

Mobile Revolution: Toward a History of Technology, Telephony and Political Activism in Egypt

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Abstract:

This article examines the use of everyday mobile technologies, and mobile telephony in particular, in political activism and protest during the 2011 Egyptian uprisings and throughout its continuing aftermath. The Arab revolutions have their own, now familiar, nomenclature, derived from the semantics of revolution and the digital age. Much of the language used to describe and analyze events in the Middle East has emphasized the “newness” of the technologies of protest and coordination and the uniquely 2.0 characteristics of these political movements. This article confronts this narrative, exploring the role of mobile telephony in Egypt during an ongoing period of political upheaval by moving away from the question of what is “new” or “revolutionary” toward what is ordinary put toward revolutionary ends. The article argues that the Arab Spring presents a crucial opportunity to interrogate and deconstruct the hybrid ecology of people and technological tools. By exploring several specific ways in which mobile telephony has played a role in the Egyptian revolution, this article demonstrates how a fixation on newness not only tells an incomplete story of this technologically mediated revolution but also undermines the ongoing practices of historicizing it.

Keywords:

public sphere, democracy, activism, Egypt, Arab Spring, information and communication technology, communication studies, social media, mobile phones

Revolutions are so often conceptualized as moments of political upheaval, ruptures with politics-as-normal. They make and become history in such rapid succession that they paradoxically defy historicizing; the chronological and structural anatomies of a revolutionary moment remain elusive and highly contested. Where to delineate the *before*, *during*, and *after*? For *whom*, by *whom*, and *how* is revolution realized? The revolutions of the so-called Arab Spring resurrected these questions and challenges. They loom large in our attempts to make sense of unfolding events. We need only consider

the nomenclature adopted to address the revolutionary moment: awakening, spring, renewal - all terms denoting newness, rebirth, a break with the past. Since 2011, the newness narrative has gained even greater significance due to the prominence of information and communication technologies (ICTs) and new media in the mobilization in Tunisia, Egypt, Bahrain, and elsewhere. Publications, including some authored by activists themselves, such as Wael Ghonim's *Revolution 2.0*, helped to perpetuate it (Ghonim 2012), and newspapers and TV reports placed social media at the center of their coverage (Campbell and Hawk 2012). The technological idiom of the "new," in contrast to history and "politics as usual," uncritically connects these contemporary revolutions in the Middle East and North Africa to a technologically mediated modernity in which the digital revolution converges with political revolutions to create democratic change.

This article explores the use of mobile phones by protesters throughout the 2011 Egyptian revolution. I challenge the technological narrative of the Arab Spring, but I specifically parse how mobile phone technology in particular can potentially serve as a lens for reading resistance from below as a hybrid mobilization of people and technology. The uses of mobile telephony during the Egyptian revolution reveals how focusing on an everyday technology and the multiplex mobilities it enables can bring analysis back down onto the street.

The research, observation and interviews used for this article come from fieldwork and surveys conducted in Cairo, Egypt, between 2011 and 2012, along with some electronic communication and VoIP conversations with activists during that time. Interviews typically lasted 1-2 hours and were semi-structured to allow informants some flexibility in directing the conversation to relevant issues of personal interest.

The Challenges Of Positioning Technology Within Revolutionary History

Almost as instantaneously as the diverse constituent mobilizations of the Arab Spring were labeled the “Twitter” and “Facebook” revolutions, the Internet became the much-publicized answer to the who, what, when, and how of revolution in the Middle East. In many ways, this should not be surprising. The challenge of making sense of the Arab Spring is fundamentally one of *active* historicizing: how to contextualize events whose project is to fundamentally remake the political, historical, and social context. In searching for explanations for the revolutionary moment, it makes sense to look for *what is different this time*. And throughout history, technological innovations not only provide new tools for mobilization, but they also serve as historical markers. This is the Internet age, so these are, however problematically, Internet revolutions.

To resist the easy conflation of the new with digital media, Peters urges us to “push beyond the commonsense fact that history is past and that new media is now. Consider instead that new media once made the historical record possible and that ever since, history writing takes place importantly in the present” (2009:15). As the revolutions continue, a growing body of literature has attempted to destabilize the isolation of the present, recalling that “[e]very moment has a history, including the Tahrir Square. The Arab uprisings were built on years of civil society movements in the region, online and offline” (Lim 2012:232). Many authors have powerfully and reflectively critiqued the more reactionary and aggrandizing accounts of the role of ICTs (Hofheinz 2011; Aouragh and Alexander 2011; Tawil-Souri 2012a; Mejias 2011; Aouragh 2011), and this article is a contribution toward this important body of critical literature that seeks to ground the Arab Spring in historical time, empirical observations and analysis.

