

# Социолингвистика

Функциональные модели

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20 сентября 2021

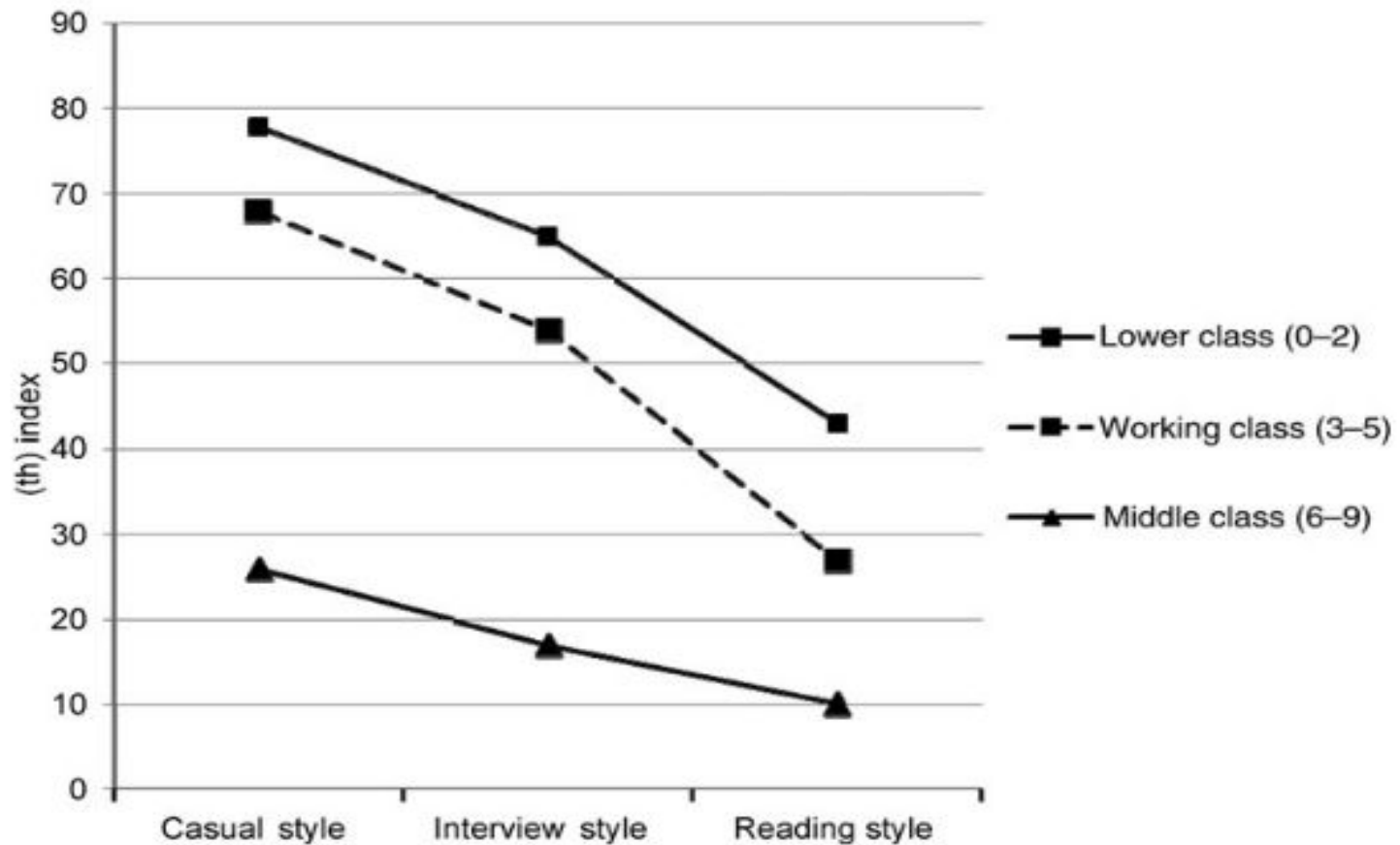
# Three waves of variation

- Eckert, 2012

# The first wave of variation (Eckert, 2012)

- ★ The first wave of variation studies established broad correlations between linguistic variables and the macrosociological categories of socioeconomic class, sex, class, ethnicity, and age.
- ★ Seminal work: Labov's (1966) study of the Social Stratification of English in New York City.
- ★ Labov defined the notion of **the vernacular** as each speaker's first acquired and most automatic, hence maximally systematic, linguistic production

# The first wave of variation (Eckert, 2012)



**Figure 1**

Class stratification of (th)-stopping. From Labov (1966).

