The Computational Social Science of (Turbulent) Politics

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social media = internet platforms that allow users to generate content

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

Monthly Active Users

- Other
- Asia
- Europe
- US & Canada

300,000,000

200,000,000

100,000,000

2010   2011   2012   2013   2014

Date
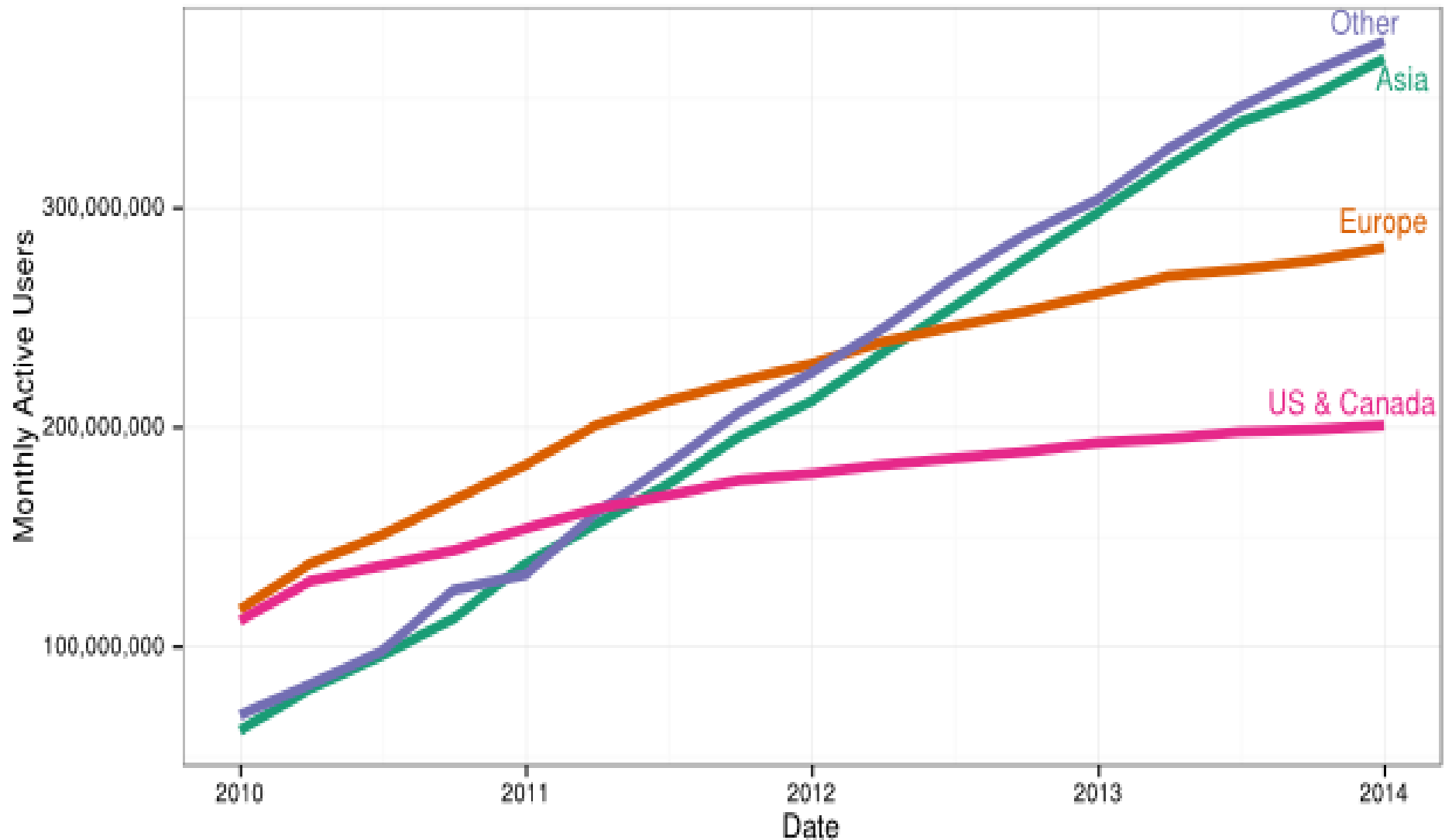
Facebook data, annual reports

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

Stop the badger cull PETITION please sign >>>
epetitions.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: epetitions.direct.gov.uk/petitions/38257

Expand   ← Reply   ↔ Retweet   ★ Favorite   ••• More

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HM Government

Search published e-petitions

All e-petitions

Open	Closed	Rejected
(5,718)	(18,273)	(20,955)

