

Political News Sharing on Social Media

**Mapping the Ideology of
Politicians, Users, and News Content**

Social Media and Political Participation (SMaPP) Lab

What explains the news-sharing strategies of politicians on social media?

Introduce a method to map the social media ideological sharing space of:

1. Politicians
2. Users
3. News content

Ideology of **users** on social media:

1. Who users follow on Twitter (Barberá, 2015)
2. Who users endorse on Facebook (Bond and Messing, 2015)
3. Supervised learning approaches

Ideology of **politicians**:

1. **NOMINATE** (Poole and Rosenthal, 1985)
2. **CF-SCORES** (Bonica, 2013)
3. **Social media**
4. **Expert / respondent placements**

Ideology of **news media**:

1. **Editorial position-taking** (Ho and Quinn, 2008)
2. **Compare news media text to politicians** (e.g. Gentzkow and Shapiro, 2010; Martin and Yurukoglu, 2017)
3. **Crowdsourcing** (Budak, Goel and Rao, 2016)
4. **Proportion shared by liberals and conservatives** (e.g. Gentzkow and Shapiro, 2011; Bakshy, Messing and Adamic, 2015)

We use link data (URLs) to unify the measurement of ideology on social media across users, politicians, and news media

e.g. [nytimes.com/2018/02/13/upshot/fake-news/...](https://www.nytimes.com/2018/02/13/upshot/fake-news/)

The benefits of link data are many:

1. Platform-agnostic
2. Behavioral measure for politicians
3. Captures how people use media
4. URLs are frequently shared
5. Changes quickly over time
6. Works with relatively small datasets

Data

We use data from the Twitter timelines of:

- **Members of Congress (535)**
- **Governors (50)**
- **President / VP / presidential candidates**
- **Ordinary users (5,000, geo-located to US)**

We define the universe of national news media domains ($n = 223$):

- foxnews.com
- nytimes.com
- breitbart.com
- cnn.com
- thenation.com
- ...

An example of a user-domain count (sub-)matrix of tweeted news URLs from Members of Congress:

	thenation.com	huffingtonpost.com	washingtonpost.com	wsj.com	foxnews.com	breitbart.com	...
Ted Cruz	0	0	23	6	44	6	...
Paul Ryan	0	0	5	8	14	0	...
Susan Collins	0	1	3	2	0	0	...
Claire McCaskill	0	4	25	10	2	0	...
Nancy Pelosi	0	2	17	0	0	0	...
Bernie Sanders	12	14	62	4	0	0	...
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

Model

Homophily assumption:

Social media users/politicians are more likely to tweet and retweet URLs of news media stories that are 'close' to their own ideology.

$$y_{img} \sim \text{NegBin}(\pi_{img}, \omega_m)$$
$$\pi_{img} = \exp(\alpha_i + \gamma_m - \underbrace{|\theta_i - \zeta_m|^2}_{\text{user-media distance}})$$

y_{img} is the count of links from domain m that have been tweeted by user i , who is affiliated with group (party) g

θ_{ig} latent ideology of user i affiliated with group (party) g

ζ_m latent ideology of domain m

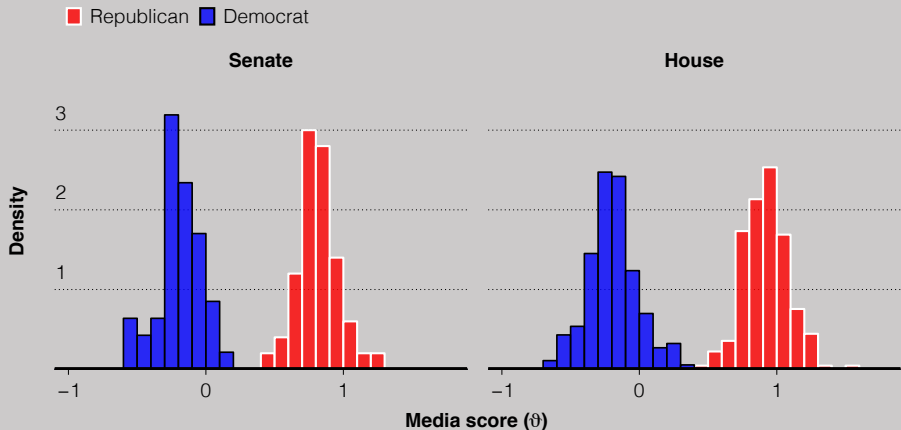
α_i user-specific intercept

γ_m domain-specific intercept

ω_m domain-specific dispersion parameter

Results

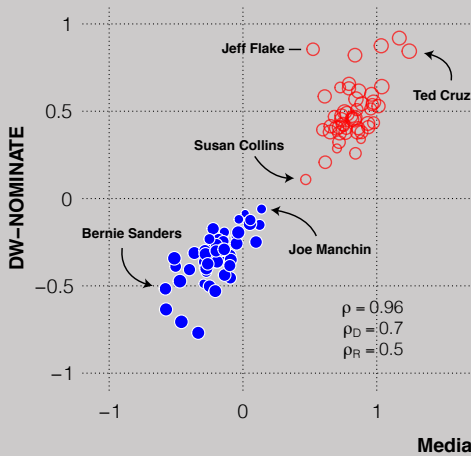
News-sharing ideology of Members of Congress:



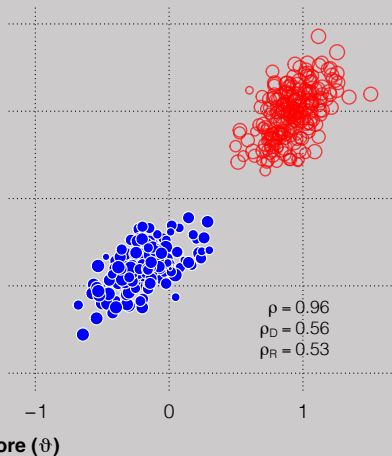
Media scores & NOMINATE:

● Democrat ○ Republican

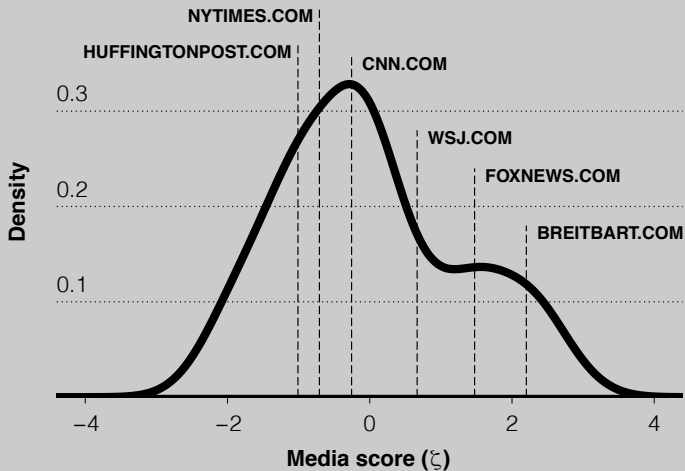
Senate



House

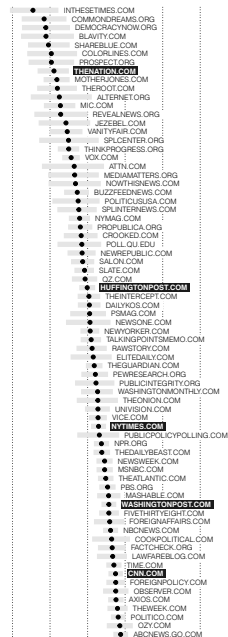


News media ideology:



◀ liberal

conservative ▶



-3

-2

-1

0

1

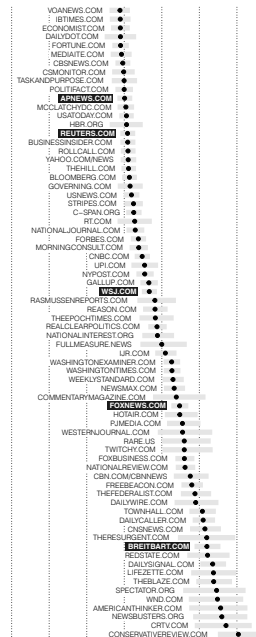
2

3

Media score (°)

◀ liberal

conservative ▶



-3

-2

-1

0

1

2

3

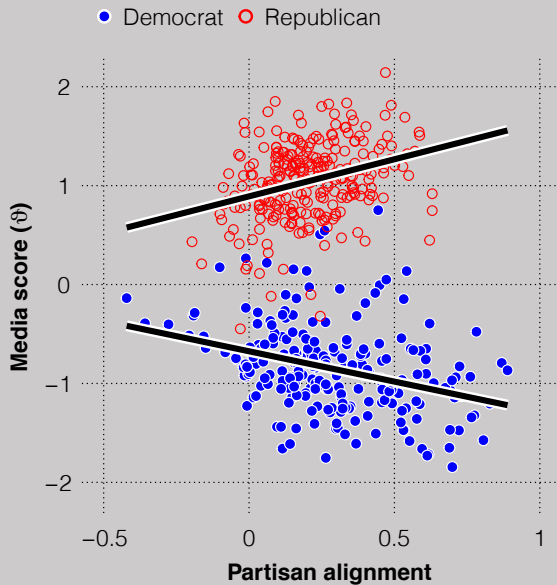
Application

What explains the news-sharing strategies of politicians on social media?

- Legislators are strategic in how they present themselves to their constituents (Mayhew, 1974; Fenno, 1978).
- Legislators in more competitive districts are wary of alienating moderate voters.
- Legislators in less competitive districts are less constrained, but also wary of alienating primary election voters.

Measure competitiveness in district i by the partisan gap in the 2016 presidential vote share:

$$partisanAlignment_i = voteShare_i^{(Trump)} - voteShare_i^{(Clinton)}$$



	Extremism of news sharing ideology			
	(1)	(2)	(3)	(4)
Partisan alignment	0.146*** (0.020)	0.159*** (0.022)	0.051** (0.023)	0.058** (0.023)
House member		-0.011 (0.011)	-0.006 (0.010)	-0.003 (0.010)
NOMINATE			0.381*** (0.052)	-0.013 (0.195)
NOMINATE ²				0.487** (0.234)
Republican × NOMINATE			-0.083 (0.060)	0.098 (0.254)
Republican × NOMINATE ²				-0.277 (0.284)
Republican		0.017** (0.008)	0.007 (0.025)	-0.016 (0.056)
Intercept	-0.034*** (0.006)	-0.037*** (0.011)	-0.156*** (0.019)	-0.088** (0.038)
N	499	499	499	499

*p < .1; **p < .05; ***p < .01

Thank You

References

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