

## **Making History or Celebrating Change?**

# **The Role of Twitter in the 2011 Egyptian Revolution**

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## INTRODUCTION

In the recent history of the Arab world, revolutions and unregulated power transfers were not uncommon, yet most were military- or elite-motivated. Though such transitions may have altered policies and governing structures, these changes were not directed by, nor did they positively impact the lives of, the population at large. This trend is tied to the view, present in Middle Eastern cultures since the seventh century, that obedience to one's ruler is a moral imperative<sup>1</sup>. Thus, mass movements of the kind seen in the Arab Spring of 2011 have been rare events; equally critical, never have they resulted in substantive changes to the government structure.

One of the few mass movements in the Middle East that had success was the Egyptian Bread Riot of 1977, the first in a series of protests triggered by food shortages. Facing pressures from the International Monetary Fund and various aid agencies, the Egyptian government attempted to end its policy of food subsidization and adopt a more market-based economic approach. For two days, the population protested against the end of food subsidies, which would drastically harm the livelihoods of Egypt's poorest. The government withdrew these plans, and food subsidies have remained a Middle Eastern fixture ever since (Ciezahl 2011). The Bread Riots demonstrated how the Egyptian populace can rise up from the lowest echelons of society, and how their political deference could be bought by the regime

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<sup>1</sup> Both authoritarian and radical-activist political ideologies have cited the Quran in support of their aims. Obedience to Muslim autocrats was considered a religious obligation, likened to the rule of the Prophet in Medina. Yet an opposing trend cites early Muslims' rejection of the pagan leadership of Mecca as justification for revolution. These two strains of thought have come into contest in the modern era, when Arab countries were ruled by Muslims yet possessed high levels of corruption (Lewis 1988).

through the subsidization of bread (Sadiki 2000; Salevurakis & Abdel-Haleim 2008). Although the Middle Eastern bread riots of the late 1970s and early 1980s portray a triumph of mass mobilization in the Middle East, a rare feat to be sure, these protests were not targeted at the underlying problems of the political regime. Therefore, they posed a smaller threat to the existing regime than the movements studied here.

The most prominent pre-2011 examples of popular movements that posed a direct challenge to authoritarian regimes were Egypt's Kefaya Movement in 2005 and Iran's Green Movement in 2009. Neither Kefaya nor the Green Movement brought changes to the leadership or functional reforms. The most recent and most successful example of such a mass movement was Tunisia's Jasmine Revolution of 2011, which ignited the Egyptian Revolution and the other movements of the Arab Spring. The forced removal of presidents by popular protest in Tunisia and Egypt represents a unique diversion from the Middle East's legacy of autocratic rule.

Egypt, in particular, has a history of relatively stable and elite-driven power transitions in the modern era. The 1952 revolution that ended the monarchy of King Farouk and instituted the nominally constitutionally democratic government that lasted through Mubarak was led by Colonel Gamal Abdul Nasser and the Free Officers Movement, a dissenting group within the Egyptian military. Once successful in removing the king from power, Nasser quickly established "unrivaled authority" over Egypt (Cook 2009: 58). His autocratic rule was smoothly succeeded by that of Anwar al-Sadat, one of the original Free Officers. After the assassination of Sadat on October 6, 1981, Vice President Hosni Mubarak, formerly the Air Chief Marshal,

claimed the presidency. Throughout this most recent period in Egyptian political history, the country experienced no great changes in government structure. Though policies were affected as the presidency changed hands, the system of governance—authoritarian rule backed by military and police—faced few serious challenges for almost sixty years.

Though elections were held throughout the Mubarak regime, they were tightly controlled by the existing government. As such, their outcomes did not reflect the wishes of the Egyptian people. Under Mubarak, the Egyptian government worked to limit judicial supervision and international oversight of the elections. It also erected barriers to candidacy for many individuals<sup>2</sup>. Such issues of validity surrounding the 2005 presidential election, in which Hosni Mubarak was elected for his fifth consecutive six-year term, were the impetus for the creation of the Kefaya Movement (Browers 2007). The leaders of the Kefaya Movement also raised the issue of the potential succession of Hosni Mubarak's son Gamal to the presidency. Prior to the January 25 Revolution that removed Mubarak from power, the common perception was that Gamal was being "groomed" for the presidency. The possibility of such a hereditary succession reinforced the perception of Mubarak's unresponsiveness to the will of the people.

The state of civil society within Egypt has allowed such transitions to take place without attention to the opinions of the people. The lack of civil society and

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<sup>2</sup> With such blatant corruption within elections, one must wonder why the Egyptian regime bothered to conduct elections. Blaydes (2011) suggests that the process of election holding is beneficial to the regime as a tool for dividing the spoils of government positions among the rent-seeking elite and also as a tool for collecting information about attitudes of the population.

nongovernmental institutions representing the population as a collective is a societal problem that has affected the Middle East for generations. It dates back to the prohibition of corporations in Islamic law; while the West began to recognize groups as legal persons in the Middle Ages for economic reasons, no such parallel institution developed in the Arab World. Though the Ottoman Sultan Mehmet V introduced the corporation to the Islamic World in 1908 in an attempt to catch up with the economic progress of the West (Kuran 2011), the last century has not been sufficient to build a strong civil society to balance government power<sup>3</sup>.

Organizations such as trade unions, professional syndicates, and even human rights groups had risen in Egypt, yet dating back to Nasser in the 1960s, the government systematically repressed these groups, restricting their creation and in what activities they could engage (Kassem 2004). Due to these limitations, few had organized to the extent that they might be able to challenge the Mubarak regime.

In the years leading up to the 2011 revolution, the most prominent opposition group in Egypt was the Muslim Brotherhood, an Islamist movement founded as a radical group in 1928 but since transformed into a political party with more moderate ambitions. The Muslim Brotherhood's original intent was to mobilize Egyptians against Western influence, and its approach turned violent in the 1940s when a member of the Brotherhood assassinated the Egyptian prime minister; Brotherhood founder Hasan al-Banna was killed in retaliation (Calvert 2004). Gradually it adopted a more liberal platform, and often it allied itself with

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<sup>3</sup> Browsers (2006) discusses how the concept of civil society has evolved within Arab political discourse. Although a number of different groups have tried to lay claim to civil society, including both Islamist and secular movements, there is a wide support among the Arab intellectual community for strengthening civil society in support of democracy.

secular parties in order to run for parliamentary elections (Cook 2009: 60). Yet the underlying differences between the secular and Islamist agendas often created discord that resulted in the dissolution of the movement, as occurred in Kefaya.

Thus though some Egyptian dissenters attempted to vocalize their views, the lack of organization hindered them from making concrete progress in reforming the government. Even a century after the introduction of the corporation, civil society groups remained weak and there was little tradition of joining organizations that might serve as platforms for voicing discontent. The January 25<sup>th</sup> protests marked a great shift from this pattern. Egyptian author and intellectual Alaa Al Aswany described the Egyptians he saw in Tahrir Square in early 2011 as having “nothing in common with the Egyptians I was used to dealing with every day” (2011: viii). He meant that Tahrir’s spirit of resistance against the government was heretofore unknown among the Egyptian people. Al Aswany cites the long repression that produced a “legacy of cowardice and submission” (2011: vii) within the Egyptian people as one of the potential reasons for the population’s prior reluctance to struggle openly against the government.

It is against this background of elite power transitions and a politically quiescent populace that we must consider the Egyptian Revolution of 2011. This mass movement that shook an authoritarian regime to its foundations lacked a single leader or leadership committee to which people turned for guidance. This begs the question of what force convinced formerly passive political dissenters to act on their preferences for political change, to take the risks of speaking out in a

repressive environment. A related question is whether such a force can be replicated in other authoritarian regimes, whether in the Middle East or elsewhere.

One salient factor of this momentous event in the history of the Middle East is the use of social media in fomenting public dissent and carrying the revolution through to its climax, and arguably its completion: the removal of President Hosni Mubarak from office. As in the 2009 Green Movement in Iran, Twitter, Facebook, and other social media outlets have been credited with maintaining the Egyptian population's attention and attendance at the protests of January and February 2011. Might the increased presence of Internet and blog postings in 2011 have been the key that sustained the January 25 Revolution where Kefaya had failed?

