An Examination of the Effects of New Media on the Non-Contiguous Geographic Dispersion of Contentious Collective Action

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ABSTRACT

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A thesis presented to the Graduate Program in Global Studies

Graduate School of Arts and Sciences
Brandeis University
Waltham, Massachusetts

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Many journalists and governments today assume that new media technologies (including mobile communications and social media) play an important role in the diffusion of a protest action. This study seeks to discover if that is true in the case of transnational protest actions. An examination of existing literature on collective action revealed that participation is likely driven by personal stake in the outcome of the action; as such, the existence of a digital, global civil society is posited to explain a transnational stake in the actions of participants separated by geography. To explore the dynamics of diffusion, two case studies are examined: the diffusion of riots starting in London in 2011 and the diffusion of protests emanating from Tunisia that same year. The studies showed that new media operates on two levels: public and private; communication carried out via private media (such as text messaging between mobile phones) was likely utilized to organize protests at the ground level, while public new media (such as Twitter) facilitated an outside conversation by previous participants and non-participants. As such, organization is mostly carried out within existing social circles, as is historically the case, but public new media primes participants from other nations to mimic protest behavior.
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INTRODUCTION

In the past decade, mobile technology and the usage of social media have grown exponentially. Many governments and journalists simply assume that it plays a crucial role in collective action events; it appears logical that an amplified and instantaneous form of communication would facilitate widespread participation. For example, Twitter, the popular micro-blogging website, has received attention thanks to journalists’ use of it as both a primary source and a mouthpiece for their own stories. Twitter amplifies and accelerates information in part through topics that are “trending,” or grouped together by the use of a common hashtag (#).

Reports of protests, riots, and events in one country can now be seen by many, in another country with great ease. Governments have taken steps to shut down internet and mobile phone services during protests to prevent their spread; protestors in Hong Kong in the fall of 2014 faced the “Great Chinese Firewall” when they attempted to post photos, video and text about their fight to bring more transparent democratic practices to their government.¹ Attempts to view information about the protests from the Internet in Mainland China revealed nothing but

everyday websites about shopping and restaurant reviews in Hong Kong. 2 Many authorities now believe that communication results in contagion.

Does new media indeed act as an effective conduit for information? Is it instrumental in the organization of a physical protest? Previous research has argued that the impact of new media technologies on contentious politics operated on five levels: individual transformation, intergroup relations, collective action, regime policies, and external attention. 3 This project investigates the collective action level: whether there is a relationship between the usage of new media and the dispersion of a physical protest event.

The self-immolation of twenty-six year old Tunisian fruit seller Mohamed Bouazizi set off massive anti-governmental protests that resulted in the flight of the Tunisian president, Zine El Abidine Ben Ali to Saudi Arabia, effectively ending twenty years of authoritarian rule. 4 In the following months, similar anti-governmental protests began in Egypt, Yemen, Bahrain, Libya, and Syria. 5 The world watched in amazement as spontaneous protests and revolutions flared across the region. Scholars scrambled to explain the mechanisms that allowed for such widespread dispersion and many looked toward social media. 6 Their findings found a synthesis between traditional and new media platforms whereby each one fed content to the other. 7

2 Jonathan Kaiman, “China Censors Images of Hong Kong Protests in TV Broadcasts to Mainland.”
5 Greg Myre, “Timeline: The Major Events of the Arab Spring,” NPR.
7 Aday et al., “Watching from Afar,” 901.
For the purpose of this study, new media has been defined as the calling, text, picture and video messaging capabilities of mobile phones, smartphone applications (such as WhatsApp and Instagram), and social networking sites that can be used to communicate specific messages to a public or select audience (such as YouTube, Facebook, and Twitter). All of these platforms contain individual user-generated content with little to no filter or editor. Findings concerning new media use in the Arab Spring will be addressed below, and the resultant scholarship from those remarkable events is the most recent and in-depth on the relationship between social networking and crowd action dispersion.

Existing literature on collective action dispersion has examined spatial and temporal diffusion, but most of these studies were conducted before the introduction of mobile technologies, what scholars call “new media.”8 New media outlets allow individuals to participate in their own filtering and publishing of content via the Internet (i.e. blogging and social networking), mobile phones (i.e. calling and messaging), and mobile software applications (colloquially known as apps). There has been a profusion of case studies of a single protest action over the past several years, most notably those involved in the Arab Spring protests of the Middle East and North Africa (MENA) Region. But little has been done to synthesize the social effects of new media technologies on the formation of collective action, and attempt to create a unified theory of its effects on protest contagion.

This paper is intended to explore the theoretical effects of new media on protest participation, especially transnational dynamics, and examine such mechanisms in two case studies: in England in 2011 and the MENA Region between the end of 2010 and the end of 2011. This analysis first posits that while most scholars have looked at new media as a whole, it

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8 Sean Aday, et al., “Watching from Afar: Media Consumption Patterns Around the Arab Spring.” 901.
actually operates on two levels: public and private. Each is used distinctly and has different effects. Next, the research will attempt to establish the existence of a global “new media civil society.” The existence of this could help explain how groups and individuals in non-contiguous geographic areas could feel engaged in a distant protest action; this sense could in turn raise the likelihood of their own participation. To better examine the role of both public and private new media in a contentious crowd action, this study will then examine non-contiguous dispersion of a crowd action first within the confines of one country, and second, between two countries: The London Riots of 2011 and the Arab Spring protests starting in Tunisia in late 2010 and early 2011. These cases occurred within one year of each other and thus utilized analogous technology; this acts as a control for advancements in mobile and new media tools. Additionally, there was significant news coverage on an international stage in both cases. While the author acknowledges that each protest action arose over a unique set of circumstances, the question to be explored concerns the affects of new media on protest dispersion.
ESTABLISHING A GLOBAL DIGITAL CIVIL SOCIETY

Globalized communications have rapidly evolved in the last twenty years. In 1994, the Internet was starting to spread and public electronic mail (e-mail) had just been introduced.\(^9\) The introduction of short message service (SMS), or, text messaging between mobile phones, was introduced in the mid-nineties—and was popular by 2000.\(^10\) Online social networking websites arrived in the first decade of the twenty-first century and have grown in scope and users.\(^11\) New media and social networking works on two levels: private and public. Private social networking operates within an existing social circle established by an individual. This includes mobile phones (with capabilities of calling as well as text, picture and video messaging) that operate based upon a contact list, compiled by the owner. In addition, mobile software applications (known colloquially as apps) are designed to work within the existing contact list of an individual’s mobile phone (such as SnapChat or WhatsApp). Furthermore, many online social networking sites have privacy settings that force operators to choose whom has access to posted material (such as Facebook or MySpace). Privacy settings and personal phone numbers ensure that communications carried out via private new media will disseminate within a pre-existing

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social circle and convergent circles that are connected by individuals contained within both. In this way, some new media communication function in ways similar to that of face-to-face communication, in terms of reach, albeit on a digital level.

Public social media, on the other hand, directs those mobile apps and websites that publish content to an unfiltered network that can be accessed by any casual user or observer (such as Instagram, YouTube or Twitter). This public new media extends beyond face-to-face networks and thus can potentially extend a message to a far larger audience than private new media. If there is any scholarship that addresses these differences, the author has not found them and thus has created these delineations herself.

Scholarship on the effects of these new mechanisms is in its infancy, since the introduction of smartphones, apps and growing networks of users has created new challenges for researchers. For instance, Howard Rheingold’s 2002 book *Smart Mobs* provides an excellent account of the rise of mobile phone culture among youth around the turn of the twenty-first century, but his observation that texting had not yet “caught-on” among youth in the United States is obsolete today where 72% of Americans indicate that they regularly send text messages on their cell phones.  

This section’s focus establishes not that a global civil society exists—as there is a great deal of literature which supports that claim—but on establishing the existence of a global social networking culture which promotes collective action.

**LITERATURE REVIEW**

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Existing literature on collective action examines this topic from three angles: cause, effect and execution. Examinations of the effects of crowd actions have determined that they most often result in a focus on allocation of governmental representatives (such as police or military) in an effort to deter further unrest.\textsuperscript{13} There exists a plethora of material on causation; several major arguments include: the scale of presence of ethnic minorities in a region;\textsuperscript{14} the effects of deprivation in highlighting inequalities;\textsuperscript{15} and resource mobilization theory, which suggests that resource inequality emboldens minority populations to channel energy into protests.\textsuperscript{16} Literature on the causes of contentious collective action can sometimes overlap with theories of diffusion. Doug McAdam’s book, \textit{Political Process and the Development of Black Insurgency 1930—1970}, focuses on the slow development of power relations between “haves” and “have-nots” over time that creates an ebb and flow of influence and authority between the two groups.\textsuperscript{17} Formal and informal organization members, structures and communication play a major role in the development and proliferation of collective action.\textsuperscript{18} New media could act as similar communication networks, and its users, arguably, comprise the organization members and its structures.

Political scientists Donatella della Porta and Sidney Tarrow posit that collective action rose with the advent of the nation-state; but with the rise of globalization, collective action can

\textsuperscript{16} Olzak, “Analysis of Events in the Study of Collective Action,” 126.
be targeted toward multiple states or even supranational institutions.\textsuperscript{19} The rise of the concepts of multi-level governance and global civil society lead potential protesters to believe that issues within one country can affect another country—even those countries with non-contiguous borders.\textsuperscript{20} Della Porta and Tarrow have also discussed transnational collective action tactics as a response to police tactics.\textsuperscript{21} They chart the growth of transnational civil society events over the previous twenty years, and argue that an international discussion of police response tactics has been mirrored by international discussions on counter-responses by protesters; this in turn, has led to a transnational participation of actors in many events.\textsuperscript{22} But mounting evidence of the globalization of politics and social justice addresses only the surface causes of transnational adoption among various countries. The question of the mechanisms that make these dispersions possible is an evolving field of research. To address the questions here, it is necessary to synthesize collective action literature with that of the literature examining modern technology.

Much has been written in the last half century regarding the diffusion of collective action. Scholars such as Susan Olzak have addressed the definitions and parameters of participation: a minimum of ten to twenty participants and the creation of a separate event after a twenty-four hour interim in activity.\textsuperscript{23} Additionally, spatial boundaries are fluid; collective action events can jump to different locales within a twenty-four hour timeframe. However, the movement of a collective action into geographically distinct locations can take more than twenty-four hours, and

\textsuperscript{20} Della Porta and Tarrow, “Transnational Processes and Social Activism: An Introduction,” 2.
\textsuperscript{21} Donatella della Porta and Sidney Tarrow, “Interactive Diffusion: The Coevolution of Police and Protest Behavior with an Application to Transnational Contention,” \textit{Comparative Political Studies} vol 45 (2012), 119-152.
\textsuperscript{22} Della Porta and Tarrow, “Interactive Diffusion,” 144.
this study posits that ideological connections can still constitute one larger crowd action rather than several discrete ones.

