

## Identifying the Victim: Metadata, Proper Names, and the Use of Twitter to Combat Violence against Women

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### Abstract

The use of Twitter by activists protesting violence against women, particularly sexual violence, is complicated by the fact that microblogging services use hashtags to identify relevant content to their audiences. Communities congregate around these particular keywords, and archives and information visualizations that map the history and morphology of controversies in public discourse online depend on shared terminology in the metadata. It is noteworthy that trending topics are particularly likely to reference proper names. After a prominent fatal sexual attack in India, the mobilization of activists through online organizing progressed through several stages, and some users privileged #delhirapecase or #delhigangrape – which protected the private identity of the victim – while others made her into a public martyr by using #jyotisinghpandey, much as the hashtag #neda galvanized public support.

### Keywords

Twitter; activism against sexual violence; online privacy; proper names

### Anonymity and Fame

The global women's rights movement has done much to ensure that the identity of victims of sexual assault be kept confidential and that names of those accusing perpetrators of rape are not published in news outlets – either in print or online – to protect them from retribution and discrimination. Many feminist activists argue, however, that prioritizing guarding female reputation does little to dissuade criminal behavior or to change to gendered power relations. In India inheritances from a colonial system of laws placed accusers at a disadvantage (Kolsky), and a postcolonial “special process system” made the lived experiences of victims more difficult (Prasad). Legal, medical, and journalistic norms contributed to persistently high statistics of unprosecuted gang rape, and until 2008 coverage of rape cases in the news media was forbidden, even if identifying information about the victim was not released (Jagadeesh). It was not until the Mathura rape case of 1974, which was named for the sixteen-year-old victim, that women's organizations protesting patriarchal legal decisions were able to begin to effect any real change.

The 2012 gang rape and murder of a 23-year-old physiotherapy student in the city of Delhi galvanized activists and led to large-scale street protests and pressure for legislative action. Soon after the assault, members of the public were using Twitter to criticize government inaction and to express sympathy for the victim who would later die from her injuries in a Singapore hospital. Indian celebrities from Bollywood stars to political figures were posting Tweets about the case very soon after it happened. They did so generally without hashtags, although some used one-word tags such as #braveheart and #justice. For example, Prime Minister Manmohan Singh posted this sober commemoration: “I pray for the peace of the departed soul and hope that her family will have the strength to bear this grievous loss. While she may have lost her battle for life, it is up to us all to ensure that her death will not have been in vain. I join the nation in conveying to her family and friends my deepest condolences at this terrible loss.”

As users of Twitter continued to share information and opinions about the case a more developed metadata scheme emerged, and #delhirapecase and #delhigangrape became common hashtags. Although she remained anonymous for the first few weeks, proper names associated with the identity of the victim were also circulated, such as #Amanat, the Urdu word for “treasure,” or #Damini, which

means “lightning” in Hindi and was also the title of a Bollywood movie about a women’s fight for justice of #Nirbhaya, “the fearless one.” #Jagruti or “awareness” also became a hashtag. In contrast, another gang rape case in which the victim committed suicide due to government inaction was only identified with a #punjabgangrape hashtag, since her identity was never given a pseudonym.

### **Privacy, Transparency, and Reputation**

After the father of the victim came forward to name his daughter publicly, Jyoti Singh Pandey, so that she could be mourned and memorialized, some news outlets wary of prosecution still avoided publishing her legal proper name in full. In contrast there was little hesitation on the part of many Twitter users who embraced the #jyotisinghpandey hashtag in their postings. Much as the violent death by shooting of Neda Agha-Soltan on the streets of Tehran on June 20, 2009 during an anti-government protest led to many adopting the #Neda hashtag, short-form narratives around Pandey’s martyrdom to the cause of ending sexual violence with #jyotisinghpandey soon proliferated. Similarly Twitter users even adopted the murdered woman’s identity in order to publicize her cause posthumously.

The arrest of a group of men who eventually confessed to abduction, rape, and assault also led to new metadata schemes, as their identities also became part of the public record. For example, when the alleged ringleader of the group committed suicide in custody, Tweets containing his name -- #RamSingh – appeared with expressions of relief. Appearance of his proper name might also be combined with hashtags indicating more general concepts, such as #StopRape or #SomeJustice. (It is important to note that trending topics on Twitter in India often include proper names, such as those of celebrities, but product names or high-concept phrases that express a particular aspect of the Zeitgeist are also likely to be listed among popular hashtags.)

