From spectacle to spectacular: How physical space, social media and mainstream broadcast amplified the public sphere in Egypt's 'Revolution'

Mohamed Nanabhay [a] & Roxane Farmanfarmaian [b]

[a] Head of al-Jazeera Online English, Qatar

[b] University of Cambridge, UK

Available online: 15 Dec 2011

PLEASE SCROLL DOWN FOR ARTICLE

independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

From spectacle to spectacular: How physical space, social media and mainstream broadcast amplified the public sphere in Egypt's 'Revolution'

Mohamed Nanabhay[a] and Roxane Farmanfarmaian[b]*

[a]Head of al-Jazeera Online English, Qatar; [b]University of Cambridge, UK

This study examines the impact of the media during the Egyptian uprising of 2011 and the extent that amplification occurred between the inter-related spaces of the physical (protests), the analogue (satellite television and other mainstream media) and the digital (internet and social media). Specifically, it analyses the intersection of these three spaces in what we label the 'amplified public sphere' and define as the information environment created when each space informs the other. Analysis begins by drawing on Bruce D'Arcus' notion of 'spectacles of dissent', in which activists renegotiate the visibility of the public sphere through protest and media networking. It then expands the concept, arguing that the Egyptian uprisings took it to the next level, transforming the 'spectacle' into a 'media spectacular', which globalised the public sphere through 24/7 coverage of what became an 'internationalised' physical space of Tahrir amplified by social media into mainstream blanket coverage. In analysis of a database of YouTube videos, the move from spectacle to spectacular was identified as coincident with a move from social media dominance to mainstream media amplification, even as the latter itself shifted how media was produced and consumed.

Keywords: Social media; social movements; Arab Spring; Egypt; public sphere; media amplification; Tahrir Square; al-Jazeera; mainstream media; political hegemony; networks

On 11 February 2011, Hosni Mubarak resigned, as simultaneously, applause in Cairo's Tahrir Square was broadcast across the world and social networks lit up with activity. To understand the events that unfolded, the real-world protests must necessarily be seen as working in concert with the interplay between social media and mainstream media. Twitter, Facebook, Wikileaks and Al Jazeera have all been individually, and together, hailed as reasons for the 'revolution'.[1] While these claims are simplistic and contestable, they raise the question of what the impact of the internet and satellite television was during this contentious period and to what extent 'amplification', which, for our purposes here, is being defined as both physical expansion and the exponential dissemination by the media, occurred.

While the public sphere created in the ether was critical in breaking through the barrier of fear in Egyptian society, if Tahrir Square and other public places had not been occupied, the change would not have occurred. Activists in Egypt were able to access the most powerful elements of both the broadcast and internet models. The internet provided them with a place to network and formulate messaging, which was then broadcast to the entire country. It was within this amplified public sphere that activists on the street fed information onto social networks and to the mainstream media, which was then diffused nationally and internationally, further emboldening the protesters, strengthening their resolve, increasing their numbers and spreading their message. This led to an amplification of the first group of protestors, initially over the media and eventually onto the streets as more Egyptians poured out.

This type of interplay between media and activists was not new, as Bruce D'Arcus has documented in his study of the Zapatistas, and which he called 'spectacles of dissent' (Arcus 2006).[2] However, what occurred in Egypt was not just a spectacle. It was transformed into a media 'spectacular', when mainstream media amplified the space defined by social media and turned it into an internationalised space of rolling news coverage, where audiences throughout the world were just a click away from 24/7 broadcasts.

As this is new territory, in which the affect of one media type (social media) used by political protesters has not been tested for its amplification powers on another media type (mainstream media), this research set out to unpick first, the relationship between protestors and media (both social and mainstream), second, the relationship between the two categories of media, and third, the impact of the this three-way relationship on the nature of the changing public sphere.

Video disseminated over the Internet played a key role in how the events taking place in Egypt were reflected both inside the country and to the rest of the world. For this research, a database of 652 YouTube videos was constructed, and patterns of usage tracked, in order to understand how information was amplified over the 18 days under consideration. This database consists of videos produced by citizens, activists and the mainstream media and contains details on when the video was posted, how many people watched it and how it was discovered. Analysis of these data provides insight into the changing roles of social and mainstream media in the processing of events, and the effects on the mainstream media of these events, an outcome that was not anticipated going in.

In order to identify the relationship between the three separate yet interlinked spaces of protest and communication, the research tested for several factors: who produced the news first, how it was amplified, when it was picked up by mainstream media, and how the mainstream media used that material. In this way, the move from 'spectacle' to 'spectacular' was found to naturally provide a sequential, two-phase structure. Further, by tracking the media dissemination in this way, findings reflected the protests as not just a local phenomenon engaging local audiences, but an international one engaging international audiences, which in turn affected local events.

This study reveals that citizen video was more widely produced and consumed during the first few days of the revolution than mainstream media footage. Significantly, not only were citizens able to produce their own footage but to distribute it through social networks, thus bypassing mainstream media as the traditional gatekeeper of news. This constituted the 'spectacle' phase.

The next phase involved the move from a spectacle to spectacular as mainstream media descended on Tahrir Square and provided 24/7 live coverage. This shift coincided with the protests that took place on Friday, 28 January and the shutdown of the internet in Egypt. The transition from spectacle to spectacular coincided with a shift from the organising phase, in which social

media played the greatest role, to the international media spectacular, in which mainstream media dominated.

In the following section of this chapter, a discussion of the overlapping contingencies of social movements, political hegemony and media theory will provide a theoretical framework in which to understand the research that follows. The second section briefly reviews the history of digital and mobile phone use in Egypt, while the third outlines the methodology used, including why YouTube videos were selected as the unit of analysis, how the data collection process was chosen, how classification took place, and what queries were performed on the data.

The fourth section shows the results of the data study in relation to the events and the timeline. It is broken into three sets of findings. The first examines the agenda-setting ability of citizen media, and shows that not only were citizens producing video but they had networks outside of state and mainstream media control to distribute them. The second reflects the move from spectacle to spectacular, as citizens successfully reprogrammed the agenda of media networks. It reveals how mainstream media proliferated and live coverage picked up, eventually to surpass citizen coverage. It also notes the importance of raw, unedited video and how this led to a shift in how mainstream media was produced and consumed. The third and final findings' set examines the amplification of media through the 18 days of protest.

Remixes and mashups, which are new videos produced utilising content originally produced by others, were found to account for a large percentage of total videos watched online. Mainstream media organisations were likewise found to rely on 'borrowed' footage from each other and citizen journalists through the course of events. The extent of this use and re-use is documented and explained. The chapter concludes with an analysis of the findings and relates them back to the theory. It suggests areas of further research, and how this initial investigation can throw light on how new media, mainstream media and real-life action interact, especially in moments of 'spectacular' political change.

Street politics, networking and media diffusion: theoretical framework

If there is one thing that this conceptual section reflects, it is that there is no single neat theory to explain the events that unfolded in Egypt between 25 January and 11 February, 2011. Rather, it is necessary to construct an interdisciplinary framework that includes hegemonic discourse and the public sphere, the underlying structures of information diffusion and 'networked power', and social movement theory.

Locating these concepts in regional terms, several recent studies on the impact of media and the internet in Egypt, and more generally the Middle East, employ a number of different theoretical approaches (Abu-Lughod 2005).[3] Marc Lynch of George Washington University and a prolific writer on the Middle East and the role of the media (both new and old), warned in his 2007 *Voices of the New Arab Public*[4] (Lynch 2007) that it was too early to judge whether an era-defining shift was caused by social media. In his more recent study, 'After Egypt' (2011), he notes, 'The proposition that these newly empowered and informed citizens will never succumb to dictatorship remains to this point untested',[5] although he goes on to identify the emergence of a '…public sphere capable of eroding the ability of states to monopolize information and argument[6]' as the most significant effect of new media. This was borne out by Radsch's earlier study (2008) of the Egyptian blogosphere, which revealed how political movements used online media when facing off with the state.[7]

In 2010, Howard's *The Digital Origins of Dictatorship and Democracy: Information Technology and Political Islam* surveyed the impact of technology across politics, media and religion in

the broader Muslim world (Howard 2010).[8] As the title suggests, he argues that technology can be used for change or to enforce the status quo. Faris' (2010) analysis of activists' use of Facebook and blogs, has argued that while social networks in Egypt could 'trigger informational cascades through their interaction effects with independent media outlets and on-the-ground organizers', they could not replace grassroots organising nor in and of itself challenge a determined state security apparatus[9]

Already, several studies have emerged on the 2011 Arab uprisings. Park *et al.* (2011) conducted sentiment analysis on blogs, Facebook updates and news articles relating to Tunisia and Egypt, and found that social media users 'were more prone to be positive about the regime change'[10]. A deluge[11] (Romero *et al.* 2011) of research is being conducted on information diffusion on Twitter, arguably the most relevant and important so far being by Lotan *et al.* (2011) on information flows during the Egyptian and Tunisian revolutions, where they found that news was co-constructed by news organisations, citizens and activists.[12] A study by Howard *et al.* (2011) found that an increase in 'online revolutionary conversations' preceded major events.[13]

To ground the argument that changes in Egypt's complex public sphere were composed of shifting physical, digital and analogue spaces, and the inter-locking powers each developed and could exert, a brief review of Antonio Gramsci's concepts of political hegemony and a regime's ability to control discourse through the media, will begin the theoretical discussion. From this will follow a discussion of the changing nature of social movements and their use of media in street politics, a reflexive process in that the movements themselves influence, but also are influenced by, the media's impact. Finally, it will be argued that processes of revolution are put in place when mediated street movements use networks of communication to organise a spectacle of dissent (establishing locales of protest and threatening government hegemony), and then, transforms into a 'spectacular' by networking through the mainstream media a continuous link between protests, the nation, the international community, and again, the protestors.

Political hegemony and media control

Gramsci argued that the ability to shape public opinion was central to political hegemony and that the state establishes its legitimacy by embedding its idealisations throughout society.

> What is called 'public opinion' is closely connected with political hegemony, namely with the point at which civil society makes contact with political society, and consent with force. The state, when it wants to undertake an unpopular action, creates adequate public opinion to protect itself; in other words, it organizes and centralizes certain elements within civil society.[14]

What is important about Gramsci's conception of hegemony is that it allows a state to exert control without having to resort to violence.[15] Though violence is a key source of the state's power, in the long run, it is more productive to seek hegemony, as without political hegemony, a state's power is constantly challenged. As Castells argues, coercion alone 'cannot stabilize domination'.[16]

While Gramsci's conception of hegemony has been the focus of much scholarship, a small and often overlooked set of sections in his *Prison Notebooks* reveal his approach to countering a dominant discourse and establishing a new hegemony. In his *Notebooks*, he describes the concept of 'integral journalism' as a holistic framework in which a publication could 'create and develop' readers' needs and 'progressively enlarge' its readership. He believed that the

press should stimulate readers and develop their potential.[17] In a sense, Gramsci was providing a formula to produce, reproduce and challenge the hegemonic conception that he had theorised through a counter-discourse, developed in media, outside the state's control.

While drawing on the premise of hegemony that Gramsci describes, in this era of instantaneity and simultaneity,[18] its mechanics require further elucidation. It is here that Castells' (2009) theory of network power is useful. While Gramsci saw the press as primarily a print medium, Castells looks at how power is shaped through various networks – most significantly communication networks. Castells introduces the idea of challenging hegemony through

> ...the reprogramming of communication networks, so becoming able to convey messages that introduce new values to the minds of people and inspire hope for political change.[19]

This is not at odds with Gramsci's understanding of how political change is introduced into society. Castells' 'reprogramming' is perhaps the continuation and next frontier, the version 2.0 of what Gramsci described as the 'realization of a hegemonic apparatus', where 'it creates a new ideological terrain, determines a reform of consciousness and of methods of knowledge'.[20]

Curran conceives Gramsci's hegemony and Castells' reprogramming as representing a continuous tension between media and power, and argues that the media is best understood as a 'contested space' in which social conflict occurs.[21]

> Contrary to the illusion that media only 'mediate' what goes on in the rest of society, the media's representational power is one of society's main forces in its own right. From this perspective, media power (direct control over the means of media production) is an increasingly central dimension of power in contemporary societies.[22]

Curran goes on to enumerate various factors he believes encourage the media to support dominant power interests, ranging from state censorship through coercion, regulation and patronage (in authoritarian states) to the high cost of entry which results in corporate ownership and media concentration (in democratic ones).[23] In addition, it is the very nature of mainstream media to centralise control, giving the state, through the Ministry of Information or other regulatory bodies, an iron grip over television, radio, and print. The actual technical model of mainstream media (what Benklar calls the 'hub-and-spoke technical architecture and unidirectional end-point-reception model'[24]) allows for the easy control of information. While not necessarily designed with such intent, for those aiming to shape a hegemonic discourse, this comes as a useful feature of the system. Of course, as the system grows in scale (i.e., gains a bigger audience), the system gains power.

