Everyday a Revolution: Mobility, Technology, and Resistance After Egypt's Arab Spring

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Abstract

The 2011 Egyptian revolution was intensely mediated by information and communications technologies (ICTs), leading many to label it a "social media revolution." ICTs did contribute in nuanced ways to the preconditions of revolution and played a complex and integral part in its execution. But the story of Egypt's Arab Spring is not a purely technological one; nor is it easily reduced to political cause-and-effects. This thesis disentangles the relationship between communications technologies, revolution, and resistance by exploring how ICTs enable subversive movement between physical and virtual dimensions. Such *transdimensional mobility* underpins both revolutionary mobilizations and the rhythm of everyday life.

This thesis examines how ICT-mediated mobility can constitute a form of tacit resistance against the physical and virtual immobilities of life under repressive neoliberal rule. But, as the post-revolution period reveals, transdimensional mobility can equally contribute to new regimes of disenfranchisement. By looking at ICT use over several years, the thesis explores how transdimensional mobility contributed to profound spatial, social, and political transformations in Egypt after the revolution, beginning with an examination of how ICT-mediated mobilities created a new spatial awareness for protesters engaging in overt political direct action. It continues by examining how ICT users playfully exercised transdimensional mobility in the face of a curfew imposed to suppress street politics. In the extended aftermath of revolution, transdimensional mobility created an impetus for urban reform and rejuvenation in Cairo that aligned with pre-revolution neoliberal agendas, and the thesis therefore interrogates the dialectic between ICT-mediated mobility both as resistance and as a vehicle for the re-entrenchment of a longstanding politics of exclusivity. Finally, the thesis concludes by addressing the question of how the mobile production and preservation of digital artifacts influences how the Egyptian revolution is remembered. The perceived permanence of digital traces is challenged by the selectivity and vulnerability of the digital archive.

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1 Mobility as Resistance

The Arab Spring

By now, the "Arab Spring" is a term so often applied in reference to events that developed in the Middle East and North Africa since 2011 that it has lost much of its power of signification. It is also contested semiotic territory. The expression "Arab Spring" was a delight of news anchors searching for a catchy turn of phrase and a stubborn vexation to critical academics with a practiced aversion to reductionism. Today we struggle with whether the collective regional events that make up the Arab Spring should be relegated to history, or whether, along with some tenacious radicals and resilient optimists, we should consider them part of the active present, a distended and ongoing revolutionary wave. Is the Arab Spring already past? Are we still experiencing it in the present? Do we anticipate its continuation, or a reprisal, in the future? The Arab Spring is a term that has greedily swallowed up its referents and, in marking a distinct and disruptive political moment, has paradoxically negated the temporality it was once surely meant to encapsulate. Rather than being meaning*less*, it is perhaps overly meaning*ful*—diverse, disputed, transnational, local, resented, rejoiced. It is

problematic, but maybe for that very reason, it is also arguably indispensable.

Some alternative appellations for the Arab Spring have been suggested, each with its own limitations. For instance, certain scholars began adopting the term "Arab uprisings." Marc Lynch confessed in his 2012 book of that title that naming these events is unavoidably controversial:

> Clearly the events of 2011 in the Middle East are not yet a story of democratic transitions. Nor are they yet clearly revolutions. *Arab Spring*—a term that I may have unintentionally coined in a January 6, 2011, article—does not do justice to the nature of the change. The uprisings are an exceptionally rapid, intense, and nearly simultaneous explosion of popular protest across an Arab world united by a shared transnational media and bound by a common identity. (Lynch, 2012, 9)

Others call the events "revolutions," and some challenge the homogenizing effects of the term Arab Spring by differentiating between individual countries' trajectories, such as the Tunisian "revolution," the Libyan "uprising," and the Syrian "civil war." As images of the protests flooded social media and television screens, the communications technologies used by protesters became a central actor in the developing drama, and the technologies of revolution also infiltrated the nomenclature of the Arab Spring. At times, events were hastily labeled "Twitter" and "Facebook" revolutions, and the Internet became the much-publicized answer to the who, what, when, and how of revolution in the Middle East. These early misnomers betray the centrality of technological narratives in our understanding of the Arab Spring, and although terms like "Twitter revolution" have thankfully fallen out of favor, the role of communications technologies remains a subject of much fascination and perplexity in both popular discourse and academic enquiry.

Ultimately, there is great value in debating how to talk about the protests that erupted throughout the Middle East and North Africa in 2011 because so much of this political moment is still in motion. To elect to call it the Arab Spring, as I

do in this thesis, is to make an active choice and deserves a declaration, such as this one. In what follows, I use the term Arab Spring in order *to* encompass all of its contradictory constituent meanings and their interpretations, in part because it is a conveniently popular and recognized moniker and in part because I consider it to be the product of a profound and continuing dialectical engagement with the historical moment. I will also refer to the Arab Spring in Egypt as the "Egyptian revolution" quite simply because most of my informants considered it a revolution, and it both triggered and signified a sea change in Egyptian politics that, regardless of structural inertia in the highest levels of government, was revolutionary in many respects for everyday politics, politics from below.

The causes and trajectory of the Arab Spring do not have neat starting or ending points, but cascading protests began with an ordinary, young Tunisian man, Mohammed Bouazizi, a fruit and vegetable seller in the city of Sidi Bouzid, over 200 kilometers from the capital, Tunis. On December 17, 2010, a municipal officer confronted Bouazizi for operating an unlicensed stall and confiscated his cart and produce. Later that day, after being denied recourse to reclaim his stall, Bouazizi set himself on fire outside the provincial headquarters. Within hours, protests erupted in Sidi Bouzid. Bouazizi had been a little-known local vendor, but his humiliation and hardship were a unifying everyday experience for many poor people in the city and throughout the country, and his tragic self-sacrifice became a rallying cry for change. Bouazizi died in hospital on January 4, and protests surged to the point at which President Zine El Abidine Ben Ali fled the country on January 14. Ben Ali's exit, after 23 years, was a rippling inspiration, particularly to youth throughout the region who had been watching events in Tunisia with anticipation from their TV and computer screens.

Meanwhile in Egypt, the administrator of a Facebook page commemorating the torture and death of another young victim of state violence, wondered what Tunisia's example would mean for his country. Wael Ghonim had created the page in honor of Khaled Said, a young entrepreneur, who was arrested in a

cybercafé in Alexandria and tortured in police custody, resulting in his death on June 6, 2010. The page had quickly become one of the most popular dissident platforms online, criticizing police abuses and torture. In late December, as protests swelled in Tunisia, Ghonim created a Facebook "event" calling for protests on National Police Day, January 25, 2011. The Facebook group had coordinated other small protests in the past, and the exact details for January 25 were still to to be determined. Shortly after President Ben Ali's departure in Tunisia, excitement peaked for the January 25 event in Egypt. Ghonim changed the title of the event, from "Celebrating Egyptian Police Day—January 25" to "January 25: Revolution Against Torture, Poverty, Corruption, and Unemployment" (Ghonim, 2012, 136). Ghonim writes:

> Images of the Tunisian demonstrations were magnificent: hundreds of thousands of united citizens carried nothing but the Tunisian flag and signs that demanded that Ben Ali step down as president. We were even more inspired by the images of the Tunisians' ultimate victory. (Ghonim, 2012, 141)

In a tweet that would prove prescient in many unforeseen ways, activist Gigi Ibrahim wrote: "The black and white days are coming, there is no grey" (Idle & Nunns, 2011, 28).

Protests and self-immolations began to spread; events were local, but momentum was transnational. Egypt was next, with protests breaking out on January 25, the date chosen by Ghonim and popularized on Facebook. Protests began in Yemen on January 27 and in Sudan on January 30. Egypt's revolution was a landmark. Deeply inspired by events in nearby Tunisia, Egypt's 18 days of sustained mass protests culminated in the resignation of President Hosni Mubarak after 30 years of uninterrupted rule, setting a global example that unleashed simmering unrest throughout the region. Bahrain held a "Day of Rage" on February 14, Libya saw protests on February 15, demonstrations swept Morocco on February 20, and Syria followed on March 15.

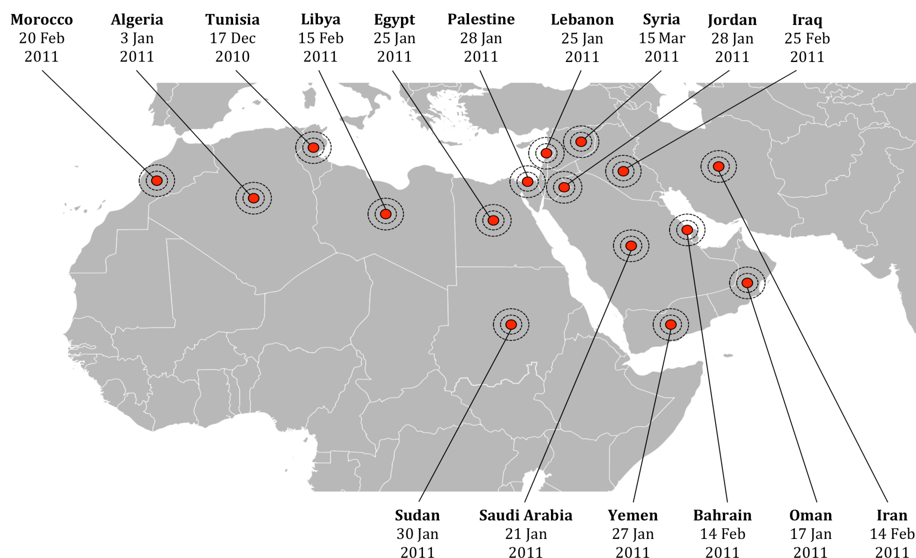


Figure 1.1: Regional map of protests during the Arab Spring.

This list is not exhaustive, nor does it do justice to the unique dynamics at play in each of these contexts, but these uprisings, revolutions, and revolts came to be known collectively as the "Arab Spring." They constitute, in each locale, what I refer to as the "revolutionary moment"—the brief window, over a period of a few days or a few months, in which protests flared and met with triumph and repression in varying measures, giving way to a prolonged and arguably ongoing period of transitional elections, violent reprisals, and resurgent resistance. The suddenness, spontaneity, and "now-ness" of the Arab Spring became so much a part of its mythology that academic work on the Arab Spring several years later faces some difficulty positioning itself in historical time and disciplinary practice. As I learned first-hand, undertaking my master's and then doctoral research in the midst of unfolding transitional politics, the ground beneath us is constantly moving. In dynamic conditions, research must be agile, adaptable, and reflective. As a result, I want to emphasize that this research contributes to a continuing conversation; even as the brackets around this historical moment are debated, analysis of the Arab Spring and its aftereffects is unbounded, open, and ongoing.

The body of literature on the Arab Spring is already becoming vast,

produced by academics, eye-witnesses, reporters, think tanks, and institutional watchdogs. Further, the instantaneity of the Arab Spring was coupled with a profusion of media content—news footage, amateur videos, photos, text messages, and social media posts—which had the effect of introducing the entire world to a region whose struggles for democracy seemed new, suddenly thrust onto the global stage through the filter of new media. This thesis endeavors to make some sense of the aftermath of the Egyptian revolution and its technological mediations while moving away from a preoccupation with newness. The Arab Spring became a captivating global phenomenon in large part due to its mediation through social media, and as such, communications technologies sit at the heart of not only how the Arab Spring has been consumed but also how it is studied and imagined. But I argue that we should resist the tendency to treat technology as a category distinct from society or politics, focusing instead on the hybrid human-technological synergism at work in the Arab Spring. The story of communications technologies and the Egyptian revolution is not about a single platform (Facebook or Twitter) or even a single technology (the Internet); it is shaped by the socially embedded *experience* of technologically enabled mobility between online and offline spaces. I suggest that the Egyptian revolution, like the Arab Spring writ large, was a result of converging mobilities, corporeal and informational, that had been slowly transformed by the uneven adoption of digital, and especially mobile, technology in the lead-up to the 2011 protests.

Viewing the revolution as a landmark not in terms of the democratizing power of technology but in terms of the gradual evolution of technologically enabled mobility and immobility introduces a perspective that approaches technological mediation as contingent and situated within a broader historical, political, social, and technological context. The remarkable images of encampments in Tahrir Square during peak protests in 2011 had an arresting visual impact, created by coordinated *movement* of people into public space and public view. The intersecting movement of the material (people and hardware) and the

intangible (ideas and data) is predicated upon the existing conditions of *mobility*, and it should be a point of departure in our understanding of the Arab Spring. As this thesis will go on to explore, the changing quality of online-offline mobility in the aftermath of revolution offers essential insights into the origins and outcomes of the political and spatial transformations taking place. In the first chapter of their edited volume on the Arab Spring, Korany and El-Mahdi write that "although they were not predicted, these events were predictable: the cracks were there to see if one looked through the right conceptual lens" (Korany & El-Mahdi, 2012, 3). Finding and defending the "right conceptual lens" has become a key occupation for Middle East scholars interested in contemporary regional politics and culture. As a result, I would argue that it has been through constructive criticism of Arab Spring narratives that we have been able to identify more rigorous avenues of enquiry on the changing Arab world, and Egypt in particular.

Critical Perspectives on Media and the Egyptian Revolution

The study of media in the Middle East during and throughout the unfolding aftermath of the Arab Spring demands a high level of theoretical, methodological and analytical vigilance that acknowledges the fluidity and indeterminacy of this moment while also being able to *say something* empirically about the changes underway. It is no doubt already apparent that technological narratives of the Arab Spring and the Egyptian revolution have significantly influenced its legacy and thus pervade most accounts and analyses of the historical moment. From the rapid regional spread of information to the mobilization efforts that took place online, media—and specifically, new media—are an important part of the story. These narratives are also of particular interest and importance to this thesis, as it examines technologically enabled mobility and how that mobility influences paths of resistance beyond the revolutionary moment. But these technological narratives

have also inspired some of the most counterproductive trends in scholarly work on the subject, and I want to specifically address three of these trends: the de-historicization of the political moment, the politicization of the subject matter, and technological determinism.

Arab Spring research can fall into the trap of treating this political moment as somehow ahistorical through a fixation on the "now" and the "new" to the neglect of the historical context of politics, society, economy, and technology. Neither new media nor new social movements emerge in a vacuum. Importantly, Sabry cautions:

> The social conditions for the Arab revolutions were already there, simmering for decades and, without them, social media would have been redundant. However, it makes sense to highlight or even privilege the role of media technology, social media included, and their role in the Arab revolutions, but only if and when we deal with the mediation of unfolding history and the kind of intentional converging aesthetics and poetics that go into such a process; those that turn happenings into memorable events. (Sabry, 2012, 82)

In determining what is truly "new" about media and the Egyptian revolution, we must engage with what came before, with particular sensitivity to the very blind spots that allowed the Arab Spring to elude prediction in the first place. Although visible opposition to ruling regimes was sporadic and often small-scale over the past twenty years, it laid the groundwork for the sweeping oppositional protests that took place in 2011. Indeed, the scale and frequency of protests had been increasing dramatically over the previous decade. And despite the fact that Internet penetration was relatively low in the few years before 2011, Internet users included many young, educated and politically active elites who would ultimately wield disproportionate influence in online (and offline) spaces. The antidote to an ahistorical approach to the Arab Spring is therefore to contextualize events, actors, and outcomes within historical trajectories of resistance and opposition and

to recognize the contingency of the present.

In many ways, it is not surprising that our conversations about the Arab Spring focus on the overtly political. The revolutionary moments that collectively make up the Arab Spring have had enormous, unanticipated political effects. Politics and political analyses naturally take center stage when authoritarian leaders who have ruled for decades are ousted, millions take to the streets, and violence erupts in face of state repression. During the Arab Spring, demands for democracy in the street seemed to align with prevailing assumptions about the *democratizing* influence of new media, and as a result, political outcomes are sometimes too hurriedly pinned to technology use. Taken together with the lack of historicization discussed above,

> this focus on politics, and the quest for revolutionary effects of new media that is often underlying it, limits our perspective. The horizon of our research gets limited by a preoccupation with the new, exemplified in ‘new’ technologies and ‘new’ media, and a preoccupation with the political. (Hofheinz, 2011, 1423)

The solution is to both expand our definition of the “political” and to look beyond the political to encompass other kinds of effects and outcomes that may manifest in other spheres of social life. Bayat (2011) argues that the Arab Spring provided conclusive evidence that our definitions of the political have been too narrow for some time—that our concept of politics must encompass otherwise invisible politics from below. For instance, without exploring youth and non-elite politics, it is difficult to interrogate the causes and consequences of the Arab Spring or indeed to situate it within a historical trajectory. Looking beyond politics entails engaging with the everyday, from more traditional anthropological explorations of everyday life practices, including technology use, to the inconspicuous resistances that take place in everyday actions and spaces. Examining how everyday technology use influences and is influenced by revolution can provide unique insights that are overlooked by analyses that exclusively focus on the political.

Politics and technology are tightly intertwined in Arab Spring research, and a great deal of criticism has specifically focused on the technological narratives that have emerged from analyses of the Arab Spring. Early on, the Arab Spring protests were labeled “Internet” or “Facebook” or “Twitter” revolutions, after the technology or social media platforms that appeared to enable them. Even the most well-intentioned reflections on media and the Arab Spring can give way to latent technological determinism, or the idea that technology propels certain political, social, economic, and cultural outcomes, for better or for worse (Kellner, 2002). Wael Ghonim, the administrator behind the Facebook event for the January 25 revolution, began a 2015 Ted Talk in Geneva, Switzerland: “I once said if you want to liberate a society, all you need is the Internet. I was wrong” (Ghonim, 2015). The lesson learned by those, like Ghonim himself, who were quick to credit the Internet with emancipatory powers in the early days of the Arab Spring was that technology had an important role to play in the protests and their escalation, but its role was nuanced, complex, and not without contradictions. In short, we should begin by recognizing that technology and society mutually shape one another and

> reject the false polarization of utopian/dystopian views of the Internet and recognize that the Internet is both a product of imperialist and capitalist logics and something that is simultaneously used by millions in the struggle to resist those logics. (Aouragh & Alexander, 2011, 1344)

Social media platforms served as tools of mobilization and spaces of dissent, but to view them as agents of change in and of themselves would be reductionist and misleading. Disaggregating the position of technology within the revolutionary moment requires viewing technology as historically, geographically, socially, and culturally embedded. Many authors have reflectively critiqued the more reactionary and celebratory accounts of the role of information and communications technologies (ICTs) in fomenting revolution and democracy (Aouragh, 2011c; Aouragh & Alexander, 2011; Hofheinz, 2011; Mejias, 2011;

Gerbaudo, 2012; Tawil-Souri, 2012b; Alexander & Aouragh, 2014), and this thesis is a contribution toward this important body of critical literature that seeks to ground the Arab Spring in local context, historical time, and empirical observations and analysis.

De-historicization, political sensationalism, and technological determinism intersect with one another, and in this case, they collectively stem from a desire to make sense of revolution; they are insidious perils in the quest for causality. But they also spur us on toward a more critical scholarship on media and revolution. Bayat rightly observes that the scale and impact of the Arab Spring can be a powerful and positive influence on our understanding of the region and, I would add, of the role of new media in that "these social earthquakes are likely to unsettle some of the most enduring perspectives on the region," including Middle Eastern exceptionalism, entrenched authoritarianism, and subaltern disengagement, among others (Bayat, 2011). But equally, we should heed Muriam Haleh Davis's words of caution, derived from her comparison of the spectacle of colonial exhibitions with the global consumption of the Arab Spring in popular media: "[I]t is worth asking what concepts are being legitimated by the current staging of the Arab Spring" (Haleh Davis, 2012). In exploring technologically enabled mobility, this thesis is a challenge and an interrogation of the technological "staging" of the Arab Spring in Egypt, making the case for more reflective and exacting work on media, politics, and everyday life. To begin, we must conceptualize communications technologies as deeply embedded social and cultural contexts, we must broaden our understandings of politics and resistance to encompass ordinary encroachments of people in virtual and material spaces, and the Egyptian revolution and the technologies of revolution must be situated historically.

New Media and the Arab Spring in Egypt

The suddenness and scale of the Arab Spring brought attention to all things revolutionary about these historic uprisings. Revolutionary politics were evident in the huge protests and strikes erupting in countries throughout the region, but attention also turned toward revolutionary technologies. Beyond discussions in academic circles, revolutions often seem cleft from the past, a historical moment without history. And the lexicon of the Arab Spring denoted this sense of newness; it was a renewal, an awakening, a renaissance, a spring. It was infused with immediacy and an overwhelming preoccupation with the present, an "extreme present" brought on by the pervasiveness of digital media (Basar, Coupland, & Obrist, 2015). As images of Egypt's Tahrir Square filled television and computer screens, we were consumed with the immediacy of the moment, constantly updating and refreshing, and a gripping need to make sense of the microevents that collectively spelled revolution. Marc Augé observes that this phenomenon,

> [t]his need to give a meaning to the present, if not the past, is the price we pay for the overabundance of events corresponding to a situation we would call 'supermodern' to express its essential quality: excess. (Augé, 1995, 29)

Augé himself drew parallels between revolutionary moments and the technologically enabled, everyday experience of supermodernity, as he called it. In a sense, revolutions are already brimming with excesses of meaning and movement and events; in supermodernity, everyday is a revolution, the everyday is excess.

The revolutionary lexicon of newness dovetailed easily with newness narratives about media and technological progress because from the outset, the Egyptian revolution was intensely technologically mediated. The supermodern, digital age excesses of the Arab Spring—a multiplicity of photos, videos, activist voices online—became a focal point. The communicative media employed during

Egypt's Arab Spring became more than conduits of information, conveyors of a remarkable revolutionary story; they *became* the story. Social media and television content from the uprisings made the Arab Spring *legible* to a global audience, even if this legibility proved illusory. As this thesis will go on to discuss in Chapter 6, the ways in which the Arab Spring and the Egyptian revolution were mediated continue to influence how these events are read and remembered by onlookers and participants alike.

Although social media platforms such as Twitter and Facebook quickly dominated conversations about media in the Egyptian revolution, these websites were constituents of a much broader media ecosystem. At least for a time, the revolutionary moment summarily eclipsed the evolutionary progression of technological and political change. Twitter and Facebook came to stand for a technological revolution in the form of "new media"—often conceptualized as participatory media of the digital age. Chun (2006) defines new media as

> fluid, individualized connectivity, a medium to distribute control and freedom. Although new media depended heavily on computerization, new media was not simply 'digital media': that is, it was not digitized forms of other media [...], but rather an interactive medium or form of distribution as independent as the information it relayed. (Chun, 2006, 1)

Twitter and Facebook represent such "2.0" technologies, as they are often known, which allow users to produce content and *participate* in information *exchange* over mediated platforms (Deibert, 1997; Jenkins, 2006). Peters suggests that we call new media "new" because we do not have the vocabulary to talk about it yet: "They are uncertain objects, their terms are unclear; their use, purpose and impact are not fully understood" (B. Peters, 2009, 18). In other words, today's new media for study and scrutinization may be tomorrow's old media, seemingly over-studied and over-theorized. The definition pivots on the conceptual power of the "new"; because even when we refer to this category of media by alternative terms, such

as information and communications technologies (ICTs), as I do in this thesis, the revolutionary implications of "newness" still linger.

Generally, ICTs have been heralded as transformative of the social world in which we live. The development of microelectronics and the resulting digitization of computing (and microtization of computing devices) have made ICTs an integral part of everyday life, and media studies on ICTs have always harbored a fascination with the all-encompassing, world-altering possibilities of digital technology. Mansell writes that "[t]hese technologies are achieving a position as *the* dominant factor influencing the latitude for social and economic development" (Mansell, 2002, 7). The potential for ICTs to transform not only how we do things but our experience of everyday life has given rise to, on the one hand, utopian hopes for technologically facilitated global development and democratization (see, for example: Shirky, 2009), and on the other hand, fear of the destructive primacy of virtual over material reality and wariness of a technologically enabled control society (see, for instance: Virilio, 1991). In fact, technology and society mutually shape and exert important constraints on one other (Woolgar, 2002). Yet, there is no question that ICT developments in the digital age are having widespread transformative effects that deserve disaggregation, and the Egyptian revolution marked a watershed moment in the ever progressing ICT revolution that had been pushing onward for decades. In that moment it seemed, as crowd-sourced media content wrote the story alongside traditional news reporting, that the ICT revolution may have created an *actual* political revolution, and it would perhaps never be more important to interrogate the relationship between communications technologies and society.

We are left with this conclusion: that making sense of this revolutionary moment must involve a critical conversation about technology because media does a great deal more than merely documenting and disseminating events; it actualizes them (Wark, 1994). Technology undeniably played a role in the Egyptian revolution and its aftermath, but what role? "ICT" is an umbrella term that includes

radio, television, and telecommunications, including mobile phones, the Internet, and satellite networks, and it crucially encompasses the increasing convergence of different communications technologies and networks into a single inter-connected system and of various audio-visual functionalities in the same hardware—for instance, the ability of a mobile phone to stream a television show, connect to the Internet, place voice calls, and transfer Short Message Service (SMS) messages. Castells identified convergence as an important characteristic of the "technological revolution" (Castells, 1996, 71-72). Deibert (1997, 114) alternatively refers to this development as *hypermedia*. But many media researchers have adopted the concept of "technological convergence" (Jenkins, 2006; Liebmann, 2006; Dwyer, 2010; Silver, 2004; Briggs & Burke, 2005), and convergence has even been underscored by Middle East media scholars in work on media and revolution (see, for example: Russell, 2011). Practically, convergence means that individual Internet platforms like Twitter and Facebook can provide narrow insights into technologically mediated activism, but they are part of a complex ICT ecosystem in which Twitter, for instance, may be accessed from a desktop computer in a cybercafé, a home PC, a laptop, or a mobile phone. Twitter allows users to publish short snippets of text, but it can also host photos and videos, private messages, and audio. It may be accessed on a broadband Internet connection, dial-up, or cellular data network. The multi-functionality of devices and software makes using Twitter a contextually contingent experience. Indeed, "only specific analyses and empirical observation will be able to determine the outcome of interaction between new technologies and emerging social forms" (Castells, 1996, 71). Any exploration of ICTs and the Egyptian revolution has to look beyond individual platforms to the ways in which ICTs are locally embedded and incrementally and unevenly revolutionary.