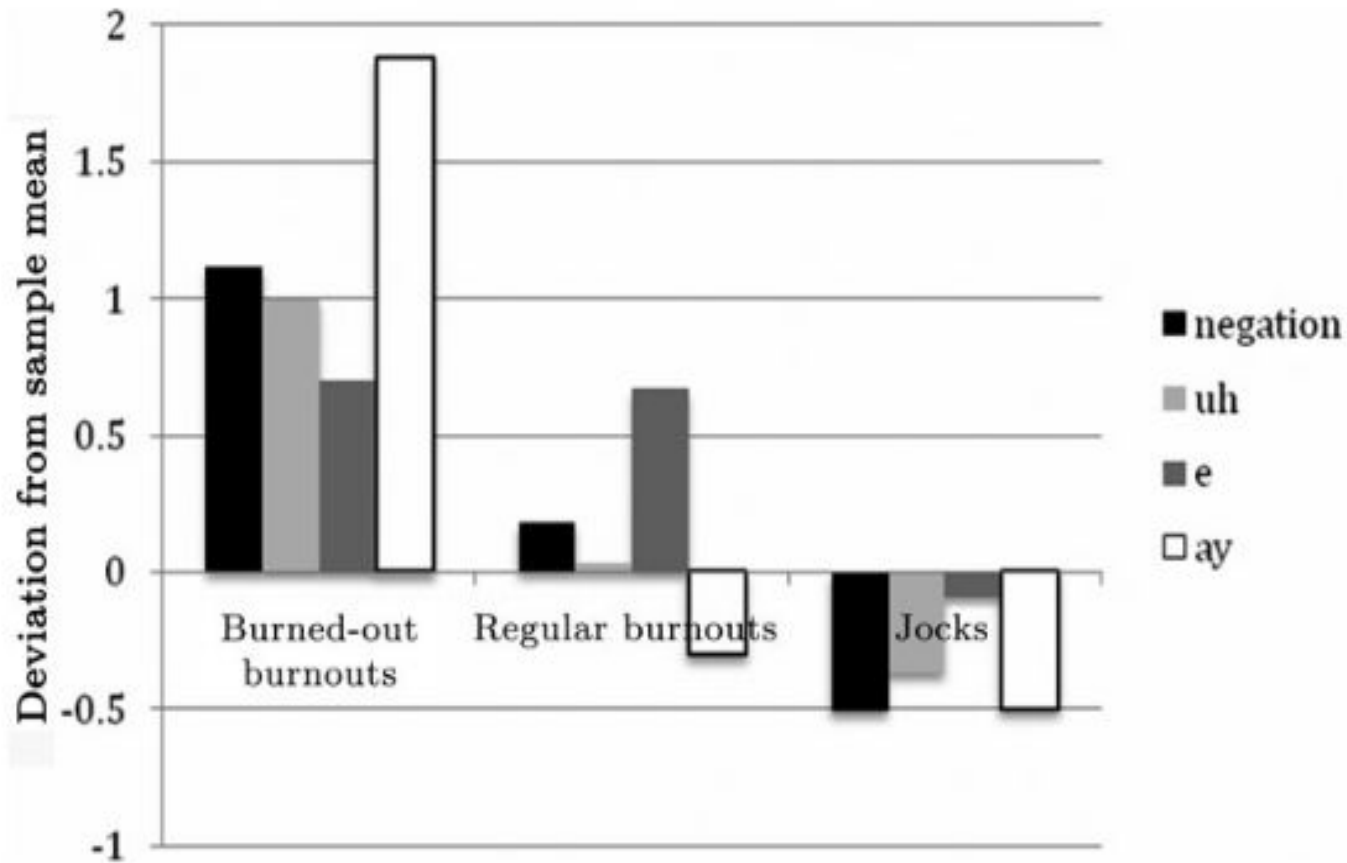
# The first wave of variation (Eckert, 2012)

- ★ Unaffected by socially motivated correction, the vernacular emerged as a classic natural object of scientific inquiry.
- ★ Class, determined according to standard sociological measures, placed individuals passively within a structure that determined their access to standard language and their exposure to linguistic change.
- ★ Social agency was limited to self-correction as individuals, sensitive to the relative status of class varieties, moved away from the vernacular as they adopted more standard forms in their more careful speech.
- ★ The first wave treated this within-speaker pattern of variation not as involving a choice between socially meaningful forms, but as the result of self-monitoring to suppress a natural cognitive process.
- ★ Style, then, was conceived purely as the output of varying attention to speech.

# The second wave of variation (Eckert, 2012)

- ★ The second wave employed ethnographic methods to explore the local categories and configurations that inhabit, or constitute, these broader categories.
- ★ In his work on a sugar plantation in Guyana, Rickford (1986) found a major division between those who worked the sugar (the estate class) and those who worked in the offices (the non-estate class).
- ★ These groups showed sharp differences in verbal culture, in language ideology, and in linguistic production.
- ★ This study emphasized that although the vernacular maybe stigmatized on a global level, its association with local values and practices gives it positive value on the local level.
- ★ Eckert (1989a, 2000): an ethnographic study of adolescents in high schools from the predominantly white Detroit suburban area. The student social order in these schools involved two mutually opposed social categories, *jocks* and *burnouts*.

# The second wave of variation (Eckert, 2012)



**Figure 2**

Use of vernacular variants by girls' subcategory. From Eckert (2000).