Here I evaluate the claim that the use of social media was the deciding factor between success and failure in the revolution that toppled the Egyptian president. I do so with the use of a model of such an unforeseen revolution, with and without the effects of social media. I will compare these models to the actual day-to-day attendance at protests of the January 25 Movement. Regardless of the outcome of the elections and constitution-writing in the wake of the 2011 Revolution, the significance of a peaceful, popular movement forcing the removal of an entrenched autocrat cannot be ignored<sup>4</sup>. If the use of social media produced the tipping point that ensured this movement's success, then it merits study for the potential replication of the revolution throughout the Middle East and other politically repressed societies.

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<sup>4</sup> The question of the overall "success" of the Egyptian revolution has already been much discussed by scholars, many of whom highlight the weakness of the Internet as a tool to create smooth political transitions (Lynch 2011). Here, I ask not if social media accomplish a state's transition to democracy, but if it can affect the dynamics of a revolution.

We can view the January 25<sup>th</sup> Revolution as part of a chain of technology-aided revolutions across the world, with varying amounts of success. In addition to the 2005 Egyptian Kefaya Movement and the 2009 Iranian Green Revolution, recent and unsuccessful mass movements include the 2011 Bahraini and Syrian protests. However, in 2011, there were some other examples of successful revolutions in the Middle East, in Tunisia and in Libya, both of which used social media to some extent. This trend of opposition movements using technology in combating authoritarian regimes will continue to develop as technology itself evolves, and as Internet access and speed improve across the world.

However, as we assess the potential use of the Internet and blogging technology for social change, it is necessary to assess the threat that it might present as a tool of authoritarian regimes. As the use of this technology spreads among opposition movements, so will repressive regimes' interest in seeking technological defenses. This theme of technology-driven repression has already been seen throughout the world, from mass censorship in China, to the Iranian Revolutionary Guard's "cyberarmy" of hackers, to British Prime Minister David Cameron's suggestion that to restrain violent protests, the government would "stop communication via these [social media] websites" (2011). Posts on social media sites have been used to punish opposition leaders even outside the virtual world, for example in Belarus, where Facebook comments are commonly quoted in trials (Shane 2011). Such government tactics may be countered by smarter technology usage on the part of revolutionaries, for example the "text2tweet" system that allowed Egyptians to access Twitter despite Internet shutdowns. However, it is

critical to remember that improvements in technology do not benefit the opposition alone. This surge in social media usage for oppositional purposes may well be a phase destined to end as soon as governments catch up technologically with the youth.

## **REVOLUTIONARY DYNAMICS**

In a repressive, authoritarian regime such as Egypt, people are highly unlikely to vocalize their true dissenting preferences among strangers. They restrict voicing their discontent and desire for change to those with whom they are closest. In this section, I will develop a model of how a revolution could occur in an environment with high pressures to conform politically. “Revolution” will be defined as a social movement that brings about significant political change, and “dynamics” as the process that drives the change. Thus, “revolutionary dynamics” refers to a process of significant political change.

Pressures to conform, which can entail both rewards for those who aid the authoritarian regime and punishments for those who stand in opposition, encourage individuals to mask any dissenting feelings they might possess. Timur Kuran calls this masking “preference falsification.” Preference falsification goes beyond merely silencing one’s true opinions, it involves the projection of a deliberately “contrived opinion” (1995: 4). Thus, preference falsification not only leads to less participation in the opposition movement; in addition, it creates the illusion of a public that is both complacent and agreeable to the status quo. The question becomes: how do protests, in which the safety of the participants from a state security service lies

only in numbers, gain any followers when individuals perceive others to be in agreement with the state?

*Desperate Conditions and Limited Choice in Egypt*

For the majority of Egyptian citizens, living conditions “have reached rock bottom in the full sense: poverty, disease, oppression, corruption, unemployment, lack of healthcare, and deteriorating education” afflict all but the elite (Al Aswany 2011: 5). In 2010, the aggregate unemployment rate in Egypt was 9%. However, almost 25% of the population ages 15 to 24 were unemployed (*World Factbook*). For these unemployed, there is little hope for advancement; and for those with a job, allegiance to the government and willingness conform, rather than academic merit, are the surest ways to rise (Osman 2010: 191).

In addition to these dire economic patterns, Egypt is plagued by a lack of

<b>Measure of Development</b>	<b>Score</b>	<b>Raw Ranking</b>	<b>Percentile Ranking</b>
GDP Per Capita	\$6,200	138 <sup>th</sup> / 228	39 <sup>th</sup>
Transparency International Corruption Perceptions Index 2011	2.9 / 10 (1 = most corrupt)	112 <sup>th</sup> / 184	39 <sup>th</sup>
Freedom House Freedom in the World Index 2011	Political Rights 6 / 7 Civil Liberties 5 / 7 (1 = most free)	Not Free	----
Legatum Prosperity Index 2011	----	89 <sup>th</sup> / 110	19 <sup>th</sup>
Heritage Foundation/WSJ Index of Economic Freedom 2011	59.1 / 100 (100 = most freedom)	96 <sup>th</sup> / 179	46 <sup>th</sup>
UN Human Development Index 2011	0.644 / 1 (1 = most developed)	113 <sup>th</sup> / 187	40 <sup>th</sup>
World Economic Forum Global Competitiveness Report 2011	3.9 / 7 (7 = most competitive)	94 <sup>th</sup> / 142	34 <sup>th</sup>
Average Life Satisfaction	4.7 / 10 (10 = most satisfied)	85 <sup>th</sup> / 110	23 <sup>rd</sup>

Figure 1: Egypt's Rankings in International Development Indices

political freedom. Since 1981 the country has been governed under an “Emergency Law” that restricts basic freedoms of speech, invades the privacy of Egyptian citizens, and also involves a high level of police corruption and brutality (Freedom House). Figure 1, above, illustrates the underdeveloped status of Egypt in a number of different international ranking systems. These low rankings represent a significant decline over the last century; Egypt, once the center of Arab culture and intellectualism, has become the “crowded, classic third-world city” (Osman 2010: 1). Those suffering the most from these problems are the Egyptian youth. Poverty and lack of opportunity for advancement make it impossible for many Egyptians to afford marriage. This bars them not only from economic prosperity but also from happiness in their private lives. Currently, there are 45 million Egyptians under the age of 35, the largest youth population in the country’s history (Osman 2010: 196). Before the January 25<sup>th</sup> revolution, the vast majority lived in the shadow of a once great but regressed nation and had little reason to expect prosperity.

Given this environment of state repression and lack of public services, it is safe to assume that some Egyptians across the country desired a change in government policy. Yet they lacked the institutions to demand that change and achieve their goals. The formation of political parties had been legal since 2007; however, a presidentially-appointed committee had to approve applications for any new party, and those applications are often rejected. For example, the Muslim Brotherhood, the most organized sector of the Egyptian opposition movement, was considered an illegal party, though some of its members gained parliamentary seats as independents. Establishing civil society groups was also forbidden by the Law of

Associations, and the 2003 Unified Labor Law limited the industries permitted to strike. The majority of broadcast media was state-owned and –operated, and the state’s printing and distribution monopoly limited privately owned publications (Freedom House). Due to these constraints, the Egyptian population could rely neither on official channels nor on the media to express dissenting opinions and seek reform. Without a responsive and representative government and with few media operating outside the influence of the state, individuals seeking to improve their country had limited options to bring about such change.

### *Modeling a Protest*

For the sake of this exercise, let us drastically simplify Egyptians’ options for dissent to one: whether to demonstrate against the regime. Any attempt to alter the course of politics in their country can only be achieved, we shall assume, by going out into the street and engaging in demonstrations. If such public expression were costless, meaning that an individual would experience no negative consequences for the act of participating in a protest, a certain percentage of the Egyptian population would choose to demonstrate against the government daily until their demands were granted. However, the Egyptian government does not guarantee such freedom of expression; individual demonstrators may incur major costs for their decision to demonstrate. To avoid these costs, many will choose not to participate at all.