Technological Orientalism

A fixation on the technologies of revolution, primarily Facebook and Twitter, entangled the Egyptian revolution in what I tend to call technological orientalism, an expansion of Philip Howard's concept of digital or Internet orientalism (Howard, 2010, 29). Howard uses digital orientalism to refer to the presumed causative relationship between greater access to digital technology and the spread of political Islam, or how, in the Middle East, connectivity to the global communications network is seen to serve the organizational goals of terrorist networks. But the concept of digital orientalism can be broadened to encompass any reading of technologically mediated change that treats the "network" as an ahistorical invention of the Internet age. In contrast to this orientalist view, Howard reminds us, "[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).

In my conception of the term, technological orientalism is a theoretical lens that fails to accommodate the complex dialectic between online and offline activities and associations. It also constitutes "[a] glorification of the technical, at the expense of the social, result[ing] in a redistribution of agency away from individual users to the technologies themselves" (Allmann, 2014b). Aouragh (2015) calls a similar elevation of the Internet at the expense of more nuanced explorations of the role of ICTs in revolution "cyber-orientalism." It fails to acknowledge the hybrid human and non-human agencies that underpin historical events (Latour, 1991, 1993). It derives from a lineage of technocentrism and the fetishization of technology (as discussed by, among others: Marcuse, 1985; Adorno & Horkheimer, 1993; Kellner, 2002; Kaika & Swyngedouw, 2000; Harvey, 2003). But technological orientalism truly takes hold in the way that it treats its subjects as *other*—it is the lens that views ICTs in the developing world as the vehicles of either liberation and economic prosperity or radicalization and organized violence. Edward Said describes orientalism as "a certain will or

intention to understand, in some cases to control, manipulate, even to incorporate, what is a manifestly different (or alternative or novel) world" (Said, 1979, 90). It is also a political project of domination that both inspired and justified Western colonialism. Technological orientalism as a method of representation serves contemporary forces of domination, such as neoliberalism, discussed at greater length below.

Technological orientalism also quietly creeps into studies of the Egyptian revolution in the failure to recognize the socially embedded and temporally contingent uses of technology as well as the uneven distribution of ICT access. As an antidote to digital orientalism, Howard reminds us that the network is "historically constructed," but in a historical moment marked by mediated "excesses," the enveloping inclusivity of the ICT-enabled "network" can be taken for granted. Being connected to the network, or "wired," as I'll occasionally call it later on, is not a universal experience—it is a highly socially and economically differentiated one. Membership as a node in the global network is marked with associative meanings, including modernity, cosmopolitanism, and affluence (Mejias, 2013). Non-membership is representative and, at times, deterministic of exclusion, poverty, and backwardness. And further, "the penalty for being outside the network increases with the network's growth because of the declining number of opportunities in reaching other elements outside the network" (Castells, 1996, 71). Moreover, connectedness is not always a *constant* state. Although mobile telephony, and particularly mobile broadband, have made connectivity more ubiquitous, one's status as a network node is spatially, socially and economically conditional.

However, as Mejias (2009) argues, "nodocentrism," or a fetish-like valorization of network membership can result in an extreme other-ing of what lies outside the network, to the point at which phenomena outside the network are perceived to not exist. As I will go on to explore in other terms, nodocentrism has ramifications for how the Egyptian revolution is remembered and archived.

Mejias therefore urges us to look at the "paranodal"—what lies outside the network but still plays a role within it. In the context of the Egyptian revolution, the importance of so-called paranodes was made apparent in the multitudes of people who occupied Tahrir Square without a Facebook account or a smartphone. Indeed, the fetishization of ICTs can lead to observations that focus exclusively on a single dimension of technological mediation, for instance the *online* to the exclusion of the *offline*. I would suggest that the most insightful analysis situates itself in the space *between*, embracing multi-dimensional activities between the virtual and the material, the online and the offline, the wired and the non-wired, of which none are true binaries. "It is only in the paranodal where disidentification can take place and alternative subjectivities can emerge" (Mejias, 2009, 13). This betweenness is difficult to capture and study because it is fundamentally antithetical to fixity; rather, it is always in motion. If we can look beyond the fetishization of the "new" and the value-laden assumptions of technological orientalism, the Arab Spring reveals that movement *between* dimensions and scales is not only the prevailing experience of everyday life in the digital age but also a precondition for revolution and a zone of agency, or even resistance. In understanding what kind of impact socially embedded ICT use has on a revolutionary moment or our everyday lives, we must consider mobility.

Trans-dimensional Mobility, Resistance, and Revolution

Almost by definition, revolutions are contingent on movement, and the mass encroachment of people in public space is often key component of revolutionary moments throughout history (Tilly, 2000). The Arab Spring, and the Egyptian revolution specifically, should challenge the limitations we had previously imagined for movement and the bounded spaces in which that movement occurs. The Egyptian revolution was significantly shaped by movement—social movements and street mobilizations, yes—but also the social,

political, spatial, physical, and technological property of mobility. From a technological perspective, the Egyptian revolution raises questions about how the transdimensional encroachments facilitated by ICTs in virtual and physical spaces might constitute resistance and instigate revolution in the digital age.

To answer this question, this thesis is greatly informed by the theoretical and methodological innovations of the "mobilities turn," which "enables the 'social world' to be theorized as a wide array of economic, social and political practices, infrastructures and ideologies that all involve, entail or curtail various kinds of movement of people, or ideas, or information or objects" (Urry, 2007, 18). It is a response to the observation that

> the social sciences have still failed to fully recognize how the spatialities of social life presuppose, and frequently involve conflict over, both the actual and the imagined movement of people from place to place, event to event. (Hannam, Sheller, & Urry, 2006, 4)

The mobilities turn takes up movement as an object of study rather than treating it merely as a transient condition incidental to other phenomena, and in so doing, it takes an interest in the technological developments in transportation and communication that facilitate movement (Sheller & Urry, 2006; Hannam et al., 2006; Cresswell, 2010; Urry, 2007; Sheller, 2008).

Thus, for studies of media and society, the mobilities turn offers valuable insights, as in the words of Sheller and Urry, "[a]ll the world seems to be on the move" (Sheller & Urry, 2006, 207). Technological innovations in the digital age have contributed to the creation of a "space of flows" and "liquid modernity" (Castells, 1996; Bauman, 2000), a fluid experience of space and time that is underpinned by intersecting and overlapping *mobilities* in transportation, communication, technology. Grappling with mobilities "involves examining how the transporting of people and the communicating of messages, information and images may overlap, coincide and converge through digitized flows" (Urry, 2007, 9). Importantly, the mobilities turn challenges a fixed, discretized, or binary

understanding of space—spaces can be simultaneously local *and* global, virtual *and* material, present *and* absent, and being *between* dimensions has important spatial implications as well.

Some early analyses on the Egyptian revolution reveal the value in conceptualizing space in this way. The intense technological mediation of the revolution immediately called into question its spatial fixity. Helga Tawil-Souri observes that "[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, 2012a, 165). Adel Iskander writes that while he was protesting in a physical, geographically inscribed Tahrir Square, "I convinced myself that while most Egyptians were in their homes and chose not to take to the streets to mourn their fallen brethren, they were all unanimously supportive of their cause. They all lived in a virtual Tahrir" (Iskandar, 2012, 146). And drawing parallels between the Egyptian revolution and the global "Occupy" movements, Paulo Gerbaudo observes that "Facebook messages and activist tweets have contributed in constructing a new sense of social centrality, focused around 'occupied squares', which are thereby transformed into *trending places*, or venues of *magnetic gatherings*, with a great power of emotional attraction" (Gerbaudo, 2012, 13). These accounts recognize Tahrir Square and the mobilizations of the Egyptian revolution as simultaneously material and virtual, local and global, actual and symbolic. They affirm an observation made by geographer and spatial theorist Doreen Massey:

> Precisely because space on this reading is a product of relations-between, relations which are necessarily embedded material practices which have to be carried out, it is always in the process of being made. It is never finished; never closed. Perhaps we could imagine space as a simultaneity of stories-so-far. (Massey, 2005, 9)

This kind of spatiality, contingent on movement, already pervades our conceptions

of the Egyptian revolution, pointing to a pressing need to grapple with movement and wanderings *between* not only physical places but also immaterial dimensions.

Rather than leading us down the path of technological determinism or orientalism, the mobilities turn recognizes that the fluidity of our modern lives does not liberate and mobilize all people and activities. Indeed, "[t]here is no linear increase in fluidity without extensive systems of immobility" (Hannam et al., 2006, 3). Technologically enabled mobility is uneven, and disparities in mobility are often obscured by the unprecedentedly large information and transportation flows that typify liquid or supermodernity. They are therefore also bound up in the creation and maintenance of power (Graham & Marvin, 1996, 2001).

> People who move and act faster, who come nearest to the momentariness of movement, are now the people who rule. And it is the people who cannot move as quickly, and more conspicuously yet the category of people who cannot at will leave their place at all, who are ruled. (Bauman, 2000, 119-120)

In other words, for certain things, people, or ideas to be put in motion, other things, people, and ideas must be fixed (Harvey, 2001). Seen through this lens, the Egyptian revolution can be analyzed as the product of an active contestation between mobilities and immobilities, which may be structural, social, economic, or political. If we take mobility between the online and the offline as a point of departure, we must situate that mobility within a landscape of other, alternative mobilities as well as contravening immobilities. We therefore need to expand our definition of politics to encompass the politics of mobility and access (Massey, 1993).

To ICT users, who are the focus of this thesis, everyday life entailed a constant exposure to certain immobilities—social inequality, spatial ghettoization, entrenched authoritarian leadership—seemingly inconsistent with their increasingly mobile experience of supermodernity. In the revolutionary moment and throughout the years that followed, these immobilities were met

with what I call "transdimensional mobility," the ability to move communicatively between, across, and through virtual and material spaces, the online and the offline. Of course, as I will go on to address, transdimensional mobility creates and is predicated upon certain immobilities as well. Transdimensional mobility enables the creation of transdimensional spatialities, which are neither wholly virtual nor wholly physical—they are interstitial spaces in which these dimensions co-extend. For those with access to ICTs, the years leading up to the 2011 revolution brought a strengthening and expansion of their transdimensional mobility with growing Internet penetration and improved connectivity. The intense technological mediation of the revolutionary moment confirmed transdimensional mobility as an integral component of the revolutionary story, and as later chapters will go on to show, it has important explanatory power in making sense of scope and limitations of the transformative role of ICT use in Egypt during the aftermath of the revolution. Although transdimensional mobility proved a powerful tool of resistance against certain longstanding immobilities that had sustained President Mubarak's 30-year rule, it was contingent on and creative in other immobilities that would become more apparent in the years after revolution.

The Egyptian revolution demonstrated clearly that exercising mobility in the face of immobility can become a form of resistance. Urry observes that "[m]oving between places physically or virtually can be a source of status and power, an expression of the rights to movement either temporarily or permanently" (Urry, 2007, 9). Millions asserted the right to movement in Downtown Cairo during the Egyptian revolution, and the subsequent clashes between security forces and protesters in the months and years ahead represented a violent struggle over the liberties and restrictions of movement—geographically in the streets and politically in the halls of power. That mobility can constitute a form of resistance may not seem remarkable in the context of revolution. Millions of people moving en masse into Tahrir Square exerted obvious pressure on the ruling regime. Mobility in the face of imposed or forced immobility is

rebellious and subversive. However, transdimensional mobility can constitute or facilitate a more tacit form of everyday resistance beyond the physical mobility of people and objects in material space. The revolutionary moment drew attention to the breaking point, the boiling over into large-scale mobilization, but as the revolutionary moment passed, overt and quiet resistance against certain immobilities continued. Here, transdimensional mobility plays an important and understudied role. Subverting physical immobilities may involve virtual mobilities, and resisting virtual immobilities may involve physical movement. In an unusually clear example from the 18 days of protests that toppled President Mubarak, a government-enforced Internet and mobile phone blackout, which paralyzed most channels of technological communication, prompted a flood of new protesters taking to the streets. They were motivated by shock and indignation at being cut off from communication as well as a desire to continue communicating and witnessing, activities that were now *only* available to those who could be physically present.

Using this framework, we can understand the context for revolution as one of mounting political, economic, social, and spatial immobilities in confrontation with converging mobilities of people, technologies, and data. I would like to emphasize, however, that to treat mobilities and immobilites as dichotomous and entirely distinct from one another would be misleading. Conditions of mobility and immobility co-create one another; in fact, they exist only in relation to each another. The Egyptian revolution was a rupture with the past, but it was not a political moment without history. In order to contextualize the ICT-enabled mobilities that followed the revolution, it is crucial to situate the events of 2011 within the trajectory of both resistance to the ruling regime and ICT developments.

The Road to Revolution: A Recent History of Politics and Communications Technologies in Egypt

By 2011, President Hosni Mubarak had ruled Egypt for over 30 years. His form of liberalized authoritarianism relied on limited and insubstantial gestures toward participatory democracy alongside largely neoliberal economic policies built on the legacy of President Anwar Sadat's *infitah* (Kandil, 2014). Mubarak's ruling National Democratic Party (NDP) controlled all branches of government, and until a narrow electoral opening in 2005, it won repeated landslide victories in sham parliamentary elections (Meital, 2006). Under this regime, conditions for opposition parties and movements, civil society, NGOs, and human rights organizations were far from favorable. These groups faced severe legal restrictions, arbitrary raids and arrests, unpredictable periods of prohibition, and other challenges, which all contributed to a shifting political landscape of immobilizing repression. As a result, active and visible opposition to the ruling regime was all but non-existent (Langohr, 2004). However, opposition to Mubarak's rule was bubbling beneath the surface, alongside reforms and developments in the country's telecom sector.

The politics of revolution that emerged in 2011 would both subvert earlier dynamics of opposition and also succumb to them in certain crippling ways. In 2011,

> the 'barrier of fear' broke down completely with the occupation and defense of iconic Tahrir Square, but it had already eroded in the last years of Mubarak's rule as a consequence of opposition's piecemeal transgression of formerly well-established red lines for public political action. (Albrecht, 2012, 31)

As in all local histories of mobility, new mobilities are often facilitated alongside or even on account of immobilities in other sectors of social life, and such was the case in Egypt. Mubarak's version of neoliberal rule would place restrictions on

political expression at the same time that it encouraged and enabled advances in the ICT sector. It would usher in an era of debilitating income disparity and unchecked cronyism that effectively reserved economic opportunity for a privileged elite even as it cultivated a generation of entrepreneurial young professionals. So when the revolution arrived, it was the product of converging political and technological developments during the previous decades.

Egypt's telecommunications sector transformed rapidly in the 1990s. The first Internet connection linked the Egyptian Universities Network to France in 1993, and by 1994, Internet connections were available to the Egyptian professional class. In 1997, Internet providers began to privatize (Saleh, 2010, 183). The first cellular network in Egypt was established under the name Telecom Egypt (formerly the Arab Republic of Egypt National Telecommunication Organization, or ARENTO) in 1996, and the industry opened to private sector competition the following year. Initially, mobile services were managed by the state provider Telecom Egypt under its subsidiary, the Egyptian Company for Mobile Services. In 1998, the government sold a license to the Misrfone consortium, which would ultimately trade under the UK's Vodafone brand, and the French MobiNil consortium also bought a license in the same year, creating an effective duopoly in the mobile telecom sector until 2006, when UAE-based Etisalat purchased a license. Competition for Internet service provider (ISP) licenses opened in 1996 as well, and many ISPs emerged as a result. This competition in the sector dramatically increased public access to mobile phones and the Internet. However, in all cases, the mobile operators and ISPs were ultimately beholden to Telecom Egypt and had little maneuverability without collaborating with the state operator and utilizing its infrastructure (Saleh, 2010). The sudden growth in access to ICTs played an important role in the changing economic and political landscape in Egypt, but that role should also not be overstated. ICT access in Egypt, as elsewhere, was simultaneously a product of political maneuverings and a factor in political change.

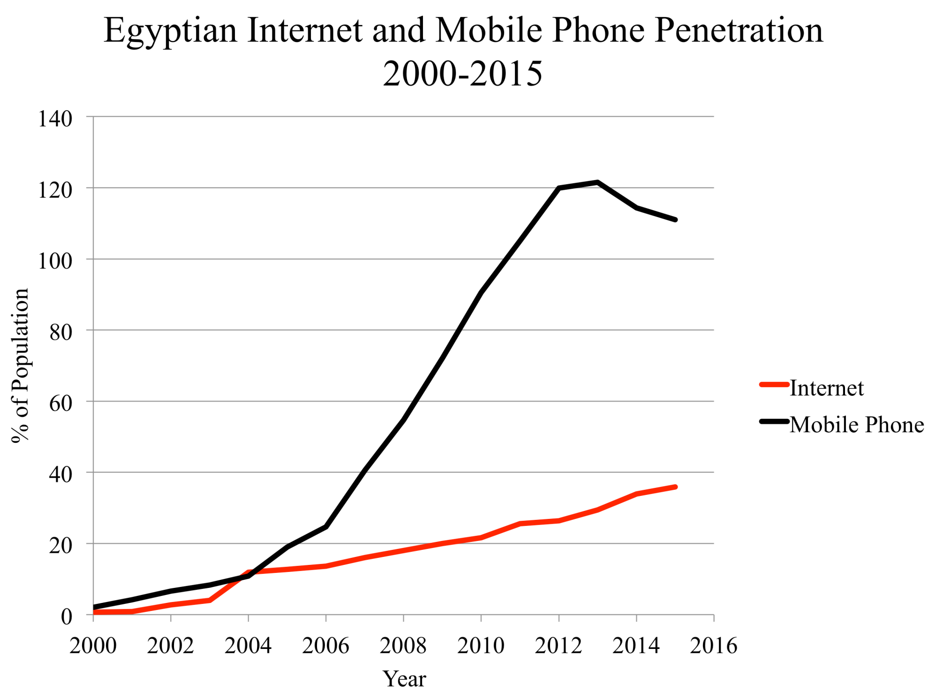


Figure 1.2: Internet and mobile phone penetration in Egypt, 2000-2015. Data from the International Telecommunications Union: http://www.itu.int/.

As this thesis will go on to explore, ICT development and access have proceeded unevenly, and questions regarding *for whom* and *by whom* the telecom industry expanded run through this analysis. As a harbinger of globalized modernity, telecommunications have been at the forefront of national economic growth strategies, and they have been the focus of both privatization schemes and scuffles for state control. From the beginning, ICTs were introduced within elite institutions and circles and in economically central jurisdictions, so the earliest users were predominantly members of the upper and middle classes. Indeed, as Harvey observes, "[i]n general, the paths of technological innovation and application have had innumerable democratizing possibilities, which have been largely diverted to ensure the perpetuation of existing power centres, both socially and geographically" (Harvey, 2003, 23). The geographic and institutional spread of access continues to play an important role in ICT usage patterns and also the

aspirational narratives surrounding ICT access.

As Figure 1.2 shows, although the term "ICT" provides a useful description of many of the technologies broadly considered to be "new media," it often requires further disaggregation. Access to the Internet and mobile phones has grown dramatically, but mobile phone penetration has vastly outstripped Internet access due to its ubiquity and affordability. In Egypt, where infrastructural limitations have impeded fixed line Internet growth, mobile ICTs have granted the most access to the widest range of users.

With Internet access and mobile telephony came new computer-mediated communicative opportunities in the form of text messaging, web publishing platforms, chat rooms, and other many-to-many media. They connected users with a global network of information and, importantly, activism. As in the past, technology use and media consumption (and now production) became defining features of personal identity. In the age of the Internet, blogging emerged as a significant medium for personal expression and ultimately, political mobilization (Faris, 2013). Writing about personal blogs in Egypt, Weyman observes:

> Brought up on satellite television, the new medium through which this generation seeks self-definition is increasingly one which offers privacy cinema goers of the 90s could have only dreamed of: the internet. Central to the internet's allure is a capacity for social exploration, uncensored by either state or family. (Weyman, 2007)

Blogs became an important expressive outlet for the young Egyptian middle classes, where young people could write in vernacular language without linguistic or moralistic gatekeepers. Despite only reaching this particular segment of the population, these young and affluent Internet users became an influential counter-public, in part as a result of their socio-economic position (Hirschkind, 2011; Jurkiewicz, 2011). As the trajectory of political opposition under Mubarak reveals,

> much of the new energy in Arab politics comes from relatively small

> groups of activists, a technology which empowers their efforts could have a disproportionate impact even if it does not reach a mass base. (Lynch, 2007)

Alongside technological developments, the political landscape was constantly shifting, with significant oppositional currents gaining momentum. In his study of political opposition during the Mubarak era, Holger Albrecht identifies three types of opposition that coexisted in a precarious relationship with the state prior to revolution: loyal opposition, tolerated opposition, and anti-system opposition. Particularly among the tolerated and anti-system opposition, ICT access provided new tools for communication and coordination. In Albrecht's assessment, the loyal opposition refers primarily to political parties, which contested elections and participated in government alongside the ruling NDP. Parties faced heavy restrictions, making it difficult to register or run in elections, and vote rigging and election fraud were rampant (Albrecht, 2012, 43). Prior to 2005, Egypt had never held multi-party presidential elections, and the National Democratic Party had won landslide elections for the National Assembly, with a handful of seats won for other parties, including the New Wafd Party, the Progressive National Unionist Party, the Ghad Party, the Arab Democratic Nasserist Party, and independents.

Among the tolerated opposition, Albrecht groups human rights NGOs and certain protest movements, including *Kifaya* and labor unions, which the government often chose to co-opt or engage in perfunctory dialogue. *Kifaya* (meaning "enough!" in Arabic) began as a group of young, educated, and technologically "connected" activists. The group held its first silent demonstration on December 12, 2004, demanding a transition to democracy and expressing opposition to Mubarak's presidency and the expected succession of power within the Mubarak family. "Moving from street protests in city centres to informal mobilisation in working-class areas of Cairo [...] they undertook 'guerilla' actions in which timing and assembly points were organised through text messaging and

the Internet" (El-Mahdi, 2009, 90). *Kifaya* inspired numerous other youth groups to materialize in the early 2000s, facilitated by digital communication platforms and an increasingly active Egyptian blogosphere (Malky, 2007; Faris, 2013). It emerged closely on the heels of the Palestinian Intifada solidarity protests in 2000 and anti-Iraq War protests in 2003 (El-Mahdi, 2009, 93). Although many of these actions—anti-war and labor protests, for example—were met with state repression and violence, and *Kifaya* ultimately fractured and faded from view, these oppositional movements laid the groundwork for what was to come in 2011. Albrecht writes:

> Whereas Kifaya itself was never a revolutionary movement, it helped to construct the social and organizational infrastructure for a revolution in the making: by showing that street protest was possible, by providing an opportunity for the politicization of a younger generation of activists, and by providing an example for both success and failure in street politics and mobilization tactics that contributed to learning and experience of the opposition. (Albrecht, 2012, 82)

By 2010, there had been no legal strikes in Egypt since 1954, as strike action could only take place under very proscribed circumstances and with prior approval of the Egyptian Trade Union Federation (ETUF) (Beinin, 2009, 69). But unsanctioned strikes had been a common feature of labor politics in Egypt, and the early 2000s ushered in a historic surge. Between 2004 and 2009, strikes became "the largest social movement Egypt has witnessed in over half a century" (Beinin, 2009, 77), bolstered by the example of *Kifaya* protests, which had breached a longstanding red line in political participation. One particular series of strikes during this period found renewed notoriety during the 2011 protests—the massive strike action that took place at the Misr Spinning and Weaving Company in Mahalla al-Kubra. In December 2006 and September 2007, massive strikes broke out in Mahalla al-Kubra, and in both cases the government ultimately capitulated to some of the workers' demands. Beyond the factory walls, solidarity movements

were also materializing, aided by online activists, like Karim al-Buhayri, whose blog *Egyworkers* began to mobilize youth around labor issues (Beinin, 2007). In 2008, the Mahalla al-Kubra workers called for another strike on April 6th, and this time, two tech-savvy activists, Ahmed Maher and Esraa Abel Fattah, launched a Facebook group in solidarity that would become the digital inception of the April 6th Youth Movement, whose black flags bearing a clenched fist would be hoisted over a sea of protesters in Tahrir Square in 2011 (Iskander, 2011; Wolman, 2011). For observers of the Arab Spring in Egypt, the April 6th Youth would become a household name.