Sociologist Daniel Myers discusses the transmission of influence during and after a crowd action to create a succession of similar events into a chain of cause and effect.24 Myers’ studies have shown that riots, in particular, exhibit short-term contagion effects that perpetuate localized unrest but fade over time; that contagion (mimicry of behavior) declines with distance from the origin point; and that the scale of contagion is reliant upon the severity of action at the origin point.25 Furthermore, the amount of media coverage of a riot is tied to its intensity; as such, a more intense riot receives more media attention, which in turn leads to more imitation, elsewhere.26 However, this is not a perpetually reinforcing model; Myers argues that infectiousness is curvilinear:

The logic of this hypothesis follows from classic diffusion models in which the rate of adoption is slow at the beginning of the cycle, peaks in the middle of the cycle, and then returns to near zero toward the end of the wave. …When we examine the dependence of the riot rate on the raw number of prior events, …we should expect this dependence to take a curvilinear form. That is, each additional event in the first half of the adoption cycle increases the probability of further rioting, and each additional event in the second half of the circle decreases future rioting.

Prior scholarship on contagion debated the idea of homogenous diffusion, which assumes that all members of a population have an equal chance of affecting and being affected by each other under certain circumstances.27 But Strang et al. argue that “infectiousness” results from the social proximity of actors rather than previous claims that diffusion is based on the homogeneity of actors—a theory put forth following the American race riots of the Civil Rights Era.28

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Arguments that new media users coexist within social proximity and that their consumption of new media is akin in nature to that of mass media (trumpeting information about collective action events), combine Strang et al.’s with Myers’ arguments and demonstrate that new media could act as the catalyst for a chain of infectiousness.

Two types of expectations drive participation in a crowd action: first, that involvement could produce a return that outweighs the risk; and second, that involvement will allow the individual to mask his or her crime in a screen of concurrent action (also known was the free-rider problem). This study will assume that the majority of participants involved in all events relayed here believe that return could outweigh the risk. But why would collective action participants believe that they could have a stake in a cause that originates in another country? Given the advent of new media technologies, social proximity, as defined by Strang et al., can exist in the context of a global digital civil society. Such a society thrives off of a kind of person-to-person contact involving shared experience, beliefs, and spaces—albeit digitally. By removing gatekeepers to information (i.e. the editors of organized online traditional media presence), online interactions can feel more direct and therefore personal, which can lower the barriers of understanding between people separated by boundaries like deserts or oceans.

In 2001 crowds used mobile phones for the first time to organize a successful displacement of a head of state, the Philippines’ President Joseph Estrada. “More than one million Manila residents, mobilized and coordinated by waves of text messages, [and] assembled…[in] peaceful demonstrations” until the president stepped down. Several other collective action events in the preceding decade utilized “swarming tactics.”

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30 Rheingold, Smart Mobs, 157-158.
31 Rheingold, Smart Mobs, 158.
organized networks brought groups of participants together to achieve a goal in what analysts have termed “netwars.”

Netwar is an emerging mode of conflict in which the protagonists…use network forms of organization, doctrine, strategy, and technology attuned to the information age…. What all have in common is that they operate in small, dispersed units that can deploy nimbly—anywhere, anytime…. They know how to swarm and disperse, penetrate and disrupt, as well as elude and evade.

The concept of a netwar is rooted in a strong belief in the rapidity of mobile and Internet communication—a feature that can only have been accelerated by the introduction of smartphones, which connect the user to both a phone and Internet network outside of the home.

Donatella della Porta and Sidney Tarrow’s 2005 book, Transnational Protest & Global Action describes the Internet as a factor in idea transmission based on the lowered cost of participation. This, however, is based upon the assumption that potential participants already possess the requisite technologies (such as mobile phones or Internet) needed to connect them to others in a movement. Unified social movements and transnational collective action is “coordinated international campaigns on the part of networks of activists against international actors, other states, or international institutions.”

This research, however, focuses less on formal networks of activists—such as non-governmental organizations (NGOs)—and more on home-grown, spontaneous collections of actors with no internationally recognized leader.

A recent paper published under the Carnegie Corporation examined the role of Facebook and Twitter in the Ukrainian Revolution of 2014 (also known as the Euromaidan Protests). The

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32 Rheingold, Smart Mobs, 161.
34 della Porta and Tarrow, “Transnational processes and Social Activism: An Introduction,” 12.
35 della Porta and Tarrow, “Transnational processes and Social Activism: An Introduction,” 12.
authors argue that conversation networks within Twitter that function analogous to general social networking and can be delineated by language with small groups of cross-over users that are active in both social language circles. This narrows the possible audience for information flow and civic engagement to those within a language network.

Literature on the diffusion of collective action has historically done a great job of connecting the sociology of group dynamics and participation explanation with the hard facts and theories of political science. However, the recent innovation of new media technologies and the increasing influence of globalization on societies has left a gap in the modern literature. In depth studies of new media data in specific cases has been created with great enthusiasm over five years, and particularly following the Arab Spring protests of 2011. However, there is little work that synthesizes this hard data with a sociological explanation for how or why new media could take on this role. Joshua Tucker et al.’s paper under the Carnegie Corporation does an excellent job on creating this synthesis of information. Moving forward, a comprehensive theory of modern collective action dispersion should take new and rapid forms for communication into account, as well as incorporate ideas of larger community and social networks that can extend to whole continents.

**PARTICIPATORY CULTURE AND SOCIAL MEDIA DIALOGUE**

For the purposes of this study, collective action addresses groupings of participants together, in person, with the purpose of making a political statement and contentious crowd action is one in which participants undertake illegal acts as a form of protest. Instances of social

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37 Joshua A. Tucker et al., “Protest in the Age of Social Media.”
activism which are carried out entirely online—sometimes referred to as “slacktivism”\textsuperscript{38}—will not be addressed in this paper.

Patrick Gunning argues that individuals must feel a “stake” in the problem at hand before becoming involved in a collective action, yet in an age of globalization, what can explain the cross-cultural stake in the contribution to a collective action that may have started in a different geographic area entirely? The presence of a participatory culture could explain a willingness on the part of individuals to join in when there seems to be little other impetus.

In 2006, the MacArthur Foundation commenced a five-year study on participatory culture and media education.\textsuperscript{39} Lead researcher, Henry Jenkins, defined participatory culture as:

A culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices.\textsuperscript{40}

Perhaps the most important aspect to this study is the statement that: “A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another.”\textsuperscript{41} Thus, the rise of a new media culture over the last several decades could explain the stake that citizens feel that they have in a collective action that has jumped national borders.

Aaron Delwiche and Jennifer Jacobs Henderson argue that the rise of participatory culture is directly linked to the rise of the Internet age and an individual’s ability to contribute to


\textsuperscript{40} Henry Jenkins et al., “Confronting the Challenge of Participatory Culture,” 3.

\textsuperscript{41} Henry Jenkins et al., “Confronting the Challenge of Participatory Culture,” 3.
any conversation because of it. They separate the rise of this culture into four stages: Emergence (1985-1993), Waking up to the Web (1994-1998), Push Button Publishing (1999-2004), and Ubiquitous Connections (2005-2011). In phase one, the introduction of personal computers promoted the growth of consumer-driven media culture, where individuals could be both producer and creator. They cite as evidence the rise of an underground music scene, driven by college radio stations and independent record labels; as well as a “vibrant zine subculture” driven by page layout software and laser printers. In phase two, the widespread accessibility of the Internet fueled the creation of interactive websites such as Amazon (1994), Craigslist (1995), and Google (1996). Their ability to close the geographic gap in products and knowledge opened the door to an online culture. Phase three addresses the consumer participation of Internet culture through the rise of blogging—a platform for the layperson to broadcast thoughts and ideas online. Examples of such platforms include LiveJournal (1999), MySpace (2003), Yelp (2004), and Facebook (2004). This era, Delwiche and Jacobs Henderson posit, is the start of the loss of privacy to a public sphere, which will be addressed in greater detail below. Phase four, which accounts for the most current conditions of participatory culture, hosts the introduction of audio-video sharing as pioneered by YouTube (2005). Simultaneously, there was a near-universal welcoming of mobile phones and the successful introduction of smartphones (the iPhone in 2007 and Android in 2008) into everyday life.

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42 For the sake of this study, phase 4 will be extended to include the years 2012, 2013 and 2014. Delwiche and Jacobs Henderson, “Introducing Participatory Cultures,” 4-6.
43 Delwiche and Jacobs Henderson, “Introducing Participatory Cultures,” 5.
accessibility among civilian populations has created a culture where mass media and social media merged to operate in tandem, with one often feeding off the other.

The adoption of social media into the sphere of mass media can push a participatory culture forward. In 2013, a team of researchers published a study of media consumption patterns during the Arab Spring protests of 2011. Their review of Bit.ly links found that the four most-read links related to the unrest in Tunisia were from mainstream news outlets from a variety of countries: “the Italian newspaper Repubblica, the French newspaper Le Figaro, the wire service Reuters, and a ‘live blog’ at Al Jazeera’s website.” This is indicative not only of social media’s power to disseminate information and feed into mass media during a collective action event, but also of the globalization of participatory culture.

In 2012 the Pew Research Center conducted a study of social networking around the globe and asked respondents in twenty-one countries which topics they shared personal views about on social networking sites. Median numbers indicated that over two-thirds of respondents share opinions on music and movies, 46% share thoughts on community issues, 43% on sports, 34% on politics and 14% shared opinions on religion. In some countries, such as Egypt, Lebanon and Tunisia, over 60% indicated that they shared their political views on social networking sites. Thus, of those who utilize social networking, participatory culture is distinctly present.

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50 Bit.ly is an online service provided to shorten URLs and thus share content on microblogging sites such as Twitter or Facebook. Aday et al., “Watching from Afar,” 901.
51 Aday et al., “Watching from Afar,” 911.
THE YOUTH FACTOR

Yet despite all of the press that it gets, social networking is not universal. According to a social networking survey conducted by the Pew Research Center in 2012, the average percentage of users across twenty-one counties was just 35%. But when broken down by age cohort, 83% of respondents in the same twenty-one countries, between the ages of 18 and 29, indicated that they use social networking sites. Thus, usage among young adults is high and exists in many countries. In his 2002 book, *Smart Mobs*, author Howard Rheingold recorded his own observances and study of the rise of mobile phone and SMS culture. Rheingold observed the rapid spread of texting in the mid to late nineties across Europe and Asia to communicate and plan gatherings. In May of 2001, Rheingold interviewed a young man in Stockholm who conveyed an early story of the use of texting to organize groups of youths with a purpose:

Svante, a young man of an anarchist persuasion, told me about a cult of fare-jumpers in Stockholm who used SMS broadcast services to warn each other when and where conductors could be found checking fare tickets.

This serves as an excellent example of the use of mobile phones in organizing an informal group of youths to achieve a common goal. Rheingold also reported on a study done by Dr. Sadie Plant for the Motorola Company on the use of mobile phones and texting in everyday life; her findings suggested that access enabled young people to create and maintain friendships and relationships that would otherwise have been forbidden by their families:

Afghans in Pakistan were horrified by the ease with which young Moslem boys and girls, who would never have been allowed to be alone together, can now participate in virtual social relationships via mobile phone.

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58 Rheingold, *Smart Mobs*, 20.
The use of new media to maintain friendships and social networks that could otherwise not exist due to traditional social conventions is indicative of a cultural shift by those people who grew-up utilizing such technologies, sometimes called “digital natives:” a willingness of young people to invest time in a social network maintained either largely or entirely by new media means.

Despite evidence of the likelihood of youths to use social networking tools over older age groups, what, if any, relationship does that have with the likelihood of a collective action to occur? Youth, it has been theorized, have historically played a large role in political violence, and civic engagement in general. A 2006 study, by Norwegian researcher Henrik Urdal, found that an increase in youth within a country will increase the risk of terrorism and spontaneous forms of political violence such as riots and violent demonstrations; yet he indicates that they are indicative of “low-intensity political violence” rather than “large-scale wars.” Thus, the youth bulge theory is pertinent to individual acts of protest rather than the outbreak of a war.