The techno-centric narratives of the Arab Spring risk perpetuating and deepening certain dominant empirical approaches to media, modernity, and the Middle East. A popular fetishization of social media, not only for political liberalization but also for economic development, sometimes conflates the usage of new media and with the presence of democratic participation

and non-hierarchical network structures. In this way, the Arab Spring has become entangled in the processes of digital or Internet orientalism, a concept outlined by Howard in his work on technology and dictatorship (Howard 2010:29). Although he focuses specifically on the much-speculated causative relationship between the rise of digital technology and political Islam, drawing on research related to terrorism networks (Stohl and Stohl 2007), the concept of digital orientalism could be expanded to encompass any ahistorical reading of technologically mediated activity that treats the “network” as a de-contextualized representation of political relationships. Rather, “[t]he network form of organization is held together by historically constructed-and limited-relations that allow for dynamic, emergent, adaptive, and flexible associations” (Howard 2010:30).

Digital orientalism can implicate other flattened analyses of technology use as well. A glorification of the technical, at the expense of the social, results in a redistribution of agency away from individual users to the technologies themselves. Facebook and Twitter are often invoked to highlight the networked, grassroots, non-elite nature of digital age mobilizations, but in focusing on the platforms rather than the people, this approach only reinforces a particular historical perspective from the vantage point of the powerful, and in this particular case, the technocratic. It places technology - and all that it represents in progress, politics, and society - at the center of the revolutions, rather than other, alternative units of analysis. Without grappling with the shortcomings of this particular historical project, we cannot meaningfully engage with the hybrid terrain of the human and the non-human (Whatmore 2002), the people, technology, and spaces that formed the backdrop for the Egyptian revolution, among others.

As the concept of digital orientalism suggests, the Arab revolutions have presented a unique opportunity to interrogate various interconnected exceptionalist theoretical approaches that pervade coverage of the Middle East and new media. There is exceptionalism that treats politics in the Middle East as a theoretical and empirical isolate and an exceptionalist framework that treats “new media” in the digital age as somehow ahistorical. In reality, mediated politics are deeply embedded in the specific contexts and

places in which activists, protesters and ordinary people live out their daily experiences. But they are also, paradoxically, transcendent; ICTs exist within contextually contingent media ecologies and material spaces, but they also allow communication that subverts the immutable importance of place, a characteristic conceptualized as “connected presence” (Licoppe 2004) or “absent presence” (Gergen 2002). ICTs are widely acknowledged to facilitate traversals and transgressions across different material and virtual, local and global spaces (Leitner, Sheppard, and Sziarto 2008; Cresswell 2010). In parsing these technologically mediated movements within the revolutionary moment, we can better understand the transient boundaries between the virtual and the real, the human and the technological, the static and the mobile.

As discussed above, analysis on the Arab Spring has suffered, in part, because of a fixation on the *new*. By 2011, telephony in Egypt was hardly new, and mobile telephony was becoming ubiquitous, and therefore, commonplace. However, in revolution as in times of political stability, it is when technology becomes part of ordinary, everyday life that it is most consequential. Although the Internet captured global imaginations about the revolutions in the Middle East and North Africa, mobile telephony played a more pervasive role. History already shows signs of remembering the Internet at the expense of mobile phones. It is an oversight that risks misreading the technological and political moment through a dominant, Western lens that places the Internet at the pinnacle of ICT potential. Although the term “Facebook revolution” is intended as a nod to the user-generated mobilization-from-below strategies that fomented the revolutions on the ground, Facebook is a global company built on digital technology, so the label - which is itself an act of historicizing - effectively disguises the discourses of corporate power and technological determinism behind social network metaphor.

This article aims to challenge this Internet-centric narrative by focusing specifically on mobile telephony in the Egyptian revolution. Mobile telephony serves here as an avenue through which to challenge the tendency toward digital orientalism, or an almost exclusive focus on technology in the Middle East as a political force rather than a part of everyday life

(Howard 2010:29). The Egyptian revolution provides a critical opportunity to reflect on the ways in which the Arab Spring is being historicized as a technologically mediated event. In this process of historicizing, the history of mobile telephony and the role of mobile phones in the revolution have been largely overlooked. Mobile phones, as a communicative technology of everyday life are significant to the revolutionary moment *because* of their ordinariness, pervasiveness, and mobility. An exploration of mobile telephony in the Egyptian revolution must be a *social* as well as *technological* analysis, and it can highlight new hybrid agencies between people and their technological tools.

