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How things are said as opposed to **what** is said

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[Levelt & Kelter, 1982]

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[Levelt & Kelter, 1982]

Linguistic style:

for us: function word class usage

Coordination is not just exact matching:

Client: “At what time does your shop close?”

Shopkeeper: “In two hours.”

Shopkeeper: “Five o’clock”

VINCENT: Antwan probably didn't expect Marsellus to react like he did, but he had to expect a reaction.

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JULES: He just massaged her feet, massaging someone's feet is nothing, I massage my mother's feet.

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JULES: It was a foot massage, a foot massage is nothing, I give my mother a foot massage.

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Matching on article presence.

But matching ≠ coordination !

(can happen by chance)

What we want: how much *Vincent's* inclusion of an article (say) immediately triggers the usage of articles in *Jules'* reply?

NOT: how similar Vincent's style is to Jules' style in general …

or even in this particular conversation

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Compare rate of article usage in Vincent's and Jules' utterances?

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~~*Compare rate of article usage in Vincent's and Jules' utterances?*~~

not capturing immediate triggering

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Correlation of article usage?

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~~*Correlation of article usage?*~~

Symmetric, so not measuring a directed triggering effect

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Trigger

$$Coordination_{(J\ to\ V)}(art.) = P(J^{art.} \mid J \text{ replied to } V, \overbrace{V^{art}})$$

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$$\textit{Coordination}_{(J \text{ to } V)}(\textit{art.}) = P(J^{art.} \mid J \text{ replied to } V, V^{art.})$$

does not control for style similarity

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Trigger

$$Coordination_{(J\ to\ V)}(art.) = P(J^{art.} \mid J \text{ replied to } V, V^{art}) - P(J^{art.} \mid J \text{ replied to } V)$$

Control (for inherent similarity)

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Trigger

$$Coordination_{(J\ to\ V)}(art.) = P(J^{art.} \mid J \text{ replied to } V, V^{art}) - P(J^{art.} \mid J \text{ replied to } V)$$

Control (for inherent similarity)

In words: "How much does the probability of Jules using an article increase as a direct consequence of Vincent using an article"

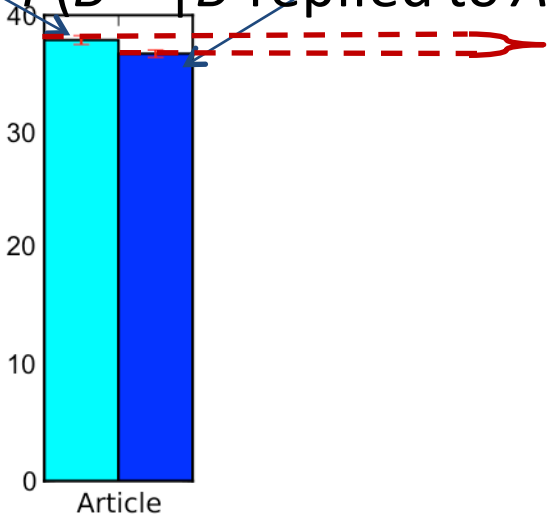
Overall coordination: average over all pairs of users (*B*,*A*)