In a study published in 2004 in the journal Psychological Science, a team of researchers theorized that youth (defined in their study as those between the ages of 15 and 24) raised in a child-saturated community will interact more with peers rather than adults and thus develop low civic knowledge which leads to their participation in political transformation events or movements. Modern access to large swaths of age cohorts on the internet could, arguably,

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stand-in for child-saturated communities and function in the same way; presupposing that online interactions are predominately between those within a similar age group.

The 2004 study argues that civic knowledge leads to a full understanding of public policy, a tendency to judge politicians based on leadership ability over personality, a trust of institutions and a toleration of minority groups.\(^{65}\) Youth raised in a child-saturated community are hypothesized to distrust societal institutions, public policy and minority groups which would, in turn, lead to an increased likelihood to partake in social unrest events.\(^{66}\) However, these theories are predicated upon the assumption that the perpetrators of contentious crowd actions such as protesters or rioters are working toward a more divided society rather than a more inclusive one. Recent data supports some, but not all of these findings. A 2014 study by the Pew Research Center found that Millennials (loosely defined as those born between 1980 and 2000) are indeed increasingly unattached to institutions\(^{67}\) but are taking on a greater role within their online social networks, are more racially diverse and politically progressive than any previous generation.\(^{68}\) These findings would explain international support movements for increased transparency and democracy (such as the Arab Spring protests in the MENA\(^{69}\) region), and against racially motivated police brutality (such as protests spawned by the Michael Brown and Eric Garner cases in the U.S.). However, rising support of anti-Islam and anti-immigrant policies in the European Union, for instance, are more supported by the findings of the 2004 study on youth bulges mentioned above.

\(^{65}\) Hart et al., “Knowledge, Youth Bulges, and Rebellion,” 591.
\(^{66}\) Hart et al., “Knowledge, Youth Bulges, and Rebellion,” 591.
\(^{67}\) This refers to the study’s finding that Millennials reported themselves as political independents and as religiously unaffiliated more than any other age group.
\(^{68}\) “Millennials in Adulthood,” Pew Research Center.
\(^{69}\) MENA = Middle East and North Africa
Urdal argues that the choice to participate in such acts is directly related to a cost-reduction scenario. The investment of an individual (in time, effort and risk) is lowered within a larger pool of peers also willing to also participate. Similarly, scholars Donatella della Porta and Sidney Tarrow point out that the ease of connection resulting from new technologies reduces the actual monetary cost of participation in transnational networks, aiding the participation of small local groups in a larger cause. Additionally, involvement may offer a greater chance of reward; Urdal postulates the possible reward of remuneration as a motivation in cases of high youth unemployment. However, the kinds of causes addressed in this study are not ones in which remuneration is generally present (except in the case of looting during a contentious or violent crowd action). Therefore, it is possible that participation in a crowd action could pay dividends on social standing—particularly given the likelihood of young participants sharing their contribution via social media.

SOCIAL NETWORKS AND IDENTITY

Owners of social networking accounts are the sole contributors to the content placed on them. As a result, any personal information, photographs or opinions are selected by users and thus convey their identity in a constructed way. Author Howard Rheingold likens this online identity to mid-century theorist Erving Goffman’s “presentation of self” theory. Goffman postulated that people “improvise public performances as a way of composing an identity in the presenter’s mind as well as the minds of others.” Furthermore, groups to which individuals

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72 Della Porta and Tarrow, “Transnational Processes and Social Activism: An Introduction,” 12.
74 Rheingold, Smart Mobs, 25.
75 Rheingold, Smart Mobs, 25.
belong further define identity. As a result, the inclusion of an individual in a group organizing a crowd action further defines his or her own identity by deciding to participate or not participate, and again by sharing or not sharing the message with others. Membership in a collective action, then, can become a function of “trendiness.” For example, if a protest held on a university campus had a low turn-out during its first night, but its participants eagerly shared pictures, video or posts on their social network profiles or via their phones, then during the next night of protests, other students who had envied the camaraderie portrayed in those messages could show up and thus increase participation. The ethics of participation in a protest or riot because of a desire to be included are beyond the purview of this study, but it is a distinct possibility.

Individual identity is fluid and often dictated by situation. For example, a man can define himself as a father and husband at home while inhabiting the identity of a manager or coworker at work. Similarly, researchers have found that situations and topics dictate interactions between individuals on Twitter. Studies of conversations conducted on Twitter identified six types of social structures: divided, unified, fragmented, clustered, inward and outward hub and spoke structures. Divided, or, polarized crowds, feature two dense groups which interact inclusively with very little cross-over; these topics tend to be heated political stories and indicate that those on one side or the other don’t argue, but generally ignore each other. Unified, or, tight crowds converse within a highly concentrated network of a small number of individuals; specific hobby

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76 Rheingold, Smart Mobs, 25.
groups or professional topics tend to fall into this category. Fragmented, or, brand clusters relate to well-known products or services that are commented upon by many disconnected participants who do not connect with each other; this is often the case with discussions concerning celebrities. Community clusters revolve around popular topics, sometimes global in nature, with various small groups conversing both intensively and extensively. Inward and outward hub structures relate to the conversations on the stories of prominent media outlets, retweeting the stories put out by those media outlets, and then also engaging with others who retweeted the same story; researchers christened these participants “subject groupies.” Finally, spoke structures, or, support networks, refer to the back-and-forth between individual consumers and a single large account—generally customer complaints for major businesses. These structures, the study argues, are indicative of the existence of a social media civil society with complex network structures, individual identities and their various groupings. If Rheingold’s likening of mobile phone culture to Goffman’s performance of self also applies to new media in this way, then the various networks an individual can partake of within the “Twitterverse” help to define their identities.

The development of a social network among digital natives can often hinge on access to social media or mobile phones. A study of text message culture in Finland at the start of the century found that participation was part of a process of evolution of youthful relationships:

The SMS phenomenon has generated its own terminology, customs, and social norms….Perhaps the most surprising feature in the text messaging of Finnish teenagers is the extent to which it incorporates collective behavior….Text messages are circulated among friends, composed together, read together, and fitting

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expressions or entire messages are borrowed from others. Teens use the messages to test their limits and step outside of the role of a child. Text messaging is a way to share relationships.\textsuperscript{86}

**RELEVANCE TO THE OVERALL STUDY**

In the past twenty years, scholars have examined the development of a global civil society and related its existence to an increase in transnational social movements and collective action. Yet the existing literature on the impact of online and social networking services on these transnational collective action events is not extensive. The literature that does exist focuses on the utilization of social networking by existing international organizations and established professional networks. Research regarding the use of online social networking in the initiation of informal transnational waves of crowd action by previously disconnected actors is scant. What does exist is generally an in-depth examination of the role of social media in the Arab Spring events of 2011.

The theory posited in this study is that there is an online social networking civil society and that its existence stimulates the adoption of contentious collective action across national borders. The rise of a participatory culture and social media dialogue, youth’s participation in it, and the social media identity constructed by participants, are all factors which make up the civil society of social media and allows its citizens to participate in a “community” protest across national borders.

Participatory culture has grown out of the rise of Internet usage and is marked by low barriers to expression and engagement with strong support and informal mentorship provided by other members of this culture. Digital natives, who have grown up with this type of culture in

their lives, distinct from their physical locales, are thus more likely to feel a connection with another member of this participatory culture, regardless of geographic distance. New media dialogue is a manifestation of this.

Digital natives, for whom this participatory culture is second nature, are predominantly under the age of thirty. Existing scholarship that explores the increased role of youth in acts of political violence, rebellion, protestation and civil society in general, suggests that those most likely to partake in contentious collective action in today’s world are also those digital natives resident in online participatory culture.

Finally, the role of social networking in the construction and expression of identity is an indicator of the prominence of social networking in modern culture and helps lend credibility to the suggestion that online and mobile social networking does indeed have a distinct culture.
METHODOLOGY

DEVELOPING CONCEPTS, THEORIES AND CASES

To better examine the cause and effect of new media on crowd action dispersion, it is useful to conceptualize the outcome of interest for theory generation and testing. Robert Adcock and David Collier address the discrepancy standards of qualitative and quantitative variables with a conceptual ladder which breaks down measurement validity into four levels: background concept, systematized concept, indicators and scores. As a researcher moves down the levels of the conceptual ladder, the concept gains specificity, and as he or she moves back up the ladder with evidentiary support, that theory is tested (see Diagram 2 in appendix).

For this study, background concepts allow us to posit that communication affects collective action. The systematized concept narrows the focus of the research considerably by further defining the outcome of interest. This study’s systematized concept, the independent variable, is “new media” and the dependent variable is non-contiguous spatial diffusion of a contentious crowd action.

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89 Adcock and Collier, “Measurement Validity,” 531.
The introduction of new media into the evolution of a crowd action can impose a whole new set of facilitating factors—such as near-instant communication to individuals and the public—on event dynamics, which can significantly impact the sympathies of an audience and appeal to a wider group than before. Observers who obtain information only from news outlets are a specific subset of individuals; those who receive text messages or casually explore the event via new media platforms like Facebook or Twitter, are another subset, which might overlap with those that follow the news, but could be distinct. To further explore this new dimension, the systematized concept refers to the outcome of spatial diffusion of a crowd action. With this concept, the investigator is able to focus research on the use of social media in contentious protest and, then, the geographic dispersal of a crowd action.

Indicators are qualitative markers of the systematized concept. For example, indicators for new media usage could include: a population’s ownership of mobile phones, a population’s usage of social networking, and tweets posted with a related hashtag. Indicators regarding the impact of spatial diffusion could be neighborhood locations, and scale of participation in neighborhoods. In order to test the theory of new media’s effect on crowd action diffusion, the indicators for new media usage should be related to the indicators for spatial diffusion. These indicators can be combined to create a qualitative narrative or, quantitative data, to provide evidence for the systematized concept. The quantitative data derived from the indicators, “scores,” make up the fourth level of the conceptual ladder. Scores refer to measurements such as the percentage of the population that owns mobile phones and social networking accounts, and the number of tweets by participants and observers; additionally it could include the geographic distance between neighborhoods involved in the protest and the number of participants within each neighborhood.
Once specific indicators have been introduced, a researcher can step back and review theory formulation rules before becoming entangled in the details of a specific case. Gary King, Robert Keohane and Sidney Verba set forth five rules to assist researchers in the formulation of a suitable theory.⁹⁰ First, a researcher should construct a theory that can be easily falsified.⁹¹ In this way, the theory can be refined by other researchers to increase validity so that no two independent variables contradict one another. Transparency is required in method and process; here, explicating research related to social media usage and dissemination of information over geographic networks. For example, if research were to suggest that there was an increase in riot-related tweeting within a two-hour period, but also that there was no change in participation (in terms of actors and spatial increases or decreases) then the cause and effect hypothesized would be inconsistent.

Secondly, these scholars counsel attention to the maintenance of internal consistency; contradictory independent variables would only cancel each other out and thus disprove the theory.⁹² To assist in this clarification, they suggest formal modeling using mathematical reasoning.⁹³ The third rule stresses discretion at the selection of a dependent variable; the variation being explained should be the priority of dependent variable choice.⁹⁴ For example, in an exploration of the effects of new media on the unfolding events in a crowd action, an investigator must be careful not to choose instances of collective action which rely exclusively on new media: this would skew the results in favor of the theory and ignore instances where new media was active but collective action did not enter the area.