# The third wave of variation (Eckert, 2012)

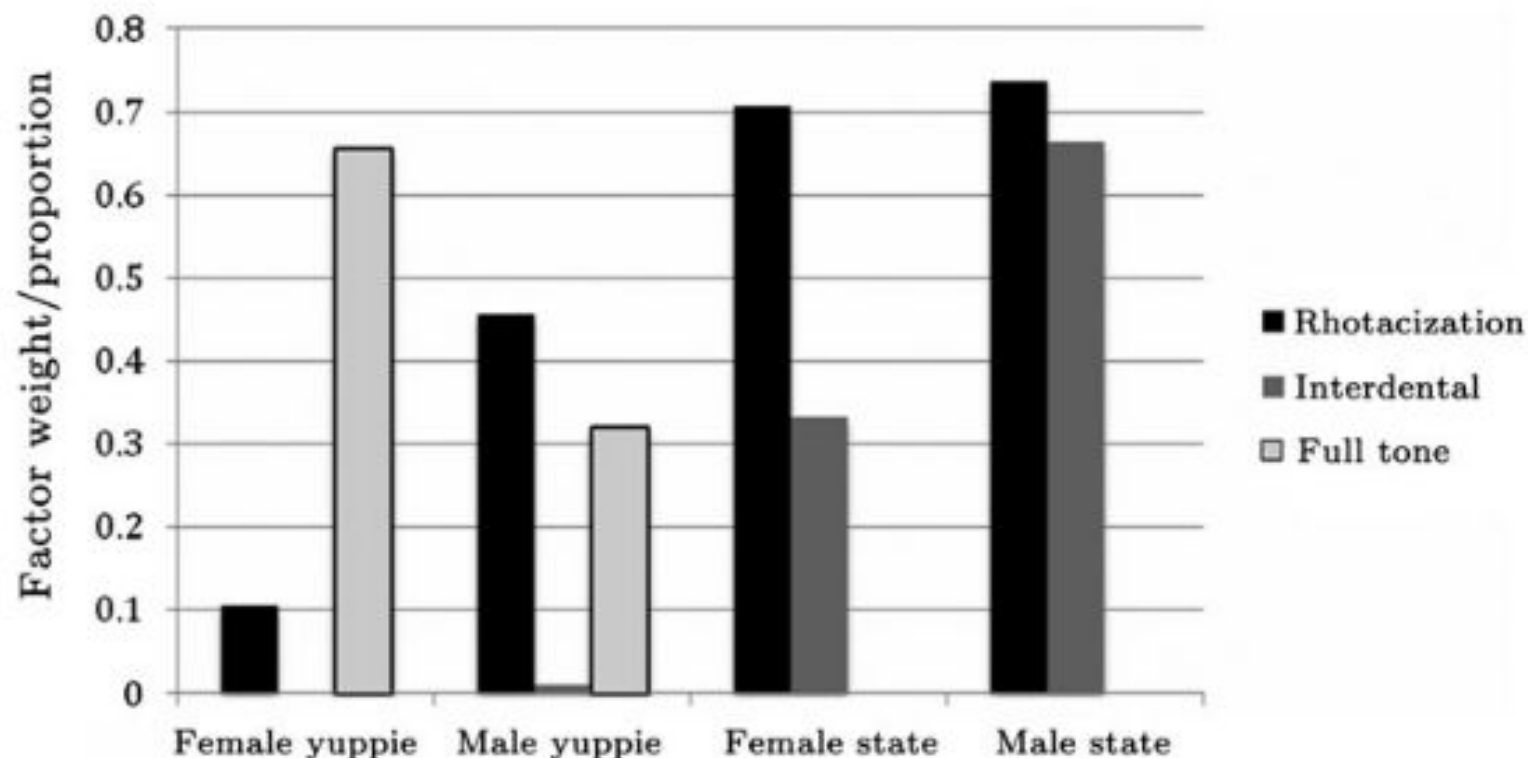
- ★ (a) variation constitutes a robust social semiotic system, potentially expressing the full range of social concerns in a given community;
- ★ (b) the meanings of variables are underspecified, gaining more specific meanings in the context of styles, and
- ★ (c) variation does not simply reflect, but also constructs, social meaning and hence is a force in social change.



# The third wave of variation (Eckert, 2012)

- ★ Zhang (Zhang 2005, 2008) traces the indexical appropriation of individual Mandarin variables in the emergence of a wealthy elite in Beijing.
- ★ China's move into the global economy has created a new class of yuppies, young managers in the foreign-owned financial sector.
- ★ The yuppies' value in the global financial market depends on the projection of a cosmopolitan self, and they have developed a speech style to match their more general materialistic and cosmopolitan lifestyle—a style that contrasts starkly with that of their peers in state-owned financial institutions.
- ★ One variable is the rhotacization of finals (in which “flower” [hwa] is pronounced [hwar]).
- ★ Another Beijing feature, the interdental pronunciation of /z/, is commonly associated with a feckless character, the “alley saunterer”. The yuppies stay away from this variable altogether because casual fecklessness is not a desirable trait for a transnational business person.

# The third wave of variation (Eckert, 2012)



**Figure 3**

Use of Beijing and Non-Mainland variables by managers in the foreign- and state-owned financial sector (factor weights for rhotacization and interdental, proportion for full tone).

# Dimensions of rhythm: The multi-layered nature of rhythmic style

Calder and Popova, 2014

# The data: Eckert (1989, 2000)

Belten High  
Detroit suburbs, 1980s

burnouts

in-betweens

jocks



# The data: Eckert (1989, 2000)

**The current analysis is based on the first 5 min of 12-minute samples from one-on-one interviews with two particular students who fall at either end of these two social extremes.**



- the most burned-out of the burnouts
- interview persona is tough, cool
- doesn't care about social standing

- the most squeaky-clean of the jocks
- interview persona is sweet, innocent
- concerned with her place in the social hierarchy

**Neither speaker is a typical member of- or a leader within- her group.**

# Proposal

- Methodological claims:
  - we suggest zooming in to rhythmic patterns at the IP level to capture differences that might be obscured at the global level
  - looking at details like accents and pauses to capture rhythmic differences that might be obscured by solely looking at PVI
- Empirical claim:
  - Judy's and Melody's rhythmic patterns are phonologically distinct from each other
- Rhythmic variation is stylistically informative

# Rhythm

- Traditionally looks at isochronous units
  - Rhythm Class Hypothesis: language is made of up rhythmically isochronous units (Pike 1946), (Abercrombie 1965)
  - Stress-timing vs. syllable-timing
- In sociolinguistics:
  - Prosodic Rhythm (i.e. syllable- vs. stress-timing), as captured by the Pairwise Variability Index (Grabe and Low 2002)
    - Dialect feature: Thomas and Carter (2006), Coggshall (2008), Szakay (2008), Torgersen and Szakay (2008)
    - Stylistic feature: Carter (2005), Callier (2011)