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

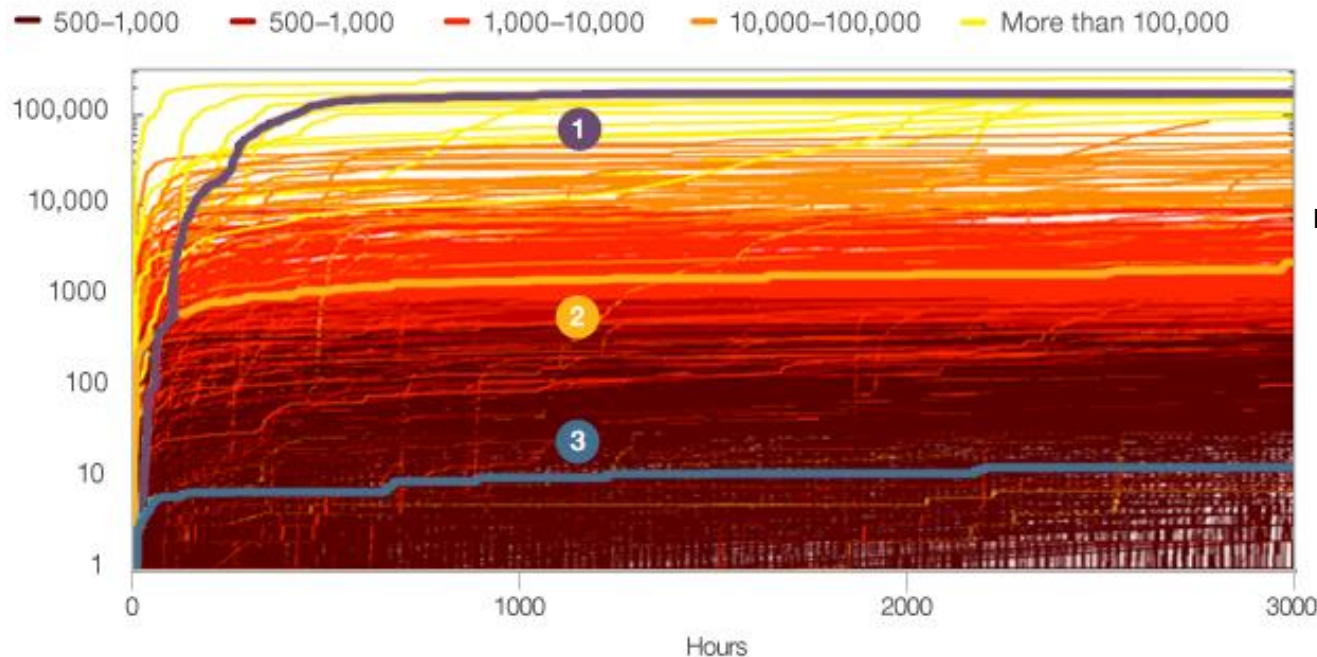**Tiny acts of participation can scale up to huge mobilizations which …**

… 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

— 500–1,000   — 500–1,000   — 1,000–10,000   — 10,000–100,000   — More than 100,000

