CS 6474/CS 4803 Social Computing: Activism, Social Movements, Crisis

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It started with a retiree. Now the Women’s March could be the biggest inauguration demonstration.
Arab Spring – A background

PEOPLE DEMAND REMOVAL OF THE REGIME
Twitter’s transformation -- once the domain of “a bunch of bored hipsters who had an irresistible urge to share their breakfast plans,” turned into “an engine of political revolution.” (Morozov 2011)
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
We assumed that an organization’s Twitter account plays a different role than an individual account, often serving as the official voice of a group, company, or organization. We define organization accounts as the following: MSM, non-media org, Web news org, and bots (which, in many cases, are controlled by automated programs representing no individual interests). All other actor types are considered individual accounts. In comparing organization accounts to individual accounts in our datasets, we found that roughly 70% of the actors in each dataset are individuals.

To understand further how different actor types behaved, we looked at their tweet to retweet ratio (see Tables 2 and 3). This is an indication of how often different actors’ tweets are retweeted by their followers. We take this to be a measure of how well actors engage their audiences. At the low end of this metric are “other” users, who are able to elicit retweets approximately 30% of the time, compared to 88% for MSM accounts. Additionally, Twitter accounts of organizations (MSM, Web news org, and non-media org) have substantially higher retweet rates (i.e., flow sizes) than do individual accounts.

<table>
<thead>
<tr>
<th>Actor Type</th>
<th>Median Tweets/Day</th>
<th>Median # of Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizations</td>
<td>15.98</td>
<td>4004</td>
</tr>
<tr>
<td>Individuals</td>
<td>11.45</td>
<td>2340</td>
</tr>
<tr>
<td>Others (excluding Others)</td>
<td>9.35</td>
<td>340</td>
</tr>
<tr>
<td>Others</td>
<td>9.35</td>
<td>340</td>
</tr>
</tbody>
</table>
What is Twitter, a Social Network or a News Media?

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ABSTRACT
Twitter, a microblogging service less than three years old, commands more than 41 million users as of July 2009 and is growing fast. Twitter users tweet about any topic within the 140-character limit and follow others to receive their tweets. The goal of this paper is to study the topological characteristics of Twitter and its power as a new medium of information sharing.

We have crawled the entire Twitter site and obtained 41.7 million user profiles, 1.47 billion social relations, 4,262 trending topics, and 106 million tweets. In its follower-following topology analysis we have found a non-power-law follower distribution, a short effective diameter, and low reciprocity, which all mark a deviation from known characteristics of human social networks [28]. In order to identify influentials on Twitter, we have ranked users by the number of followers and by PageRank and found two rankings to be similar. Ranking by retweets differs from the previous two rankings, indicating a gap in influence inferred from the number of followers and that from the popularity of one’s tweets. We have analyzed the

1. INTRODUCTION
Twitter, a microblogging service, has emerged as a new medium in spotlight through recent happenings, such as an American student jailed in Egypt and the US Airways plane crash on the Hudson river. Twitter users follow others or are followed. Unlike on most online social networking sites, such as Facebook or MySpace, the relationship of following and being followed requires no reciprocation. A user can follow any other user, and the user being followed need not follow back. Being a follower on Twitter means that the user receives all the messages (called tweets) from those the user follows. Common practice of responding to a tweet has evolved into well-defined markup culture: RT stands for retweet, ’@’ followed by a user identifier address the user, and ’#’ followed by a word represents a hashtag. This well-defined markup vocabulary combined with a strict limit of 140 characters per posting conveniences users with brevity in expression. The retweet mechanism empowers users to spread information of their choice beyond the reach of the original tweet’s followers.
That's Old News!
How social media is replacing traditional journalism as a news source

The Truth About News Sources

- Over 50% of people have learned about breaking news via social media rather than official news sources.
- 46% of people get their news online at least 3x a week.
- As of 2012, online news revenue has surpassed print newspaper revenue.

8 News Stories that Broke via Social Media

- Egyptian Uprising (Facebook)
- Announcement of the royal wedding (Facebook)
- Hudson River Plane Crash (Twitter)
- Protests killed in Bahrain (Facebook)
- Whitney Houston's death (Twitter)
- Hillary Clinton won't be in a 2nd term Obama cabinet (Twitter)
- Osama bin Laden raid and death (Twitter)

The 1st person to tweet about the Osama bin Laden raid was a neighbor who, while complaining about the noise next door on Twitter, unknowingly tweeted about one of the biggest news stories of the decade.