# Rhythm in Music





# Rhythm

- Rhythm is a multi-layered phenomenon comprised of many elements
- Though PVI is informative, looking at some of these rhythmic elements can illuminate patterns obscured by PVI
- In this study we look at the speakers' uses of:
  - Accents
  - Pauses

# Methodology

- We propose to study rhythm on the **IP level**
- At the IP level, we propose to look for **rhythmic patterns** as opposed to e.g. computing the Pairwise Variability Index (PVI, Low and Grabe 1995)
  - PVI as a measurement might be informative, but less informative than rhythmic patterns
    - $\text{PVI} [2\ 4\ 2\ 4\ 2\ 4] = \text{PVI} [8\ 16\ 8\ 16\ 8\ 16]$
    - $\text{PVI} [2\ 4\ 8\ 16] = \text{PVI} [16\ 8\ 4\ 2]$

# Methodology

A study of rhythmic patterns on the IP level faces **two further methodological problems**:

- a. IP identification
- b. rhythm characterization

*General strategy*: agreement between two annotators, decisions rooted in a thorough examination of a number of parameters

# Methodology

Parameters considered in **IP identification**:

- pitch contour
- pauses
- accents
- correspondence to clauses

# Methodology

Parameters considered in **rhythm characterization**:

- accents (pitch, relative duration, intensity)
- pauses: IP-internal (relatively short, clause-internal, bearing an articulatory cue, e.g., glottalized pauses, pauses preceding an emphatically accented syllable) vs. IP-external

***Default assumption:*** IPs with one prominent accent and no internal pauses that correspond to clauses are unmarked

# A taste of rhythmic variation

## Judy

- (1) “All sixth, we had so much fun”
- (2) “Damn, we did some crazy shit”

## Melody

- (3) “We used to have so much fun”
- (4) “She was my first friend”

# Results

- Quick statistical observations:

	Judy	Melody
# IPs	84	109
Average # sylls / IP	5.583	5.983
Average IP duration	1089.046	1087.87
Average speech rate	5.046 sylls/s	5.384 sylls/s
% Rising IPs	25% (21 of 84)	8.257% (9 of 109)
Pitch St Dev	32.224	31.367

# Results - PVI

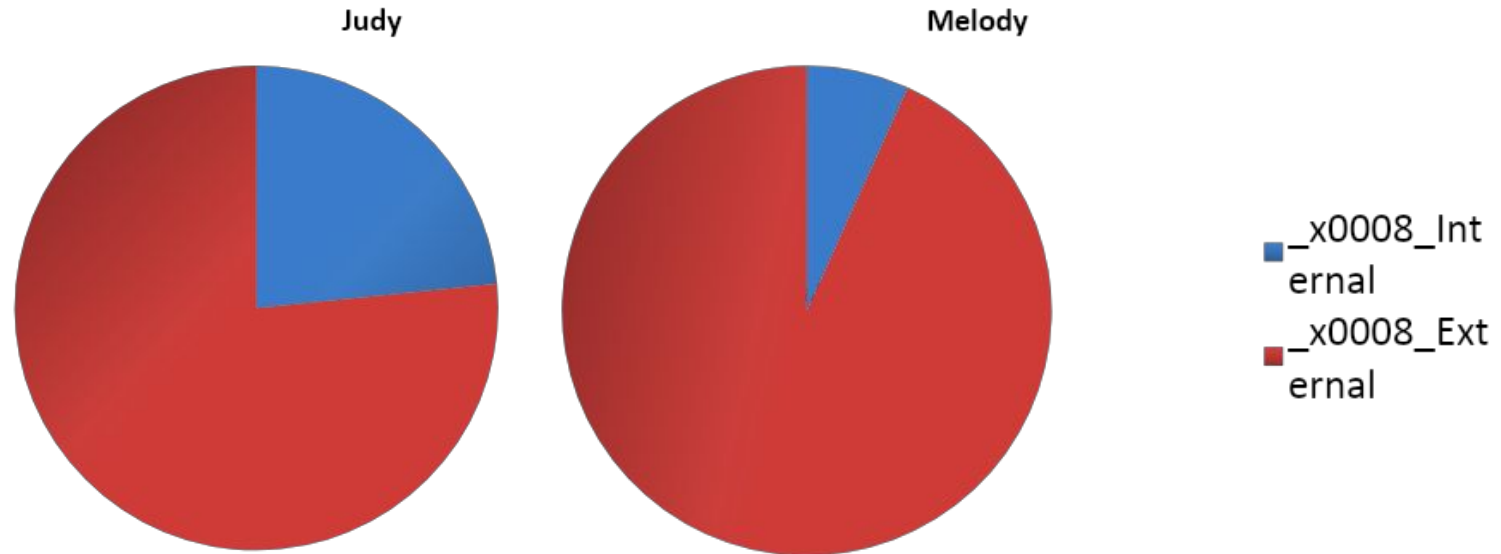
	Judy	Melody
PVI	0.626	0.583

- Linear regression in R using lme4 (Bates et al. 2011)
- Factors: speaker, IP-duration, # sylls in IP

	Estimate	Significance
Speaker	-0.043	n.s.
Duration	-0.009	n.s.
# sylls	0.001	n.s.