⁹¹ King et al., Designing Social Inquiry, 100.
⁹² King et al., Designing Social Inquiry, 105.
⁹³ King et al., Designing Social Inquiry, 105.
⁹⁴ King et al., Designing Social Inquiry, 107.
Social research is better served by replicable data using observable, concrete concepts. Abstract concepts such as “new media culture” are open to interpretation and difficult to measure. Therefore, specific indicators and scores are necessary. The researcher must finally state theories as universally as possible: avoiding specifics, which limit the universe of cases. When constructing a theory, it must not be immediately equated with a specific case study, such as the London Riots of 2011, which utilized new media, because that is a specific case, not the lynchpin of the entire theory. Thus, a cross section of cases of collective action should be explored before general acceptance of a theory as valid.

Selection of cases in this instance will be naturally biased because of their location in time and space. Given the recent invention of new media, the universe of cases will be confined to extremely recent examples; for instance, Twitter was created in 2006 and thus the cases in which tweets were instrumental would occur after that time. Additionally, ownership and access to these resources is not universal and varies by country and region. The institution of a control group would be difficult, but it would be prudent to assess instances of crowd action without access to a speedy and organized digital communication system in order to pinpoint a difference in spatial diffusion.

**STRATEGIES OF CASE ANALYSIS**

Political scientists Harry Eckstein and Alexander George have written extensively on the use of different types of case studies for theory testing. Each type utilizes different methods...

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95 King et al., *Designing Social Inquiry*, 109.
96 King et al., *Designing Social Inquiry*, 113.
and serves different purposes. Additionally, these types of case studies can be ordered in usefulness based on maturity of the theory being tested. Configurative idiographic testing is used for the newest theories and focuses only on a single case study to determine those independent variables that could lead to the dependent variable.\textsuperscript{99} This method is most like the process of a historian in taking apart a single occurrence.

Given that new media has been identified by other researchers as the causal mechanism responsible for the spatial dispersion of civil unrest, configurative idiographic and heuristic case studies are unnecessary for this proposal. Journalists and governments have acknowledged new media as a culprit for spreading information during civil unrest on various occasions: authorities in Hong Kong imposed stricter sanctions on Instagram and Weibo\textsuperscript{100} during the September/October 2014 student protests;\textsuperscript{101} and British Prime Minister David Cameron called for a conditional ban on new media after the 2011 London Riots.\textsuperscript{102} These are just a few examples to demonstrate the general acceptance that new media platforms acts as a causal mechanism in civil unrest distribution; therefore the primary independent variable has been identified and shown to exist in several cases. Thus, the next step is to test its validity with a probability probe.

After the formulation of the hypothesis of a crucial causal mechanism (i.e. use of social media), “one does not necessarily proceed immediately to test them,” argues Eckstein.\textsuperscript{103} Thus, given the presence of easily accessible hard data regarding social media usage in a specific

\textsuperscript{99} Eckstein, “Case Study and Theory in Political Science,” 96.
\textsuperscript{100} Weibo is a Chinese social networking site akin to Twitter
\textsuperscript{103} Harry Eckstein, “Case Study and Theory in Political Science,” 108.
place and time, and the widely reported distribution of civil unrest, tests can be run to correlate the volume of new media usage with reported dispersion. If there is a noticeable correlation, then the plausibility of the relationship will be further proven, and more in-depth testing, can be executed.

**TYPOLOGICAL THEORY**

To better conceptualize a theory and its constructs, it is helpful to create a descriptive typology chart. Typologies are generally understood to be an organized system of types.\(^{104}\) Alexander George and Andrew Bennett indicate that the creation of those types places a researcher’s independent variables into relevant categories which can help delineate relevant cases and allow the researcher to observe “how and under what conditions [the independent variables] behave in specified conjunctions or configurations to produce effects on specified dependent variables.”\(^{105}\) In order to observe this, it can be useful to create a chart (see Diagram 3 in appendix). Typological charts with cells of explanatory variables can easily lie out theorized indicators and help a researcher visualize the structure of arguments and universe of cases. For instance, as shown in Diagram 3, this proposal’s theory rests on three indicators, which are measured in columns two, three and four, and ranked by combination of high or low scores for each three indicators. Column five attempts to control for possible government censorship of new media and is scored as either regulated or unregulated. This creates several sets of variables and takes into account the various permutations amongst the indicators to provide a broad framework for assessing the universe of cases. Relevant cases can be assessed and placed into

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the table based on their scores of high or low for each indicator, creating a grouping of cases that are similar for further examination. In the last column to the right, the expected outcome—based upon the high or low and regulated or unrelated indicators—is listed: extensive (widespread geographic dispersion) or intensive (contained geographic dispersion). A universe of cases has been placed into the first column.

For the purposes of this study, widespread geographic dispersion has been defined as mimicry of the protest actions (self-declared as for the same reasons) in a non-contiguous area. Noncontiguous has been defined as distinct neighborhoods, towns or cities with other neighborhoods, town or cities in between them. Distinctness has been chosen over specific distances because number of miles does not always translate to how great or little contact is maintained between populations. For instance, the city of Cairo covers a large geographic area, but distinct neighborhoods in the northeast can have a distinct identity from, and little communication with, neighborhoods in the southwest due to natural and imposed structures (both social and physical). As such, their adaption from one to another can sometimes be indicative of a greater spread than between two cities in different countries.

DATA

Data on ownership for mobile phones and usage of social media for the years and countries in the table were taken from self-reported usage in Pew Research polls. Data for related tweets was compiled from various sources, which reported such data during and after the protest actions; tweets concerning the incident can come from both participants and observers. For example, in Egypt in 2011, statistics demonstrate that 76% percent of Egyptians owned
mobile phone in 2011, and 30% reported using social networking sites.\textsuperscript{106} This would give Egypt’s case a rank of high in the ownership of mobile phones and low in the use of social media indicator columns. 92% of residents in the United Kingdom reported owning cell phones, and 52% reported using social networking sites.\textsuperscript{107} Thus, this instance of collective action would obtain a measurement of “high” in both indicator categories.

Measurement of related tweets can be difficult to judge. In 2011, there were an estimated global total of two hundred million tweets per day.\textsuperscript{108} During the first night of the London Riots, there were roughly fifteen thousand related tweets.\textsuperscript{109} However, that was the high point of the trending topic for the next several days, though it did spike again each night while the crowd actions were occurring and from several new locations that were not present in the conversation on the first night.\textsuperscript{110} Thus, while the number of tweets was high, it appears low in the scheme of the entire “Twitterverse.” However, for the purpose of this study, unique related tweets that numbered above 1% of the estimated population of the area containing protests scored as high (see Diagram 4 in appendix).

When the universe of cases has been placed into the chart based on the presence of high or low indicators, they can then be matched up with the expected outcome to determine a trend. If the independent variables do not match up with the expected outcome, or dependent variable, then there is a problem with the internal validity of the theory.

\textsuperscript{107} “Social Networking Popular Across Globe,” \textit{Pew Research Center}.
\textsuperscript{110} “Reading the Riots: Twitter Traffic during the Riots,” \textit{The Guardian}. 
Process Tracing and Path Dependence

A specific combination of independent variables forms the building blocks for any political theory. The theorizing researcher assembles those triggers that he or she believes to be the most accurate contributors to a specific outcome. But once those have been put forth, the best way in which to explicate and test the theory is to highlight their relationship to each other. Process tracing, in its essence, is the unfolding timeline of events and circumstances that lead to a particular outcome. As Alexander George and Andrew Bennett put it:

Process tracing is an indispensible tool for theory testing and theory development not only because it generates numerous observations within a case, but because these observations must be linked in particular to ways to constitute an explanation of the case.\textsuperscript{111}

By linking the events leading up to a specific event, the minutiae can provide insight into both a specific case, and the theory in general which may be applicable to other cases.

This process of assessment of a timeline of causal factors can further fine-tune a theory: highlighting its flaws and revealing previously unrealized variables. George and Bennett explore several varieties of process tracing.\textsuperscript{112} First, they describe the detailed narrative, which is a highly specific account of a single event and its lead-up and ripples. This type of process tracing is most akin in nature to an historical narrative created from in-depth research by an historian. Conversely, an analytical explanation focuses primarily on an explication of the links in the theory with sparse examples of historical evidence. The middle-of-the-road approach, which will be utilized in the case studies, explicates first a single historical case and then its related theory parts for the sake of clarity in conceptualization of the theory in relation to a real-life event.

\textsuperscript{111} George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 207.
\textsuperscript{112} George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 210-211.
The two case studies examined here focus on establishing existing new media access and usage in relevant countries and provide a timeline of related unfolding events; this is an attempt to track the spread of action with its counterpart information flow via new media. In this way, the case studies attempt to examine the role of new media in the diffusion of information as it happens to test the theory that instantaneous communication will lead to widespread participation. Additionally both case studies attempt to typify participants in an effort to demonstrate that participant demographics overlap with those of the theorized global civil society culture in an effort to explain why individuals involved in the flow of information might care or feel a personal stake in the issues at hand.
CASE STUDY ONE: THE LONDON RIOTS OF 2011

To reiterate, the theory under consideration in this proposal is that the use of new media during a contentious crowd action will affect the non-contiguous geographic dispersion of that crowd action. The first and critical step in evaluating a theory regarding the usage of social media is to determine the access and usage a population has to social media at the time. For the purpose of this theory, new media has been defined as the calling, text, picture and video messaging capabilities of mobile phones, smartphone applications (such as WhatsApp and Instagram), and social networking sites that can be used to communicate specific messages to a public or select audience (such as YouTube, Facebook, and Twitter). All of these platforms contain individual user-generated content with little to no filter or editor.

In surveys conducted by the Pew Research Center in 2011, 89% of respondents in Britain claimed to own a mobile phone.\textsuperscript{113} Of those who owned mobile phones, 79% said that they regularly used it to send text messages, 54% used it regularly for pictures or videos, and 38% used it regularly for Internet access.\textsuperscript{114} In the same survey, 43% of respondents in Britain indicated that they utilized online social networking. However, when broken down by age


\textsuperscript{114} Pew Research Center Global Attitudes Project, “Global Digital Communication,” 2.
group, the percentage of eighteen to twenty-nine year olds who utilized social networking jumps to 78%. In terms of gender, men are slightly more likely to indicate that they used the Internet than women: 86% of men compared to 79% of women. Additionally, possession of a college degree made little difference: 43% of those without a college degree use social networking while 45% of those with a college degree indicated using it. Thus, those most likely in Britain to own a cell phone and utilize its full capacity for texting, pictures, videos and internet, as well as those most likely to use the Internet and social networking are youths between the ages of 18 and 29, with men and college degree holders slightly more likely within their respective subcategories.

