CS 4803 Social Computing: Purposes of Social Computing Systems II

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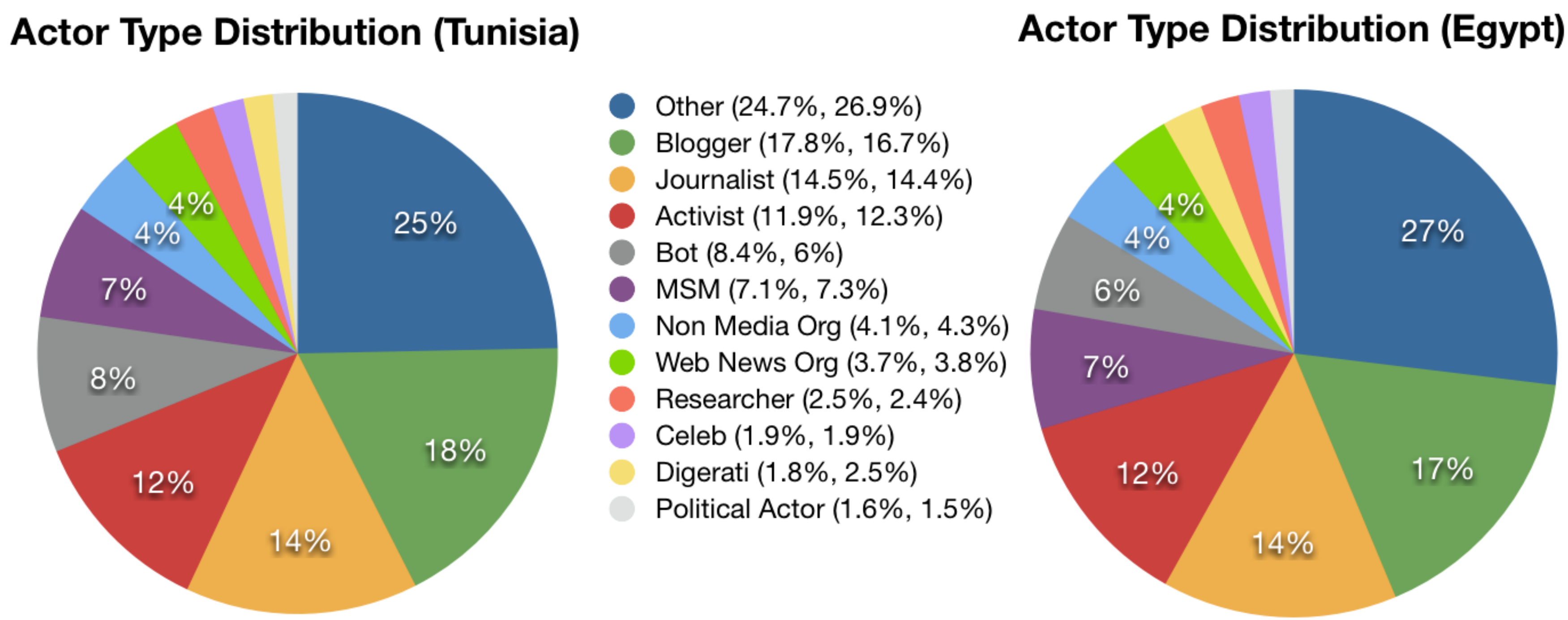
Week 3 | September 2, 2015

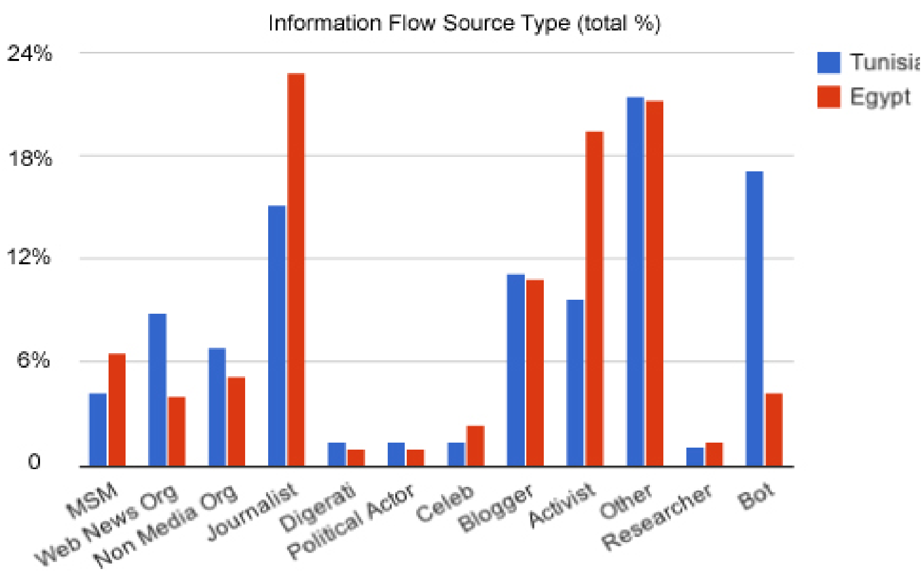
The Revolutions Were Tweeted: Information Flows during the 2011 Tunisian and Egyptian Revolutions

