

The Computational Social Science of (Turbulent) Politics

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social media = internet platforms that allow users
to generate content



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POLITICAL TURBULENCE

"This compelling book shows how, when, and why individuals decide to join online collective actions, and what makes those actions scale up. Using a fascinating array of cases taken from the news headlines of our time, the authors draw an important set of conclusions about democracy in turbulent times. *Political Turbulence* provides invaluable insights into political participation, individual choice, and democracy in an age of changing societies and politics."

—**LANCE BENNETT**
University of Washington

"*Political Turbulence* is an exciting book. The authors bring a psychological perspective to the analysis of experimental results and big data to tell an insightful and fresh story about social media and collective action dynamics at the individual level."

—**BRUCE BIMBER**
author of *Information and American Democracy*;
Technology in the Evolution of Political Power

"This engagingly written and elegantly designed study tests to their limits half a century's worth of big ideas about collective action. The authors convincingly show why information signals, visibility, and the distribution of thresholds are important for explaining the pace and scale of political engagement. Essential reading if you want to understand how it all kicks off online."

—**ANDREW CHADWICK**
author of *The Hybrid Media System: Politics and Power*

"This is great, adventurous social science."

—**PHILIP N. HOWARD**
coauthor of *Democracy's Fourth Wave?*
Digital Media and the Arab Spring

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MARGETTS, JOHN
HALE & YASSERI

POLITICAL
TURBULENCE

HELEN MARGETTS, PETER JOHN,
SCOTT HALE & TAHA YASSERI

POLITICAL TURBULENCE

HOW SOCIAL MEDIA SHAPE
COLLECTIVE ACTION

POLITICAL TURBULENCE

As people spend increasing proportions of their daily lives using social media, such as Twitter and Facebook, they are being invited to support myriad political causes by sharing, liking, endorsing, or downloading. Chain reactions caused by these tiny acts of participation form a growing part of collective action today, from neighborhood campaigns to global political movements. *Political Turbulence* reveals that, in fact, most attempts at collective action online do not succeed, but some give rise to huge mobilizations—even revolutions.

Drawing on large-scale data generated from the Internet and real-world events, this book shows how mobilizations that succeed are unpredictable, unstable, and often unsustainable. To better understand this unruly new force in the political world, the authors use experiments that test how social media influence citizens deciding whether or not to participate. They show how different personality types react to social influences and identify which types of people are willing to participate at an early stage in a mobilization when there are few supporters or signals of viability. The authors argue that pluralism is the model of democracy that is emerging in the social media age—not the ordered, organized vision of early pluralists, but a chaotic, turbulent form of politics.

This book demonstrates how data science and experimentation with social data can provide a methodological toolkit for understanding, shaping, and perhaps even predicting the outcomes of this democratic turbulence.

collective action = activity undertaken by citizens with
aim of contributing to public / social goods

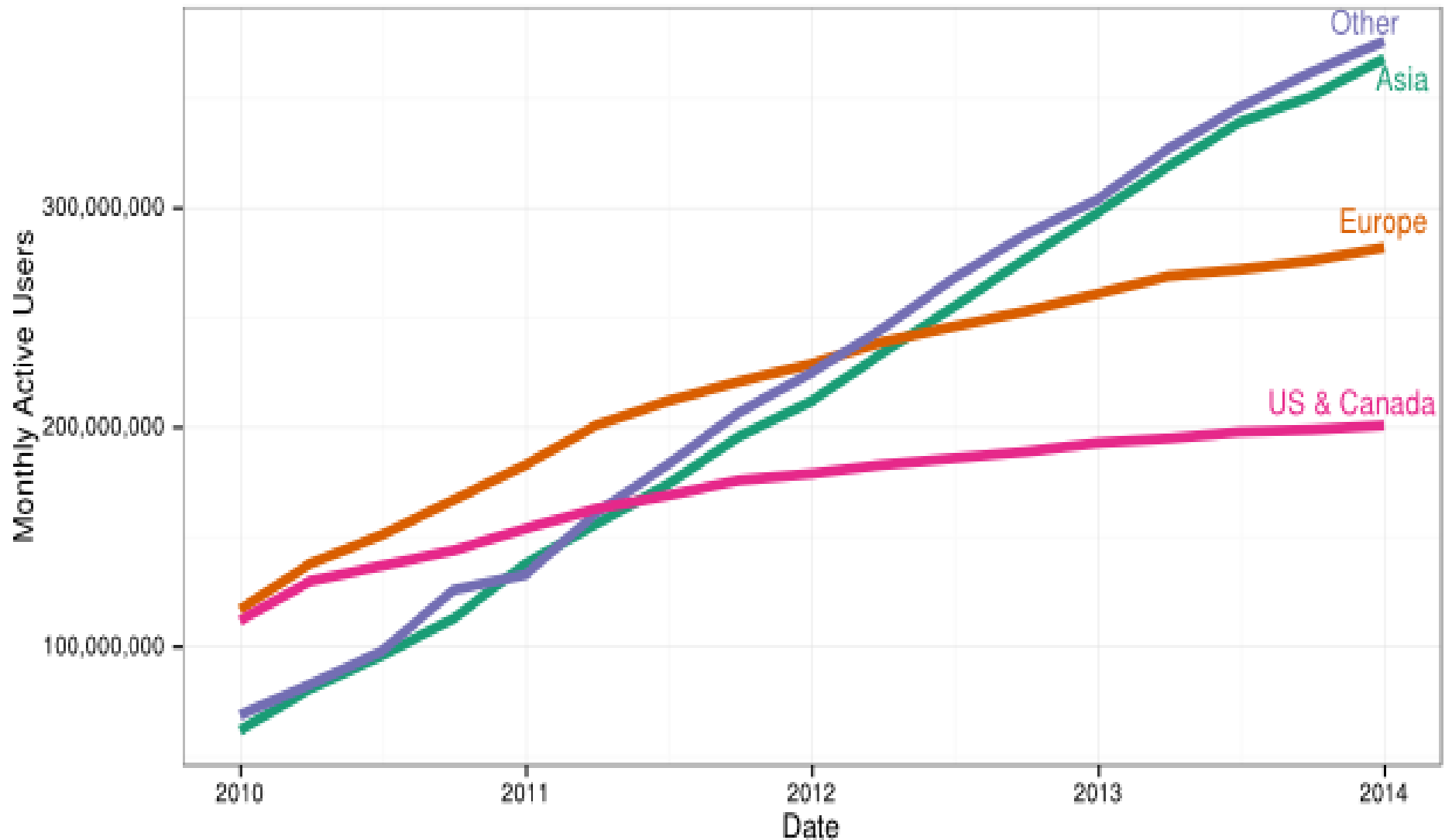
**People's lives are intertwined with
internet-based platforms, especially
social media – dripping with data**