Castells further introduces the idea of power lying *within* networks.[25] These concepts are useful as they offer a framework for understanding how satellite television, the internet and the activists interact, as each constitute a network. For Castells, the interface between different networks is important – whoever controls this interface has 'switching power', namely, the ability to allow (or throttle) the flow of information through society. Another level of power within the network paradigm is 'network making' power. This allows for new networks to be created, a crucial element in the following discussion on how social movements adapt within a networked environment, choose their tactics, and develop a linked relationship between street politics and the media.

Changing social movements

Castells' (2004) defines social movements as those involved in 'purposive collective actions whose outcome, in victory as in defeat, transforms the values and institutions of society'.[26]

This definition is sufficiently broad to cover unions, students, digital activists, professional associations, the Muslim Brotherhood and impromptu gatherings. However, social movements are themselves under-going rapid organisational change to become free-flowing horizontal formations, rather than what previously were more hierarchical, disciplined and top-down groupings (Porta and Diani 1999).[27] Jeffrey Juris (2008) describes contemporary activist networks as 'fluid processes, not rigid structures'[28] that reflect the 'networking logic' of the internet in their own organisation and dynamics.[29]

There is a second body of literature that deals with the impact of new tools themselves. With low-cost endpoint devices, such as mobile phones, which allow the recording of still and moving images, it is possible to post media online within minutes of an event's occurrence (and increasingly as the event occurs). Social networking sites such as Twitter, Facebook and YouTube allow for instantaneous distribution of content. Under the old media model, news was typically produced, vetted and distributed by a single entity. In the new information environment, these functions are being disaggregated.[30] The net effect of this shift is the creation of alternate and often ephemeral media networks, outside the purview of governments and traditional media corporations, which opens 'new possibilities for opposition voices to be heard' and 'disrupts existing regimes of power and knowledge . . . decentering the power of the previously powerful media in the public sphere' (Stevenson and Webster 2001).[31]

Mary Joyce (2010) observes that the mechanics of digital activism are only now beginning to be understood, and that although these tools afford activists with opportunity, there is no one-size-fits-all solution to the use and effect of different technologies in different environments.[32] Juris has shown how the anti-globalisation movement effectively used digital technologies to organize, create alternative media representations and express 'alternative political imaginaries based on an emerging network ideal (Juris 2005).'[33] Earl and Kimport (2011) argue that technology offers two main benefits to activists: first, drastically reduced transaction costs allow easier organising and participation, and second, the potential to aggregate individual action across a broader collective without requiring physical presence.[34] These benefits were advantageous to Egyptian activists.

Sharp's (1973) work on non-violent resistance, which the *New York Times* suggested was studied by Egyptian activists (a claim many disputed),[35] argues that the goal of a protest should be to grow so large and overwhelming as to render the government powerless.[36] Shirky (2008) argues that the internet and social networking tools have made it easier for groups to self-organise and that this 'will transform the world everywhere groups of people come together to accomplish something'.[37] Harvey Molotch makes the point that protestors attempt to use the media to show that 'common sense' is not in fact common sense, and has emphasised the

> . . .agenda-setting function of the movement-media relationship. The movement may act concertedly to 'feed the agenda' by generating media coverage, or alternatively, to assault the status quo . . . the strategy is to behave absurdly in order to pose the possibility that the established world is an absurd one.[38]

D'Arcus calls such acts 'spectacles of dissent', and sees them as a function of the media. How much social movements can influence the media, and in turn, how the media shapes social movement is a contentious debate. The ubiquity, reach and speed of internet communications has added new tension to the nature of this reflexive influence, becoming an issue that divides the academe and policy worlds, and which the analysis of empirical data in this research, is designed in part to clarify. Castells differs with Molotch over the relationship between the movements and

media, and the power each controls and exerts; Castells believes that the 'message is the message',[39] whereas Molotoch sees the media as playing a much more active role in shaping the movement, saying that the 'medium is the movement'.[40]

Virilio, who has written extensively on politics, war and globalisation, ties into this debate the concept of political transformation, noting that 'revolution is movement, but movement is not a revolution'.[41] He believes that it is in the street that revolutionaries are most effective for, at that moment, they cease to be a part of the system and instead transform into a 'producer of speed' (Virilio 2006)[42] that can force change itself. For him, the street is of ultimate importance as it is there that the state can be conquered.

The concept of those occupying the street being producers of speed, for the argument here, becomes a useful prism through which to understand the role of the media in modern revolution, as unlike revolutions of decades past, the instantaneity of the media now matches the rhythm of the street. In effect, the capabilities contained within the 'communication revolution' take on new meaning in the context of street politics and political revolution. Often described as an information cascade in Egypt, in which the news spread not just mouth to mouth but monitor to monitor, the real-time nature of news provided on Twitter and live television broadcasts provided a stark contrast with the slow routines of printing daily papers and broadcasting evening newscasts. The flow of the crowd could respond and pivot in real-time. The information communication facilities brought about such rapid flows of news that time itself seemed to contract. Traditionally, protest movements relied on the media to spread their message to the 'decision makers'.[43] Yet, even prior to the explosion of satellite communications and the internet, Virilio saw what he called the 'miniaturization of action', which was the result of the contraction of time, leading to 'a situation in which the notions of "before" and "after" designate only the future and the past in a form of war that causes the 'present' to disappear in the instantaneousness of decision'.[44]

It is a contention of this research that this constituted the transition from 'spectacle' to 'spectacular' in that the internet allowed protestors to not only bypass the media in conveying their message but to lead the media. In the spectacle phase, activists found in the internet a place to network, and formulate messaging to organise large groups and provide a stream of communication that eventually captured the mainstream media. The outcome of this work, the 'spectacular' phase, was the broadcast of activists' communications material to the nation and the rest of the world, and the take-up of their work by the mainstream media The protests on 25 January then, were unarguably for the Egyptian state's consumption, but, for 'movement' to become 'revolution', they were equally for the media, the protestors themselves and the international community in a reflexive, networked 'spectacular'.

The internet in Egypt

In 1993, the Information and Decision Making Support Center, a body affiliated with the Egyptian cabinet, linked Egypt to the internet, making it the second Arab country to become connected (Tunisia was the first in 1991). Once service providers were licensed in 1997, the public was allowed to connect (Mellor *et al*. 2011).[45] Internet penetration in Egypt in 2009 stood at 20%,[46] while literacy rates stand at 66%. Demographically, those under 18 make up 38% of the population[47] while nearly a quarter of the population are between 18 and 29 years old.[48]

Activists used the internet as a tool to organise protests and connect with other activists, both inside Egypt and internationally. The mainstream media in turn often relied on blogs as a source

for reporting. Because the activists' worldview would have been shaped by interaction through the internet with a global community, their perspectives were thereby amplified, and helped shape public opinion.

Egypt has a history of an active and diverse blogosphere. A 2009 study by the Harvard Berkman Centre showed that Egyptian had the largest cluster of blogs in the Arab world and that there existed two sub-sets of bloggers – 'secular reformist bloggers' and Muslim Brotherhood bloggers, who both used their blogs for political and social discourse (Bruce *et al.* 2009).[49] Lynch has noted that within Egypt there was a 'close, organic relationship between blogging and contentious political movement (Marc 2007)'.[50] Bloggers such as Alaa, Manal, Mona Atef and members of the Muslim Brotherhood played a role in this. Projects such as 'Torture in Egypt' which chronicled human rights violations since 2006 and 'Pigopedia', a decentralised, online user-contributed database of pictures of police officers allegedly involved in torture, were led by these figures early on.[51]

Radsch identifies three phases in the growth of the Egyptian blogosphere: first, an experimentation phase wherein early adopters started using blogs and formed an elite base that would occasionally influence the media; second, an activist phase during the rise of the Kifaya Movement and the uptake of blogging by younger members of the Muslim Brotherhood; third, a diversification and fragmentation phase consisting of bloggers from across the political, social and religious spectra.[52] The experimentation phase established a group of core bloggers who remained influential all the way to the 2011 revolution. Radsch saw these bloggers as 'central nodes'[53] in the Egyptian blogosphere, who promoted blogging amongst their peers and gained high visibility.

Several bloggers were journalists, enabling 'cross-fertilization between journalists and bloggers'.[54] Faris argue that the burgeoning independent media in the years leading up to the revolution was significant as it provided a nexus for human rights activists and bloggers.[55] This was not limited to the national level but also played out internationally, as blogs on local events were picked up by the mainstream media. Al Jazeera journalist Huwayda Taha, for example, produced a documentary in 2007 following up on stories uncovered by bloggers relating to torture in Egyptian police stations.[56] Soft ties between bloggers and journalists were also important, as when Al Jazeera hosted Egyptian bloggers and activists, such as Alaa Abul Fateh and Wael Ghonim, at its annual media conferences in Doha, Qatar. Similar relationships were struck between journalists and activists on the ground during the 18 days in Egypt.

It was more than simply ideas and opinions that the internet allowed Egyptians to easily share; media was now mobile and by using phones with built-in cameras and media-sharing sites such as YouTube and Flickr, Egyptians could effortlessly transmit photos and videos. Thus, torture videos and videos of women being abused quickly spread through Egyptian society.[57]

When Ayman Nour's Al Ghad Party was denied an FM radio license by the government, the party went online and launched an internet radio channel in 2005.[58] The internet not only enabled political parties to work around state regulations, but it allowed citizens in Egypt to access information and express themselves online. Sadiki (2009) sees the internet as 'widening the site of bottom-up struggle against authoritarianism' and intensifying the 'old contest over control of ideas, values, and information'.[59]

The government often arrested bloggers, although blogging remained a fairly elite affair until social networks such as Facebook became popular.[60] By 2011, Facebook had five million self-declared Egyptian users.[61] As if to underscore its importance as a mass communication tool, Gamal Mubarak, the ex-president's son and heir apparent would give online interviews, and Facebook groups 'nominating' him for president started appearing in 2008.[62]

Yet Facebook was more than a 'social' network – it became a political one. Crucially, it enabled activists to overcome the limitation of blogs, reaching enough people to allow for successful mobilisation. Facebook's architecture enabled information to be diffused very quickly through peer recommendations. Additionally, its membership was not limited to those who actively sought to participate. Unlike a blog, which requires not only time but also the belief that one has something to say publicly, participation on Facebook requires a much lower threshold. One can participate on Facebook just by accepting friend requests and instantaneously Facebook will deliver a tailored 'news feed' from a peer group consisting of links, status updates and photos. This made Facebook well suited to campaigning and message diffusion. While it is romantic to believe that Facebook democratised participation and allowed leaderless organisation, the core of the activists using Facebook as an organising or message-diffusion tool often were, like many bloggers, real-world activists as well.

The April 6 Youth group, which formed on Facebook in 2008 to support a strike planned for 6 April, is a good example, as within weeks, it grew to 70,000 members. It was founded by Ahmed Maher who had cut his teeth demonstrating for an independent judiciary in 2006, when he was arrested and incarcerated for two months. The April 6 Youth organised protests annually and while their calls were always public and inclusive, the group's co-ordination and decision-making was done by a small core of activists, outside the public eye (Wolman 2011).[63]

The beating and death of Khaled Mohamed Saeed at the hands of police in Alexandria in June 2010 caused public anger over the widespread use of torture and corruption by the security services, and a Facebook page entitled 'We are all Khaled Saeed' quickly gained thousands of followers (Chick 2011).[64] It soon became the focal point for distributing information about protests and played an important role in mobilising for the January 25th demonstration, a public holiday traditionally set aside to honour the police force. April 6th's Maher would along with Google's Ghonim establish the Facebook page calling for the 25 January 2011 protest. Facebook became the site of a new counter-hegemonic discourse, not unlike that described by Gramsci. What the activists did not know when organising their protest was that the Ben Ali regime in Tunisia would fall just days before they would converge on Tahrir Square.

YouTube video data collection: methodology

As this research focuses on the importance of the 'spectacle' and its transformation into the 'spectacular', video serves as the clearest expression of that process. While most analyses of the interactions between mainstream and social media have focused on social networking sites, looking at video allows for a more refined analysis for three reasons. First, to produce video of an event, one needs to be on location or have access to feeds from that location. Second, the source of a video can be confirmed definitively. Unlike text, which may be transmitted and re-transmitted, thereby making the source difficult to ascertain, when video is re-transmitted there are overlays that usually allow the source to be identified. Third, video allows us to study audience behaviour from the endpoint, the final product in a chain, whereas the social networking sites often serve as referrers. Additionally, a view from the endpoint allows us to understand the referral chain.

