

# Echoes of Power: Language effects & power differences in social interaction

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# From influence to language

Can subtle, *domain-independent* linguistic cues reveal (situational) power?

*Who's in charge?*

Did [redacted] we  
have [redacted]  
[redacted] in  
[redacted]  
[redacted]

[redacted] We  
did [redacted] have [redacted]  
[redacted] in  
[redacted] ...



# Language reveals power: “easy” cases

Your Honor, I agree.



Thank you.



I'd love to get your thoughts on this when you are available.



Let's discuss later.

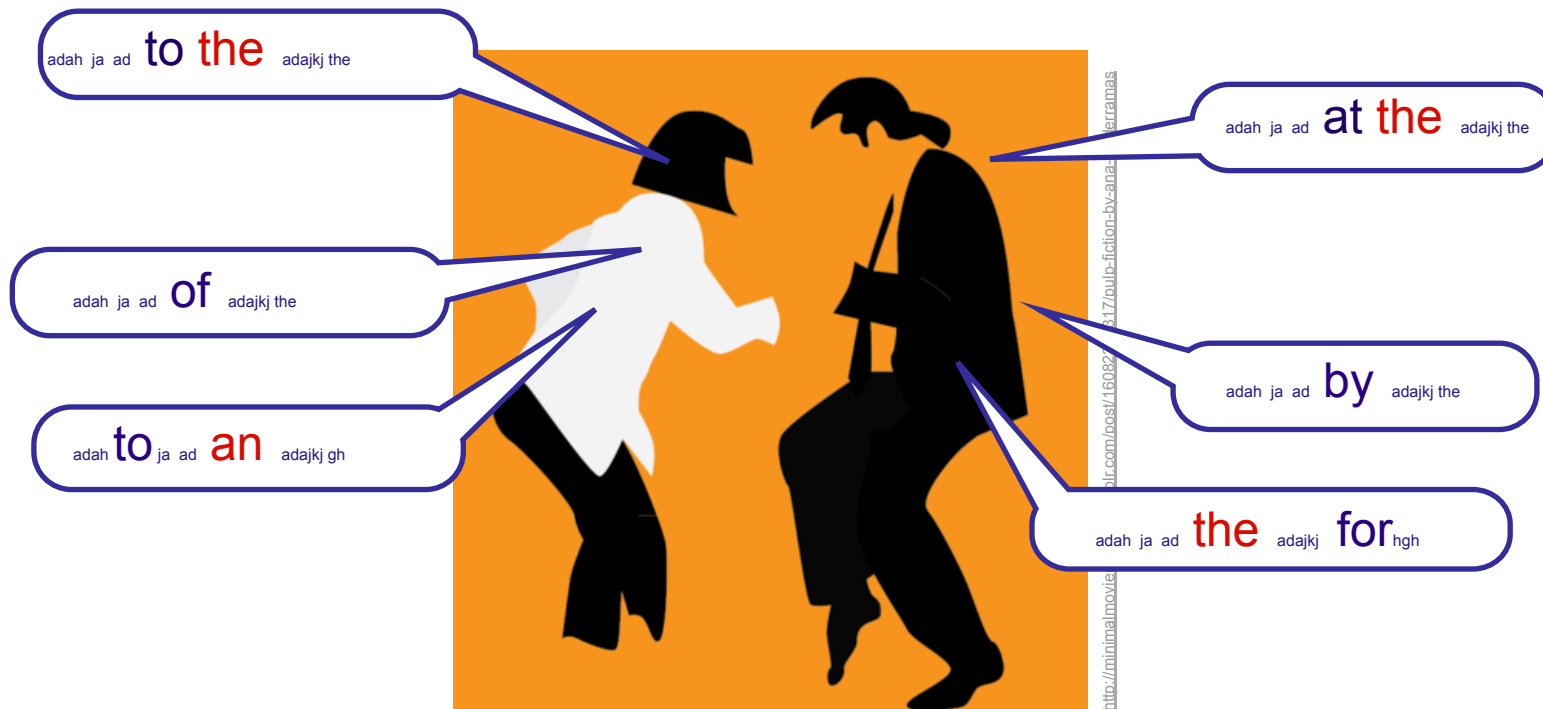


[Gilbert 2012;  
Diehl et al. 2007, Scholand et al. 2010]

What about general (domain-independent) signals?