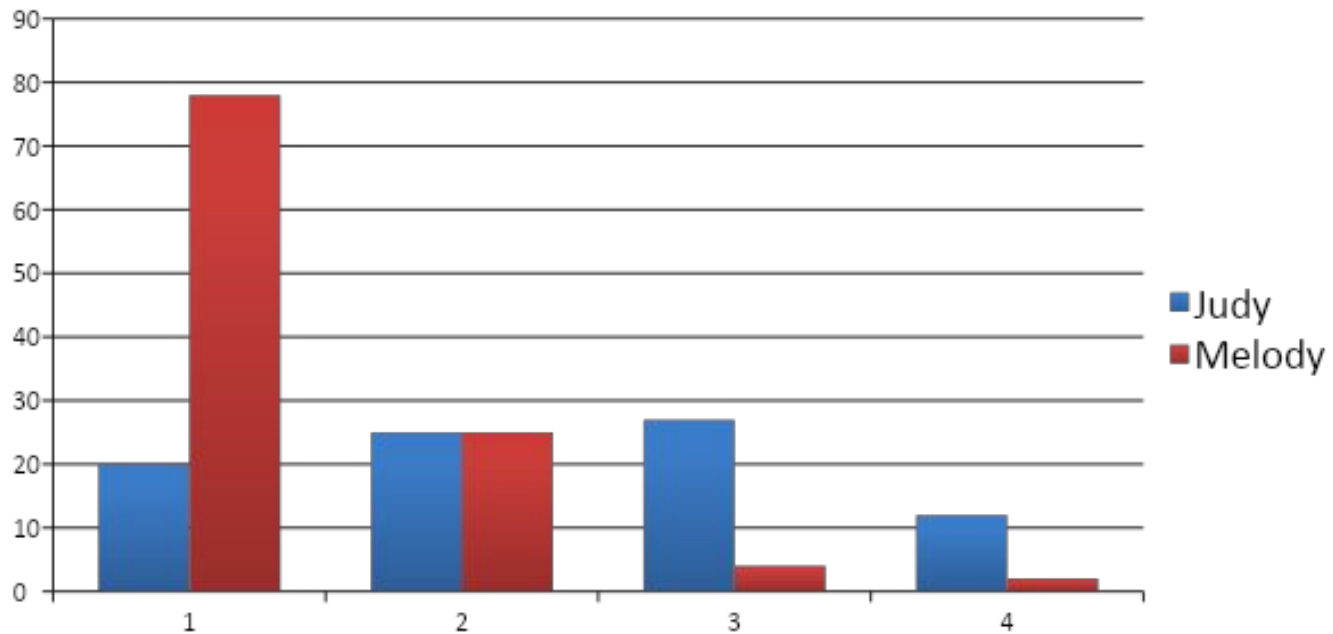


# Results - Pauses



- Judy has more internal pauses than Melody (\*\*\*)

# Results - Accents



# Results - Accents

- Linear regression in R using lme4 (Bates et al. 2011)
- Factors: speaker, rising/falling, IP duration, number of syllables

	Estimate	Significance
Speaker (Melody)	-0.873	***
Rising/Falling	0.124	n.s.
IP Duration	0.001	***
# Syllables	0.011	n.s.

# Rhythmic variation

Though **PVI** difference is **not significant**, Judy and Melody show **highly significant** differences in their use of **accents** and **pauses**!

## Judy

- a. variation in duration and pitch (hence, different accents)
- b. IP internal pauses
- c. the majority of IPs have multiple accents

## Melody

- a. less variation in duration and pitch (overall, more monotone)
- b. less IP-internal pauses
- c. less IPs with multiple accents

**Judy's IPs are marked, Melody's IPs are unmarked**

Statistical facts above are not unrelated – together they reflect two different rhythmic strategies Judy and Melody use

# Rhythmic patterns: Judy

$$\llbracket (\text{X } \_ )_{\text{IP}} \vee (\text{X } \_ \text{X } \_ \text{X } )_{\text{IP}} \rrbracket_{\text{clause}},$$

where x is a stressed syllable, \_ is a sequence of unstressed syllables,  $\vee$  is an optional short (often glottalized) pause. The first IP is often pronounced in a creaky or breathy voice.

1.  $\llbracket (\text{All sixth})_{\text{IP}} \vee (\text{we had so much fun})_{\text{IP}} \rrbracket_{\text{clause}}$
2.  $\llbracket (\text{Damn})_{\text{IP}} \vee (\text{we did some crazy shit})_{\text{IP}} \rrbracket_{\text{clause}}$
3.  $\llbracket (\text{Oh my God})_{\text{IP}} \rrbracket_{\text{clause}}$

The pattern above is not the only pattern Judy uses, and it is not always fully realized, but it prevails.

# Disfluencies?

1. “We **uh** dressed up as sardines you know”
2. “**We, we** got arrested before”

$$\llbracket (\text{X } \_ )_{\text{IP}} \vee (\text{X\_X\_X})_{\text{IP}} \rrbracket_{\text{clause}}$$

1.  $\llbracket (\text{All sixth})_{\text{IP}} \vee (\text{we had so much fun})_{\text{IP}} \rrbracket_{\text{clause}}$
2.  $\llbracket (\text{Damn})_{\text{IP}} \vee (\text{we did some crazy shit})_{\text{IP}} \rrbracket_{\text{clause}}$
3.  $\llbracket (\text{We uh})_{\text{IP}} \vee (\text{dressed up as sardines you know})_{\text{IP}} \rrbracket_{\text{clause}}$
4.  $\llbracket (\text{We})_{\text{IP}} \vee (\text{we got arrested before})_{\text{IP}} \rrbracket_{\text{clause}}$

*Disfluencies are not (always) disfluencies – they can be part of the rhythmic patterns!*