What does politics look like in this digital,
datafied world?

And what tools do we need to research it?

Politics in a new habitat

Facebook usage across the world



Facebook data, annual reports


Social media allow tiny acts of participation in support of social and political causes




 Stop the badger cull PETITION please sign >>>
petitions.direct.gov.uk/petitions/38257 #stopthebadgercull
Expand Reply Retweet Favorite More

 Not much time left to sign the badger cull petition. Takes seconds but could mean everything #badgercull
submissions.epetitions.direct.gov.uk/petitions/38257
Expand Reply Retweet Favorite More

 With badger cull about to start, please help stop it. Write to your MP and sign the petition: petitions.direct.gov.uk/petitions/38257
Expand Reply Retweet Favorite More


HM Government

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Search published e-petitions

All e-petitions

Open (5,718)	Closed (18,273)	Rejected (20,955)
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Listed below are any e-petitions that can be signed.

Previous [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) ... [285](#) [286](#) [Next](#)

e-petition name 	Signatures 	Closing 
Stop mass immigration from Bulgarian and Romanians in 2014, when EU restrictions on immigration are relaxed. View response	152,729	12/11/2013
Ban the sale of young puppies & kittens without their mothers being present View response	83,867	02/05/2014
We call for a Cumulative Impact Assessment of Welfare Reform, and a New Deal for sick & disabled people based on their needs, abilities and ambitions View response	75,369	12/12/2013
Promote cycling by implementing the recommendations in the 'Get Britain Cycling' report. View response	72,048	23/04/2014
Live Transport of Farmed Animals View response	58,194	19/11/2013
No MP Salary Increase View response	49,703	14/01/2014

Tiny acts of political participation (micro-donations of time and effort)

- Which expand 'ladder' of participation
- And draw new people into politics
- Contra 'politics as pain' principle



**Tiny acts of participation
can scale up to huge
mobilizations
which ...**



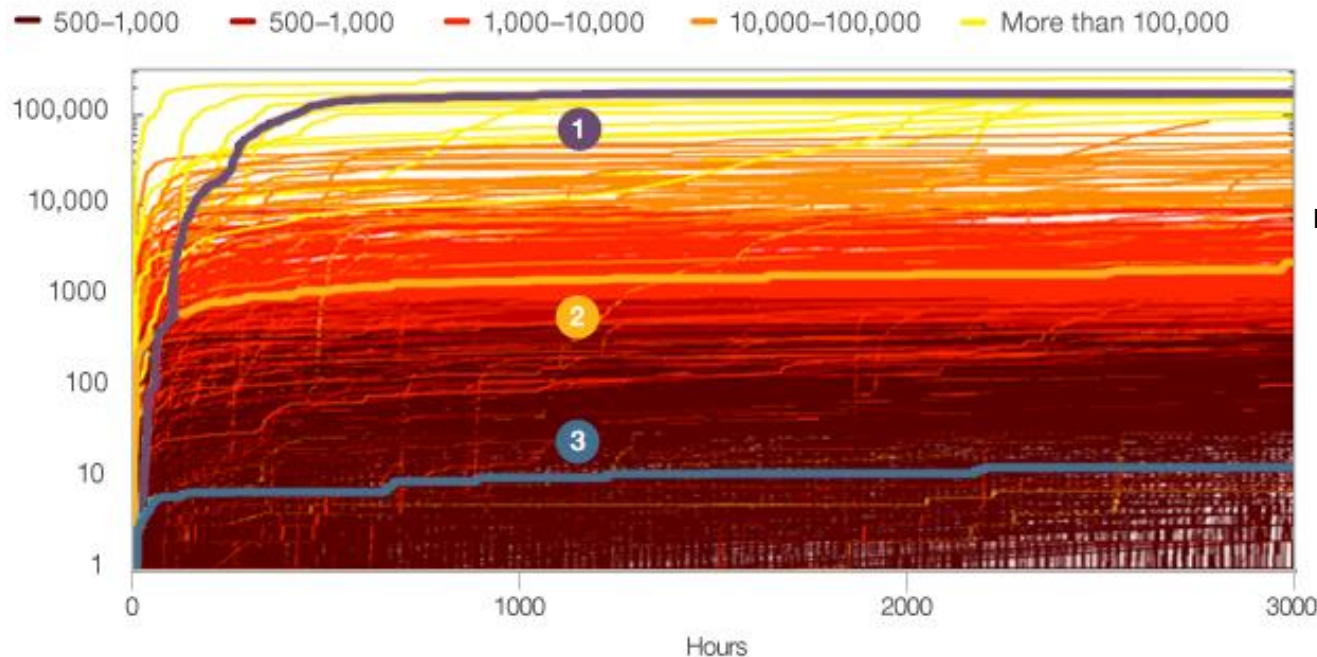
**... can bring about social and policy change
& challenge party systems and regimes**



...but mostly don't

E-petitions: Swift uptake is key to success

Eventual number of signatures



Example petitions, all entitled "Stop the badger cull":