Since this study seeks to understand the role of public spaces and the media in constructing the public sphere, video is the ideal unit of media to examine as it definitively reflects the public spaces under consideration. Moving images and natural sound recordings that are taken raw from protests, and then carried across the internet and broadcast media, reflect the essence of the spectacle/spectacular dynamic discussed earlier.

The primary dataset for this study was acquired by collecting a sample of YouTube videos posted over the 18 days of the Egyptian revolution (25 January to 11 February 2011). Unfortunately, YouTube does not provide a highly granular search function. To overcome this, a multipronged approach was taken to populate a database of relevant videos. This involved quantitative discovery, where YouTube was searched for the most-viewed videos containing the keywords 'Egypt', 'Cairo', 'Tahrir' and 'Jan25'. The top 4000 videos were inspected (YouTube only provides 1000 results per search), and irrelevant videos or videos posted outside our timeframe were discarded. The remaining videos were logged into a database.

A similar process was performed for videos posted to YouTube by Al Jazeera, Reuters, Russia Today and the Associated Press.

A qualitative discovery process was then undertaken. Over the course of the 18 days, *The New York Times*, *The Guardian*, Al Jazeera and Global Voices Online all produced 'live blogs' that curated[65] media from across the internet, providing blow-by-blow updates as events unfolded. YouTube videos posted to these archives were extracted and entered into the database.

From 15 July to 29 July, 2011, each individual YouTube video page was accessed and a corpus of data catalogued for each. These data included:

- Link to the video
- User who uploaded the video
- Video Title
- Number of views the video had
- Date the video was posted online
- Referral data (where available)

Two secondary datasets from Al Jazeera were also used to inform this study. These consisted of Al Jazeera's own Web server and live video stream analytics, which provided a detailed view both of how users got to its website and their activity on the site itself, as well as data for live video consumption.

The final YouTube video dataset consisted of 650 videos.[66] Each was hand-coded in order to identify who produced it. The following key was used to identify the producer type after refining it through the coding process.

- **Citizens:** This was a broad category that consolidated a number of different producer types, including activists and casual observers.
- **Mainstream Media (MSM):** these were news organisations, such as Al Jazeera or the Associated Press and freelance journalists.
- **Mashups and Music Videos:** Videos from multiple sources that had been taken and remixed together to form a collage. This category also included music videos.

Classification was done in three phases. First, if the YouTube user ID ('username') was that of a news organisation, it was automatically placed into the MSM. Second, user profiles were examined to ascertain whether the person posting the video was a journalist. Usually, journalists mark themselves clearly as such; however, in certain cases, there were journalists that also considered themselves activists (e.g., 3arabawy). In these cases, unless they were associated with a specific news organisation, they were classified as citizens. Third, the video content of the remaining users was randomly checked. In certain cases, this revealed that while the user had uploaded a clip to his or her own account (thus, the username would be a personal name), the

actual clip had originated elsewhere. The video was thus reclassified as MSM if the clip was taken verbatim. In cases where various clips from different sources were taken together, the source was marked as a mashup.

Video pages on YouTube were then mined to assess where the videos were embedded. YouTube provides a list called 'significant discovery events'. This contains important places where the video was viewed. The list is based on when the video was viewed and how many times it was viewed at that place. It is not a definitive listing of statistics; rather, it is indicative of broad trends for the videos in question.

The analysis of the data aimed to answer questions around media amplification. Key questions revolved around who amplified whom during the Egyptian revolution. Tests were run on the data in order to extract trends and make observations. These tests were grouped into three categories: audience-driven trends (i.e., what was watched), media-led trends (i.e., what was produced and displayed) and discovery trends (i.e., how the media spread). In regards to the latter, there are three broad discovery paths for video: actively seeking something out (e.g., searching for it or browsing a website looking for it), being a recipient of content that is being shared (e.g., on a social network or through email), or having the content placed in front of you (e.g., due to it being editorially chosen and placed on a front page or list). In this study, this last category is subdivided into content being editorialised on mainstream news outlets and content posted on YouTube itself. While in practice these are not totally discreet categories, since a mainstream media outlet might choose to have its content shared on a social media site, for the sake of this study, we categorise this as discovery on a social network as it was 'pushed' to a user.

Various limitations affected data collection and analysis. As noted above, YouTube offers no granular search engine. Thus, it is possible that significant videos did not make it into the dataset; however, the chances of this are slim given that four major sources of information (al Jazeera, Reuters, Russia Today, and the Associated Press) would have had to have missed the video as well.

Further these data reflect total views of a video over time and not per day. This allowed analysis of what happened when videos were produced but not what happened on any given day. There were also some cases when a video may have only been discovered days after posting. These issues surfaced when examining individual videos and were taken into consideration such that they were rendered unimportant for the purposes of the investigation. Additionally, due to the architecture of Twitter, referral data are often reported inaccurately or not at all.[67] Given this limitation, this research avoided drawing conclusions on the prominence of Twitter versus other social networking sites.

Because a large selection of Al Jazeera, Reuters, Associated Press and Russia Today footage was included, the dataset was slightly skewed towards mainstream media. Had only MSM footage been included that was discovered through general searches of Google and the four 'live blogs', the total number of views of MSM videos would have decreased by between 2% and 4% of total views across the dataset. This variance was not deemed significant in comparison to the value of having a larger dataset, and so the videos were retained. Finally, this study accounts for MSM video posted only on YouTube and not videos posted on individual video portals or other websites. YouTube-centric also meant that videos that were posted on media outlet 'live blogs', but which used different video services, fell out of the collection scope.

The dataset based on the collection mechanisms outlined above, and taking into consideration the various limitations, was deemed sufficient for purposes of the investigation, and YouTube offered an ideal mechanism for testing the interaction between public spaces, internet media and mainstream media.

Findings

The findings reveal the importance of understanding internet use in order to comprehend how events unfolded in Egypt. Likewise, they provide new insight on the interaction between the internet and mainstream media, adding significantly to our understanding of how new and old media are interlinking to create a global public sphere as part of local political activism and social movement. The summary data in Table 1 show quantitatively that which has only been shown anecdotally in the past: the significance of citizen videos in shaping the political culture and the information environment.

By pivoting the dataset on the number of views per producer type, the results provide a view into what audiences online watched during the 18 days of the Egyptian revolution. The data reveal that even though a larger quantity of videos were produced by MSM (more than double), citizen video and mashups combined accounted for nearly 15% more views. This means that during the 18 days of Egypt's revolution, audiences consumed as much video content directly produced by citizens as they did by media organisations. This has profound implications on communication flows. Not only are traditional networks of communication (the broadcast model) now competing directly with peer creation, but the structures of hegemonic discourse are being regularly bypassed. These data correlate with Castells' theory of protest reprogramming communication networks.

The analysis that follows is split into a three-phased approach. The first is the agenda-setting phase, during which social media played a key role in value diffusion, organising and pushing the boundaries of what was allowed in society. This was by and large an elite affair, led by those who had access to, or were already involved in, political activism. Early protestors spread their message directly through video taken form YouTube and shared on social networking sites. Here we see actualised D'Arcus's argument that social movements create 'spectacles of dissent' to capture media attention.

The second phase is the 'spectacular'. It was during this phase that mainstream media played an increasingly important role as it amplified the message being communicated by social movements via social media. Mainstream media became dominant during this phase as it provided 24/7 coverage of the events unfolding.

A final section looks at what the data tell us about the actual nature of media amplification, and how professional and citizen producers used each other's work to create remixed works or mashups. This section considers videos produced across the two phases mentioned above.

Citizen media: the spectacle phase

The ability to bypass traditional gatekeepers of information is a frequently cited benefit of the internet era, as citizens become able to produce content cheaply, post it directly online and

Table 1.   Summary of dataset.

	Total Videos	% of Videos	Total Views	Max Views	Average Views	% of Views
Citizen	170	26.15%	19,490,669	3,031,623	114,651	41.29%
Mashups	35	5.39%	7,310,681	2,216,432	208,877	15.49%
MSM	445	68.46%	20,402,599	1,755,235	45,849	43.22%
	650	100.00%	47,203,949	3,031,623	72,621	100.00%

share that content. This is seen as a shift away from a culture of intermediation (state or organisational control) and toward disintermediation. This section reveals how events unfolded in the media on January 25th, the first day, showing that the majority of media being produced was citizen-led and citizen-distributed. It shows how citizen media framed coverage as the protests unfolded, and that discovery bypassed traditional media channels and instead the public actively searched out information on the protests through search engines or social networking sites, most notably Facebook. Mainstream media coverage was weak – so much so that, on that day, Marc Lynch (2011) wrote on the Foreign Policy website that even though Al Jazeera had a played a key role in covering and framing the protests in Tunisia, in Egypt:

> Al-Jazeera's lack of coverage of the protests has become a major story. [S]ince getting back on line I've seen an episode of a talk show, more Palestine Papers, and only short snippets of breaking news on Egypt.[68]

The dataset (Table 1) shows that on 25 January 2011, citizen videos significantly outnumbered MSM videos, both in quantity and views. They were recorded by protesters and onlookers throughout the day and into the evening. Video quality was often shaky and grainy; yet, the videos were uploaded en mass.

Table 2 shows that citizens produced 76% of the videos uploaded on the first day, with the remaining 24% produced by journalists. This means that while citizens in Cairo – both protestors and onlookers – were producing and distributing media to represent the events occurring around them, mainstream media was still not paying much attention. This dichotomy is further exemplified by the actual number of views these videos obtained. Of the 34 citizen-produced and uploaded videos, 28 were uploaded by individuals; four were duplicate uploads of another user's. Thus, there were no 'power users' uploading all the videos. There was a diversity of users, meaning no one person controlled the messaging. Control was in the hands of the crowd. Of course, not everyone's video had an equal impact. While the playing field was level in terms of ability to produce and upload, once the video was on YouTube, what immediately stands out is that video distribution on 25 January followed a 'power law', more popularly known in the media field as 'long tail distribution'.

This means that only a few videos were responsible for a disproportionate number of views, while the rest had just a few views each. Most significant was the video posted by MFMAegy, which constituted nearly half of the views on 25 January, and was the most viewed video over the 18 days, as illustrated in Figure 1. It is worth examining this video in detail. On 25 January, a user named MFMAegy posted a video[69] to YouTube showing demonstrators walking through a street in Cairo being chased by a crowd-control vehicle with a water canon. A young man stood in front of the canon with his arms raised in what would become an iconic scene of the revolution. Over the 18 days of Egypt's revolution MFMAegy's video had over three million views.

The discovery data allows us to trace the diffusion of this video. On 25 January, the day it was taken, it spread on Facebook, where it was viewed more than a half million times. It was then

Table 2. Video uploaded on 25 January 2011.

	Total Videos	% of Video	Total Views	Max Views	Average Views	% of Views
Citizen	34	75.6%	6,730,762	3,031,623	197,964	87.43%
MSM	11	24.4%	967,683	239,402	87,971	12.57%
Grand Total	45	7,698,445	7,698,445	3,031,623	171,077	100.00%

found on Google Egypt, where people were searching in Arabic for 'Demonstrations in Egypt', 'Day of Wrath' and 'Egypt'. This shows that inside Egypt, people were becoming aware of what was happening in the streets and were searching for more information. Later in the day, it was placed on the YouTube homepage, so anyone visiting www.youtube.com would see the video. This is a significant moment of discovery as the video was now in front of a general, global audience instead of just those actively searching for it or who were networked into the event (on Facebook, for example). By day's end, the video had been viewed over 1.7 million times, without any mainstream media diffusion.

Two days later, on 27 and 28 January, the video again picked up traffic, this time when Al Jazeera and Der Spiegel, respectively, posted it to their websites. This example illustrates how citizen videos led the initial coverage by orders of magnitude before mainstream media became the source for the same story.

Additionally, there was another wave of views as the video was reposted by other users. The user, FreeEgypt, for example, downloaded and reposted[70] the footage verbatim without attributing it to MFMAegy. In this way it gained a significant 311,176 views, a gain of more than 10%. The video was also downloaded and edited by user wilyawilDotCom and reposted[71] to YouTube on the same day. The user reduced the length of the video, placed an overlay explaining it in English, and posted the following message with the video:

> Egyptians are not afraid anymore from (sic) the police state they are living in. Egyptians protested today against a 30 year-old dictatorship. Inspired by the Tunisian uprising and organized and coordinated using Facebook, Egyptians went to the streets in thousands. This video is an edit from an original found here: http://www.youtube.com/watch?v=kWr6MypZ-JU

This version got 183,723 views and was diffused via Facebook, Twitter and YouTube. In subsequent days, it was picked up by mainstream web outlets, the most significant of which was Yahoo! News, which accounted for 80,000 views. Overall, this single video was viewed over 3.6 million times and was continually reproduced with different narratives.

