Replication Paper: *Channeling Hearts and Minds: Advocacy*

Organizations, Cognitive-Emotional Currents, and Public Conversation

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Introduction

- Two conversational styles for advocacy organizations to stimulate public conversations: Cognitive vs. Emotional
- Which one is more effective? Does advocacy organizations' strategy of using the two styles matter?

Three Hypotheses

- Hypothesis 1: Cognitive and emotional conversational styles spread across conversational fields because of social contagion but decline with equal intensity over time because of saturation effects such as cognitive and emotional overload.
- Hypothesis 2: The frequency of cognitive and emotional conversational styles are inversely related to each other over time within conversational fields because widespread use of either style facilitates the contagious spread of the other.

Three Hypotheses

- Hypothesis 3: Advocacy organizations will stimulate more public conversation if they dispatch messages with emotional language during periods of prolonged rational debate within a given conversational field, or when they dispatch messages with cognitive language when emotional conversations dominate.

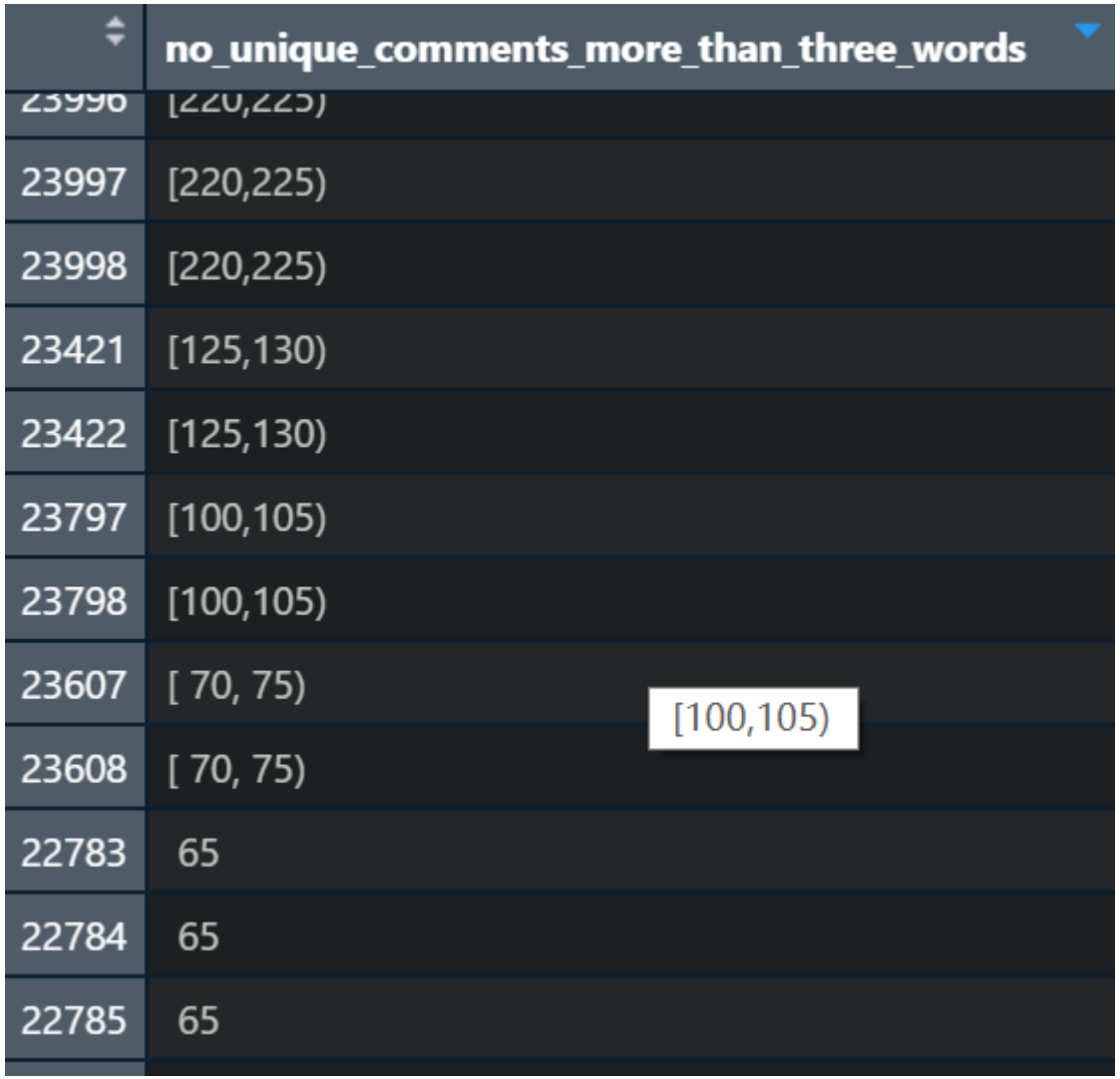
Replication

- Model: Negative Binomial
- Variables
  - DV: Number of unique social media users who make substantial comments about an advocacy organization’s posts by day