"Triggered" probability

Control probability

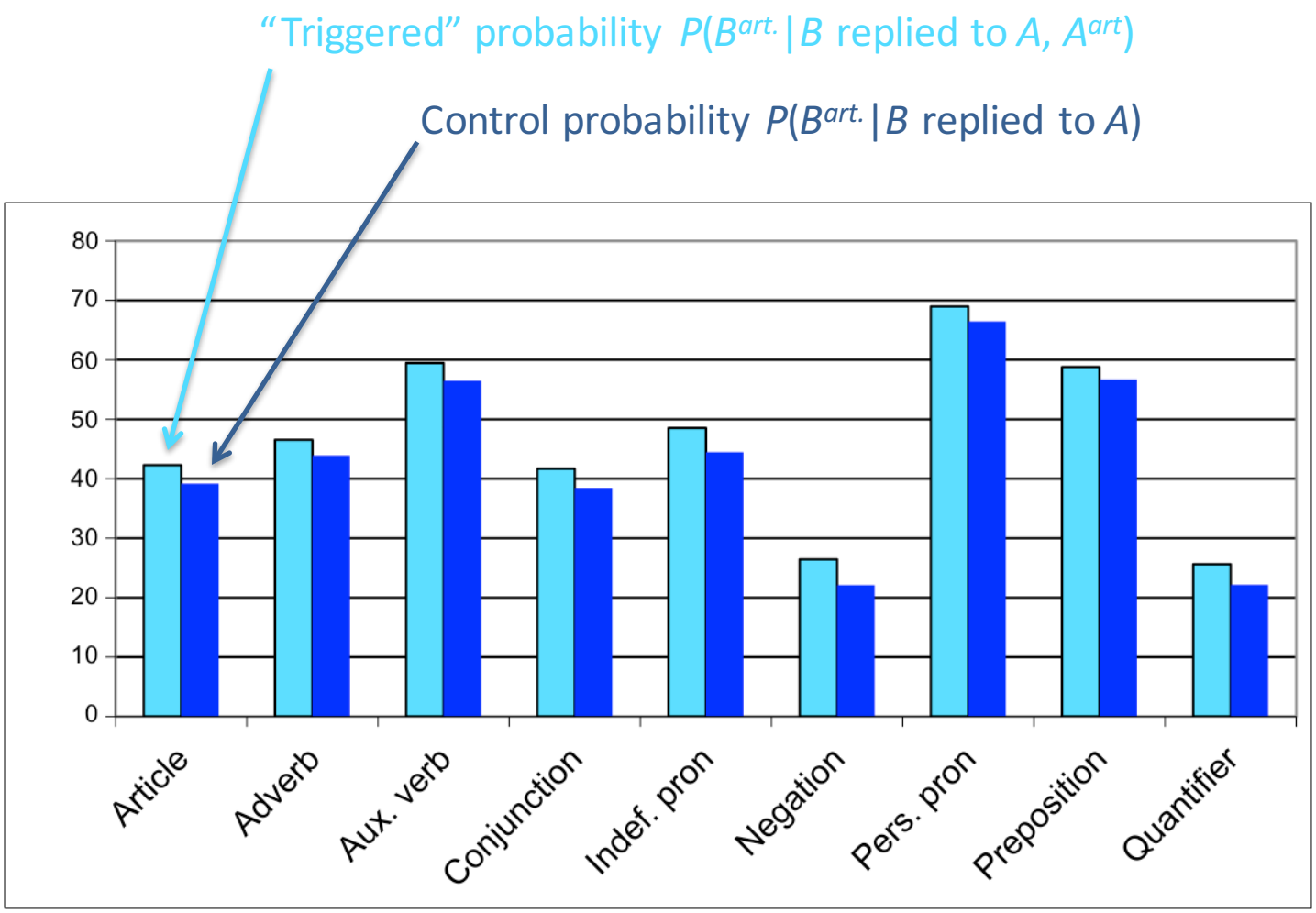
$P(B^{art.} \mid B \text{ replied to } A, A^{art})$

$P(B^{art.} \mid B \text{ replied to } A)$



Coordination

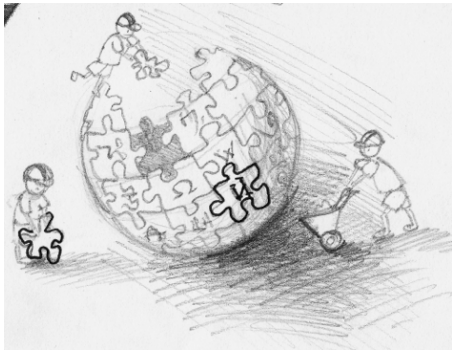
Coordination effect in social networks!



p-value<0.0001

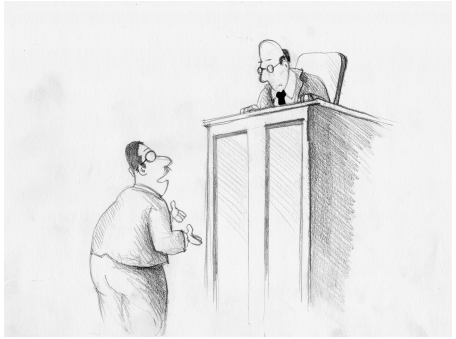
Coordination and power differences

Two very different empirical settings:



Wikipedia community of editors:

- 240,000 conversational exchanges on "talk pages"
- users become **admins** through elections



U.S. Supreme Court oral arguments:

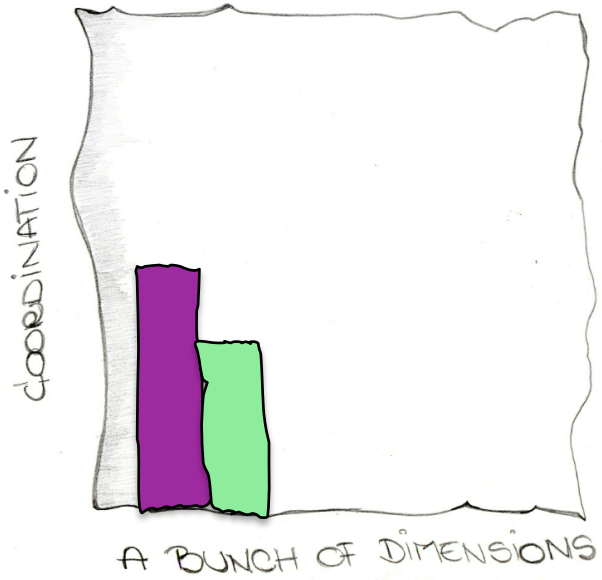
- 50,000 verbal exchanges
- between **Justices** and **lawyers**

Coordination and power differences

Hypothesis: Higher power → others coordinate more towards you

Coordination towards high-power people (purple)

Coordination towards low-power people (green)



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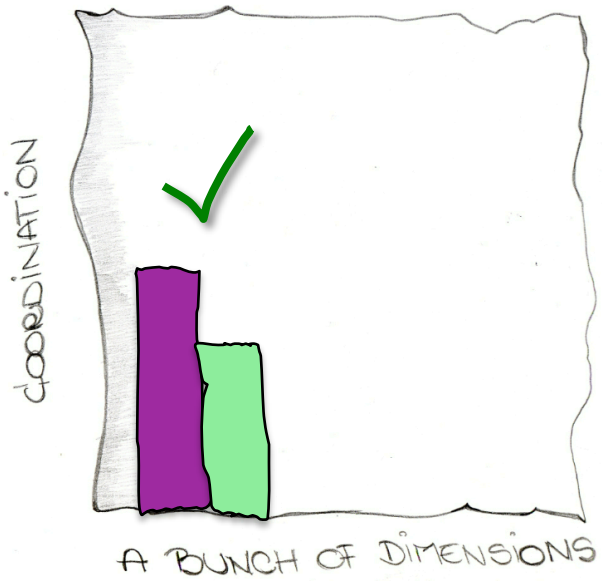

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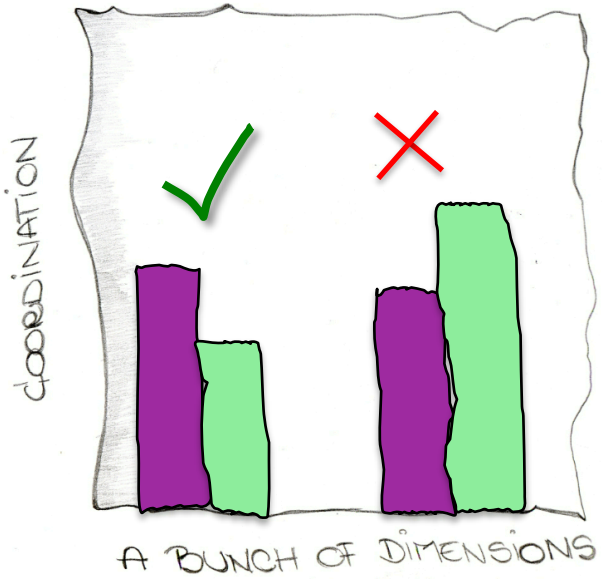