- | | | | | | |
|---|------------------------------|---|----------------------------|---|-------------------------|
| 1 | Total signatures:
294,264 | 2 | Total signatures:
3,588 | 3 | Total signatures:
15 |
|---|------------------------------|---|----------------------------|---|-------------------------|

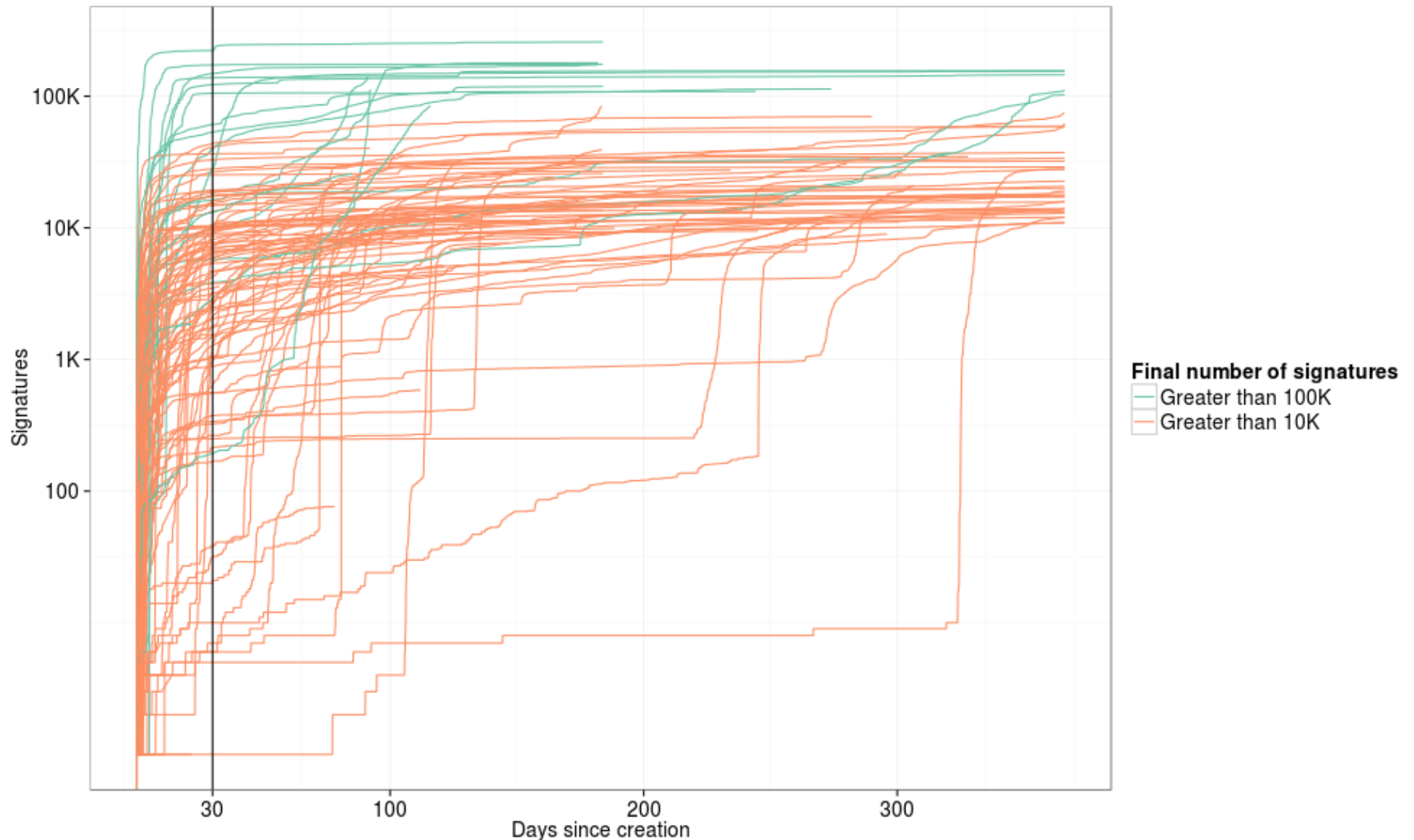
Source: Oxford Internet Institute at the University of Oxford