Where do People Get Their News Overall?

- Social media makes a strong showing as an online news source.
- Facebook: 59.5%
- Twitter: 19.9%
- YouTube: 12.7%
- Google+: 11.6%
- Other: 42.8%

Since 2009, traffic to news sites from social media platforms has increased 57%.

9% of adults who get news on a digital device use Facebook or Twitter to get that news very often.

To understand the impact of actor types on the information flows, we look at two important attributes: **source** and **size**. An information flow's source refers to the user who first posted the content. If we look at the distribution of information flows across source types, the differences in dynamics between the Tunisia and Egypt datasets are prominent (see Figure 3).

*Figure 3. Distribution of Information flows by Source Type for Tunisia and Egypt.*

Note: Bars represent the number of threads (as a % of total threads) in each dataset that were seeded by an actor of the given type.

We define an information flow's size as the total number of participatory tweets, namely, tweets that are close copies or retweets of the information flow source (see Figure 4).

*Figure 4: Information Flow Sizes for Tunisia and Egypt.*

Note: Bars represent the median number of tweets in threads that were originated by an actor of the given type.

When considering the Tunisia dataset, Figures 3 and 4 suggest that, while more journalists than bloggers served as sources for information flows in Tunisia, those flows started by bloggers were substantially larger in size. This suggests that bloggers played an important role in surfacing and disseminating news from Tunisia, as they had a substantially higher likelihood to engage their audience to participate, compared with any other actor type. Additionally, the Tunisia dataset showed less engagement from MSM, journalists, or activists, compared to Egypt.

When looking at the Egypt data, there are very clear distinctions: MSM, journalists, and activists were much more engaged in information flows, serving as the main sources of flows much more than in the Tunisia dataset. Additionally, they drew larger participation from their audience, as measured through flow size. Meanwhile, although non-media orgs account for being the source of 5% of all flows (26 out of 500), they had the largest average size, most notably a flow started by the official WikiLeaks account, which read:

"WikiLeaks did more for Arab democracy than decades of backstage U.S. diplomacy."


In order to gain another dimension of understanding of the flow of information on Twitter and the relationship between actor types in our data, we examined what we call sub-flows. Each information flow is made up of multiple sub-flows. A sub-flow between user A and B (A → B) exists if user B retweeted text that user A had previously posted.

By collapsing every sub-flow within all chosen information flows, we see recurring patterns of retweet behavior among actor types. In the ten most common sub-flow paths between coded actors across both datasets, journalists, activists, bloggers, and "other" actor types are the most prominent (see Table 4). This reinforces the claim that, while organizational actors have larger followings on average, individual actors are much more likely to play an active role in information dissemination.

*Table 4. Ten most Common Sub-flows for each Dataset (Tunisia left, Egypt right).*

<table>
<thead>
<tr>
<th>Sub-flows (Tunisia)</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activist → Activist</td>
<td>49</td>
</tr>
<tr>
<td>Journalist → Other</td>
<td>48</td>
</tr>
<tr>
<td>Journalist → Blogger</td>
<td>41</td>
</tr>
<tr>
<td>Activist → Blogger</td>
<td>38</td>
</tr>
<tr>
<td>Other → Blogger</td>
<td>37</td>
</tr>
<tr>
<td>Journalist → Activist</td>
<td>34</td>
</tr>
<tr>
<td>Blogger → Blogger</td>
<td>31</td>
</tr>
<tr>
<td>Blogger → Other</td>
<td>31</td>
</tr>
<tr>
<td>Journalist → Journalist</td>
<td>30</td>
</tr>
<tr>
<td>Activist → Journalist</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-flows (Egypt)</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalist → Activist</td>
<td>111</td>
</tr>
<tr>
<td>Journalist → Other</td>
<td>109</td>
</tr>
<tr>
<td>Journalist → Blogger</td>
<td>102</td>
</tr>
<tr>
<td>Activist → Other</td>
<td>102</td>
</tr>
<tr>
<td>Activist → Activist</td>
<td>100</td>
</tr>
<tr>
<td>Other → Other</td>
<td>97</td>
</tr>
<tr>
<td>Activist → Blogger</td>
<td>85</td>
</tr>
<tr>
<td>Blogger → Blogger</td>
<td>78</td>
</tr>
<tr>
<td>Journalist → Journalist</td>
<td>70</td>
</tr>
<tr>
<td>Blogger → Activist</td>
<td>69</td>
</tr>
</tbody>
</table>
Social media and the decision to participate in political protest: Observations from Tahrir Square
Summary