I take inspiration and find my theoretical moorings at the intersection of the mobilities paradigm and media studies that emphasize the important role of spatiality to technology use. Research on mobile telephony can benefit greatly from considering the mobile phone within the context of *movement* - how this communicative device operates in, through, between and against various overlapping virtual, material and interstitial spaces. The mobilities paradigm treats movement itself as an object of study and analysis (Hannam, Sheller, and Urry 2006; Urry 2007), and as ICTs engender multilayered mobilities between the present and the absent, the virtual and the physical, they necessarily complicate the spaces and geographies in which people live out their daily lives.

Mobility and the experience of movement is ever more relevant to the study and politics of space (Sheller and Urry 2006; Cresswell 2010; Sheller 2008). The close relationship between space and (im)mobility highlights the need for context-specific and historical analyses of communication technologies, such as mobile phones. I have suggested that active historicizing characterizes our attempts to analyze the ongoing revolutions in Egypt and elsewhere. It implies a process of making sense of rapidly moving people, technologies and events; it is a *mobile* methodology with mobile subjects. "By immersing themselves in the fleeting, multi-sensory, distributed, mobile and multiple, yet local, practical and ordered making of social and material realities, researchers come to understand movement not only as governed by rules but as methodically generative" (Buscher, Urry, and Witchger 2011). The spatial dimensions of technologically mediated movement require localized,

contextual analyses that recognize the importance of place. Thus, the Egyptian context is of paramount importance to an understanding of mobile phone practices during the 2011 revolution and beyond. Indeed, “[t]he uprising in Egypt was not the revolution of a network, but a network of revolutions across media platforms, across time, and across spatialities” (Tawil-Souri 2012b:165).

Mobile Telephony In Egypt

Mobile phones are arguably the technology of everyday life in Egypt. At first glance, the significance of mobile phones is made evident in their sheer ubiquity. Within Egypt, where this ethnographic research took place in 2011 and 2012, Internet penetration was roughly 33-39 percent (International Telecommunications Union 2012a), with Facebook penetration at only 6 percent and Twitter at a tiny 1.5 percent of the total population (Dubai School of Government 2011). Meanwhile, mobile phone penetration reached somewhere between 80 and 100 percent (International Telecommunications Union 2013). Statistics also suggest that most Internet users, by a small but important margin, accessed the Internet using their mobile phones or a USB modem (Egyptian Ministry of Communication and Information Technology 2011).

In the historical trajectory of ICT development, “while theoretically the IT revolution allows for two-way communication, in practice, communication flows are often one-directional, originating from industrialized economies and flowing into the industrialized and the Third World” (Saleh 2010:2). Egypt’s telecommunication sector, though advanced in the region and growing, bears the unmistakable hallmark of foreign influence and centralized state authority. Egypt adopted the telegraph as early as 1856 due to colonial interests in communicating with Europe, but by 1918, the Egyptian government purchased all telephone and telegraph lines (Mitchell 1991). The colonial management of telecommunications laid the groundwork for monopolized state control of the developing networks, an ownership model that helped to cement the diplomatic and communicative relationship between British colonial administration and Egyptian leadership.

The modern telecommunications sector emerged during Gamal Abdel Nasser's presidency, resulting in the 1957 establishment of the Wired and Wireless Telecommunications Authority. Infrastructural advancements continued with the laying of the first coaxial cable for radio frequency transmission in 1961, and wireless telephony was available in cars by 1975 (Rachty 1995). In 1982, the Arab Republic of Egypt National Telecommunications Organization (ARENTO) was established, to be replaced later by the Ministry of Communications and Information Technology (MCIT) under President Mubarak in 1999 (Saleh 2010). Telecom Egypt (TE), the country's primary telecom provider, was founded with the laying of the first telegraph line in the mid-19th century and has continued to dominate Egypt's telecom sector. It is 80 percent government-owned, and the MCIT has extensive oversight over its operation. In addition, TE has enjoyed monopolistic control over the fixed-line telephone industry, majority control of Internet services and infrastructure since the launch of TE Data, and has maintained roughly a 44 percent share in Vodafone Egypt (Middle East Rating and Investors Service 2009). As a result, the Egyptian government has traditionally held the most control over fixed-line telephone and wired Internet access.

Until this year, TE had failed to open bidding to other operators for its fixed line service (The Economist 2010; Ministry of Communications and Information Technology 2014a). In April 2014, TE announced in a press release that it would be launching a mobile phone service in direct competition with Egypt's existing mobile providers, Vodafone Egypt, Etisalat, and Mobinil (Ministry of Communications and Information Technology 2014a). In exchange for using their competitor's mobile networks, TE is allowing the other mobile providers to lease their land lines, though reportedly only their older, copper cable network rather than their high-speed fiber-optic lines (Elyan 2014). The move indicates recognition by TE of the immense importance and value of mobile telephony to Egypt's future and the global telecom market. Importantly, it is also an active acknowledgment of the role that mobile technologies have played in expanding ICT access in the developing world.