Identified crowd action participants in the London Riots were predominantly young and male: ninety percent were found to be men or boys. One-third of the adults identified as participants in the riotous activity recorded their highest education level as the GCSE (General Certificate of Secondary Education). Five percent of those arrested indicated that they held a college degree. 66% of ten to seventeen year olds brought up on charges following their participation in the events of August 2011 were indicated as having special educational needs. Maps of the crowd action place the vast majority of participants in the poorest neighborhoods of

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117 Polling by the Pew Research Center was done by telephone and only with those above the age of 18; this excludes results from younger teens who may also have a large share of social networking, mobile phone and internet usage.
119 Roughly equivalent to a high school degree.
120 Rogers, “Data Journalism Reading the Riots.”
As a result of these factors, it has been determined by journalists that the protests was perpetrated predominately by a poor and undereducated male population. However, statistics were taken from those participants who were brought up on charges by police and would thus likely skew the results to favor those whom police were able to identify and arrest—likely those holding prior interactions with local police; and also those who could not afford a lawyer to prevent their indictment.

It has been established, then, that those most likely participants of the 2011 London Riots are roughly analogous in age and gender to those most likely to utilize new media. Thus, it would next be useful to track social media’s usage, and its relationship to the spatial dispersion of the events and timeline of the protest action to elucidate their relationship.

On Thursday, August 4, at 6:15 pm, police shot and killed Mark Duggan, aged 29. On Saturday, August 6, around 5 pm, roughly three hundred people gathered outside of the Tottenham police station in response to the shooting after a march from a nearby estate. Around 8 pm eyewitnesses claim that one teenage protester and a police officer confronted each other and violence erupted. The crowd threw bottles at police and lit several police vehicles on fire within the hour. As the night went on, the arson spread to a double-decker bus and shops in the area of the police station; looting also followed. The Guardian newspaper later compiled a graph of related tweets per hour based on location during the crowd action (see Figures 1-5 in appendix). According to this graph, related tweets started to appear after the march on the police

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station but before violence broke out (numbering roughly one thousand). After the violence started, the number spiked dramatically, topping out at just over fifteen thousand a little before midnight; this indicates that 5.9% of the population of the borough of Tottenham was tweeting about the event. After that brief peak, the number drops steadily, hitting a low point in the early morning hours, but still not dropping below one thousand.

There was another uptick in Tottenham tweets in the morning of Sunday, August 7 and reached another peak just before midday at around six thousand related tweets. This is concurrent with the time at which fire crews claimed to have all fires under control and police announced the beginning of an investigation. At the same time that related tweets originating from Tottenham reached their second peak, there was an introduction of related tweets coming from Birmingham, which is a city approximately ninety-nine miles to the northwest of London’s Tottenham neighborhood. Birmingham’s highest spike of the day came in the late evening and topped out around three thousand before dropping off dramatically for the rest of the night. The population of Birmingham at the time was approximately 1,073,000; this means that around 0.28% of the population was tweeting about the events going on in their area. However, crowd action also started at around 6:30 pm that night, four miles north of Tottenham in Enfield. There was a sharp rise in related tweets coming from Enfield starting an hour before the first violent events, topping out at around twelve-thousand a few hours before midnight and declining sharply thereafter; falling below a thousand within the first few hours of the next day. Enfield’s

126 John Burn-Murdoch et al., “Reading the Riots.”
127 “England Riots: Maps and Timeline,” BBC.
128 Rogers, “2011 Census Results.”
129 “England Riots: Maps and Timeline,” BBC.
registered population at the time was 312,000;\textsuperscript{130} this indicates that 3.8% of the population was actively tweeting about the local events. Meanwhile, tweets from Tottenham at this point had not fallen below one-thousand since the start and spiked again at the same time as Enfield but with only around four thousand five hundred; they dropped sharply and sank below one-thousand for the first time early the next morning.\textsuperscript{131}

On the night of August 8, there were upticks in related tweets in the London boroughs of Hackney, Croyden, and Clapham, as well as the cities of Birmingham, Nottingham, and Liverpool—all of these upticks preceded the start of crowd action in each area; but in each case, the peak of related tweets occurred after the start of the event.\textsuperscript{132} Hackney’s peak of roughly ten thousand tweets represented about 4.1% of the population; Croyden peaked at around nine thousand, representing 2.5% of the population; the neighborhood of Clapham in the borough of Lambeth peaked at a modest three thousand, indicating just under 1% of resident tweet-responses.\textsuperscript{133} Nottingham’s ratio of tweets to population was negligible, while Liverpool’s six thousand five hundred related tweets represented 1.4% of the local population.\textsuperscript{134}

On the last night of recorded crowd action, tweets in Manchester surged after the start of violent protests and peaked at around twelve thousand five hundred, representing approximately 2.5% of the city’s 503,100 residents;\textsuperscript{135} collective action also appeared in the city of Gloucester but the number of tweets in relation to it was negligible (see Diagram 4 in appendix).

The creation of a chart to determine a relationship between distance from the point of origin and scale of social media response (percentage of population tweeting about the riots) can

\textsuperscript{130} Rogers, “2011 Census Results.”
\textsuperscript{131} John Burn-Murdoch et al., “Reading the Riots: Twitter Traffic during the Riots.”
\textsuperscript{132} John Burn-Murdoch et al., “Reading the Riots: Twitter Traffic during the Riots.”
\textsuperscript{133} Rogers, “2011 Census Results.”
\textsuperscript{134} Rogers, “2011 Census Results.”
\textsuperscript{135} Rogers, “2011 Census Results.”
be helpful (see Diagram 4 in appendix). When represented side-by-side, the scale of social media response does not correlate with distance from point of origin.

Those participating in the crowd action would be unlikely to have any other means of communication except their mobile phones while out in the streets. Given that just over a third of mobile phone users in 2011 indicated that they regularly used their cell phones to access the Internet, but nearly 80% said that they used it for text messaging, it is probable that those participating in the events would be more likely to be communicating via text message than social networking sites or apps, which require accessing the Internet on a mobile phone. It would follow, then, that those “tweeting” during the events were people most likely not out on the streets but inside, at a computer. As a result, people likely turned to the Internet and social media to find out exactly what was happening. Thus, it is more likely that organization and communication among participants happened via text messaging and comments by observers were delivered via Twitter and other social media outlets.

Anecdotal evidence supports this conclusion: collective action participants relayed to reporters that text messages via BlackBerry phones had circulated all day before each violent protest broke out and that the locations where the next bout of violence and looting were indicated in the messages. For example, Guardian staff writer Paul Lewis was shown one message circulating on Sunday August 9th: “Everyone in edmonton enfield woodgreen everywhere in north link up at enfield town station 4 o clock sharp!!!!” it said. The message urged people to bring balaclavas, hammers, trollies, cars and vans – but advised against starting fires. It added: "Police can't stop it.”

Given the private nature of BBMs, it is difficult for the

137 Paul Lewis, “A Fire Lit in Tottenham that Burned Manchester.”
public to obtain these types of messages. However, police in Manchester corroborated the story, telling several other reporters that they were informed by civilians that plans were being made via text message to bring the looting and arson from London to Manchester on the third night after its start.\textsuperscript{138} The introduction of cheap, pay-as-you-go service for BlackBerry users in 2008 made the phone an attractive option to cell-phone customers and it became a symbol of the modern, working-class urban youth.\textsuperscript{139} Sending text messages from a BlackBerry phone to another type of phone was at the time ten cents per message, but messages sent using their BBM service were free.\textsuperscript{140} BBM messages are sent to a Blackberry server, from there, only those who have a specific pin number, or who already reside in the contact list of the sender, can read the message.\textsuperscript{141} As a result, police were unable to look at the messages themselves—making it an effective way to spread news widely, but only among certain people.\textsuperscript{142}

The working conclusion, then, indicates that the organization of events took place via text message (private new media) and that dialogue concerning the events occurred via social media (public new media). While there is no way to tell what percentage of individuals will go outside to participate once he or she is aware of an incident, the spike in tweets and information during a crowd action would certainly increase the audience for related events. However, the coverage of the violent protests by news outlets on television and radio disseminated the same information in real time; some crowd action participants indicated that they had joined after seeing events

\textsuperscript{140} Ball and Brown, “Why Blackberry Messenger was Rioters’ Communication Method of Choice.”
\textsuperscript{142} Ball and Brown, “Why Blackberry Messenger was Rioters’ Communication Method of Choice.”
unfolding on the news rather than looking to social media.\textsuperscript{143} A September 2011 study on where the public gets its news, determined that while eighteen to thirty-nine year olds are more likely than their elders to turn to the Internet for breaking news, 47\% of that younger group will turn to local television over the Internet (see Figure 6 in appendix).\textsuperscript{144} Thus, there is no concrete evidence that social networking sites were better able to disseminate the information than traditional media outlets. However, the combination of news transmission in both traditional and new media outlets would ensure the greatest penetration given that 22\% of youths did indicate that they turn to the Internet first for breaking news. Therefore, the dissemination of information on collective action by social networking outlets ensures that the information is reaching not only those who watch the news, but also, those who would otherwise have not seen the unfolding of events in real time on a televised news broadcast.

In a similar exercise to process tracing, political scientist Paul Pierson addresses the question of timing in theory testing. In tracing the events and circumstances that led to the occurrence of an event, causal chains are often encountered.\textsuperscript{145} However, to follow a causal chain indiscriminately into the past would inundate the researcher with unnecessary information, therefore, Pierson suggests creating cutoff points.\textsuperscript{146} While there are several suggested ways to determine this end-point, Pierson suggests creation based on a clarification of the constraints of the theory; for example, a causal chain may lead to information that does not fall under the

\begin{itemize}
\item \textsuperscript{145} Paul Pierson, “Big, Slow-Moving and …Invisible: Macrosocial Process in the Study of Comparative Politics,” in \textit{Comparative Historical Analysis in the Social Sciences} eds. James Mahoney and Dietrich Rueschemeyer (Cambridge MA: Cambridge, 2003), 188.
\item \textsuperscript{146} Pierson, “Big, Slow-Moving and…Invisible,” 188.
\end{itemize}
purview of the study and thus should be put aside.\textsuperscript{147} Similarly, Pierson speaks of structural
determination: the theory that causal connections paired with certain existing relationships or
structures will combine to create a tipping point when independent variables are present in the
right context at the right time—known as a threshold.\textsuperscript{148} This theory of inevitability feeds into a
theory of path dependence.

Path dependence refers to the existence of a self-reinforcing process in a political
system: a fairly modest change induces a feedback loop, which reinforces the initial
direction of change. Collective action, for instance, may lead to shifts in
expectations and resources that facilitate more collective action.\textsuperscript{149}

As a result, the reoccurrence or perpetuation of an event may be structurally built into its
configuration. This theory helps to explain the perpetuation of contentious crowd action in
England in 2011. The successful execution of looting and arson on the first night of the protests
in Tottenham sent a signal to other possible participants that they too could execute the same
actions with little fear of retribution. After the second night, where violent protests were
successfully transferred to the nearby locale of Enfield, a signal was sent across the country that
contentious crowd action could jump to different locations. The repeated discussion of the topic
on old and new forms of media during the day perpetuated the idea in the public consciousness.
Therefore, based upon this theory, waves of violent protest were structurally self-perpetuating
thanks to the first night’s jump in location and the persistent discussion of it on old and new
media—which widened the scope of informed individuals.