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

1. Total signatures: 294,264
2. Total signatures: 3,588
3. Total signatures: 15
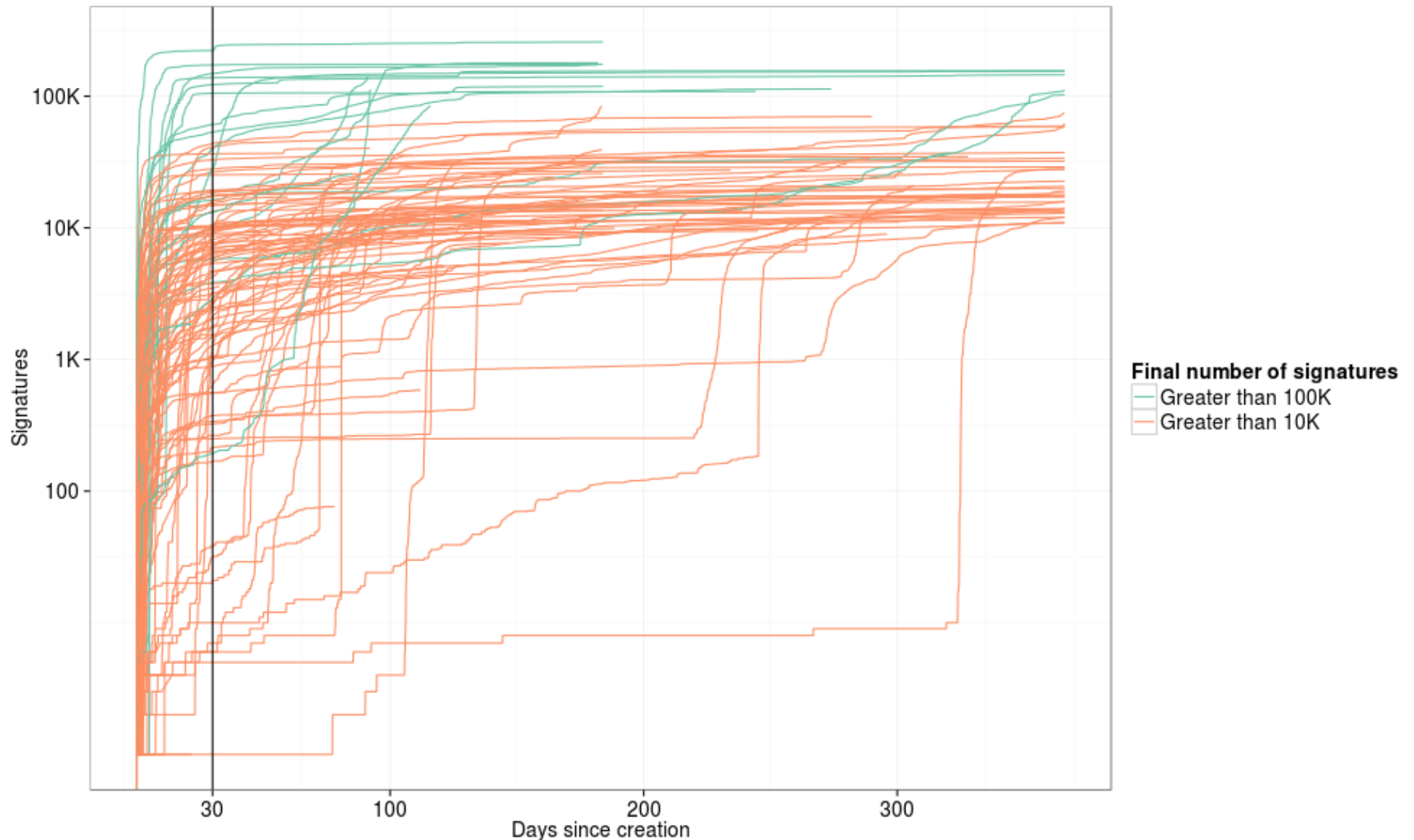
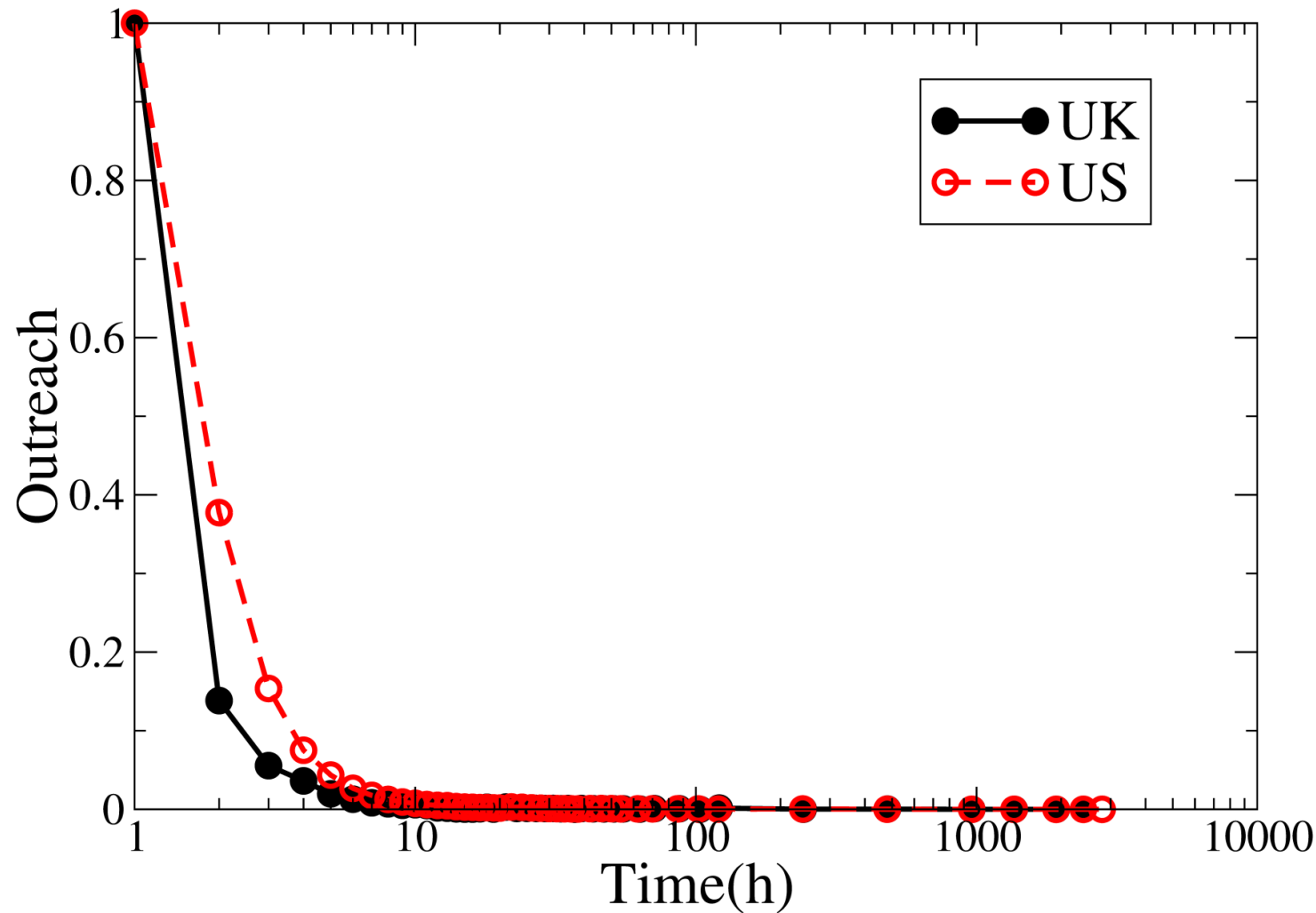Source: Oxford Internet Institute at the University of Oxford