As Nishant Shah has pointed out, access to digitally networked social media services such as Twitter may also lead to cybervigilanteism rather than democratic civil society, and many Twitter users did express violent ideation about what the perpetrators deserved, although many also focused on recourse from the justice system. Hashtags such as #inhumanebastards or #death4rape indicate how public rage and desire for retribution may be an important part of public discourse on Twitter.

Street protests continued through International Women’s Day of 2013, and Twitter continued to be a way to share news items, photographs, and information about ways to participate in both street actions and online activism. In the conventional narrative of rights-based liberal democracy, digital culture represents a series of challenges to social norms about sexuality, violence, and the relationship between perpetrators and bystanders (Dibbell). Online practices also supposedly pose risks to person privacy (Palfrey and Gasser) and rewards for governmental transparency (Sunlight Foundation). But the narrative becomes more complex if privacy is recognized as a culturally contingent concept (Dourish and Bell; boyd), and activists may experience circumstances in which they wish to “out” victims as well as perpetrators. The current debate about whether legislation in process within the Indian parliament should be named in honor of Jyoti Singh Pandey illustrates the difficulties that existing sociolegal frameworks face in accommodating the needs expressed by new forms of public opinion.

Indian women’s rights groups, such as Breakthrough and Blank Noise, have tried to formulate their own social media campaigns

### **References**

boyd, d. (2008). Taken out of context American teen sociality in networked publics. Retrieved March 12, 2013, from <http://www.danah.org/papers/TakenOutOfContext.pdf>.

- Burke, J. (2013, January 2). India debates naming new law after gang-rape victim. *The Guardian*. Retrieved from <http://www.guardian.co.uk/world/2013/jan/02/india-gang-rape-victim-law>
- Dibbell, J. (2005). A Rape in Cyberspace. In V. J. Vitanza (Ed.), *CyberReader*. New York: Pearson Longman
- Dourish, P., & Bell, G. (2011). *Divining a digital future mess and mythology in ubiquitous computing*. Cambridge, Mass.: MIT Press.
- Jagadeesh, N. (2010). Legal changes towards justice for sexual assault victims. *Indian Journal of Medical Ethics*, 7(2).
- Kolsky, E. (2010). "The Body Evidencing the Crime": Rape on Trial in Colonial India, 1860–1947. *Gender & History*, 22(1), 109–130. doi:10.1111/j.1468-0424.2009.01581.x
- Palfrey, J. G., & Gasser, U. (2008). *Born digital: understanding the first generation of digital natives*. New York: Basic Books
- Prasad, S. (1999). Medicolegal Response to Violence Against Women in India. *Violence Against Women*, 5(5), 478–506. doi:10.1177/10778019922181338
- Reese, D. (2013, January 7). Father of New Delhi rape victim: Tell the world my daughter's name. *Washington Post*. Retrieved from <http://www.washingtonpost.com/blogs/she-the-people/wp/2013/01/07/father-of-new-delhi-rape-victim-tell-the-world-my-daughters-name/>
- Shah, N., & Abraham, S. (2009). *Digital natives with a cause? a knowledge survey and framework*. The Hague [etc.]: [Humanist institute for cooperation with developing countries (Hivos) [etc.].
- Sunlight Foundation. (2006). Sunlight Foundation making government transparent & accountable. Retrieved March 12, 2013, from <http://www.sunlightfoundation.com>.

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## **Tweeting the Revolution: Networked Publics, Copresence, and Recent Political Activism**

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### **Abstract**

In this paper I look at social media engagement as part of direct political action in the regime-changing events of Tunisia and Egypt in the winter of 2010-11 (known internationally as the “Arab Spring”). In analyzing activist video and short blogging forms (YouTube and Twitter), I give an analysis of the formulation of a networked public sphere (Castells 2000, Varnelis) wherein one finds not only forms of citizen journalism or witness to revolution, but forms of *mediated participation* in such actions. It is the nature of such mediated participation that I discuss in terms of the phenomenon of copresence (Ito, Schroeder, et al.). My method in formulating this analysis is to compare three different types of “narratives” of the events that accompanied these activities. Toward this end, I look at traditional ethnographic evidence (interviews I have conducted with activists; data flows (the origination and flow of a Twitter hashtag such as #Jan25 or #Sidibouaid); as well as the content of microblogging and activist videos transmissions. With this methodology, I seek to integrate *human narratives* and *data narratives* of social media engagement in the service of political activism.