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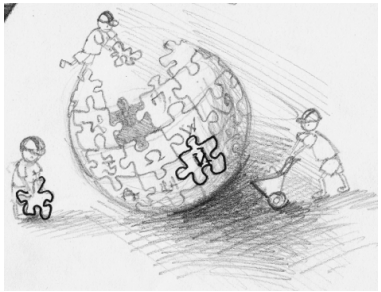
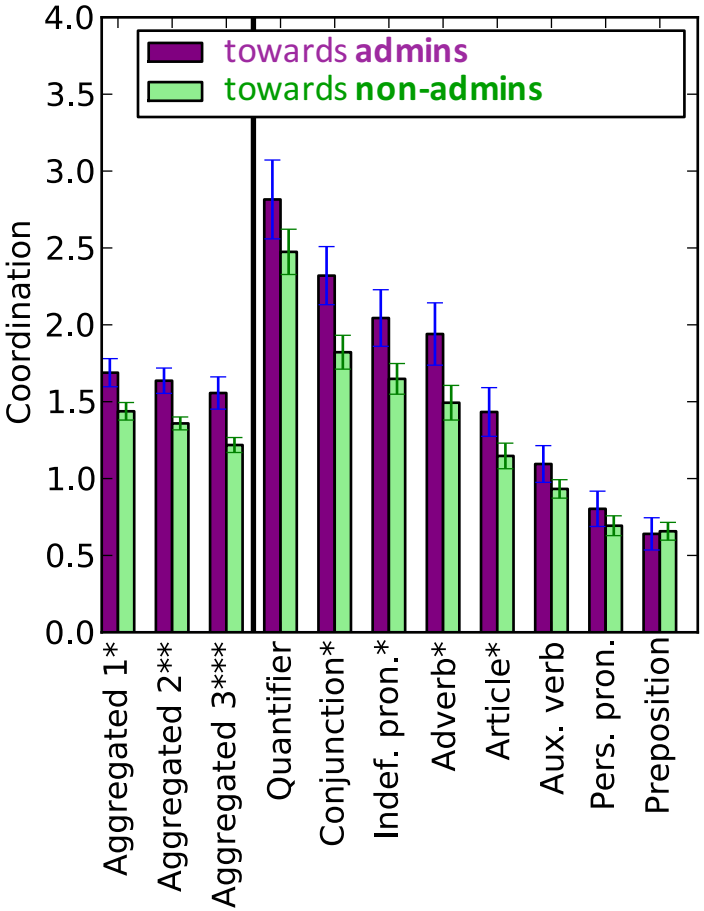
Wikipedia:





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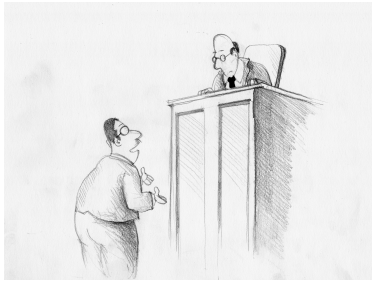
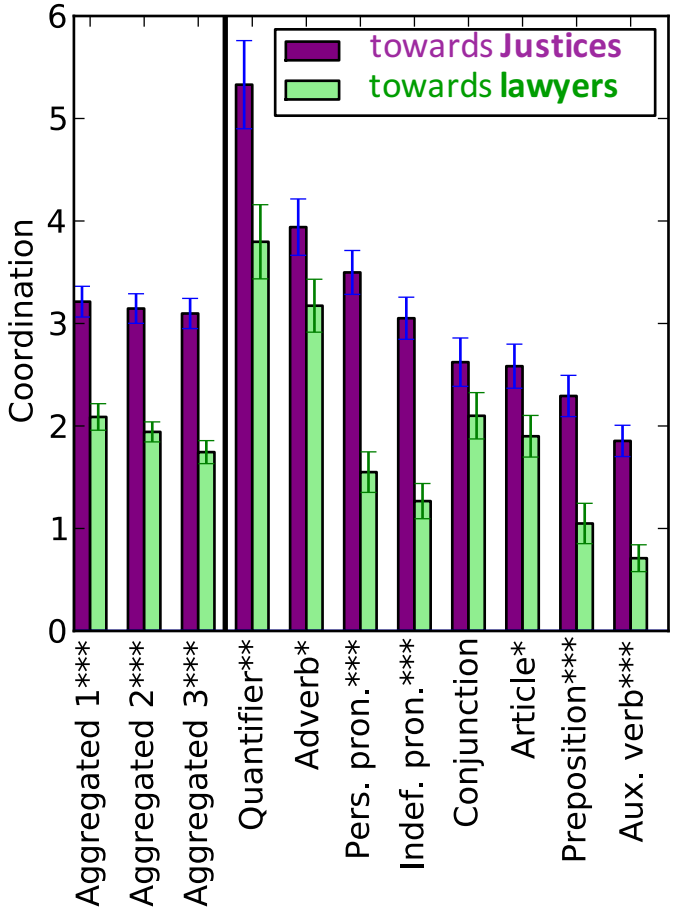
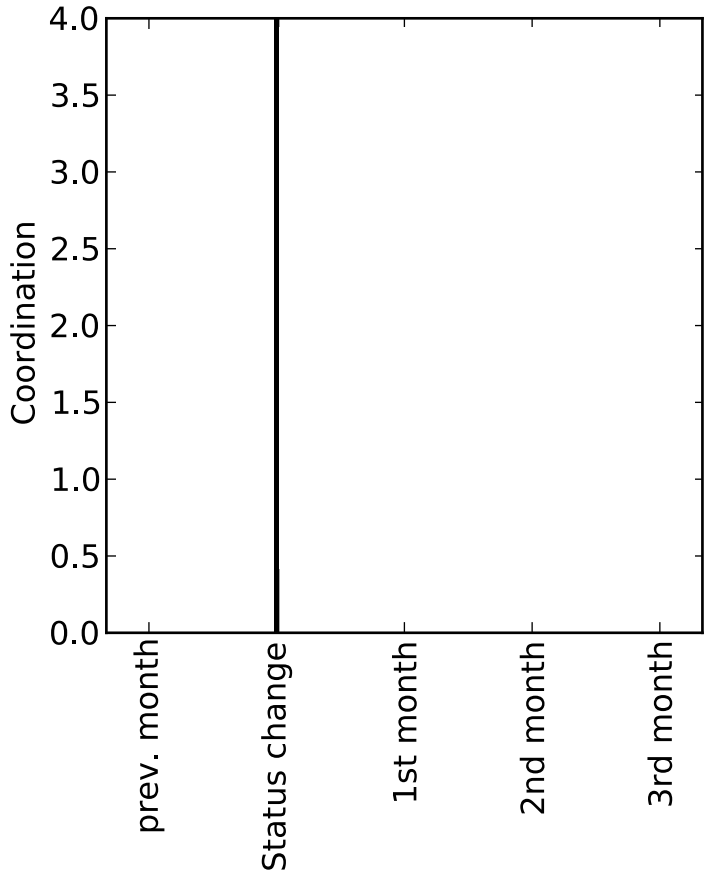
Supreme Court:





Coordination and status change

Track a fixed group of users as they undergo **status change**



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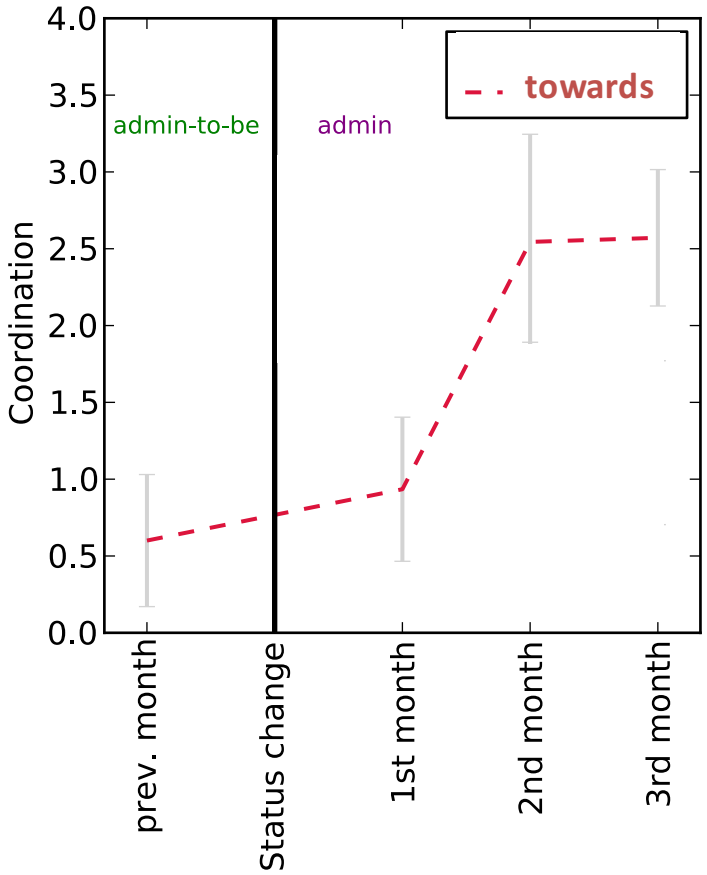