Ultimately, the solidarity protests in Cairo on April 6th were small-scale, but the movement did not disappear. The popularity of the Facebook group made its organizers targets of the security services, and on the day of the solidarity protests, Esraa Abdel Fattah was arrested and detained, later to be released. The group attempted to organize further protests, and Ahmed Maher was also arrested, detained, beaten, and released on several occasions. Although some bloggers had faced charges and incarceration in the recent past, the April 6th Youth seemed to have triggered a new awareness of cyberactivism and the threat it might pose to the regime (Wolman, 2011). In their own right, the labor strikes that swept Egypt during the first decade of the 2000s sent a shock wave through the Egyptian government, and they revealed many of the widening cracks in the regime's economic policies. However, they also happened to align with a small but significant expansion of online activism as a result of increased Internet access. The effect of these pro-democracy and labor solidarity movements was to inspire and train a new generation of political activists in organizing tactics, aided by communication technologies. Many of the figureheads of the 2011 revolution were "repeat offenders" when it came to both online organizing and street protests.

Finally, in Albrecht's classification, the anti-system opposition included the various strands of the Islamist movement and the Muslim Brotherhood, in particular. According to Albrecht, "[t]he Muslim Brotherhood has been, since

its inception, the main source of trouble for those who controlled the state in Egypt," and it has remained perhaps the most organized opposition in the country (Albrecht, 2012, 99). The legacy of Islamist opposition would be felt after the 2011 revolution; as Gerbaudo (2013) notes, Islamists would achieve greater (if short-lived) political gains due to their organizational strength in comparison to various ICT-mediated and ideologically "leaderless" pro-democracy movements after the revolutionary moment. During the same period in which Egypt was witnessing a remarkable upsurge in small protests and large strikes prior to the revolution, an experiment with slightly more lenient electoral rules allowed the Muslim Brotherhood to win a substantial number of seats in parliament in 2005, and their new electoral mandate gave the group a platform to demand an end to the longstanding Emergency Law and the practice of detaining and prosecuting civilians in military courts (Meital, 2006). These demands aligned closely with the interests of many pro-democracy advocates, and demonstrations and sit-ins, aided and organized online, occurred throughout that year in opposition to these deep-seated grievances (Abdelrahman, 2009).

However, the Muslim Brotherhood's electoral victory was met with almost immediate countermeasures and crackdowns from 2006 onward, including widespread arrests of Muslim Brotherhood members and violence directed toward demonstrators (Albrecht, 2012, 114). These political issues would linger in the political imaginations of activists of all stripes, from *Kifaya* veterans to Muslim Brotherhood parliamentarians, and their legacy would be the #NoMilTrials movement in 2011. The bright yellow posters and stickers of the #NoMilTrials movement, proclaiming "لا" ("no!" in Arabic) to military trials for civilians, became a sort of membership badge in the ongoing revolution both online, on personal Facebook pages and websites, and offline, in the streets and in office buildings and homes. While the popular hashtag and accompanying social media campaign against military trials may have given the impression that the inception of the movement could be traced only as far back as the breaking of the barricades

during the 18 days, the solid red lines prohibiting demonstrations and political debate had been gradually, if imperfectly, eroded in the years prior. When the protesters in Tahrir Square took up their mobile devices and issued their demands for social justice and democracy, it was because these were the ordinary, everyday technological tools at hand, and those were the issues that had preoccupied activists for decades.

For many participants in the 2011 revolution, the physical battles fought in Tahrir Square were both the culmination and commencement of a long road to greater freedom. Egyptian novelist Adhaf Soueif writes in her account of the "Day of Rage," that

> [t]his is the reality that we've been living for decades, finally risen to the surface. At last our capital reflects the true condition of the country and of our lives: burned and broken and almost ruined. And now we'll have to save it. (Soueif, 2012, 40)

The 18 days of protest exposed a regime of continuous exclusion, repression, and violence, as images and independent accounts of events were transmitted on televisions, text messages, phone calls, and Internet platforms. But the methods of dissemination, much like the politics of revolution, were not entirely unique to the revolutionary moment. As even this brief overview reveals, the popular movements of the early 2000s widely used social media and online platforms to coordinate (Lim, 2012). The popularity of political blogging, for instance, grew in response to the limited success of movements like *Kifaya*: "[t]he crucial point is that Kifaya and political blogging developed symbiotically in Egypt—Kifaya providing a purpose for bloggers to write, and bloggers giving Kifaya an outlet to take root" (Malky, 2007). The technologies of communication that became such central actors in the developing political drama of 2011 had co-evolved with their uses and users, and on a material and symbolic level, they had also been the product of specific commercial and political decisions and circumstances.

A Revolt Against Neoliberalism

The political and technological developments in the years preceding the 2011 revolution were interconnected by more than simply a coincidence of timing and an alignment of political and communicative opportunity. Together, they were very much the product of a pervasive regime of neoliberal economic reform that had shaped Egypt's technological, economic, and political future since the 1970s. To date, few efforts have been made to specifically connect the technological narratives of revolution with the neoliberal forces that created the conditions for revolt. However, the aftermath of the revolution has ushered in a re-entrenchment of neoliberal politics, facilitated in part by growing ICT penetration and promise. As such, the neoliberal state and the user-empowering technologies of the digital age are inextricably linked in both infrastructure and imagination and deserve greater attention. Gradually, neoliberalism opened Egypt to global private investment, realigned Egypt's foreign policy and market orientation with that of the United States and Europe, transformed the country's built urban environment, introduced new communications technologies for commercial and personal use, and institutionalized a regime of economic and political abstraction.

Neoliberalism is an unwieldy concept to bring to bear on technology and the Arab Spring because it encompasses simultaneously "an ideology, a mode of governance and a policy practice" (Steger & Roy, 2010, 11). It is also a concept most often invoked by its detractors, so using the term "neoliberalism" has actually come to signify a critique in academic literature and popular discourse. However, such negative implications do not necessarily diminish its usefulness because neoliberalism is, in fact, also the target of a great deal of active resistance and antagonism, particularly in the developing world. Broadly speaking, neoliberalism is an abstract economic model, translated into a package of economic reforms, urged by supranational institutions like the International Monetary Fund (IMF) and the World Bank and by core economies like the United States and European Union, which is aimed at opening up global markets and increasing competition.

In many cases in the developing world, these reforms have been only partially and imperfectly implemented under pressure from international institutions and foreign states, and Egypt is no exception (Mitchell, 2002).

David Harvey describes neoliberalism as

> in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices. (Harvey, 2005, 2)

Practically, for Egypt, this translated into a stuttering transition from state-driven economic growth toward market-driven flexible accumulation by way of structural adjustment, a policy package that typically bundles free market rules, the withdrawal of the state from industry, curtailing government expenditures, privatization, lifting restrictions on capital flows, encouraging foreign trade, and floating exchange rates (Farah, 2009, 20). This process did not spell the complete retreat of the state, and ultimately, neoliberalism can be highly interventionalist, as Harvey's definition implies. Importantly, technological progress and development have always consistently been seen as integral parts of neoliberal economic policy and its associated abstractions, globalization and capitalism. In fact, Kellner (2002) characterizes the unique configuration of technology and broadly neoliberal agendas as "technocapitalism," to mark the crucial integration of computerization and ICTs into economic ideology and practice.

Egypt's neoliberal turn began under President Anwar Sadat in 1974, with the implementation of a program of reforms, collectively referred to as the *infitah* ("opening" in Arabic), aimed at recovering Egypt's struggling economy by inviting foreign investment. Although Sadat's *infitah* laid the groundwork for further neoliberal reforms, it was Mubarak's Egypt that truly became a paragon of the

neoliberal state in the Middle East (Farah, 2009; Armbrust, 2011; Abdelrahman, 2014). As the state withdrew from industry and state welfare provisions were scaled back, a new elite—drawn primarily from the ranks of the Egyptian army and the ruling NDP—emerged (Farah, 2009; Joya, 2011). Armbrust observes:

> The only people for whom Egyptian neoliberalism worked 'by the book' were the most vulnerable members of society, and their experience with neoliberalism was not a pretty picture. (Armbrust, 2011)

Evidence of the uneven and disenfranchising effects of neoliberal policies could be felt in the waves of riots and labor unrests during the Mubarak years. Even as Egypt became integrated into processes of globalization and capital became more mobile, neoliberalism created greater income inequality, increasing informalization of labor and economic activity and resulting in both ghettoization and spatial transformations as the state invested in urban development (Farah, 2009). The immobilities imposed on Egypt's poor and working class sparked resistance in the form of labor strikes, which accelerated in the early 2000s (Beinin, 2009; Alexander, 2011; El-Mahdi, 2011; Alexander, Bassiouny, & Sroka-Miller, 2014).

The project of developing Egypt's media infrastructure, the material foundation of the country's media landscape, proceeded in conjunction with the political and economic priorities of the neoliberal state. Access to ICTs and the networked connections they enable was part of a neoliberal vision from the outset, so while neoliberal policies created the exclusionary and disenfranchising conditions for revolt, they also put in place much of the communications infrastructure that would underlie the digital tools heralded as catalysts for grassroots democratic change. Kellner (2002) refers to these contradictions as the "objective ambiguity" of globalization:

> To some extent, the new technologies *are* revolutionary and *do* constitute a revolution of everyday life, but it is often a revolution

> that promotes and disseminates the capitalist consumer society and involves new modes of fetishism, enslavement, and domination yet to be clearly perceived and theorized. (Kellner, 2002, 299)

In order to cultivate an economy compatible with the forces of globalization, Egypt needed to be communicatively connected and its telecommunications marketized. As in other sectors, IT development advantaged certain groups of people disproportionately, especially the middle class and what Saleh calls the "globalization elite," who are "a set of English-speaking wealthy entrepreneurs with close connections to companies in the core economies" (Saleh, 2010, 124). An entrepreneurial middle class of "highly educated computer scientists, engineers, and managers whose social status was tied to IT adoption" would also become both a product and a key driver of a broader neoliberal agenda (Saleh, 2010, 22). Many of the young, tech-savvy organizers and activists of the 2011 revolution would be drawn from this broadening entrepreneurial elite, and in the years following the revolution, the rhetoric of revolutionary change would serve and inspire a revival of entrepreneurial discourse, in the figure of the activist-entrepreneur (as discussed in Chapter 5).

The ICT sector has also served neoliberalism as ideology, and the promise of ICT-enabled connectivity readily coalesces with the virtualism of the globalized economy. After all,

> [n]eoliberalism is a success of the political imagination. Its achievement is a double one. It makes the window of political debate uncommonly narrow and at the same time promises from this window a prospect without limits. (Mitchell, 1999a, 455)

Technological narratives of liberation, so prominent in discourses about the Egyptian revolution, share a conceptual heritage with neoliberal rhetorics of economic opening and prosperity. Paradoxically, the political resilience of neoliberalism depends on its virtualism (Carrier, 1998; Miller, 1998); between

the reality and the rhetoric, neoliberalism is a regime of liminality that is conceptualized as somehow inescapable.

> Like the globalization rhetorics with which they are elided, discourses of neoliberalism have proved to be so compelling because, in representing the world of market rules as a state of nature, their prescriptions have a self-actualizing quality. (Peck & Tickell, 2002, 382)

Neoliberalism and technological optimism serve one another as abstractions, whose conceptual power has the ability to outstrip the empirical evidence of their successes and failures.

In many ways, the 2011 revolution was a culmination of decades of discontent with President Mubarak's neoliberal agenda. Neoliberal Egypt had instigated years of social movements and unrest that laid the groundwork for the 2011 revolution, and it had also supplied the communicative infrastructure and cultivated the IT expertise that would help to mobilize it. Thus, the revolution and its aftermath should be understood as products of an ongoing dialectic between the mobilities and immobilities of everyday life under a regime of technologically enabled neoliberalism.

Liminal Spaces, Liminal Times

As the previous section suggests, the concept of liminality—the state of being *between*—can be useful in making sense of the liminal conditions that pre-dated the revolution as well as the period of prolonged liminality that followed the downfall of the Mubarak regime. The Egyptian revolution implicates liminality on multiple scales and in multiple dimensions, and a spatial understanding of liminality helps to explain the ICT-mediated traversals that enable transdimensional mobilities (and associated immobilities). In defining liminality, Wydra, Thomassen, and Horvath (2015) explain:

> Originally referring to the ubiquitous rites of passage as a category of cultural experience, liminality captures in-between situations and conditions characterized by the dislocation of established structures, the reversal of hierarchies, and uncertainty about the continuity of tradition and future outcomes. (Wydra et al., 2015, 2)

Revolution is therefore often theorized as a liminal event, resulting in transitional circumstances that place individuals and societies into states of confusion and ambivalence, where both opportunities and dangers are many (Szakolczai, 2015). In fact, Peterson (2015) describes the Egyptian revolution as just such a moment:

> After Tahrir Square, Egypt entered an extended liminal state betwixt the structural coherence of the former regime and whatever new normal would ultimately emerge. One defining aspect of liminal states is the tension they pose between possibility and danger, that is, hope and risk. The desire of those favoring a swift shift to order and predictability to avoid the political, social and economic risks this ambiguity posed was as real as many others desire to keep the revolution going in hopes that a much better future for Egypt was yet attainable. (Peterson, 2015, 179)

At such moments of transition, "the normal limits to thought, self-understanding and behaviour are relaxed, opening the way to novelty and imagination, construction and destruction" (Thomassen, 2014, 1). Indeed, the post-revolution period demonstrates the relaxation of limits, illustrated in political, social, economic, and spatial spheres, as people renegotiated their relationships with one another and with the state. The notable increase in physical *movement* of people in and through public spaces in the immediate aftermath of revolution was an observable indication of liminal conditions.

However, liminality also conditioned the revolution, as an experience intrinsic to modernity itself (Thomassen, 2014; Szakolczai, 2000). In particular,

liminality can become permanent when "[t]he institutions constituting a society were created to deal with an extraordinary situation only to later become permanent. In a way this is normal and could not be otherwise, but the experience of being 'stuck in liminality' is also highly critical" (Thomassen, 2015, 54). In the project of maintaining an authoritarian state and implementing neoliberal economic policies (which are themselves imperfectly situated between state control and privatization), such a permanentization of liminality could be encapsulated in, for instance, Egypt's longstanding Emergency Law and its arbitrary administration. The structural machinery of repression that sustains perpetual liminality, then, can give way to either resignation and despair or indignation and revolt (and indeed many alternatives in between). Moreoever, the quotidian experience of liminality is realized in the interplay of mobilities and immobilities. Mobility—transdimensional and otherwise—can sustain states of liminality or subvert them, but so too can immobility, and the relative mobility of some can result in greater immobilities (and therefore more profound conditions of liminality) for others.

Under such circumstances, we must also consider the spatial experience of liminality as a moving *between*—of passages, of boundary-crossing—and therefore as a possible condition of agency, innovation, and subversion. Many activists would describe the revolutionary moment as a breaking of barriers, a threshold experience. Outside the bounds of ritual or rule, movement *between* entails too much possibility, uncertainty, and contingency. And transdimensional mobility is just such a liminal traversal, involving not only the movement *between* virtual and physical dimensions via ICT mediation but the co-creation of these dimensions, their co-realization. As de Certeau (1984, 127) observes: "This is a paradox of the frontier: created by contacts, the points of differentiation between two bodies are also their common points. Conjunction and disjunction are inseparable in them." Transdimensionality, as not only a crossing of a "frontier" between dimensions but a rejection of the dichotomy that would distinguish them,

is fundamentally liminal, and thus, it offers a useful lens for understanding the ICT-mediated experience of revolution and its aftereffects. As with all liminal experiences, however, these aftereffects are ambiguous and uncertain. For many the 18 days of the Egyptian revolution in 2011 marked the beginning of an extended state of liminality, a transitional moment that gave way to a protracted period of change.

The Egyptian Revolution

Much work has been done documenting what are known as "the 18 days" of revolution in Egypt in 2011. Tracing in detail the exact events day by day and providing a comprehensive historical analysis of the factors that led to revolution is not the aim of this thesis; in a sense, to attempt to do so would be disingenuous, as I was neither present for the 18 days of protests, nor was I, as a recent graduate with a Bachelor's degree, an established expert in Egyptian history when the Arab Spring began. However, what came after the revolution was profoundly influenced by the 18 days, and before discussing my post-revolution observations and analysis, it is essential to set this scene. For an account of the revolution through the eyes of both witnesses and researchers along with analyses of the impetuses for revolution, Abdelrahman's (2014) reflections on the origins of the pro-democracy protest movements, Korany and El-Mahdi's (2012) edited volume, the collection of English-language tweets during the 18 days as curated by Idle and Nunns (2011), Soueif's (2012) passionate articulation of her revolutionary experience, Achcar's (2013) exploration of revolutionary causes and ways forward, the edited volume by El-Mahdi and Marfleet (2009) on Egypt's impending moment of change, Tripp's (2013) analysis of the legacy of resistance in the Middle East, and the work of Albrecht (2012), Hanieh (2013), and Kandil (2014) on the evolution of opposition to the Egyptian state all provide particularly useful insights, to name a few.

A perusal of the literature reveals that the origins of the Egyptian revolution are rooted in discontent that had seethed in various corners of Egyptian society long

before 2011. It was the culmination of compounding grievances, given sudden legitimacy by protests in Tunisia and a specific outlet in the form of a call for protests on Police Day. Support for Wael Ghonim's January 25 Facebook event grew quantifiably online. With the endorsement of established activist groups, such as the April 6th Youth Movement, the National Association for Change, and remnants of *Kifaya*, word spread rapidly in the days leading up to January 25, and just days before protests were scheduled to begin, the online event had over 100,000 confirmed attendees (Ghonim, 2012, 159). On Police Day, thousands of Egyptians protested in cities throughout Egypt, and in Cairo, protesters flooded into Tahrir Square. Security services initiated crackdown on the protests, which resulted in early incidents of violence and arrest. Protests continued for the next two days, as attacks on protesters and detentions increased, but the demonstrations swelled enormously on Friday, January 28. That day, known as the Day of Anger or the Day of Rage, the Egyptian government shut down Internet and mobile phone service, and after Friday prayers, the number of protesters reached the hundreds of thousands. The same day, President Hosni Mubarak made his first televised announcement in response to the sustained protests, in which he refused to step down but announced that he would be dismissing his cabinet (Figure 1.3 provides a day-by-day timeline of events).

By February 2, Internet service had been partially restored, but violent confrontations between protesters and police escalated. Some commentators have pointed to the communications blackout, alongside images of mounting violence and the detention of online activist Wael Ghonim, as mobilizing factors for people who had not yet joined the growing protests (Peterson, 2011b; Iskandar, 2012). February 2 would later become known as the Battle of the Camel, as thugs armed with clubs and knives stormed Tahrir Square on horses and camels to attack anti-government protesters. Despite reshuffling his government and appointing Omar Suleiman as Vice President, President Mubarak continued to be the target of popular anger. February 4 was deemed the Day of Departure, as hundreds

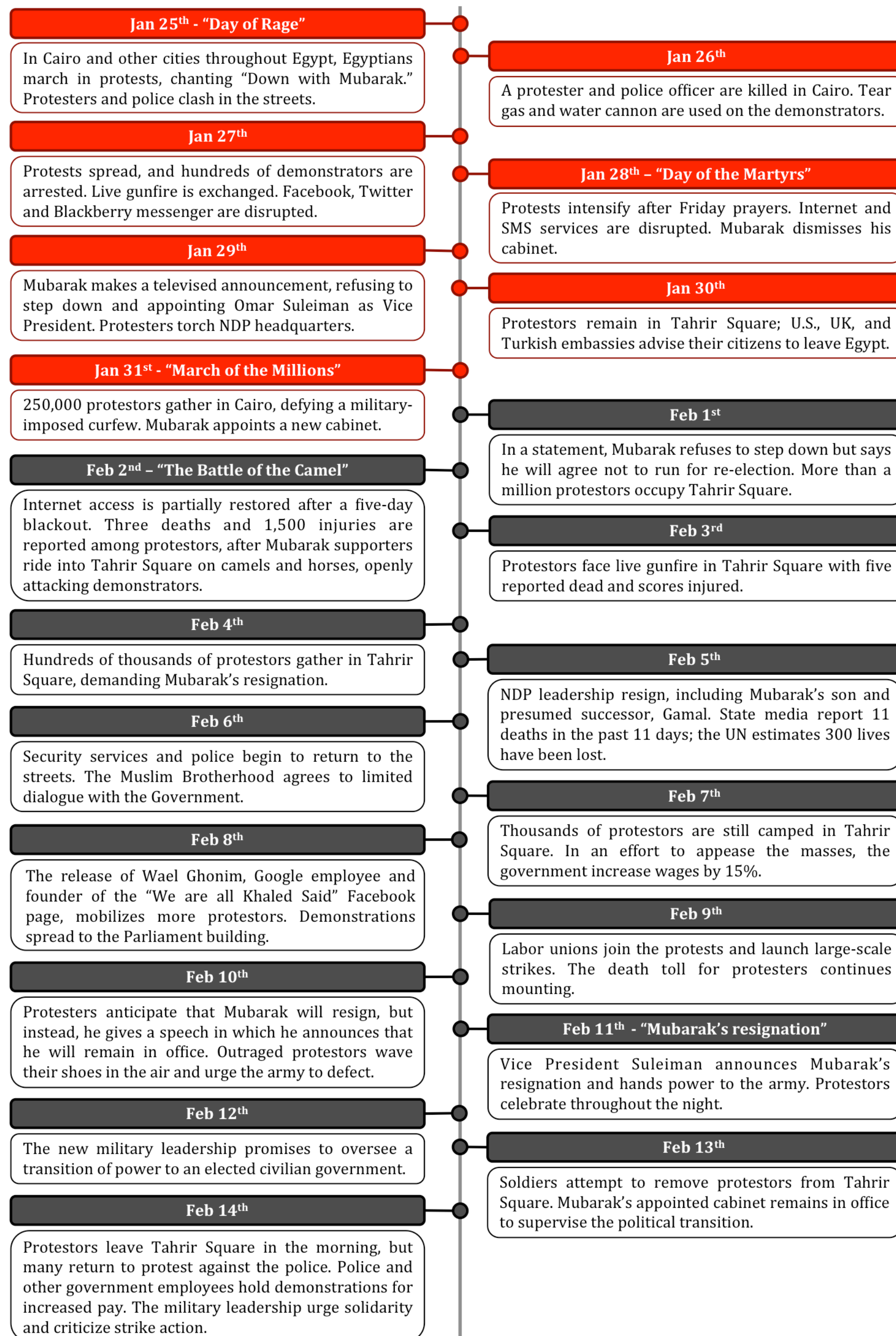


Figure 1.3: Timeline of the 18 days of the Egyptian revolution.

of thousands of protesters demanded the president's resignation. By February 9, many other social movements and organizations had voiced support for the demonstrations, including Egyptian labor unions, which launched a campaign of widespread strikes throughout the country. On February 10 Mubarak issued another announcement, in which he shocked protesters by refusing to step down and instead offering to hold elections and transfer power to a new leader in September. But on February 11, Vice President Omar Suleiman announced Mubarak's resignation and the installation of an interim government under the control of the Egyptian army.

Over the course of 18 bloody days of protest, the Egyptian state had been irrevocably altered. Questions swirled around the logistics of revolution as Tahrir Square gradually cleared and the proverbial dust settled. How had the revolution started? Who were its organizers? How did they mobilize so many people? What would come next for these activists, the government, and the country?

The 18 days have become the subject of some fixation and fascination; they were brutal, spectacular, and inspiring. As the Arab Spring increasingly fades into history, there is a temptation to treat the 18 days as an isolated event—one which is increasingly viewed as extraordinary and unfulfilled. This period is often viewed by scholars as a question of mechanics: *how* it came about. For revolutionary participants, it has developed its own mythology, a lost utopia. One underlying goal of this thesis is to destabilize the fixation on the revolution as the 18 days and the media storm that surrounded them and to rather look at the revolution as a process and the media ecosystem as an inextricable part of politics, economics, and everyday life. For clarity, I will refer to "the revolution" as the 18 days, and "post-revolution" as the period that followed, despite the imprecision of this distinction. The revolution and the role of technology did not cease to be relevant after the 18 days, and glancing across, between, and through punctuated periods of protest can provide significant insights into technology-enabled resistance. This thesis takes up the question of revolution after Mubarak resigned, and it takes

a longitudinal approach to the aftermath of the Egyptian revolution, looking at technology use over time, with attention turned toward the changing experience of the ordinary in extraordinary times.

Structure of the Thesis

Following the 2011 revolution, there was much anticipation about the ongoing promise of technologically mediated activism and political change. It seemed that a wave of democratic energy had broken in Egypt, and that communications technologies would help carry the populist movement forward in the days and years that followed. My research in Cairo began months after the revolution, in September of 2011, and while much speculation continued to swirl around the causes of revolution, I became interested in the unfolding aftermath and the role of ICT users in the transformations and instability that ensued. Aware that, as Hofheinz puts it, "the heyday of revolutionary activism will pass; everyday life will return" (Hofheinz, 2011, 1427), I began observing ICT use among activists during the post-revolution period, looking for insights into the long-term transformative effects of ICTs. I took a longitudinal approach, meaning that I returned to Egypt for years after the revolution and maintained contact with my informants from afar using ICTs myself. What this process revealed was that while particular ICTs and individual platforms had roles to play as tools and spaces for organization, dissent, and mobilization (Aouragh & Alexander, 2011), ICT use was having a broader transformative and consequential effect on everyday life in the kinds of mobility it enabled—transdimensional mobility *between* the online and the offline. This transdimensional mobility opened up unexpected opportunities for resistance and subversion at the same time that it created conditions for complacency, avenues of escape, and a profound capacity for loss and forgetting.