  - IVs: 21 (see next slide)

Key Indicator	Organization Contributes to Phase Shift (1=yes, 0=no)
	Number of Posts by Organization, Previous Day
Characteristics of Advocacy Organizations	Organization's Number of Facebook Fans
	Closeness Centrality of Organization within Field, Previous Day
	Betweenness Centrality of Organization within Field, Previous Day
	Organization's Total Yearly Budget
Tactics of Advocacy Organizations	Number of Page Views Organization Received from Facebook Advertising
	Organizations' Posts Discuss Influential Topic (1=yes, 0=no)
	Number of Audiovisuals in Organization's Posts, Previous Day
Characteristics of Advocacy Organization's Audience	Total Number of People Who Viewed Organization's Page
	Opinion Leadership (Popularity of Users who Comment on Post), Previous Day
	Homophily Index (Dissimilarity of Audience Demographics)
	% of Organization's Page Viewers under Age 35
	% of Organization's Page Viewers Female
	% of Organization's Page Viewers from Eastern U.S.
	% of Organization's Page Viewers from Southwestern U.S.
	% of Organization's Page Viewers from Midwestern U.S.
	% of Organization's Page Viewers from Western U.S.
External Opportunity Structures	Number of News Articles about Organization, Previous Day
	Number of Blog Mentions of Organization, Previous Day
	Relative Volume of Google Searches, Previous Day