Not only did citizens produce the majority of video on the 25 January, but the actual discovery and viewing of these videos took place primarily through social networking sites. This is significant as it indicates that an alternative information network exists and that information flows easily through it, bypassing control typically held by those in power.

Facebook played a particularly important role in the diffusion of information during the first day of protests. Figure 2 shows the unrivalled video provision on YouTube by social networking sites that day.

Even this depiction overstates the role of mainstream media on 25 January. For example, the FreeEgypt video which had the most significant mainstream discovery views was only actually posted on Al Jazeera two days later, on 27 January.

A further source of discovery was via direct searches on Google and YouTube. On 25 January, the dataset indicates Egyptians were actively searching for media on the protests. The footage from Tahrir Square uploaded by user Fesalhussien,[72] for example, gained 473,000 views. It was discovered by people searching for 'Day of Wrath', as well as through internal YouTube referrals from other videos, and was followed by a huge spike in traffic on Facebook. This suggests that until the mainstream media started significant coverage of Egypt's protests, people inside the country were engaging in active search activity as information about the events started diffusing through society. 'Searching' became a primary entry point to accessing the videos, suggesting an alternative diffusion flow to both mainstream media and social networks.
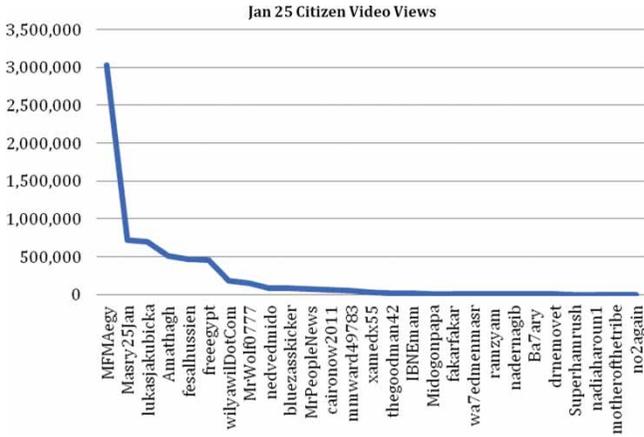
Jan 25 Citizen Video Views

Figure 1. Citizen video views by producer.
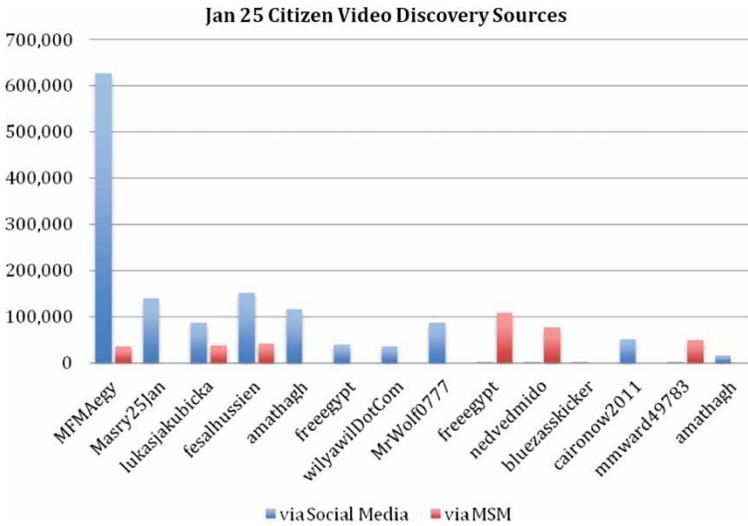
Jan 25 Citizen Video Discovery Sources

Figure 2. Citizen video views originating on Social Media v MSM (25 January 2011).

Mainstream media was slow to cover events in Egypt. Only ten entries were recorded in the dataset for 25 January, accounting for just over 770,000 views (as opposed to the 6.7 million views of citizen video). Both the numbers of videos produced, and the number of times they were consumed, were significantly less than citizen-produced videos. This is not to say that mainstream media completely ignored the protests – Reuters, Associated Press, Russia Today and Al Jazeera, whose videos appear through the dataset, all produced material. However, the scale of their coverage did not match the level of audience interest or the intensity of the events taking place.

For example, Al Jazeera's 9:35 pm news bulletin[73] on 25 January led with its Palestine Papers investigation, the channel's focus for the days leading up to the protests in Tahrir Square. Into the

Table 3.   Palestine Papers v Egypt (stories published on 25 January). Data from 25 to 26 January.

	Tweets	**Facebook likes**
Story Palestine Papers		
Qurei: 'Occupy the crossing'	27	291
al Madhound assassination	162	682
Erekat: 'I can't stand Hamas'	58	210
PA questions Tony Blair's role	13	54
MI6 offered to detain Hamas figures	55	316
Demanding a dimilitarised state	31	73
	346	**1626**
Story : Egypt		
Egypt protestors clash with police	1,087	4,000
Three dead in Egypt protests	585	6,000
	1672	**10,000**

night, even though the protests had been well underway, the news in Egypt had still not moved to the top of the mainstream news agenda (see Table 3).

Meanwhile, the audience's choice of news on Al Jazeera shifted away from the lead story on the Palestine Papers to the story on Egypt. This can be seen clearly in how stories were shared on social networks:

In Figure 3, the discovery path on YouTube shows that the majority of people who found Al Jazeera's own video package on the Egypt protests did so either through a search via YouTube or Google, or received it through Facebook. A vast majority of searches on 25 January that turned up this video were for 'Cairo protests', 'Egypt protests' or a similar variation of terms. The Al Jazeera video package on the protests in Egypt gained just under 60,000 views.[74]

In sum, the findings in this section illustrate how citizen media allowed for self-representation during the first day of protests and how millions came to know of the protests without relying on
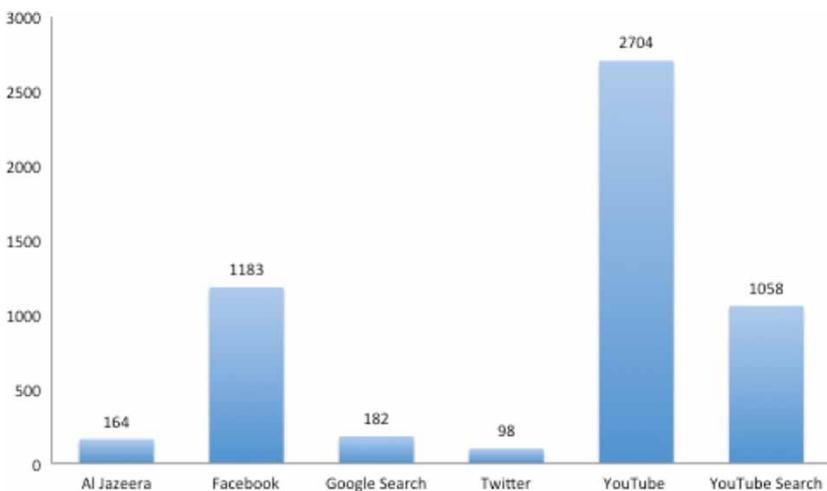

Figure 3. Referrals to Al Jazeera video package on Egypt (25 January 2011).

mainstream media. Yet, this changed as the spectacle captured the mainstream media's attention and a transformation took place – a shift from spectacle to media spectacular.

Mainstream media roll 24/7: the spectacle to spectacular phase

Once Al Jazeera and other news organisations began rolling news coverage, audiences inside Egypt, and throughout the world, were just a click away from 24/7 broadcasts. At the same time, the continued rolling of cameras had an important effect on protestors who called Al Jazeera, among others, pleading, 'please don't turn off your cameras or else we'll be slaughtered' (Wadah 2011).[75] This section analyses the amplification of media through mainstream broadcasting and the effect on the public sphere of continuous live coverage.

Protests continued from Tuesday, 25 January, picking up intensity on Friday, 28 January. Fridays became associated with protests during the Arab Uprising because Muslims hold their major weekly congregational prayer on Fridays, just after midday, gathering thousands to the mosques and making it a natural day to organise. On 28 January, the first Friday since the protests began, both the number of protestors swelled and interest in the story exploded. In Cairo itself, an estimated 100,000 protestors took to the streets (Sharp 2011).[76]

This was the day an iconic battle took place on the Qasr al-Nil bridge as police forces attempted to keep protestors from Tahrir Square (El-Ghobashy 2011).[77] In addition, it was on this day that opposition leader Mohamed El Baradei was placed under house arrest and the army was deployed onto the streets as protestors overwhelmed the police. The building intensity of protests through the week, and the widespread coverage via citizen media, led the mainstream media at last to descend on Egypt in anticipation of major protests on Friday. The volume of mainstream media output jumped dramatically that day as illustrated by the first spike of MSM in Figure 4, with Al Jazeera alone producing 15 videos.

It is also worth noting that the initial decline in citizen video coincided with the government's blocking of internet services such as Facebook and Twitter on January 27th.[78] Thereafter both MSM and citizen media followed much the same pattern until 11 February, when citizen media output dropped and MSM increased. This suggests that for citizens, the message driver was over; for mainstream media the story continued.

Looking at actual viewership patterns, when MSM coverage took off, it outstripped citizen media in terms of views for all but five days. It is worth examining those five days to understand the reasons. After 28 January, views for citizen media rose higher than mainstream media between 3 and 5 February, as well as on 8 and 10 February. On 3 February internet access was restored after it had been completely cut on the 28 January. There is a spike in the volume of citizen videos between 3 and 5 February as all footage taken over the previous five days was uploaded to YouTube.

The most viewed video posted on 3 February, was from user mosolini12, who stated the video was taken on 28 January. The video shows what is described as a diplomatic vehicle running over protestors. On the day it was posted, the video garnered over two million views. No detailed discovery data were available for the video, which may unnecessarily skew the day's views, as the actual views may have been spread over time. The video was embedded by both the *New York Times* and Al Jazeera on 4 February.

Contributing to the deluge of footage one would expect online in response to internet restoration, the previous day (2 February) saw what became known as the Battle of Tahrir, in which camels and horses were used to attack protestors, adding surreal drama to the events and increasing viewer attention.
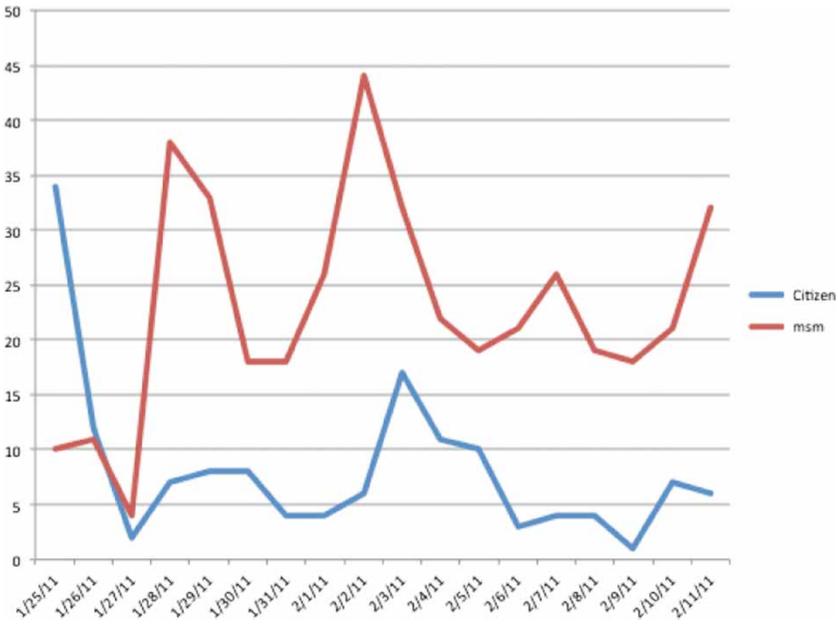
Figure 4. Volume of citizen vs MSM videos produced (25 January–11 February 2011).
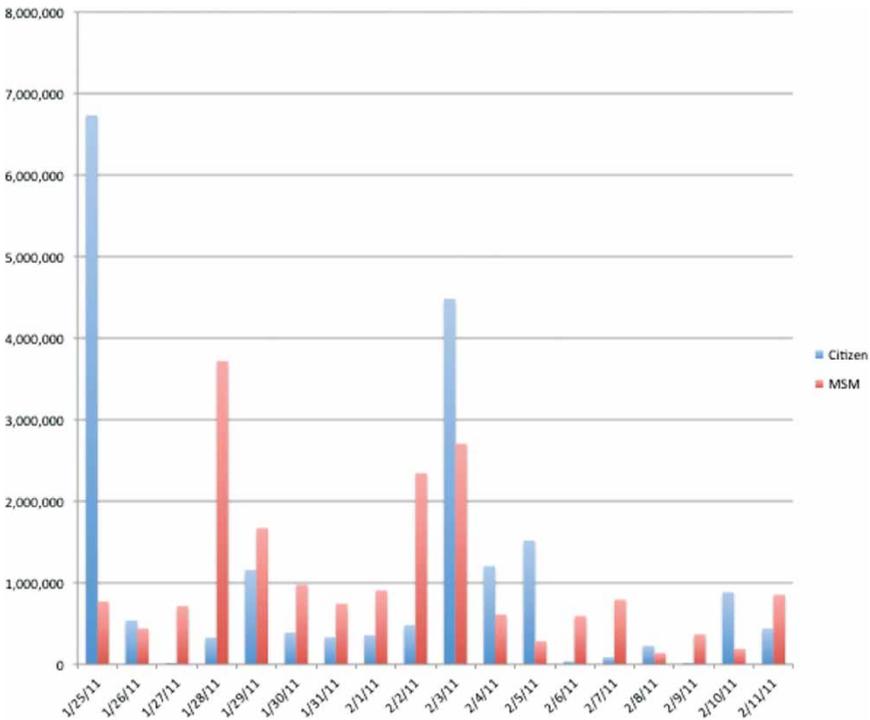

Figure 5. Daily views of citizen vs MSM videos (25 January–11 February 2011).