Coordination **towards** users increases after these gain higher status

Coordination and status change

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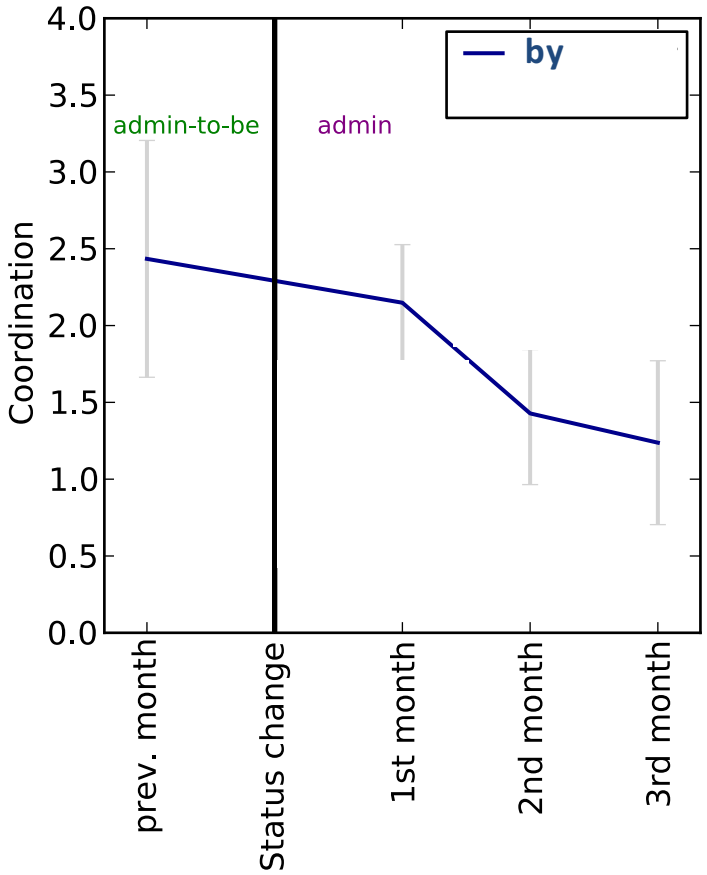
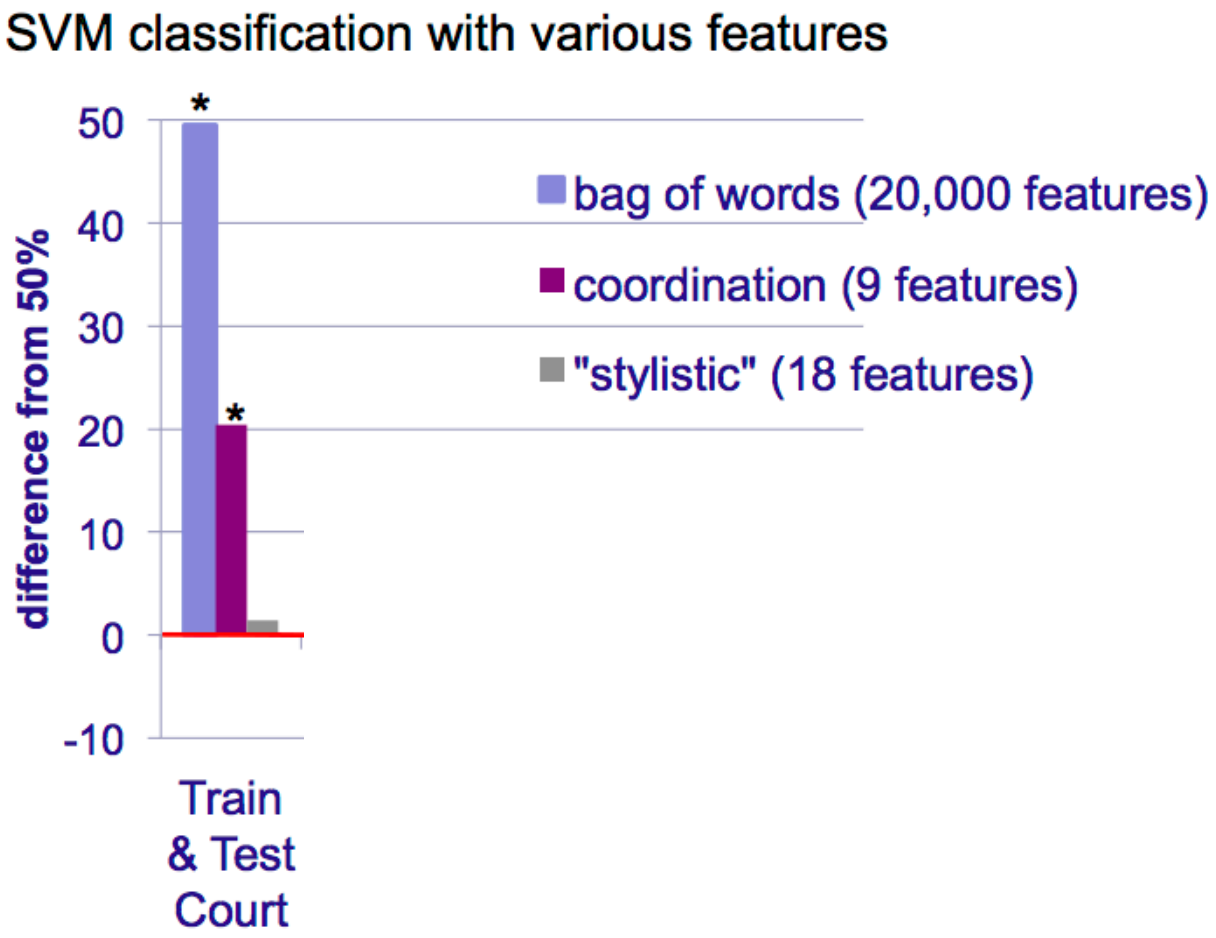