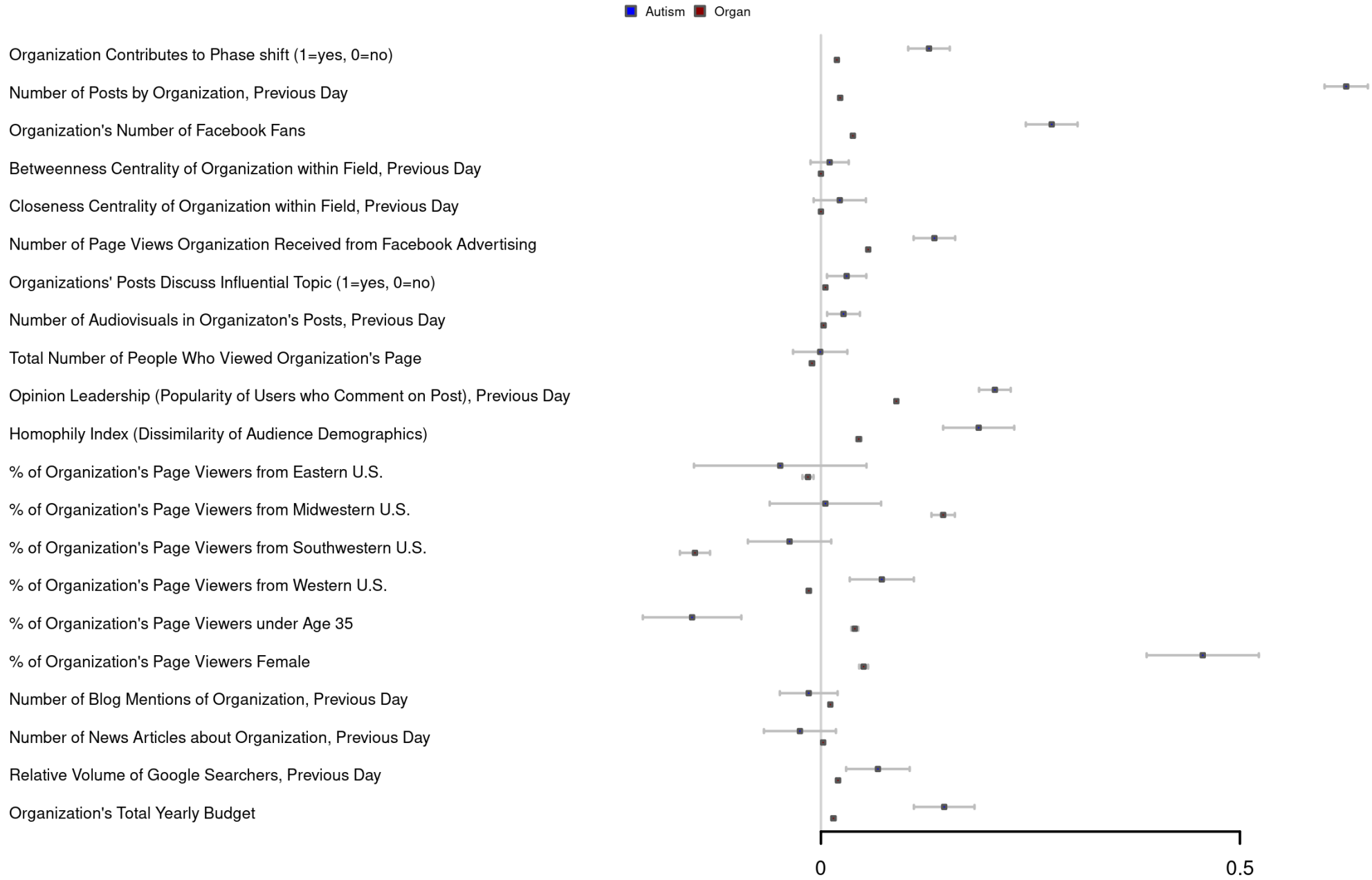
Problems for replication

- DV
  - Mixed of ranges and numbers
  - “Values of this indicator are binned to protect anonymity of organizations and results may therefore differ from main models presented in our article.”



Problems for replication

- IVs
  - In the negative binomial model for organ donation organizations, “Closeness centrality” and “Between centrality” = 0 when NA values are dropped