This thesis is organized into seven chapters. Chapter 2 introduces the mobile methods used to undertake this research into ICT-mediated mobility and the

Egyptian revolution. There is no definitive handbook for conducting ethnographic research during revolutionary times, where the conditions of the field site are constantly in flux. I draw extensively from methodological strategies developed in ethnography for the Internet—in particular, the embedded, embodied, and everyday Internet described by Christine Hine (2015). In this chapter, I consider the methodological implications of mobility, where both the subjects of study and the researcher herself are mobile between physical places but also online and offline spaces. My methodology embraces multi-sited field work to encompass not only different geographic places but also technologically mediated spaces. This chapter discusses the challenges and opportunities inherent in working in a moment of political upheaval and between field sites that are multi-dimensional. The chapter makes the argument that ethnographic methods are well-suited to analyzing the online-offline traversals of activists, artists, and entrepreneurs, all of whom are ICT users and subjects of this research. Such methods are responsive to the field site, reflective, and adaptive and because they have evolved out of a scholarly tradition of "offline" observation and interviewing, aimed at understanding the everyday, even in extraordinary circumstances.

Chapter 3 explores the immediate aftermath of the revolution, when a retreat of the state opened up opportunities for continual street demonstrations and marches, which became an almost daily occurrence. This chapter specifically focuses on the role of mobile technologies, and mobile phones in particular, in facilitating constant movement in public urban spaces. Although much attention during the revolution focused on Internet platforms, this chapter suggests that the ubiquity of mobile phones, as devices enabling transdimensional mobility in the form of ICT-facilitated communication, helped to overcome many of the familiar immobilities of public space, as protesters coordinated, checked in, and navigated the streets using a combination of virtual and "offline" communication. Drawing on research conducted in 2011 for my master's thesis, this chapter illustrates how mobile phones were used to coordinate and provide assurances

to protesters as they moved into the streets; provide a "mobile heartbeat," a vital check-in on personal safety and security; witness and document events; and bridge the digital divide by allowing interpersonal communication between close ties who may or may not have had Internet access. The technological mobility of activists—communicating through mobile phones—augmented their physical mobility in the streets. The observations in this chapter provide an important basis for understanding the ICT-mediated mobilities that would be influential in years to come, where transdimensional mobility was both an everyday experience and imbued with revolutionary connotations and meaning.

After a period of unprecedented physical and transdimensional mobility following the fall of the Mubarak regime, Chapter 4 examines how ICT users engaged in transdimensional mobility in the face of sudden state imposition of immobilizing policies and infrastructure. Between August and November 2013, following the deposition of President Mohammed Morsi, the interim military government implemented a curfew under the Egyptian Emergency Law. This was a re-entrenchment of longstanding policies in a new context; Egypt had been governed under Emergency Law for over 30 years. Originally invoked in exceptional circumstances, emergency law came to be employed in a regime of permanent emergency *rule*, which pervaded everyday life. Although the curfew was a sudden spatial restriction under emergency powers, it highlighted the implications for everyday transdimensional mobilities under emergency rule. Instantly, the liberal mobilities of the post-revolution period were abruptly confronted with forced immobility. As security forces erected physical checkpoints and visibly patrolled the street to enforce the curfew effectively, physical movement was effectively curtailed. But the curfew appeared online, as ICT users documented their immobility on Twitter and the photo-sharing mobile application, Instagram. In documenting their physical immobility and sharing it online, these ICT users challenged their offline immobility with comparatively unrestricted transdimensional mobility. Their ICT-enabled mobility in itself began to constitute

a form of transgression and resistance. In this chapter, I explore how ICT users shared the curfew online, allowing transdimensional onlookers, myself included, to encounter and experience it from afar. Like the revolution itself, the curfew manifested both online and offline. I also raise questions about the nature of resistance and whether everyday, ordinary practices arising out of confinement and boredom can be transgressive. This chapter therefore also reminds us to be careful not to (over-)read resistance into everyday digital practices while also illustrating the value of transdimensional research methods that allow observations in both online and offline spaces, some of which would not have been possible through in-person experience in the physical field.

The curfew and the re-institution of the Emergency Law were representative of a general trend toward the greater exercise of state control, including a new law banning protests, passed in November 2013. Prior to these crackdowns, coordinated social movements of all varieties experimented with the new mobility they could undertake in public space, facilitated by ICTs for coordination, communication, and documentation. The remarkable mobility of people, information, and technologies in public space introduced in Chapter 3 had begun to remake the city—it altered the expectations of many young, elite ICT users, whose relationship with urban space was profoundly shaped by their revolutionary experiences. As a result, many young people were newly invested in and inspired to rejuvenate and remake the city to structurally and socially reflect the victory of revolutionary mobility over immobility. Chapter 5 grapples with how transdimensional mobility informed projects spearheaded by young, ICT-using activists for urban change. The chapter begins by introducing grassroots movements in both Cairo and Alexandria that focused on improving urban space. Ultimately, grassroots movements faded and disbanded with the contracting of public space at the hands of security services. In those cases, the immobilities of offline, physical spaces became insurmountable, even for ICT-using activists exercising trandimensional mobility to organize. However,

the city *was* changing, and this chapter goes on to explore how technological promise and the experience of transdimensional mobility tacitly influenced the revolutionary transformations of urban space but also easily aligned with pre-existing neoliberal urban development agendas. In this context, more organized and formal art and entrepreneurship events partnered both financially and spatially with urban developers. Their efforts continue to attract young people to Downtown Cairo and chart a distinctly transdimensional geography there, which is most easily and comfortably traversed by ICT users.

Chapter 6 offers a reflection on the implications of pervasive digital mediation for remembering the Egyptian revolution. Even at this writing, the memory of the Egyptian revolution is constantly disputed online and offline, so we must critically consider how the multi-media digital "texts" of the revolution are being produced, curated, remembered, and forgotten. The chapter investigates various concerted ICT-enabled efforts aimed at documenting and archiving the revolution to reveal a a powerful politics of deletion that is acting on the digital record of the Egyptian revolution. It also points to the ways in which efforts to save and protect digital artifacts have had to operate between the online and the offline. New media studies often struggle with how to encompass and analyze the in-between spaces, activities, users, and experiences of the digital age. The Egyptian revolution was heavily technologically mediated, producing huge numbers of digital artifacts—photos, messages, tweets, e-mails, Facebook posts, videos, and much more. Chapter 6 looks at the way in which technologically mediated content from the revolution *becomes* the definitive memory of the revolution and interrogates the risks inherent in reading the revolution through a *single* dimension. Transdimensional mobility was a defining characteristic of the revolution and an experience shared by many of its youthful leaders, but it entails movement *between* the online and the offline, so our wanderings in the archives of the revolution must be transdimensional as well.

Finally, Chapter 7 offers some concluding thoughts on the implications of

transdimensional mobility in future paths of resistance and summarizes the findings of the previous chapters. This chapter highlights the ways in which a rapidly changing political climate in the aftermath of the revolution was influential in and transformed by the transdimensional mediations of ICT users.

2 Research Methods in Motion

Researching a Revolution

The study of ICT use in the Middle East is a topic that straddles multiple disciplines and methodological traditions, from media studies to area studies and a great deal in between. Further, the revolution not only exerted irreversible influences on the context in which this research occurred, but it also raised the stakes; it complicated the relationship between researcher and subject, the local field site and global information flows, the revolutionary and the everyday. As a result of both the interdisciplinary nature of this research and the exigencies of the revolutionary moment, a reflective note on methodology is very much in order, and this chapter offers such a contemplation. In what follows, I suggest that ethnographic methods provide a uniquely insightful perspective on the question of how the Egyptian revolution has been technologically mediated and that those methods must be *mobile* and multi-sited, between geographic places but also between virtual and physical dimensions. In the case of the Egyptian revolution, I also argue that a longitudinal approach, which allows the researcher to return to the field over time and observe events both physically and "at a distance," can provide greater depth of

understanding and combat a tendency to sensationalize the revolution as a spatially and temporally confined event.

It is also important to consider the ways in which technological orientalism, discussed in the previous chapter, might manifest in research methodology. Anthropology, after all, has long been predicated on the opposition between "here" and "there" (Gupta & Ferguson, 1997; Caputo, 2000). The tendency to otherize the "there" is a continual concern in anthropological research and forms the basis of orientalist discourse, as articulated by Edward Said (1979). The context of the Egyptian revolution presents countless temptations to otherize, essentialize, and sensationalize. As a moment of political rupture, a revolution raises questions that fundamentally center on *difference*—what is new, extraordinary, *other* about this moment in comparison to moments past and yet to come? In addition, ethnographic methods employed in the aftermath of a revolution engage with subjects who are challenging existing hegemonies, and they are not protected by the comfortable distance of the past or the apparent stability of context (Cornwall & Lindisfarne, 1994). Under such liminal conditions, it is more than usually important to be responsive to changing circumstances while also situating research spatially and temporally and to recognize liminality as a situation that can be both temporary and permanent to varying degrees.

The spectacular scale of the Arab Spring, made instantly global in digital information flows, triggered a stunning demonstration of differential mobility, as academics, journalists, and NGOs from outside Egypt flooded into the country to document events. Such "academic tourists," as Abaza derogatorily calls them, were drawn opportunistically toward the shining example of Egypt's revolution, an apotheosis of difference (Abaza, 2011a). Balancing a multi-sited and mobile research methodology against the valid criticism of superficial and "trendy" analyses is an important objective of digital ethnography and media research methods in the Middle East. If ethnographically informed qualitative methods have often tended toward an exploration of difference, then such a heavily

technologically mediated revolution in the Middle East offers ample opportunities for orientalist discourses to take root.

There are several key methodological strategies for confronting these less productive tendencies, and they capitalize on the inherent strengths of qualitative, fieldwork-based research. Ethnography aims to elucidate everyday life and, as such, offers a methodological antidote to sensationalizing the revolutionary moment. Instead, ethnography should emphasize the everyday within the extraordinary, divulging both how everyday life is shaped by the revolution but also how the revolution was born out of everyday experiences and practices. This perspective is crucial for situating ICTs within a broader historical trajectory that takes into account the preconditions for revolution and the indeterminacy of what is to follow. Further, a mobile methodology that entails movement between geographic places but also between virtual and physical dimensions can destabilize the binary concepts of "here" and "there." The field site can also be *between*. Mobile methods additionally demand a constant reflection on the relative mobility and immobility of the researcher, a recognition of the ways in which the researcher is privileged in her geographic mobility and how her own transdimensional mobility may be similar or different to that of her subjects. Rather than taking a single snapshot of a bracketed moment in the field, research that is also mobile in time allows the field to guide research questions and conclusions and treats the revolution as an event in motion rather than an isolated episode.

Ethnographic Methods for Transdimensional Lives

The field of media studies, and particularly media studies of the Middle East, is characteristically difficult to classify along disciplinary lines. Research in the area of "new media" tends to encompass a wide variety of methodological techniques, inspire considerable debate, and resist the constraints of dominant paradigms, ethical dogmatism, or reductive canonization. Indeed, in his overview of the new media studies "meta-field," Silver (2004, 62) writes that he hopes "it will remain

canonless for as long as possible." Researchers in the field are faced with the methodological and ethical concerns that preoccupy all academic research, but they must also grapple with the additional challenge of engaging with participants and subjects who exist in a hyper-connected digital age, where the general consensus regarding boundaries, including between private and public content and virtual and physical spaces, are still being actively negotiated.

As the Egyptian revolution unfolded, information and communications technologies were suddenly foregrounded as key tools, actors, and catalysts in revolutionary politics. But as the previous chapter established, ICTs had gradually become a feature of everyday life for some Egyptians, and certain ICTs, such as mobile phones in particular, were becoming so ubiquitous as to be utterly ordinary parts of daily communication. Indeed, as Hine (2015) observes, "[t]he Internet has often become an infrastructure that underpins the things that people do, rather than a foregrounded activity that they do in its own right." In other words, the new media of the revolution were, in fact, becoming quite mundane, but the revolutionary moment suddenly thrust them into the spotlight, making them appear new again. Teasing out the inherent tension between the revolutionary and the everyday is a task well suited to ethnographic methods because ethnography examines how people live their daily lives, and it allows researchers to investigate how ICT users make sense of and ascribe meaning to their interactions with technology (Hine, 2007; Coleman, 2010; Hine, 2015). Many authors, including Silver (2004), Carey (2005), Deibert (1997), and Hine (2005), argue that new media must be contextualized, historicized, and analyzed in relation to geography, politics, discourse, and identity. This academic concern with contextualization is a driving force behind the integration of various research techniques under the umbrella of new media studies, and it is a concern broadly applicable to the study of the Egyptian revolution, reminding us that ICT-mediated communication occurs in specific contexts and historical time. The ICT mediation of the Egyptian revolution was as much *Egyptian* as it was technological, and the interpretation and analysis

of ICT use in Egypt must recognize its contingency on the Egyptian experience.

Ethnography is fundamentally a descriptive and qualitative craft, which is often predicated on fieldwork, participant observation, and interviewing. It is a uniquely personal methodology, in which the researcher is very present in both the data collection and analysis. Although there is no singular approach to ethnography, all ethnographers aim to study the social lives of groups of people in order to "unearth what the group takes for granted, and thereby reveal the knowledge and meaning structures that provide the blueprint for social action" (Herbert, 2000, 551). Although traditionally, ethnography has taken place offline, at a field site "away" from the home environment of the researcher, there is a growing recognition that the "field" must be reconceptualized to encompass a more fluid understanding of place. People are more mobile than they have ever been, and migration, diaspora, globalization, and the telecommunications revolution have all resulted in increased transnational, translocal, and transdimensional flows that cannot be so easily theorized from a single vantage point. As the boundaries between online and offline are becoming less distinct, ethnography must also embrace both virtual and material dimensions of the field as well as the interstitial space between. Further, the online is itself

> multi-spatial, in the various new forms of space that emerge online, the connections that it enables across geographic spaces, and the forms of mobility that its users engage in as they encounter it on multiple devices. The experience of the Internet spans different forms of temporality, as we engage in interactions that are sometimes persistent and archived for the long term, and at other points as fleeting, immediate, and ephemeral as a chat on a street corner. (Hine, 2015, 13)

Ethnography must go online because everyday life is increasingly ICT-mediated (Murthy, 2008). Christine Hine offers a useful framework for conducting ethnography for the Internet, which treats the Internet as embedded, embodied,

and everyday, meaning that

> it is embedded in various contextualizing frameworks, institutions, and devices, that the experience of using it is embodied and hence highly personal and that it is everyday, often treated as an unremarkable and mundane infrastructure rather than something that people talk about in itself. (Hine, 2015, 32)

Each of these approaches can help to elucidate the role of ICT use in the Egyptian revolution and its aftermath. Viewing ICTs, like the Internet, as "embedded" encourages us to understand digital communication flows as situated in local contexts and particular times, rather than purely trancendental, although they have transcendental properties and effects that subvert discretized understandings of place and time. As Miller and Slater (2000, 5) point out, "we need to treat Internet media as continuous with and embedded in other social spaces, that they happen within mundane social structures and relations that they may transform but that they cannot escape into a self-enclosed cyberian apartness."

Chapter 1 introduced the historical development of ICTs and political opposition in Egypt prior to the revolution in order to situate this analysis within a broader Egyptian context. It is crucial to recognize that the ethnographic underpinnings of this research mean that these observations are specific to Egypt, even as they reveal practices and phenomena that have global implications and indeed occur across, between, and through local and global scales. Coleman calls this aspect of media ethnography a process of "provincializing":

> [t]o provincialize digital media is not to deny their scale and global reach [...] the fact that digital media culturally matters is undeniable but showing how, where, and why it matters is necessary to push against peculiarly narrow presumptions about the universality of digital experience. (Coleman, 2010, 489)

Thus, embedded qualitative methods help move analysis of ICT use away from

generalizations that treat cyberspace as wholly *separate* from material spaces and ICT users as a homogeneous cohort, both tendencies inherent in big data analyses of the digital traces humans create online. In fact, as later chapters will demonstrate, online, ICT-mediated experiences are greatly influenced by offline conditions, and visa versa. Ethnographers are interested in the particular affordances and constraints of media in context. Because it is simply not possible to apprehend the full scale, extent, or complexity of intersecting mobilities or the whole of the Internet, for instance, ethnography approaches the macro-questions about ICT-mediated social transformations by observing how people in specific contexts engage with ICTs (Hine, 2015, 29).

Understanding ICT use as an embodied, personal experience is both the natural project of an ethnographic approach to ICTs and an important methodological tactic to counteract any preconceived notion of ICTs as independent of the social world or human agency. Because everyday life is increasingly produced by hybrid human and non-human agencies (Haraway, 1991; Latour, 1991, 1993), Hine (2015, 41) writes that "rather than being a transcendent cyberspatial site of experience, the Internet has often become a part of us, and [...] virtual identities are not necessarily separate from physical bodies." The embodied view of ICTs also places emphasis on observations of ICT *users* and prompts media researchers to ask by whom and for whom ICTs have become part of everyday life. If we acknowledge, as I have done in Chapter 1, that ICT access is uneven and that all ICT-enabled mobilities are relative rather than absolute mobilities, a key task of ICT ethnography is to interrogate the differential embodiment of ICTs. In this thesis, I worked with activists, artists, entrepreneurs and other young people who are best described as a relatively affluent, ICT elite. So this research must be taken together with a growing body of critical enquiries into the diverse stakeholders and participants in revolution, looking at alternative subjectivities, especially the marginalized poor and the non-wired (paranodes), and the broad constellation of movements and actors that worked together across the digital divide.

A preoccupation with the everyday and the mundane typifies ethnographic research, and this focus can be a valuable counterbalance to the sensationalism of a revolutionary moment. Because ethnography "examines what people *do* as well as what they *say*," it has the potential to reveal inconsistencies and contradictions in the embodied experience of ICT use (Herbert, 2000, 552). This ethnographic perspective is crucial in understanding the relationship *between* technological promise and technologically mediated practices, a question that is central to Chapter 5. ICT use has developed meanings in the revolutionary context with implications for everyday life that the subjects (ICT users) themselves do not immediately recognize or articulate in those terms. After the Egyptian revolution, the "everyday" seemed to lose some of its descriptive power, as the conditions in which ICT using activists were constantly in flux. Every day brought new experiences that informants would describe as unprecedented. Changing conditions made them re-evaluate their relationships with the transdimensional spaces of the city and online spaces. As an inductive practice, qualitative methods derived from ethnography are well suited to engaging with such conditions of liminality; order should emerge from the field rather than be imposed upon it (Silverman, 1985). Herbert observes that ethnographers "evince comfort with data that are unstructured (i.e., not coded) according to pre-established analytic categories" (Herbert, 2000), and Hine writes that accepting "uncertainty becomes an ethnographer's job, and pursuing some form of absolute robust certainty about a singular research object becomes a distraction, and even a threat, to the more significant goal of working out just how life is lived under these conditions in which such stability is at best a very temporary achievement" (Hine, 2015, 5). The methodological acceptance of uncertainty is important in the best of times, but it is vital in the tumult of a post-revolutionary field site.

If we recognize that everyday life, even in a seemingly bounded geographic locale such as Cairo, is contingent on transdimensional activities and spaces, then transdimensional field sites and subjects must constitute reasonable subjects

of ethnographic study. How can we better conceptualize the "field" under these conditions? How can our methods more dynamically embrace the transdimensional experiences of everyday life? Just as mobility *between* online and offline has become a crucial topic of scholarly enquiry, mobility must become a methodological consideration and strategy for ethnographic research.

Mobile Ethnography in Transdimensional Spaces

All ethnographic enterprise has been contingent on movement from one place to another; travel, or the experience of dislocation from a familiar environment to an unfamiliar environment underpins this methodology. However, this understanding of movement is oddly limiting.

> The boundary between anthropological field and home which has so often been demarcated by the metaphor of travel has incorporated a presumption that 'home' is stationary while the field is a journey away. (Amit, 2000, 8)

It establishes a binary "here" and "there," which run counter to more fluid understandings of space that prove useful in making sense of our increasingly technologically mediated and interconnected world. It also, however unintentionally, juxtaposes the mobility of the researcher with the fixity of the objects of study (Rapport, 2000, 73). But we know that the subjects—people, places, and technologies—of ethnographic research are mobile. Thus, as Urry (2007, 11-12) points out, "research methods also need to be 'on the move' " in order to have the flexibility to capture the flows of materials, people, information, and ideas that have come to characterize everyday life in all locales and, I would suggest, especially places experiencing revolutionary transition.

Mobile research methods can begin to accommodate a less discretized and narrow understanding of the field. A number of important considerations complicate the fixity of the "field" as the site of research, some of which were

introduced in Chapter 1. Spaces, including the field site, are always in the process of being made (Massey, 2005), they are social products (Lefebvre, 1974), and they are constantly *becoming* as opposed to *being* (Cresswell, 2004). In this understanding, the field must also be conceptualized as a place that is *made* rather than a place that inertly awaits visitation. In other words, the field is "constructed" between the "infinite interconnections and overlapping contexts" that characterize everyday life for both the research subjects and the qualitative researcher (Amit, 2000, 6).

Space and movement within and through this constructed field are made more complex by the advent of digital communications technologies, which compress and erode spatial and temporal boundaries. Unfortunately, "[i]n the disciplinary idealization of the field, spatial practices of moving to and from, in and out, passing through have tended to be subsumed by that of dwelling" (Clifford, 1997, 67). It is more difficult to accommodate movement and ensuing liminality. Of course, there is an argument to be made that the "field" in ethnography has never been singular, pure, set apart, and unadulterated. In fact, always "the construction of an ethnographic field involves efforts to accommodate and interweave sets of relationships and engagements developed in one context with those arising in another" (Amit, 2000, 6). Home and away are always overlapping and interpenetrating. It is only the archetypal field, which has haunted the tradition of ethnography since its inception, that presupposes this binary distinction and a fixity of place (Gupta & Ferguson, 1997). Mobile methods seek to rectify this oversight, and multi-sited ethnography in particular has gone a long way toward moving ethnography away from a fixed understanding of the field, making ethnography more mobile. Rather than embedding in a single field site, multi-sited ethnography moves between different locations in an effort to gain a fuller picture of the "circulation of cultural meanings, objects, and identities in diffuse time-space" (Marcus, 1995, 96).

Multi-sited ethnography opens up myriad possibilities for research into

technologically mediated life. Like her subjects residing in the "field," the ethnographic researcher must be mobile between the online and the offline, the virtual and the physical; she must conduct transdimensional research in order to decode transdimensional lives, where the virtual and the physical are coextensive. The field for the digital ethnographer, then, is geographical and communicative, and it is messy and unbounded.

> Multi-sited ethnography is less about sustained dwelling in one field as it is about following the flows of humans and 'non-humans' in and across a particular field, so the ethnographer needs to travel much, physically and through communications: it is mobile ethnography par excellence. (Larsen, 2008, 154)

Therefore, ethnographers must "take part in the diverse forms of communication and interaction that those they study use and not to write off any of these forms of communication as inherently less informative or as un-ethnographic" (Hine, 2015, 3). I suggest, in agreement with Hine, that ethnographic research must take place between and through the various interrelated and coinciding dimensions of space and communication in which the research subjects carry out their ordinary lives. This means acquiring local knowledge in a geographically delineated field site through observation, interaction, and interviewing, but also carrying out data collection through the communicative media that informants use themselves.

On this point, ethnography for the Internet has complicated a methodological practice known as "ethnography at a distance" (Geertz, 1973). At once an innovative and much-debated methodology, ethnography at a distance is undertaken when researchers make ethnographic observations based on cultural products—literature, film, music, art, letters, and other materials—without being physically present in the "field" or interacting directly with research subjects (Mead & Métraux, 2000; Marcus & Mascarenhas, 2005). The subjects of research, then, are these material traces. In-body or in-person field experiences have traditionally been the foundation of ethnographic work, but ethnography at a distance suggests

that physical *presence* need not be a prerequisite for ethnographic observations to take place and for them to reveal important insights about social and cultural phenomena. It therefore also destabilizes any fixed understanding of the "field" as a specific *place*. In the digital age, the methodological thrust of ethnography at a distance aligns well with ideas of hybridity and human-nonhuman networks and agencies that have come to inform our understanding of technology and society. In this understanding, people and objects, including technologies and media, are all valid subjects of ethnographic enquiry. If we conceive of the "field as a network" in line with Burrell (2009, 191), then such a "heterogeneous network incorporates mapping out the social relations of research participants and their connections to material and digital objects and physical sites."

If *being there* in the field can now encompass virtual and physical spaces (and the space between) (Postill, 2016, 2017), then ethnography will entail a constant engagement with digital traces—social media, photos, videos, e-mails, text messages, and other virtual "objects." Gray (2016), for example, makes a compelling case in her reflections on studying the "Snow Revolution" in Russia in 2011 that her experience of the protests through following them online constituted a "field" experience. As events unfolded in real time, they became an "online manifestation" of offline events, and Gray had a temporally contingent experience of witnessing them as they appeared online. She writes: "But what was the nature of my participation? Although I was not on the streets of Moscow, I nevertheless participated and even maintained copresence (which is implicit in the term *participant observation*)" (Gray, 2016, 504). Gray engaged in virtual methods outlined by Postill and Pink (2012), including catching up, sharing, exploring, interacting, and archiving online, all ordinary digital practices that can also serve as ethnographic methods. She was also a curator of digital artifacts, in the tradition of "ethnography at a distance," but the encounter with these digital objects—tweets, videos, photos—was a participatory experience, enhanced by her familiarity with the geographic location and context and intensified by the temporality of real-time.

