

Measuring Cross-Cultural Stimulus-Response on the Internet

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Abstract

The Internet is now an accepted form of discourse around the world on subjects ranging from the mundane to the serious. Social media provides data on attitude diffusion regarding events across the world. In addition to providing valuable data for social science research, the Internet is allowing new forms of social and political behavior to occur. We present background on how open-source free web analysis tools can be used to gather opinions in regions of otherwise sparse data.

The Purpose of the Sparse Data Project

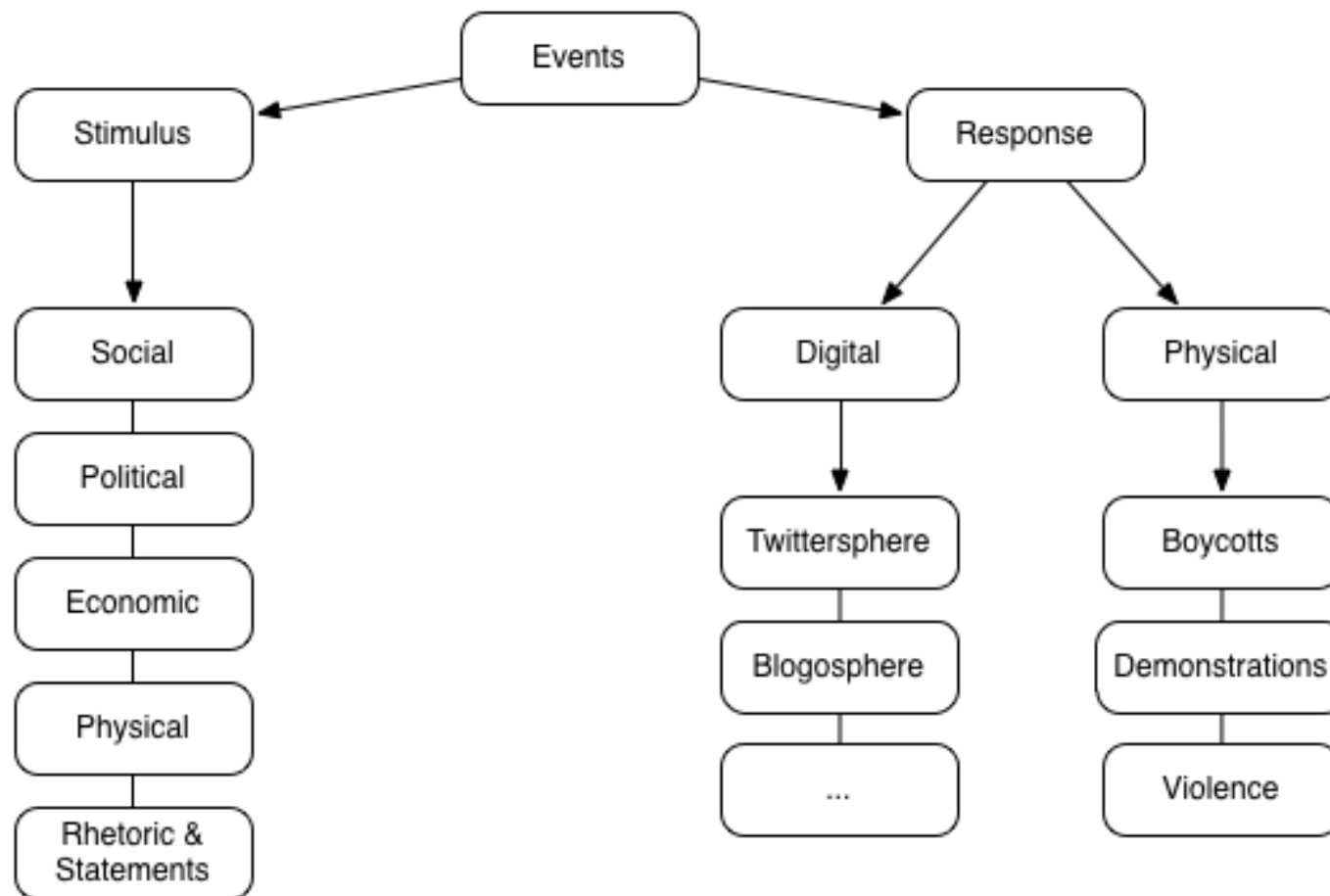
There are regions of the world where there is little conventional access in order to assess the population. These are regions of sparse data. It is our intent to measure cross-cultural stimulus-reponse in these regions via the Internet.