# Who has the (conversational) lead?

Communicative behaviors are “patterned and coordinated, like a dance” [Niederhoffer and Pennebaker 2002]



Look for adaptation/coordination of linguistic *style*

# Defining linguistic style coordination



Direct repetition: under speaker's control, could just be choice of topic. ☹️

Function-class matching: unconscious & frequent  
[Niederhoffer and Pennebaker 2002]

At least you were outside

quantity words

It doesn't make much difference...

~~Doesn't really matter ...~~

~~It's not important ...~~





blue: prepositions; red: articles; etc.

# Measuring immediate influence

How much does speaker  $x_1$  immediately trigger  $x_2$ 's use of function-word class  $c$ ?

= how much does  $x_2$  *coordinate* to  $x_1$  on  $c$ ?

$\Pr(x_2 \text{ uses } c \mid x_1 \text{ uses } c, x_2 \text{ immediately replies})$

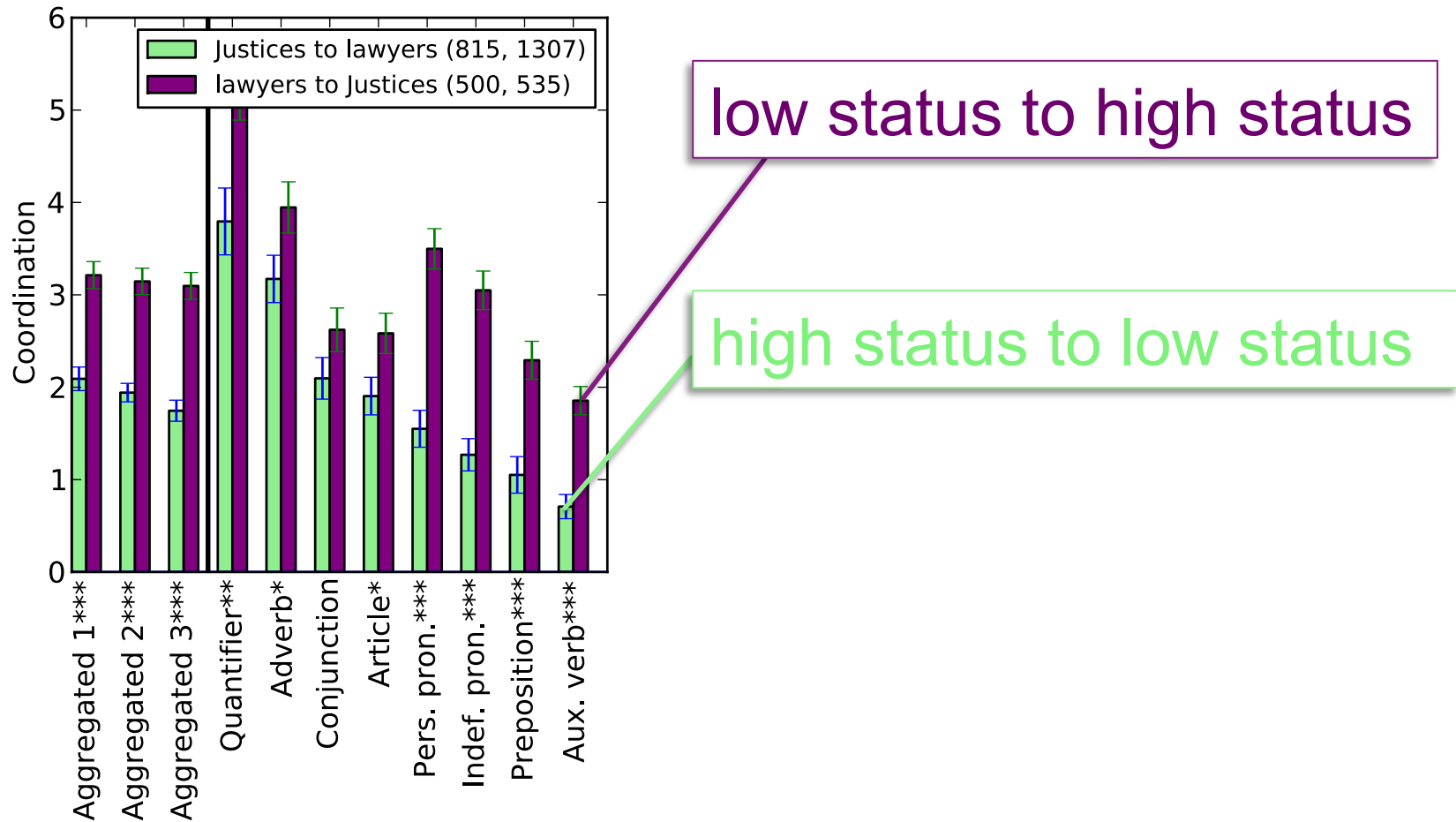
—  $\Pr(x_2 \text{ uses } c \mid x_2 \text{ immediately replies to } x_1)$