Marcus (1995, 105), writes that "multi-sited research is designed around chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence." In Marcus's view, multi-sited ethnography involves the construction of the object of study through movement. Techniques of construction may be planned or unplanned and include following things, following people, following metaphors, and following stories or plots. These techniques of *following* lend themselves readily to the architecture of social media, in which "following" is a both a social activity and and a spatially organizing principle. But following also involves making choices about what, how, and where to follow—decisions that chart a unique transdimensional geography of the "field" in the movements of both research subjects and the researcher herself. As Gray found in her opportunistic research on the 2011 Russian protests, following digital traces (photos, hashtags, social media posts) involved a process reminiscent of snowball sampling, in which one post might suggest another user to follow or another photo to view.

The insufficiency of a singular, fixed conception of the field site and the centrality of digital "objects" were immediately apparent in the course of my own research. In order to study ICT use and activism in Egypt, I engaged with methodologies that traverse these various mediums and spaces; in an effort to examine how information *flows*, I needed to understand how various media are interrelated, and this required a creative amalgamation of data in the form of observations, artifacts, and interviews. The field was unavoidably transdimensional. While in Egypt, I was connected to friends, family, and colleagues at "home" by email, phone calls, social media, and text messages. My own posts on Facebook and Twitter, and some of my e-mails from time in the field have become important contributions to my field notes. Because this communicative interconnectivity is a characteristic of my everyday life as a researcher in the field, it is relevant to my positionality in the field, where I was situated between virtual and physical dimensions. Moreover, as my informants

shared their ICT mediated experiences with me, I was introduced to new groups, people, and artifacts, both online and offline. I joined Facebook groups to stay up to date on upcoming meetings and events, and I was added to e-mail lists and WhatsApp conversations. Informants might reference a Facebook post in an interview that I would later search for online, only to then read the comments below the post and follow a link to a related tweet on Twitter. Thus, the traditional ethnographic "observation" or "interview" increasingly references outside itself, to other dimensions. Even when I returned "home" to Oxford, my online life reflected the field: Egypt was ever present in my social media news feeds, and re-connecting with the field was as easy as typing a message and pressing "send." In certain ways, ICT mediation has meant that I never leave the field, and ethnographic methods must account for this richness of place and connectivity. In an illustration of the reflective observations that might emerge from such transdimensionally mobile methods, Chapter 4 is based on my experience of the 2013 curfew via social media. I had just left Cairo two months prior, but although I was not geographically present, the curfew materialized online, or in Gray's (2016) interpretation, it became an "online manifestation." And this virtual field experience led me to new revelations about ICT mediated transgressions both online and offline.

The centrality of "following" in multi-sited research points to the importance of considering the role of the researcher within the research enterprise, a self-reflective practice encouraged in ethnographic work (Okely, 1992). We must consider how the researcher is mobile herself: "at the most immediate level, the analyst's own movements across spaces, institutional settings and disciplines are significant expressions and conditions of research" (D'Andrea, Ciolfi, & Gray, 2011). I, myself, was *mobile* in the sense that I had relocated from a Western institution of higher education to Egypt for fieldwork, and the research I conducted would cross geographic borders in multiple ways after I had physically left the country in the form of publications, talks, and even social media posts. Ethnography has long recognized that being an "outsider" in a

particular field affords a certain scientific distance that may not be as easily accessible to "insiders." But this distance, like the field itself, is artifice; it is thoroughly constructed—cognitively, geographically, spatially, and through the selective exercise of various mobilities. As a researcher, I recognize that my own transdimensional mobility affords certain privileges, and rather than guaranteeing objectivity, it is contingent on the intersecting subjectivities: my own and those of my informants.

From a practical perspective, there are many valid reasons to embrace multi-sited and transdimensional qualitative research in the context of post-revolution Egypt. First, my informants live their daily lives in a geographic place, Cairo, but traverse many different dimensions through their ICT-mediated communications and their physical movement. Since this transdimensional mobility forms an integral part of their everyday lives, it should also become a key element of my research method. Second, personal safety and security was of paramount concern throughout the course of this research, both my own safety as a researcher but also the safety of my informants. At times, informants would opt for interviews conducted over Skype or phone, even when I had met them in person, due to either the practicalities of moving through the city at certain times of day or a concern for personal safety in public places. These concerns became more pronounced as my research progressed over time.

Initially, one of the profound results of the Egyptian revolution was the increased freedom of expression afforded political activists and ordinary citizens after the resignation of President Mubarak. This newly relaxed public sphere was less the product of more lenient laws or government policy and more a function of the widespread belief among Egyptian citizens that they have a collective bargaining power vis-à-vis the enforcement arm of the government. The belief that the "power is in the hands of the people" provided activists the opportunity to speak more openly and organize more overtly than would have ever been possible under the Mubarak regime. However, this period of relative opening to

public expression was short-lived, and security crackdowns, attacks on protests, surveillance, and arrests of activists under subsequent transitional regimes soon made activists more cautious. Working in multiple online and offline field sites, then, offered distinct advantages, as it mirrored the transdimensional strategies of activists themselves to survive and subvert mounting personal dangers. These changing political conditions also resulted in the geographic dispersal and exile of many activists as time went on. At first, the publicity of the revolution offered activists new opportunities to travel to international training programs, give lectures and talks, and even seek out educational opportunities abroad. I often found myself coordinating schedules with activists who were, like me, flying from Egypt to Europe and elsewhere. As the state began to crack down on ongoing protests, some activists went into exile but maintained significant ties to Egypt, their continued connectivity an important feature of the *local* communicative landscape, even as they were physically living abroad.

Research Between Macro and Micro Scales

The conditions of revolution clearly highlight the ways in which the "field" for ICT research cannot be neatly contained. An ethnographic perspective on media studies is also suited to grappling with multiple, interpenetrating scales and dimensions. It views local events and observations as embedded in larger systems and processes. Miller and Slater write that for them,

> an ethnographic approach to the Internet is one that sees it as embedded in a specific place, which it also transforms. [...] Moreover, our approach is ethnographic in that it uses immersion in a particular case as a basis for generalization through comparative analysis. (Miller & Slater, 2000, 21)

Thus, local observations may serve as the basis for broader theoretical generalizations and discussions. Although this thesis offers a glimpse into specific practices at particular points in time after the Egyptian revolution, there are

certainly implications for understanding ICT mediation and the Arab Spring more broadly. Moreover, it is my intention that these observations may prove useful starting points for future conversations, investigations, and analysis of transdimensional mobility in other contexts.

Herbert observes that "ethnography enables analyses of the important moments when macro and micro interpenetrate, when constraints and contingencies alternately pattern and perturb daily life" (Herbert, 2000, 555). Grounded in local context, transdimensional ethnography can and should accommodate the interconnected global and local flows, the virtual and the physical, the online and the offline while acknowledging the limitations that this personal and subjective methodology place on the potential for generalization. The integration and interpenetration of of macro and micro scales is an important methodological issue for transdimensional research, which implicates the global flow of people, ideas, and data. As Chapter 1 discussed, everyday, individual practices are embedded in world system transformations, such that the technologies used to subvert dominant hegemonies are also created by and constitutive of hegemonic forces of capitalism, neoliberalism, and globalization (Aouragh, 2011b). Kellner (2002, 286) notes that we should be conscious of the "contradictions and ambiguities of globalization and the ways that globalization both is imposed from above and yet can be contested and reconfigured from below." This perspective urges us to more actively consider how our observations of individual behaviors and practices are situated within global processes. In Marcus's words, "[e]thnographies have always been written in the context of historic change" (Marcus, 1995, 165). The study of media and revolution foregrounds the question of historic change, but as Marcus earlier observed, ethnographers

> have not generally represented the ways in which closely observed cultural worlds are embedded in larger, more impersonal systems. Nor have they portrayed the role of these worlds in the sort of events and processes that make history. (Marcus, 1986, 165-166)

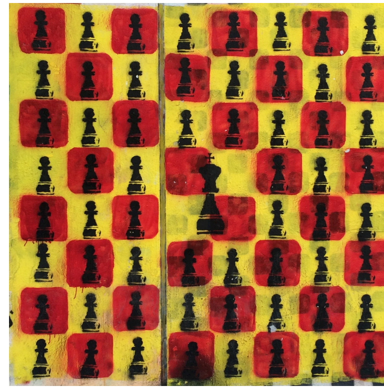
Thus, our spatial and temporal understanding of the "field" must also accommodate this intermeshing of scales—the world system and the individual, the immediate present and the heavy hand of history. In the chapters to follow, ICT-mediated activities will be situated in the context not only of the recent revolution but also in terms of broader historical, political, and technological circumstances. Transdimensionally mobile methods are capable of moving *between*, where such contradictions as hegemony and resistance coexist. This method further recognizes that virtuality is not a property reserved for *cyberspace* or ICT-mediated communications alone; many macro and micro phenomena become virtualities, such that the "virtual" can be understood to apply to economic, political, and spatial domains (Miller, 1998). Transdimensional methods acknowledge the ambiguously physical and virtual properties of historical processes and individual experiences alike.

Time and Transdimensional Research

There is much debate around when we should be able to meaningfully reflect on and analyze the Egyptian revolution and the Arab Spring more broadly. Nearly every academic conference dealing with the topic concedes that it is still too early to say how the events of 2011 will affect politics and society. It is worth asking whether a revolution can or should be studied in real time, as it unfolds. At this writing, the Egyptian revolution occurred nearly five years ago, a period of perhaps just enough years to provide some significant insight into the longer-term impact of 2011. However, this thesis also takes a longitudinal view—the observations herein were recorded between 2011 and 2016, where the time step at which they were taken is of paramount importance. In some cases, observations taken at a particular point in time are revisited and rediscussed later, as they acquired new meanings and significations in light of new developments and contexts. Being engaged in observation and analysis from the earliest moment onward has been essential, but the temporal and spatial "field" of engagement must also be understood to be

dispersed and multi-dimensional.

(a) Chess board graffiti by artist El Teneen, Downtown Cairo, 2011. Photo by author.



(b) Chess board graffiti by artist El Teneen, Downtown Cairo, 2014. Photo by author.

Figure 2.1: Longitudinal research in the field offers unique (spatial) insights, particularly during periods of political transition.

Events no longer (if they ever did) unfold in an objectively "real" time any more than they occur in an objectively "real" and fixed place; the interconnectivity of global media and the speed of global communications have resulted in transdimensional events in which the present is characterized by excesses of meaning, content, and technologically mediated ephemera. And this present becomes past almost instantly, ever more rapidly superceded by a new profusion of presents. I have therefore previously suggested that the Egyptian revolution demands an engagement with a process of "active historicization," which attempts to "make sense of rapidly moving people, technologies and events as they occur; it is a mobile methodology with mobile subjects" (Allmann, 2014b). As Buscher, Urry, and Witchger (2011) urge:

> 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 et al., 2011, 7)

As the present becomes both more fleeting and surfeited, it paradoxically risks becoming harder to recapture retrospectively at some future point, an issue addressed in much greater depth in Chapter 6. For this reason, the “now” of each chapter in this thesis offers insights that may be more elusive with each passing year, day, or even hour. They are deeply contextual, contingent on particular places, circumstances, and historical times. But they are not, therefore, irrelevant. Rather, they are part of an essential process of active historicization, the collective effects of which will provide invaluable observations on the relationship between ICTs and society after the revolution.

A longitudinal approach to studying the revolution can positively contribute to this effort. My longitudinal perspective, which traces—more or less chronologically—changing on- and offline conditions over time as a result of numerous visits to the field and continuous observation “at a distance” online, provides invaluable insight into the rapidly changing experience of ICT mediated mobility in the aftermath of the revolution. Together, these observations are more comprehensive than a single, temporal snapshot of an isolated field experience. In fact, early observations of ICTs and converging physical and virtual mobilities in the immediate aftermath of revolution often lent themselves to optimistic narratives and celebratory conclusions. If this thesis concluded after Chapter 3, it might also have suggested similarly buoyant prospects. But liminal conditions often cannot be captured sufficiently in a single moment; rapidly changing conditions can reveal tendencies, practices, and beliefs that have long influenced the present and which will continue to shape the future. Figure 2.1 is a very simple pictorial illustration of the effect of time on the post-revolutionary field site. I photographed the graffiti in Image (a) while on fieldwork in 2011. The artwork, by graffiti artist El Teneen, depicts a victory of pawns over a king on a chessboard. On a return to Cairo in 2014, I took the photograph in Image (b), a new chessboard by El Teneen, the “king" restored, now dominating the chessboard. Many of my observations, even those undertaken online, could not have been made without being an active

observer and participant *at the time*, and taken together they confirm an important conclusion. There is no single "effect" of ICT penetration and use. There are only the collective effects of individual practices, beliefs, and meanings, situated in local contexts and particular moments in time.

It is also worth noting that longitudinal research also allows for longer periods of reflection and the accommodation of increasingly and unavoidably mobile lives. There is ever greater acceptance of the fact that the exigencies of academic life often dictate the parameters of research in the field (Amit, 2000). Due to personal obligations "at home" and the vicissitudes of funding, for instance, academics often pursue field work and research opportunities when they are made available; there is no ideal research timetable. At the same time, there is a general understanding that ethnography is well served by time both in the field and away from it—time to *live* in the field and time to *reflect* on it. For all of the reasons outlined above, the "field" can no longer reasonably be considered singular and contained, and researchers may never fully *leave* the field ever again. Even in remote, rural communities with little ICT penetration, researchers can more and more easily take the field home with them in the form of photos, videos, and audio recordings. Still, reflection is essential to ethnographic practice, and it is also intrinsic to active historicization. To make sense of observations in the present, we often need the distance of some time and space (physical and virtual) away.

Thesis Data Collection

The research for this thesis took place between 2011 and 2016. Between 2011 and 2015, I conducted several rounds of fieldwork in Cairo, Egypt, for up to a quarter of the year, with the exception of 2012. I also undertook some brief research in Alexandria in 2014. I engaged in participant observation, attending meetings, protests, performances, and other events with young, ICT-using activists. I also conducted in-depth, semi-structured interviews with over 70 informants, some

of whom gave multiple interviews over the course of several years, along with dozens of informal and unstructured interviews; these interviews and other casual conversations all collectively inform my analysis. Appendix A contains a list the pseudonyms and affiliations of my informants who gave interviews. In addition, I gathered digital texts and artifacts throughout my research, saving and storing countless photos, websites, social media posts, e-mails, videos, and other digital ephemera that I encountered in the transdimensional "field."

The young people I came to know and interview were affiliated with various groups, from the April 6th Youth Movement, with whom I worked most extensively in 2011, to the #NoMilTrials campaign, revolutionary socialists, anti-sexual harassment campaigns, and many more, but their affiliations were often cross-cutting, as few young activists in the post-revolution period were members of only one movement or group. All of my informants shared a high level of ICT connectivity. I used a snowball sampling technique, commonly employed by survey researchers as well as qualitative ethnographic researchers in the developing world in order to reach people who would otherwise be less accessible (Atkinson & Flint, 2001; Clark, 2006). This strategy entails starting interviews among a known population and asking that population for contacts with similar characteristics in order to expand the interview pool. Snowball sampling is a non-probabilistic sampling technique that is particularly useful in reaching hidden or hard-to-reach populations, or where a certain level of trust must be established between the researcher and the interviewees or respondents (Atkinson & Flint, 2001). It is used quite regularly in qualitative and quantitative Middle Eastern studies research (Clark, 2006), and it is particularly useful in conflict zones (N. Cohen & Arieli, 2011). As in other conflict scenarios, characterized by liminality, in post-revolution Egypt snowball interviewing allowed me to be "referred" and therefore "vouched for" by informants to other, prospective informants.

As I mentioned above, my informants should be considered ICT elites; many of them grew up using personal computers at home, and most of them owned

smartphones by 2012. They are accustomed to regular Internet access, which in 2011, meant that they were among the roughly 33 percent of the Egyptian population who had Internet access. They are mostly well educated, holding university degrees, though many of them struggle to find permanent jobs. Although these informants represent only a narrow demographic cohort, they are crucial to understanding the role of ICT use in everyday life and therefore the revolutionary moment. These users and their ICT mediated practices were the reason that ICTs became a focal point in the revolution, so they play a central role in making sense of the potentials and limitations of ICT mediated political and social transformations.

This thesis also draws on content analysis of Facebook, Twitter, Instagram, and websites. Generally, where ICT users are viewed as "authors," and their content can be accessed by the public, this material can be used and observed in the course of digital research (Ess & Jones, 2003). The Internet raises important questions regarding authority and authorship and the right to privacy (Hofheinz, 2011), but I have taken the view that searchable content available to the average Internet user using a search engine falls within the realm of public material. Because social media platforms have their own internal privacy protections, users can restrict the information that is available from their profiles and posts internally on the site. Further, other researchers who use Twitter and Facebook data treat searchable profiles and tweets as public data (Lotan et al., 2011). In future chapters, I use content obtained from searches conducted in English and Arabic as a social media user myself, and in the case of Chapter 4, I also used a Twitter aggregator, Topsy Pro, to collect tweets and tweet statistics, and an Instagram analytics application, Statigram (now, Iconosquare), to search and collect publicly visible Instagram photos.

I submitted a CUREC 1A form in compliance with the University of Oxford's guidelines on research ethics pertaining to human subjects and received approval for my interview- and participant observation-based methodology from the Social Sciences and Humanities Interdivisional Research Ethics Committee.

Since that time, I have taken a number of further considerations into account. The revolutionary context is highly relevant to the ethical considerations pertaining to this research. In the immediate aftermath of revolution, many activists became accustomed to speaking openly about their activities with researchers, journalists, aid workers, and others. Further, because of the speed and scale of global information flows, activists have become accustomed to their comments—on Facebook, Twitter, or in SMS—existing in the public domain and being made readily available to search. However, circumstances can rapidly change, and an interview conducted in 2011 may have new relevance in 2016. Activists and protesters have faced arrests, detention, and torture on an unprecedented scale in recent years, at times on account of their online activity. As a result, all of the interviews and personal communication and correspondence included in this thesis—including those with prominent public figures—have been anonymized, and much of the online content has also been anonymized. I take this precaution in the interest of first and foremost "doing no harm" as a researcher working in an uncertain political moment.

The methodological considerations outlined here collectively point to the importance and necessity of studying ICT mediation across and between dimensions, broadly conceived. Ethnographic approaches to ICT use provide compelling insights into the interpenetration and co-creation of the virtual and the physical, macro and micro effects, the extraordinary and the everyday. Viewing the Internet, and ICTs generally, as embedded, embodied, and everyday situates them in time and place while accepting and problematizing the ways in which they bend and render ambiguous our notions of temporality and spatiality. Robins (2000, 92) notes that "[t]hrough the development of new technologies, we are, indeed, more and more open to experiences of de-realization and de-localization. But we continue to have physical and localized existences. We must consider our state of suspension between these two conditions." This "state of suspension" should be a recognized subject of scholarly enquiry, causing us to reconceptualize

the boundaries of the "field site" and the universe of possible artifacts, texts, and materials worthy of investigation. The ethnographic practices of following, wandering, and observing now (and perhaps always did) occur *between* the "here" and "there," and more recently, the online and the offline. Rather than undermining the meaningfulness of terms like "field" and "artifact," transdimensionally mobile methods embrace a complexity in these concepts that has always existed and has only been foregrounded by the development of ICTs.

3 A Mobile Revolution

A Revolution in Motion

In 2011, I spent a great deal of my time in Cairo in the streets. All of life seemed to be outdoors; the street was teeming with activity—from unlicensed sidewalk cafés spilling over the pavement to small throngs of demonstrators chanting and blocking the roadways. I had not personally experienced Cairo under President Mubarak, but even in the absence of that comparison, the lack of policing in public space after the revolution was everywhere apparent, and its effects were palpable. Post-revolution Cairo had been plunged into a state of exuberant if precarious chaos, in which people, traffic, noise, and movement strained against the urban environment built to contain them. The revolution had clearly influenced many of these conditions, and the consuming legacy of the revolution so dominated this new landscape that it might have given the impression that these public incursions in urban space were without antecedents, without history. But there were hints that this would have been a simplistic reading of post-revolution street politics. Even in the midst of dense protests occupying the Tahrir roundabout, there was something unmistakably ordinary about this revolutionary city—in the koshary food stands, the swell of

voices joined in song, the children shrieking and chasing one another through the crowd. The revolution had become part of the rhythm of everyday life. On the one hand, the revolution was becoming routinized; but on the other, the revolution had also somehow been borne out of routine.

Prior to the January 2011 revolution, Egypt was teetering on the brink of change (El-Mahdi, 2009; Osman, 2010). President Mubarak had ruled Egypt for 30 years under an interminable state of emergency that restricted public demonstrations and gatherings and suspended many basic rights. Civilians were subjected to indefinite detention and military trials, and arbitrary crackdowns on media, political parties, and unions were commonplace. The excessive policing required to maintain such a state of affairs was sustained by a massive and influential security apparatus, which in turn benefited from the economic transformations taking place in the name of privatization and marketization. Mubarak's neoliberal vision for Cairo included enormous urban redevelopment schemes that prioritized seeking foreign investment over addressing the demands of a burgeoning urban population (Hanieh, 2013). Informal housing and informal economies were expanding and encompassing more and more middle class Egyptians. Poor housing conditions coupled with urban redevelopment plans led to urban displacement, resettlement, and resentment (Ghannam, 2002; UN-HABITAT, 2015).

Together, these conditions resulted in what Bayat has termed the "neoliberal city," a "city inside-out," in which "a massive number of urban residents, the subaltern, become compelled to operate, subsist, or simply live on the public spaces—in the streets, in a substantial 'out-doors economy' " (Bayat, 2012, 113). In their everyday activities, adaptations to the demands of urban life, urban residents often engage in what Bayat refers to as a "quiet encroachment of the ordinary," or "the silent, protracted, but pervasive advancement of the ordinary people on the propertied, powerful, or the public in order to survive and improve their lives" (Bayat, 2010, 56). Such encroachments may include coordinated

actions, but they can equally constitute the efforts of individuals to make a living (as street vendors, for instance) or provide shelter for their families (in informal housing developments, for example). Bayat argues that these forms of "quiet" resistance should be understood as subversive and transformative, individual assertions—however uncoordinated or ordinary—of a right to the city. These movements could also be conceptualized as *tactics*, to borrow the term from de Certeau, in which individuals moving through a city exert a creative power and assert their agency simply in navigating the city in spite of, and at times in conflict with, the intent of planners, rulers, or security forces. In de Certeau's interpretation, even the most everyday activity of walking could be subversive: "[t]he long poem of walking manipulates spatial organizations, no matter how panoptic they may be" (de Certeau, 1984). In this way, people lay claim to urban space, writing and reading the city as they walk through it. Thus, encroachments in public space have a quotidian dimension, and revolutionary encroachments might be understood as such a traversal, with these practices *moving* from the realm of the ordinary to the extraordinary.

The 18 days of revolution were, among other things, the extreme consequence of a city turned inside out (although Cairo was certainly not the only site of revolutionary protests). But the mass mobilizations that characterized the revolutionary moment eclipsed the significance of accumulated micro-mobilizations over time and the everyday technologies that had accompanied many of them. Mass incursions into public space dramatically characterized revolutions throughout the Middle East and North Africa during the Arab Spring, demonstrating the distinctly embodied, corporeal power of the crowd. Movement was intrinsic to the Egyptian revolution, and sociologist and mobilities theorist John Urry reminds us that mobility has a strong associative connection to the very notion of civil society and civil disobedience or disruption. Among the primary connotations of the term "mobile" is the idea of a moving mob, a crowd, seen as dangerous and uncontrollable precisely because of its mobility

(Urry, 2007). Moving crowds contain the potential for transformative collective action but also destruction and chaos (Mazzarella, 2010). Mitchell echoes this concern in his influential history of colonization in 19th century Egypt, where he discusses the deep-seated fear, among state administrators and intellectuals, of crowds and their need to be ordered and disciplined (Mitchell, 1988). People taking to the streets is unmistakably disruptive and rebellious, so human mobility in public spaces is likely to remain the prevailing memory of the revolution and its immediate aftermath.

However, this physical mobility was, in fact, transdimensional—the prevalence of ICTs at-hand, worn and carried on these moving bodies, had already inconspicuously influenced the tactics and expectations of individual movement through the city streets and would continue to do so as the revolutionary experience of protest was continuously technologically mediated. During this period of sustained protests and street politics, the relationship between people and the street was re-calibrated, particularly for young, middle class, ICT users whose prior experience had likely been one of increasing enclosure and compartmentalization in the new developments, cafés, and shopping centers of the neoliberal city (de Koning, 2009). Now, they were traversing boundaries—material, virtual, imagined—*with* their communicative technologies. And at least briefly, these traversals coalesced with other transgressions and quiet encroachments and even narrowed the digital divide between ICT users and non-users, as people from all walks of life and differing levels of ICT connectivity shared physical spaces. In understanding the relationship between ICTs and the revolutionary moment and its aftermath, mobile phone use presents a useful point of departure, particularly in the immediate post-revolution period, when the physical occupation of public space continued to be a tactic of many established and embryonic social movements.