As a convergence technology, mobile phones constitute multi-media devices that can perform multiple communicative functions once limited to

the separate services of landlines or cable broadband. The concept of convergence refers to “the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behavior of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want” (Jenkins 2006:2). ICT devices no longer serve a unitary purpose, but rather “[o]ur cell phones are not simply telecommunications devices also allow us to play games, download information from the Internet, and take and send photographs” (Jenkins 2006:16). Convergence captures an intricate collection of interrelated technological and social processes, and it has revolutionized ICT usage and access in the developing world. Where countries like Egypt have struggled to provide wired data networks, mobile phones have begun aggressively filling the gap, connecting users to the Internet wirelessly. TE has relied heavily on its data services to compensate for the slumping demand for landline telephones in response to the popularity of cell phones. With 4G coverage on the horizon for Egyptian mobile operators, mobile data represents a rapidly accelerating threat to fixed cable services. Mobile data has become a more accessible means of connecting to the Internet for most people in the developing world (International Telecommunications Union 2012b). In addition, the role of mobile communication before, during, and in the ongoing aftermath of Egypt’s 2011 revolution has almost certainly peaked the interest of TE in acquiring mobile services, not only to claim its share of the burgeoning mobile market but also to assert a government presence in a communicative technology that has come to dominate not only everyday life but a subversive culture of popular resistance.

Since its arrival, mobile telephony substantially altered not only the telecommunications sector, but also the balance of power between the government, private companies, and individual users. Mobile telephony was the only branch of the Egyptian ICT sector open for competition in 1998 and one of the earliest industries to be liberalized (El-Shinnawy and Handoussa 2004). State-owned operators were outpaced and usurped by the market drive (Saleh 2010). As a result, there are currently three mobile phone networks in Egypt: Vodafone Egypt, Etisalat, and Mobinil, which was formerly known as the state-owned Egyptian Company for Mobile Services

until it was purchased by a consortium of private telecom providers in 2007 (The Economist 2010). Although these companies are thoroughly integrated into an international web of foreign investment and market interests, and therefore cannot claim to operate entirely in the public interest, they do represent a deviation from the traditionally exclusive state control of the telecommunications sector. The government exerts oversight in the form of the Telecommunications Regulatory Authority (TRA), but because mobile communication has so rapidly outpaced other ICT industries in Egypt that the government's practical influence in the sector has been effectively crippled. As a result, the interaction between Egyptian ICT users and government telecom services, perhaps with the exception of state-run television broadcasts, has decreased dramatically. TE's bid for space in the mobile communications sector is a recent step toward reclaiming lost ground.

Cellular networks bypass the necessity for expensive fixed-line infrastructure to some degree, allowing more widespread and faster access to information transmission as mobile phones increasingly offer data services along with call-and-text functions. Mobile phone penetration in Egypt quickly outpaced fixed-line telephones, and while broadband and dial-up Internet penetration continues to edge upward, mobile telephony is rapidly connecting Egyptians to the Internet through their mobile devices to 3G networks. This historical development of mobile telephony explains why mobile phones are ubiquitous where other new media technologies are not; mobile phones are not only replacing state-owned fixed line services, but also increasingly providing an opportunity to connect to the Internet for individuals without access at home.

Mobile phones occupy a distinctive place in the media landscape for three crucial reasons: they have provided connectivity where communities and individuals were unable to access it, they have permeated nearly all segments and divisions of society, and they are uniquely mobile. Unlike satellite television of the late 1990s, or the printing press of the early 20th century, mobile telephony is interactive, connective, and unconstrained by "old media" limitations of space and time. Further, mobile telephony undermines, to some extent, the control and surveillance function of the government in

telecommunications and information-sharing in its privatization and diversification, even though it is fundamentally contingent on the institutional structures of the state regulations and the global economy.

I will highlight some of the ways in which mobile phones have been used during and in the continuing aftermath of revolution in Egypt in an effort to illustrate how the historical trajectory of the mobile telecom sector, mobile phone adoption, and everyday use culminated in the practices of organization, mobilization and resistance that coalesced in the revolutionary moment. Many of the ways that activists have used mobile telephony have transformed the meaning and use of the technology to accommodate the exigencies of the revolutionary moment. Protesters, drawing on lessons learned in their everyday experiences, used mobile phones to transmit information and to coordinate activity, to enhance personal safety and accountability, and to document events. In the build up to large-scale protests, mobile phones helped to bridge the increasingly gaping digital divide by connecting huge numbers of people with varying levels of access to online social media and sharing critical information between the online and the offline.