Most mobilizations fail

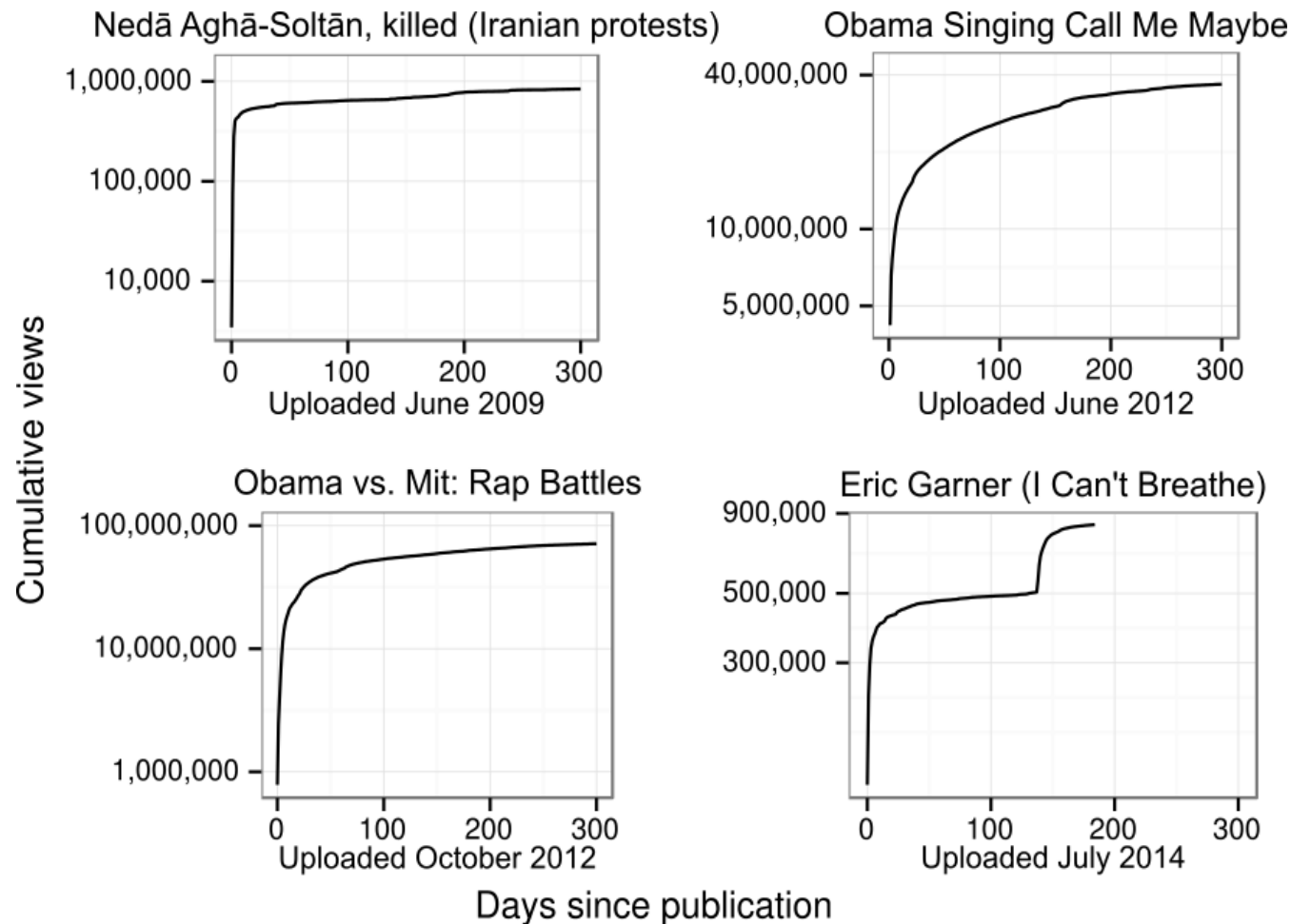# Successful mobilizations develop fast

Petitions receiving more than 10,000 signatures

Collective attention decays very quickly

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

Modeling the Rise in Internet-based Petitions
T Yasseri, SA Hale, H Margetts - arXiv preprint arXiv:1308.0239, 2013