### **Keywords**

Twitter; Networked YouTube; Media, Activism; North Africa

### **Human Narrative, Data Narratives**

“How are activists and new technologies transforming each other and the global spaces in which they interact? Information and communication technologies (ICTs) are clearly having an impact on contemporary politics, but what kind of impact?” Jodi dean, Jon anderson, and Geert Lovink wrote 2006. In taking up this question more than six years later, I am suggesting a productive analytics in looking at the production of human narratives and data narratives in regard to social media engagement for political action. By “human narratives,” I mean the utterances of a global mobile age where short form blogging, such as Twitter, or instant image publishing to a network, such as the Instagram platform, have come to represent new modalities of human expression. With the term “data narratives,” I indicate the avalanche of data streams produced by mobile devices or sensor networks that lay primarily outside of the user’s agency (e.g., when in use, a mobile phone signals mobile cell tower activity without action on the part of the owner). I suggest that the importance of this approach lies in how one might understand better the strategic, tactical, and personal transmissions enacted in social media by activist.

### **Activism, Tactical communication, and the Bodily Risk of Danger**

Perhaps Malcolm Gladwell—in what was received by internet cognoscenti as a largely reactionary, luddite position in regard to social media (Shirky)—is right in his estimation that without “skin in the game,” without bodily presence at sites of political conflict that there can only be “small change” to be had. In leaving aside the sites of online activism that one has seen evidenced over the past two decades of popular Internet use (i.e., denial of service, boycotts, petitions, campaigns, et al.), I am framing my inquiry of social media aid to political activism in North Africa (winter 2010-11) as bracketed by a basic term of being physically located at a site (Egypt or Tunisia) and thus being subjected, at difference degrees of risk, to the bodies of law enforcement by government. In short, I am suggesting that social media use in these contexts (and conflicts) are tools in a mode of activism that demands bodily presence: to achieve regime change Tahrir Square in Egypt had to be bodily

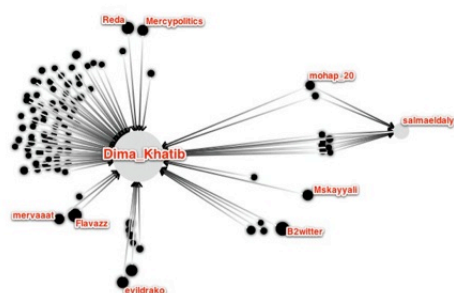
occupied; to instigate mass action, the country needed the incendiary sacrifice of Tunisian Mohamed Bouazizi's self-immolation (his town, Sidi Bouzid, became the historic hashtag).

In reframing the body in relation to the engagement of social media (for activist or other purposes), I point to a key shift recent theorization of networked society, as discussed in the terms of X-Reality (Coleman), Hybrid reality (de Souza e Silva) and the embodied space (Farman) that frame subjects how are meaningfully engaged in embodied, located actions even as they participate in virtual, informational, and networked actions. Along these lines, I ask following question in this work: In looking at real-time (and nearly real-time) communiqués from sites of risk to networks of interested parties, might one understand the YouTube videos, the Twitter streams, the Facebook postings as modes of agency and aspects of copresence? To answer this question, I look at three object studies of activist "narratives" that construct a type of networked publics around the activism; this is both a public in the sense of a popular movement (the necessary masses of people needed to make the actions possible) as well as a public beyond the site—one of global witness as it were.

## Object Studies

I give three examples of different modes of understanding activist engagement of social media: Ethnographic study (interviews); Data visualization (network reading); Twitter artifacts (the content of Tweets). The subject of the ethnographic study is Egyptian located in the country during the time of the revolution who participated in the events to one degree or another. I interview a spectrum of participants, including those with high degrees of media engagement and activist experience to those with little of either. The purpose of the interviews is to ascertain not only attitudes toward social media tools in terms of political action, but to gauge degrees of copresence with others as a factor in bodily risk.