• The paper presents a survey study of Tahrir Square protests.
  • Field study approach
  • A survey of media use by Egyptian protesters was fielded over a 4-day period beginning on Friday, February 24, 2011, less than 2 weeks after President Mubarak resigned.
  • Snowball sampling
  • Interviews initially conducted in open streets, but strategy later abandoned

• It shows that Facebook provided new sources of information the regime could not easily control

• Social media was crucial in shaping how citizens made individual decisions about participating in protests, the logistics of protest, and the likelihood of success
Table 2 Percent of Protestors Using Different Media by Purpose and Gender

<table>
<thead>
<tr>
<th></th>
<th>Use In General</th>
<th>For Communicating About Protests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male (n = 792)</td>
<td>Female (n = 258)</td>
</tr>
<tr>
<td>Blog</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>E-mail</td>
<td>83</td>
<td>85</td>
</tr>
<tr>
<td>Facebook</td>
<td>49</td>
<td>60</td>
</tr>
<tr>
<td>Phone</td>
<td>92</td>
<td>93</td>
</tr>
<tr>
<td>Print</td>
<td>64</td>
<td>59</td>
</tr>
<tr>
<td>Satellite TV</td>
<td>93</td>
<td>94</td>
</tr>
<tr>
<td>Text</td>
<td>61</td>
<td>67</td>
</tr>
<tr>
<td>Twitter</td>
<td>15</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 3 Impact of General Media Use on Participation in Protests

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Attended Protests on First Day</th>
<th>Previously Attended Protests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Age</td>
<td>1.007</td>
<td>1.009</td>
</tr>
<tr>
<td>Male</td>
<td>1.294</td>
<td>1.291*</td>
</tr>
<tr>
<td>Education</td>
<td>1.047</td>
<td>0.997</td>
</tr>
<tr>
<td>Internet at home</td>
<td>1.453*</td>
<td>1.318</td>
</tr>
<tr>
<td>Internet on phone</td>
<td>1.092</td>
<td>1.031</td>
</tr>
<tr>
<td>Blogs</td>
<td>1.354*</td>
<td>1.486*</td>
</tr>
<tr>
<td>E-mail</td>
<td>0.799</td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td>1.252</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td>1.137</td>
<td></td>
</tr>
<tr>
<td>Print</td>
<td>1.274*</td>
<td></td>
</tr>
<tr>
<td>Satellite TV</td>
<td>0.540*</td>
<td></td>
</tr>
<tr>
<td>Text messaging</td>
<td>1.128</td>
<td></td>
</tr>
<tr>
<td>Twitter</td>
<td>1.536*</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.214***</td>
<td>0.342*</td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>−682.616</td>
<td>−670.172</td>
</tr>
</tbody>
</table>
An interesting finding...

- The fact that women comprised an impressive 25% of the sample confirmed a significant push by women to be part of the political process.
- Anecdotally, a number of women interviewed in Cairo said that Facebook allowed them to express their opinions and participate in political activity even when they could not attend meetings or when they felt that conditions otherwise discouraged them from speaking up.
Key Takeaway: “[...] social media in Egypt mediated many kinds of ties and brought individuals news, information, and the social support needed to spur participation in political protests.”
Social media, social movements and the diffusion of ideas in the Arab uprisings

Halim Rane & Sumra Salem
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Abstract

This article studies the 2011 Arab uprisings as social movements for political reform and regime change. Social media, particularly Facebook and Twitter, are perceived to be playing a central role in these events, which have even been described as ‘Facebook’ and ‘Twitter revolutions’. Using diffusion theory, this
The Role of Social Media in Mobilizing Political Protest