Badger: CC-BY-NC-ND Sally Longstaff, <http://www.flickr.com>

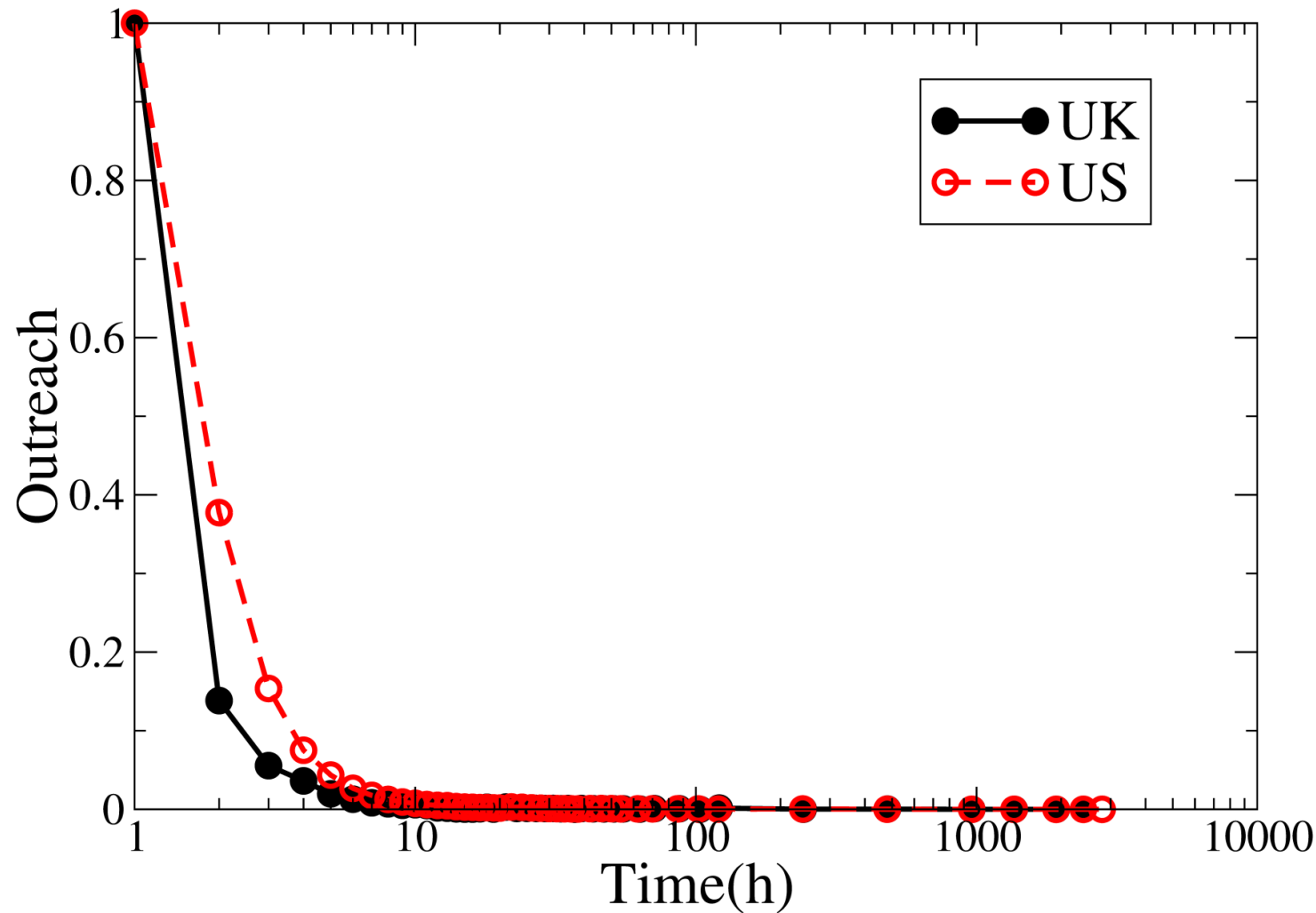
Most mobilizations fail

Successful mobilizations develop fast



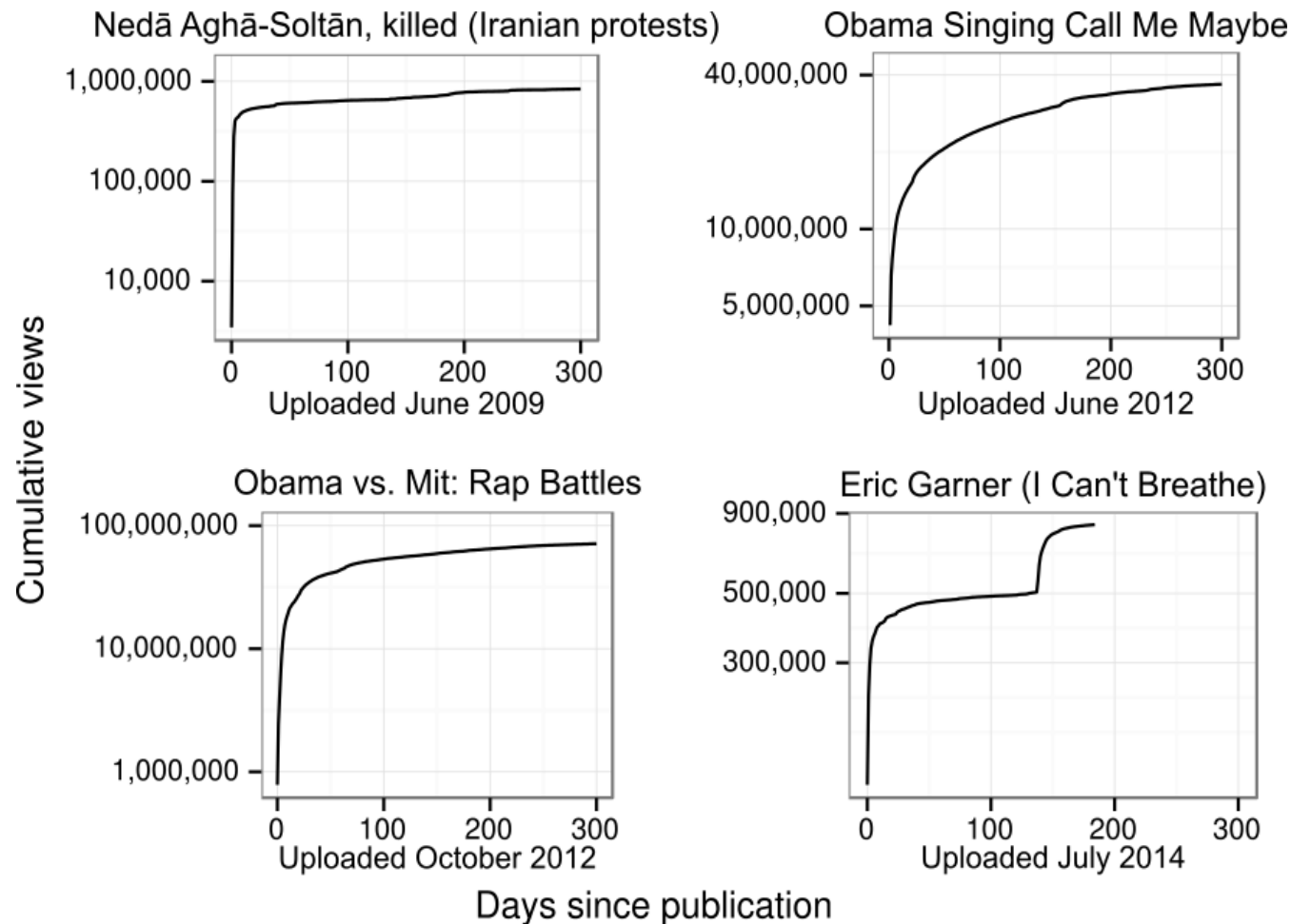
Petitions receiving more than 10,000 signatures