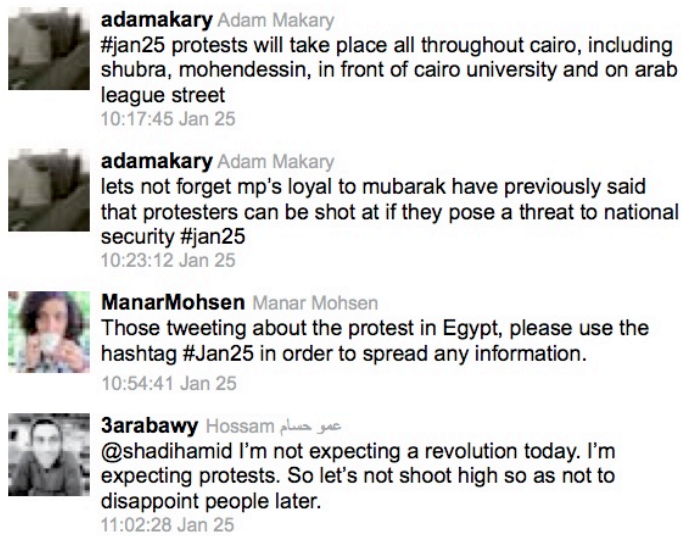
The second group of data addresses the pattern of Twitter cascades of information around the Al Jazeera journalist Dima Khatib around the trending of #Sidibouzid. Based on data parsing and visualization by Gilad Lotan (see figure 1), I am suggesting that such mapping of reputation and clustering of play an important role in tactical communications and a reflection for activist of a global witness (even if one cannot yet describe this as a coparticipants).



Graph of Dima\_Khatib's Twitter network (Al Jazeera journalist)  
Credit: Gilad Lotan  
Giladlotan.com

The last object study is the series of Tweets collected in the book *Tweets from Tahrir* (figure 2). The content of the tweets moves between networked cheering, to metadata (use #Jan25), to prep for prison. In other words, it traverses the grid of social beyond a command-control framework. The bodies in immanent risk act playfully; they play with the space of mediation within the frame of a located activism. In other words, it traverses the grid of social beyond a command-control framework. The bodies in immanent risk act playfully, they play with the space of mediation within the frame of a located activism.

Figure 2 (Tweets from Tahrir)



## References

- Castells, M. *The Rise of the Network Society*. Oxford, UK: Blackwell, 2000
- Coleman, B. *Hello Avatar*. Cambridge, Mass.: MIT Press, 2011p
- Farman, J. *Mobile Interface Theory: Embodied Space and Locative Media*. London: Routledge, 2012
- Gladwell, M. "Small Change: Why the Revolution Will Not be Tweeted," *The New Yorker*, October 4, 2010
- Idle, N. & Nunns, A. *Tweets from Tahrir*. London: OR Books, 2011.
- Lotan, G. "#Sidibouzid Twitter Hashtag: an analysis of the people spreading the News." <http://giladlotan.com/blog/2011/01/sidibouzid-twitter-hashtag-a>
- Shirky, C. "From Innovation to Revolution: Do Social Media Make Protests Possible?" *Foreign Affairs*, March/April 2011. [http://www.foreignaffairs.com/node/67189&cid=soc-in-from\\_innovation\\_to\\_revolution-12610](http://www.foreignaffairs.com/node/67189&cid=soc-in-from_innovation_to_revolution-12610)
- de Souza e Silva, A. "From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces." *Space and Culture* vol. 9 no. 3, August 2006, 261-278.
- Varnelis, K. ed. *Networked Publics*. Cambridge, Mass.: The MIT Press, 2008.

## A Digital Humanities Approach: Text, the Internet, and the Egyptian Uprising

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### Abstract

In the context of recent events in the Global Middle East, many people have struggled to make sense of the role of technology (especially social media) in the fomentation of a revolutionary praxis. One of the problems of studying technology and political change is that common interpretation of new media—as spreadable, quantifiably predictable, and without a body—lends itself to ahistorical insights. How might a digital arts and humanities approach to scholarship offer insights into the dynamic of revolution in a digital age where nothing is going to give itself over—whether technocratic or militaristic. It is neither the Egyptian culture nor the technology, but the people who resist. This paper presents a case study of the hashtag #Tahrir using analytics developed by an Arabic knowledge management system—a body of work that coheres dissimilar elements not into a single idea, but into a heterogeneous network.