Project Members:

- Principal Investigator: Edward P. MacKerrow
- Miles Parker <http://metaABM.org>
- Jen Watkins <http://jenwatkins.com>



Stimulus Response



Sparse Data: 2009 Iranian Protests



During the protests of the 2009 Iranian Election

- forcibly closed or limited the coverage of the media
- jammed broadcasts out of the country
- block cell phone calls and text messaging
- Internet access and access to Facebook, Twitter, and YouTube were blocked

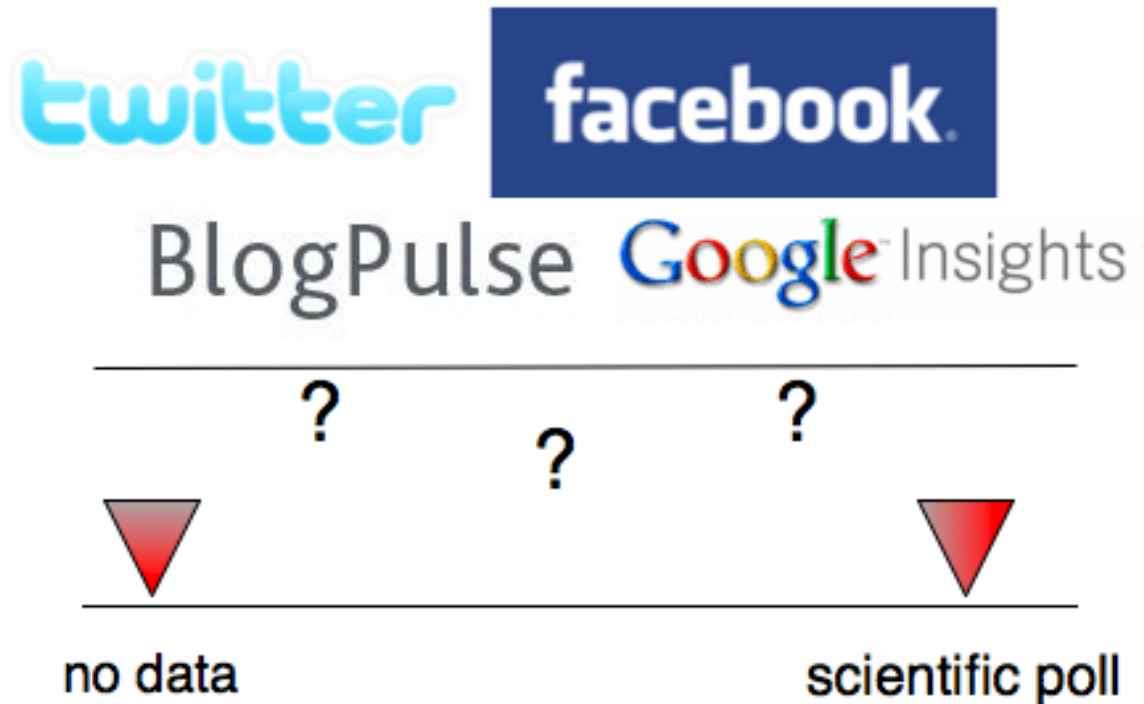
Abundant Data: Twitter Revolution

Protestors turned to Twitter and other social media sites to

- avoid being silenced
- organize protests
- report on events
 - ★ video of violence captured by cell phone cameras



What kind of analysis can one really do through social media?



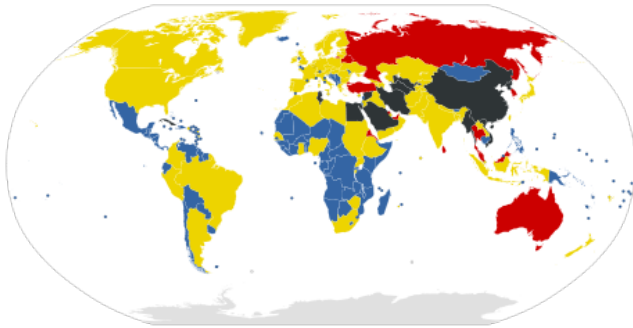
What do pollsters concern themselves with?