Collective attention decays very quickly



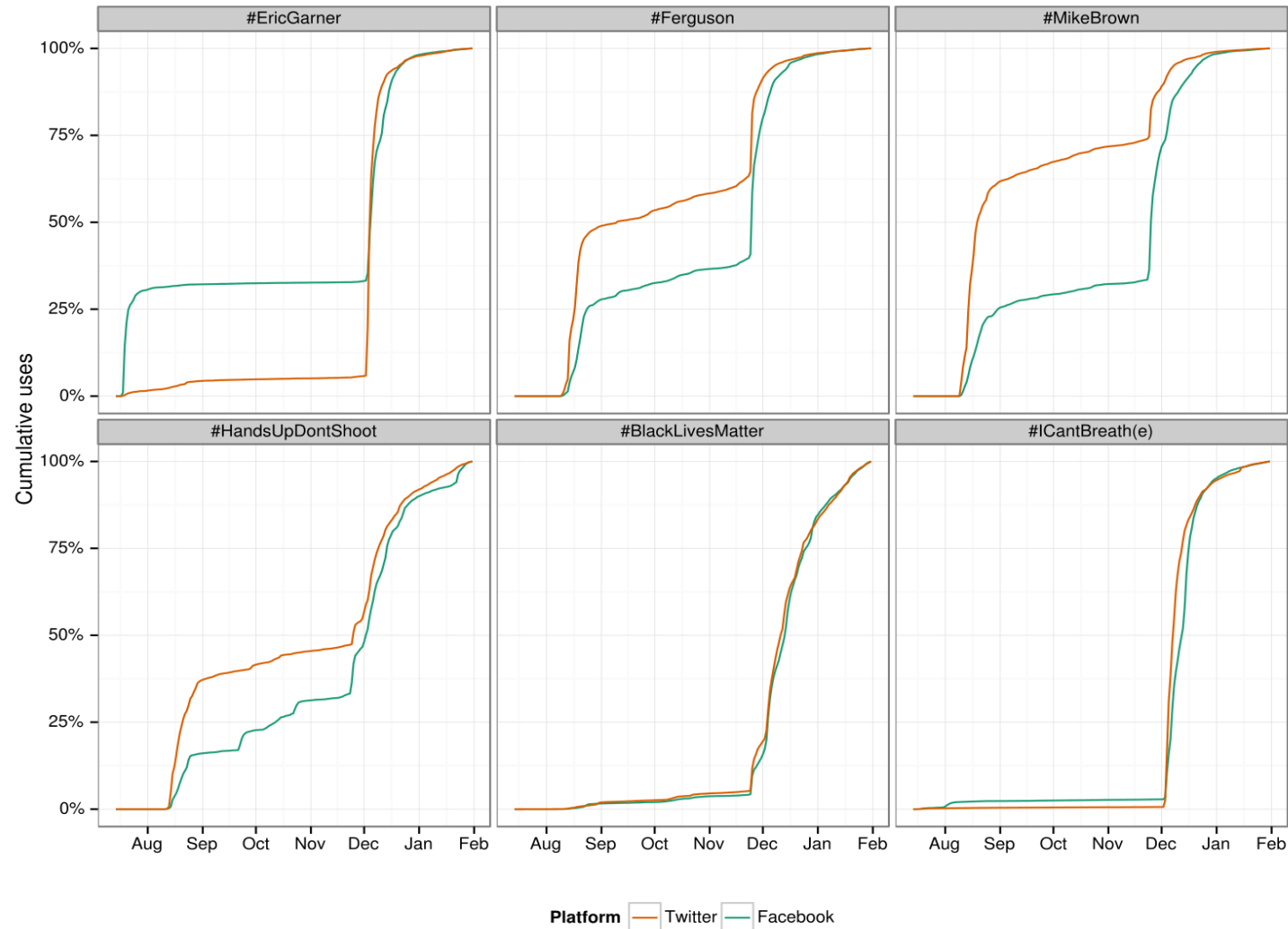
$$r(t) = \frac{E[\log(N(t))] - E[\log(N(t-1))]}{E[\log(N(t))]}$$

Success (if it comes) comes quickly YouTube videos show similar pattern (no s-shape)



