

The Significance of Phonetic Detail in the Construction of Social Meaning*

Robert J. Podesva
Stanford University
podesva@stanford.edu

1. Introduction

- (1) Many recent approaches to variation have treated phonological variables as resources for the construction of social meaning (Eckert 2000, Zhang 2001).
- (2) The meaning of variation is generally assumed to derive from the frequency with which a given variant occurs.
- (3) *Claim*
Social meaning is transmitted not only via frequency, but also on the level of the token, through the (scalar) phonetic details differentiating one token from another.

2. Current Study

- (4) *Variable under Consideration*
Released word-final coronal stops (-t/d)
- (5) *Previous Work*
Bucholtz (1996) – Girl Nerds
Ashburn (2000) – Science Fiction Fans
Benor (2001) – Orthodox Jewish Men
Podesva et al. (2002) – Gay Activist Lawyer
- (6) Together these studies hint at a relationship between releasing stops and performing competence or precision.
- (7) Released stops (a form of hyperarticulation) have also been suggested as a feature of ‘sounding gay’ (Walters 1981, cited in Barrett 1995).
- (8) *Speakers*

Heath	Jack
gay medical school student white, mid-twenties Jack’s boyfriend ‘Diva’	gay medical school student Asian American, mid-twenties Heath’s boyfriend ‘Friendly’

- (9) *Situations*

Speaker	Social Situation	Professional Situation
Heath	barbecue with friends	meeting with patient
Jack	dinner with boyfriend	meeting with professor

3. VARBRUL Analysis

- (10) Approximately 30 minutes from each of the four situations were coded (776 tokens for Heath, 508 for Jack) for several linguistic (preceding and following context, word type, morphological affiliation, phrasing, intonation) and social factors (situation, addressee, addressee gender).
- (11) *Application Value: Released Stop*
Acoustic representations (waveforms, spectrograms, pitch tracks) were consulted to categorize -t/d as released, unreleased, flapped, palatalized, glottal(ized), or deleted.
- (12) *Significant Linguistic Factor Groups*

Heath	Jack
Preceding Context	Preceding Context
Following Context	Following Context
Word Type	
Morphological Affiliation	

- (13) *Significant Social Factor Group*

Situation	Heath			Jack		
	Input=0.019, p≤0.048					
	FW	N	%	FW	N	%
Professional	0.605	24	6	0.701	16	9
Social	0.389	12	3	0.411	13	3

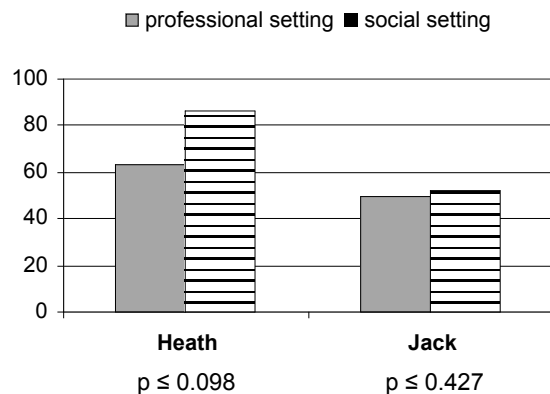
(Results taken from run of full model, including groups in 12).

- (14) Both Heath and Jack are more likely to release -t/d in their respective professional situations, a finding consistent with the competence/precision meaning in (5) and (6).

4. Acoustic Analysis

- (15) *Procedure*
Using Praat, duration measurements were taken for all release bursts, as a way of quantifying burst strength.

* Thanks are due to a number of people for helpful discussions of this work: Kathryn Campbell-Kibler, Edward Flemming, Jacquelyn Rahman, John Rickford, Mary Rose, Devyani Sharma, Julie Sweetland, Andrew Wong, Arnold Zwicky, and especially Penny Eckert. All errors are mine.

(16) *Raw Duration of Release Bursts (in ms)*(17) *Speech Rate Normalization*

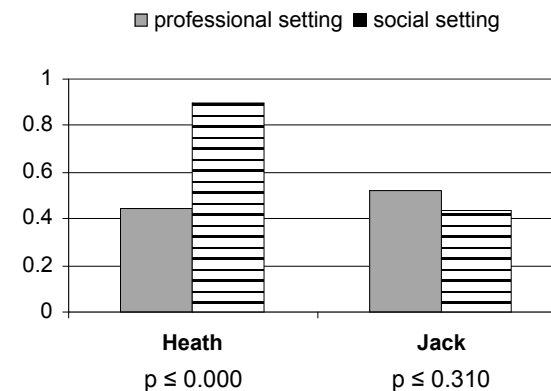
In order to normalize for speech rate, the raw burst duration must be considered in proportion to some value characterizing the speech rate local to the burst. The value should vary minimally across the various linguistic environments that may obtain across the range of tokens.

(18) *Duration of Stressed Vowel*

Crystal and House (1990) report that in conversational speech, although syllable and stress group durations depend on the linguistic context (i.e., number and order of phones in syllable or stress group), stressed vowel durations are remarkably immune to the effects of linguistic context.

(19) *Normalization Procedure*

The raw burst duration was divided by the duration of the stressed vowel in the same stress group containing the release burst.

(20) *Normalized Duration of Release Bursts*

(21) Even though Heath's stop releases are less frequent when speaking to his friends at a barbecue, they are longer. Jack does not appear to use burst duration stylistically.