Evidence from the Tunisian Revolution

Anita Breuer
The Dynamics of Protest Recruitment through an Online Network

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The recent wave of mobilizations in the Arab world and across Western countries has generated much discussion on how digital media is connected to the diffusion of protests. We examine that connection using data from the surge of mobilizations that took place in Spain in May 2011. We study recruitment patterns in the Twitter network and find evidence of social influence and complex contagion. We identify the network position of early participants (i.e. the leaders of the recruitment process) and of the users who acted as seeds of message cascades (i.e. the spreaders of information). We find that early participants cannot be characterized by a typical topological position but spreaders tend to be more central in the network. These findings shed light on the connection between online networks, social contagion, and collective dynamics, and offer an empirical test to the recruitment mechanisms theorized in formal models of collective action.
Social media as a tool for social movements: the effect of social media use and social capital on intention to participate in social movements

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Keywords
social media, media use pattern, social movements, social capital.

Abstract
Social media provide a participatory media environment based on the interactive Web 2.0 platform. This feature makes social media an effective tool for mobilizing people to participate in social movements. This study verified the role of social media in promoting the intention to participate in social movements. Participation intent was higher among those who were more involved in social media. The findings showed that social media improved the social capital which moderates the relationship between social media use
Reflections on #Occupy Everywhere: Social media, public space, and emerging logics of aggregation

Jeffrey S. Juris


ABSTRACT

This article explores the links between social media and public space within the #Occupy Everywhere movements. Whereas listservs and websites helped give rise to a widespread logic of networking within the movements for global justice of the 1990s–2000s, I argue that social media have contributed to an emerging logic of aggregation in the more recent #Occupy movements—one that involves the assembling of masses of individuals from diverse backgrounds within physical spaces. However, the recent shift toward more decentralized forms of organizing and networking may help to ensure the sustainability of the #Occupy movements in a posteviction phase. [social movements, globalization,
#Ferguson:

Digital protest, hashtag ethnography, and the racial politics of social media in the United States

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Rutgers University

JONATHAN ROSA
University of Massachusetts Amherst

ABSTRACT
As thousands of demonstrators took to the streets of Ferguson, Missouri, to protest the fatal police

...
Twitter for Sparking a Movement, Reddit for Sharing the Moment: #metoo through the Lens of Social Media

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{lmanikon, gbeigi, huan.liu, rao}@asu.edu
Arizona State University, Tempe, Arizona, USA

Abstract. Social media platforms are revolutionizing the way users communicate by increasing the exposure to highly stigmatized issues in the society. Sexual abuse is one such issue that recently took over social media via attaching the hashtag #metoo to the shared posts. Individuals with different backgrounds and ethnicities began sharing their unfortunate personal experiences of being assaulted. Through comparative analysis of the tweets via #meToo on Twitter versus the posts shared on the #meToo subreddit, this paper makes an initial attempt to assess public reactions and emotions. Though nearly equal ratios of negative and positive posts are shared on both platforms, Reddit posts are focused on the sexual assaults within families and workplaces while Twitter posts are on showing empathy and encouraging others to continue the #metoo movement. The data collected in this research and preliminary analysis demonstrate that users use various ways to share their experience, exchange ideas and encourage each other, and social media is suitable for groundswells such as #metoo movement.
Stages in Social Movements

- **Preliminary stage** - people begin to become aware of a threatening problem.
- **Coalescence stage** - people begin to organize and start making the threat known to the public.
- **Institutionalization stage** - organizational structure develops.
Discuss how social media platforms have been disrupting activism and social movements in contrast to traditional activism.
Revisiting Tufeki and Wilson...

- Years of activism, blogging, training, conferences, and key platforms like NGOs meant that there was already a community of “tweeps” who knew each other, had often met in person, and trusted each other.
- Many of the activists who would later play prominent roles had met in person.
  - Facebook was good at motivating people to come back to protests after they had already been in one
- Strong ties on social media were helpful in continual participation
Parallels with historical social movements

- Research about the civil rights era in the United States emphasizes the role of strong ties (McAdam, 1999)

- But how about weak ties and the role of Twitter in motivating first time participation?