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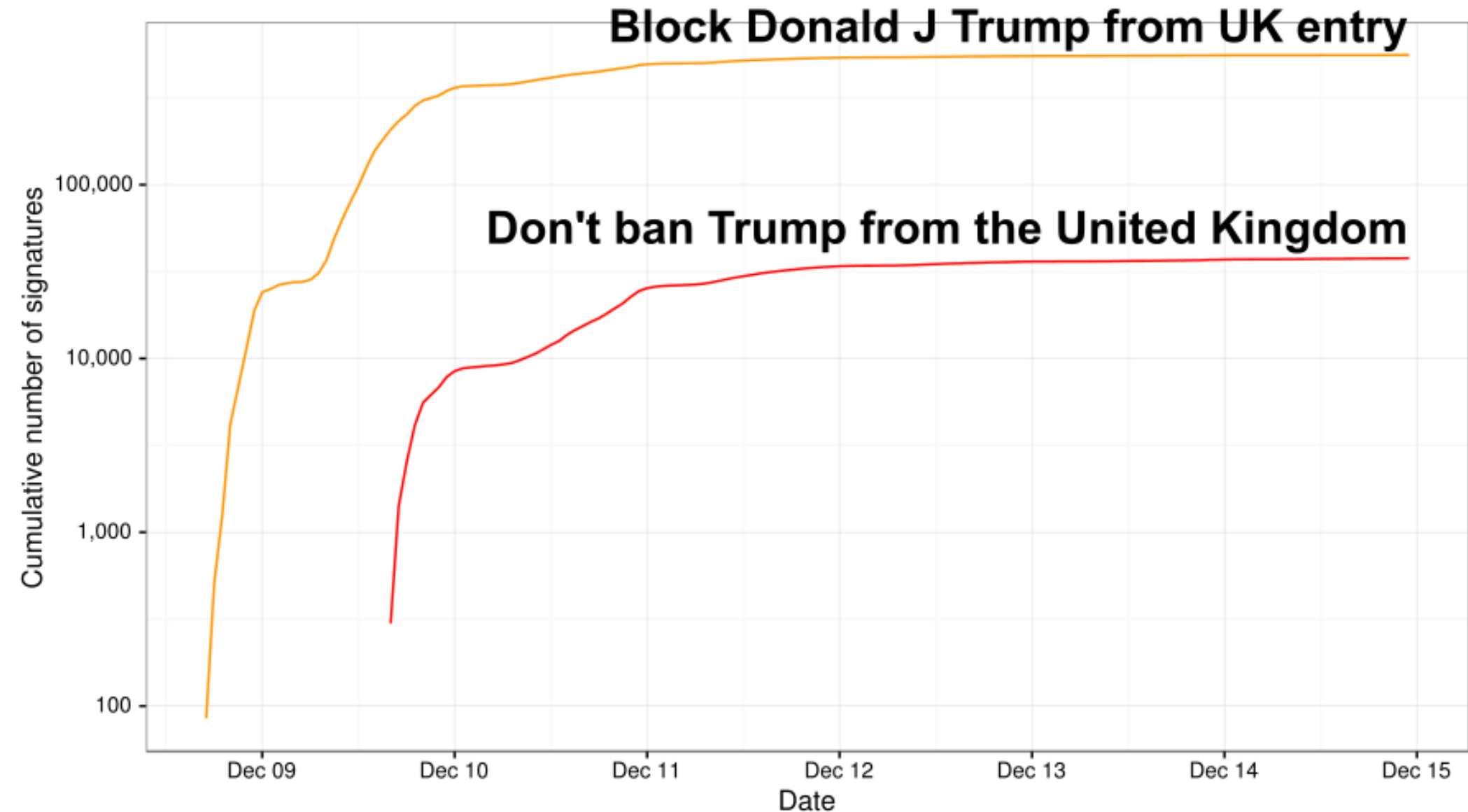# YouTube videos show similar pattern (no s-shape)