While more views of citizen video took place on 8 February, the difference was not significant as both citizen media and MSM views dipped. The 10th of February was the day of Mubarak's highly anticipated but disappointing speech; mainstream media produced more videos but gained less views than citizen media. Most of the citizen media views came from four videos of Tahrir Square protestors reacting to the speech. 'Qik - Reactions to Mubarak speech by tabula gaza' obtained over 330,000 views, making it the most viewed video by citizen or mainstream media that day. The same user also posted a video just before Mubarak's speech, titled 'Qik - Tahrir minutes before mubarak goes by tabula gaza', which got over 100,000 views. User anonymous source1 posted a video titled 'Tahrir Square Reacts to Mubarak Speech', which was viewed over 233,000 times. Finally, the fourth-most viewed video was 'El-Tahrir Sq. Feb 10 (El Tahrir 7ta El-taghyeer)' by user miro0550, which combined with the other three composed the majority of the day's views.

Even though views dipped overall during this period, the actual number of pieces produced by MSM was showing a renewed increase. It was a period in which protestors had begun negotiations with the regime, suggesting the need for more analytic material (the typical purview of MSM) and less from the street (which had focused on action).

Friday 28 January marked the start of 24/7 protest coverage by mainstream media. Al Jazeera audience patterns, for example, suddenly spiked after an unprecedented rise as people tuned in globally to watch the events in Egypt. This marked the start of the media spectacular, and the second phase of media coverage, where the mainstream media played a pivotal role. A similar jump is reflected in Al Jazeera's own live streaming data, where the channel made available a video stream of its channel online for anyone to view.

Figure 6 shows the number of views of the livestream. From 25 to 27 January, the line is flat; on 28 January, the line skyrockets to well over a million views, marking the move from spectacle to spectacular, and generally, amplification from citizen to MSM produced coverage. This move was transformative and reflected events on the ground in Egypt. There was also a shift in viewing patterns: there was a massive move to live viewing of events as they unfolded. While large numbers of views were recorded in our dataset, it is worthwhile to compare that data to Al Jazeera live video streaming data. Figure 7 plots the two sources of Al Jazeera content (their live stream in blue and their YouTube videos in red) against citizen media on YouTube (in green).

It reveals four discreet outcomes. First, it confirms that the discovery phase was led by the citizen media. Second, it marks the effect of the regime's closure of the internet – a move that did not squash access entirely, but which clearly dampened the process – and which showed significant bounce-back once access was restored. Third, it illustrates that Al Jazeera's live stream video provided more views than any of its YouTube videos, highlighting the move of global audiences on a specific day to 24/7 live coverage, and the amplification of the message from citizen to mainstream video. Fourth, it shows that when there was little to report (between Feb 6 and Feb 9), citizen-produced video lacked appeal, even when there was access to the internet, suggesting that audience interest in citizen-produced news may not be as elastic as for mainstream news, which includes professional analysis emanating from a credible source. However, the raw video used by mainstream media, as discussed below, adds a new twist to this observation, as the dataset revealed the growing importance of raw video published by the mainstream media, not only in numbers of videos, but in their ability to capture a large amount of viewer attention.

In the dataset, video is considered raw when it shows exactly what the camera captured without any additional layers of presentation – no voice-overs, reporters, or post-production material. Of course, it can be argued that the mere fact that a camera was pointed at one
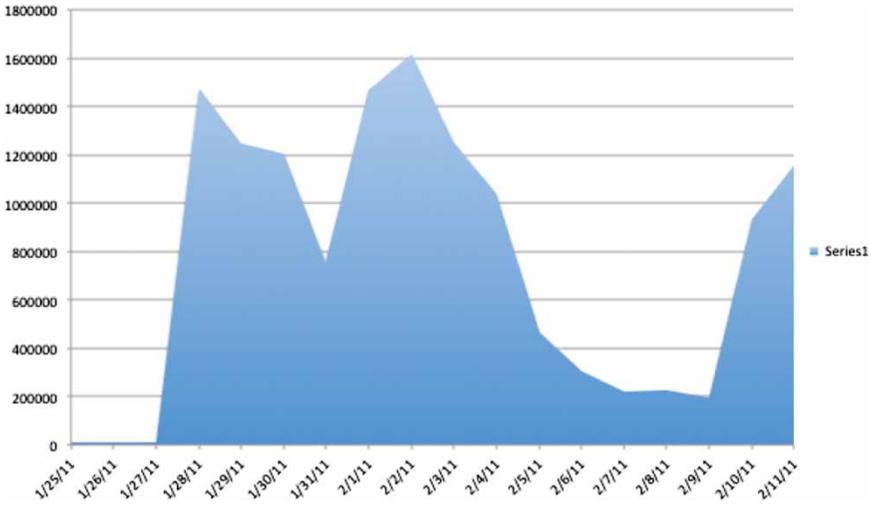
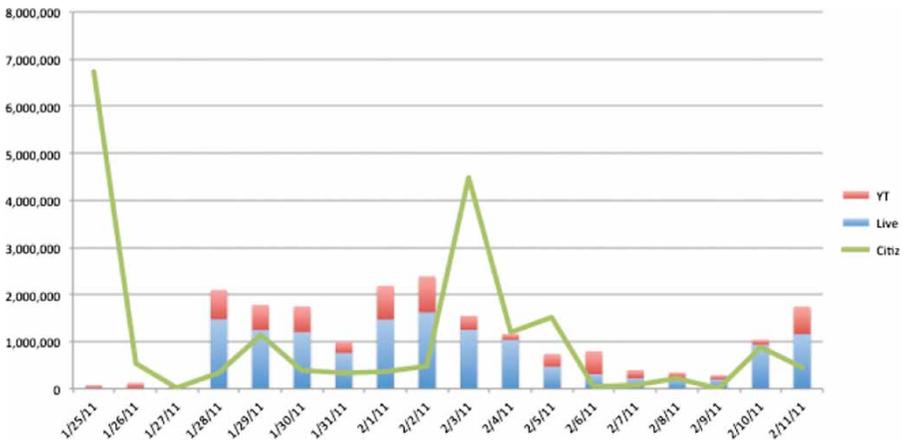Figure 6. Al Jazeera livestream usage (25 January–11 February 2011).

Figure 7. All Al Jazeera video (live stream and YouTube videos) vs citizen video.

particular point instead of another, that one particular video was uploaded instead of another, or that certain segments were played out over others, all affect the news presentation. In EH Carr's (1961) seminal lecture 'What is history?', he posited[79]

> The most effective way to influence opinion is by the selection and arrangement of the appropriate facts. It used to be said that facts speak for themselves. This, of course, is untrue. The facts only speak when we call on them: it is he who decides to which facts to give the floor, and in what order or context.

For the purpose of this study, we chose a less-sophisticated set of rules, distinguishing simply between raw versus packaged material.

Analysis of the top 25 mainstream media videos revealed that 76% were clips showing raw footage. That means that 7.8 million of the top 11 million mainstream media views were of

footage taken by a camera and uploaded without packaging. Put another way, video was placed on the internet without any of the added frills we have come to expect from journalists. The video, in a sense, was technically no different from that of any citizen media recorded in the dataset, except perhaps for the job title of the journalist shooting the video and the mainstream media company's logo layered on top.

This suggests not only a shift in the production of news, but more importantly, a shift in the consumption of news. It is widely believed in the news industry that contextualisation is a key role of a news provider. But, as media proliferates at ever increasing speed across the internet, the units of consumption are being transformed. The idea of a news package normally includes certain elements – a peg, a didactic statement, some colour and a summary. Yet, the poor showing of such videos in the top 25 produced on the events in Egypt, indicates such packaging performed less well than raw footage. In a sense, there is a shift towards letting pictures speak for themselves. Apparently, clips with natural sound, often roughly shot, engage audiences as well, if not better, than highly packaged material.

This points to a shift in the nature of information dissemination. There are two possible explanations: first, citizen production has changed the way that people 'see' events; second, the need and ability to provide immediate dissemination has changed the focus of packaging.

Two videos, both uploaded by Euronews on the first day of the protests, offer a good comparison. The first, a full news package entitled 'Thousands march in Egypt protests', provides an explanation of the day's events, discusses how the protests were organised and includes interviews with numerous opposition leaders. This package got just over 14,000 views. This contrasts with a video posted by Euronews under its 'No Comment TV' brand. It is just four minutes of raw footage taken on the streets of Cairo. There is no narration or contextualisation other than the date and time the video was taken. The only audio is natural sound from the streets. This clip obtained 43,000 views – more than three times that of the more packaged video. Of Al Jazeera's top 10 videos produced during those 18 days, 50% were raw video. The five raw videos gained 20% more views than their packaged counterparts (1.2 million vs 800,000).

In another unexpected departure, as videos were being catalogued, it became apparent that a number of those that were uploaded under user accounts were actually of material directly taken (copied) from mainstream media sources. Over four million views in the database (nearly 20% of MSM views) were identified as being for mainstream media that was re-uploaded. This is the opposite of what has hitherto been considered the direction for amplification, namely, the media as amplifying citizens' voices; in these cases, individuals were overtly amplifying mainstream media footage.

Out of the 435 mainstream media video clips in the dataset, 351 were posted by the media organisations themselves. The remaining videos were copied and re-uploaded by some 42 individuals, significantly amplifying mainstream media through YouTube. While the source news organisations may claim injury and the users fair use, the focus of this study is on the amplification effect and not the copyright debate.

This worked the other way around as well. The mainstream media used citizen video heavily in its own coverage. This points to an interesting question around copyright as eyebrows are usually raised if a citizen remixes professionally produced content (this act is sometimes portrayed as piracy); however, for news purposes, citizen media is used constantly by the mainstream media, without apparent concern for copyright. The only real consideration within newsrooms revolves around the authenticity of the video and not its ownership. While this subject is fascinating, it is tangential to the study at hand.
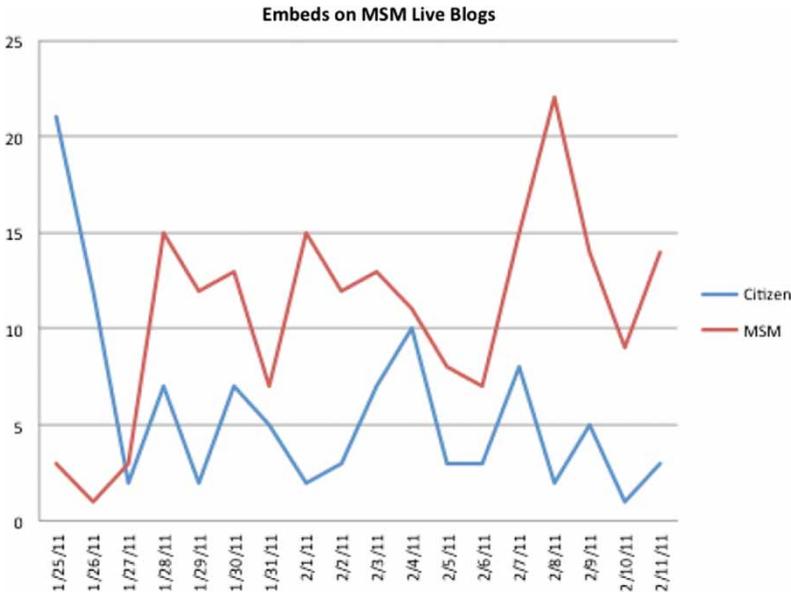
Figure 8. Citizen vs MSM videos used on MSM live blogs.