- Who has access to the survey medium?
 - ★ Who is not reachable by phone on a land line?
- What do we know about those polled?
 - ★ Pro Ahmadinejad or Pro Mousavi?
- Will the data obtained be useful?
 - ★ On a scale of 1 to 5...
- Will the attitudes expressed affect behavior?
 - ★ Will you be voting for the candidate?

Who has access to the Internet?

Internet Access: Censorship

But didn't Iran block access to the Internet?



25% of the world's population is affected by www censorship¹

Internet censorship can be circumvented through proxies or VPN's

¹<http://woorkup.com/2010/06/27/internet-censorship-report/>

Internet Access: Usage

Who uses the Internet in Iran:

- predominantly middle and upper class
- certain degree of net savviness to skirt blockages
- language limitations



What do we know about those participating?

Demographics

What are we able to determine about users?

Service	Personal Information
Twitter	language, timezone, tweet location
Facebook	current town, hometown, age, sex
Google Insight	location by IP
BlogPulse	rank, citations

Will the data obtained by useful?

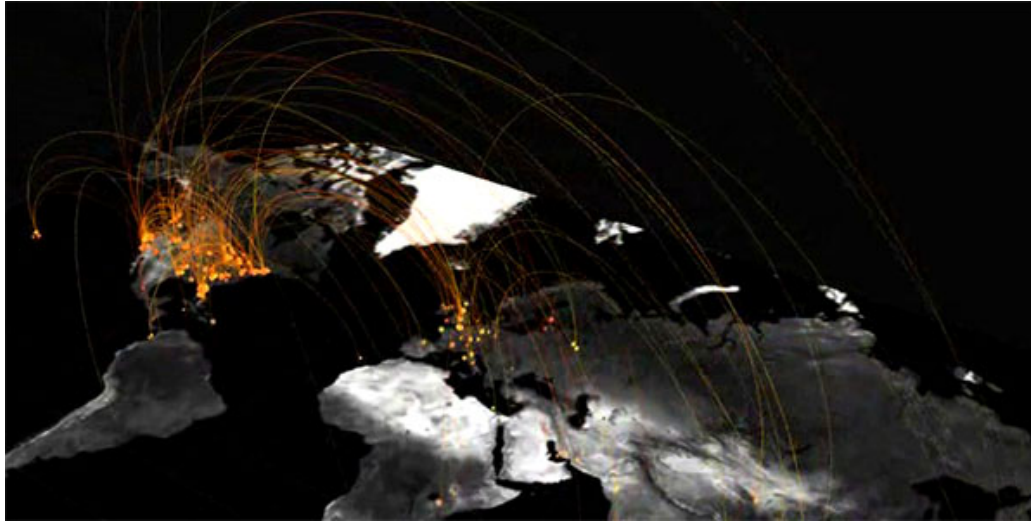


Stimulus-Reponse: Things we want to know

- demographic features of response
- geographic features of response
- quantify size of response
- temporal features of response
- quality of response: sentiment analysis
- digital response vs. physical response