5. **Constructing Social Meaning**(22) *What do Heath's long stop release bursts mean?*

I suggest that the duration of release bursts indexes not just precision, but the degree of precision, such that super-long release bursts at the barbecue come to index something more like 'prissiness'.

(23) *Phonological Variables as Semantically Underspecified*

Phonetic qualities become associated with the social circumstances under which they are produced. The social history of a variable endows the variable with some degree of meaning (an underspecified meaning), with repetition leading to a more fully specified meaning and greater large-scale social intelligibility.

Underspecified meaning of Heath's bursts: competent/precise

(24) *Creating New Meanings*

The mapping between form and meaning is elastic and subject to reworking (*bricolage*, as in Hebdige 1979).

Reworked meaning of Heath's bursts: prissy

(25) *The Role of Discourse Function*

The discourse function of an utterance containing a phonological variable can help imbue the variable with social meaning.

(26) *Using Stop Release Bursts to Express Prissiness*

Heath: 'Oh my God^h. I haven't had Hi-C since, like, like, like at a junior high school party or somethin'.

(27) *Distinctiveness and Style*

'The characteristics of a particular style cannot be explained independently of others.' (Irvine 2001: 22)

- (28) *The Significance of Personae (vs. Identity)*
 Heath distinguishes himself not only as a gay man, but a particular type of gay man, one with a flamboyant diva persona. Using stop release bursts to perform prissiness is a means of constructing this persona.
 Jack does not exploit long stop release bursts because performing prissiness would not be consistent with his friendly persona (or any of the other personae he constructs).
- (29) *Co-occurrence with Other Linguistic Features*
 Styles are built out of clusters of features, not isolated variables, so one feature of a style may take on meaning through its association with others.
- (30) Podesva (submitted) reports that Heath uses falsetto more frequently in this barbecue setting than in other situations, and that the falsetto is longer in duration, higher in fundamental frequency (f₀), and wider in f₀ range, patterns attributed to Heath's performance of flamboyance.
- (31) *Co-occurrence of Stop Release Bursts with Falsetto*
 Heath: Some kid^h was gonna, shoot, what the hell do you call those little . What *do you call* those little things that, a crossbow . I was, I was *rollerblading* today and some kid's like, 'I'm gonna shoot you with my crossbow!' *This little guy.*

6. Conclusions

- (32) *Summary*
 Both Heath and Jack produce stop release bursts more frequently in professional settings than in social settings, most likely to project an image of competence. An acoustic analysis of the stop releases reveals a different pattern: Heath's releases at the barbecue, though infrequent, are rather long, indexing prissiness and contributing to Heath's persona as a diva.
- (33) Analyses couched solely in terms of frequency of occurrence, such as the VARBRUL analysis in §3, may fail to capture subtleties in the construction of social meaning, as shown by the acoustic analysis of release burst duration in §4 and §5.
- (34) Low-level phonetic details, often treated as lying beyond the borders of sociolinguistic relevance, may play an integral role in encoding the meaning of variation.

References

- Ashburn, Karyn. 2000. Mainstream perceptions of SF [Science Fiction]. Panel discussion at Minicon 35, Minneapolis, MN.
- Barrett, Rusty. 1995. Supermodels of the world unite! Political economy and the language of performance among African American drag queens. In William Leap, ed. *Beyond the Lavender Lexicon*. Buffalo, NY: Gordon and Breach, 207-26.
- Benor, Sarah Bunin. 2001. The learned /t/: Phonological variation in Orthodox Jewish English. *Penn Working Papers in Linguistics (Papers from NAWAV 29)* 7.3: 1-16.

- Bucholtz, Mary. 1996. Geek the girl: Language, femininity, and female nerds. In J. Ahlers, L. Bilmes, M. Chen, M. Oliver, N. Warner, and S. Wertheim, eds. *Gender and Belief Systems*. Berkeley, CA: Berkeley Women and Language Group, 119-32.
- Crystal, Thomas H. and Arthur S. House. 1990. Articulation rate and the duration of syllables and stress groups in connected speech. *Journal of the Acoustical Society of America* 88.1: 101-12.
- Eckert, Penelope. 2000. *Linguistic Variation as Social Practice*. Malden, MA: Blackwell Publishers.
- Hebdige, Dick. 1979. *Subculture: The Meaning of Style*. London: Routledge.
- Irvine, Judith. 2001. 'Style' as distinctiveness: The culture and ideology of linguistic differentiation. In Penelope Eckert and John Rickford, eds. *Style and Sociolinguistic Variation*. Cambridge: Cambridge University Press, 21-43.
- Podesva, Robert J. Submitted. The stylistic use of phonation type: Falsetto, fundamental frequency, and the linguistic construction of personae.
- Podesva, Robert J., Sarah J. Roberts, and Kathryn Campbell-Kibler. 2002. Sharing resources and indexing meanings in the production of gay styles. In Kathryn Campbell-Kibler, Robert Podesva, Sarah Roberts, and Andrew Wong, eds. *Language and Sexuality: Contesting Meaning in Theory and Practice*. Stanford, CA: CSLI Publications, 175-89.
- Walters, Keith. 1981. A proposal for studying the language of homosexual males. Austin, TX: University of Texas, Ms.
- Zhang, Qing. 2001. *Changing economy, changing markets: A sociolinguistic study of Chinese yuppies*. Ph.D. thesis, Stanford University.