A demonstration or protest is the direct result of individual decisions to participate (Opp & Gern 1993: 660); hence, it is necessary to study each individual’s cost-benefit calculation to determine how and if a protest might occur. In making this decision to engage in dissenting behavior, Kuran (1995: 16) identifies three

factors that an individual considers: the individual benefit derived from society's decision, the personal risks and benefits of each choice, and the internal benefit of honest self-expression. Given the size of the Egyptian population, a lone Egyptian's participation in a protest will have little effect on the course of Egyptian politics. From his or her standpoint then, society's decision is essentially fixed (Kuran 1995: 37). Therefore his decision is dependent only on the personal costs and benefits of participation, and on the private satisfaction associated with true self-expression. In an authoritarian regime such as Egypt, where allegations of torture run rampant, the potential costs of participation for our individual are very high. In all but a few extreme cases, such costs would overshadow the internal benefits of true preference revelation.

#### *Individual Calculus*

Let us consider three fairly typical Egyptians as examples: an unemployed youth, a middle-aged government employee, and a well-paid telecommunications engineer. The youth finds himself limited in all aspects of life; his future seems to lack opportunities for personal advancement, as he does not have the connections to get a decent job, nor the capital or skills to start his own business. Additionally, without a steady means of income, he cannot hope to rent an apartment, marry, or start a family. Thus, he finds himself desperate and with little to lose. He might not have the personal connections to become involved in sophisticated, academic opposition movements such as Kefaya, but he can join a demonstration. If he does so, he cannot be fired (since he has no job) and the risks to his family are minimal (since he is unmarried and has no children).

Turning now to the government employee, he has reaped some benefits from the current system. He receives a salary and is able to support his family. Privately, he acknowledges the ethical flaws in the status quo. Despite his deeper desire for a freer society and more opportunities for his children's advancement, the risk of protesting, losing his job, and being imprisoned plays more heavily in the decision calculus of the government employee than that of the unemployed youth. Accordingly, he is relatively less likely to expose himself and his family to the potential dangers of protesting against the regime.

Finally, consider the well-paid telecommunications engineer. His decision calculus differs from his two compatriots. He lives with his family in a gated community located in a suburb of Cairo, where he interacts almost solely with wealthy people like himself. His children attend private schools, and his family belongs to exclusive sports clubs. He and his family rely on the Internet and satellite television for much of their entertainment, rather than engaging the mass Egyptian society and culture. Our prototypical telecommunications engineer is thus insulated from the woes of poverty that might encourage protest participation. The personal benefit he would derive from a demonstration is thus minimal.

These three portraits are meant to represent common profiles of the Egyptian population. Though they do not represent specific individuals, many Egyptians have similar stories and could relate to the predicaments, motivations, and fears of the three individuals presented here. Although in reality, the characteristics and conditions of Egyptians are far more diverse, the stylized set

concocted here is sufficient to convey the essential features of revolutionary dynamics.

### *Influence of Other Protesters*

In Kuran's model of a revolution, first present in a 1989 paper and outlined in *Private Truths, Public Lies*, the key to deciding whether to participate is the individual's perception of the percentage of the population that dissents openly. The smallest percentage that would make a given individual join the protest is called that individual's "political threshold." The presence of other protesters can encourage individual participation, because people perceive that they are not alone in their opinion, and they feel a sense of safety in numbers from repressive state security. Some people require little outspoken support from the rest of the community to dissent, indicating a low political threshold. Others need a large percentage of the population to speak out against the government before they themselves will participate. Consider the difference in willingness to participate between the unemployed youth and the government official. The youth's nothing-to-lose attitude indicates a relatively low political threshold; he is likely to participate even if the number of dissenters is small. By contrast, the government official's concern for his job and his family's safety means that he will participate only in a demonstration that is already large, one in which he will feel protected by the strength of numbers and anonymity of a crowd. He has a higher political threshold.

If a single individual chooses to display his previously hidden dissent, this will alter the perceived size of the dissenting population. This new perceived percentage could induce other possible protesters to publicize their dissent,

initiating more open dissent. Thus, public opposition might grow through a bandwagon process, with progressively more individuals joining in as their political thresholds are reached (Kuran 1995: 20). In terms of our three Egyptians, imagine that the unemployed youth's mother falls very ill, yet his family cannot afford treatment. His consequent frustration over the system increases his desire for change and lowers his political threshold. He chooses to participate in a small protest. The government official sees this protest and realizes that a greater percentage of the population than he originally thought opposes the regime. This revised perception equals his political threshold, so he, too, chooses to participate in the protest. In this way, a small event can trigger a revolution by altering one individual's decision calculus. That individual's decision to protest will bring others to meet their political thresholds and decide to participate themselves.

#### *Community-Building Effect*

While the mere presence of other protesters provides the feeling of safety in numbers, therefore decreasing the fear involved in demonstration, Steven Pfaff cites the interactions between the protesters as a critical factor in encouraging revolutionary behavior. Pfaff claims that a collective identity within an informal group can create expectations of solidarity and participation in a demonstration (1996: 99), thus alleviating the fear of bearing participation costs alone. This collective identity feeds the idea that protesters, even those who had never met before a demonstration, form one community who rely upon each other.

Consider this effect on our modeled protesters. Suppose that once they are both out in the street, the unemployed youth and the government official end up

marching to the city center side by side. They chant in unison as they march, exchanging glances in acknowledgement of each other. Once they reach the government building, which the march targeted, the government official offers the unemployed youth an edge of his Egyptian flag to hold, and together they wave the flag and chant for independence. Although these two individuals had never met before, their shared demonstration experience unites them; each understands that the other desires the same change and opportunity that he holds dear. The two go home separately, and soon both hear that in the middle of the night the protests turned violent. They are now afraid to participate in another demonstration. However, because of the bond they formed the day before, each feels a duty to the greater community to participate in the next day's protest. Thus, the interactions of protesters create bonds of community and feelings of responsibility toward that community, encouraging protesters to remain involved in a movement. In terms of our model, the feeling of community lowers the political thresholds of individuals who participate in a demonstration.

### *Difficulty in Initiating Revolution*

Whether we ascribe the decision to participate in a protest to the perception of how many people are already protesting (with Kuran) or to a collective identity that ensures participation by one's peers (with Pfaff) or to a combination of the two, the key difficulty in achieving revolution is the spark. If a sizeable number of people choose to protest, others witness the protest and choose to join, and then interact with other demonstrators and become invested in the movement. Yet getting this process started can be extremely difficult. The lack of communication between those

who privately dissent makes this very unlikely. It hinders not only the popularization of dissenting ideas, but also the sharing of information that supports the opposition in a repressive, authoritarian regime.

If new ideas are to spread amongst an entire population, these ideas must be passed along “weak ties” (Granovetter 1973), which are those relationships that involve relatively less time, intimacy, and reciprocity than “strong ties” that include our relationships with close friends and family. Granovetter suggests that those connected by strong ties are clustered into core groups, and that private ideas spread only through strong ties, such as dissenting opinions in authoritarian Egypt, will be contained within a core group and not be passed throughout a population. If one member shares the idea along one weak tie to another individual, that individual’s immediate circle will become informed. The knowledge will then spread further to a larger group of individuals. However, under an authoritarian government such as that of Mubarak’s Egypt, the sharing of such sensitive information as revolutionary tendencies is highly dangerous. Hence it is unlikely to occur.

In an authoritarian regime, dissenting ideas generally spread only along strong ties, thus limiting the awareness of the population to other who might share their anti-regime views. Individuals tend to underestimate the size of the dissenting population, and without widespread communication, no collective identity forms across the population at large. Though small pockets of resistance may emerge, they will not be noticed widely, and the numbers protesting will remain small. With the rest of the population continuing to engage in preference falsification, and

appearing to adhere to the status quo, such a protest movement will peter out and die without producing effective social change.

Now imagine that our unemployed youth befriends a small number of activists who are in the process of organizing a protest. The youth decides to attend; yet because this behavior is risky, he does not tell anyone about the plan outside his immediate circle of friends and family. In other words, he shares his plans and experiences only with people to whom he is linked by strong ties. Though he might interact with the government employee once a week at the local sandwich shop, he does not share details of the protest with him, for fear that the government will find out. Thus, only the youth's immediate circle of friends show up for the small protest, increasing the chances that it will quickly be broken up by police.