(reported as % (multiplied by 100) in the following)

[Danescu-Niculescu-Mizil, Dumais, Gamon 2011]

# Status in US Supreme Court transcripts

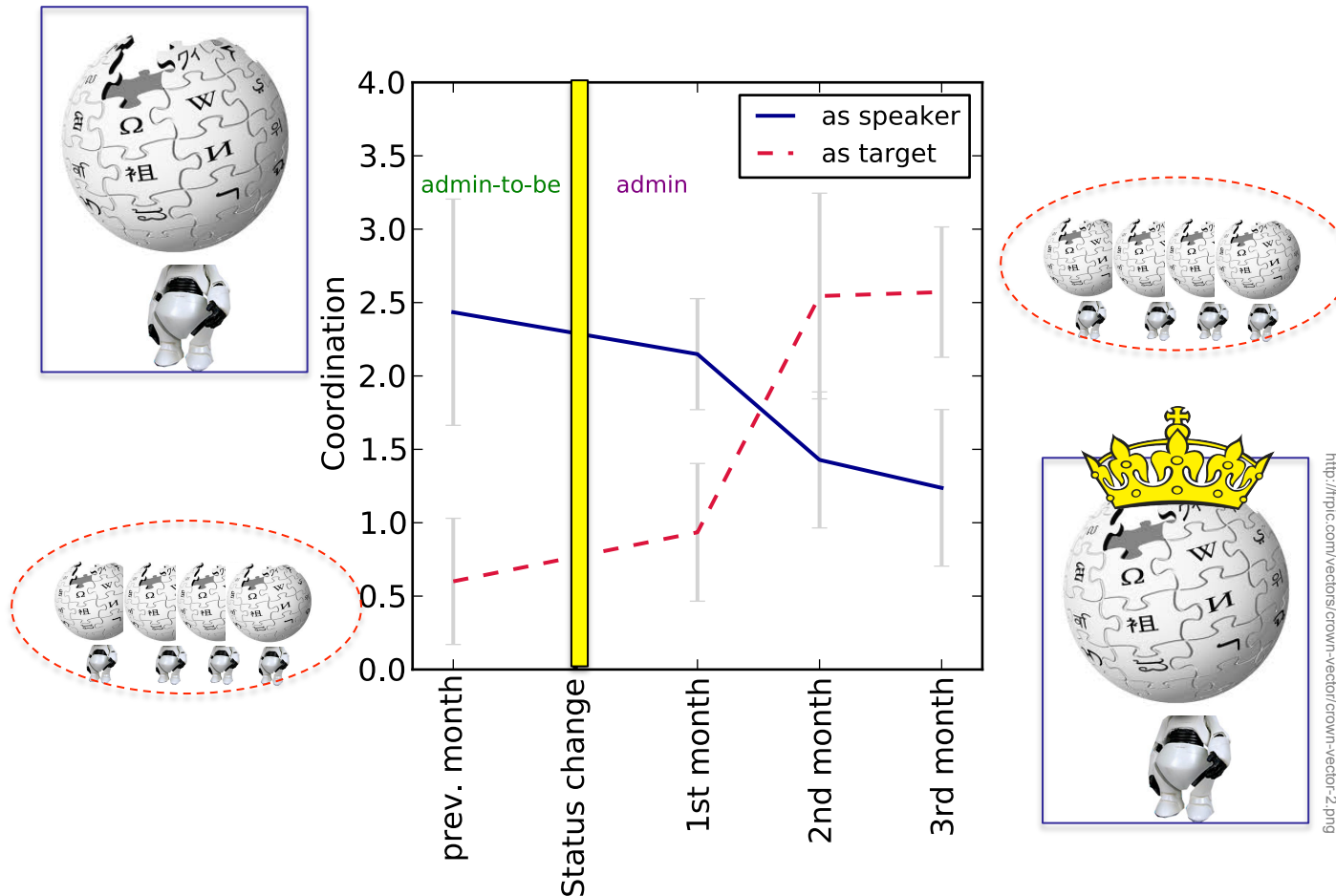
50,000 exchanges + metadata (download from my webpage)