### Keywords

Twitter; #Tahrir; Arab revolutions; *thawra*; Global Middle East; Egypt

The unprecedented upheavals in the Arab countries that started in Tunisia in December 2010 spread like wildfire, igniting a wave of similar protests around the world and especially in Egypt, which erupted a month later. In an act of transnational solidarity, in February 2011, an Egyptian activist ordered pizza for labor union protesters in Wisconsin. The international phone call from Egypt was just one of many messages of solidarity streaming into Madison, Wisconsin, from all over the world. Such connections prompted this critical investigation regarding the interaction of ideas and triggers of influence on civic engagement and political mobilization ever since the Egyptian uprisings began in 2011. It is part of a larger collaborative study that examines the hermeneutics (text, context and intellectual origin) of digital knowledge produced from social unrest and citizen action as they flow among transnational actors in the Arab uprisings, Occupy Movements and socio-economic protests in Spain and on Wall Street.<sup>1</sup>

While many facets of these movements have been studied recently, it is important to examine the distinct socio-political forces leading to their emergence and the mutual influences among them. This article contributes to the larger CCA project by providing a micro-study on #Tahrir and its significance within a historical narrative of “revolts” or “*thawra*” in Egypt. The revolutionary turmoil in Egypt did not emerge out of the blue and simply through social media activism as is often depicted, but rather was precipitated through many years of internal pressures and growing social movements.<sup>2</sup> Indeed, the social movements in Egypt, Spain, and Wall Street are unique historical moments that, in fact, represent culminations of myriad dynamics, actors, and forces over time, and are therefore extremely complex to research.

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<sup>1</sup> The Collaborative Cultural Analytics (CCA) project involves a cross-disciplinary partnership among scholars at four main institutions: Prof. Nitin Sawhney and Prof. Peter Asaro at The New School are leading the project in the United States in collaboration with Laila Shereen Sakr, director of R-Shief, Inc. and a Ph.D. candidate at the University of Southern California (USC); in the UK, Dr. Christopher Brewster from the Aston Crisis Centre, Aston University is partnering with Dr. Tarik Sabry at the University of Westminster.

<sup>2</sup> See, for example, Philip Marfleet and Rabab Al-Mahdi, *Egypt: the moment of change* (London: Zed Books, 2009).

The discourse around *thawra* (revolt; or revolution) has emerged from a contemporary history of the “idea of revolution” in Egyptian culture—from the ‘Urabi revolt against the Ottomans in 1882 to Zaghloul’s uprising against the British in 1919, to Nasser’s revolt against the monarchy in 1952, to the bread riots of 1977, and to the leaderless revolution of 2011. I argue that it was actually a convergence of 1) a technology infrastructure consisting of the Internet, micro-blogging, Twitter, Facebook, smart phones, the convention of the #tag, phone numbers stored in digitized contact lists, personal mobile communication devices; 2) physical habits such as communication habits, use of mobile devices, or movement and speech acts in public settings; and 3) a national narrative of al-thawra that enabled the mobilization of the body politic and was identified by global witnesses as the “Arab Spring” and the moment of revolution in the global Middle East

My approach here, Collaborative Cultural Analytics (CCA), is built on a cooperative research and analytic framework to examine large-scale multilingual data and contextual knowledge from contemporary social movements. This newly emerging research by computer scientists, linguists, social scientists, humanities scholars, and interaction designers seeks to understand how both micro-level qualitative analysis and “big data” computational analytics offer varying and complementary perspectives on complex socio-cultural research questions. I am interested in gaining critical insights into how transformational ideas and information on a large-scale move differently among various actors within and across movements. I approach research questions by combining network analysis and language analytics/text-mining with CCA. This methodology entails large-scale analysis, in particular of the R-Shief living data repository (<http://r-shief.org>), a unique and rich archive of multilingual social media content from the 2011 uprisings, along with qualitative research based on ethnographic, social, and historical inquiry. R-Shief is a “big data” repository in terms of volume, velocity, and variety of data.