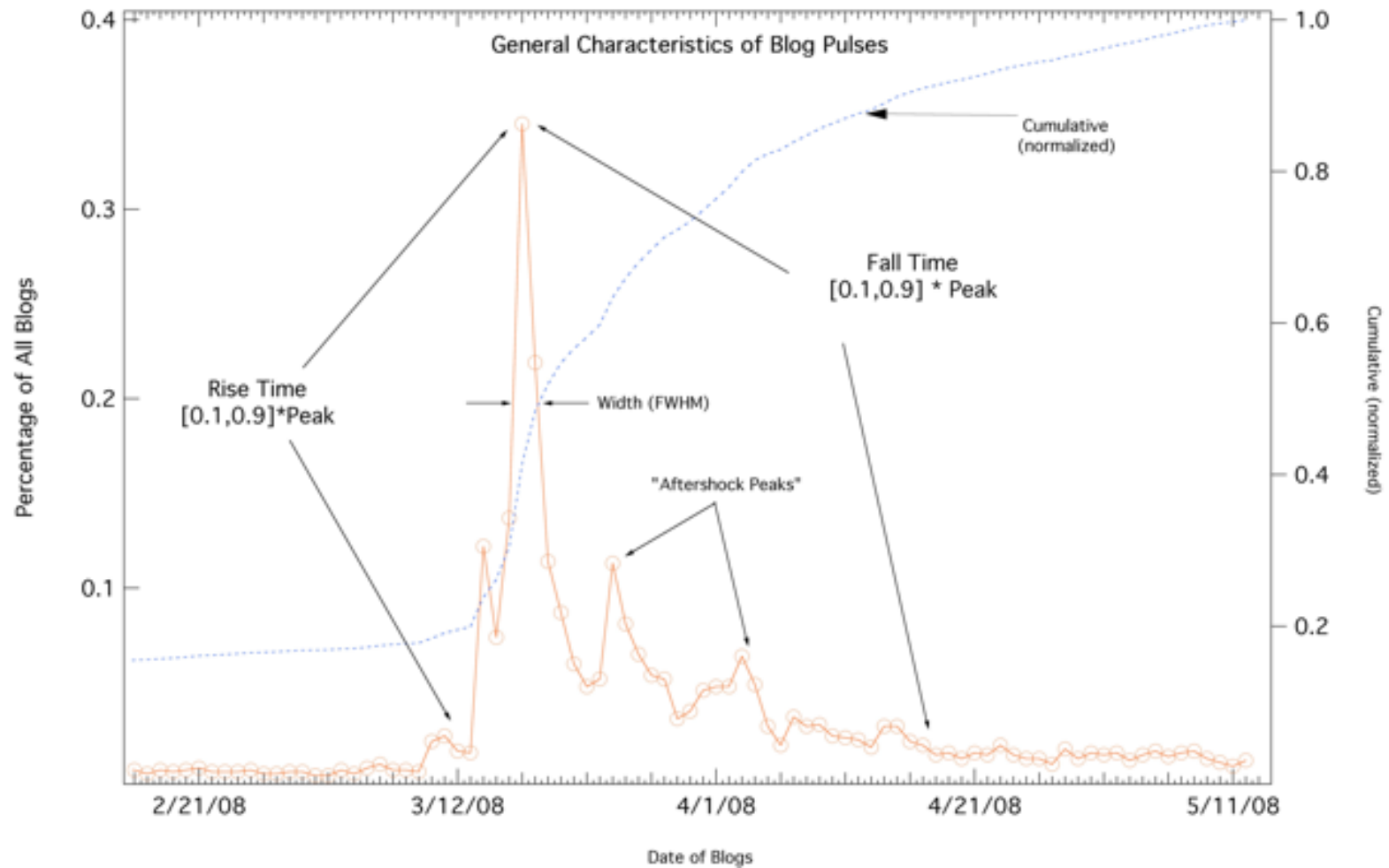
Location-based Technologies



- Find the phrase "Just landed in" as the end location and the home location of the profile ²

²http://infosthetics.com/archives/2009/05/just_landed_visualizing_the_tweets_of_people_that_have_just_landed.html

Response Spikes: Characteristics

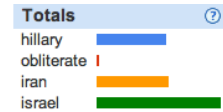


Response Spikes: For Free!

Web Search Interest: hillary, obliterate, iran, israel

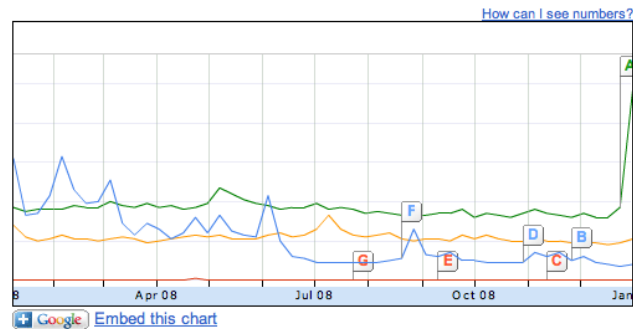
Worldwide, 2008

Categories: [News & Current Events](#), [Entertainment](#), [Games](#), [Reference](#), [Local](#), [Sports](#)