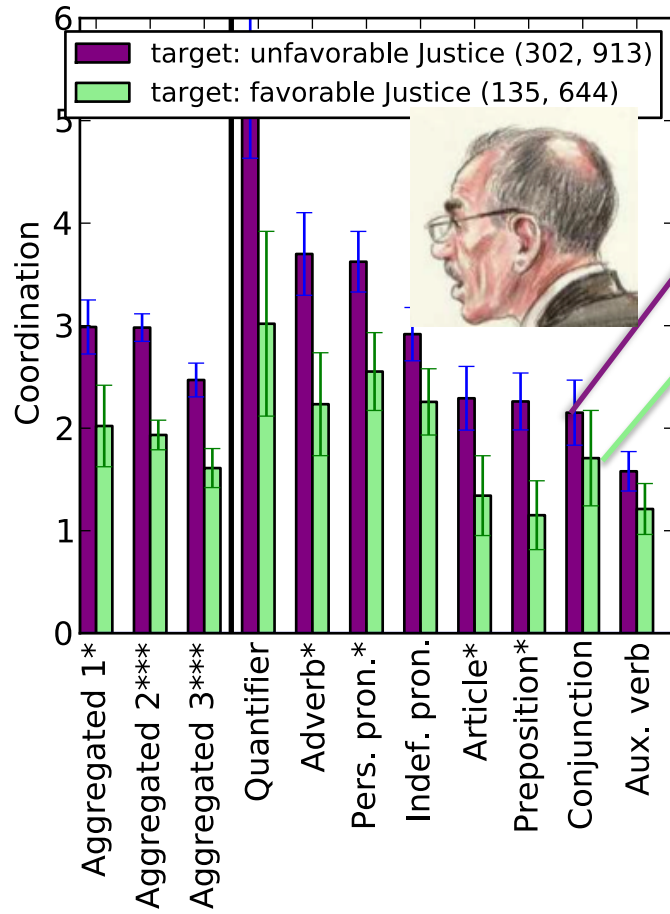
# Status change in Wikipedia

240,000 exchanges + metadata (download from my webpage)



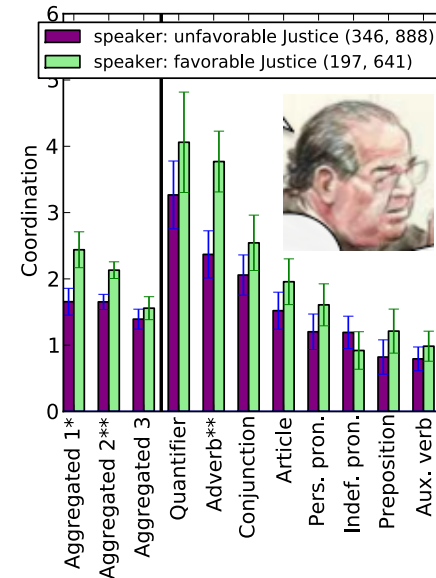
# Dependence in Supreme Court transcripts