Throughout this discussion of revolutionary dynamics, our telecommunications engineer has stayed out of the protests. Separated as he is from the rest of Egyptian society, minor protests are unlikely to be noticed by him and he is unlikely to have any relationship-forming interactions with either the unemployed youth or the government official. As discussed in the next section, his segment of the Egyptian population is most likely to be affected by social media, though network effects could reach all levels of Egyptian society.

## **SOCIAL MEDIA AND REVOLUTIONS**

Though initiating a revolution in the absence of civil society is difficult, new technology has emerged that may ease the process of information-sharing: the Internet and online networking platforms. Tools such as blogs, Twitter, and

Facebook create another forum where political opinions may be discussed in an environment where people typically find their social inhibitions lowered. The lack of face-to-face contact offered in online, text-based communication, eliminates the fear of blushing or encountering negative reactions from a visible audience, thus making people more likely to express their true opinions (Pierce 2009). Charles Darwin, in *The Expression of Emotions in Man and Animals* (1872), describes the numerous slight and uncontrollable motions that people make when they feel a particular emotion. Because humans easily recognize these signals in others, face-to-face communication exposes an individual to the risk of their emotions being recognized. Paul Ekman (2003) expands on Darwin's work, writing that not only are these movements universal to humans, but they are also impossible to control. Thus if one feels angry or sad, it is inevitable that the emotion will be expressed briefly on one's face, and any present audience will witness it. The average individual is afraid of embarrassment, the expression of derision from his audience, and the subsequent public expression of shame on his own face. Yet on the Internet, without this dynamic of facial visibility, people find their inhibitions lowered, having no reason to fear that their emotions will be given away by their expression. Hence, people are more likely to engage in online expression of their true preferences.

Compounding this uninhibited state are the motivations of various individuals in blogging or tweeting. Pederson (2010: 21) reports two main motivations of blog-writing. While some view this form of expression as similar to writing in a diary, many consider their blog as a space for citizen journalism. The first, blog-as-diary motivation is strange, because writing on a blog is hypothetically

the most public way of expressing oneself. A blog's contents are available to anyone with Internet access; they thus become part of the public sphere, yet the feeling of removal from one's audience, as explained by Pierce, leads bloggers to consider their public blog as private. On the other hand, some view blogging as a form of citizen journalism, implying a sense of duty to inform the world of what they see. These motivations, in combination with the uninhibited sense generated by the lack of face-to-face expression in online communication, decrease the prevalence of preference falsification in Internet expression. The feeling of freedom from conformity and the judgment of one's peers makes the space of online expression feel private rather than public. Hence it is more likely that individuals will share their private dissenting opinions via the Internet.

This expression of private preferences in an easy manner facilitates the spreading of information along weak ties. As discussed above, the perceived population of political dissenters in an authoritarian regime may appear small because people are unwilling to share their feelings with those to whom they are weakly tied. However, if private dissenters engage in Internet communication, they will feel uninhibited and are therefore more likely to express their true opinions online. It also creates the opportunity for communities to form and reinforce dissenting opinions. For example, it might be possible for our unemployed youth and government official to express their anti-Mubarak opinions online. In so far as this happens, each may feel a sense of community before they ever step outside to protest.

### *Retweeting as Network Dissemination and Virtual Group Affirmation*

We have identified two primary mechanisms through which social media can affect the individual choice of whether to participate in a protest movement. The first is enabling the ease of private preference spreading along weak ties. The second is creating a community of like-minded, dissenting individuals, which could lead to feelings of community responsibility and increased attendance at demonstrations. There is an established procedure on Twitter, one of the most heavily used social networking interfaces, which allow both of these mechanisms to operate simultaneously. It involves “retweeting” a post.

To “retweet” another user’s post on Twitter, a user must simply click on a button under the post to add his or her own name to the friend’s post. Figure 2, an image from @TravellerW’s profile, shows that @Scribbleee has retweeted @TravellerW’s post. Retweeting will simultaneously create a copy of that post on



**Figure 2:** @Scribbleee retweets @TravellerW; @TravellerW’s page image from @norashalaby’s profile. It indicates that @norashalaby has retweeted

@3arabawy’s post. Retweeting thus establishes a publicly shared belief between two Twitter users. It also enables the second user to make that post visible to his own network of friends. In this way, retweeting puts in motion both mechanisms described above. By reposting the idea on a new profile, the act gives another

one’s own profile, indicating that @Scribbleee has forwarded the same idea as @TravellerW. Now consider Figure 3, which provides an

person's network access to the post, thus spreading the idea along the weak ties that are so difficult to transverse in the reality of an oppressive Egyptian state.

Additionally, the accreditation of the post to the original poster enlarges the network beyond a single person's contacts. If @Scribbleee tweets a joke about Mubarak fleeing to Saudi Arabia, and @norashalaby, who appreciates the joke against Mubarak, sees the

tweet, @norashalaby will feel

a connection based on

homophily<sup>5</sup> with

@Scribbleee. However, if

@Scribbleee has retweeted

the joke from @TravellerW,



Figure 3: @norashalaby retweets @3arabawy; @norashalaby's page

@norashalaby will feel a connection with both @Scribbleee and @TravellerW.

Hence, her network of homophily will be expanded. These processes, which allow information to spread costlessly along weak ties and create a sense of community, will be referred to as network dissemination and virtual group affirmation.

### *Limitations of Social Media as a Tool of Revolution*

Although social media can be seen as a tool of revolution, it has obvious limitations: not everyone has access to the Internet. In fact, only 24% of the Egyptian population, or 19.2 million out of 80 million, has Internet access; most of them get access in public places such as Internet cafes (Arthur 2011). In any case, Twitter reported that only about 14,000 of its users identified their location as

<sup>5</sup> Homophily is the idea that similarity breeds connection, discussed in McPherson et al. 2001.

Egypt (O'Dell 2011); and it is unclear how many of these 14,000 actually lived in the country. Some of them may have listed Cairo as their location as a symbol of solidarity with the protesters. The limited access to the Internet and Twitter in Cairo obviously limits the efficacy of Twitter as a factor influencing Egypt's January 25<sup>th</sup> revolution. However, in spite of its limited reach inside Egypt, social media could have drawn a critical mass to the protests. Additionally, social media could have attracted critical participants who would not otherwise have participated, for example the telecommunications engineer. By mobilizing the telecommunications engineer and other Egyptians like him, generally well-educated and young individuals who would not usually undertake activist projects, social media would harness an otherwise distant sector of the population in the demonstrations.

An additional limitation of social media lies in government monitoring. In Egypt, use of the Internet is not as free and safe as in democratic countries such as the United States. Although the lack of face-to-face communication does make expression via the Internet appear more private and safe, Egypt has been internationally recognized as an unsafe country for bloggers. Indeed, even before the 2011 revolution, bloggers had been the targets of government attacks (Freedom House). Therefore the fear of repression that often prevents expression through conventional media may also be a factor in the virtual world. If so, social media may not create greater opportunities for dissenters to recognize each other and join forces.

*Social Media Versus Broadcast Media*

While social media do facilitate the spread of information, it is also critical to remember that just the posting of a statement or video to the Internet does not imply that the post will go viral. For one thing, the overabundance of information available on the Internet makes it more likely to be overlooked (Turrell). There is simply too much data for it all to be seen by the equally vast population of Internet users. Despite Internet content's availability to any person who chooses to seek out that information, there is no guarantee that it will attract notice. For ensured publicity, true power still lies in the hands of broadcast media.