By 2011, mobile phones were commonplace technologies of communication, and for this reason, they deserve greater attention in our analysis of technologically mediated activism and technologically enhanced

mobility. In no small part, the movement of people in public space was facilitated by the integration of mobile technology into everyday life. By virtue of timing, the observations made in this thesis cannot escape the revolutionary moment, so the ICT-mediated practices and mobilities discussed here often represent distinctly revolutionary uses of ICTs that grew out of the exigencies of post-revolution conditions and contexts. But we should also be attuned to the ways in which revolutionary mobilities are contingent on ordinary practices and, as the revolution fades farther into history, how ordinary practices are shaped by revolutionary experiences of being mobile between dimensions. Beginning this analysis with an exploration of how activists used mobile phones and how their mobile phone use shaped their spatial awareness provides a useful preliminary insight into both the importance of *mobility* as a form of resistance and the ways in which mobility is unavoidably transdimensional for ICT-users. Mobile phones allow users to exist constantly *between* a virtual dimension comprising a communicative network and the physical dimension of their immediate surroundings. Moreover, mobile phones move *with* people, on their bodies, as people exercise mobility between physical places. For these reasons, as we shall see below, mobile phones have long been theorized to have transformative effects in the realms of both everyday life and disruptive politics.

For many people, the day-to-day exercise of mobility and movement had long been mediated, enhanced, and even created by information and communications technologies, and especially mobile phones. In concert with de Certeau's urban perambulations and Bayat's quiet encroachments, "[m]obile technology is not, then, simply operating within a spatial environment; it is implicated in the production of spatiality and spatial experience" (Brewer & Dourish, 2008, 965). Mobile phones allow users to be always *between* the immediate here and now and a distant there and then, and as hardware, they also physically move with people between places. The development of ICT infrastructure and increased access to mobile telephony enabled ICT users to

experience the city in new ways; it changed how the city could be read and understood. And this reality was directly observable in the ubiquity of mobile phone use during protests and demonstrations after the revolution. Rather than enabling a separate, technologically mediated mobility superimposed or parallel to the physical movement of people on the street, mobile phone use was shaping and shaped by the experience of urban space. As Brewer and Dourish (2008, 969) observe, mobile phones "transform existing spaces as sites of everyday action." Mobile phones have rendered virtual and physical spaces interpenetrating and intermeshed, such that mobility in the city is not experienced as *either* a virtual *or* a physical spatial experience but as a single, transdimensional experience of being always between.

Media theorists, including Castells, Fernandez-Ardevol, Qiu, and Sey (2007) and Ling and Donner (2009), have suggested that in the developing world, mobile telephony first serves a connectivity purpose (connecting those otherwise unconnected) and second a mobility purpose (allowing free movement *with* communicative technology). This chapter focuses on these dual purposes in the context of post-revolution Cairo, where the city was turned inside out; the occupation of public space became a tactic of not only the chronically disenfranchised but an entire generation of young revolutionary protesters. It examines how the prevalence of ICTs at-hand, in the form of mobile phones, facilitated mobility between and through virtual and physical dimensions—transdimensional mobility—that altered the relationship between protesters and urban space. The exercise of this transdimensional mobility had been a precondition for revolution, but the revolution also gave it added significance, as protesters came to assign new meanings to certain spaces and to define their local environment in increasingly transdimensional terms. Protesters used mobile phones pervasively to enhance their physical mobility and create new opportunities for virtual mobility, and this chapter explores four interrelated transdimensional practices that reveal the ways in which the spatial experience

of mobile phone users was influenced by their ICT use in Cairo after the fall of Mubarak. Mobile phones were used for navigation and coordination, for confirming the safety and bodily integrity of friends and fellow protesters, for documentation and corroboration of events, and for bridging the digital divide between Internet users and non-users. These mobile practices together reimagined the city, the locus of protest, as a transdimensional space imbued with revolutionary meaning and promise. The spatialities generated during this time would persist, long after this moment of intense mobility had passed.

For ICT users, mobility through the built environment of the city was contingent on mobility *between* virtual and physical dimensions; and these dimensions should be understood not as separate, but intertwined. This chapter introduces specific ways in which the post-revolution context shaped activists' use of mobile technology but also how these practices re-made and created the very spaces in which activism occurred. Tahrir Square and the many other protest locations that continued to attract demonstrations after the 18 days were geographic locations, situated in physical space, but they were also dispersed, technologically mediated localities, distributed across and between dimensions. Appadurai (1996) describes this production of mediated locality:

> Rather than a simple opposition between spatial and virtual neighborhoods, what has emerged is a significant new element in the production of locality. The global flow of images, news, and opinion now provides part of the engaged cultural and political literacy that diasporic persons bring to their spatial neighborhoods. In some ways, these global flows add to the intense, and implosive, force under which spatial neighborhoods are produced. (Appadurai, 1996, 197)

Tahrir Square was the place into which crowds of people flowed, but it was also *created* in those flows of moving people and technologies. The protests in the square had a visible physicality but also an inseparable virtuality—Tahrir Square and the revolution itself were realized in *between*.

Banal Technologies in Revolutionary Times

"You're studying *these things*?" Jameel asked me incredulously, holding a scratched-up flip-phone with a black-and-white display, which he had just pulled out of his pocket. "I honestly don't know what you're planning to find out about these," he laughed. "Mine doesn't even *do* anything. It doesn't even have Internet!"[1] We were standing on the central island in Tahrir Square on a sweltering Friday afternoon, surrounded by a group of fidgeting young protesters holding black flags displaying a clenched fist and "April 6th Youth Movement" scrawled across the bottom in Arabic. "You want to talk to Salma," Jameel told me. He promptly flipped open his phone and typed a message, his thumbs flitting over the keys. "Hang on—we'll find her," he said, looking back at me. We surveyed the crowd. His phone lit up, and he glanced at it quickly. "She's praying. Just hang around, and she'll be back soon." So we waited, and I glanced across the traffic circle to take in this moment of calm before the end of afternoon prayers. Throughout the square, I could see small congregations of protesters, of heads bent downwards, eyes lowered in a different kind of reverence, their faces and fingers glued to the tiny screens of dozens of glowing cell phones.

In 2011, my mobile phone was not much more sophisticated than Jameel's. It had a color display and could take photos of moderate resolution, and it featured unused e-mail and web browsing applications that I considered too expensive and cumbersome to utilize with a telephone keypad. But it would prove my most valuable fieldwork tool. Jameel's reaction to my interest in mobile phones was not unusual; mobile phones had become so thoroughly woven into the fabric of everyday life and communication that they were almost invisible. Their pervasive presence in Tahrir Square was less a testimony to their revolutionary potential than their integration into everyday life; mobile phones extended, enhanced, and created mobilities that were taken for granted even as they were harnessed for revolutionary

[1] Personal interview with Jameel, 9 September 2011.

mobilization and coordination. Chapter 1 briefly traced the intersecting political and technological developments that preceded Egypt's revolution, and the rapid implementation and uptake of mobile telephony was an important factor in Egypt's technological landscape.

Mobile phones are arguably the communications technology of everyday life in Egypt. As Chapter 1 discussed, Internet penetration in 2011 was roughly between 33 and 39 percent (International Telecommunications Union, 2011b), with Facebook penetration at 6 percent and Twitter at only 1.5 percent penetration (Arab Social Media Report, 2011). Mobile phone penetration, however, had reached somewhere between 80 and 100 percent (International Telecommunications Union, 2011b). Statistics also suggest that most Internet users, by a small but important margin, accessed the Internet using their mobile phones or a USB modem (Arab Republic of Egypt Ministry of Communications and Information Technology, 2011). Internet activism was certainly an important catalyst in the lead up to the revolution, but its impact was necessarily limited by access. Although the Internet captured global attention during the revolution, mobile phones played a more consequential role in the spatial contestations that ensued. In fact, it is likely because of their accessibility and banality that mobile phones factored so heavily in the media landscape in post-revolution Egypt. It is not at all uncommon for "banal" uses of technology to become politicized in repressive contexts and for ordinary ICTs to become tools of resistance (Howard, 2010). During 2011, many everyday practices took on political significance, and in contemplating both the precursors for revolution and the ensuing after-effects, it is crucial to consider movement—on mass and micro scales and between virtual and physical dimensions—as what Mahdavi (2007) calls "situated resistance," forms of subversion that may not be obvious but constitute important transgressions in repressive contexts. Mobility as resistance is perhaps unmistakable in the form of mass marches and sit-ins, but it may also take "quieter" forms, as individual tactics of circumvention or survival. These mobilities inform and influence one another, such that we should

examine how taken-for-granted mobilities are activated and appropriated during times of transition and upheaval as well as how new, revolutionary mobilities become normalized.

Since its arrival in Egypt, 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 the late 1990s and one of the earliest industries to be privatized (El-Shinnawy & Handoussa, 2004). Private companies vied for market shares, resulting in the three consortiums of mobile providers available today: Vodafone, Etisalat, and Mobinil. Although the government exerts oversight in the form of the Telecommunications Regulatory Authority (TRA), the mobile communications sector has so rapidly outpaced other ICT industries that the government maintains little direct control over mobile telephony. That said, Telecom Egypt (TE), the state-owned operator of Egypt's landline sector, acquired a 4G mobile license in August of this year, in a bid to compete in the sector (London Stock Exchange, 2016). TE's interest in being an independent provider of mobile telecommunications is an active acknowledgement of the dominance of mobile ICTs in the market.

Thus, there are structural and material reasons for the success of mobile phone penetration in Egypt, as in many other parts of the developing world. Wireless networks are less difficult to install than expensive fixed-line infrastructure, which makes mobile telephony appealing to commercial operators and consumers alike as a method of "leapfrogging" landlines and expediting the adoption of new ICTs (Castells et al., 2007; Donner, 2008). 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 (Arab Republic of Egypt Ministry of Communications and Information Technology, 2016). In developing countries, affordability has played a large role in

soaring penetration rates. The availability of prepaid as well as contract plans and the decreasing price of handsets have made mobile phones among the most low cost ICTs (Castells et al., 2007).

Where Egypt had struggled to expand access to wired data networks, wireless telecommunications have begun aggressively filling the gap, connecting users to the Internet via their phones. Mobile phones are convergence technologies, multi-media devices that can perform multiple communicative functions once limited to the separate services of either phone or Internet providers. Such mobile ICT devices no longer serve a unitary purpose; instead, "[o]ur cell phones are not simply telecommunications devices; they also allow us to play games, download information from the Internet, and take and send photographs" (Jenkins, 2006, 16). Convergence has allowed more people to access the internet via mobile technology, but as a result, we should also note that there is no single, universal experience of mobile ICTs; some people own smartphones that offer nearly the full power of personal computing in a hand-held format, and others own basic call-and-text phones. But the many different devices that enable mobile communication can connect to one another in ways that range from the very simple (voice calls) to the complex (wireless file-sharing, for instance), and they all enable communicative connectivity that transcends the immediate physical environment. In the years after 2011, many more young people came to own smartphones as costs came down and wireless coverage improved. Between 2011 and 2016, the percentage of mobile phone users with mobile Internet subscriptions has more than doubled (Arab Republic of Egypt Ministry of Communications and Information Technology, 2016).

Theorizing Mobile Phones and Revolutionary Mobility

Existing research on mobile phones has recognized their potential to influence spatial and temporal transformations, and it has also encompassed research into both the use of mobile phones in everyday life as well as the role of mobile

phones in political participation. Since their development, mobile phones have been the subject of much speculation regarding the relationship between mobile communications, urban environments, and everyday practices (Moss & Townsend, 2000; Townsend, 2000). Castells has written widely of the potential for converging technological and social changes to transform cities (Castells, 2000), and Lefebvre has offered insights on how space is socially constructed in the relations between people and objects (Lefebvre, 1974). There is a general recognition that "mobile communications devices will have a profound effect on our cities as they are woven into the daily routines of urban inhabitants" (Townsend, 2000, 85).

The mobile phone, because of its portability, is seen to be "subtly insinuating itself into the capillaries of everyday interchange, altering our forms of life, and bringing about new possibilities in its wake" (Gergen, 2010, 15). The associations between and investigations into mobile phones and "everyday life" are many (see, for instance: Agar, 2003; Ling, 2004; Caron & Caronia, 2007; Hanson, 2007; Ling & Donner, 2009). Ling observes:

> 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 & Donner, 2009, 29)

One significant reason that mobile phones are seen to integrate so thoroughly into everyday life is their ability to be *worn* or carried with a person at all times. The mobile phone has even been described by some researchers and theorists as a "prosthetic" technology, always at hand, and "physically coterminous with [our] bodies" (Urry, 2007, 45). It is "wearable" (Reading, 2009), and in certain contexts, the colloquial term for "mobile phones" connotes its bodily proximity (Plant, 2002; Srivastava, 2005; Ito, Okabe, & Anderson, 2009).

The corporeal proximity of mobile phones also has implications for spatiality. Research on mobile phone use has suggested that mobile phones have ushered in an era of unprecedented "placelessness" (see, for example, Kupfer,

2007), or a "liberation from place" (Wellman, 2001, 238), and to some extent, the mobility of this technology at-hand has made it possible to be simultaneously present and absent, maintaining a "absent presence" (Gergen, 2002; Licoppe, 2004; de Souza e Silva & Frith, 2010; Villi & Stocchetti, 2011), in which an absent party is made communicatively present via technology. All of these interpretations capture something important about the transdimensionality of this technology, but they also, however unintentionally, de-emphasize place. Yet because mobile phones move with people as they go about their daily activities, they directly challenge any binary notion of social networks as separate from physical spaces and places. "These mobile social networks can facilitate the flow of new kinds of information into public spaces and as such can rearrange social and spatial practices" (Humphreys, 2010, 764). Mobile phones *bring* ICT-mediated practices into public space and put them in motion, rendering ICT-mediation a physical experience, such that "how one conceives of and experiences place—especially in an urban context—is affected in manifold ways at a micro level by the everyday practices of using a mobile phone" (Wilken, 2008, 42). Offline, physical contexts have always been implicated in online, virtual experiences and practices, but the mobile phone has made the entanglement of physical space and virtual networks more apparent through its conspicuous mobility, as users carry the hardware through physical spaces and communicate across distances and dimensions.

A growing number of studies investigate how mobile phones in different countries and among different demographic groups are being adapted to the needs of everyday life and are also influencing how people go about their everyday activities. Ling (2004) observes that mobile phones contribute significantly to "micro-coordination" practices, meaning the management and planning of ordinary activities and social connections via mobile communication (see also: Ling & Yttri, 2002). Micro-coordination consists of, among other tasks, what Ling refers to as midcourse adjustment, iterative coordination, and the softening of time and schedules. Midcourse adjustment refers to the ability to change plans or

travel that are already underway. Iterative coordination captures the way that the micro-coordination of everyday life employs the mobile phone to gradually refine plans or activities, and the softening of schedules refers to the relaxing of precise time arrangements due to the ability to plan and coordinate on-the-move (Ling & Haddon, 2001; Ling, 2004). A full survey of the myriad everyday uses of mobile phones is well beyond the scope of this chapter, but I will return to specific studies on mobile phone use in everyday contexts in light of some of the post-revolution uses of mobile phones discussed below. Importantly, mobile phones have been the subject of particular interest in the realm of everyday life as a result of their mobility between both a communicative and a spatial "here" and "there."

The integration of Internet connectivity into mobile phone technology has made it possible to not only maintain constant connection with close contacts in a personal directory but also to be constantly online, which has instigated further debate about how to understand ICT-mediated movement in urban space. Kwan (2007) suggests, for instance, that "hypertext" may be a useful metaphor for urban travel, as individual ICT users can now engage with interactive decision-making processes and connection to various interrelated social networks as they move through urban spaces. Hypertext is a "non-linear, nonsequential method for organizing text that enables the text to be linked in multiple ways," suggesting that urban spaces must be read differently in an age of distributed and pervasive ICT mediation (Kwan, 2007, 442).

> Urban travel can no longer be understood in terms of the spatial interaction between two fixed points in space, as the interactive coordination enabled by mobile communications that leads to a particular meeting or social activity may be transacted continuously over a span of time and space. (Kwan, 2007, 441)

According to de Souza e Silva, these new spatial configurations could be considered "hybrid spaces," bringing the seemingly intangible networks of cyberspace into the physical dimension: "[T]he popularity of mobile technologies

and their uses as collective communication media remind us that networks are indeed spatial phenomena and that the space 'in between' represented by the paths in fact matters" (de Souza e Silva, 2006, 267). The prevailing view is that constant and mobile ICT connectivity is enabling new socio-spatial experiences that are being woven into the fabric of everyday life and that it is likely to have the greatest effects in the most spatially elusive zones—the interstitial paths *between* physical locations and between the offline and the online (broadly understood here to encompass not only connectivity to the World Wide Web but also networks of social connections maintained at a distance via mobile telephony).

Another rich seam of enquiry around mobile phones has centered on the use of mobile phones in instigating protests and the role of mobile technology in democratic politics.

> The ability to move at will and to avoid hazards, to intersect and interrupt, is a vital aspect of power-to. The introduction of mobile communications, from the simple mobile phone to the Internet-enabled smart phone, as well as a myriad of other networked mobile computing devices, has massively enhanced the capacity to coordinate, organise and distrupt at speed and in numbers, enabling what can be described as 'mobil(e)isation.' " (Hands, 2011, 124)

Of course, much of the research in this area flirts dangerously with technological determinism and, in the case of the developing world, technological orientalism. The rapid uptake of mobile technology in the developing world has made it a focus of global development agendas and optimism (see, for example: The World Bank, 2012). By 2011, there were nearly 6 billion mobile cellular subscriptions worldwide, of which 79 percent were in the developing world (International Telecommunications Union, 2011a).

In terms of their democratic potential, mobile phones were early identified as organizational tools for collective social action. Rheingold (2007) introduced the concept of the "smart mob" to describe a loose, non-hierarchical group assembled

quickly and spontaneously with the aid of ICTs. These flash mobilizations could be used to create spontaneous protests, and Rheingold cites familiar examples from the World Trade Organization protests in Seattle in 1999 to protests against President Joseph Estrada in the Philippines in 2001, among others, where protesters coordinated via SMS. According to Rheingold: "In the political sphere, the power of persuasion, organization, and coordination have been democratized worldwide by the availability of mobile telephones and text messaging" (Rheingold, 2008, 237). He goes on to acknowledge that there are both democratic and undemocratic potentialities in mobile technology use, as mobile phones can be subject to surveillance and monitoring. But this caveat notwithstanding, the examination of punctuated, disruptive social action has a tendency to lend itself to wildly exaggerated expectations about the transformative effects of ICT use on political systems.

This view of ICT-mediated "swarming," to borrow Rheingold's characterization, focuses on flashes of intense group activity that suddenly materialize and then dissipate, and it can result in a perception that the moment of political upheaval is divorced from everyday technological practices. Without further investigation and contextualization, it can also fail to recognize the less dramatic transformative effects that such acute moments of hybrid human-technological agency and innovation can have over time. The immediate aftermath of the Egyptian revolution offers an unparalleled opportunity to interrogate the nuanced relationship between ICT-mediated mobilities and spatial and social practices. Although the 18 days of revolution in 2011 did mark an intense and punctuated moment of upheaval, the uses of mobile technology during that time evolved out of ordinary practices of long-time mobile phone users. Moreover, the revolution became a sustained experience for many newly initiated activists *following* the resignation of President Mubarak. After Mubarak stepped down on February 11, 2011, Egypt entered a tumultuous period of transition, led by the Supreme Council of the Armed Forces (SCAF) until June 2012, when

Egypt elected Muslim Brotherhood candidate Mohammed Morsi to the presidency, though the transitional period did not end there. Police had largely retreated from public spaces, and although security forces cracked down on street protests after the revolution, this transitional period was marked by unprecedented mobility and direct action in public space. In fact, ICT-mediated collective action became very much a part of everyday life. As Figure 3.1 shows, there were over 20,000 protests in Egypt in 2011, and the sheer frequency and diversity of protests throughout this period meant that many revolutionary uses of mobile technologies continued alongside the mobility of people after the 18 days, with lasting effects.

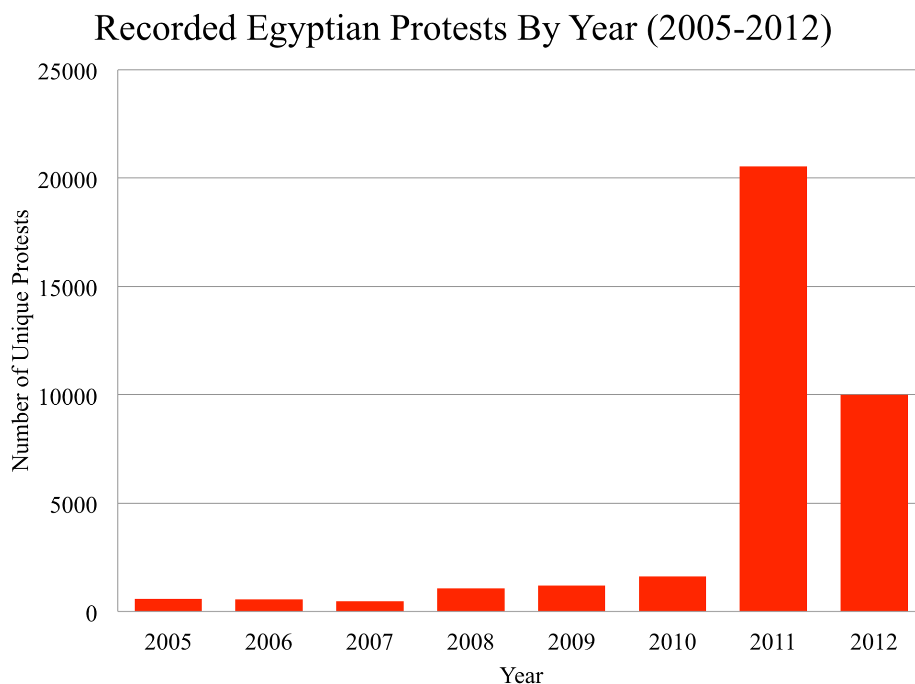


Figure 3.1: Number of reported individual protests in Egypt, 2005-2012. Data retrieved from the Global Database of Events, Language, and Tone (GDELT): http://gdeltproject.org/.

During the initial post-revolution period, activists continued to use ICTs, and mobile phones in particular, as they engaged in what had become a sustained and vigorous culture of street politics. Mobile technology was well suited to the city

turned inside-out, as mobile phones accompanied people in their daily movements between private and public spaces and enabled communicative movement between physical and virtual dimensions. Mobile phones accompanied activists into the street because they had accompanied people in their everyday lives. The mobility of activists *between* geographic locations and communicative dimensions constituted an important mechanism of resistance and subversion, making and re-making new urban spatialities long after the revolution.

Mobile Technologies Mediating Resistance

In the days leading up to January 25, a young woman named Asmaa Mahfouz emerged as an enthusiastic revolutionary instigator. She was a member of the April 6th Youth Movement, and she posted several calls to action on the video-sharing website, YouTube, between January 18 and February 28. In her videos, she encouraged viewers to join her, and she even posted her phone number so that they could meet her in Tahrir Square (Wall & Zahed, 2011, 1338). The addition of her phone number made this rallying cry a distinctly personal appeal. At least in the first days of revolution, the *We Are All Khaled Said* Facebook page administrators were still anonymous, and the January 25 revolution event on Facebook was organized but leaderless. Here was a young woman inviting prospective protesters to join her—to *call* her—and to *meet* offline. Asmaa's inclusion of her phone number in these videos (a practice that would actually become far more common after the 18 days) highlights certain pre-existing expectations about mobile phones: they are connected directly to an individual who is known and who is reliably waiting on the other end of the line, and they are well-suited to on-the-go coordination and information-sharing. Many social media posts encouraging people to join the Police Day protests seemed to echo an awareness, so evident in Asmaa's videos, that the success of the "revolution," could not be achieved by seasoned activists alone; novice protesters, newly mobilized, needed to participate.

A key question was how to get them to actually take to the streets.

Navigation and Coordination

Prior experience of protests had proven to long-time activists that coordination online needed to be accompanied by coordination on the move, and mobile phones were the obvious tool for communicating while moving, even without mobile Internet. *Kifaya* had made use of fixed-line telephony and mobile phones alongside blogs and chat rooms to coordinate demonstrations (Meital, 2006). The April 6th Youth solidarity movement had used both Internet organization and SMS to coordinate their solidarity protests in 2008. But these experiences also illustrated the limits of online organizing in street protests, and they had an important strategic result: activists realized that organizing offline effectively would not be as simple as instigating online communication (Rosenberg, 2011). In his book on the revolution, Wael Ghonim explains that by 2011, mobile phones were seen as a way of reaching more potential participants because of the comparative pervasiveness of mobile technology:

> Many creative ideas that I responded to came through the members of the page. One of the best ones was to distribute mass text messages (SMSs) that publicized Jan25. It was crucial for the invitation to reach all Egyptians, even if they did not participate, so that they anticipated the event and took the time to determine their positions. Reaching working-class Egyptians was not going to happen through the Internet and Facebook. Youth groups that had mobilized through the Internet printed fliers of the Jan25 invitation and distributed them, together with the SMS messages. (Ghonim, 2012)

In fact, most of the protesters I met in 2011 were entirely new to political activism. The revolution that had dethroned their authoritarian leader of 30 years had been their initiation into protest culture. They joined protests because people they knew had also joined, and they had often been in constant contact via SMS

with friends and family who were protesting. In an article for *The New Yorker*, Gladwell (2010) writes that high-risk activism is a *strong tie* phenomenon, meaning that people take risks with other people whom they actually *know*, or with whom they have a strong connection. "It makes a difference when someone you know says meet me here," Salma, an April 6th activist, told me one evening outside an April 6th Youth meeting. "You go because you trust them."[2] Mobile phones are widely acknowledged to uphold closer, more meaningful, "strong" ties than online media and social networking platforms because they are often used among people who also share significant face-to-face relationships (Villi & Stocchetti, 2011). In contrast, online platforms sustain weaker ties (Cardon & Aguiton, 2007). In order to access someone via mobile phone, a user must have a very specific reference for them—their phone number—which must be exchanged in order to make contact. Thus, ties maintained by mobile phone are closer and the communication more personally relevant than on other media platforms (Ling, 2004; Ling & Donner, 2009). Even though many activists I spent time with at protests and meetings in 2011 had seen the revolution erupting on the news and online, nearly everyone indicated that they had also received personal messages on their phones from friends urging them to go to Tahrir Square.