\textsuperscript{147} Pierson, “Big, Slow-Moving and…Invisible,” 189.
\textsuperscript{148} Pierson, “Big, Slow-Moving and…Invisible,” 193.
\textsuperscript{149} Pierson, “Big, Slow-Moving and…Invisible,” 195.
PRELIMINARY CONCLUSIONS

At the end of this process, the case study of the 2011 London Riots indicated that social media operates on two levels: the public and the private. Public social media operates on public platform websites and mobile applications. Private social networking is executed via mobile phone functions such as text or picture messaging and is sent to the pre-existing social circle of an individual. The organization and planning of crowd actions appears to have been executed via private means because of the security that accompanies private social networking, particularly by text messaging. Public social networks experienced an increase in crowd action-related posting following the start of specific events and were utilized predominantly to facilitate a dialogue in reference to the unfolding events. However, an increase in public network dialogue did not reveal a clear connection with the geographic distance between each crowd action. Increases in distance from the origin point correlated with decreases in the number of related tweets. Thus, while social media was utilized to plan and execute a crowd action within a community, there is no clear correlation between its use and the geographic dispersion of the collective action.
CASE STUDY TWO: THE ARAB SPRING – TUNISIA TO EGYPT

In December of 2010, a twenty-six year-old fruit seller named Mohamed Bouazizi in Tunisia self immolated after police confiscated his cart for lack of official permit.\textsuperscript{150} The event set off massive anti-governmental protests that resulted in the flight of the Tunisian president, Zine El Abidine Ben Ali, to Saudi Arabia, effectively ending twenty years of authoritarian rule.\textsuperscript{151} Several months later, similar anti-governmental protests started in Egypt, Yemen, Bahrain, Libya, and Syria.\textsuperscript{152}

Once more, the theory under consideration in this proposal is that the use of new media during a crowd action will affect the non-contiguous geographic dispersion of that crowd action; the underlying assumption is that ease of, and access to, communication will facilitate greater participation across a larger geographic area as individuals learn of the collective action event. The first and critical step in evaluating a theory regarding the usage of new media is to determine the access and usage a population has to new media technologies at the time. For the purpose of this theory, new media has been defined as the calling, text, picture and video messaging capabilities of mobile phones, smartphone applications (such as WhatsApp and Instagram), and social networking sites that can be used to communicate specific messages to a public or select

\textsuperscript{151} "Timeline: The Major Events of the Arab Spring,” \textit{NPR}.
\textsuperscript{152} "Timeline: The Major Events of the Arab Spring,” \textit{NPR}.
audience (such as YouTube, Facebook, and Twitter). All of these platforms contain individual user-generated content with little to no filter or editor.

According to data compiled by the United Nation’s (UN) International Telecommunication Union (ITU), there were 12,387,656 mobile phone subscriptions in Tunisia in 2011.\textsuperscript{153} Statistics from UN Data further indicate that the total population of Tunisia that same year was approximately 10,481,000.\textsuperscript{154} Data from the Pew Research Center the following year found that 91\% of Tunisians self-reported owning a mobile phone.\textsuperscript{155} It is likely, then, that many Tunisians owned more than one mobile phone during the 2011 protests; perhaps as a cheap, pay-as-you-go option, or perhaps to avoid tracking by a Big Brother government. However, in the same Pew survey, only 34\% of Tunisians reported using social networking sites.\textsuperscript{156} Thus, in the typology chart (Diagram 3 in appendix), Tunisia received scores of high for ownership of mobile phones (private new media) and low for social networking (public new media).

In 2011 there were 83,425,145 mobile phone subscriptions in Egypt,\textsuperscript{157} in a population of approximately 81,121,000.\textsuperscript{158} A Pew survey in the spring of that year found that 71\% of individuals in Egypt self-reported owning a mobile phone.\textsuperscript{159} This once again indicates that many Egyptians likely owned more than one mobile phone. 85\% of respondents to the Pew survey, who reported utilizing the Internet, also reported use of social networking sites.\textsuperscript{160} As

\textsuperscript{157}“Mobile cellular_2000-2013.xls,” International Telecommunication Union.”
\textsuperscript{159}Pew Research Center Global Attitudes Project, “Global Digital Communication,” 22.
such, Egypt received scores of “high” for both public and private new media usage in the
typology chart (Diagram 3 in appendix).

The population of the Arab world is largely young; a 2012 study by Michael Hoffman
and Amaney Jamal at Princeton University reported that 60% of the MENA region’s population
was under 30.\textsuperscript{161} Hoffman and Jamal’s study focused on compiling statistics regarding age
cohorts and the Arab Spring. Their study found that the youngest cohort of individuals surveyed
(18-24) were 50% more likely to participate in protests than the oldest generation surveyed
(55+).\textsuperscript{162} In both Tunisia and Egypt, protest participants were largely male: 77% in Egypt and
79% in Tunisia.\textsuperscript{163} An Arab Barometer survey conducted in the spring and summer months of
2011 found that the Egyptian revolution had more middle-class participants than not, and that
Tunisian participants was similarly distributed.\textsuperscript{164} This indicates that participants likely had the
means to own and operate mobile technologies during this time.

Just hours after Mohammed Bouazizi’s self-immolation in the town of Sidi Bouzid on
December 17, protests spread both within that town and quickly throughout the region.\textsuperscript{165} In
March of 2010, another small-town cart vendor in Tunisia self-immolated after facing
bureaucratic corruption but his case did not spark protests like Bouazizi’s did. The difference,
many locals believed, was that a video of Bouazizi’s act of protest was disseminated online
quickly after it happened.\textsuperscript{166} Sidi Bouzid locals pushed hard for media attention, and a video of a

\begin{flushright}
\textsuperscript{161} Michael Hoffman and Amaney Jamal, “The Youth and the Arab Spring: Cohort Differences and Similarities,”
_Middle East Law and Governance_ 4 (2012), 169.
\textsuperscript{162} Hoffman and Jamal, “The Youth and the Arab Spring,” 176.
\textsuperscript{163} Mark Beissinger, Amane Jamal, and Kevin Mazur, “The Anatomy of Protest in Egypt and Tunisia,” April 15,
\textsuperscript{164} Mark Beissinger et al., “The Anatomy of Protest in Egypt and Tunisia.”
\textsuperscript{165} Ryan Rifai, “Timeline: Tunisia’s Uprising: Chronicle of Nationwide Demonstrations over the Country’s
Unemployment Crisis,” _Aljazeera_, January 23, 2011, accessed May 30, 2015,
\textsuperscript{166} Taylor Dewey, Juliane Kaden, Miriam Marks, Shun Matsushima, and Beijing Zhu, “The Impact of Social Media
on Social Unrest in the Arab Spring,” prepared for the Defense Intelligence Agency by the Stanford Public Policy

town protest posted online by Bouazizi’s relatives Rochdi Horchani and Ali Bouazizion on December 17, was picked up by Al Jazeera’s Mubasher channel, which operates primarily on YouTube.\(^{167}\) Al Jazeera had recently created a new media team to constantly comb the Internet and find news affecting the Arab world; they had found the video on Facebook.\(^{168}\)

Facebook was reported as the main social networking site for protest organizers in Tunisia because it was not included in the government’s online censorship program, which covered most every other social networking site.\(^{169}\) According to numbers compiled by the International Telecommunications Union (ITU), the UN agency in charge of information and communication technologies, 39.1% of Tunisians had access to the Internet in 2011.\(^{170}\) In a Pew Research Center Survey from 2012, 34% of all individuals surveyed in Tunisia indicated that they used social networking, while 57% indicated that they did not have access to the Internet.\(^{171}\) Thus, a majority of individuals who had access to the Internet were utilizing it for social networking.

By December 24, protests became violent in the towns of Menzel Bouzaïène thirty-two miles away from Sidi Bouzid and Miknassi, thirty-one miles away.\(^{172}\) A day later, rallies were held in Kairouan, Sfax and Ben Guerdane\(^ {173}\) fifty-six, seventy-four, and one hundred eighty-two

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\(^{168}\) Yasmine Ryan, “How Tunisia’s Revolution Began.”

\(^{169}\) Yasmine Ryan, “How Tunisia’s Revolution Began.”


\(^{172}\) Ryan Rifai, “Timeline: Tunisia’s Uprising.”

\(^{173}\) Ryan Rifai, “Timeline: Tunisia’s Uprising.”
miles away from Sidi Bouzid respectively.\textsuperscript{174} By December 28, rallies in the Tunisian capital of Tunis had started in support of protestors across the country.

Over time, the trending of Twitter hashtags mirrored the expansion of protests: #bouazizi became #sidibouzid and then #tunisia by January.\textsuperscript{175} As a result, the Tunisian government organized a network of web activists to find and eliminate postings and support online.\textsuperscript{176} On January 7, several bloggers, web activists and a rapper who posted a video on YouTube of a song criticizing the Tunisian government, were arrested for their posts.\textsuperscript{177} This is similar to the attempted crackdown by police in England during the London Riots, when officials arrested several people who advertised for protest participants online. On January 14, 2011, President Zine El Abidine Ben Ali fled to Saudi Arabia, ending more than 20 years of authoritarian rule.\textsuperscript{178} Researchers at the University of Washington conducted an analysis of related Arab Spring tweets during protests between January and March 2011; they looked at tweets that originated within the country of Tunisia, in the MENA region, and in the rest of the world. Unlike in the case of the London Riots, the upticks in regional Twitter activity occurred immediately preceding the introduction of crowd action events in that area.\textsuperscript{179} Immediately after President Ben Ali resigned, related tweets declined steeply, but rose again after the installment of a new leader, Mohamed Ghannouchi, who was seen as a continuation of the old regime until he too resigned on February 27 (see Figure 7 in appendix).\textsuperscript{180} This is an indication that public social

\textsuperscript{174} Distances calculated as the crow flies from center to center; calculated using Google Maps.
\textsuperscript{175} Yasmine Ryan, “How Tunisia’s Revolution Began.”
\textsuperscript{176} Yasmine Ryan, “How Tunisia’s Revolution Began.”
\textsuperscript{177} Yasmine Ryan, “How Tunisia’s Revolution Began.”
\textsuperscript{180} Philip N. Howard et al., “Opening Closed Regimes,” 13.
media was being utilized to plan and encourage physical protest rather than discuss it after-the-fact, as was the case in the London Riots.

Between January 14 and March 16, 18% of tweets utilized the hashtag #sidibouzid from within Tunisia; eight percent of tweets using that same hashtag originated in neighboring countries, and 32% came from outside the region.\textsuperscript{181} The remainder of related tweets during that time period had obscured locations and could not be pinpointed.\textsuperscript{182} However, Internet penetration at the end of 2010 was only 34% in Tunisia, and access was very expensive for private use; although access through university, high school, and primary school libraries was very high.\textsuperscript{183}

Other regional countries affected by unrest include Yemen, Bahrain, Libya and Syria; these countries make up the bulk of regional contributors to new media information flow during the Arab Spring. In 2011, Yemen had 11,668,000 mobile phone subscriptions\textsuperscript{184} to a population of approximately 24,053,000.\textsuperscript{185} However, only 581,752 Internet subscriptions were in service in Yemen that same year.\textsuperscript{186} Thus, any public new media contributions from Yemen were likely on a small scale. Bahrain held 1,693,650 mobile phone subscriptions\textsuperscript{187} to its population of 1,262,000 that same year.\textsuperscript{188} Internet penetration in Bahrain was at 53% and thus more likely to

\textsuperscript{181} Philip N. Howard et al., “Opening Closed Regimes,” 10.
\textsuperscript{182} Philip N. Howard et al., “Opening Closed Regimes,” 10.
\textsuperscript{184} “Mobile Cellular 2000-2013.xls,” International Telecommunication Union.”
\textsuperscript{187} “Mobile Cellular 2000-2013.xls,” International Telecommunication Union.”
have contributed to an online discussion than Yemen.\textsuperscript{189} Libya had 10,000,000 and Syria had 12,917,000 mobile phone subscriptions\textsuperscript{190} to their populations of 6,355,000\textsuperscript{191} and 20,411,000 respectively.\textsuperscript{192} Libya experienced a near-total Internet and phone service blackout during much of 2011 under Muammar al-Qadhafi, but the organization Freedom House reports that Internet penetration for 2011 was at 17\%.\textsuperscript{193} Similarly to Libya, Syrian Internet access was closely restricted and monitored under President Bashar al-Assad, but Internet penetration was at 23\% in 2011.\textsuperscript{194} Thus, research which found that only 8\% of tweets relating to #sidibouzid emanated from other Arab Spring-affected countries is not surprising given the small amount of access truly available to public media on the Internet. But high rates of mobile phone service indicate higher use of private new media like SMS or picture and video messaging in transmitting information.