Broadcast media offers a more powerful platform for amplification than social media; for example, consider the number of people who visit *The New York Times* website or read it in print in a given day versus those who read a personal blog<sup>6</sup>. Though it is impossible to track the number of people who read a given article in the print edition of a newspaper, at a minimum, the headlines must be read by a significant percentage of its readers, which drastically outnumbers Egypt's Twitter users. Yet social media can help inform broadcast media, for example by alerting journalists to developments in places that are difficult or dangerous for them to access (Lister & Smith 2011). Yet Lotan et al. (2011) show that journalists were more frequently the source of information than bloggers and activists, and that

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<sup>6</sup> According to the most recent figures from the Audit Bureau of Circulations, the print circulation of *The New York Times* is 1,150,589, and the digital circulation is 380,003 (Lulofs 2011). *Al Ahrām*, the semi-official Egyptian national newspaper, has an estimated circulation of 900,000 (Carnegie Endowment 2004). Additionally, a single print copy of a newspaper is often typically read by more than one person; in a household, we can assume that at least 2 people will read the paper on average. A library's copy of the paper might be read by 20 people. Compare these figures to the estimated 14,000 Twitter users in Egypt.

journalists were more likely to retweet content from another journalist. Thus, though social media can supplement and subtly influence broadcast media, it has not supplanted mainstream media as a source of information.

Social media's primary strength over broadcast media from the public perspective is that information transmitted via social media has an element of spontaneity and is not framed to reflect a particular organization's viewpoint. Because broadcast media is produced by a news company, its audience is directed to particular stories or details of events. Therefore, the public does not choose what information it reads. In contrast, the very abundance of social media makes it unfiltered. The determination of what information is important is left up to the reader, not the publisher. Thus, although broadcast media still acts as the primary source of news for the majority of the world's population, social media such as Twitter and the blogosphere can serve as a counter-narrative to dominant news stories, if readers take the initiative to seek out alternative accounts of published news.

## **JANUARY 25<sup>TH</sup> REVOLUTION**

The demonstrations that took place on Tuesday, January 25, 2011, in Cairo's Tahrir Square initiated an eighteen-day movement that would result in President Hosni Mubarak stepping down from power. The 2011 protest movement followed a similar popular movement in Tunisia, at the end of which President Zine El Abidine Ben Ali resigned. The date of the initial protest, January 25, was chosen because it is "Police Day" in Egypt, an official holiday. Because police corruption formed one of

the most significant causes of popular discontent, the choice to protest against the regime on the holiday of its security apparatus was symbolic.

The January 25<sup>th</sup> Revolution built on the themes of Kefaya, the earlier-discussed dissenting movement created in 2004. Both the Kefaya Movement and the January 25<sup>th</sup> Revolution opposed the absolute power of the Egyptian government under Mubarak, the ossification of its institutions and the restrictions on Egyptian political discourse. Kefaya was significant in its direct criticism of the Mubarak regime and call for an entirely new government; in fact, Kefaya held Egypt's first major anti-Mubarak protest (Oweidat et al. 2008: 11). The protests of January and February 2011 echoed these themes and built on the rhetoric created by Kefaya. However, Kefaya was created within academic circles, and it failed to attract popular support. It eventually withered away precisely because it did not resonate with the public.

### *Significance of Tahrir Square*

Our focus here is on the protests that took place in Cairo, Egypt's capital. The protests were centered at Tahrir Square, one of the busiest intersections of the city. Any protest there would be extremely visible to the city's population. It would also halt traffic and slow the workings of the regime. However, Tahrir also possesses a symbolic significance, as it is the location of one of the government's largest office buildings, the Mugamma<sup>7</sup>; thus the demonstrations there represent a protest against the government itself.

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<sup>7</sup> Tahrir Square and the Mugamma were both built under the rule of Nasser and are the most recognizable visible remnants of his rule in the capital. The Mugamma houses the Egyptian health, education, and interior ministries, and has come to epitomize bureaucratic

*Protest Attendance*

In researching the specific events that occurred between January 25 and February 11, 2011, I discovered that the media accounts of each day’s events were shockingly vague. Estimates on the number of protesters in Tahrir Square took the form of vague descriptions such as “tens of thousands” and “more than 10,000” for most of the demonstrations<sup>8</sup>. Even though the events of those eighteen days harnessed the attention of the world, it seems that no one watching the events was completely sure of what exactly was transpiring on the ground. However, some

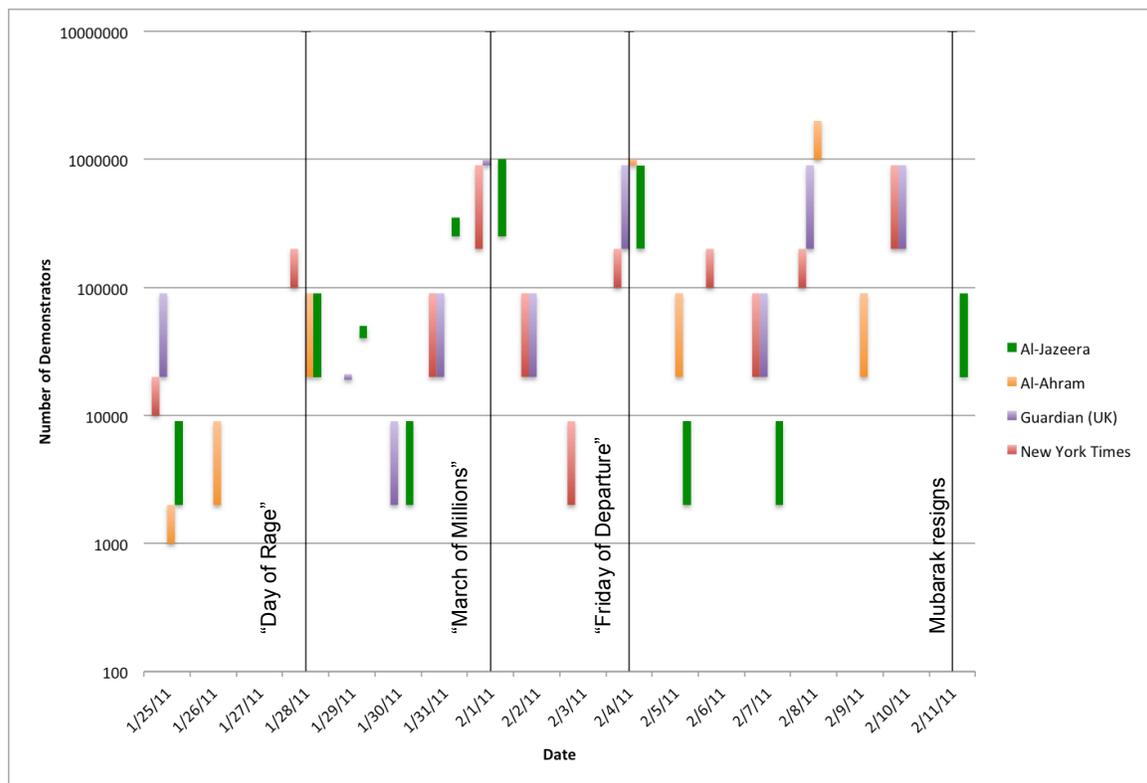


Figure 4: Daily attendance at protests. Note that vertical axis has a logarithmic scale. The attendance at key protests (indicated on the graph) appears to reach a maximum near 1,000,000 on Tuesday, February 1, and remain at that level until Mubarak’s resignation.

inefficiency in the Egyptian government. Beattie describes the building as “the dark heart of a labyrinthine self-serving Egyptian bureaucracy” (2005: 198).

<sup>8</sup> Standardized coding was used to interpret the numerical phrases to the graph in Figure 4. “More than a thousand” was coded as 1,000 to 2,000; “thousands” was coded as 2,000 to 9,000; “more than ten thousand” was coded as 10,000 to 20,000, etc.

trends are discernable from these vague details.

Figure 4 depicts major broadcast media's estimates of the number of protesters present in Tahrir Square every day from January 25 to February 11. Although the estimates are rough, there is a clear upward trend in protest attendance, though the maximum attendance seems to be reached early in the revolution, on February 1.

The first major trend in the data is that the key days of protest seem to fall on Tuesdays and Fridays. The first day of protest, Tuesday, January 25, was chosen due to its significance as National Police Day, a holiday that honored and celebrated one of the most hated institutions in Egypt. The next major protest, Friday, January 28, named the "Day of Rage" was chosen for its convenience; because Friday is the Muslim holy day, many people would already have gathered in mosques<sup>9</sup>, and could march in groups to Tahrir Square. The next Tuesday, February 1, called for a "March of Millions," though it is unlikely that the protest reached a million participants. The next Friday, February 4, was entitled "Friday of Departure" by the revolutionary leadership. In fact, it was not until the next Friday, February 11, that Mubarak stepped down.