# Rhythmic patterns: Melody

## *Melody's accents reflect the Information Structure*

1. “She was my first<sub>FOC</sub> friend”
2. *Penny*: “Do you think that you’ll keep a lot of your high school friends after you graduate?”  
*Melody*: “Not a lot<sub>FOC</sub>. I’m pretty sure<sub>FOC</sub> I’ll keep Karen<sub>FOC</sub>. In fact<sub>FOC</sub>, I’m almost positive<sub>FOC</sub> I will<sub>FOC</sub>. Um, probably Bessie<sub>FOC</sub> too. ...”<sub>FOC</sub>



# Rhythmic variation is stylistically informative

- Judy and Melody use distinct rhythmic patterns
- Judy's patterns are less canonical than Melody's patterns
- Judy's patterns have multiple accents that are dramatic and diverse in nature
- Melody's accent placement is driven by the Information Structure pressures
- Judy's patterns can be perceived as being more “expressive”, whereas Melody's patterns can be viewed as more “interactive”

# Экспрессивные указательные местоимения

- Acton and Potts, 2013; Potts, 2013

# До Трампа: Sarah Palin

*“Americans are cravin’ that straight talk”*

Acton and Potts, 2013; Potts, 2013

# Бурная реакция на ее речь

FoxNews.com:

- *“We feel like she talks like we do.”*
- *“She talked like real people to real people”*

Huffington Post:

- *“illusion of straight-talking”*
- *“pseudo-folksiness and fundamental dishonesty”*

Acton and Potts, 2013; Potts, 2013

# Дебаты 2008

- Joe Biden, Palin's opponent:

*“We should be helping them build schools to compete for those hearts and minds of the people in the region”*

# И все, все, все:

- В полиции: *make that phone call right now*
- Стюард(есса): *get those bags under that seat in front of you*
- Инструктор йоги: *get that left arm up over that head*

Acton and Potts, 2013; Potts, 2013

# Экспрессивные употребления указательных местоимений

- давно известны лингвистам
- есть и в русском:
  - Смех смехом, а в полицию уже обратилось более двадцати горожан, которые уверяют, что после встречи с этим "похитителем человеческих душ" (так окрестили маньяка журналисты) у них чего-то не хватает. Ох, и мнительные *эти американцы*! У нас бы на такого маньяка народ молился. Лос-анджелесская полиция злоумышленника усиленно разыскивает, но пока безуспешно. [Похититель душ // «Криминальная хроника», 2003.06.24]
  - *эти дети* мне уже надоели
  - Уберите уже *эти ноги* из прохода!

# Корпусный подход

Эти утверждения импрессионистические

Можем ли мы их квантифицировать?

Acton and Potts, 2013; Potts, 2013



# Experience Project: признания

**\*Sigh\***[All Confessions >>](#)

CATEGORY: FRIENDS CONFESSIONS >>



Posted by [BrokenAngelWishes](#)  
on January 20th, 2010 at 12:38 PM

Rate Up +  
3

I really hate being shy... I just want to be able to talk to someone about anything and everything and be myself.. That's all I've ever wanted.

[...]

14 Reactions

 you rock (1)  teehee (2)  I understand (10)  sorry, hugs (1)  wow, just wow (0)

6 Comments ([add your own](#))

Sort By [Earliest](#)

Posted by [bigbadbear](#) on January 20th, 2010 at 12:41 PM

 I was really shy when I was younger. I got better when I entered the work field and gained confidence. I think you will grow out of it :.)



[like](#) 1 [dislike](#) [Flag](#)

# Experience Project: признания

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Confession: I bought a case of beer, now I'm watching a South Park marathon while getting drunk :P

Reactions: *Sorry, hugs: 2; You rock: 3; Teehee: 2, I understand: 3; Wow, just wow: 0*

---

Confession: subconsciously, I constantly narrate my own life in my head. in third person. in a british accent. Insane? Probably

Reactions: *Sorry, hugs: 0; You rock: 7; Teehee: 8; I understand: 0; Wow, just wow: 1*

---

Confession: I really hate being shy . . . I just want to be able to talk to someone about anything and everything and be myself. . . That's all I've ever wanted.

Reactions: *Sorry, hugs: 1; You rock: 1; Teehee: 2; I understand: 10; Wow, just wow: 0;*

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# Experience Project: признания

## 10 Reactions

 you rock (3)  teehee (0)  I understand (6)  sorry, hugs (1)  wow, just wow (0)

Figure: EP reaction icons.

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<i>Sorry, hugs</i>	sympathy
<i>You rock</i>	cheering, supportive
<i>Teehee</i>	amused
<i>I understand</i>	solitary
<i>Wow, just wow</i>	shock

---

Table: Interpreting the icons.

# Experience Project: признания

		Category	Reactions
		<i>Sorry, hugs</i>	91,222 (22%)
		<i>You rock</i>	80,798 (19%)
		<i>Teehee</i>	59,597 (14%)
		<i>I understand</i>	125,026 (30%)
		<i>Wow, just wow</i>	60,952 (15%)
		Total	417,595
Texts	140,467		
Words	21,518,718		
Vocab	143,712		
Mean words/text	153.19		

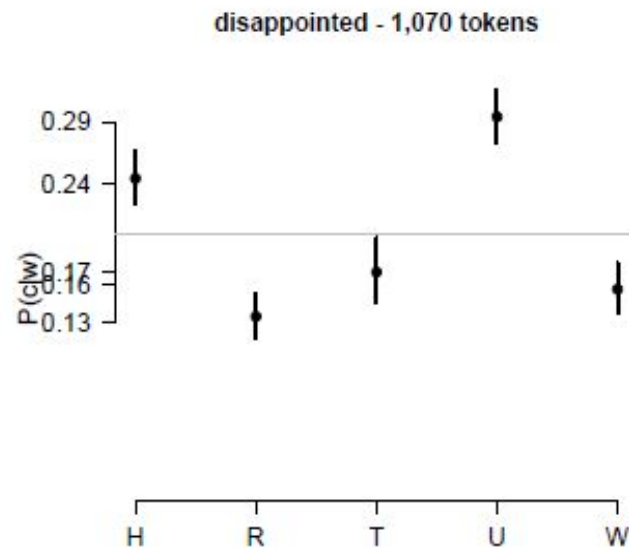
(a) The overall size of the corpus.