On January 25, 2011, protests in Tahrir Square in Cairo brought the unrest in Tunisia to Egypt. Reporters testified that there were tens of thousands of protesters in Cairo, and attempts to storm the parliament building brought reprisals of tear gas and water canons against the crowd. Protest events also started in Alexandria (approximately 111 miles away from Cairo), Mansura (68 miles away), Tanta (52 miles away), Aswan (423 miles away) and Assiut (199 miles away).\textsuperscript{195}

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\textsuperscript{190} “Mobile Cellular_2000-2013.xls,” International Telecommunication Union.”
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That first day, Twitter was so active that the Egyptian government blocked it within the country.\textsuperscript{196} By the end of the second day of protests, the Egyptian government had additionally blocked Facebook, Twitter, and sporadically, mobile phone service.\textsuperscript{197} Reports from inside Egypt reported that Internet access and SMS services flickered on and off over the course of the next several days.\textsuperscript{198} By the end of the week, protests had occurred in Suez (approximately 76 miles from Cairo), Sheikh Zuweid (180 miles away), Ismailia (70 miles away), and Toukh (20 miles away).\textsuperscript{199} Government calls for a curfew were ignored as protests continued and ICT services cut in and out.\textsuperscript{200} On February 11, 2011, Egyptian President Hosni Mubarak resigned his post.\textsuperscript{201} During the first seventeen days of Egyptian demonstrations, protests also started in Yemen; and in the month following President Mubarak’s resignation, protests also erupted in Bahrain, Libya and Syria.\textsuperscript{202}

A survey conducted in Tahrir Square during the protests found that only 13\% of respondents indicated that they had used social media as a medium related to information about protest activities.\textsuperscript{203} Of those who took the survey on the spot, 92\% indicated their use of television and 93\% indicated firsthand communication for information about the protests.\textsuperscript{204} One study of Twitter during the Arab Spring protests tracked clicks on links associated with country-specific hashtags to record consumption of related materials and found that the vast majority of

\begin{footnotesize}
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\item \textsuperscript{196} “Frontline: Revolution in Cairo, Day-to-Day,” \textit{PBS} accessed July 21, 2015, \url{http://www.pbs.org/wgbh/pages/frontline/revolution-in-cairo/day-to-day/}.
\item \textsuperscript{199} “Timeline: Egypt’s Revolution,” \textit{Aljazeera}.
\item \textsuperscript{200} “Timeline: Egypt’s Revolution,” \textit{Aljazeera}.
\item \textsuperscript{201} “Timeline: Egypt’s Revolution,” \textit{Aljazeera}.
\item \textsuperscript{202} “Timeline: The Major Events of the Arab Spring,” \textit{NPR}.
\item \textsuperscript{203} Sean Aday, Henry Farrell, Marc Lynch, John Sides and Deen Freelon, “Blogs and Bullets II: New Media and Conflict after the Arab Spring,” \textit{United States Institute of Peace Peaceworks} no. 80 (July 2012), 8.
\item \textsuperscript{204} Aday et al., “Blogs and Bullets II,” 8.
\end{itemize}
\end{footnotesize}
information consumption occurred outside of the MENA region entirely: 83% of clicks on Tweets with #sidibouzid and 75% of clicks on Tweets with #jan25. These numbers once again indicate that public new media serves to facilitate a discussion of events by non-participants, rather than to organize them. Results of the University of Washington study, which found an uptick of Tweets preceding protest events in the Arab Spring could perhaps indicate that an increase in discussion on a public new media platform can fuel news and opinions within traditional media outlets like the news stations viewed by 92% of Tahrir Square protesters, which translated into action on the part of individuals.

But what are the connections between individuals whom are compelled to participate? The global digital civil society would extend to regular users of new media, which are, generally, the middle and higher classes, who have the money and means to access these technologies. The majority of participants in protests in Egypt and Tunisia were middle class and young and are thus potential members of this digital civil society. Both countries claim Arab as their official language, and so a literate populace would readily understand information flow between the two. This is in keeping with Tucker et al.’s argument that online conversation networks operate within linguistic bounds, with only a few points of crossover (those few individuals that operate within several language spheres simultaneously). Data compiled from various studies tracked and recorded information flow online in English, and thus amongst an educated and western-exposed populace. DJ Wolover’s paper on media and agency during the Tunisian revolution argues that Tunisia and Egypt, as well as various other Arab countries have historically operated with a group relational solidarity. Cultural, linguistic, religious, governmental and historical

205 Aday et al., “Blogs and Bullets II,” 13.
206 Joshua A. Tucker et al., “Protest in the Age of Social Media.”
similarities have been captured and cultivated by Al Jazeera’s news presence; which Wolover argues promotes a pan-Arab identity that is reinforced by their propensity to broadcast news from one country across the entire region. \(^{208}\) Furthermore, co-dependence by regional states can shape beliefs and actions, which places Al Jazeera’s CNN-style new blast in the unique position of holding powerful sway over the analysis of social issues in the Arab world. \(^{209}\)

A study published in the International Journal of Communication addressed the flow of information via Twitter between and within Tunisia and Egypt during their revolutions and dubbed them “information cascades.” \(^{210}\) Information cascades are situations where “it is optimal for an individual, having observed the actions of others ahead of him, to follow the behavior of the preceding individual without regard to his own information,” online this is accomplished via “reblogging” or “retweeting.” \(^{211}\) In other words, users publish the same content from another user under the new user’s name. This dataset considered the most prominent information flows during the revolutions and found that there were 20,848 Tunisian, and 29,403 Egyptian, unique flows of information where a Tweet was duplicated, or nearly duplicated more than twice (retweeted). \(^{212}\) They found that there were twelve actor types that had tweeted within these datasets, which they further broke down in either individual, or organization Twitter accounts (see Figure 8 in Appendix). Their findings suggested that approximately 70% of the information flow occurred from the accounts of individuals. \(^{213}\) The individuals contained within these

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\(^{211}\) Gilad Lotan et al., “The Revolutions were Tweeted,” 1380.
\(^{212}\) Gilad Lotan et al., “The Revolutions were Tweeted,” 1382.
\(^{213}\) Gilad Lotan et al., “The Revolutions were Tweeted,” 1386.
information cascades were those who posted frequently and boasted a lot of “followers,” or, users who subscribe to receive updates to the posts of another user’s account.\(^{214}\) Thus, the flow of information regarding events circulated within an existing online social network of users, spearheaded by prominent individuals in the regional sphere such as well-known activists, celebrities, political actors and bloggers.\(^{215}\)

**Preliminary Conclusions**

There have been a plethora of studies conducted on the diffusion of the Arab Spring protests in 2011. Direct polling of individuals on-the-ground during a protest indicate that participation was driven by images observed on television or by face-to-face communication. Data compiled by several UN agencies demonstrates that mobile phone ownership and usage was high in Egypt and Tunisia. Mobile phone subscriptions that outstripped population numbers could be indicative of a culture in which mobile phones can be switched and discarded to avoid pressure from an oppressive “Big-Brother” regime. Egypt, Tunisia, Yemen, Bahrain, Libya and Syria had low Internet penetration, but protester demographics in Egypt and Tunisia aligned with those most likely to have access to Internet services; and of those that had access, social media usage was high when available. Studies of the flow of online information found that organizations and news outlets that posted information with links to articles were consumed predominantly outside the MENA region by outside observers while information cascades within Egypt and Tunisia occurred predominantly among individuals. Individual information cascades were led by active Twitter users with a lot of followers that were known in both countries. Information posted by these individual users was often picked up by organizations and news

\(^{214}\) Gilad Lotan et al., “The Revolutions were Tweeted,” 1386.

\(^{215}\) Gilad Lotan et al., “The Revolutions were Tweeted,” 1383.
outlets: online, in print and on television. Thus, while protest organization was conducted on the ground level, initial information flows were cultivated by individuals actively promoting protest activities online, which fed into news stories picked up by traditional media outlets.
CONCLUSION

New media technologies can be widely utilized during the execution of a contentious collective action. Because of this observation, governmental and journalistic accounts often rely upon the assumption that new media has been instrumental in the organization and execution of protest actions. This study argues that new media operates on two levels – public and private – and that they have differing effects on organization and participation. Public media appears to function predominantly to act as a megaphone and often contains crossover with traditional media sources. Private new media appears, on the surface, to act as a means of communication between protest actors but operates predominately within an existing social circle, mimicking the effects of a face-to-face interaction, albeit on a digital level.

This study addresses the argument that new media can expedite the diffusion of a collective action event by facilitating individual transformation in belief by means of rapid communication. The reduction in social barriers caused by digital communication could provide a catalyst for the creation, as well as act as an indicator of the existence of, a global digital civil society. The existence of such a society may lower the cost of participation and provide an explanation for the “stake” that individuals in one country have in the plight of individuals in another country.
Conversations conducted via new media are most likely contained within existing linguistic spheres, which can often link regions and/or peoples that also have a shared history and culture. This cultural affinity allows conversation participants to feel a personal stake in the issue at-hand and will thus become more likely to feel included in the digital civil society of that group, regardless of geographic distance.

In the case study of London’s 2011 riots, participants were predominantly young males of working class status. They were very likely to have access to a mobile phone before, during, and after the protest events, and a plethora of anecdotal evidence suggests that planning and organization was executed either face-to-face or via text messaging or BBM. Data surrounding Twitter usage during the days of protest found spikes in activity after an event and indicated that public new media was thus utilized predominately for the sake of discussion by non-participants after the fact.

In Tunisia and Egypt in 2011, protest participants were also predominantly male and young, but were members of the middle class in their countries. However, they too had easy access to mobile phones for on-the-ground communication, though it is difficult to gauge the extent of their usage of mobile phones for planning purposes. Analysis of Twitter in MENA countries found an uptick in activity preceding a protest event, which suggests that it may have been used in planning. Furthermore, information flow existed between the two countries thanks to Al Jazeera’s constant live-coverage and an information cascade via Twitter, which was informed by political and activist elites that had previously engaged in online activism and cultivated a following.

New media technologies do host conversations by activists on both public and private levels, and can engage casual participants and observers in a meaningful conversation. However,
television continues to function as the dominant means of information broadcasting for viewers in both the Western and Arab world. The function of new media, then, may be to stimulate action among a select set of individuals that utilize it habitually. These individuals could, in turn, mobilize other individuals within their existing social spheres (either online or in-person); but do not appear to be the lynchpin to diffusion.