Autism
Organ
Organization Contributes to Phase shift (1=yes, 0=no)
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Organization's Number of Facebook Fans
Betweenness Centrality of Organization within Field, Previous Day
Closeness Centrality of Organization within Field, Previous Day
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Organizations' Posts Discuss Influential Topic (1=yes, 0=no)
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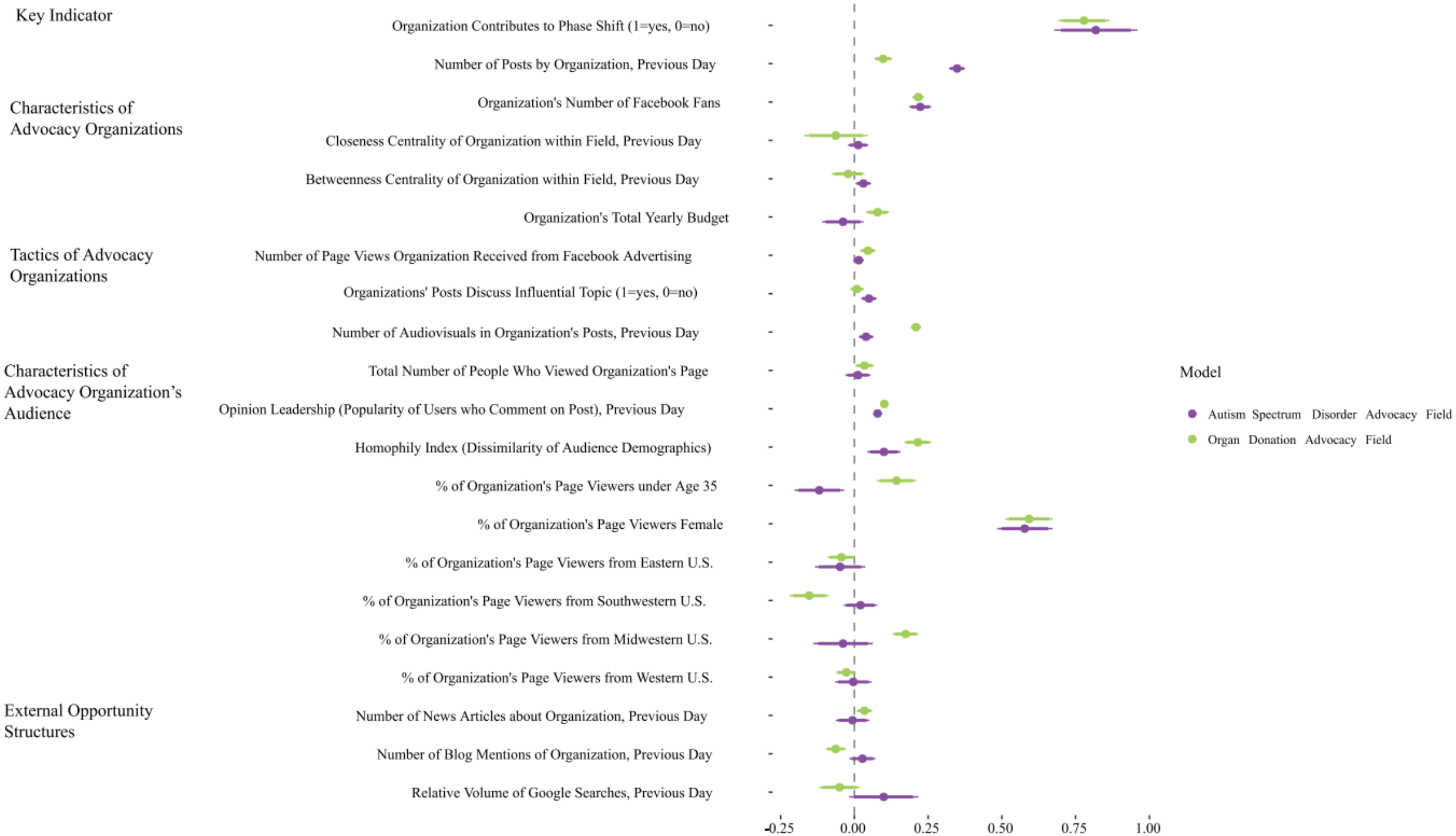
% of Organization's Page Viewers from Southwestern U.S.
% of Organization's Page Viewers from Western U.S.
% of Organization's Page Viewers under Age 35
% of Organization's Page Viewers Female
Number of Blog Mentions of Organization, Previous Day
Number of News Articles about Organization, Previous Day
Relative Volume of Google Searchers, Previous Day
Organization's Total Yearly Budget
0
0.5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External Opportunity Structures
Number of News Articles about Organization, Previous Day
Number of Blog Mentions of Organization, Previous Day
Relative Volume of Google Searches, Previous Day
-0.25
0.00
0.25
0.50
0.75
1.00
Model
Autism Spectrum Disorder Advocacy Field
Organ Donation Advocacy Field

Bayesian models and sensitivity check

- “Closeness centrality” and “between centrality” variables removed

```
model3 <- stan_glm(usercmt1 ~ orgshft + orgpost + fbfans +
                     budget +
                     fbads + inftpc + advsl +
                     ttlview + opldsp + homophily + age35 + female +
                     east + midwest + south + west +
                     blog + newsatc + googlesearch,
                   data = autism)
model4 <- stan_glm(usercmt1 ~ orgshft + orgpost + fbfans +
                     budget +
                     fbads + inftpc + advsl +
                     ttlview + opldsp + homophily + age35 + female +
                     east + midwest + south + west +
                     blog + newsatc + googlesearch,
                   data = organ)
```

Bayesian models and sensitivity check

- Bayesian models are better?

```
data1 <- model1
target = data$usercmt1[as.integer(names(predict(data1)))]
print(mean(abs(predict(data1) - target)))

data2 <- model2
target = data$usercmt1[as.integer(names(predict(data2)))]
print(mean(abs(predict(data2) - target)))

data3 <- model3
target = data$usercmt1[as.integer(names(predict(data3)))]
print(mean(abs(predict(data3) - target)))

data4 <- model4
target = data$usercmt1[as.integer(names(predict(data4)))]
print(mean(abs(predict(data4) - target)))
```

```
[1] 2.499647
[1] 2.20836
[1] 0.4298664
[1] 1.509921
```