(b) All reactions.

**Table:** In general, reader reactions are sympathetic and supportive.

# Считаем и изображаем

Cat.	Count	Total	$\text{Pr}_{\text{EP}}(w r)$	$\text{Pr}_{\text{EP}}(r w)$
<i>Sorry, hugs</i>	1167	18038374	0.00006	0.26
<i>You rock</i>	520	14066087	0.00004	0.15
<i>Teehee</i>	300	8167037	0.00004	0.15
<i>I understand</i>	1488	20466744	0.00007	0.29
<i>Wow, just wow</i>	473	12550603	0.00004	0.15



# Указательные местоимения

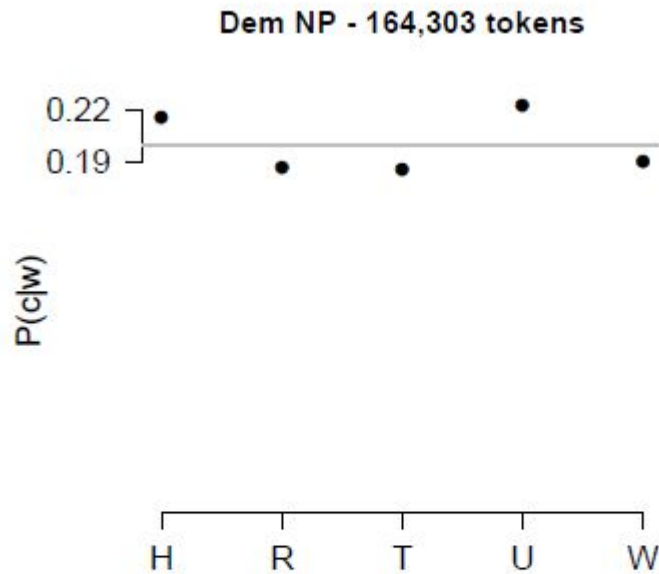


Figure: All determiner demonstratives in the EP data.



# Примеры: слова, вызывающие симпатию

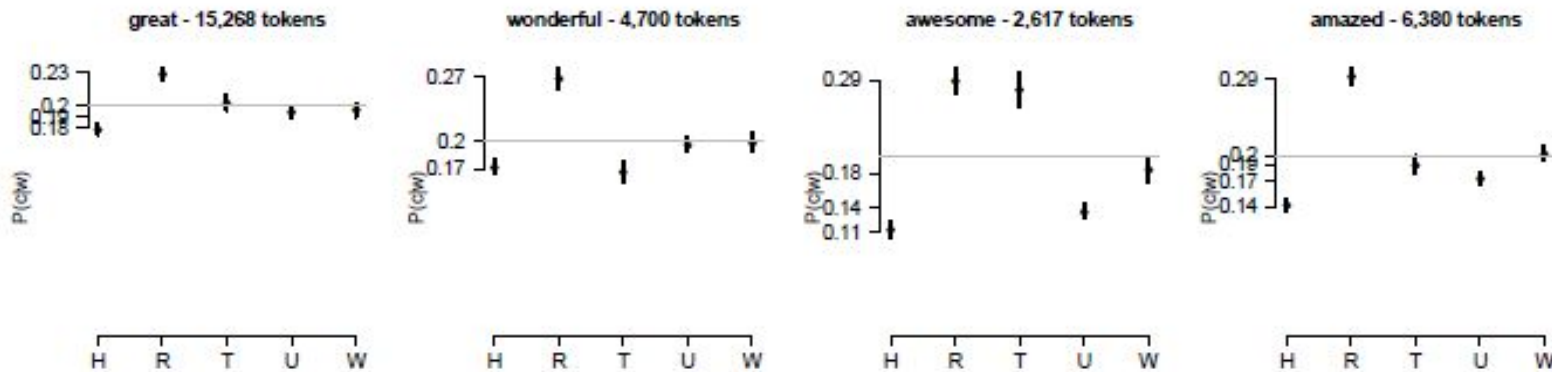


Figure: Words eliciting predominantly 'you rock' reactions.