Second, it appears that the number of protesters in Tahrir Square did not continue to grow, despite calls from the revolutionary leadership for a "March of

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<sup>9</sup> Though using the mosque as a meeting place was convenient for a large portion of the population, groups such as Christians and women, who played a significant role in the protests, would not meet there. Women in Egypt are more likely to attend mosque than in other Arab states (see "Egyptian Women Break New Ground at the Mosque"); however, the mosque is still a male-dominated institution. Christians, who make up 10-15% of the Egyptian population, met at church before heading to Tahrir Square and other central locations.

Millions.” Instead, the number of protesters reached a plateau in the second week of demonstrations, and the people simply refused to leave. This trend distinguishes the Egyptian revolution from those described by Kuran: the Iranian and Eastern European revolutions. The huge number of people opposing a regime is not enough to ensure the regime’s fall; it is instead the refusal of that opposition to surrender, the creation of a stalemate that the government realizes it cannot win, that forces authoritarian regimes to step down.

#### *Social Media Sample Selection Methodology*

In choosing the specific social media outlets on which to focus in this study, I have selected those blogs, Twitter feeds, and Facebook pages that are most followed and most referenced in traditional media and scholarly work on the Egyptian uprising. By cross-referencing those Tweeters most commonly cited in the existing literature on the 25<sup>th</sup> of January Revolution, I am relying on the authentication practices of those journalists and scholars to narrow the plethora of available on-the-ground reporting for Tahrir to those most critical to the movement. This amounts to a form of peer review to select my sources. Such verification efforts include scanning the profile of the blogger for facts supporting their claimed location, checking within one’s own network for common followers, and engaging the source to obtain further information (Meier 2011). These are all tasks that I, lacking an established network of contacts in the region and studying the events in retrospect, am unable to perform. This authentication process is intended to filter out posts written by individuals posing as protesters in Cairo, either for nefarious purposes, as with a security official intending to gain information, or to spread

awareness, for example the blog written from the point of view of a Lesbian activist in Damascus, which was actually authored by a 40-year-old American man (Mackey 2011). Thus, the sources selected for this study all came from scholars who engaged in similar research at the time of the revolution.

It is also critical to note that the social media outlets cited here are not necessarily those participants or commentators with the most sophisticated analyses of the events in Tahrir Square. Their reports may even contain flawed information, as the Tweeters conveyed their misconceptions from the ground in Cairo. However, for the purpose of studying the effect of social media on individual choices, the effects of minor inaccuracies in their posts can be considered negligible. These sources are those that were most trusted at the time of the protests, by both Egyptians and the international community that followed the protests. The importance of these sources does not lie in their research ability or nuanced interpretations. Rather it is that other Egyptians followed their blogs, read their posts, believed them, and rose from their chairs inside their homes to join in a demonstration. Those blogs that were most followed, rather than those whose authors offer the most research, were the critical movers in sustaining the revolution. That is why they are studied here.

Although every effort has been made to select a sample of Twitter feeds that are representative of the movement and motivated and empowered average, nonactivist Egyptians to engage in the protests of early 2011, a perfectly accurate representation of the social media that existed is impossible to attain. Fraudulent posts, inaccurate reporting, and the limits of Twitter archives and searches

significantly limit the completeness of any research conducted on web content and social media in particular. However, these limitations do not invalidate all social media data. Inaccuracies are present in all sources of information—even the most respected reports contain typos on occasion—yet methods for fact checking and research continually evolve with time. Although validation and name-checking methods for researching new media have not yet evolved or been standardized, the information and misinformation spread along such pathways still change the perceptions of those who read it. Thus these media cannot be ignored.

In sum, the research presented here provides an early approach of how data collection and analysis on social media might be conducted. More sophisticated methodologies will certainly emerge in time; and they will be perfected in future studies as the potential impact of nontraditional media in the political sphere grows.

#### *Data Collection Methodology*

At the time of this research, accessing old Twitter data is extremely difficult. Though every Twitter user's profile contains a long history of their Twitter activity, there reaches a point where their tweets are no longer visible. For this study, which was conducted eight months after the revolution in Egypt, the relevant tweets could not be accessed directly from the subjects' Twitter pages. Old tweets are stored in what is known as the Twitter "firehose," which is not readily available to the public. Although some Twitter analytics services, available by subscription, have access to the firehose, these services each provide fairly specific analyses of the tweets; and they were not particularly useful to this study. For example, many services are intended for tracking trends across users, rather than tracing a specific users'

history. Others are aimed at teaching users what behaviors attract more followers; thus, they track the activity of subjects from the time of subscription onward, rather than retracing their tweet history.

The availability of the Twitter archive for research is currently on the agenda of both corporations and government agencies. In April 2010, the Library of Congress announced that it was transferring the entire Twitter archive into its records. In the same month, Google announced that it would make this archive searchable. The Google search allowed users to narrow their search to “Updates,” which would retrieve only results from social media services (Yousuf 2010). However, the Google search engine interface has since changed, and it is no longer possible to narrow search results to social media status updates. The Library of Congress’s Twitter archive is also not yet available for public research. The infrastructure for its database is still under construction, and may be for some time; this project is one of the Library’s largest and most complex digital undertakings (Watters 2011). When this archive is available, more extensive research on the use of Twitter and its relationship to the timing of the revolution should be conducted.

In the absence of these tools, data collection for this study was conducted through targeted Google searches aimed at isolating all the available tweets from the selected Twitter users between January 24 and February 11, 2011. In the search bar, I typed “site:twitter.com inurl:username.” The first phrase, “site:twitter.com,” limited the results of the search to those from [www.twitter.com](http://www.twitter.com). The second phrase, “inurl:username,” was varied for each user, for example “inurl:SandMonkey” or “inurl:GSquare86.” These phrases limited returned results to a particular Twitter

user. On the end of this phrase, I added “jan” and “feb” alternatively, thus retrieving every tweet with either of those words in the time stamp. I then manually sifted through the results, recording only those from the period between January 24 to February 11. Next, I adjusted for the time difference between the time stamp on each Tweet (recorded in Pacific Standard Time) and the local time in Cairo. This adjustment was verified by matching tweets rejoicing at Mubarak’s resignation with the time of his announcement, 6:00 pm in Cairo.

Given the limited accessibility of the full archive of Twitter data at this time, it was not possible to account for the complete archive of tweets related to the Egyptian revolution. Without access to the Library of Congress archive or the Twitter firehose, one cannot know if every tweet is returned via the targeted Google search described. However, absolute numbers of retweets are unnecessary to trace the trends in retweets visible in the available data.

#### *Limitations of Data Collection*

The restricted availability on “retweeting” data makes it impossible to find real time counts of the retweets of a particular post. Accordingly, we cannot account for the exact chronology of when a post went viral. We cannot say, for instance, that at 1:30 on Saturday a certain post had been retweeted 15 times, and by 3:00 that same day, 500 times.

This data set also excludes tweets that are private or “protected.” However, this data is of marginal usefulness to the theme of network dissemination and virtual group affirmation as a whole. If a Tweet is protected, it cannot spread and

serve to inform the larger population. Hence, the realm of public Tweets is the best set of data for this study.