FUTURE SCHOLARSHIP

Comparative historical examples of collective action dispersion could act as a control group to establish if dispersion with use of social media functions differently than it did prior to the invention of social media. Recent studies on crowd action dispersion have cited mass media as functioning to spread the message and consequent execution of civil unrest. This mirrors the wide audience of social media but takes the onus from an individual to an organization that would have a different set of motivations (i.e. biases) such as the desire to sensationalize for the sake of higher reader or viewership. Studies which view collective action dispersion before the modern era, such as Kevin R. Cox and George J. Demko’s “Exploration of Conflict Behavior in a Spatio-Temporal Context” focus on word of mouth and local news distribution; their example focuses on agrarian Russia in the first decade of the twentieth century. In such instances, the motivations are of an individual rather than an organization. Thus, social media combines the individual motivations for dispersion of information with the amplified reach of mass media. This may prove a complicated hurdle to overcome when comparing to the existing historical sample.

This study relied heavily upon data compiled by other researchers that was not completely analogous in nature. In order to best compile meaningful data, research, in the future, should compile statistics and examine the data independently. Similarly, the methods utilized to examine public new media usage in direct correlation to distance from the origin point within England, could not be replicated in the transnational case of the Arab Spring. The catalyzing event of a collective action operates like a rain cloud, and subsequent events ripple outward from their point of contact like a water droplet, from that cloud, upon the ground. When such massive event ripples occur, the point of origin from which to measure is more difficult to determine; subsequent participants may have been ignorant of the original event and reacting entirely to the first show of unrest in his or her own country. With such media saturated countries like England, it is safer to assume that participants were likely aware of the catalyzing event; in countries where new media access is less likely and traditional media outlets are state-controlled, foreknowledge of events in other countries is less likely and thus the origin point would be within that country (even if the chain of events, or, the raincloud, started in another country). This is based upon the assumption that an origin point is determined by the belief of the majority of participants.

The interference of a government in access to Internet and mobile communications was touched upon briefly in this study. In the future, it would be prudent to include a more comprehensive examination of the role of regime interference and counter-attacks via new media. Additionally, existing data about public new media far outstrips that of private new media because of the difficulty for researchers in obtaining private usage statistics. A further impediment was my own language barrier; all of the information that I had access to was in English, which often ignored, or, only mentioned in passing, the use of hashtags and keywords in
Arabic or other languages. Any individual utilizing the Internet in English or with English, exists in a very specific sphere of life within the MENA region.
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APPENDIX

Diagram 1: Ranking of Select New Media Technologies from Private to Public

<table>
<thead>
<tr>
<th>Totally Private</th>
<th>Calls between mobile phones</th>
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<tbody>
<tr>
<td></td>
<td>Text/Picture messages between mobile phones</td>
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<tr>
<td></td>
<td>WhatsApp</td>
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<td>SnapChat</td>
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<td>Tumblr</td>
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<td></td>
<td>Google+</td>
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<tr>
<td>Totally Public</td>
<td>YouTube/Vine</td>
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<td></td>
<td>Twitter</td>
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</table>
Diagram 2: Conceptualization and Measurement Levels of New Media Effects on Diffusion

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
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<tbody>
<tr>
<td><strong>Level 1: Background Concept</strong></td>
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</tr>
<tr>
<td>Communication</td>
<td>Collective Action</td>
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<tr>
<td><strong>Level 2: Systematized Concept</strong></td>
<td></td>
</tr>
<tr>
<td>Social Media</td>
<td>Spatial Diffusion of Crowd Action</td>
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<tr>
<td><strong>Level 3: Indicators</strong></td>
<td></td>
</tr>
<tr>
<td>Ownership of mobile phones</td>
<td>Distance between neighborhoods</td>
</tr>
<tr>
<td>Tweets</td>
<td>Scale of crowd action in neighborhoods</td>
</tr>
<tr>
<td>Use of social media</td>
<td></td>
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<tr>
<td><strong>Level 4: Scores</strong></td>
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<tr>
<td>Number of participants who own mobile phones</td>
<td>Distance between neighborhoods involved</td>
</tr>
<tr>
<td>Number of related Tweets</td>
<td>Number of participants in neighborhood</td>
</tr>
<tr>
<td>Percentage of population that uses social media platforms</td>
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</tbody>
</table>
Diagram 3: Typology for Social Media as a Means of Spatial Dispersion of Collective Action

<table>
<thead>
<tr>
<th>Cases</th>
<th>Ownership of Mobile Phones</th>
<th>Related Tweets</th>
<th>Use of Social Media</th>
<th>Government Interference</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferguson 2014</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Unregulated</td>
<td>Extensive</td>
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<td>London 2011</td>
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<tr>
<td>Hong Kong 2014*</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Regulated</td>
<td>Extensive</td>
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<td>Egypt 2011</td>
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<tr>
<td>Tunisia 2011</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Unregulated</td>
<td>Extensive</td>
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<tr>
<td>Ukraine 2013</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Unregulated</td>
<td>Extensive</td>
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<td>Intensive</td>
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</tbody>
</table>

*Did not reach expected outcome
Diagram 4: Comparison of Geographic Distance of Related Crowd Actions and Local Social Media Response – London Riots 2011

<table>
<thead>
<tr>
<th>Location</th>
<th>Approximate Distance from Origin Point (in miles)</th>
<th>Approximate Number of Related Tweets</th>
<th>Population</th>
<th>Scale of Twitter Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tottenham</td>
<td>0</td>
<td>15,000</td>
<td>254,900</td>
<td>5.9%</td>
</tr>
<tr>
<td>Hackney</td>
<td>3</td>
<td>10,000</td>
<td>246,300</td>
<td>4.1%</td>
</tr>
<tr>
<td>Enfield</td>
<td>4</td>
<td>12,000</td>
<td>312,500</td>
<td>3.8%</td>
</tr>
<tr>
<td>Clapham</td>
<td>10</td>
<td>3,000</td>
<td>303,100</td>
<td>0.99%</td>
</tr>
<tr>
<td>Croyden</td>
<td>15</td>
<td>9,000</td>
<td>363,400</td>
<td>2.5%</td>
</tr>
<tr>
<td>Gloucester</td>
<td>91</td>
<td>100</td>
<td>121,700</td>
<td>0.08%</td>
</tr>
<tr>
<td>Birmingham</td>
<td>99</td>
<td>3,000</td>
<td>1,073,000</td>
<td>0.28%</td>
</tr>
<tr>
<td>Nottingham</td>
<td>104</td>
<td>100</td>
<td>305,700</td>
<td>0.03%</td>
</tr>
<tr>
<td>Manchester</td>
<td>159</td>
<td>12,500</td>
<td>503,100</td>
<td>2.5%</td>
</tr>
<tr>
<td>Liverpool</td>
<td>175</td>
<td>6,500</td>
<td>466,400</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71,200</strong></td>
<td></td>
<td><strong>3,950,100</strong></td>
<td><strong>0.02%</strong></td>
</tr>
<tr>
<td><strong>Adjusted Total</strong></td>
<td><strong>71,200</strong></td>
<td></td>
<td><strong>2,054,052</strong></td>
<td><strong>0.03%</strong></td>
</tr>
</tbody>
</table>

218 As the crow flies from center to center; calculated using Google Maps
219 Numbers are taken from the first night of the appearance of a crowd action in each neighborhood/city
220 Calculated by dividing related tweets by population
221 Total local populations multiplied by percentage of
Diagram 6: Process Tracing for the Effects of Social Media on Collective Action Dispersion

Theoretical Process

<table>
<thead>
<tr>
<th>Prior Condition</th>
<th>Stimuli</th>
<th>Mechanisms</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widespread</td>
<td>Start of</td>
<td>Actors organize</td>
<td>Spikes of new media usage/</td>
</tr>
<tr>
<td>mobile phone/</td>
<td>crowd event</td>
<td>with social</td>
<td>mimicry of behavior in non-contiguous areas</td>
</tr>
<tr>
<td>social media</td>
<td></td>
<td>networking tools</td>
<td></td>
</tr>
<tr>
<td>usage</td>
<td></td>
<td>“Trending”</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>escalates</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>participation</td>
<td></td>
</tr>
</tbody>
</table>
Diagram 7: Process Tracing for the Effects of Social Media on Collective Action Dispersion as exemplified in London 2011

<table>
<thead>
<tr>
<th>Historical Process</th>
<th>2011 Stats</th>
<th>Crowd Action Starts</th>
<th>Text Messaging</th>
<th>Waves of Collective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>89% of Brits march on own police</td>
<td>Aug 6</td>
<td>Aug 7 daylight: 6:40pm; 9:00pm; Aug 7</td>
<td>Aug 8 repeat of Aug 7 --</td>
<td>Aug 9 repeat of Aug 7 --</td>
</tr>
<tr>
<td>mobile phones/ violent</td>
<td></td>
<td>BBMs crowd peak</td>
<td></td>
<td>different neighbor-hoods</td>
</tr>
<tr>
<td>43% use social networking</td>
<td></td>
<td>circulate action in Twitter</td>
<td></td>
<td>different neighbor-hoods</td>
</tr>
</tbody>
</table>

Diagram 8: Process Tracing for the Effects of Social Media on Collective Action Dispersion as exemplified in Tunisia 2011

<table>
<thead>
<tr>
<th>Historical Process</th>
<th>Crowd Action</th>
<th>New Media Feeds</th>
<th>Waves of Collective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Stats</td>
<td>91% of Tunisians own mobile phones/34% use social networking&lt;sup&gt;223&lt;/sup&gt;</td>
<td>Dec 17 Mohammed Bouazizi’s public self-immolation/</td>
<td>Dec 17 Video of self-immolation is picked-up via Facebook by Al Jazeera and broadcast nationally</td>
</tr>
<tr>
<td></td>
<td>Dec 17</td>
<td>Dec 17</td>
<td>Jan 14 President Ben Ali</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jan 14 President Ben Ali</td>
</tr>
</tbody>
</table>

Figure 1: Graph of Twitter Traffic by Location and Time (Day 1)
Figure 2: Graph of Twitter Traffic by Location and Time (Day 2)
Figure 3: Graph of Twitter Traffic by Location and Time (Day 3)
Figure 4: Graph of Twitter Traffic by Location and Time (Day 4)
Figure 5: Graph of Twitter Traffic by Location and Time (Day 5)
For Weather and Breaking News, Young Adults Are More Likely to Turn to the Internet and Less Likely to Turn to Local TV News

Percent of adults in each age group who get information about each topic from each source

Source: Pew Research Center’s Project for Excellence in Journalism and Internet & American Life Project in partnership with the Knight Foundation, January 12-25, 2011 Local Information Survey. N=2,251 adults age 18 and older. Conducted in English and Spanish and included 750 cell phone interviews.
Figure 7: Logged Number of Tweets on #sidibouzid, by Location

Ben Ali Resigns

Notes: “Outside Country” refers to Twitter profiles that had locations outside both the country and the region, and “No location” refers to profiles that either had no location data or had have been deleted or suspended since archiving began. The blue bar indicates the period in which journalists began reporting that protests had reached the level of “thousands” of participants.

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Figure 8: Actor Type Distributions for Information Cascades on Twitter in Tunisia and Egypt\footnote{Gilad Lotan et al., “The Revolutions were Tweeted,” 1385.}