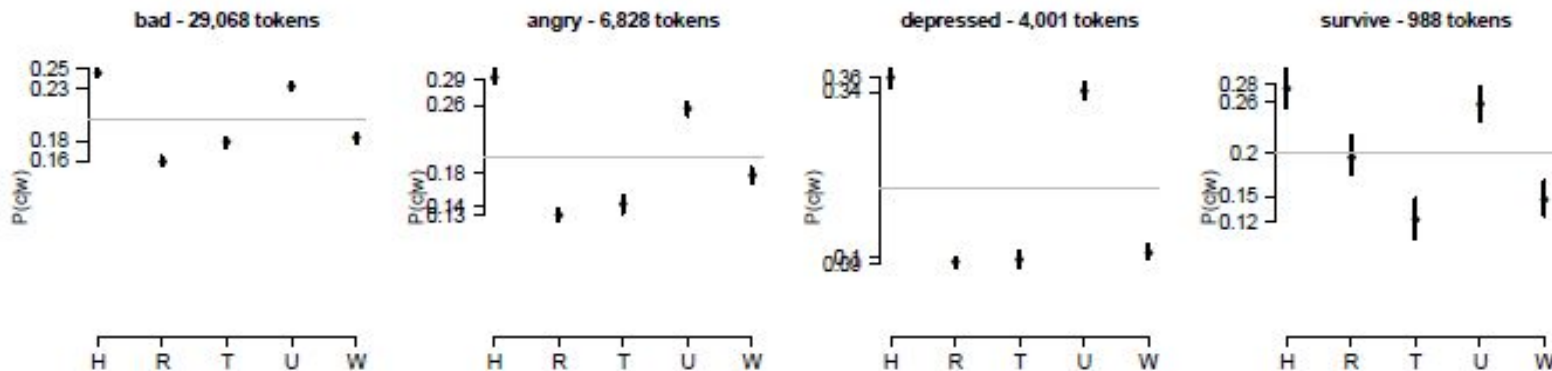


Figure: Words eliciting sympathetic reactions.

- Что же особенного в употреблении указательных местоимений у Palin?
- 16 интервью Palin на шоу
- + интервью до и после нее
- всего 48 интервью

Acton and Potts, 2013; Potts, 2013



# Квантитативный анализ

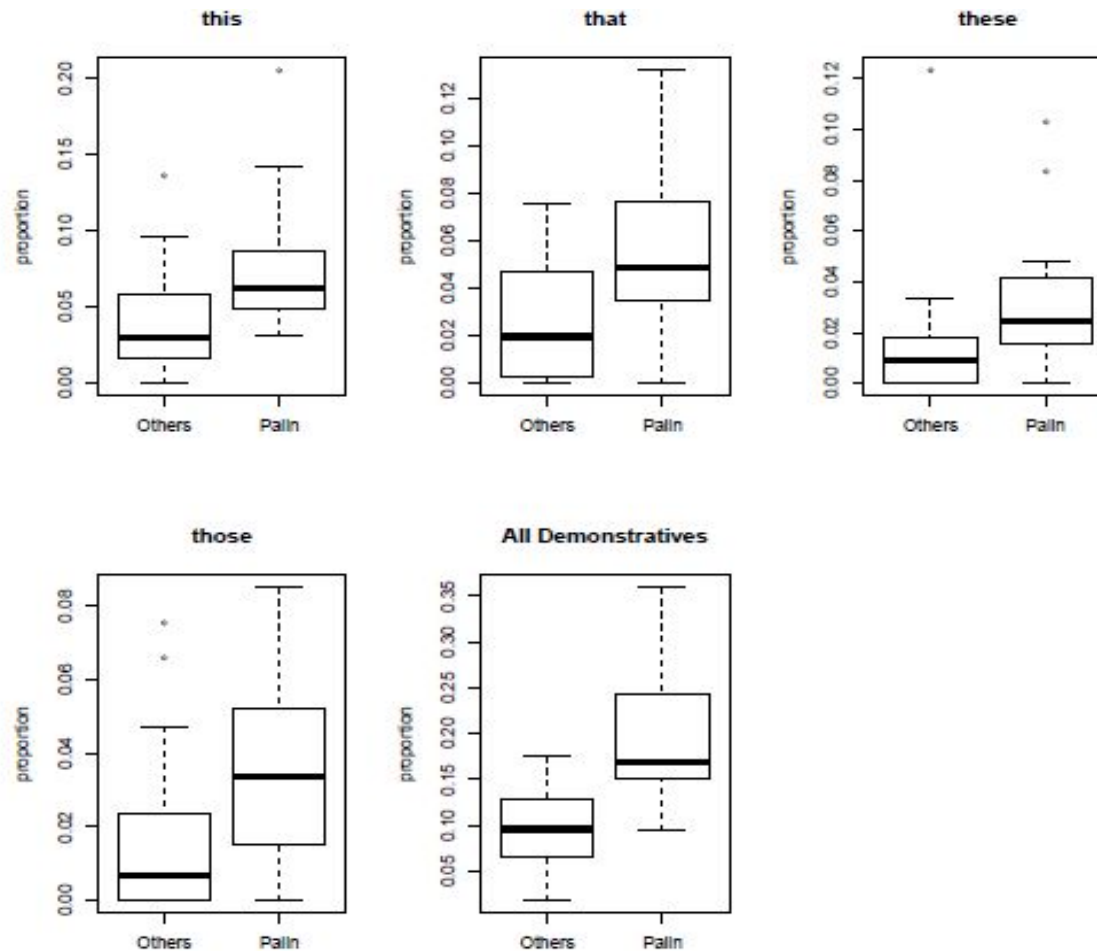


Figure: Non-pronominal dems. as a proportion of all determiners.

# Полярные мнения – почему?

FoxNews.com:

- *“We feel like she talks like we do.”*
- *“She talked like real people to real people”*

Huffington Post:

- *“illusion of straight-talking”*
- *“pseudo-folksiness and fundamental dishonesty”*

Acton and Potts, 2013; Potts, 2013

# СВОЙСКОСТЬ

Указательные местоимения в непрямом значении создают эффект **солидарности, свойскости** (термин восходит к лекциям Сандро Васильевича Кодзасова, мой перевод для solidarity из анализа статьи)

Проявления свойскости **уместны при совпадении отношения к сообщаемому, мнений**

При несовпадении эффект обратный: навязанной солидарности, **навязанной близости мнений, отношения к**

Acton and Potts, 2013; Potts, 2013

# Language Attitudes

- The Matched Guise Technique

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- Christopher Potts [joint research with Eric Acton]. 2013. Cravin' that straight talk: the latent affective meaning of demonstratives. Workshop on Computational Social Sciences, Stanford, Jan 11.