Cultural analytics is an emerging methodology for researchers who wish to examine rich socio-cultural phenomena across heterogeneous and multimodal data sources. It leverages a range of mixed methods for understanding the nature of digital knowledge production across media and social networks, while simultaneously engaging in historical and cultural analysis. The body of literature studied includes not only scholarly and scientific materials, but also social media, blogs, and other online publications. It is in part the socio-digital convergence of technology, cultural transformations, and national narratives that enabled the mobilization of what global witnesses and participants have called the “Arab Spring.” The political upheaval mediated on the Internet over the past few years has raised crucial questions about the influence of technology (particularly social media) in mobilizing and enabling popular uprisings.<sup>3</sup>

Recent studies about the influences of technology on social movements like the Arab uprisings rarely have incorporated rigorous Arabic language analyses on large-scale social media (i.e., billions of tweets and millions of website articles over several years). This is partly due to the lack of Natural Language Processing (NLP) tools to conduct computational linguistic research in languages other than English, but also due to lack of access to appropriate large-scale data collections. The growth of “big data,” particularly collections of social media patterns, has enabled more in-depth examination of the role of digital networks, allowing scientific and policy communities to direct their attention toward aggregated imprints of online and social media activity, without engaging in critical methodological analyses that take into account the historical and cultural basis to inform meaningful critique. This fetishization of data over meaning has produced much research that examines the scale, speed and directional influences in digital networks and social media (such as those presented at the International AAAI Conference on Weblogs and Social Media<sup>4</sup> conferences in recent years); however,

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<sup>3</sup> See further Manuel Castells (2012), *Networks of outrage and hope: Social movements in the Internet age* (London: Polity).

<sup>4</sup> International AAAI Conference on Weblogs and Social Media (ICWSM), <http://www.icwsm.org>.



complementary approaches engaging in historical, cultural, and textual analysis can reveal richer insights to explain the wider context of such phenomena

In the case of the Egyptian Revolution, the challenge facing scholars when examining contemporary digital media and political change is how to analyze information quantitatively about groups of people in a region where, historically, data science has been used to support a form of colonialism.<sup>5</sup> As Timothy Mitchell explains in *Colonising Egypt*,<sup>6</sup> the practice of science and systems of ordering national standards are modern projects that enable governments to maintain discipline and surveillance. A cog in the colonial project, the science of documenting every political act reflected a “tendency of disciplinary mechanisms, as Michel Foucault has called these modern strategies of control, ... not to expect and dissipate as before, but to infiltrate, and colonise.”<sup>7</sup> At a time when unprecedented Islamophobia and anti-Arab sentiment exist throughout the West, critical readings of race and cultural meaning across media are necessary. Thus, another challenge to studying technology is learning how to deconstruct the tool from the political designs embedded in them.

A review of scholarship on media and the Middle East reveals a lack of engagement with digital media content, whether as primary sources or in critically questioning the tools and analytics provided. While many humanities scholars bring rich insights in history and culture, their analyses often are constrained by limited tools for understanding the ontology and syntax of digital production and social media networks. Arguments by writers such as Malcolm Gladwell who writes that “high risk social activism requires deep roots and strong ties,”<sup>8</sup> likely only can be verified or challenged by a combination of ethnographic research and social network analysis on large-scale datasets.

Knowledge production in the digital realm tests the boundaries between the cultural, the archival, and the technical. It can embody all of these dimensions at once, and thus reconfigure our understanding of each. To this extent, the digital humanities and sciences require new methodological and conceptual tools with which to attend to computation and empirical knowledge. This language provides the conceptual framework for the research presented here.

## References

Aday, S., Farrell, H., Lynch, M., Sides, J., Kelly, J., & Zuckerman, E. (2010) “Blogs and Bullets: New Media in Contentious Politics.” In: *Peaceworks*, no. 65, Washington, DC: United States Institute of Peace Press, September.

Anderson, Jon and Dale Eickelman (2003), *New Media and the Muslim World: The Emergent Public Sphere*. Bloomington: Indiana University Press.

Aouragh, M. & Alexander, A. (2011) “The Egyptian Experience: Sense and Nonsense of the Internet Revolution.” In: *International Journal of Communication* 5, pp. 1344-1358.

Benjamin, W. (1968). “The Work of Art in the Age of Mechanical Reproduction.” In: Arendt, H. (ed.), *Illuminations: Essays and Reflections*, Zohn, H. (trans.). New York: Schocken Books.

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<sup>5</sup> On the use data to support colonialism, see James C. Scott (1999), *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press)

<sup>6</sup> Timothy Mitchell (1988), *Colonising Egypt* (Cambridge: Cambridge University Press).

<sup>7</sup> *Ibid*, p. [12](#).