Interest over time

☐ Forecast ? ☒ News headlines

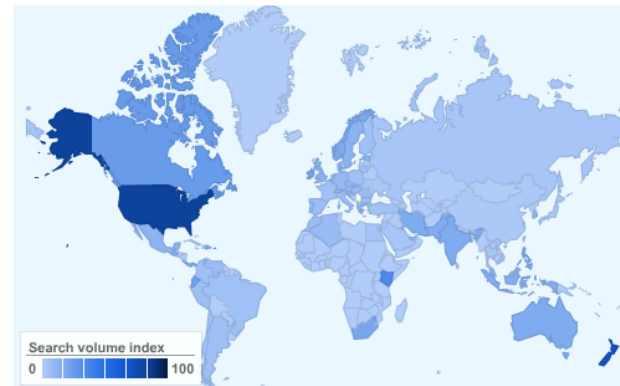


See worldwide top rising searches by clearing the search terms

- A** [Israel bombs Gaza in 'war' on Hamas](#)
- B** [Obama names Hillary Clinton secretary of state](#)
- C** [It's not revenge, it's a reckoning: Cougars obliterate Tulsa to pick up Saturday sweep](#)
- D** [Hillary Clinton hails Obama victory](#)
- E** [Facebook can 'completely obliterate' social lives, warns DeBrett's](#)
- F** [Hillary Clinton, speech](#)
- G** [Sun may or may not be about to obliterate Oracle and Microsoft](#)