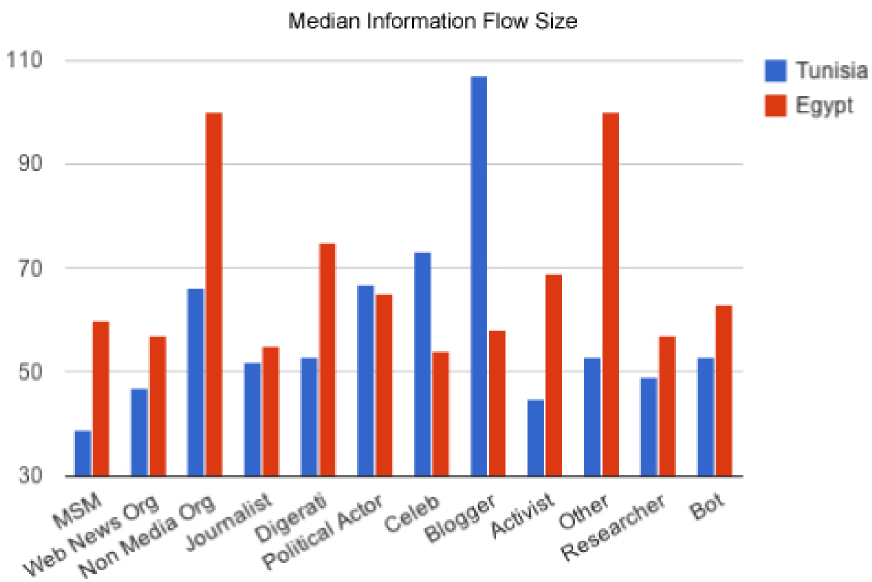
Summary

- Analysis of Twitter information flows during the 2011 Tunisian and Egyptian uprisings
  - Tunisian demonstrations from January 12–19, 2011
  - Egyptian demonstrations from January 24–29, 2011
- Identify “key actor types,” e.g., MSM organizations, individual journalists, influential regional and global actors, and other participants who actively posted to Twitter on these two revolutions
- Study contagion of information by each actor type
- Examine relationship between traditional news media and social media in the two revolutions



	Median Tweets/Day	Median # of Followers
Organizations	15.98	4004
Individuals (excluding Others)	11.45	2340
Others	9.35	340





Sub-flows (Tunisia)	Count
Activist → Activist	49
Journalist → Other	48
Journalist → Blogger	41
Activist → Blogger	38
Other → Blogger	37
Journalist → Activist	34
Blogger → Blogger	31
Blogger → Other	31
Journalist → Journalist	30
Activist → Journalist	29

Sub-flows (Egypt)	Count
Journalist → Activist	111
Journalist → Other	109
Journalist → Blogger	102
Activist → Other	102
Activist → Activist	100
Other → Other	97
Activist → Blogger	85
Blogger → Blogger	78
Journalist → Journalist	70
Blogger → Activist	69