Mobilizations against policing in the US
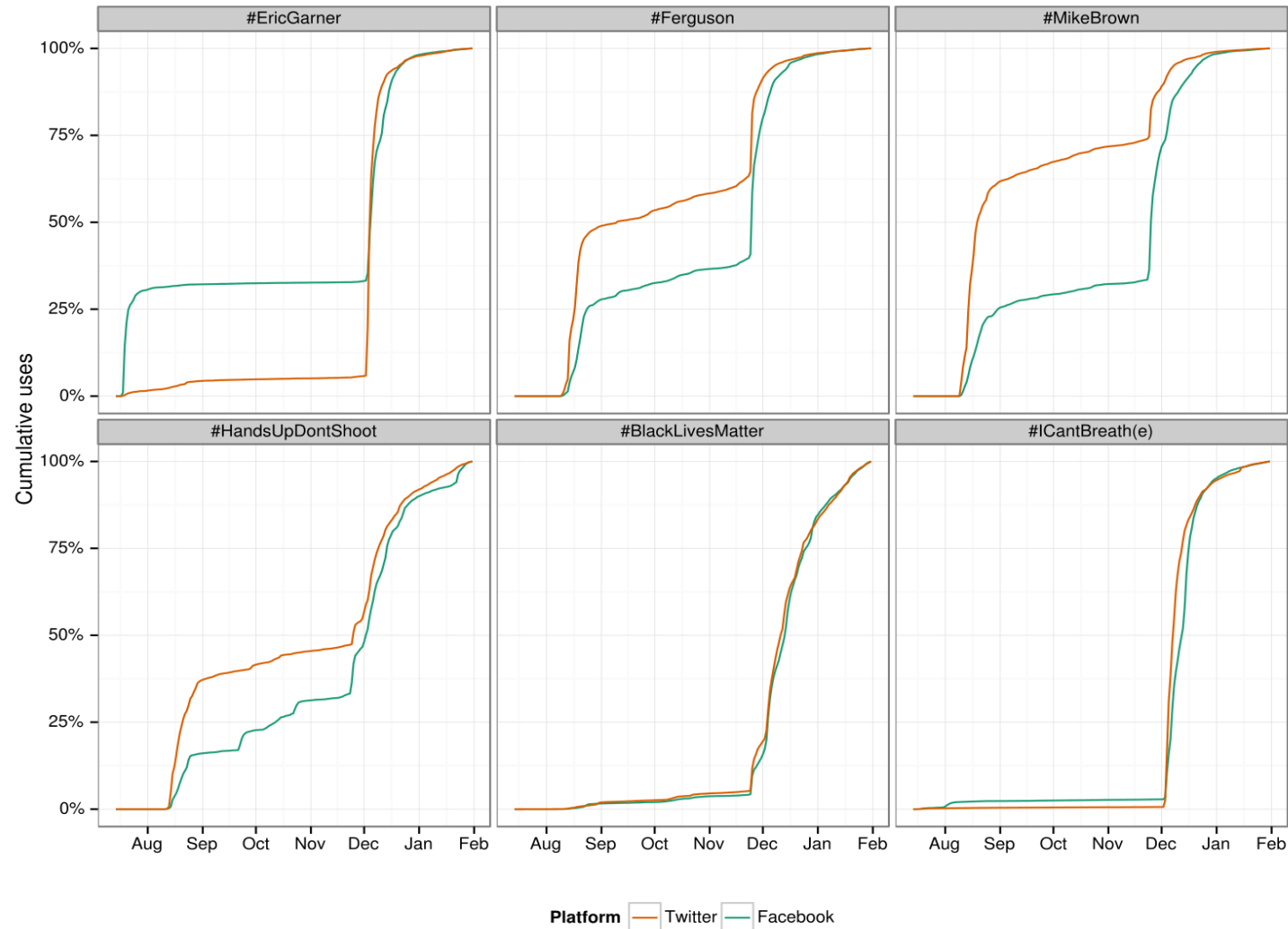
Source: Margetts et al (2015) Political Turbulence: How Social Media Shape Collective Action, Princeton University Press.