Coordinating Across Spaces, Technologies And Platforms

Egypt is certainly not the first country to witness the connective and mobilizing power of the mobile phone. So called “smart mobs” (Rheingold 2007) contributed to the ouster of President Joseph Estrada in the Philippines in 2001 (Rafael 2003; Rich Ling and Donner 2009), mobile phones played important roles in the Orange Revolution in Ukraine (Lysenko and Desouza 2010), and they have even been symbolically turned off en masse in Nigeria in response to exploitative policies of local mobile phone companies (Obadare 2006). All of these movements used the mobile phone as an organizational tool, building on its popularity in everyday communication.

One of the primary uses of mobile phones in the revolutionary moment and in subsequent protests has been for sharing information and coordinating action. Mobile phones had carved out their place in everyday life and political movements long before the Egyptian Revolution. Perhaps most recognizable in the pre-2011 wave of manifest political mobilizations was

Kifaya [Enough!], which organized semi-formally in a silent demonstration in 2004. *Kifaya* made use of fixed-line and telephony and mobile telephony alongside nascent blogs and chat rooms to coordinate demonstrations (Meital 2013). In 2008, workers at the Misr Spinning and Weaving Company in Mahalla al-Kubra declared a strike for April 6th. The date became the namesake of the April 6th Youth Movement, a headliner in the news coverage of the Egyptian Revolution in 2011. The 2008 event resulted in widespread workers' strikes, protests, and rioting and prompted a firm government response, including hundreds of arrests. The strike had taken full advantage of new media in its organization, including blogs and other websites as well as SMS. But the outcome had been disappointing; it illustrated the limits of online organizing in street protests, and it had an important strategic result: activists realized that organizing the offline effectively would not be as simple as instigating online communication (Rosenberg 2011).

Mobile telephony is the quotidian medium through which people socialized, coordinated and communicated prior to the revolution, so there is no great revelation in its mere presence or prominence within the media ecology during or after the revolution. As a technology used for what Ling calls the "micro-coordination" of everyday life (Ling 2004), it becomes the natural tool of macro-mobilization. Most of the activists I interviewed considered their phones an essential accessory, an ever-present and mundane piece of wearable hardware. They did not call them revolutionary. Rather, the role of mobile phones was made particularly compelling in how mobile telephony and human agency in the Egyptian political sphere have co-evolved to meet the demands of political unrest. The mobile phone's accessibility "at-hand" proved central during the days of the revolution.

Although maps, routes and plans could be made and disseminated online before protests even began in January, they could only at best approximate the actual physical terrain that protesters would encounter on the day of action. Routes were made and altered to respond to changing conditions, and they were texted on mobile devices to individuals' contacts. Maps of entry and escape were carefully updated and disseminated via SMS and forwarded extensively in order to reach the widest possible audience, which

meant reaching individuals who did not have regular Internet access. This particular usage of mobile telephony is very context-specific, requiring users to be present in the places and spaces where the geographic information will be relevant. Thus, activists and protesters could be highly responsive to changing conditions; they were physical mobile in public space, and the information they gathered in the streets could be transmitted to countless other places by way of various ICT functions and platforms - SMS, Twitter, Facebook. This dual mobility of the activist and her information occurred instantaneously and simultaneously.

The role of mobile phones in protest activity reveals the importance of *spatiality* to media studies. Theories about digital ICTs, namely the Internet, often emphasize their transcendental properties: their *placelessness*, fluidity and virtuality. But mobile phones represent a key nexus, the intersection of moving people, mobile hardware, and data in motion. Looking at their uses in political activism in Cairo highlights how the Egyptian context exerts certain influences on the “spaces of flows” (Castells 1996), and how those virtual spaces are deeply embedded in the physicality of protest. The mobile phone is a prosthetic technology, always at hand, and “physically coterminous with [our] bodies” (Urry 2007:45). The mobility of this prosthetic communicative device gives activists and protesters unprecedented ability to traverse and transgress in physical and virtual space, and it imbues the technology with new, revolutionary significance.

Mobile phones also maintain particular *kinds* of close-knit networks that proved essential to mobilization. Mobile phones support “strong ties,” but they also allow users to maintain a wider network of close ties because communication is not contingent on face-to-face interaction (Rettie 2008). In contrast, online platforms uphold weaker ties, where opportunities for coordination arise out of collectively sharing individual goals (Cardon and Aguiton 2007). Cell phones connect people with “friends and family” in part because in order to access someone via cell phone, a user must have a very specific reference for them - their phone number - which must be exchanged in order to make contact (Ling 2004; Ling and Donner 2009). Ties via cell phone are closer and their communication more personally relevant.