<sup>8</sup> Malcolm Gladwell (2011), Does Egypt Need Twitter? in *The New Yorker*, 2 February 2; available online <http://www.newyorker.com/online/blogs/newsdesk/2011/02/does-egypt-need-twitter.html>

Bimber, B. (2003) *Information and American Democracy: Technology in the Evolution of Political Power*. Cambridge: Cambridge University Press.

Bruns, A. (2010). From Reader to Writer: Citizen Journalism as News Producers. In: Hunsinger, J., Klastrup, L., & Allen, M. (eds.), *Internet Research Handbook*. Dordrecht, NL: Springer, pp. 119-134.

Castells, M. (2000) *The Information Age: Economy, Society, and Culture*. Oxford: Blackwell.

\_\_\_\_\_. (2009) *Communication Power*. Oxford: Oxford University Press.

\_\_\_\_\_. (2012). Networks of outrage and hope: Social movements in the Internet age. In: *Polity*.

Castells, M., Caraça, J., & Cardoso, G. (2012). Economic Crisis: An introduction, in Castells, M.; Caraça, J. & Cardoso, G. (Ed). *Aftermath: The cultures of the Economic Crisis*, Oxford: Oxford University Press.

Choy, M., Cheong, L. F. M., Ma, N. L., & Koo, P. S. (2011). *A sentiment analysis of Singapore Presidential Election 2011 using Twitter data with census correction*. (eprint arXiv:1108.5520).

El-Ghobashy, Mona (2011). The Praxis of the Egyptian Revolution. *Middle East Research and Information Project*, 258. <http://www.merip.org/mer/mer258/praxis-egyptian-revolution>.

M. Mohammed el-Nawawy and Adel Iskander (2003), *Al-Jazeera: The Story of the Network that is Rattling Governments and Redefining Modern Journalism*. New York: Basic Books.

Etling, Bruce; John Kelly, Robert Faris, and John Palfrey (2010). Mapping the Arabic blogosphere: politics and dissent online. *New Media & Society*, December 2010 12: 1225-1243, doi:10.1177/1461444810385096.

Jameson, Frederic. *Postmodernism or, the Cultural Logic of Late Capitalism* (Duke University Press, 1991).

Foster, Hal. "The Archival Impulse," *The Archive: Documents of Contemporary Art*, ed. Charles Merewether (Cambridge: MIT Press, 2004).

Fuchs, C., K. Boersma, A. Albrechtshlund, and M. Sandoval (eds.) (2011). *The Internet and Surveillance: The Challenges of Web 2.0 and Social Media*. New York: Routledge.

Ghannam, Jeffrey. (28 March 2012). [Digital Media in the Arab World: One Year After the Revolutions](#). A Report to the Center for International Media Assistance.

Ghonim, Wael. *Revolution 2.0* (New York: Houghton Mifflin Harcourt, 2012).

Gladwell, Malcolm . "Small Change: Why the Revolutions Will Not Be Tweeted," *New Yorker*, October 4, 2010, [newyorker.com/reporting/2010/10/04/101004fa\\_fact\\_gladwell](http://www.newyorker.com/reporting/2010/10/04/101004fa_fact_gladwell).

Gladwell, Malcolm (2011) Does Egypt Need Twitter? *The New Yorker*. February 2, 2011. <http://www.newyorker.com/online/blogs/newsdesk/2011/02/does-egypt-need-twitter.html>

Gonzalez-Bailon, Sandra, Borge-Holthoefer, Javier and Moreno, Yamir (2012) Broadcasters and Hidden Influentials in Online Protest Diffusion. *American Behavioral Scientist*, Forthcoming. SSRN: <http://ssrn.com/abstract=2017808> or <http://dx.doi.org/10.2139/ssrn.2017808>

Hands, J. (2010). @ is for Activism. *Dissent, Resistance and Rebellion in a Digital Culture*. London: Pluto Press.

Hardt, M. and Negri, T. (2011). Arabs are Democracy's new Pioneers. *The Guardian*, 24 February, 2011.

Hirschkind, Charles (2011). Uprising in Egypt: The Road to Tahrir. *The Immanent Frame: Blog of Social Science Research Council*. <http://blogs.ssrc.org/tif/2011/02/09/the-road-to-tahrir/>

Howard, Philip N. and Muzammil M. Hussain, "The Role of Digital Media," *Journal of*

*Democracy* 22, no. 3 (2011): 35–36.

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

Iskandar, A. & Haddad, B. (2013). *Meditating the Arab Uprisings*. Tadween Publishing.