The use of citizen media by the mainstream media as depicted in Figure 8 supports the overall hypothesis that citizen media was more important during the first phase (reference general chart). *The Guardian, The New York Times* and Al Jazeera all initially relied disproportionately on citizen media from the 25 January until an upturn in mainstream media coverage occurred on the 28 January.

Figure 9 shows the number of different types of videos embedded in mainstream media's live blogs. Al Jazeera relied less on citizen media and more on its own produced material; however, *The Guardian* and *The New York Times* both relied on citizen media one-third of the time. These cases of news organisations embedding citizen media served to amplify their voices and aid discovery.

What is also significant is that the dataset indicates that mainstream media showed a preference for using material from other mainstream media outlets (over citizen video). Both *The Guardian* and the *New York Times* embedded approximately 50% of YouTube video from other mainstream media sources. Al Jazeera comprised half of the mainstream media sourcing on both *The Guardian* and *The New York Times* blogs. *The New York Times* also relied heavily on the Associated Press. Assuming that Al Jazeera posted all its video to its live blog, then the data shows that the *New York Times* published almost half of all video material produced by Al Jazeera. This means that Al Jazeera's culture of sharing of content led to significant amplification of its own coverage. Table 4 shows the number of videos embedded in several sites:

Conclusion

The findings on how video was produced, distributed, viewed and amplified during the Egyptian upheaval provide new insight on the complex relationship between digital, analogue and physical spaces during contentious times. Three broad outcomes emerge: first, how the protests
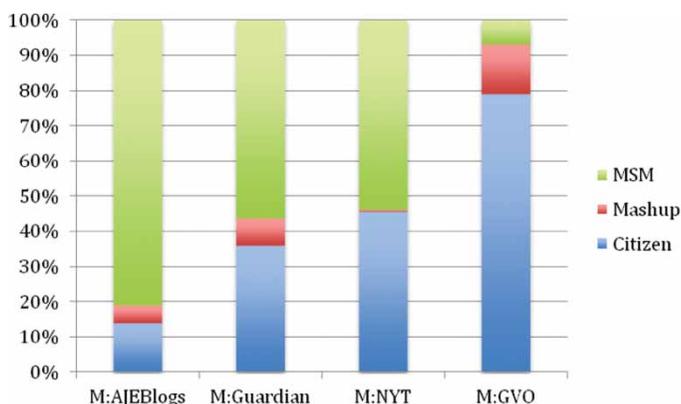
Figure 9. Distribution of video types across news websites.

Table 4. MSM video used on MSM live blogs.

	Al Jazeera	Associated Press
Al Jazeera Blog	88	0
Guardian Blog	12	4
NYT Blog	40	25

were able to 're-programme' mainstream media agendas; second, how the movement changed from 'spectacle' to 'spectacular', and third, how media amplification took place.

Finding 1: Reprogramming communication networks. Castells theorised that power resides within networks, those broad structures of linked knowledge and communication.[80] Within this thesis three networks were identified: physical (protestors), analogue (media) and digital (internet).

In Egypt, the protestors were able to not only activate their own physical network but to instantiate their own media network and to 're-programme' the mainstream media network. Put another way, they were able first, to set the media agenda on 25 January using the internet to reflect their physical protests. Second, citizen video was responsible for a large majority of both the videos produced (76%) and viewed (87%) on the first day of the protests. The most watched video over the entire 18-day 'revolution' was citizen produced. While the mainstream media did not have Egypt at the top of its news agenda that day, the public clearly did. They were actively seeking the story out on news sites like Al Jazeera, sharing it on social networks and searching for it on YouTube and Google.

These findings are significant as they show that in large-scale events, participants can directly reach the public without relying on mainstream media. Now that both the production of media artefacts and the distribution of those works can take place via *social* media channels, thereby bypassing both the state and mainstream media, social movements are empowered to deal directly with the public. However, whether or not the need for spectacles has changed is an opportunity for further research.

Finding 2: From spectacle to spectacular. The exact moment of the collapse of the hegemonic discourse in Egypt is difficult to pinpoint. However, the clearest manifestation of its eminent

demise, as revealed by the data, was on Friday, 28 January when the volume of videos produced by the mainstream media increased dramatically, indicating that the mainstream media were now fully engaged with the agenda laid down by the protestors. By that day, millions of people around the world had witnessed the protests in Egypt and hundreds of thousands had participated in amplifying the events taking place. While protests were by no means limited to Tahrir Square, the data reveal how it became a potent symbol of the revolution. The imagery of the protestors' occupation of this physical space was, by Friday, being communicated both through citizen and mainstream media. From the data, it emerged that live video also surpassed recorded video clips and this can be understood to confirm the 'spectacular' nature of the event, in which the public sought to experience live minute-by-minute updates.

It also became apparent that a shift in media consumption was likewise occurring. The findings show that 76% of the most viewed mainstream media videos were of raw video footage. The growing prominence of raw video suggests that the public's priority was to gain unfiltered access to information immediately, rather than wait for edited or 'produced' clips. This means that source material was watched more frequently than packaged items. In this way, the video output of professional journalists came to mirror that of citizens in form. In an era where news organisations strive to provide context, this has significant implications for how audiences interact with information. Traditionally, within broadcasting, a conceptual model for contextualisation and depth would look like the conceptual model for news contextualisation in Figure 10.

The conceptual model carries over to content online, where the final unit would be a tweet (140 characters of text), an individual picture or a video. The model, however, does not hold for a relationship between raw and packaged video in contentious times: the length of these raw videos is not shorter – some of them are as long as news packages.

While previous research[81] has focused on the distribution shift caused by new social networks, the way in which contextualisation has been affected has not yet been significantly dealt with. These data suggest that contextualisation has shifted from the unit level to the stream level. Context is provided within the discovery stream (such as a Twitter or Facebook feed), as well as through the broader media environment. This points to a profound shift in how news is consumed and produced as each element produced contributes to a longer, complex story, instead of a single video providing the whole story. Within a broader social movement context, it may also imply that there is a disinclination by the public to absorb material from the hegemonic discourse of the media, much as there is a disclinination to absorb state-controlled messaging.

Finding 3: Media amplification. A characteristic of digital media is that it can be easily copied, reproduced and distributed with the click of a button. This means that either mainstream media organisations or citizens can easily amplify or aide in the dissemination of a video. This section of the data considered re-uploading footage, through mainstream media's use of both citizen media and other mainstream media video.

The data showed that through the 18 days of the 'revolution', the distinction between producer, consumer and publisher often blurred as mainstream media used media produced both by
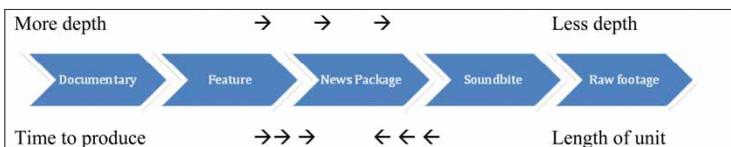

Figure 10. Conceptual model for news contextualisation.

citizens and other news organisations within their own reporting. *The New York Times*, for example, used 73 citizen videos and 40 Al Jazeera videos in their coverage. This points to what Lotan has called co-construction of news by journalists and activists.[82] This co-creation points to new forms of how culture is constituted and reconstituted in the digital age, where media is easily malleable. The general trend points to a symbiotic relationship amongst producers and consumers.

It is not the intent of this research to suggest that this was a 'leaderless revolution' enabled by the 'crowd' online. This revolution, like all others, had a group of people organising and agitating. That they used the media in a unique way to render Tahrir Square iconic, to develop networks to reach the public both at home and abroad, and to bring more people into the protest to bring down the regime – that is the contention and source of examination here. The socio-political conditions in Egypt – Mubarak's hegemonic grip and its opposition, the mainstream media and the internet – set the scene for the 'amplified public sphere' that developed. This amplified public sphere consisted of the public space occupied by protestors, and the provision of 24/7 coverage of events by mainstream media, both set to a constant beat of activity on the internet that at times led and at times re-enforced the mainstream media. The regime, to some degree oblivious to this foment of mediated local-international exchange, did not go quietly into the night. It attempted instead to prolong its survival by disrupting the physical, analogue and digital networks challenging its hegemony. The attack on Tahrir Square on 2 February by thugs mounted on horses and camels, was the most overt attempt by the regime to break the protest network. Yet, not only did this attempt fail but it fed further drama into the nature of the spectacular – making this a day that generated the most views recorded on Al Jazeera's live stream.

The regime attempted to counter the analogue mainstream media networks through the use of four tactics – the intimidation and arrest of journalists; the use of state media to control the message; jamming the satellite signal of Al Jazeera;[83] and finally, attempting to disrupt all digital networks.[84] However, according to the data, and as subsequent broadcasts show, this had no visible affect on the growing size of the protests, or the ability to communicate within the protest movement. It is significant that none of the regime's attack tactics worked. In fact, each was individually counter productive, as an attack on the physical, analogue or digital network would send the other networks into overdrive, adding to the spectacular.

It is important to recognise at this juncture, however, that this point cannot be generalised. Similar attacks have proven more successful at suppressing protest movements elsewhere, such as in Bahrain, or Syria. What was unique in Egypt was that by Friday, 28 January 2011, each of the different networks (physical, analogue and digital) had gained critical mass – hundreds of thousands of protestors, and the mainstream media, had gone into rolling news mode and social networking sites had exploded with activity related to the revolution. What this research does show, unequivocally, is that change is rapidly affecting the linkages between local protest, global audience reception and response, and mainstream media interpretation. Additionally, it has underscored that the role of the citizen within the media environment has become as important and transforming as the citizen in the political one.

Notes

1. The use of the word 'revolution' itself is contested. Even though Mubarak has stepped down it is still too early to tell if the political regime has changed to the extent that the events can be declared a revolution.
2. Bruce D'Arcus, *Boundaries of Dissent, Protest and State Power in the Media Age* (Routledge, 2006) 34.

3. See for example, Nina Abu-Lughod, *Dramas of Nationhood : The Politics of Television in Egypt* (The University of Chicago Press, 2005).

4. Marc Lynch, *Voices of the New Arab Public: Iraq, al-Jazeera, and Middle East Politics Today* (Columbia University Press, 2007).

5. Marc Lynch, 'After Egypt: The Limits and Promise of the Online Challenge to the Authoritarian Arab State', *Perspectives on Politics*, 9 (2), 302.

6. Ibid, p. 307.

7. Courtney Radsch, 'Core to Commonplace: The evolution of Egypt's blogosphere', Arab Media and Society, September, 2008.

8. Phillip Howard, *The Digital Origins of Dictatorship and Democracy: Information Technology and Political Islam* (Oxford University Press, 2010).

9. David Faris, 'Revolutions without Without Revolutionaries? Social Media Networks And Regime Response In Egypt' (2010). Publicly accessible Penn Dissertations. Paper 116. http://repository.upenn.edu/edissertations/116

10. Jaehyuk Park, Beunguk Ahn, Rohjoon Myung, Kyuree Lim, Wonjae Lee, Meeyoung Cha, 'Revolution 2.0 in Tunisia and Egypt: Reactions and sentiments in the online world' (paper presented to the Fifth International Association for the Advancement of Artificial Intelligence (AAAI) Conference on Weblogs and Social Media, Barcelona, July 17–21 2011.

11. See Romero, D.M., Meeder, B., Kleinbery, J., 'Differences in the Mechanics of Information Diffusion Across Topics: Idioms, Political Hashtags, and Complex Contagion on Twitter', and C. Castillo, M. Mendoza, and B. Poblete, 'Information Credibility on Twitter' both presented at WWW 2011, March 28–April 1, 2011, Hyderabad, India.

12. Gilad Lotan, Erhardt Graeff, Mike Ananny, Devin Gaffney, Ian Pearce, and danah boyd, 'The Revolutions Were Tweeted: Information Flows during the 2011 Tunisian and Egyptian Revolutions', *International Journal of Communications* 5, (2011) 1375–1405.

13. Howard, Phillip N., Duffy, Aiden, Freelon, Deen, Mussain, Muzammil, Mari, Will, Mazaid, Marwa, 'Opening Closed Regimes : What was the role of social media during the Arab Spring?', Working Paper 2011.1, Project on Information Technology and Political Islam, University of Washington (2011).

14. Adamson, *Hegemony and Revolution*, p. 220.

15. Ibid, p. 10.

16. Castells, *Communication Power*, p. 194.

17. Ibid, p. 379.

18. Jan Aart Scholte, *Globalization, A Critical Introduction (second edition)*, Palgrave MacMillan, 2005 (Kindle Edition), p. 971.

19. Castells, *Communication Power*, p. 284.

20. Forags, *Gramsci Reader*, p. 192.

21. James Curran, *Media and Power* (Routledge, 2002), p. 141.

22. Nick Couldry, and Curran, James (eds.), *Contesting Media Power – Alternative Media in a Networked World* (Rowman & Littlefield Publishers, 2003), p. 4.