Power differences can arise from dependence [Emerson 1962]



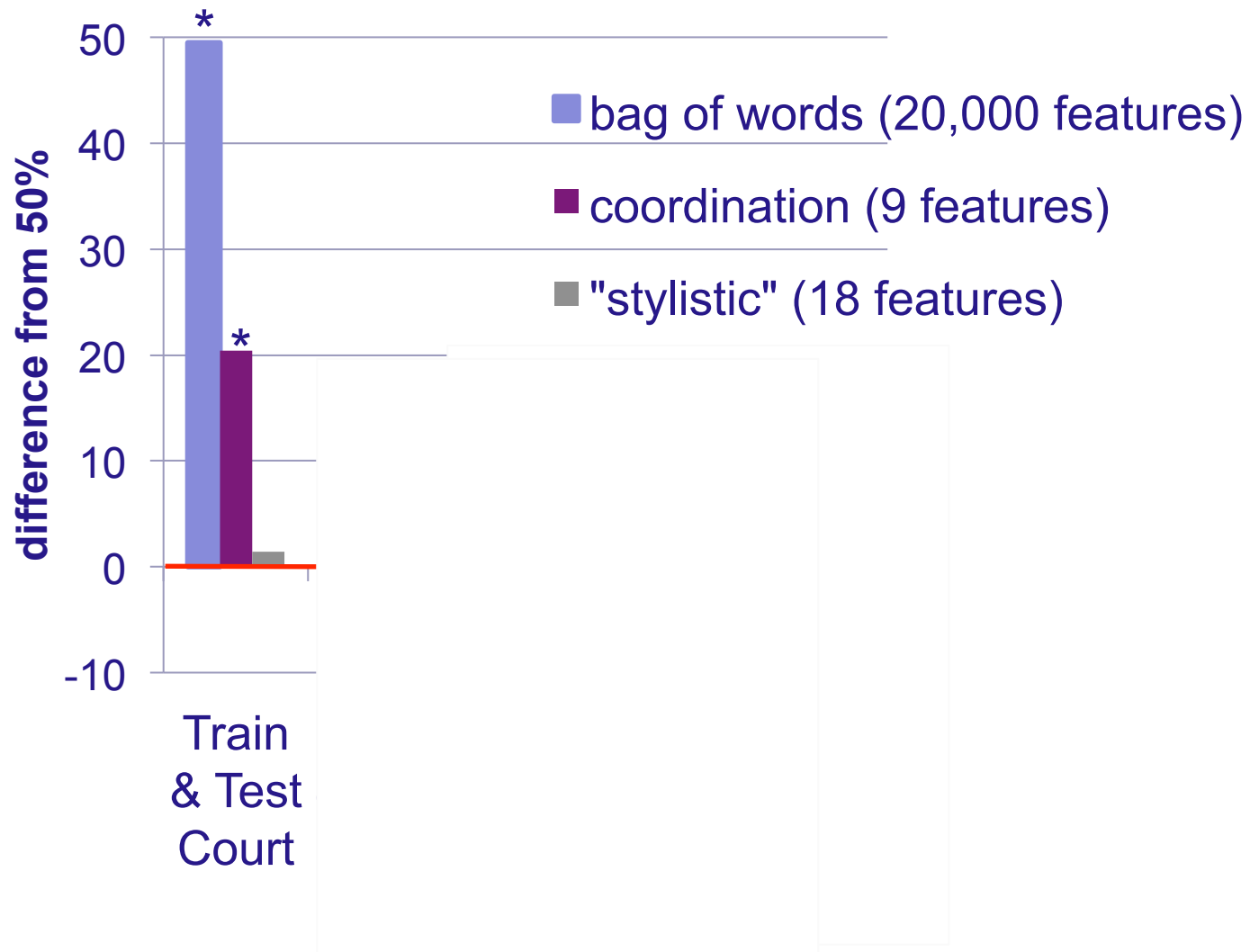
“needed to change” J’s mind

J “had your opinion”