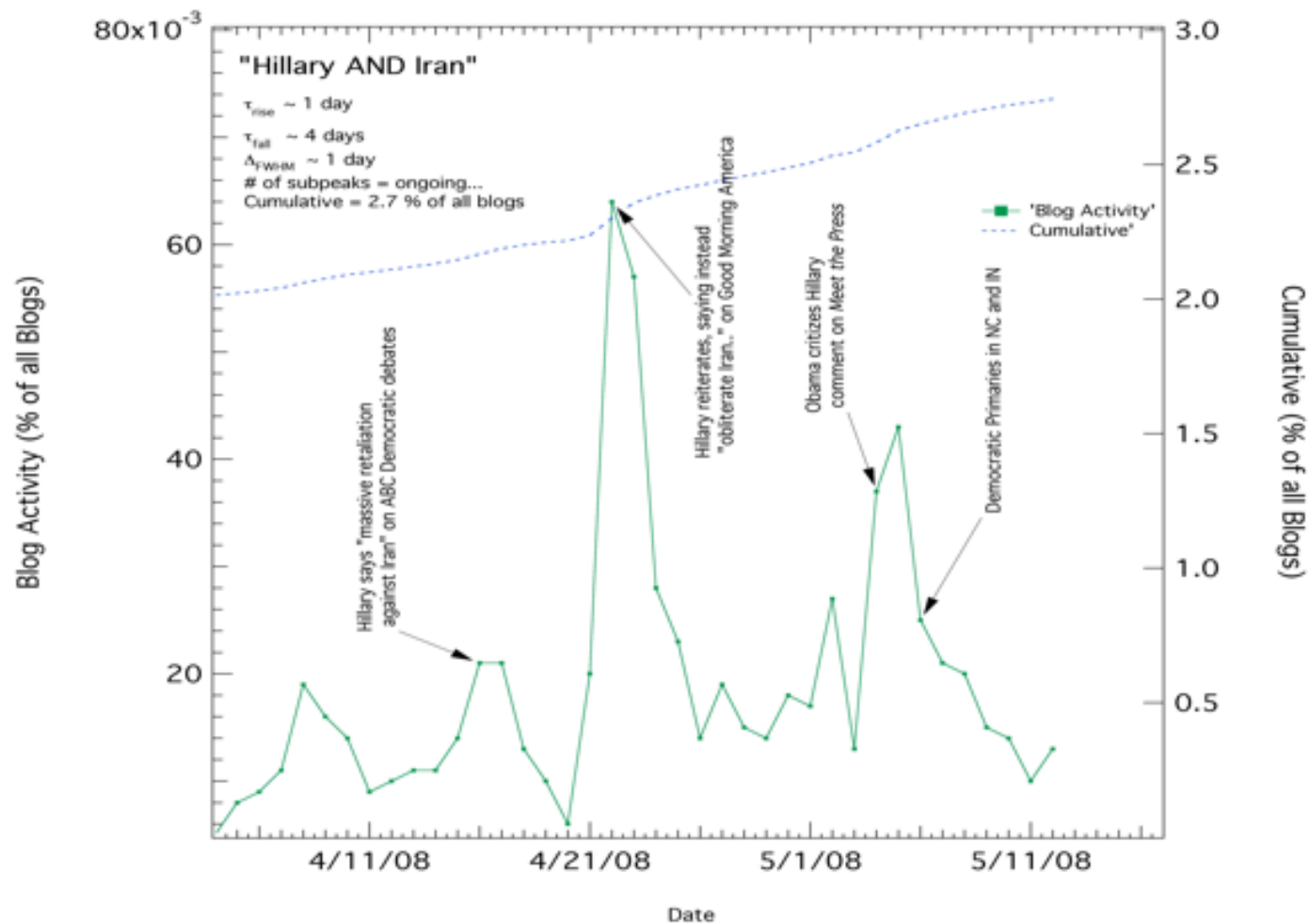
Regional interest

? Region City

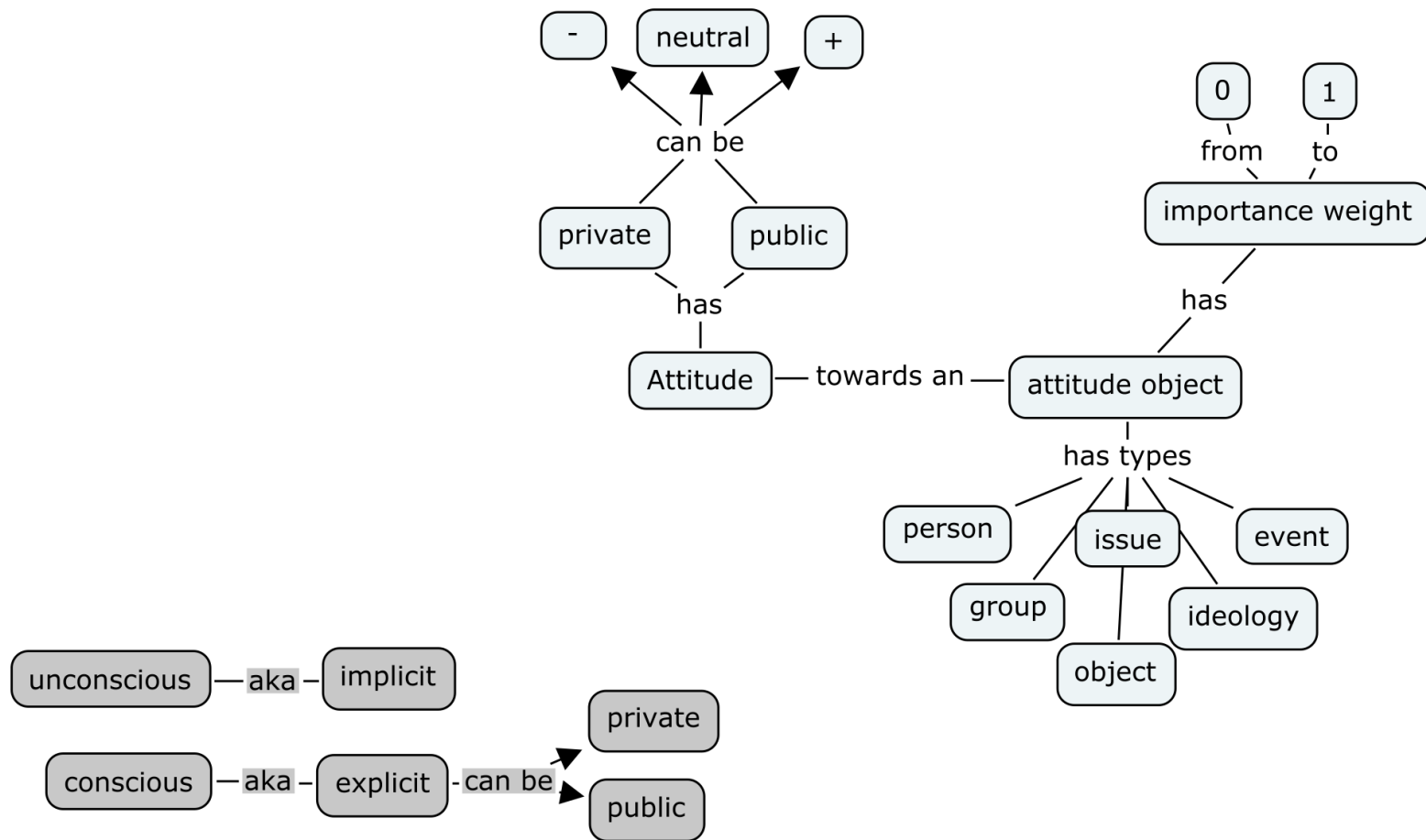


+ View change over time ?

Response Spikes: Processed



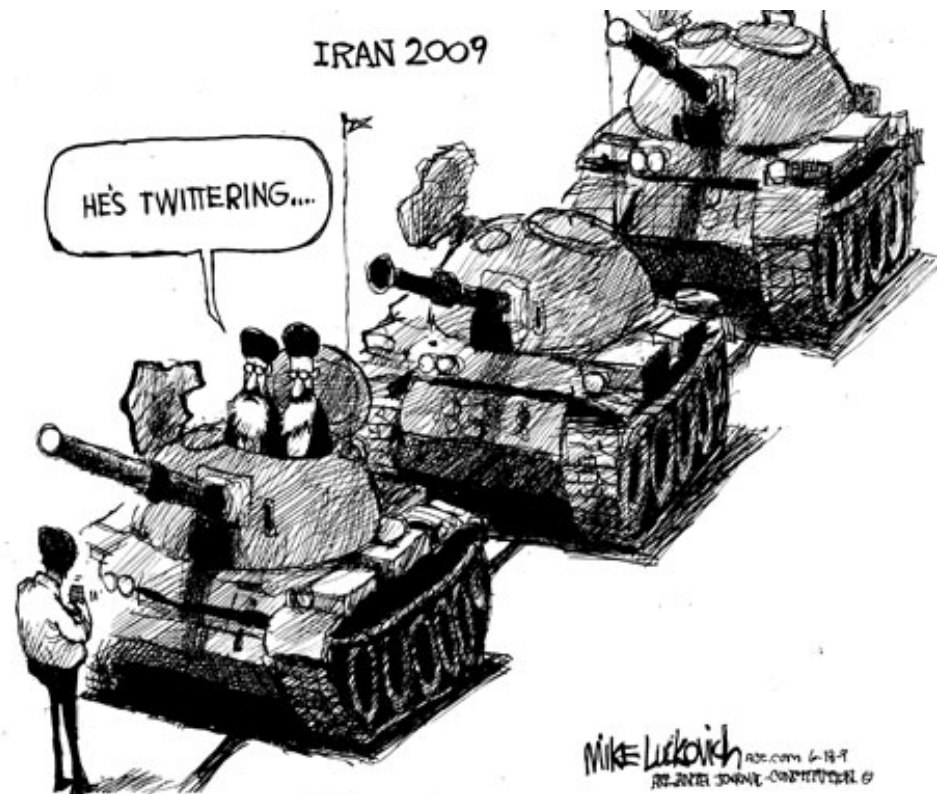
Attitudinal Direction



Will the attitudes expressed affect behavior?

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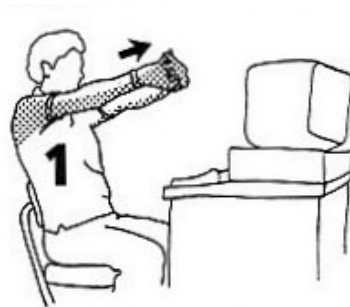
- In Iran, online activity mirrored physical behavior



What kind of analysis can one really do through social media?



When expressing your attitudes online don't forget to stretch



10–20 seconds
2 times



10–15 seconds



8–10 seconds
each side



15–20 seconds



3–5 seconds
3 times



10–12 seconds
each arm



10 seconds



10 seconds