23. Ibid, pp. 148–150.

24. Benklar, *Wealth of Networks*, p. 196.

25. Ibid, p. 936.

26. Manuel Castells, *The Power of Identity second edition (Blackwell 2004)*, p. 3.

27. Donatella Della Porta and Mario Diani, *Social Movements: An Introduction* (Blackwell Publishers, 1999), p. 135.

28. Jeffrey S. Juris, *Networking Futures: The Movements Against Corporate Globalization* (Duke University Press, 2008), p. 5.

29. Ibid, p. 10.

30. Benklar, *Wealth of Networks*, p. 68.

31. Nick Stevenson in Frank Webster (ed), *Culture and Politics in the Information Age : A New Politics?* (Routledge, 2001), p. 71.

32. Mary Joyce (ed.), *Digital Activism Decoded : The New Mechanics of Change*, (Idebate Press, New York, 2010), p. 2.

33. Jeffery Juris, The New Digital Media and Activist Networking within Anti-Corporate Globalization Movements, The Annals of the American Academy, AAPSS, 597, January 2005, pp. 189–208.

34. J. Earl and K. Kimport, *Digitally Enabled Social Change : Activism in the Internet Age*, (The MIT Press, 2011), p. 63.

35. See Sheryl Gay Stolberg, 'Shy U.S. Intellectual Created Playbook Used in a Revolution', 16 February 2011, *New York Times* http://www.nytimes.com/2011/02/17/world/middleeast/17sharp.html?pagewanted=all, (retrieved 30 September 2011) and Tarek Amr, 'Gene Sharp Taught Us How to Revolt', Global Voices Online, 15 April 2011, http://globalvoicesonline.org/2011/04/15/egypt-gene-sharp-taught-us-how-to-revolt/ (retrieved 30 September 2011).

36. Gene Sharp, *The Politics of Nonviolent Action* (Porter Sargent Publisher, 1973), p. 697.

37. Shirky, *Here comes every body*, p. 24.

38. Ibid, p. 6.

39. Castells, *Communication Power*, Location 7653.

40. Roberts, *How the Internet is Changing the Practice of Politics in the Middle East*, p. 6.

41. Ibid, p. 43.

42. Paul Virilio, *Speed and Politics*, (Semiotext(e), 2006), p. 29.

43. Della Porta and Diani, *Social Movements*, p. 169.

44. Ibid, p. 157.

45. Mellor, Ayish, Dajani, and Rinnawi, *Arab Media*, p. 126.

46. World Bank, World Development Indicators (2009).

47. Egypt Country Statistics, United Nations Population Division, UNICEF, http://www.unicef.org/infobycountry/egypt_statistics.html (retrieved 20 September 2011).

48. Egypt Human Development Report 2010, United Nations Development Programme and the Institute of National Planning, Egypt. (2010), p. vii.

49. Etling, Bruce, Kelly, John, Faris, Robert, Palfrey, John, 'Mapping the Arabic Blogosphere: Politics, Culture, and Dissent', Berkman Center Research Publication Number No. 2009-06, June 2009, Harvard University.

50. Lynch, Marc, 'Blogging the New Arab Public', Arab Media & Society (February, 2007), p. 12.

51. http://tortureinegypt.net/.

52. Radsch, *Core to Commonplace*, p. 1.

53. Ibid, 4.

54. Ibid 4.

55. Faris, *Revolutions without revolutionaries*, p. 7.

56. Sadiki, *Rethinking Arab Democratization*, p. 245.

57. Faris, *Revolutions without Revolutionaries?* p. 58.

58. Mellor, Ayish, Dajani, and Rinnawi, *Arab Media*, p. 27.

59. Sadiki, *Rethinking Arab Democratization*, pp. 239–240.

60. '10 Worst Countries to be a Blogger', Committee to Protect Journalists, 30 April, 2009, http://www.cpj.org/reports/2009/04/10-worst-countries-to-be-a-blogger.php (retrieved 20 September 2011).

61. Malin, Carrington, 'Egypt Facebook demographics', Spotonpr, 26 January 2011 (retrieved 20 September 2011).

62. Morozov, *The Net Delusion*, location 2350.

63. Wolman, David, 'The Instigators: How a small band of digital activists ricker their lives and helped bring down the government of Egypt', The Atavist (2011), Kindle Edition, location 129–161.

64. Chick, Kristen, Beating death of Egyptian businessman Khalid Said spotlights police brutality, Christian Science Monitor, June 18, 2010, http://www.csmonitor.com/World/Middle-East/2010/0618/Beating-death-of-Egyptian-businessman-Khalid-Said-spotlights-police-brutality, retrieved 15 September 2011.

65. This term has been taken up by media to describe the way blogs collect and link to content relevant to their purpose from across the internet.

66. The full dataset can be downloaded using this link : http://mohamedn.com/files/thesisdataxlsx

67. For a discussion on this problem, see http://blog.bitly.com/post/7762784679/where-does-your-traffic-really-come-from.

68. Lynch, M., Foreign Policy, 25 January 2011, http://lynch.foreignpolicy.com/posts/2011/01/25/watching_egypt_and_lebanon_and_the_pa_and (retrieved 31 July 2011).

69. MFMAegy, Egyptian Tank Man, Youtube, 25 January 2011, http://www.youtube.com/watch?v=kWr6MypZ-JU.

70. FreeEgypt, Demonstrations of the day of rage [translation], Youtube, 25 January 2011, http://www.youtube.com/watch?v=YtTUsqra-MU.

71. WilyawilDotCom, Tiananmen-like courage in Cairo: Egypt's 25 Jan protests, Youtube, 25 January 2011, http://www.youtube.com/watch?v=q1m4_q_HP5o.

72. Fesalhussien, Angry demonstration on January 25, Youtube, 12 January 2011, http://www.youtube.com/watch?v=o-wZpF6P7sQ.

73. AlJazeeraEnglish, News Bulletin 1935GMT update, Youtube, 25 January 2011, http://www.youtube.com/watch?v=GrzCZohlFzc.
74. AlJazeeraEnglish, Thousands join Cairo protests, YouTube, 25 January, http://www.youtube.com/watch?v=_2VsGQpNnqA.
75. Wadah Khanfar, 'A historic moment in the Arab world', TED Talk, 1 March 2011, http://www.ted.com/talks/wadah_khanfar_a_historic_moment_in_the_arab_world.html (retrieved 27 July 2011).
76. Sharp, J.M., 'Egypt : The January 25 Revolution and Implications for U.S. Foreign Policy', February 11, 2011, Congressional Research Service, 7-5700. 2.
77. El-Ghobashy, *The Praxis of the Egyptian Revolution*.
78. www.guardian.co.uk/world/2011/jan/26/egypt-blocks-social-media-websites.
79. Edward Hallet Carr, *What is History* (Penguin, 1961), p. 11.
80. Castells, *Communication Power*.
81. Romero, D.M., Meeder, B., Kleinbery, J., 'Differences in the Mechanics of Information Diffusion Across Topics: Idioms, Political Hashtags, and Complex Contagion on Twitter' presented at WWW 2011, March 28–April 1, 2011, Hyderabad, India.
82. Lotan *et al.*, 'The Revolutions Were Tweeted', p. 1405.
83. Sedarat Firouz, Al Jazeera TV says signal jammed in Middle East, Reuters, 1 February 2011, http://www.reuters.com/article/2011/02/01/us-egypt-jazeera-idUSTRE7107DD20110201, (retrieved 27 September 2011).
84. James Cowie, Egypt Leave the Internet, 27 January 2011, Renesys, http://www.renesys.com/blog/2011/01/egypt-leaves-the-internet.shtml (retrieved 27 September 2011).

References

Abdelrahman, M.M., 2004. *Civil society exposed: the politics of NGOs in Egypt*. London: Tauris Academic Studies.
Abu-Lughod, N., 2005. *Dramas of nationhood: the politics of television in Egypt*. Chicago: The University of Chicago Press.
Adamson, W.L., 1980. *Hegemony and revolution: a study of Antonio Gramsci's political and cultural theory*. Berkeley, CA: University of California Press.
Aday, S., *et al.*, 2010. *Blogs and bullets: new media in contentious politics*. Peaceworks No. 65. Washington, DC: United States Institute of Peace.
Amin, G., 2011. *Egypt in the era of Hosni Mubarak: 1981 – 2011*. Cairo: The American University in Cario Press.
Araf, A.Al-Din, 2009. *The Mubarak leadership and future of democracy in Egypt*. New York: Palgrave MacMillan.
Asur, S., *et al.*, 2011, 7 Feb. Trends in social media: persistence and decay. Working Paper Series, Social Science Research Network, Social Science Electronic Publishing, Stanford. arXiv:1102.1402v1 [cs.CY]. www.papers.ssrn.com.
Auter, P., Arafa, M.M., and Al-Jaber, K., 2004. *Who is Al Jazeera's audience? Desconstructing the demographics and psychographics of an Arab Satellite News Network.* Transitional Broadcasting Studies. Spring-Summer.
Ayres, J.M., 1999, Nov. From the streets to the internet: the cyber-diffusion of contention. *Annals of the American academy of political and social science*, 566, 134.
Ayubi, N.N., 2008. *Over-stating the Arab state: politics and society in the Middle East*. London: I.B. Tauris.
Benkler, Y., 2006. *The wealth of networks: how social production transforms markets and freedom*. New Haven, CT: Yale University Press.
Bennet, W.L. and Entman, R.M., eds., 2001. *Mediated politics: communication in the future of democracy*. Cambridge: Cambridge University Press.
Best, M.L. and Wade, K.W., Aug 2009. The internet and democracy: global catalyst or democratic dud? *Bulletin of science, technology & society*, 29 (4), 255–271.
Black, J., 2008. Egypt's press: more free, still fettered. *Arab media & society*, Jan. www.arabmediasociety.com/.
Bollier, D., 2008. *Viral spiral: how the commoners built a digital republic of their own*. New York: The New Press.
Bowker, R., 2010. *Egypt and the politics of change in the Arab Middle East*, Cheltenham: Edward Elgar.
Bunt, G.R., 2009. *iMuslims: rewiring the house of Islam*. Chapel Hill, NC: The University of North Carolina Press.
Canetti, E., 1984. *Crowds and power*. New York: Farrar, Straus and Giroux.
Carr, E.H., 1961. *What is history*. Harmondsworth: Penguin.
Castells, M., 2004. *The power of identity*. 2nd ed. Oxford: Blackwell.
Castells, M., 2007. *Fernandez-Ardevol, Qiu Jack Linchuan, Sey Araba, mobile communication and society: a global perspective*. Cambridge, MA: The MIT Press.
Castells, M., 2009. *Communication power*. New York: Oxford University Press (Kindle Edition).

Castillo, C. and Mendoza, M.B., 2011. Poblete, information credibility on twitter. Paper presented at WWW 2011, 28 March-1 April, Hyderabad, India 2011.

Chick, K., 18 Jun 2010. Beating death of Egyptian businessman Khalid Said spotlights police brutality. *Christian Science Monitor*. Available from: http://www.csmonitor.com/World/Middle-East/2010/0618/Beating-death-of-Egyptian-businessman-Khalid-Said-spotlights-police-brutality [Accessed 15 September 2011].

Cleveland, W.L., 2000. *A history of the modern Middle East*. 2nd ed. Boulder, CO: Westview Press.

Constanza-Chock, S., 2008. New social movements in the network society, Big brother and empowered sisters: the role of new communication technologies in democratic processes, Proceedings, conference and workshop, Uppsala, 16– 17 April 2008, Uppsala Universitet.

Cooke, M. and Lawrence, B.B., eds., 2005. *Muslim networks from Hajj to Hip Hop*. Chapel Hill, NC: The University of North Carolina Press.

Couldry, N. and Curran, J., eds., 2003. *Contesting media power – alternative media in a networked world*. Lanham, MD: Rowman & Littlefield.

Curran, J., 2002. *Media and power*. London and New York: Routledge.

D'Arcus, B., 2006. *Boundaries of dissent, protest and state power in the media age*. London and New York: Routledge.

Drezner, D.L. and Henry F., (2008). 'Introduction: Blogs, politics and power – a special issue of Public Choice'. *Public Choice*, 134, 1–13.

Duval, J., 2010. *Next generation democracy: what the open-source revolution means for power, politics and change*. New York: Bloomsbury.

Earl, J. and Kimport, K., 2011. *Digitally enabled social change: Activism in the internet age*. Cambridge, MA: The MIT Press.

Egypt Country Statistics. United Nations Population Division, UNICEF. Available from: http://www.unicef.org/infobycountry/egypt_statistics.html [Accessed 20 September 2011].