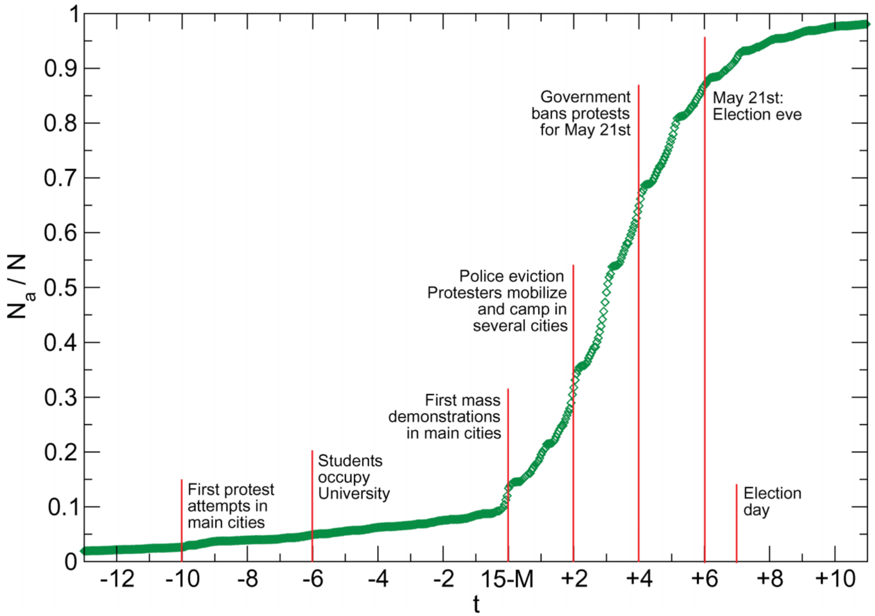
The dynamics of protest recruitment through an online network

Summary

- Basic premise: not much evidence on how exactly SNSs encourage recruitment during protests and movements
    - Limited research on protest growth
    - Research has shown that information cascades in online networks occur only rarely, with the implication that even online it is difficult to reach and mobilize a high number of people
- Analysis of the growth of protests in Spain in May 2011
- Findings:
    - Most early participants – i.e. users who sent a message prior to the first mass mobilizations and to the news media coverage of the events – needed, on average, less local pressure to join, which is consistent with their role as leaders of the movement
    - While being central in the network is crucial to be influential in the diffusion process, there is no topological position that characterizes the early participants that trigger recruitment. This suggests that whatever exogenous factors motivate early participants to start sending messages, the consequence is that they create random seeding in the online network

Summary

- Findings
  - Horizontal organizations are successful at mobilizing people through SNSs because their decentralized structure, based on coalitions of smaller organizations, plant activation seeds randomly at the start of the recruitment process, which maximizes the chances of reaching a percolating core; users at this network core, in turn, contribute to the growth of the movement by generating cascades of messages that trigger new activations, and so forth



Your reflections…

Class Exercise

- Go to search.twitter.com
- Each of you pick one of the hashtags:
  - #FreddieGray
  - #BlackLivesMatter
  - #NoJusticeNoPeace
  - #BaltimoreUprising

- Look at the first six returned tweets.
- What kind of an actor is the author of the tweet?
- How many followers and followees do they have?
- How many tweets?
- Is the tweet retweeted by others?
- Post your results on Piazza (under "discussion")

Traditional news organizations are often not the main actors in the revolutions that were examined. Why is this the case?

Lotan et al quote Shirky “Given that Twitter and other social media tools can be leveraged to spread information, Shirky (2009) has argued that social media may have the potential to provoke and sustain political uprisings by amplifying particular news and information”

How much of an important role did Twitter play in the Tunisian and Egyptian revolutions?

Relatedly, it is important to tease out whether Twitter helped bring interested parties together, or allowed interest to grow in a community. What are the methodological challenges in trying to investigate this question?

The outstanding question remains, what is the role of the average Twitter user? How can such an ecosystem that allows users with more authority to drive conversations, what kind of provisions need to be made to have the voice of the average user heard?

Lotan et al used the shingling method for string comparison to identify information flow patterns. What other alternative mechanisms could be adopted to detect flow of information?

Lotan et al also identified many diverse actor categories ranging from mainstream/non mainstream media, bloggers, activists, celebrities, political actors, researchers, bots, digerati etc. Are these roles context dependent? If so how and what implications does it have in studies of Twitter?

Does the structural position of a user matter in what role emerges out of their activity? Discuss in the light of strong and weak ties.

Other than hand-coding, what could be alternative ways of identifying actor roles on Twitter?

Lotan et al. also noted that different actors engaged differently with their audiences. MSMs and journalists commanded high response rates. Do you expect this to be consistent across events?