Naima and Aya were two such new activists. We sat together in a sparse room with a couple of desks and a few rolling office chairs in an empty, somewhat dilapidated multistory house off of Kasr al-Aini Street. Their local branch of the April 6th Youth Movement had established its post-revolutionary headquarters here, and on this particular night, it was bustling with people in every room. Naima was sipping a cup of coffee she had made in their communal kitchen, and everyone was regularly checking their phones. There was a faint smell of wet paint wafting in from the banners that hung with freshly scrawled slogans outside. Neither Naima nor Aya had been "members" of April 6th before the revolution, and they considered themselves distinctly apolitical before the events of January 2011. They

[2]Personal interview with Salma, 13 September 2011.

were university educated and had Internet access at home from a young age, but it was not the Internet that brought them to the streets in January. Friends and acquaintances, they agreed, had convinced them. They soon realized that when Internet and mobile phone signals were shut off entirely on January 27, the only way to keep abreast of developments on the ground was to join them. They left their computers at home and joined the protesters physically occupying Tahrir Square.[3]

Figure 3.2: April 6th Youth meeting, Downtown Cairo, September 2011. Photo by author.

Trading phone numbers was an urgent and pervasive part of protests after the revolution. Before I could consent or object, my phone was constantly being passed around groups of activists at any opportunity, with shouted promises that I would receive an invitation to join the next demonstration or attend the next meeting, and this was common practice. The voices yelling their promises to “be in touch” almost always followed through. The reality was that although many meetings and marches were advertised on Facebook, the most reliable information about where and when to meet always came via SMS and often at short notice. It may seem

[3]Personal interviews with Naima and Aya, 13 September 2011.

like the practice of readily adding new contacts to one's mobile phone address book rendered the ties maintained through mobile phones weaker than before the revolution, and to some extent, this was surely the case. But there was still, often, a physicality to these connections. I had experienced it myself—someone had seen me and even held my phone in their hand. We may not have *known* each other, but neither were we entirely anonymous. I was struck by how effective the personal nature of mobile phone communication was at making people feel more personally invested in a group's activities. In line with Sadie Plant's observations, it could "facilitate the emergence of a new private world, a virtual community that can be pulled together in a mater of moments" (Plant, 2002, 61). Protesting involved real risks, but having myriad SMS connections to other protesters, who were also moving through the streets, gave many activists and me, as a researcher, greater confidence in our movements. Nahla, an occasional protester who was not affiliated with the April 6th Youth, said she would be constantly "texting and calling contacts and family members for meetups and updates."[4] And Talal, young digital marketer, who also joined protests regularly after the revolution, told me that he valued his mobile phone most for "being able to communicate with a few friends in order to meet up and move together."[5]

Some of the safety concerns involved in moving through the streets and into possible danger could be assuaged along the way by the assurance that individuals could find and meet friends at the protest site itself. Mobile phones have elsewhere been recognized to convey critical information and assist movement through perilous environments during various kinds of emergencies (see, for instance, Kavanaugh, Yang, Sheetz, Li, & Fox, 2011), something that Internet postings alone could not accomplish in Egypt, not least because of the low Internet penetration rate. Leaving one location (home, for instance) for another (a demonstration outside a government ministry, perhaps) involved a period of mobile indeterminacy and exposure—the journey *between* places—but mobile

[4]Personal communication with Nahla, 8 February 2012.
[5]Personal communication with Talal, 8 February 2012.

phones provided uninterrupted connectivity, "constant touch" (Agar, 2003). In this case, the inherent insecurity of interstitial spaces (public spaces and streets) was mitigated by being technologically *between* physical and virtual dimensions, which each yielded different but complementary information.

According to Abbas, a founder and leader of the April 6th Youth, maps, routes, and plans could be made and disseminated online before protests, but they could only at best approximate the actual physical terrain that protesters would encounter on the day of action. We were speaking in a café in the Borsa neighborhood, where passersby readily recognized him as a revolutionary figurehead, often interrupting our conversation about coordination tactics in order to steal a few words with a political celebrity. Routes were made and altered to respond to changing conditions, and they were disseminated by text on mobile devices, he said.[6] In her detailed account of the Egyptian Revolution, El-Ghobashy (2011) describes how false information about gathering places and meeting times were shared online before January 25, and on the day, organizers used mobile phones and landlines to share the accurate information about when and where to meet. Moving together and circulating information among strong ties in this way provided additional security. Thus, this kind of dynamic "midcourse adjustment" was a navigational practice embedded in the everyday practices associated with mobile phone use, but it acquired new meanings and had been applied to new conditions after the 18 days. In this sense midcourse adjustment, to use Ling's (2004) terminology, became a strategic and subversive tactic.

Crucially, the at-hand, or prosthetic, nature of mobile phones meant that they could be used to send real-time updates on protest conditions as they were being witnessed by protesters; the mobility of this prosthetic communicative device gave activists and protesters unprecedented ability to traverse and transgress in physical and virtual space. Communication via mobile phone made the built environment more readable and, therefore, more navigable. Thus, activists and protesters could

[6] Personal interview with Abbas, 27 September 2011.

be highly responsive to changing conditions; they were physically 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, or other social media. This dual mobility of the activist and her information occurred instantaneously and simultaneously, and protests were incredibly reliant on such transdimensional mobility of people and data.

Transdimensional mobility meant more than just physical navigation through the streets. It also encompassed navigation between the online and the offline. Fahmi, writing on the relationship between online blogging and the city, says:

> The spaces of resistance constituted within these hybrid physical and virtual worlds have created new geographies of protest. On the one hand, global networks' geographic mobility, loose organizational models and access to communications have shifted their campaigns and resources to alternative virtual venues. On the other hand, as events are reported through websites, blogs and streams in a collaborative social process, a means of navigation is provided for street protesters. (Fahmi, 2009, 90)

As street experiences were shared with virtual networks, virtual communication became more intimately connected with physical, offline sites and experiences. And similarly, virtual communication, mapping, and documentation were also communicated back onto the street for the purposes of navigation and coordination. Mobile phones were the interstitial technology that could move physically between places with protesters and could also mediate virtually between the online and the offline, even between Internet users and non-users.

Getting to a protest implicated the mobile phone and its physical proximity in important ways. Other mobile media studies have highlighted the ability of the mobile phone to relax time constraints, allowing meetings to be scheduled and rescheduled on the go and to allow for the rerouting of pathways in events

of emergency or unexpected interruptions by communicating new routes while in transit (Castells et al., 2007; Ling, 2006; Ling & Donner, 2009; P. Peters, Kloppenburg, & Wyatt, 2010). "Thus, 'going out' can involve continuous coordination, negotiation and movement with people who are present as well as those who are absent" (Urry, 2007). Mobile phones were the banal, quotidian medium through which people socialized, coordinated and communicated prior to the revolution, so there is no great revelation in their mere presence or prominence within the media ecology during or after the revolution. Most of the activists I interviewed considered their phones an essential accessory, an ever-present and mundane piece of wearable hardware. They did not consider them "revolutionary," but mobile phones were part of hybrid human and technological agencies that made protests possible—mobile communications were integral to the movement of people. As Salma put it, "The phone is for getting more details and to make plans. The Internet cannot make protests happen. The cell phone actually materializes it—the Internet might be for getting some information, but the cell phone is more important."[7]

The integration of location awareness technology into mobile phones was also significant. Mobile phones equipped with GPS and smart phones with access to online maps, such as Google Maps, were incredibly useful for planning, attending, and documenting protests. Other research has shown that having access to such locative media changes how place and location are understood (de Souza e Silva & Frith, 2010; Gazzard, 2011). Reflecting more broadly on the introduction of Google Maps to Egypt, Yusuf, who authors a popular blog on urban rights, said, "Open street maps made it possible to plan all kinds of routes. First and foremost was Google Earth. That was a game-changer."[8] The sprawling metropolis of Cairo could now be read from above, via satellite imagery, with streets in unfamiliar districts mapped and named. I, myself, used Google Maps extensively during fieldwork in 2011 to look up locations that had been texted to me by

[7]Personal interview with Salma, 13 September 2011.
[8]Personal interview with Yusuf, 23 August 2016.

informants before going there myself. Although I did not have a smart phone myself, informants would often ask me where I was headed next as I prepared to leave and offer to look up a good route on their phones.

Digital maps were an integral part of what Ling (2004) has described as iterative coordination, which involves cross-checking the physical terrain, personal directions communicated by phone, and online maps. Locative technology, then, did not just affect the way mobile phone users with Internet connectivity navigated and read the city; it affected how the city was understood by anyone who came into contact with such ICT-users, who viewed the city as a transdimensional geography—the virtual projection and the physical topography. Location awareness technology meant that any individual activist could know where she was at any given moment—she could assign a geographic marker to her movements between places. Digital maps were also influenced *by* offline events—they were themselves a mobile product. Users can submit corrections and amendments to online maps, including Google Maps, and they can build their own personal maps with locations personally pinned and labeled. At this writing, Google maps labels Tahrir Square as "historic square & site for revolution." Protesters had quickly begun physically eliminating Mubarak's name from various Cairo landmarks, painting over signs that featured the deposed president's name. In January 2011, protesters graffitied over signs at the Mubarak metro station with الشهداء ("the martyrs" in Arabic). When I used the metro over seven months later, Google Maps still listed the station as "Mubarak," but it has since been changed to "Al-Shohadaa" ("the martyrs"). Such name changes illustrate the dialectic between online and offline spaces—these dimensions make and shape one another, and they are often contested in parallel.

Studies on mobile phones and travel have resulted in mixed observations. In some cases, mobile phones appear to decrease the need and desire to make journeys due to the ability to communicate at a distance (Ling, 2004), but others indicate that mobile phones actually increase mobility generally as well as the

willingness to travel in everyday life (Townsend, 2000). In the revolutionary moment, communication via mobile phone generally increased participation and influenced the decisions of many people to join protests. Even months after the revolution, mobile phone communication continued to connect activists and motivate them to continue participating in protests. The use of mobile phones to navigate to protest locations and to meet for planning purposes clearly evolved out of longstanding mobile phone uses for micro-coordination. The ability to change plans while moving (midcourse adjustment) as well as discuss developments, impediments, and dangers along the way (iterative coordination) gave activists greater confidence in venturing out into the street. The softening of schedules pervaded all revolutionary uses of mobile phones, as people were more willing to wander out without a pre-determined plan (a trend noted elsewhere by: Silberman, 1999; Townsend, 2000). There is some evidence from research on mobile phone use between children and parents that having a mobile phone is perceived to minimize risks because it can be used in an emergency to share information or to check in. Equally, though, mobile phones may make users feel safer taking risks, such as going places and engaging in activities that are unfamiliar (Pain et al., 2005). Protesting throughout 2011 was a high risk activity, and the feeling that one could bring her entire social network with her as she moved through the streets helped to mitigate feelings of uncertainty and danger. Importantly, this technology *moved with* protesters so that their physical mobility was, in fact, always transdimensional. Challenges and immobilities in the physical environment could be addressed and communicated transdimensionally, and navigation was thus a seamlessly transdimensional undertaking.

For mobile phone users, their mobility in the street was deeply connected to their communicative mobility enabled by wireless mobile technology. Mobile phones made the street accessible and legible to a large number of people who may not have otherwise physically participated in protests. Moreover, mobile phones allowed people who met briefly, for an instant, at a protest to stay connected

long after their moment of co-presence in public space had passed, and this network of mobile phone contacts helped to maintain momentum and participation after the revolution. As Howard et al. (2011, 16) observe: Protesters "found solidarity through social media and then used their mobile phones to call their social networks onto the street." The dual mobility of the protester and her communicative device enabled movement through public space and across physical and virtual dimensions, as she physically occupied public space and transmitted her movements via ICTs.

Activists used mobile phones extensively for navigation, coordination, and mapping, as tools to assist their physical movement in the streets, and using a combination of personal observation and communication, digital mapping, and location awareness technology, protesters were able to mitigate against certain risks associated with moving through public space by being in constant communication. In the revolutionary moment itself, this ICT-assisted mobility brought many first-time protesters Downtown. Most of the activists I interviewed in 2011 were not residents of the Downtown area; they lived in various other, distant districts of the city. Familiarity with the area, however, was not a significant disincentive to participation because Downtown was more than just a physical terrain; it was transdimensional, hypertextual, and hybrid. It was evident that activists associated their transdimensional mobility strongly with Downtown and Downtown strongly with the revolution. They brought their virtual networks with them into and through these urban spaces, and their physical presence in urban space also expanded and reconfigured their virtual networks. Indeed, hybrid spaces have the potential to "strengthen users' connections to the space they inhabit, because the connection to other users depends on their relative position in space" (de Souza e Silva, 2006, 270). The profound ICT mediation taking place Downtown, the heart of the revolution, would create associations and meanings for revolutionary participants and non-participants alike, with long-lasting effects that are discussed in greater depth in Chapter 5. Of course, Downtown was not solely important because

of the revolution; it had long been a zone of social porousness and transience that attracted many different people, including artists, activists, and intellectuals (Ryzova, 2015). The transdimensional mobilities exercised on an unprecedented scale during the revolution added new meanings to these spaces of movement.

Embodied Mobile Signals

The physical proximity of the mobile phone to human bodies proved particularly significant for revolutionary activists. The mobile phone as *prosthesis* took on new meaning for protesters who continued to mobilize in the streets after the revolution. For navigation and coordination purposes, trust in strong ties was key. Information shared via mobile phones was considered more credible and reliable because the phone *must* have accompanied a person; users and devices were interwoven, a single human-technological hybrid, moving, witnessing, and communicating across dimensions, between the physical streets and virtual wireless signals. The prosthetic nature of mobile technology, the experience of mobile phones as extensions of the body, is one of the characteristics of mobile phone use that has expedited its domestication in everyday life (McGuigan, 2005; Caron & Caronia, 2007; Ling & Donner, 2009), but the revolution had assigned new meanings to the embodied experience of mobile communication. In many cases, communication via mobile technology stood in for a physical check-in. The integrity of a person's mobile phone connection became a proxy for ascertaining her bodily integrity and safety. "Yeah, it sounds crazy to you, maybe," Salma said to me once, reading my doubtful expression, "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."[9]

In this context, an undelivered text message, an unanswered phone call, a phone switched off, was as good as watching a heart monitor flatline. Mobile phones were always on, and they were always at hand, and like a human heart, their

[9]Personal interview with Salma, 15 September 2011.

signals pulsed in the background, an inconspicuous but integral part of everyday life, where distress was often part of the daily rhythm. When I first wrote about this cyborgian enmeshing of body and phone after the revolution, I referred to the mobile signal as a "mobile heartbeat," in reference to the ordinariness (and yet indispensability) of the mobile phone and its association with life or death status (Allmann, 2014a). Texting or calling a friend and fellow protester was like checking for a pulse. Constant communication was the long-established and pre-revolutionary norm, but this was a new appropriation of a familiar technology, a response and adaptation to the particular conditions of the post-revolution environment. Urry (2007, 20) observes that "individuals increasingly exist beyond their private bodies and leave traces in informational space. The self comes to be spread out or made mobile as a series of traces." The "self" as a "trace"—a mobile signal—was understood to *exist* between dimensions, linked to a physical embodiment but distributed through and across physical and virtual dimensions.

Other authors have examined the practice of "checking in" as critcally important in emergency situations (Katz & Rice, 2002; A. A. Cohen & Lemish, 2005; Ling, 2004; J. Gordon, 2007). During protests after the revolution, moving between places was precarious and unpredictable, and it left the peripatetic activist exposed in the liminal act of journeying. But for mobile phone users, these journeys were made through transdimensional space, where the "connected presence" of distant others, to borrow Licoppe's (2004) expression, constituted a lifeline. Indeed, Ling (2004) notes that "the notion of a mobile telephone as a lifeline is one of the central images of the device." In the context of post-revolution activism, the perceived gravity of nonresponse was profoundly shaped by the personal experiences of protesters. Many new activists expressed disbelief at the kinds of violence and attacks that they and their friends had faced during and after the revolution. The use of live ammunition on protesters during the 18 days had shocked many participants and observers, and within the following year, most of my informants knew several people who had been arrested, injured,

or even killed during demonstrations. Emergency situations were common, and activists felt the need of a "lifeline" every day, and the continuous connectivity and co-presence of their mobile phones provided a way to tolerate and respond to these anxieties. Rather than requiring a fixed meeting point (although those were also often implemented), checking in could be done on the move. It could take place between places—via ICTs.

At one meeting of April 6th Youth activists in Downtown Cairo, Attar wanted to raise a concern that undercover police officers had infiltrated their ranks at marches. A few of their friends had gone missing since last Friday's demonstration. No one had seen them since the previous week, and Attar suspected the group had been infiltrated by security forces. "How do you know they're missing and not just busy?" I asked, suggesting an alternative explanation. He looked at me gravely. "No," he said firmly. "They haven't answered their phones."[10] His comment prompted some urgent shuffling, and his concern was noted. They would start looking for the missing protesters at local hospitals and jails. Using the mobile phone connection as a proxy for 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: Eltantawy & Wiest, 2011). Suspicion was ignited in the loss of ICT connectivity, the lost signal. Of course, the loss of mobile phone contact was always a proxy, and an imperfect one at that. There were certainly other reasons why fellow protesters might not respond on their mobile phones, but nonresponse was an initial red flag, prompting further investigations; it was a preliminary diagnostic.

Again, the meaning ascribed to disconnection from a mobile device evolved out of commonplace uses of mobile technology prior to the revolution, even though these interpretations were profoundly shaped by revolutionary experiences. Indeed, checking in has become "a question which is now so common that it has come to define the mobile age: 'Where are you?' If this is the perfect

[10]Personal interview with Attar, 13 September 2011.

mobile question, the perfect mobile answer is ‘on the mobile’ ” (Plant, 2002, 29). For mobile phone users, transdimensional mobility was so much a part of both their everyday lives and their revolutionary experience that it came to stand for their physical wellbeing. The embodied use of mobile phones meant that their users existed always between an “offline” here and now and an ICT-mediated communicative space, where they could share information far beyond their immediate surroundings. The disruption of that transdimensional mobility was a catastrophic warning sign; to be thus immobilized communicatively indicated a very distinct possibility of physical immobility and danger.

The prosthetic, or at-hand nature of mobile phones has long been associated with the potential for enhancing personal safety and feelings of security. Perhaps because the moments in which bodies are in motion, between places, are also periods of varying degrees of uncertainty, the always-on, always-present mobile phone offers a lifeline to a virtual network of other mobile phones attached to other, absent but communicatively present, bodies. After the revolution, the corporeal enmeshing of mobile phones with human bodies took on new meanings. The mobile phone signal became like a “mobile heartbeat,” a way for activists to check the “pulse” of friends, family, and colleagues. Disconnection and non-response meant more than an interruption in ICT connectivity; it indicated that the body in possession of (and coterminous with) the mobile phone was likely compromised in some way. In this use of mobile phones, it is apparent that for mobile ICT users, bodily movement is entirely and universally transdimensional; bodies are conceptualized to exist in between physical and virtual spaces, such that immobility in any of these spaces is perceived to indicate the probability of immobility in others.

This particular emergency use of mobile phones by activists illustrates the hybridity of the spatial experience of protest and the blurring of boundaries between offline and online and between humans and technologies. In this setting, mobile technology is revealed to be very much embedded in physical places,

and mobile phone users are perceived to exist permanently between a physical environment and a virtual communicative network, which interpenetrate and influence one another. Moreover, treating the mobile phone signal as a wireless heartbeat was not confined to the context of protests and demonstrations alone. These were intense moments of mobility and risk to be sure, but risks were many, and they were distributed through space and time. Activism, like mobile ICT mediation, was an activity that perturbed the time between protests or meetings and even long after some activists gave up their revolutionary politics altogether. In part, this was facilitated by the constant connectivity to fellow (and former) activists via ICTs. But participation in protests made everyday life riskier, and many activists felt that they could face retroactive retribution from security services at any time, such that their daily movements were always undertaken in the shadow of their revolutionary mobility. In 2014, Jameel, whom I first met in Tahrir Square in 2011, told me he tried to take each day one at a time, but he knew his past political activities might catch up with him. "I could be arrested for anything. You'll know if one day I don't pick up your call," he said. "I probably never will again."[11]

Mobile Documentation and Corroboration

The fact that mobile phones accompanied activists as they physically moved through the streets meant that they became tools for real-time documentation of events. Citizen journalism became a buzz term during the entire Arab Spring as amateur videos and photos streamed out of Egypt and other countries. Citizen journalism gained traction worldwide in the past several years due to the rise of 2.0 technologies that allow users to become content producers and disseminators (Boler, 2008; Goode, 2009; Khamis & Vaughn, 2011; Radsch, 2011), and it contributed a great deal to international coverage of the Arab Spring, in part because of the inability of foreign journalists to acquire first-hand information.

[11]Personal interview with Jameel, 29 October 2014.

"It was dangerous for everyone," an *Al Jazeera* television journalist told me in 2011. "Everyone will use citizen material when you are really shooting history. If you want verification and two sources and that sort of thing, though, forget it."[12] As a professional journalist, he viewed the preponderance of amateur footage with some skepticism, but while citizen-gathered content may not meet established journalistic standards, it had certainly developed its own economy of truth.

The mobility of people and technologies was essential to the valorization of citizen-produced material. "But you had to *be* there. Of course there was more weight attached to the photos because you sometimes risked your life to get them," Othman, a twenty-something film-maker and graffiti artist told me, holding up his mobile phone to emphasize the point.[13] Othman's comment highlights the physicality—the placedness—of mobile documentation and the authoritative value attached to it. Artist and activist Lara Baladi makes the argument that

> [h]ere, and in the whole region during the Arab uprisings, the act of photographing became not only an act of seeing and recording; it was also fully participatory. At the core of the Egyptian uprising, photographing was a political act, equal in importance to demonstrating. (Baladi, 2013)

The physicality of photographing was integral to the meaning of photographs as documentary *evidence*, as Othman described it, and as *resistance*, in Baladi's characterization. In later years, the policing of public photography would signal the end of the ongoing revolution. Moreover, the fact that mobile phones were present in physical space with activists means that the images they capture acquire credibility in having been taken at great risk to the amateur photographer or videographer. The credibility of revolutionary footage is moored in the simultaneous technological *and* physical mobility of ICT user in offline spaces. In commenting on the emerging practice of cameraphone photography, Rubinstein

[12]Personal interview with Hanif, 19 September 2011.

[13]Personal interview with Othman, 27 September 2011.

(2005, 9) writes that "[t]he cameraphone photograph has an authenticity that is absent from most other types of photographic images. As it is an image that was unmediated by manipulation, the phone photograph makes a claim for truth that no other digital image can make." Of course, disputing the integrity of amateur footage became a key counter-revolutionary strategy, and various regimes would frequently claim that images and videos had been manipulated ("*mitfabrika*"), but many activists still clung to the belief that their digital documentation efforts corroborated their stories and experiences.

Rashid, an activist with the Egyptian Initiative for Personal Rights and a self-described technology geek who helped to run the media tent in Tahrir Square during the 18 days, said of the revolution: "No one believed us because it is—unbelievable. Until we could actually show them." He was referring to the power of amateur videos and photos to bear witness to what human eyes and ears had experienced in the street. "Most of the coverage came out from normal people using just normal cell phones to provide information," he added.[14] 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 online, including on the *We Are All Khaled Said* Facebook page (El-Ghobashy, 2011). So these strategies were hardly new, but they were made more possible by the affordances of the mobile technologies at hand, which now increasingly featured cameras for surreptitious recording on the move. Whether a phone could only send text messages or stream video live to the Internet, people were used to documenting their movements *as they happened*. Many protesters recounted using mobile phones to document protests for themselves without any intention of disseminating their recordings, photos, or other personal messages more widely. "No, I leave the sharing of pictures and stuff to the other, more famous activists," Othman said.

Early on, some of these "famous activists" recognized the value of

[14]Personal interview with Rashid, 19 September 2011.

aggregating mobile content from users who could not or did not want to post their material online. The Internet and phone blackout on January 28 was a catalytic moment for such offline collection of digital content. Even after SMS was blocked on January 28, protesters continued using phones, but instead of using them primarily for communication, mobile phones became almost exclusively mobile recording devices. In the absence of their 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 and disseminated, mobile phones were relatively invisible, as Facebook and Twitter took center stage, but this online content was dependent on the physical mobility of activists and their phones. 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. The communications blackout caused 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 (Wilson & Dunn, 2011; Aday, Farrell, Lynch, Sides, & Freelon, 2012). "We felt like the only people online because no one else had access in Egypt. Everything was focused on getting the information beyond Egypt," Rashid said of the blackout. Activists in the ad hoc media hub in Tahrir Square gathered digital content manually, downloading images from people's phones, and they trawled through the square, taking notes with pen and paper.[15]

Certain activists, like Rashid, became aggregators—human media

[15]Personal interview with Rashid, 19 September 2011.

hubs—who posted any and all content, their own or that of others who shared their images, texts, and videos with them. After the 18 days, these aggregation practices continued, and they even became movements in their own right, as collectives like *'Asker Kazeboon* ("the military are liars" in Arabic) and *Mosireen* ("we are determined" in Arabic) assembled to document the violence of security forces and attacks on protests. The efforts of these collectives to collate and share digital archives documenting protests were focused on mobile footage, perceived to be an eye-witness perspective through the lens of a mobile phone camera. Groups like these made an effort to screen recorded footage of protests, police brutality, and altercations between security forces and demonstrators in public spaces and at popular protests in order to highlight the very real connection between online images and offline spaces and politics. What these efforts also reveal, importantly, is that despite aggregation efforts, not every mobile documentarian was also a content sharer. Many people kept personal archives of photos and videos without any intention of sharing them on social media or even with other friends and family, leaving the dissemination of digitally recorded content to a relatively small handful of active social media users, who were also activists.