In an article for *The New Yorker*, Malcolm Gladwell argues that high-risk activism is a “strong tie” phenomenon (Gladwell 2010). Indeed, activists I interviewed at protests in Tahrir Square a few months after deposition of President Mubarak indicated that they had received personal messages from friends via SMS urging them to come to the square during the height of the protests in January and February 2011. The personal messages, sent on the go, served a mobilizing function beyond the conversations and calls to action online. It materialized the mobilization as networks of friends encouraged one another to take to the streets. Given the high level of mobile phone penetration, this kind of interpersonal communication could reach far more people than Facebook alone, and it carried a kind of urgency or immediacy. This information also carried a certain additional degree of reliability, which stemmed from the strong-tie networks maintained by mobile phone use. Information transmitted by phone could be trusted because it came from people who were established, close contacts. To this end, mobile phones were used to bolster existing strong ties and activate them, capitalizing on their technological strengths - connecting the present spaces and actions with numerous absent parties and potential participants. These revolutionary mobilizations exemplified how “[t]he mobile can facilitate the emergence of a new private world, a virtual community that can be pulled together in a matter of moments” (Plant 2002:61).

Digital Geographies Of Safety And Security

“Yeah, it sounds crazy to you, maybe. But if someone doesn’t answer their phone, we have to assume they are dead, or at best, arrested. And then we go to a new strategy to deal with that possibility.” - Hanaa, a member of the April 6th Youth Movement (interviewed by author, September 13, 2011)

Mobile phones take on new meanings and engender new practices in emergencies and natural disasters. Emergencies refer to the unexpected, however mundane, but they can equally include moments of traumatic upheaval. Through its integration into daily life, the mobile phone has become a key resource in emergency situations, from last-minute scheduling changes to disaster notification (Ling 2004; Katz 2009; Gordon 2007). The revolutionary

difference for mobile telephony lies in both its responsiveness to unexpected conditions but also in its provision of new assurances and practices of safety and security. A mobile signal means a live connection to other people, a reassurance that you are not alone. Regular check-ins with friends, family, protest organizers, and fellow activists became (and continue to be) commonplace in the tense political climate surrounding the revolution.

Like a heartbeat, mobile phone communication during periods of mass protest represented the life status of the device's owner. A call or a text meant things were okay, for now. Apart from during the government-orchestrated ICT blackout initiated on January 27th and 28th, 2011, if someone did not answer his or her phone, the possible reasons were likely very grim. Using the mobile phone connection as a proxy for real, face-to-face confirmation that friends, family and fellow protesters were safe, helped activists respond to disappearances, arrests, and other emergencies more quickly (see also El-tantawy and Wiest 2011).

Many first-time protesters indicated in personal interviews that they were initially apprehensive about joining their friends in the street. Public spaces in Egypt are heavily policed and monitored, and large crowds are often daunting without experience of evasive techniques and police tactics. Having friends call or text with directions and encouragement brought more people to the street. Having a mobile phone at-hand mitigated against some of the risks of going out "alone" to join an unfamiliar social movement. Facebook pages for political organizations and individual activists posted phone numbers to call. During the buildup to the January 2011 protests, April 6th Youth Movement activist Asmaa Mahfouz invites viewers to meet up with her, and she her phone number for anyone interested to contact her personally (Wall and Zahed 2011). More contact, perpetual contact, meant more confidence.

In order to ensure an additional degree of safety, misinformation was often disseminated through online social networks, which were presumably monitored by the state. Accurate information could later be communicated via mobile phones, land-lines and word-of-mouth (El-Ghobashy 2011). These

multifaceted strategies to enhance safety and security during the revolution built upon existing, familiar mobile phone uses for quick planning and emergency responses.

Present Presence And Mobile Documentation

The photo-taking function of mobile phones had long been used by activists to document instances of police abuse, and these images and videos helped to incite anger toward the regime (El-Ghobashy 2011). Even after SMS was blocked on January 27th, protesters and activists continued using phones, but instead of communication, they became mobile recording devices. As discussed above, the convergence characteristics of mobile phones make them particularly versatile; they are simultaneously portable and relatively inexpensive communication devices, music players, cameras, flashlights, and even miniature computers. In the absence of one of these functions, others might take prime position. Protesters put their mobile phones to use as documentary devices, photographing and filming the protests, brutal attacks, and collective resistance of people camping in Tahrir Square. This tactic has continued to play a prominent role in ongoing protests since 2011, resulting in efforts toward aggregating and disseminating the huge amount of user-generated content in meaningful ways, such as the *Askar Kazeboon* group's multi-media displays of police violence. These documentary practices are meaningful because they imply the *presence* of the photographer or videographer. Being present in the moment, in the physical spaces of protests and crackdowns, lends credibility and urgency to the visual documentation. In seeming contrast to the present absence afforded by mobile phones, their function in the protest space is to confirm a present *presence* - a convergence of the physical place and the mobile technology.