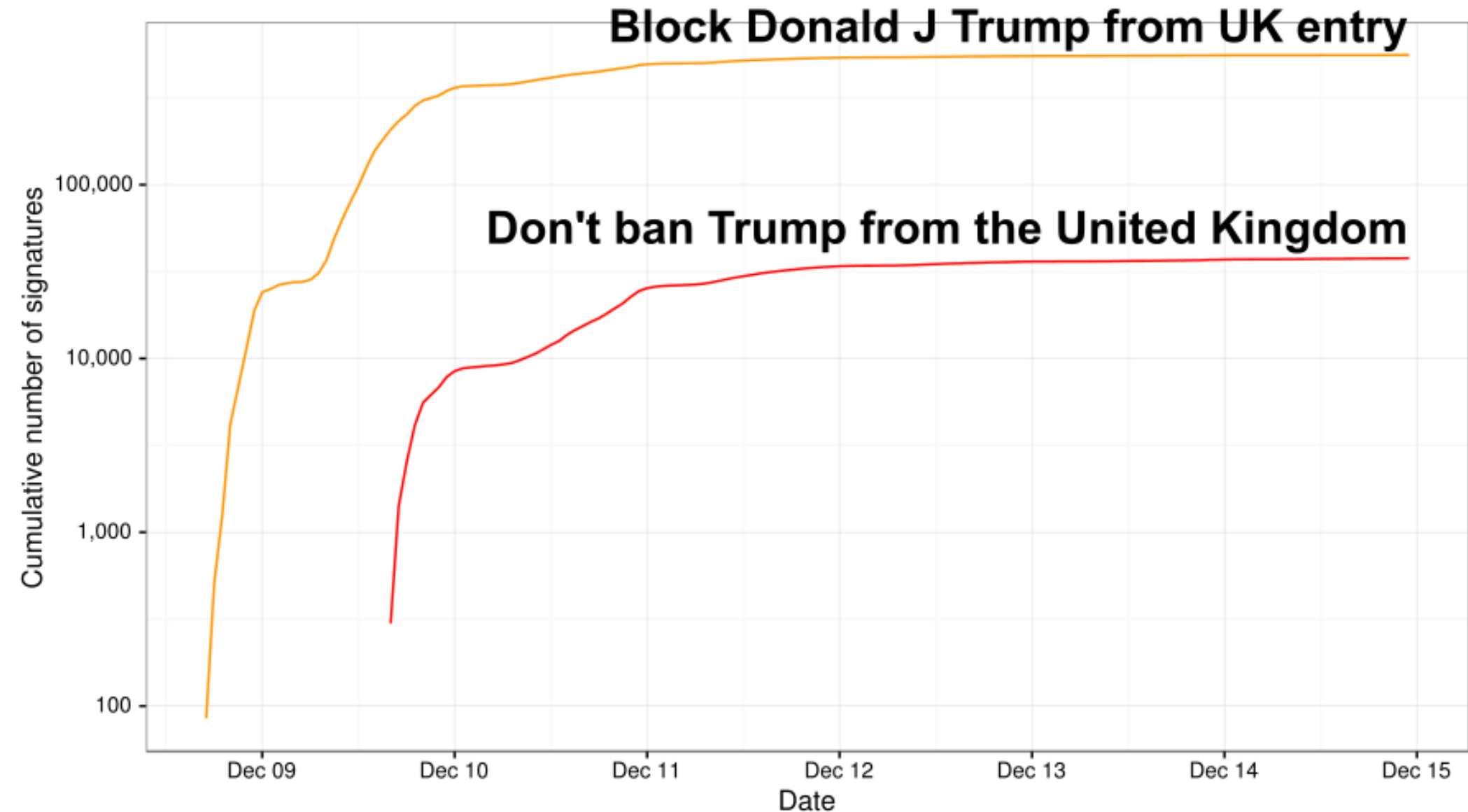
Source: Margetts et al (2015) *Political Turbulence: How Social Media Shape Collective Action*, Princeton University Press.

Mobilizations against policing in the US



Source: Margetts et al (2015) *Political Turbulence: How Social Media Shape Collective Action*, Princeton University Press.

To block or not to block Trump





Petition

EU Referendum Rules triggering a 2nd EU Referendum

We the undersigned call upon HM Government to implement a rule that if the remain or leave vote is less than 60% based a turnout less than 75% there should be another referendum.

[Sign this petition](#)

4,148,629 signatures

[Show on a map](#)