*Data*

Using the data collection method described above, retweet data was collected from thirteen key Twitter users located in Cairo between January 25 and February 11, 2011. Figure 5 depicts the total number of retweets each Twitter user received on each day of the protest. The number of retweets is small for all Twitter

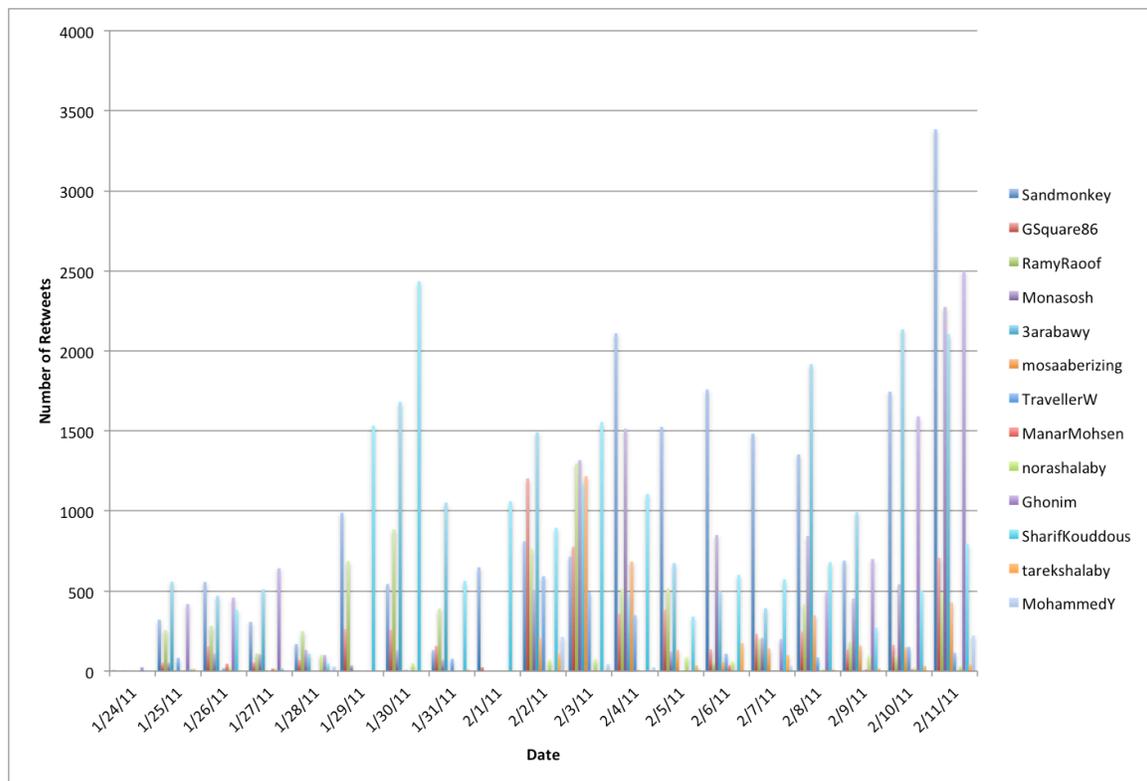


Figure 5: Total Daily Retweet Count.

users in the first week of the movement, due to the Internet shutdown in Egypt from Thursday, January 27 to Wednesday, February 2. It is clear that a sizeable number of Twitter users were able to bypass the shutdown and publish tweets during that time

period via initiatives such as text2tweet<sup>10</sup>; however for many Egyptians Internet connectivity was a struggle during that week. The lack of Internet connectivity in the first week of the protests makes it unlikely that social media could have provided new channels for communication and community-formation within Egypt.

It is possible to see two dominant trends in retweeting data: one led by @SharifKouddous, which has a spike around February 2 (see Figure 6); the other, more dominant trend led by @Sandmonkey (see Figure 7), which increases in retweets throughout the time period, though spikes on important dates such as Fridays.

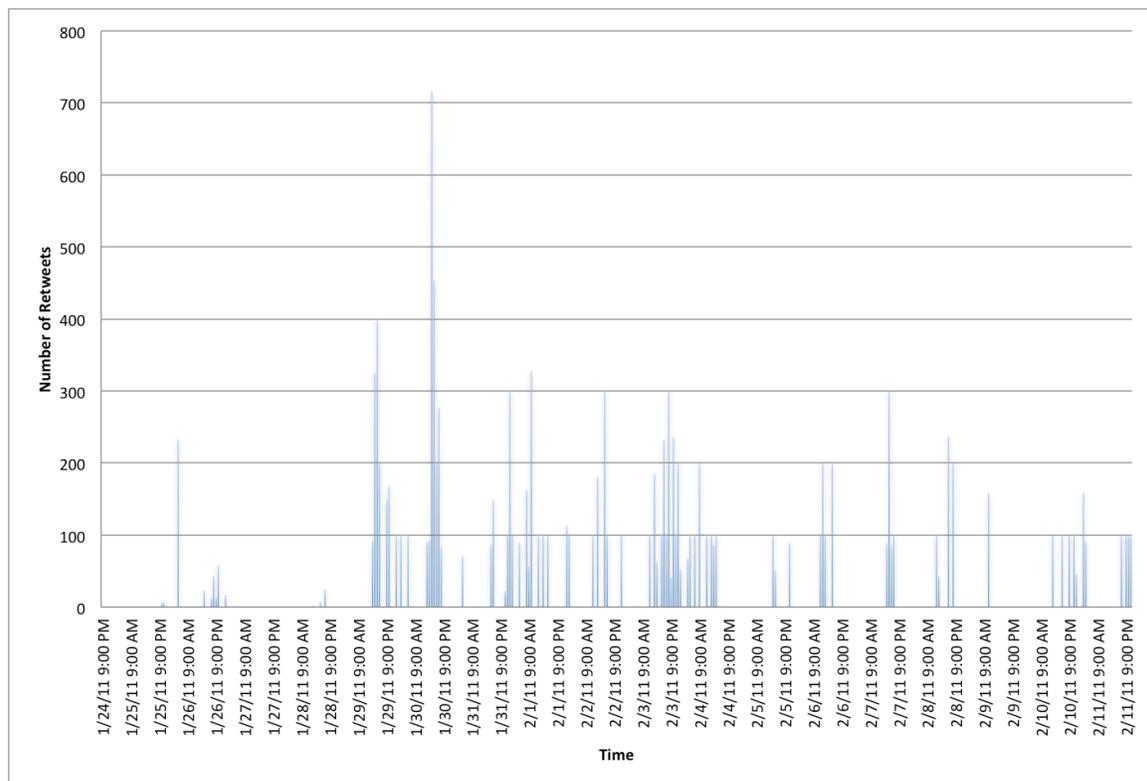
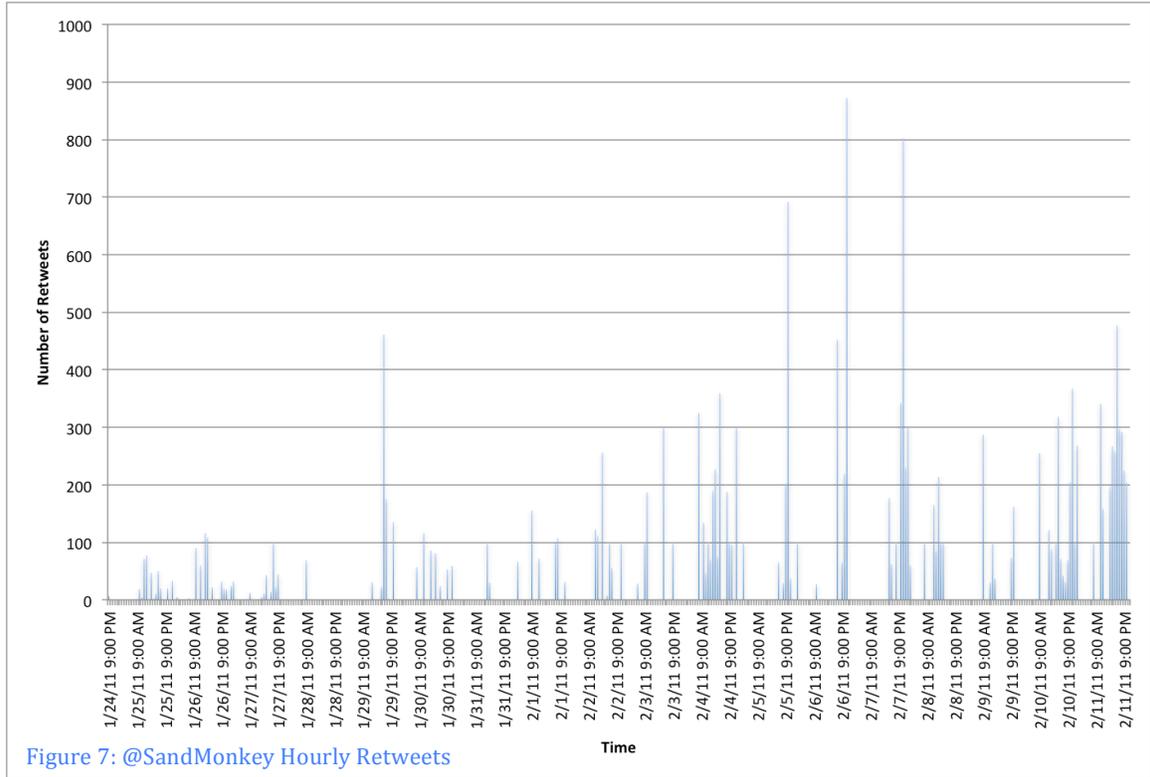


Figure 6: @SharifKouddous Hourly Retweets

<sup>10</sup> Google and Twitter co-developed “text2tweet” during the Egyptian Internet shutdown. It allowed individuals to send tweets to the server via text message, and thus did not require Internet access.