- Other research on the civil rights movement also indicates that “sit-ins” often occurred because the Black students in college towns heard of the idea on television or radio, rather than from their social networks, and adopted it because it made sense in their political context (Andrews & Biggs, 2006)

- Weak ties help in mobilization?
“Because of social media we reach people in the smallest corners of America. We are plucking at a cord that has not been plucked forever. There is a network and a hashtag to gather around. It is powerful to be in alignment with our own people”

- Cullors-Brignac, one of the cofounders of the BLM movement, to the CNN
Revisiting Tufekci and Wilson...

- Zuckerman (2008) had argued that nonpolitical platforms may provide better affordances for political dissent because they can avoid being targeted, marginalized, and being seen as only concerned with narrow issues.
- Tufekci and Wilson found that along with pictures of children, animals, and light-hearted discussions of everyday concerns, political discussions flourished on Facebook, which had four million users in Egypt by late 2010 (Howard, 2010; Khamis & Vaughan, 2011).
More loose Ties lead to more activists

- “You’re not going to get everyone who liked your Facebook page to volunteer their summer, building schools and helping out, but it’s still all part of that journey.” – Craig Kieldburger

- “Social media opens the megaphone so much wider… when you finally look at that spectrum, we’ve got more people who are finally making a journey.” – Craig Kieldburger
#SocialMovements on Twitter

- Community
- Awareness
- Organization
Twitter and Social Accountability

- Reactionary and in real time
- Personal causes/passions championed
- Better Engaged & Aware of Issues
Engagement & Advocacy

• Political or Social Cause Engagement/Awareness
• 2012 Pew Study Social Media's Influence on Politics
• 2011 Ogilvy Georgetown Study of Dynamics of Cause Engagement
• MacArthur Foundation and the Center for Information and Research on Civic Learning study of youth and participatory politics
Why social media is reinventing activism

- ‘Feel good clicking rather than make a change’ – Kessler

- ‘Slacktivism’: The act of participating in obviously pointless activities as an expedient alternative to actually expending effort to fix a problem
Example of poor activism - Kessler

- Red Cross: 208,500 ‘likes’ on FB

- Online donations accounted for 3.6% (private donations)
Online social change: easy to organize, hard to win

Zeynep Tufekci at TEDGlobal 2014

https://www.ted.com/talks/zeynep_tufekci_how_the_internet_has_made_social_change_easy_to_organize_hard_to_win/#t-4052
What can social media platforms do to support real activism, beyond “slacktivism”?
“[...] Then I saw Brown’s body laying out there, and I said, Damn, they did it again! [...] I’m not just going to tweet about it from the comfort of my bed. So I went down there.”

- Johnetta Elzie, BLM protestor
But, “What if the liberating potential of the Internet also contains the seeds of depoliticization and thus dedemocratization?” (Morozov 2011)

*Can social media be abolishing freedom instead?*
For all of the talk in the West about the power of the Internet to democratize societies, regimes in Iran and China are as stable and repressive as ever.

Social media sites have been used there to entrench dictators and threaten dissidents, making it harder—not easier—to promote democracy.
Threats to freedom

- The Iranian regime used the Web to identify photographs of protesters; to find out their personal information and whereabouts (through Facebook, naturally); to distribute propagandistic videos; and to text the population into counterrevolutionary paranoia.

- Mexican crime gangs use social networking sites to gather information about their victims.
- Russian neofascists employ the Internet to fix the positions of minorities in order to organize pogroms.
Opening Closed Regimes

What Was the Role of Social Media During the Arab Spring?

Philip N. Howard, University of Washington
Aiden Duffy, University of Washington
Deen Freelon, American University
Muzammil Hussain, University of Washington
Will Mari, University of Washington
Marwa Mazaid, University of Washington

- Social media alone did not cause political upheaval in North Africa
- Social media did not change the purpose of social movement organizing -- economic opportunity and political voice are still the shared goals of social movements
- Social media provided new opportunities and new tools for social movements to respond to conditions in their countries
- It helped spread democratic ideas across international borders
Extras
Tufekci and Wilson surveyed people’s Facebook use during the Tahrir Square protests. What are the strengths and limitations of snowball sampling?
Both papers focus on social movements in an authoritarian regime. People concerned about persecution may not tweet or use Facebook. Are there specific measures social media platforms can adopt to allow them to participate?