100,000



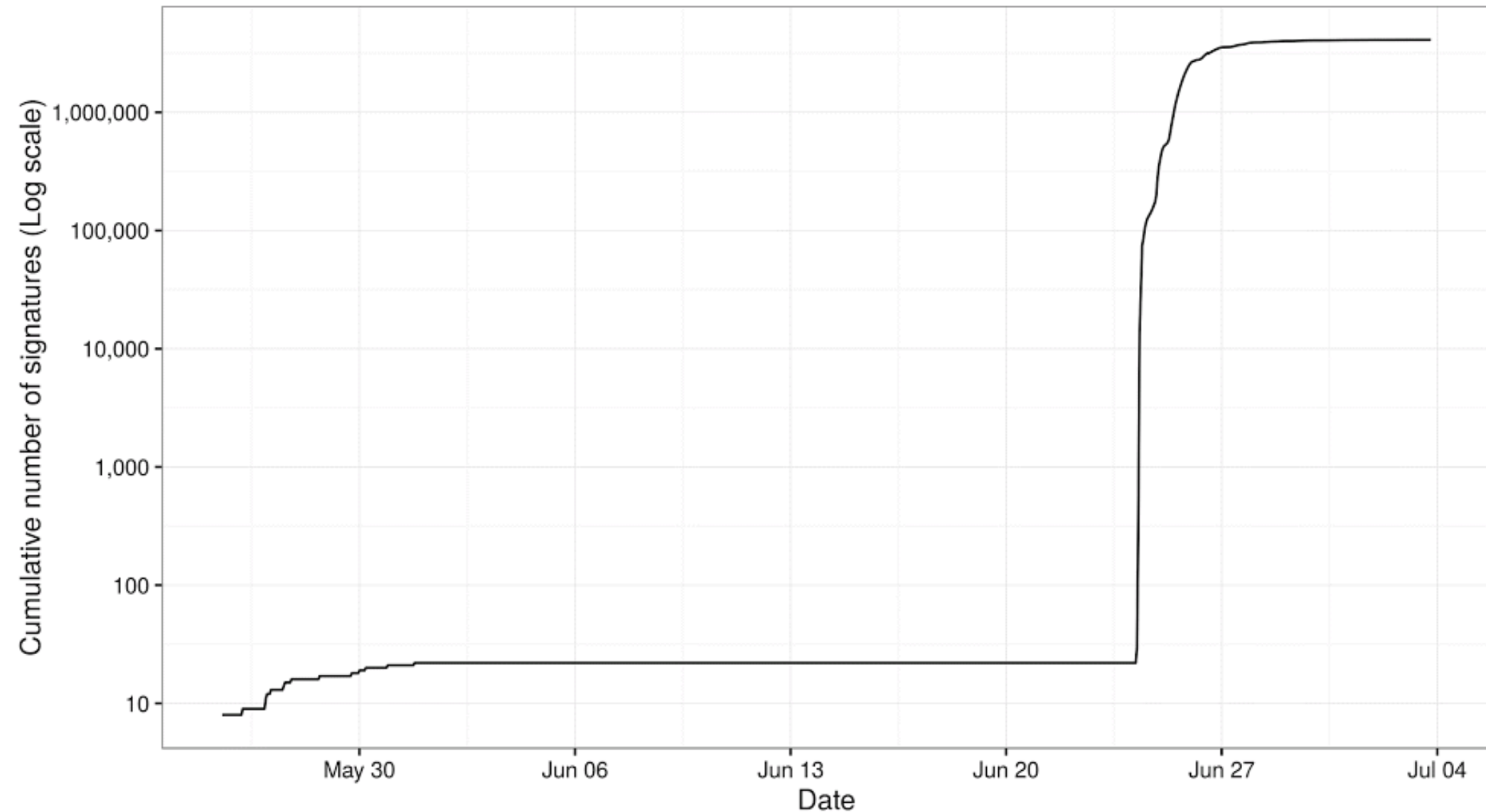
Parliament debated this topic

This topic was debated on 5 September 2016



[Watch the debate](#) • [Read the transcript](#)

Signatures on petition to rerun Brexit referendum, 2016



What shapes behaviour?

Social media exert social influence

- **Social information** – real-time information about participation of others
- **Visibility** – action being visible to outside world (eg. Icebucket Challenge) – or invisible, anonymous (eg trolls)
- Can use **experiments** to test and compare their effect

Social information and visibility as drivers of political behaviour

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#90BrightYears

We're celebrating The Queen's 90th

Promoted by Unilever UK & IRE

Orlando

2.83M Tweets

#IntTrack200

#LovelsLove

111K Tweets

Northern Ireland

76.3K Tweets

#POLNIR

102K Tweets

America

788K Tweets

Poland

92.5K Tweets

#patronsLunch

8,680 Tweets

#vote4education

#GAWA

26K Tweets

Gordon Brown - full interview

Watch the full interview with former Prime Minister and Remain campaigner Gordon Brown #Murnaghan

47 35

don moynihan Retweeted

Senator Ron Johnson @SenRonJohnson · 2 Dec 2015

Yet another tragedy. My thoughts and prayers go out to California. Will continue to watch the developments. - rj

33 24

BuzzFeed @BuzzFeed · 4m

This is what LGBT people are saying in the wake of the Orlando shooting bzfd.it /1W...

Photo/Video Photo Album

What's on your mind?


Friends Post

Roger Scully

38 mins · Twitter ·

A journalist went to a Donald Trump rally yesterday and came back shocked. Here are his tweets

<https://t.co/anWhX9j4sH> via @psbook



1 event invite

TRENDING

World Health Organization: 'Very Low Risk' of Zika Spreading Globally Due to Olympics, UN Agency Says


Fermi Paradox: Study Says It Will Take Longer Than Theory Suggests to Encounter Aliens

LIGO: 2nd Sound Heard From Colliding Black Holes, Group's Scientists Say

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Experimenting with social information: a natural experiment

e-petitions – create and sign petitions online

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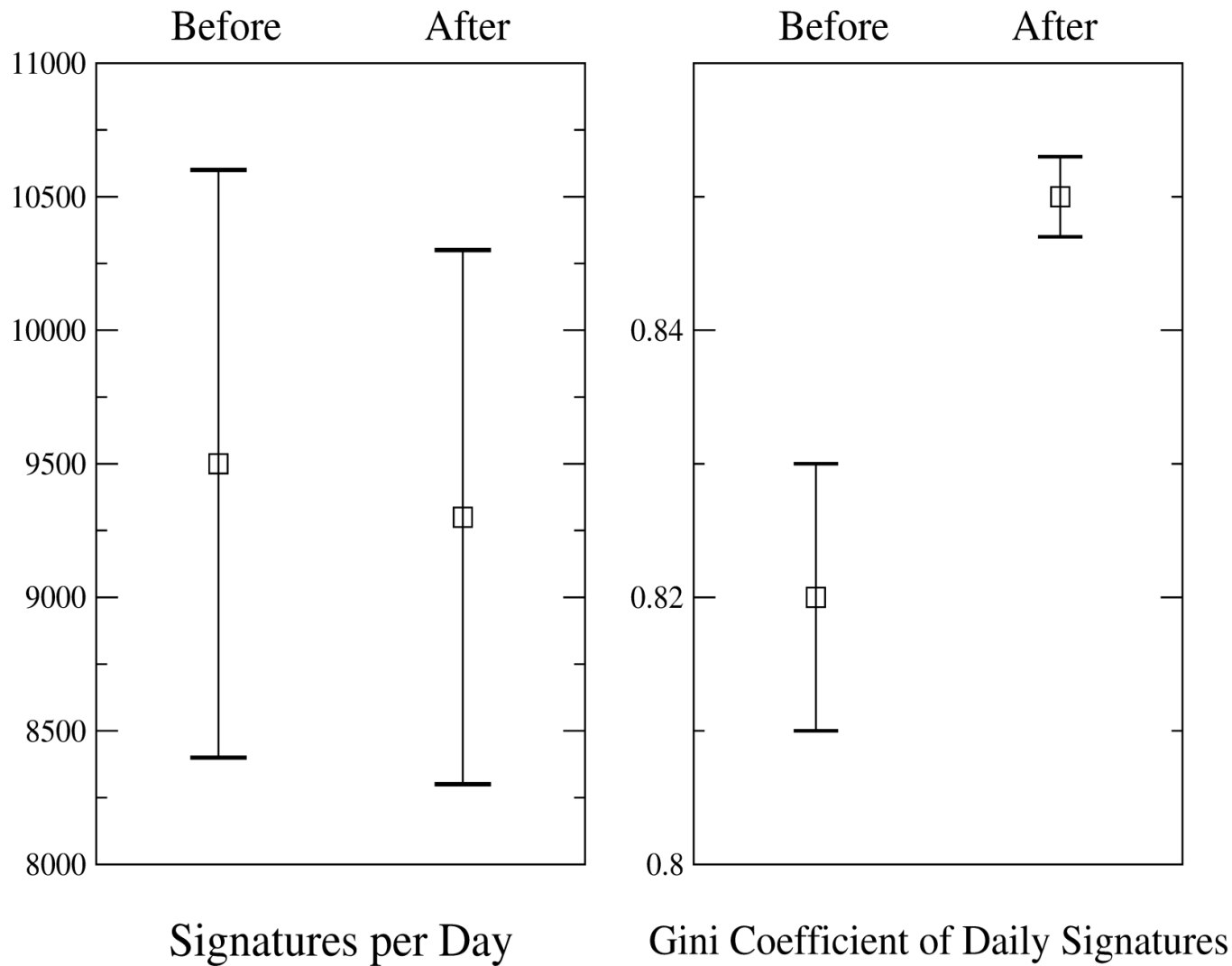
Trending e-petitions