During the ICT blackout in 2011, experienced and technically skilled activists regularly collected media content from other protesters to disseminate via back channels and electronic back doors. Mobile phones helped protesters observe events and store them in digital as well as personal memory. It allowed them to preserve a recollection of events in the "offline" spaces of protest with the possibility of distributing them in online spaces.

Recording events that the activists themselves witnessed became a way to assert ownership over transient experiences. The communications blackout effected a rerouting of information flows. Unable to share information with fellow protesters, activists' attention turned to sharing content with international audiences by posting as much mobile phone-aggregated content on the Internet as possible when any open connection could be found. Ramy, an activist with the Egyptian Initiative for Personal Rights who worked tirelessly with other tech experts to find ways to break through the blackout, said, "We felt like the only people online because no one else had access in Egypt. Everything was focused on getting the information beyond Egypt" (interviewed by author, September 19, 2011). The unintended consequence of the complete strangulation of ICT channels was a concentration of content directed toward the international community, who could read, download and share what limited content emerged from Egypt. Protesters used any means necessary to get information out, seeking expertise from fellow protesters, like Ramy, and "hactivist" guides, created by groups like Anonymous (Anonymous 2011; Rhoads and Fowler 2011).

In the absence of its communicative functionality, mobile phones became useful for their other features, namely photo-taking and storage. The intermittent stream of images and information smuggled out of Egypt's ICT blackout helped to reinforce a popular perception that the Internet and social media platforms were the primary (if not exclusive) tools of the revolution. An international audience became the default consumers of this content pushed online. Without considering the contextually contingent media environment in which this content was being produced, the mobile phone fell away in the background as Facebook and Twitter took center stage. The mobility, versatility and ubiquity of mobile phones meant that they had faded into the fabric of everyday life. Thus obscured, it became the natural tool to aid a revolution

Mass Mobilization Across The Digital Divide

As a convergence technology, mobile phones have the unique technical capability of providing several overlapping levels of connectivity. The diverse range of mobile phone hardware, ranging from the most basic call-and-text phone to touch-screen "smart phones," means that users who connect to

one another may, in fact, have very different experiences of the connectivity afforded by these devices. A smart phone user could access the Internet, use Facebook, and watch movies, while call-and-text users cannot. Convergence occurs unevenly within technologies and societies, and as such, there are many coinciding “digital divides” that influence access to ICTs and participation in the virtual communities and spaces they enable. At the time of this research, roughly nine percent of Egyptian mobile phone subscribers had Internet access on their mobile devices (Business Monitor International 2012). Today, the number is closer to 20 percent by official estimates (Ministry of Communications and Information Technology 2014b). Internet access and Facebook and Twitter usage alone cannot account for the vast participation in the 2011 revolution. Instead, mobilization across and in spite of divides in Internet access fomented the mass protests.

Crucially, mobile phones helped to bridge the divide. The ubiquity of mobile phones proved one of their greatest assets in the revolutionary context, as people called and texted one another with information gleaned from various technologically mediated sources. Internet users communicated Facebook updates via SMS to their friends without Internet access, and the content of phone calls and text messages could be posted online by Internet users using smart phones and computers. In this way, the mobile phone created hybrid spaces, “mobile spaces, created by the constant movement of users who carry portable devices continuously connected to the Internet and to other users” (de Souza e Silva 2006). This hybridity connected users to one another and to both physical and virtual spaces. As a pervasive convergence technology, the mobile phone seamlessly blurred the lines between online and offline content, making any and all information available between users who might otherwise have been communicatively isolated by the digital divide.

The result was the mobilization of new sectors of the Egyptian public, who had not be politically active in the past and had been excluded from activism in some cases due to lack of access to online spaces for dissent. Indeed,

„for a number of years, the Arab media landscape has been witnessing a perplexing paradox, namely: a gap between the vibrant and active media arena, where many resistant and oppositional voices could be heard, on one hand, and on the other hand the dormant and stagnant political

arena, which did not exhibit any serious signs of active change [...]” (Khamis and Vaughn 2011).