Egypt Human Development Report, 2010. United Nations Development Programme and the Institute of National Planning, Egypt.

El-Ghobashy, M., 2011. The Praxis of the Egyptian Revolution. *Middle East Report 258 – People Power*, 41 (Spring), Middle East Research and Information Project (MERIP), MER258.

El-Mahdi, R. and Marfleet, P., 2009. *Egypt: the moment of change*. London: Zed Books.

Etling, B., *et al.*, June 2009. *Mapping the Arabic blogosphere: politics, culture, and dissent, Berkman Center Research Publication Number No. 2009-06*. Cambridge, MA: Harvard University.

Egypt Country Statistics. United Nations Population Division, UNICEF. Available from: http://www.unicef.org/infobycountry/egypt_statistics.html [Accessed 20 September 2011].

Faris, D., 2010. Revolutions without revolutionaries? Social media networks and regime response in Egypt. Publicly accessible Penn Dissertations. Paper 116. Penn Libraries, University of Pennsylvania. Available from: http://repository.upenn.edu/edissertations/116

Fawcett, L., 2009. *International relations of the Middle East*. 2nd ed. Oxford: Oxford University Press.

Forgacs, D., ed., 1988. *The Antonio Gramsci Reader: selected writings 1916–1935*. London: Lawrence and Wishart.

Francese, J., ed., 2009. *Perspectives on Gramsci: politics, culture and social theory*. London: Routledge.

Germino, D., 1990. *Antonio Gramsci: architect of a new politics*. Lafayette: Louisiana State University Press.

Ginsberg, M., 2011. Is Al Jazeera Fueling "Tunisteria?". *Huffington Post*, 20 Jan. Available from: http://www.huffingtonpost.com/amb-marc-ginsberg/al-jazeera-fueling-tunist_b_811865.html [Accessed 20 Sept 2011].

Gladwell, M., 2010. Small change: why the revolution will not be tweeted. *The New Yorker*, 4 Oct.

Gladdwell, M. and Shirky, C., 2011. From innovation to revolution: Do social media make protests possible? *Foreign Affairs*. 90 (2), March/April, 153–154.

Grant, R., Nov 2004. The democratization of diplomacy: negotiating with the internet. Oxford Internet Institute, University of Oxford, Research Report No. 5.

Grewal, D.S., 2008. *Network power: the social dynamics of globalization*. New Haven, CT: Yale University Press.

Habermas, J., 1991. *The structural transformation of the public sphere: an inquiry into a category of bourgeois society*. Cambridge, MA: The MIT Press.

Hafez, K., 2007. *The myth of media globalization*. Cambridge: Polity Press.

Harding, T., 2001. *The video activist handbook*. London: Pluto Press.

Holger, A., 2007. Authoritarian opposition and the politics of challenge in Egypt. *In*: O. Schlumberger, ed. *Debating Arab authoritarianism: dynamics and durability in nondemocratic regimes*. Stanford, CA: Stanford University Press, 59–74.

Howard, P.N., 2010. *The digital origins of dictatorship and democracy: information technology and political Islam*. New York: Oxford University Press.

Howard, P.N., *et al*., 2011. Opening closed regimes: what was the role of social media during the Arab Spring? Working Paper 2011.1. Project on Information Technology and Political Islam, University of Washington.

Human Rights Watch, 29 Nov 2010. Egypt: elections marred as opposition barred from polls. Available from: http://www.hrw.org/news/2010/11/29/egypt-elections-marred-opposition-barred-polls [Accessed 15 Sept 2011].

Jan van, D., 1999. *The network society*. Thousand Oaks, CA: Sage Publications.

Joyce, M., ed., 2010. *Digital activism decoded: the new mechanics of change*. New York: Idebate Press.

Juris, J.S., 2008. Networking futures: the movements against corporate globalization. Durham, NC: Duke University Press.

Juris, J.S., Jan 2005. The new digital media and activist networking within anti-corporate globalization movements. *The annals of the American academy*, AAPSS, 597, 189–208.

Khasnabish, A., 2010. *Zapatistas: rebellion from the grassroots to the global*. London: Zed Books.

Kienle, E., 2001. *A grand delusion, democracy and economic reform in Egypt*. London: I.B. Tauris.

Langohr, V., Posusney, M.P. and PennerAngrist, M., eds., 2005. *Authoritarianism in the Middle East: regimes and resistance*. Boulder, CO: Lynne Rienner.

Lessig, L., 2008. *Remix: making art and commerce thrive in the hybrid economy*. London: Penguin.

Loader, B.D., ed., 2007. *Young citizens in the digital age: political engagement, young people and new media*. Routledge.

Lotan, G., *et al*., 2011. The revolutions were tweeted: information flows during the 2011 Tunisian and Egyptian Revolutions. *International journal of communications*, 5, 1375–1405.

Lovink, G., 2008. *Zero comments: blogging and critical internet culture*. London: Routledge.

Lust-Okar, E., 2007. Management of opposition in Egypt, Jordan and Morocco. *In*: O. Schlumberger, ed. *Debating Arab authoritarianism: dynamics and durability in nondemocratic regimes*. Stanford, CA: Stanford Univeristy Press, 39–58.

Lynch, M., Feb 2007. Blogging in the New Arab Republic. *Arab Media and Society*.

Lynch, M., 2007. *Voices of the New Arab Public: Iraq, Al Jazeera, and Middle East politics today*. New York: Columbia University Press.

Lynch, M., After Egypt: the limits and promise of the online challenge to the authoritarian Arab State. *Perspectives on politics*, 9 (2), 302.

Lynch, M., 25 Jan 2011. Watching Egypt (but not al-Jazeera) Foreign policy. Available from: http://lynch.foreignpolicy.com/posts/2011/01/25/watching_egypt_and_lebanon_and_the_pa_and [Accessed 31 July 2011].

Malin, C., 2011. Egypt Facebook demographics. *Spotonpr*, 26 Jan.

Mayer-Schonberger, V. and Hurley, D., 2000. Globalization of communication. *In*: J.S. Nye, ed. *Governance in a globalizing world*. Washington, DC: Brookings Institution.

McAdam, D., Tarrow, S., and Charles Tilly, C., 2001. *Dynamics of contention*. Cambridge: Cambridge University Press.

McNair, B., 2006. *Cultural chaos: journalism, news and power in a globalised world*. London: Routledge.

Mellor, N., *et al*., 2011. *Arab Media: globalization and emerging media industries*. Cambridge: Polity Press.

Mendoza, M., Poblete, B. and Castillo, C., 25 July 2010. Twitter under crisis: can we trust what we RT? Presented at 1st Workshop on Social Media Analytics (SOMA '10), Washington, DC.

Miles, H., Jul–Aug 2006. Al Jazeera. *Foreign policy*, 155, 20–24.

Miles, H., 2 Mar 2005. Arab Television News and Al-Jazeera', speech. London: The Frontline Club.

Morozov, E., 2011. *The net delusion: the dark side of internet freedom*. New York: Public Affair Books.

Park, J., *et al*. 'Revolution 2.0 in Tunisia and Egypt: reactions and sentiments in the online world'. Paper presented to the Fifth International Association for the Advancement of Artificial Intelligence. Conference on Weblogs and Social Media, Barcelona, July 17–21.

Porta, D., 1999. *Donatella and Diani, Mario, social movements: an introduction*. Oxford: Blackwell.

Papacharissi, Z., ed., 2011. *A networked self: identity, community, and culture of social network sites*. London: Routledge.

Peterson, M.A., 2011. *Connected in Cairo*. Bloomington, IN: Indiana University Press.

Pintak, L., 2011. *The New Arab journalist: mission and identity in a time of turmoil*. London: I.B. Tauris.

Radsch, C., Sept 2008. 'Core to commonplace: the evolution of Egypt's blogosphere'. *Arab Media and Society*.

Roberts, J.W., 2009. How *the Internet is changing the practice of politics in the Middle East*. Lampeter, UK, and Lewiston, NY: The Edwin Mellen Press.

Rodgers, J., 2003. *Spatializing international politics: analysing activism on the Internet*. London: Routledge.

Rogers, R., 2004. *Information politics on the web*. Cambridge, MA: The MIT Press.

Romero, D.M., Meeder, B., and Kleinberg, J., 2011. Differences in the mechanics of information diffusion across topics: idioms, political hashtags, and complex contagion on twitter, Paper presented at WWW 2011, 28 March –1 April Hyderabad, India.

Routledge, P., 1998. Going global: spatiality embodiment and mediation in the Zapatista insurgency. *In*: S. Dalby and G. O'Tuathail, eds. *Rethinking geopolitcs*. London: Routledge.

Rugh, W.A., 2004. *Arab mass media: newspapers, radio, and television in Arab politics*. Westport, CT: Praeger.

Ryan, C.R., 2001. Political strategies and regime survival in Egypt. *Journal of third world studies*, 18 (2), 25–46.

Sadiki, L., 2009. *Rethinking Arab democratization: elections without democracy*. Oxford: Oxford University Press.

Sassen, S., 2000. 'Digital networks and the state: some governance questions'. *Theory Culture & Society*, 17 (4), 19–33.

Schlumberger, O., ed., 2007. *Debating Arab authoritarianism: dynamics and durability in nondemocratic regimes*. Stanford, CA: Stanford University Press.

Scholte, J.A., 2005. *Globalization, a critical introduction*. 2nd ed. New York: Palgrave MacMillan (Kindle Edition).

Seib, P., Dec 2005. Hegemonic no more, western media, the rise of Al-Jazeera, and the influence of diverse voices. *International studies review*, 7 (4), 601–615.

Sharp, G., 1973. The politics of nonviolent action. *Power and Struggle (The power of nonviolent action Part I)*. Boston: Porter Sargent.

Sharp, J.M., 11 Feb 2011. Egypt: the January 25 revolution and implications for U.S. Foreign Policy, Special Report, pages 1–35, http://books.google.com/books?id=hRMe8oJ_z9AC&pg=PA1&lpg=PA1&dq=Sharp+J+Egypt+The+January+Revolution&source=bl&ots=eWbddVtZSQ&sig=PCQxgbMferSlffBb_Kx6bm7SFig&hl=en&ei=5hzNTsX3EKmfiAKPy6mbBQ&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCMQ6AEwAA#v=onepage&q&f=false. Congressional research service. 7–5700. Washington, DC.

Shirky, C., 2008. *Here comes everybody: the power of organizing without organizations*. New York: Penguin.

Sreberny, A., 2008. The analytic challenges of studying the Middle East and its evolving media environment. *Middle East journal of culture and communication*, 1, 8–23.

Stanford, D., 2008. Egypt takes on the new media. *Mideast monitor*, 3 (3).

Stevenson, N. and Webster, F., eds., 2001. *Culture and politics in the information age: a new politics?* London: Routledge.

Strangelove, M., 2010. *Watching YouTube: extraordinary videos by ordinary people*. Toronto, Canada: University of Toronto Press.

Sullivan, D.J. and Jones, K., 2008. *Global security watch: Egypt - a reference handbook*. Praeger Security International.

Surowiecki, J., 2005. *The Wisdom of Crowds*. New York: Anchor.

Telhami, S., 2010. *2010 Annual Arab Public Opinion Survey*. Bethesda, MD and New York: University of Maryland with Zogby International.

Trager, E., Sept/Oct 2011. 'The Unbreakable Muslim Brotherhood: Grim prospects for a liberal Egypt'. *Foreign Affairs*, 90 (5), 114–126.

Virilio, P., 2006. *Speed and politics*. Semiotext(e).

Virilio, P., 1989. *War and cinema: the logistics of perception*. London: Verso.

Wadah K., 1 Mar 2011. A historic moment in the Arab world. TED Talk. Available from: http://www.ted.com/talks/wadah_khanfar_a_historic_moment_in_the_arab_world.html [Accessed 27 July 2011].

Webster, F., ed., 2001. *Culture and politics in the information age: a new politics?* London: Routledge.

Wheeler, D.L., July 2006. Empowering publics: information technology and democratization in the Arab World—Lessons from Internet cafés and beyond. Oxford Internet Institute, University of Oxford, Research Report No. 11.

Whitaker, B., 2003. Battle station. *The Guardian*, 7 Feb. Available from: http://www.guardian.co.uk/media/2003/feb/07/iraqandthemedia.afghanistan [Accessed 20 Sept 2011].

Wittkower, D.E., ed., 2010. *Facebook and Philosophy: What's on your mind?* Chicago and LaSalle, IL: Open Court.

Wolman, D., 2011. *The instigators: how a small band of digital activists risked their lives and helped bring down the government of Egypt*. Brooklyn: The Atavist (Kindle Edition).

Wu, S., *et al.*, Who says what to whom on twitter?, Paper presented at WWW 2011, March 28–April 1, Hyderabad, India.