Most active e-petitions in the last hour. Page last updated 19:03 BST.

Make CCTV mandatory for all slaughterhouses 28,336 total signatures	49 signed in the last hour	Driver receives maximum sentence of 14 years per person that has been killed. 17,932 total signatures	46 signed in the last hour
The immediate release of Marine A 76,524 total signatures	23 signed in the last hour	Harvey's Law 37,598 total signatures	18 signed in the last hour
Stop the badger cull NOW 8,899 total signatures	16 signed in the last hour	Improvement of medical care towards children with autism and other disabilities within the hospit... 373 total signatures	14 signed in the last hour

[► See more trending e-petitions](#)

Social information reinforces (un)popularity



4

Leadership without
leaders?

MORTON CHAVES

E SILVA

JOÃO MACHADO



AV. MORTON CHAVES
NOVA DESEMPENHA
P. R. L. F. N. L. COM. 8

Summing up

- Tiny acts of participation - can scale up to large-scale mobilizations (but mostly don't)
- Lacking leaders, institutions, organizations, collective identity
- Mobilizations are unstable, unpredictable – unsustainable
- Leading to **political turbulence** and a model of democracy which looks like **chaotic pluralism**
- Requiring institutional redesign for new engagement

The Democratic Party is Broken

04/01/2016 11:08 am ET | Updated Apr 01, 2016



Kathleen Frydl 

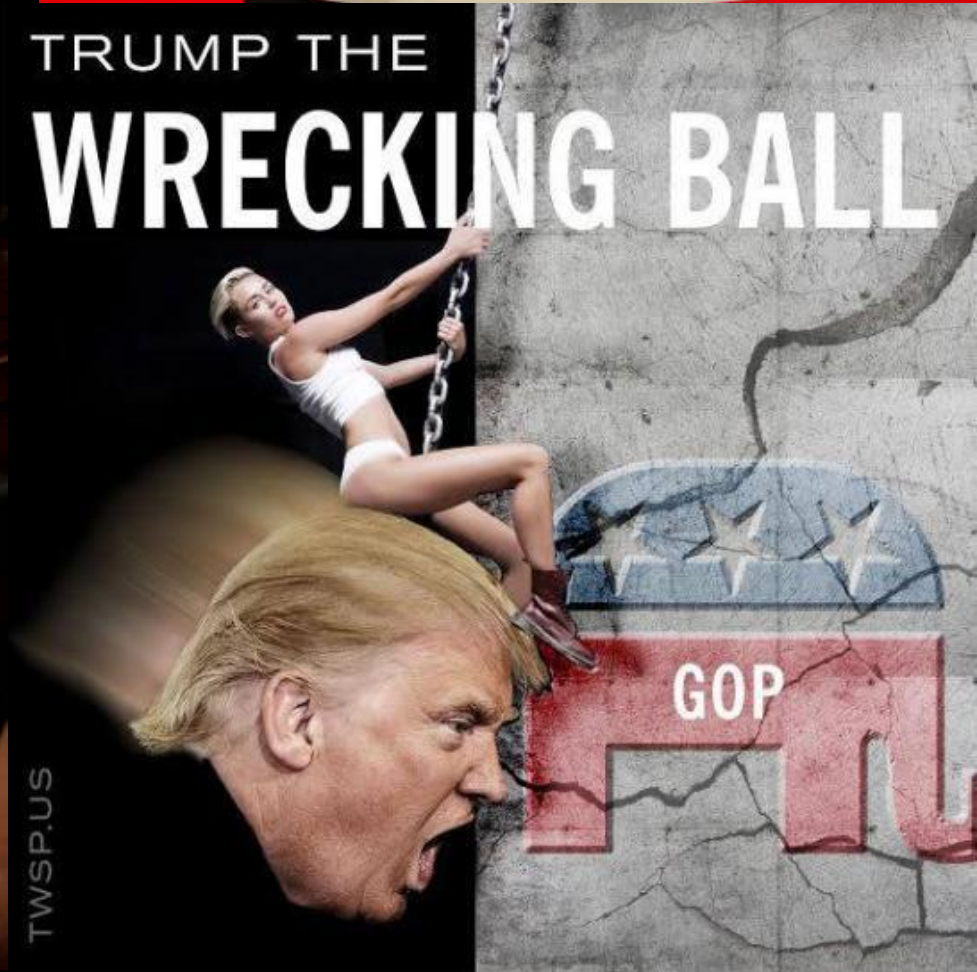
Historian studying US state power, policies, and the institutions that shape American life.



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TRUMP THE WRECKING BALL



A computational social science for political turbulence

Take a few issues on our minds post-election:

- Fake news (how to detect?)
- Echo chambers (do they exist?)
- Advertising on social media (was that what won it?)
- The rise of hate (or exposing dark secrets?)
- Political bots (will they destroy political participation?)

We will need:

- Multi-disciplinarity (including social science)
- Data sources, partnerships
- Machine learning, algorithm design... the tools of social data science
- Experimentation
- Ethical framework that is part of the science