To block or not to block Trump

Block Donald J Trump from UK entry

Don't ban Trump from the United Kingdom

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

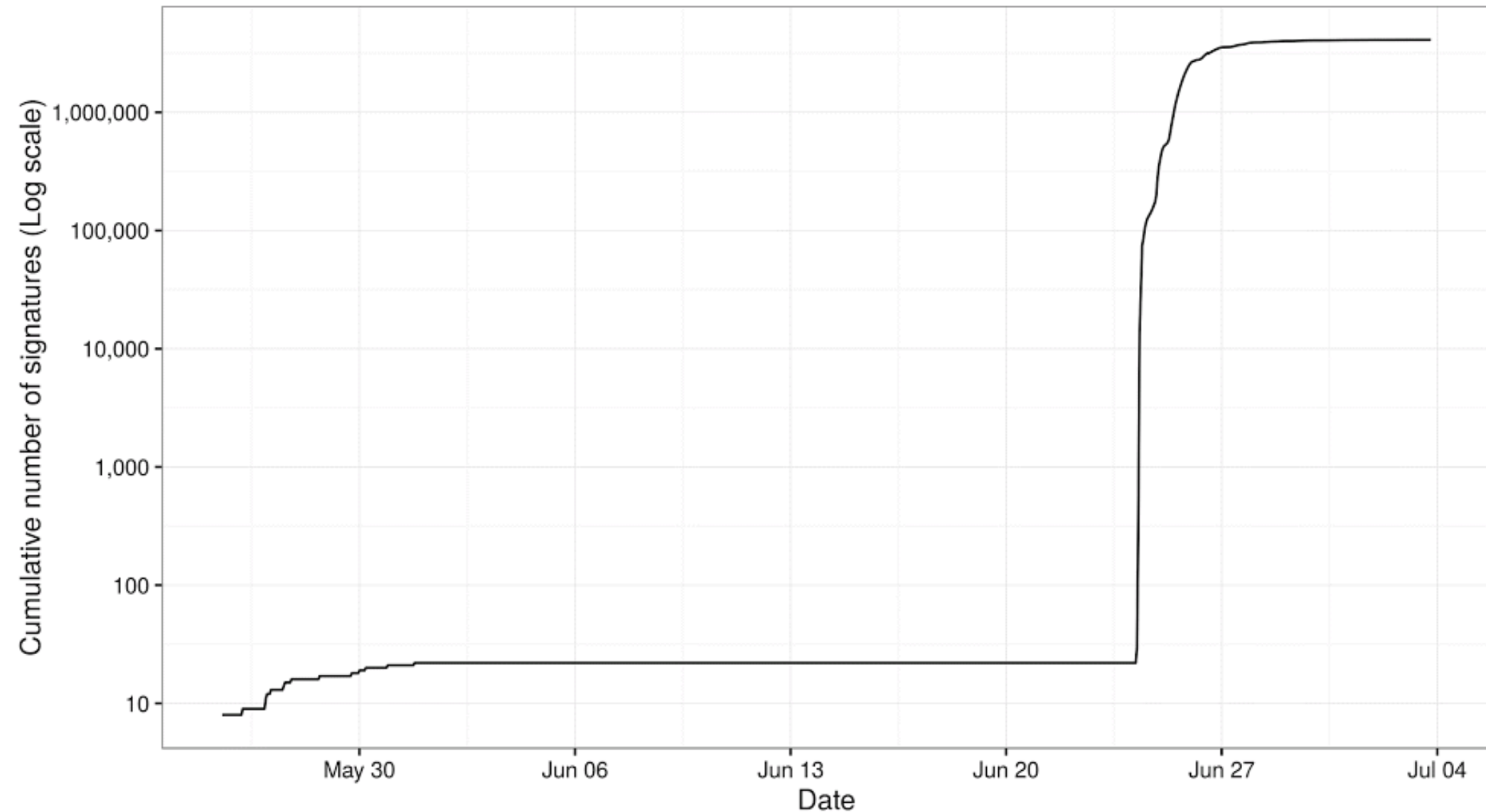Show on a map   100,000

🏛 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

Margetts, H., John, P., Escher, T., and Reissfelder, S. (2011) 'Social Information and Political Participation on the Internet: an Experiment', *European Political Science Review,* 3(3): 321:344.

Social information and visibility as drivers of political behaviour

Experimenting with social information: a natural experiment

Social information reinforces (un)popularity
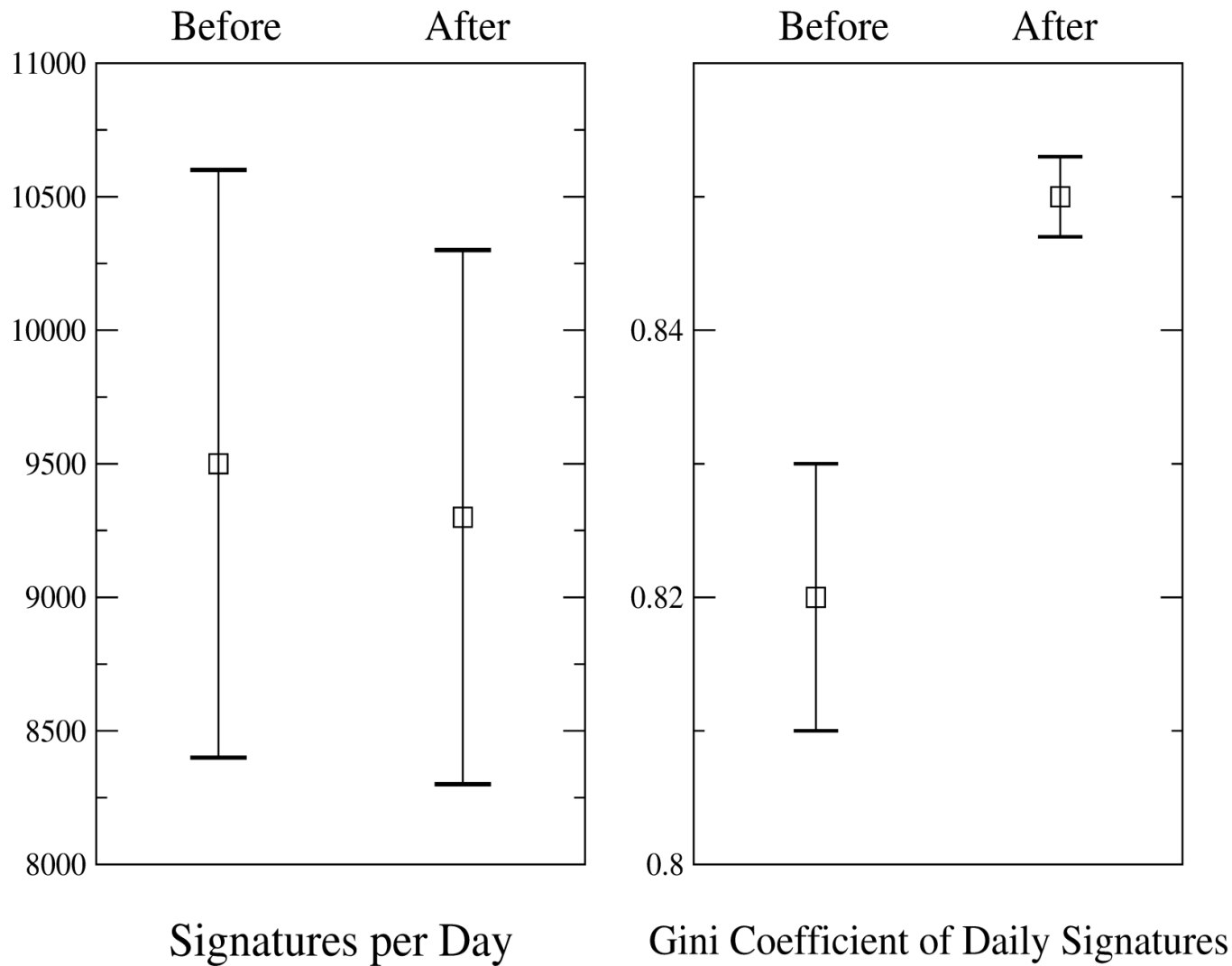
Investigating Political Participation and Social Information Using Big Data and a Natural Experiment
SA Hale, P John, HZ Margetts, T Yasseri – Paper to APSA 2014 Annual Meeting, Washington DC 2014