While @SharifKouddous appears to lead the growth in attendance at the protests, @Sandmonkey's spikes in retweeting coincide with spikes in protester attendance in Tahrir and important events in Egypt. Because @Sandmonkey's trend



of Tweets cannot be shown to have led the increase in attendance, one cannot infer that his online activity was among the causes of the revolution. Rather, @Sandmonkey himself suggests that the revolution caused him to join in a community, not that a preexisting community caused the revolution. He wrote on January 29, "5 yrs ago my beliefs made me a minority opposition, today i am the people #jan25." Also, "I have gained 17000 followers in a week. This is insane. I am humbled. Thank you all :) #jan25." This indicates that the revolution brought him popularity and increased his community of like-minded individuals, rather than his Twitter popularity creating the revolution. It is possible that Internet expression is

not a factor that greatly affects the dynamic of revolution. Rather, the observed Tweets are the natural reflection of events in the real world.

*Making, Celebrating, and Recording History*

If social media were truly a cause of the revolution, or even just a critical facilitator of protests, then we would expect the trend of retweets to precede the rise in attendance at these protests. This would indicate that the increase in Internet activity facilitated both the spread of demonstration plans and formation of community ties, before the protest took place. For a subset of the tweets studied, for example @SharifKouddous's tweets, this trend holds true: the largest numbers of retweets occur before significant protests. However, for many Twitter users including @Sandmonkey, retweets peak concurrently with significant events, not before them. If the timing of increased Internet activity does not lead the spikes in attendance at protests, then social media cannot be considered a causal factor in drawing additional Egyptians to protests. Instead, the heightened amount of Twitter activity reflects the community formed by the revolution, rather than causes it.

These trends can be broken down into four types of Tweets: those for *making* history, those for *venting* frustrations and anger about the course of history, those for *recording* history, and those for *celebrating* history. Tweets intended to make history are those that spread plans for future protests. Here is an example from @TravellerW: "Friday will be a great day of demos, yet; but WEDNESDAY AND THURSDAY TOO! take the streets, #Egypt! #jan25."<sup>11</sup> Tweets intended to vent are those that express feelings about the current situation and communicate a desire for

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<sup>11</sup> <http://twitter.com/#!/TravellerW/status/30352605821534208>

change, for example, @GSquare86: “The end is near ya #Mubarak you better pack and leave ..or just leave #Jan25.<sup>12</sup>” Tweets intended to record history are those that report what the user sees on the ground, for example, @norashalaby: “All streets seem to be barricaded well and calm except for museum area. Ambulances allowed to pick up injured #Jan25.<sup>13</sup>” Tweets intended to celebrate history express emotion at events that just occurred, for example, @Sandmonkey: “FIREWORKS, CELEBRATIONS, FUN! JUBILATION! I AM NOT MAKING SENSE. I AM HEADING TO TAHRIR! #JAN25.<sup>14</sup>” These four types of Tweets reflect different rationales for engaging in blogging activity, particularly highlighting the dichotomy of a blog as a diary or a blog as a source of citizen journalism.

The two trends identified earlier, those following @SharifKouddous, who lead the trend of attendance, and those following @Sandmonkey, who coincide with the attendance trend, each predominantly reflect two of these types. The Tweets for making history and venting precede the spikes in attendance, while those to record and celebrate history coincide with the spikes in attendance.

## CONCLUSION

Although social media could be a useful tool in mobilizing dissent in an authoritarian regime, the Twitter data currently available does not suggest that the individuals who participated in the Egyptian revolution of 2011 were significantly connected before they chose to demonstrate. Rather, the majority of Twitter users

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<sup>12</sup> <http://twitter.com/#!/GSquare86/status/29714244387741696>

<sup>13</sup> <https://twitter.com/#!/norashalaby/status/32874504816427009>

<sup>14</sup> <http://twitter.com/#!/Sandmonkey/status/36106460014321664>

studied here saw the greatest spikes in retweet activity concurrent with major protest events; thus they engaged in tweeting to primarily to celebrate and record history. In this way, it does not appear that Twitter had a role in facilitating the Egyptian revolution.

However, Egyptians' use of Twitter to record and celebrate history could have had political consequences outside of Egypt. Twitter's international reach allowed sympathetic individuals in other countries to connect more personally with demonstrators in Egypt. When the personalities of people experiencing world events are displayed for an international audience, it makes readers from across the globe feel personally connected to the revolution. The triggered feelings could give rise to protests in the international arena, in this case, against governments that supported the Mubarak regime or outside of Egyptian embassies. This international effect of social media had an even greater role in the January 25<sup>th</sup> Revolution's success than the interconnectivity effects on the Egyptian population. This is consistent with the fact that the majority of the tweets studied here were in English, rather than Arabic<sup>15</sup>; as a more international and Western language, the use of English indicates that the audience of tweets consisted not only of Egyptians, but also Americans, Europeans, and others. Future research on the effect of Twitter on the Arab Spring revolutions should focus on the international human dynamic in addition to local revolutionary dynamics.

A more interesting and useful study of Twitter's utility in cultivating mass movements would be the Occupy Wall Street movement. For one, in this movement

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<sup>15</sup> Of the 1,933 tweets studied here, only 249 of them (less than 13% of the total) were in Arabic. Seven of the thirteen Twitter users surveyed never posted in Arabic at all.

the percentage of participants with Internet access is much higher; this would lead to richer data and a broader reach of information once posted to the Internet. Additionally, the use of technology such as Twitter has become fairly engrained into the American lifestyle. Hence, it is more natural and therefore more effective for Americans to use social media for planning. An additional case to consider is Russia. Recent protests in Russia over election fraud have utilized cellphones and hand-held video cameras to document ballot stuffing, indicating that Russians, like Americans, have already incorporated technology into their lives and are able to intuitively utilize it to bring about change. The network dissemination and virtual group affirmation effects made possible by social media, witnessed in the January 25<sup>th</sup> revolution in Egypt, could be a more potent force for change in a country such as Russia, where technology is already incorporated into the population's daily lives.

Initiating a revolution, even in a society where a large percentage of the population is discontent with the status quo and eager for change, can be extremely difficult. The risks of speaking out against an authoritarian regime such as Mubarak's Egypt include loss of job, imprisonment, torture, and possibly death; for many would-be protesters, the possibility of achieving change is too small to face these risks. Without public signals of opposition, many private dissenters remain ignorant to the percent of the population that privately desires change. Those dissenters never connect—the unemployed youth, government official, and telecommunications engineer never realize their shared dream for a more democratic Egypt—and large-scale revolutions do not occur.

Social media present an opportunity to change this dynamic. Because people feel uninhibited in online forms of expression, it is possible that dissenters can connect via the Internet and not expose themselves to the dangers of public demonstration until they are certain that they have a community of other protesters to stand beside. Although social media has the potential to act as a tool in this way, this does not seem to have been the case in the 2011 Egyptian revolution. Although protesters did post information about the revolution to Twitter, the majority of retweeting occurred concurrently with large protests. Thus, the connections between protesters were not made via the Internet before the demonstrations occurred. Twitter has the potential to connect individuals and promote change in the status quo, yet the Egyptian usage of Twitter in January and February of 2011 was merely a celebration of that change, not the driving force behind it.

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