch cocky outgoing talkative local gay fairy haole Polynesian dark skin curly hair</p>

Implication for phonetics

- when looking at the relation between a variant and a perceived social factor, other social factors cannot be ignored
- we should move beyond description of more homogeneous groups of speaker/hearers

Implications for sociolinguistics

- pitch is associated with the social performance of gender and ethnicity
- demonstrate how the way we talk is viewed as central to who we are (the association between language and social “stuff” can then be exploited in production to construct who we are)
- increase our understanding of the indexical field: what traits are associated with one another and with linguistic variables

Applications for future research

- for those of us working in Hawai'i, gives some idea as to the kinds of social styles and groups we should be examining for socially-meaningful variation in Hawai'i
 - understanding the ideologies surrounding variation is an important step toward understanding *why* we observe the linguistic variation we do

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aloha & leiDaz

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