Leadership without leaders?

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

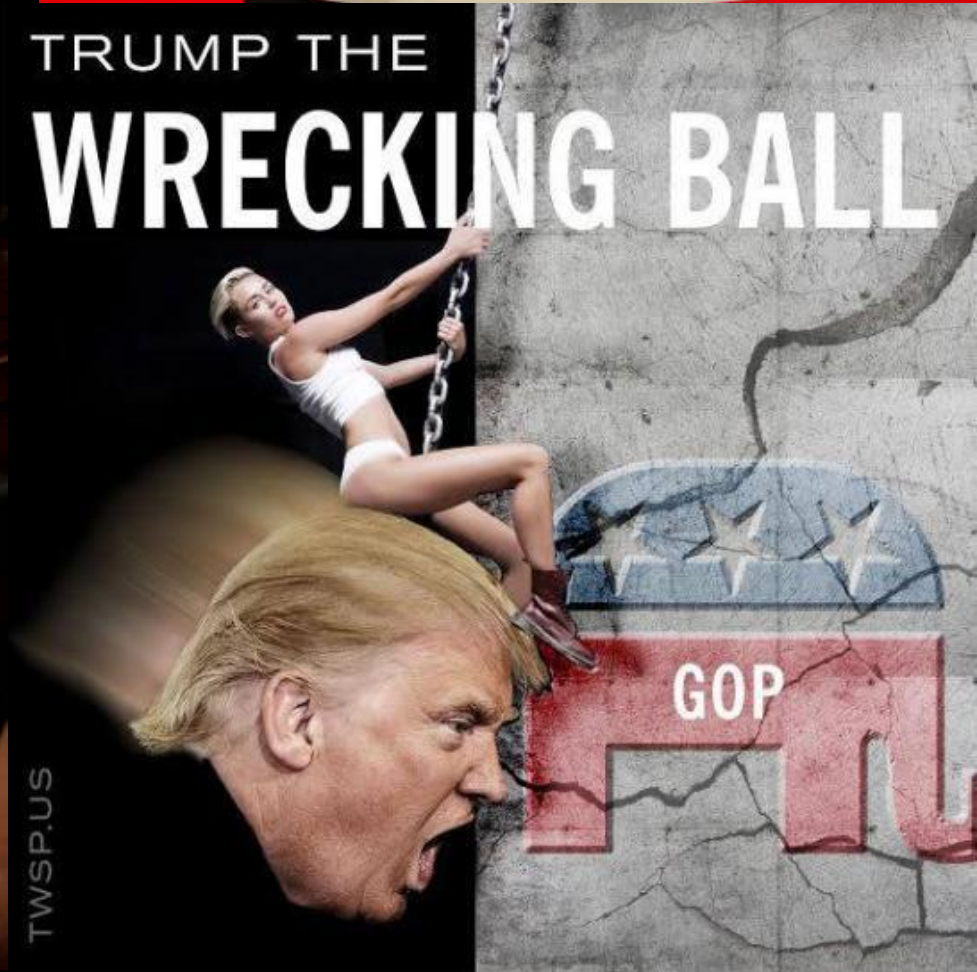04/01/2016 11:08 am ET | Updated Apr 01, 2016

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

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TRUMP THE
WRECKING BALL

GOP

TWSP.US

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**