Jenkins, Henry (2006). *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

Kraidy, Marwan (2009), *Reality Television and Arab Politics: Contention in Public Life* Cambridge: Cambridge University Press.

Kraidy, Marwan and Joe F. Khalil (2010), *Arab Television Industries*. London: British Film Institute.

Lotan, Gilad, E., Graeff, M. Ananny, D. Gaffney, I. Pearce, and D. Boyd, “The Revolutions Were Tweeted: Information Flows during the 2011 Tunisian and Egyptian Revolutions,” *International Journal of Communication* 5 (2011): 1375–1405.

Lynch, Marc. (2012) *The Arab Uprising: The Unfinished Revolutions of the Middle East*. New York: Public Affairs.

Lynch, Marc. “Young Brothers in Cyberspace,” *Middle East Report* 37, no. 245 (Winter 2007), [www.marclynch.com/wp-content/uploads/2011/03/Middle-East-Report-245\\_-Young-Brothers-in-Cyberspace-by-Marc-Lynch.pdf](http://www.marclynch.com/wp-content/uploads/2011/03/Middle-East-Report-245_-Young-Brothers-in-Cyberspace-by-Marc-Lynch.pdf)

Manovich, Lev. "Cultural Analytics: Analysis And Visualization Of Large Cultural Data Sets." *A Proposal From Software Studies @ Calit2*, September 30, 2007.

Marfleet, P. & Al-Mahdi, R. (2009) *Egypt: The moment of change*. London: Zed Books.

Marks, L.U. (2010) *Enfoldment and Infinity: An Islamic Genealogy of New Media Art*. Cambridge, MA: The MIT Press.

Mason, Paul (2012). *Why It's Kicking Off Everywhere: The New Global Revolutions*, Version Books.

Mitchell, Timothy (1988) *Colonising Egypt*. Cambridge: Cambridge University Press.

Morozov, Evgeny. “Think Again: The Internet,” *Foreign Policy* (May/June 2010).

Mourtada, Racha and Fadi Salem. (May 2011). [Civil Movements: The Impact of Facebook & Twitter](#). *The Arab Social Media Report*. Dubai School of Government. Vol. 1, No. 2.

Mourtada, Racha and Fadi Salem. (November 2011). [The Role of Social Media in Arab Women's Empowerment](#). *The Arab Social Media Report*. Dubai School of Government. Vol. 1, No. 3.

Mungiu-Pippidi, Alida and Igor Munteanu, “Moldova’s ‘Twitter Revolution,’” *Journal of Democracy* 20, no. 3 (2009): 136–142;

Scott, James C. (1999). *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale U.P.

Seib, Philip M. (2008), *The Al Jazeera Effect: How the New Global Media Are Reshaping World Politics*. New York: Potomac Books, Inc.

Seib, Ed. Philip M. (2009), *New Media and the Middle East*. New York: Palgrave Macmillan.

Sewell, William H. (2005). *Logics of History: Social Theory and Social Transformation*. University of Chicago Press.

Shirky, Clay. *Here Comes Everybody: The Power of Organizing without Organizations* (New York: Penguin Books, 2011).

Shirky, Clay. "The Political Power of Social Media," *Foreign Affairs* (January/February 2010).

Sinclair, J. (ed.) (1987). *Look Up: An account of the COBUILD project in lexical computing*.

Sinclair, J. M. (1991). *Corpus, Concordance, Collocation*. Oxford University Press. George Dunbar, ed. *Computers and Translation* Vol. 3, No. 3/4 (1988/1989), pp. 263-266.

Twitter blog, "#YearInReview: Hot Topics and Top Hashtags of 2011," December 4, 2011, <http://blog.twitter.com/2011/12/yearinreview-hot-topics-and-top.html>.

Tufekci, Zeynep. "New Media and the People Powered Uprisings," *Technology Review*, August 30, 2011, [www.technologyreview.com/blog/guest/27122/](http://www.technologyreview.com/blog/guest/27122/).

Youssef, B. (08 August 2011). Internet and Political Mobilization in Egypt and Tunisia. *Connected in Cairo*. <http://connectedincairo.com/2011/08/08/internet-and-political-mobilization-in-egypt-and-tunisia/>.

Zuckerman, Ethan "Meet the Bridgebloggers," *Public Choice* no. 134 (2008): 47–65.

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