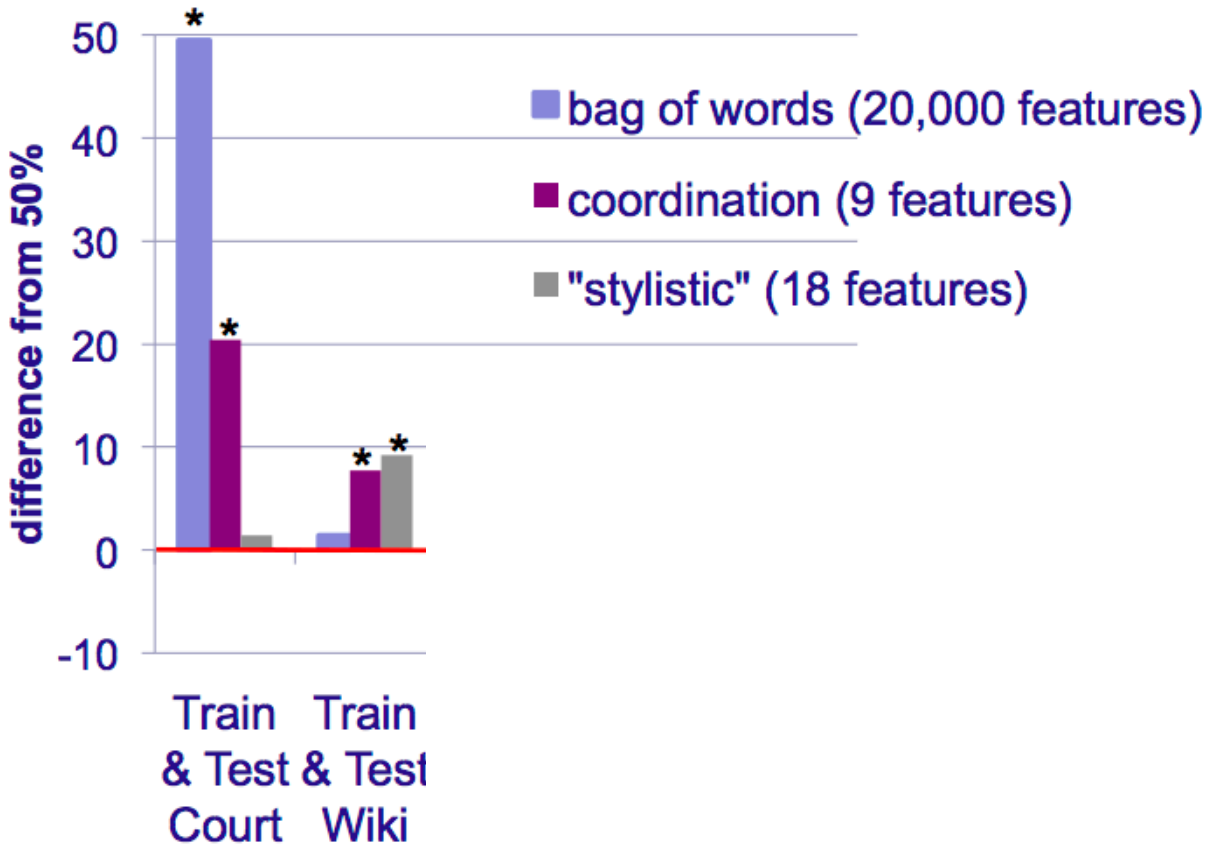
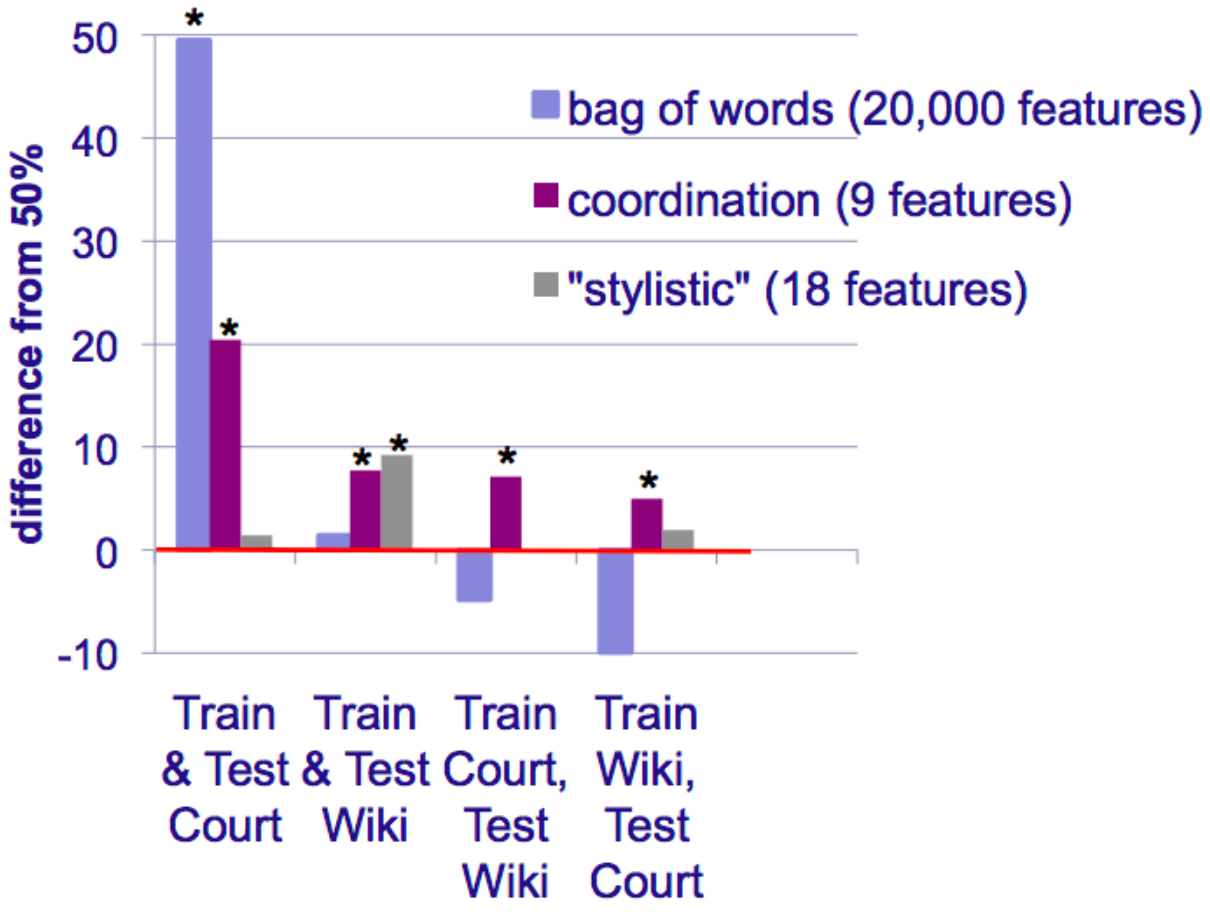


Coordination **by** users decreases after these gain higher status


SVM classification with various features
50
40
30
20
10
0
-10
difference from 50%
*
*
bag of words (20,000 features)
coordination (9 features)
"stylistic" (18 features)
Train
& Test
Court

SVM classification with various features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