The harnessing of the mobile phone for mobilization was a significant factor in reaching new political actors and bringing online activism fully into offline spaces and communities. Mobilization occurred across socio-economic strata and between urban cities and rural towns and communities. Tahrir Square was hardly the only site of popular protests during the peak of the revolution in January and February 2011, and it remains only one of many locations that have continued to see protests, marches, sit-ins, strikes and violence. Protesters took to the streets in the port city of Suez (Dziedzic 2011), Alexandria, Asyut, Minya, and others (Weaver et al. 2011), and support poured out of communities as far-flung as the Bedouin of the Sinai peninsula (Omer 2011; Arabawy 2011). Many cities other than Cairo witnessed severe crackdowns, police brutality, and violent resistance, which have continued - and even escalated - since the June 30th, 2013, ouster of President Mohammed Morsi (Rose and Kortam 2014). However, these geographically dispersed mobilizations have been consistently obscured by the prominence of Cairo and Tahrir Square in analyses of the Egyptian revolution. The geographic and political prominence of Cairo is one factor in this omission, but it is facilitated by the technological narrative that has emerged from the Arab Spring. Capital cities and footage of protests there dominate news coverage because they are the most digitally connected and therefore the greatest producers of documentary content. Cairo's disproportionate *online* presence coupled with their geopolitical significance has cemented its historical prestige in the active process of memorializing the revolution. While the Internet has more limited reach beyond urban centers, mobile phones have penetrated all levels of society. Their inclusion in any technological analysis of the revolution helps to tell a more complete story and opens the door to more inclusive accounts of the mass mobilizations that connected people across neighborhoods, cities and even national borders.

These lessons in mobilizing across the divide have clearly had an impact in the aftermath of 2011. During subsequent fieldwork in Cairo and Alexandria in June of 2013, it was apparent that the *Tamarrod* (“Rebel”) campaign,

which organized against the presidency of Mohammed Morsi, recognized the critical importance of the *offline* in organizing popular support. In order to reach as many people as possible, *Tamarrod* opted for a paper-based petition campaign, where organizers and volunteers would pass out petition pamphlets in the streets of many Egyptian cities. The campaign had a website and a social media presence, but their mobilization strategy focused on the street level, the face-to-face, in contrast to the emphasis that had so recently been placed on social media during 2011.

The Mobile Revolution In History

“By themselves, mobile phones are not a revolutionising, independent tool, but they do influence the way citizens understand and organise democracy” (Hermanns 2008:79). It is not the goal of this article to replace the trope of Internet revolutions with a narrative that treats cell phones as a causative explanation for the Egyptian revolution. However, mobile telephony plays a crucial and underrepresented role in its technological story. This article has attempted to historically situate ICT development and use in Egypt in order to better understand the role of ICTs, and mobile phones in particular, in the 2011 Egyptian revolution. I have also presented observations on the role of mobile phones during protest activity from fieldwork, interviews, and my own experience in Egypt. The significance of mobile phones to political activism can be directly traced to their functionality in everyday life, their pervasiveness and popularity, and their unique mobility between and through physical and virtual spaces.

The Egyptian revolution, like the other revolutions of the Arab Spring, was unprecedentedly mediated by communication technologies. Going forward, it is increasingly important to consider the contextually contingent development of the telecom sector as politically, socially and historically relevant to moments of political rupture. To ignore the historical evolution of new media alongside political and social history is to risk replicating a kind of digital orientalism that collapses multidimensional mediated relationships into familiar techno-centric explanations. A more user- or actor-oriented perspective is needed, which focuses on how people and technologies jointly encounter and create physical spaces and forms of resistance within them.

The political terrain in Egypt implicates geographies that are both human and technological because these mobile technologies have become part of the media ecology of everyday life.

We must also recognize the role that active historicizing plays in defining how we *read* revolutions. Revolutionary moments do not lend themselves facily to contextualization or historical analyses due to their explosive, and often ephemeral, nature. The everyday is easily obscured by the revolutionary flashpoint. In the digital age, active historicizing is complicated by the pervasiveness of communications technologies. We are presented with an overwhelming quantity of real-time digital documentation, such that the technologies of documentation themselves have a tendency to captivate and monopolize our attention and analyses. Thus, we must *actively* contextualize and historicize unfolding events. Historical perspective is subject to the impermanence of technological mobilities. We have seen this process play out in analyses of the Arab Spring, where a contemporary celebration of the Internet has already obscured the tremendous and continuing importance of the mobile phone, particularly in the developing world.

The modern experience of being - technologically and physically - mobile is a central feature of the Egyptian revolution and the politics of the everyday. In fact, the communicative and technological mobility afforded by mobile phones has become such a ubiquitous aspect of daily life that it is often treated as wholly unremarkable. "This mobile logic affects the way that we organize our daily lives, the way that we gather information and the way that we do our work. It is increasingly taken for granted, to the degree that we only see it when it is not there" (Ling and Donner 2009). Viewing the Egyptian revolution through the narrow lens of social media limits any conclusions we might make about the relationship between new media and protest politics. Undoubtedly, digital technologies made a great contribution to the revolution and its unfolding aftermath, but their role must be historically and spatially contextualized, and it must consider how the mediated politics of revolution emerge from the mediated practices of everyday life.

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