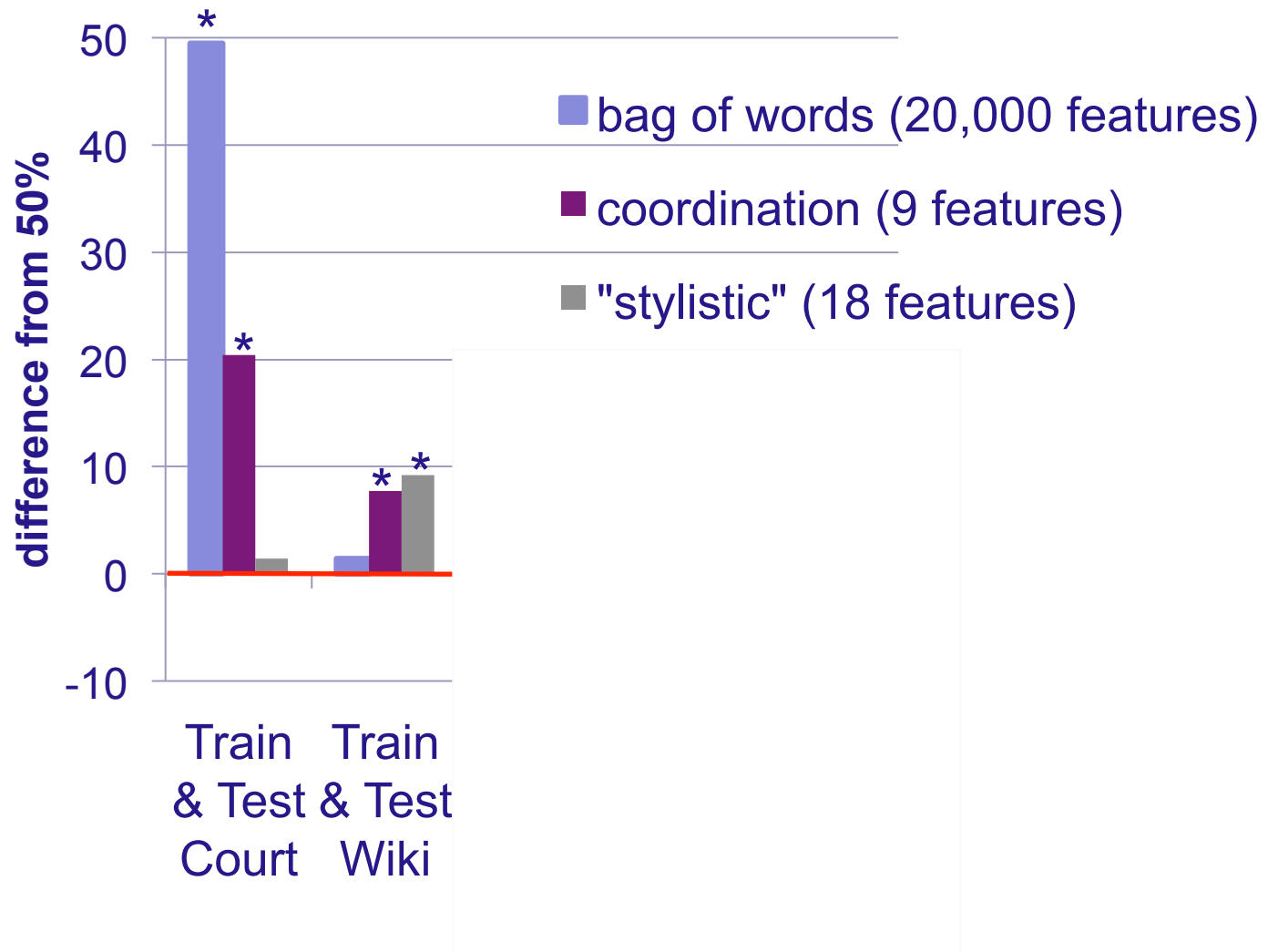
# Evidence of domain independence

SVM classification with various features



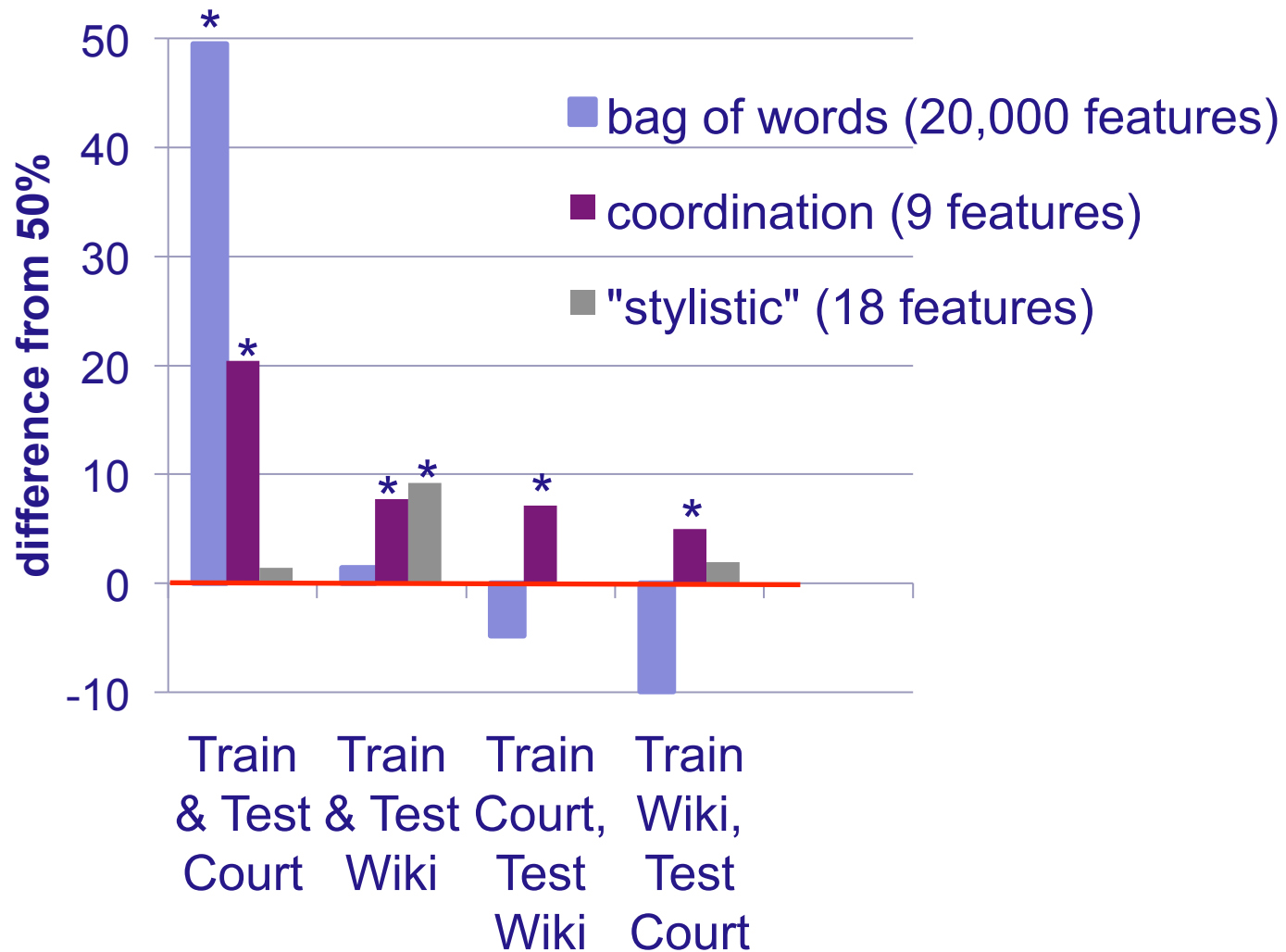
# Evidence of domain independence

SVM classification with various features



# Evidence of domain independence

SVM classification with various features



# Subtle, *domain-independent* linguistic cues reveal power relationships.

- static status & status change
- situational dependence