Egypt's Arab Spring has resulted in a vast amount of video and photographic content, and protests after 2011 contributed to the realization of a transdimensional street, rendered meaningful and memorable through mobile documentation. "In effect, Tahrir triggered a new visual culture. It became the spot to film and to be filmed, as well as being a space to see others and to be seen" (Abaza, 2014, 9). The expectation that any event could be recorded and saved meant that public life and public spaces became sites of *potential* photography and filming at all times. Protesters carried their mobile phones at the ready, prepared to instantly snap a photo. And spaces were *made* in the sharing and dissemination of photos, videos, and other data. The sites of major protests and crackdowns became nationally recognized symbols. Citizen reporting contributed to the association of specific places with particular instances of violence and martyrdom, and these spatial

associations were physically evident in the proliferation of graffiti around sites of clashes and graffiti depicting specific events that had gained notoriety through social media. Just months after I left Cairo, in December 2011, an amateur video of a woman being beaten by security forces at a protest was posted on YouTube. She was dragged along the ground near Tahrir Square, her black abaya torn open to reveal a blue bra as she was kicked and beaten (Ayish & Mellor, 2015, 2). The blue bra became a symbol of injustice and oppression, depicted on banners and graffitied on walls for years to come (see Figure 3.3). It first appeared on walls near the site of the assault itself, connecting the ICT-mediated memory with the geographic *place* in which it occurred. The incident illustrates the interpenetrating virtual-physical spatiality of post-revolution protest culture, where events that occurred offline were recorded and disseminated online to become symbolic images that then were re-introduced on the physical street.

In the years following the revolution, it would gradually become more difficult to take photos in public places, particularly around Downtown locations associated with the revolution. Cameras, particularly long-lens models associated with journalism, attracted unwanted attention, abuse, and even arrest. The *de facto* prohibition on political photography was bolstered by arbitrary arrests of photojournalists, prompting outcry from press freedom advocates and protests from the Egyptian Journalists' Syndicate (Safwat, 2013; Committee to Protect Journalists, 2015). I, myself, was stopped on two occasions, in 2013 and 2014, while taking photos of graffiti in Downtown Cairo by security personnel. And an academic colleague working in the humanitarian aid sector was briefly detained in 2013 for taking photographs outside of a police station. Many activists described camera phones as presenting a simple, surreptitious, and always at-hand solution to the challenge of photographing in public places. The ubiquity of mobile phones equipped with cameras meant that it was not necessary to carry a separate camera at all times; if a cameraphone users encountered something worthy of documentation in the course of their movements through the city, they could quickly react

Figure 3.3: "Blue bra" graffiti in Downtown Cairo, March 2013. Photo by author.

and record it. Between 2012 and 2014, several informants would mention this surreptitious use of camera phones to take photos instantly and inconspicuously, and others volunteered that they rely on their camera phones to capture politically sensitive footage during in-between moments, when they are in transit and happen to come upon an event, place, performance, or work of art they find interesting.

Mobile documentary practices are meaningful because they imply the presence of the photographer or videographer in a particular place at a particular

time. Being present in physical spaces lent credibility and urgency to the visual documentation. Camera phones have been recognized elsewhere to privilege timeliness in their ability to capture events that are happening *right now* (Villi, 2007; Scifo, 2005). Mobile phone documentation, then, was very much embedded in offline context, but they enabled the transdimensionality of bodies and data—creating networked locality, distinctly local and but capable of nearly infinite global dissemination, mobility, interpretation, and reappropriation (E. Gordon & de Souza e Silva, 2011). Mobile documentation encompassed what Hjorth and Pink call "emplaced visuality," or "a visuality that is part of place and makes place, an in this case traverses and connects the material-physical with the digital-intangible" (Hjorth & Pink, 2014, 46). This visuality was further enhanced by location awareness technology, which allows users not only to navigate, as discussed above, but to easily (often by default) tag images and videos with GPS coordinates. When images are shared on social media, geotagging allows them to be mapped onto particular locations, "allowing the recipient to gain an insight into the culture, politics and society at these moments in time" (Gazzard, 2011, 406). Rather than negating or transcending the physical spaces in which protesters moved and recorded their images and videos, mobile documentation practices relied on and reinforced the importance of the urban spaces where they occurred. Activists were eager to prove that *something* happened *here*, and mobile phone cameras offered an opportunity to preserve such eye-witness points of view.

The ubiquity of technological witnessing resulted in an overwhelming amount of digital content from myriad perspectives, all claiming authority on transient moments. The question of mobile memories is revisited more thoroughly in Chapter 6, but for now it is important to reflect on how activists assigned meaning and value to these digital traces, recorded and saved on-the-go. Studies of camera phone usage in everyday life suggest that "camera phone practices provide new ways of mapping place beyond the geographic: they partake in adding social, emotional, psychological, and aesthetic dimensions to a sense of place" (Hjorth

Figure 3.4: Photo taken on author's mobile phone at a protest in September 2011.

& Pink, 2014, 42). In other words, the very act of recording and documenting personal experiences, however mundane, imbues the photographed spaces with multi-layered, transdimensional meaning. In fact, "the very possibility of taking camera phone photos enables types of wayfaring in that it becomes part of the way that our trails and traces become 'somewheres' as we move through the world" (Hjorth & Pink, 2014, 45). For many activists who joined the revolution in 2011, their understanding of Tahrir Square as being "somewhere" revolutionary was shaped by ICT mediation—amateur images shared online and distributed on satellite TV, text messages, and images shared among close ties via mobile phones. The continued documentation of protests, whether for private, personal archives or wider distribution online, also contributed to how these activists experienced urban space. These were spaces already heavily documented and awaiting documentation. Even personal documentation was creative in making these places meaningful, allowing people to possess them and claim ownership over them in the

process of making what Reading (2009, 91) describes as "memobilia," a "memory form that is lived and embodied" and mediated by mobile phones.

Mobile phones contributed significantly to the preponderance of digital content that brought us images, video, and personal accounts of the Egyptian revolution as it occurred. The physical proximity of mobile phones to moving bodies, so integral to both the navigational and security considerations discussed above, was equally important to the amateur documentation of events that took place during the revolution and beyond. Citizen journalism, as this chapter highlights, is an extension of everyday practices related to the ubiquity camera phones—mobile phones with built-in cameras for recording photos and video. Research by Okabe and Ito (2003) in Japan revealed that camera phones facilitate new kinds of visual awareness and render the mundane newsworthy. They also make any camera phone owner a possible news producer, however banal and personal the "news" may be. During the revolution and continued direct action afterward, it is no surprise that protesters used camera phones to document events—to witness events *with* them. Still, the purpose of this witnessing varied among protesters. Some kept personal archives of images and videos that they never intended to share or send to a wider audience. Others were documenting their experiences in order to post them online for a global audience, and some people worked to collect digital content from other protesters in order to share it more widely on their behalf. In this way, the visual culture around protesting took on distinctly diverse and transdimensional qualities.

Importantly, the physicality of mobile technology, its presence *with* protesters in real time and offline spaces, gave these documentary efforts greater credibility and significance. Protesters reported taking photos so that others would believe their accounts of events; ICT-mediated witnessing helped to corroborate protesters' reported experiences. In other words, the physical dimensions of a mobile image were integral to the meanings associated with it—this ICT product was deeply embedded in a distinct offline context. As images and videos were sent

and shared widely, physical places acquired meanings and associations that were then translated back onto the street. Tahrir Square, as many observers, researchers, and commentators have noted, was simultaneously locally and globally constructed in the interplay between the online and the offline. Tahrir Square (and many other sites and the spaces between them) has a transdimensional spatiality created in the ICT mediation that occurred between individuals and a broader global audience.

Documentation was such a critical interest of protesters that it led to the production and preservation of a vast quantity of digital content related to the revolution and its aftermath, and targeted initiatives materialized to aggregate and curate the ICT-mediated artifacts of revolution. In certain ways, it is obvious how the documentation of protests assisted and constituted acts of resistance: the preservation of a digital record helped to challenge regime narratives of events, motivate and mobilize others to continue protesting, and convince a global audience that the revolution was still ongoing and facing mounting repression. But the next chapter, Chapter 4, will explore a more nuanced reading of mobile documentation and trandimensional mobility after the revolution to reveal the ways in which even mundane acts of everyday ICT-mediated documentation can be alternately playful and subversive.

Communicating Across the Digital Divide

The practices above have all touched on the role of mobile technology in bridging the so-called digital divide. Internet activism alone could not account for the success of the 18 days, and we should be equally cautious not to overstate the importance of mobile ICTs in a complex media ecology in which technologies and people interact in diverse ways. There is no universal experience of transdimensional mobility—it is shaped by the affordances of the communications technologies available as well as the specific uses and practices of people and the contexts in which they live, move, and communicate. As a convergence technology, mobile phones have the unique technical capability of providing

several intersecting levels of connectivity; mobile phones range from the most basic call-and-text devices to touch-screen smart phones, so 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, for instance, while basic call-and-text users cannot. Convergence occurs unevenly within technologies and societies, and as such, there are many overlapping "digital divides" that influence access to ICTs. When I conducted this research in 2011, around nine percent of Egyptian mobile phone subscribers had Internet access on their mobile devices (Arab Republic of Egypt Ministry of Communications and Information Technology, 2011). But mobilization occurred across and in spite of divides in Internet access, in part because of the converging mobility of people and data.

The ubiquity of mobile phones proved one of their greatest assets during the revolution and in the post-revolution context, as people called and texted one another with information originating 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 smart phone users with Internet access. In this way, the mobile phone facilitated "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, 262). A complex convergence of transdimensional mobilities, between physical and ICT-mediated virtual spaces, allowed information to flow between mobile phone users with differing degrees of connectivity. This mobility addressed a difficulty observed by Khamis and Vaughn (2011): "[F]or 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." The harnessing of the mobile phone for mobilization was a

significant factor in reaching new political actors and bringing online activism fully into spaces and communities that existed intermittently *between* the offline and the online (or exclusively in the offline), as the quote from Wael Ghonim earlier in this chapter illustrated.

Many activists saw the mobile phone as a technological leveler—a mediator between media. Information from digital maps and protest details from Facebook events could be shared with networks of close ties via calls or texts to mobile phone contacts to aid in navigating to demonstrations and meetings. Photos from any phone could be collected and uploaded at the next opportunity to find an Internet connection. The experience of the 18 days, and indeed, much of the next year, was one of constant crossing of the digital divide to document and share information. Transgressing and occupying were key tactics of post-revolution street politics, but *bridging*, a practice that actively moves *between*, was also essential and subversive. Bridges, in de Certeau's view, constitute "a transgression of the limit, a disobedience of the law of the place, it represents a departure, an attack on the state, the ambition of a conquering power, or the flight of an exile; in any case, the 'betrayal' of an order" (de Certeau, 1984). Acts of "bridging" thus reject the harsh binaries that designate social, cultural, political, or spatial enclosures. Inclusivity, in this context, is rebellious and a rejection of factitious divisions, including between virtual and physical dimensions and those who can access them.

The prosthetic nature of mobile phones also aided such bridging tactics in that information shared wirelessly could be further transmitted face-to-face, on-the-go. Where protesters moved, their phones moved with them, and the physical mobility of people and technologies was essential in momentarily narrowing the digital divide. The widespread reach of the 2011 revolution was testimony to mobilization occurring across the digital divide, but it also highlights the importance of physically sharing public space. Outside of Cairo, protesters took to the streets in Suez, Alexandria, Assuit, Minya, and other

cities, and support poured out of communities as far-flung as the Bedouin of the Sinai peninsula (Omer, 2011; 3Arabawy, 2011; Weaver, Siddique, Adams, & Hill, 2011). However, these geographically dispersed mobilizations have been consistently obscured by the prominence of Cairo and Tahrir Square in coverage of the Egyptian revolution. The geographic and political prominence of Cairo is one factor in this omission, but it is exacerbated by the technological narrative that has emerged from Egypt's Arab Spring. Protests in the capital city dominate news coverage because it is the most digitally connected, with the most extensive telecommunications infrastructure, and therefore contains the greatest numbers of digital content producers. But understanding how the revolution spread so widely requires interrogating the mediation between the online and the offline. Mobile phones are an interstitial technology *par excellence* that epitomize the embodied, embedded, and everyday nature of ICT-mediated mobility.

However, during the revolution's initial aftermath, pre-existing digital divides began to be re-entrenched as protesting became a more normalized, commonplace activity. Many protests were often still cross-cutting different socio-economic groups—with ICT-using middle class elites and disenfranchised urban poor joining demonstrations in Cairo. But without a unifying, singular cause and with a newly initiated generation of young protesters eager to tackle a kaleidoscopic array of political and social issues, communication *across* the digital divide waned. And new divides began to emerge, as activists migrated toward new technologically mediated enclosures, political "echo chambers" online. This insularity became particularly pronounced on certain platforms, as Gerbaudo (2012, 71-74) observes among "Twitter pashas," whose popularity on Twitter did not translate into wider networks of action or participation but rather resulted in small communities of like-minded activists online.

To some degree, the Arab Spring served as a global advertisement for online platforms Facebook and Twitter, and the numbers reflect this increased popularity. Compared to the period of January to April 2010, when Egypt experienced a 12

percent growth in Facebook users, the same post-revolutionary period in 2011 showed a 29 percent increase, one of the highest in the Middle East (Arab Social Media Report, 2011). Thus, it is perhaps less the case that Facebook activity drove people to revolution than that the revolution drove people to Facebook. The online resources used by an elite few became popularized as more people became mobilized for the first time—their offline, physical experiences of protest inspiring them to become active members of certain online platforms. For ICT using Egyptians, having choices not only among mediums but also among platforms (Facebook, Twitter, Flikr, Instagram, etc.) means that not only access to ICTs, but also the specific networks they enable can become imbued with layers of personal meaning, particularly in a highly politicized setting and under pressure from the exigencies of mobilization and protest. In other words, we "need to account for the interplay of the media available to different actors, the cultural contexts of protest communications, and the different stages of the lifetimes of such movements" (Röder & Rinke, 2011, 1276). Thus, there is ideological meaning and personal status symbolism behind the use of the Internet, mobile phones, Facebook and Twitter in the Egyptian revolution, but those meanings are not simply derived from some kind of abstract democratic promise embedded in 2.0 technologies; rather, they evolve as these technologies and platforms become socially embedded, in this case within the political landscape of post-revolution Egypt.

Even by late 2011, when I conducted fieldwork, protesting had become a more atomized and fragmented activity, although protests could draw large crowds into the street. A number of high-profile and violent crackdowns in October, November, and December made protesting an increasingly dangerous activity. Activists, especially new activists, expressed less concern about communicating across and between digital and ideological divides, and they engaged in less active reflection on the communicative limitations of their ICT use than they had, by their own description, during the revolution. The growing diversity of voices online and in the street after the revolution made communicative enclosures at least as

appealing as communicative traversals and bridging. Bashir, an April 6th Youth activist, described his decision to reduce his Facebook usage:

> Facebook is easier for the normal people than Twitter, so I stopped being active on Facebook. On Twitter, I find a lot of people who are open-minded. Twitter is very anti-Mubarak. On Facebook, with more normal people, I have close friends posting against me.[16]

Many other activists took similar steps to avoid conflict with counter-revolutionary voices and opinions. As a result, small "filter bubbles," to borrow a term coined by Pariser (2011), have been stratifying political beliefs and affiliations across different Internet platforms in Egypt, mirroring and compounding some of the existing socio-economic stratifications that contribute to the digital divide. Unlike Pariser's bubbles, which are "personal ecosystems of information" created by algorithms that tailor online experiences to the user using machine learning, the filter bubbles in the Egyptian media landscape are socially and technologically constructed echo chambers online, borne out of the politicization of online space in the post-revolution environment. Political information is becoming less likely to flow between Egyptian users of different platforms as activists retreat into politically similar "bubbles" of the Web.

It is worth considering how mobile phone use may have contributed to this echo chamber effect, which Sunstein (2001) identified as a likely outcome of Internet communication, where users can choose to avoid information that counters their world view. In general, mobile phones maintain social networks of relatively small numbers of close acquaintances, or strong ties. Matsuda (2005) observes that a primary use of mobile technology is to engage in "selective sociality," allowing mobile phone users greater choice in their interpersonal relationships. Gergen notes that mobile communication lends itself to "circular affirmation," or "a form of interchange in which participants continuously affirm the views and values of each other" (Gergen, 2008, 303). In contrast to other forms of ICT-mediated

[16]Personal interview with Bashir, 29 September 2011.

communication, particularly social media, mobile phone networks tend to be tighter-knit, connecting people with shared interests. Continuous communication with these contacts results in its own form of insularity (Gergen, 2010). While this insularity can be the very sort of "strong tie" that can motive high risk activism and sustain the momentum of political involvement, it is also likely to encourage selectivity when it comes to dissenting points of view.

In the year following the 18 days, protesters acquired many new mobile phone contacts during protests and as a result of involvement in political activism, and those new "acquaintances" tended to be more active participants in revolutionary politics. Communication via mobile phone for both personal and political purposes was constant, so activists certainly became accustomed to talking with people who shared their interests and their political views. When it comes to direct action, this may result in "homogeneity—a distinctly non-pluralist outcome, eliminating the possibility of nuanced or bold political decision-making" because people who disagree with the group just drop out and become non-participants (Hands, 2011, 130). Then, where there is a choice to do so, people may simply avoid communication channels that have too many dissenting voices, such as particular social media networks. Ali, an activist with the April 6th Youth and several other smaller movements, said:

> The problem with Facebook—it's like what you see at home. A lot of people watching TV and they don't know anything about anything. Our country is falling down! Gradually, I stopped using Facebook. I don't like Facebook because, I don't know, my friends on Facebook, I just call them supporters of the regime. They are not really supporting the regime but they want everything to calm down. But the people on Twitter, they are always angry. So mainly, it's Twitter for me.[17]

In reflecting on the role of mobile phones in political activism, most informants pointed to their ability to bridge the digital divide between Internet

[17]Personal interview with Ali, 26 September 2011.

users and non-users. This function of the mobile phone was undoubtedly useful during the 18 days, as people texted and called friends and family to join them in the square. But as the revolution drifted further into recent history, it was apparent that the digital divide did not loom quite so large in the concerns of young, newly mobilized activists. Their experience of ICTs was one of pervasive technological mediation, and their close ties were also more like them: politically active, engaged in protesting and direct action, and socially selective about their ICT communication. They shared interests, and they shared a desire to continue sustaining the momentum of revolution. As protests became more frequent, they also became smaller. As crackdowns intensified, protesters became fewer in number and more committed. Thus, while mobile phones certainly enabled transdimensional mobilities that facilitated movement into the streets and interaction with a wide array of urban residents and stakeholders, they also contributed to an array of new ICT-mediated enclosures.

Mobile phones were reportedly vital during the revolution for communicating with people who had varying levels of access to ICTs; they mediated the paranodal space, in Mejias's (2009) terminology, between network nodes and quasi- or non-nodes. But as the revolution continued and a prolonged transition ensued, mobile phones came to sustain small, committed groups of activists. Constant communication was beginning to create circular affirmation that manifested most significantly, at least among the activists I met and interviewed, in a gradual retreat into echo chambers online. In other words, the more diverse the communicative community, the more selective regular activists became about whom to engage with. Although transdimensional mobility enables, by definition, mobility and communication *between* dimensions, facilitating the breaking of barriers (physical, psychological, and political) in the revolutionary moment, it can also engender new enclosures and new forms of insularity as both the revolution and ICTs are once again enfolded into everyday life and are taken for granted.

I raise this point about communicative selectivity in the post-revolution

period because it illustrates the complexity of "digital divides," which often interact with other kinds of social, political, and economic divides. Activists used mobile phones to straddle the digital divide because they constituted a technology that could mediate between the online and the offline, Internet users and basic mobile phone users, the politics of the Internet and the politics of the street. But while mobile phones helped facilitate the transdimensional mobility that underpinned the revolutionary moment and subsequent sustained protest movements, those mobilities that broke down longstanding barriers to political action gave way to new (transdimensional) enclosures in the form of echo chambers online alongside the increasing compartmentalization of public space in the face of more severe security crackdowns. Thus, transdimensional communication is essential in the digital age for organizing mass protest and direct action, but it also opens up opportunities for communicative selectivity and discrimination. The new ICT-mediated enclosures in which activists communicate suggest that political activism in Egypt runs the risk of losing sight of the ways in which the street-level mobilizations of the revolutionary moment were defined by overcoming the digital divide and capitalizing on the "messiness" and liminality of information flows. Post-revolution Egypt was characterized by an essential paradox of the digital age—the free flow of connectivity is invariably contingent upon the disruptions and fissures of differential access. So, the future of ICT-mediated political activity will depend on recognizing and critically engaging with the hybrid everyday relationships between human activists and their technologies.

Mobility Between Dimensions

Prior to the revolution, mobile phones were already a pervasive and commonplace technology, and as the revolution unfolded, attention focused on the role of the Internet and social media in instigating the protests that escalated to a breaking point from which the Mubarak regime could not recover. The fixation on social

media arose, in part, from the tremendous amount of digital content shared on social media platforms that contributed to reporting on the Arab Spring. But as this chapter has shown, mobile technology in particular and the transdimensional mobilities it enables were integral to the production and dissemination of this content. Moreover, they were essential elements of the physical mobilization that occurred during the 18 days and the continued street politics in the transitional period that followed. Both the revolutionary experience of activists and the impressions of revolution assimilated by a global audience were contingent on the converging mobility of people and communications technologies.

Of course, the transitional period after the Egyptian revolution presents an unusual case for studying the relationship between ICT mediation and mobility for at least two reasons. First, rather than being an intense and isolated experience confined to the "revolutionary moment," protesting became a much more normalized way of engaging with politics and public space. The revolution had clearly altered the cadence of everyday life in Cairo, evidenced by the fact that street vendors (who had informally occupied public space for years) launched new, lucrative trades in revolutionary paraphernalia, such as flags and t-shirts, on Downtown streets leading to Tahrir Square. So for any transitory occupant of public space, but especially for young, newly mobilized protesters, the revolution was very much a part of the everyday. Second, post-revolution ICT use and the meanings associated with it had unquestionably evolved out of everyday experiences with ICTs prior to the revolution. However, the spectacular nature of the revolution had also obscured these more mundane origins of ICT-mediated mobility. It has been a goal of this chapter to draw connections between the ordinary and the post-revolutionary uses of mobile technology to illustrate how the gradual hybridization of space influenced the revolutionary uses of technology and also how the revolution and its ICT mediation had begun to transform spatial experiences and the meanings associated with mobility and space.

These observations are very much embedded in a particular geographic and

temporal context; the spaces and times in which these ICT-mediated practices occur shape those practices, and in turn ICT mediation creates and influences the spaces and times in which it takes place, and Cairo would be the subject of many spatial transformations as a result of transdimensional mobilities exercised after the revolution.

> It is clear that modern cities are not merely by-products of the operation of capital, nor simply products of the benign imagination of urban planners. Cities are the sites of intense struggles between disparate interests and multiple stakeholders, whose ideas, influences and actions together ultimately shape today's urban realities. (Bayat & Biekart, 2009, 823).

We should see ICT-mediated mobility as not just enabling movement through an urban landscape but as being creative in *making* urban space and defining the relationship that people feel to that space. Transdimensional mobility is distinctly spatial—it implicates physical and virtual space, and especially the interstitial spatiality that exists between. The uses of mobile phones by activists after the revolution offers early insights into how transdimensional mobility has the power to influence the relationship between people, technologies, and urban space, often making people feel *more* connected to specific places rather than facilitating a de-spatialized separation from place. It also reveals how mobilities and immobilities interact—the transdimensional mobility of a few can have spatial implications for many.

Mobility as Resistance

By beginning this examination of transdimensional mobility after the revolution with the use of mobile phones in political activism, I want to emphasize two important points. First, transdimensional mobility—the mobility of people and technologies between physical and virtual dimensions—was an important factor in the revolutionary moment and therefore continued to play a central role in political

mobilizations for years to come. And second, this mobility between dimensions has long-lasting political, social, and spatial implications that extend far beyond the realm of post-revolution political activism. After Mubarak's resignation, with SCAF in control, and a weakened, arbitrary, and unpredictable security apparatus maintaining spatial discipline, a dynamic culture of street politics took hold, taking advantage of the newfound mobility asserted by people in public space. As a researcher in Egypt at this time, I was interested in how the revolution was being sustained and how it had become part of everyday life and the role of ICTs in that process. This chapter has therefore looked at ICT use in the context of overt political activism—protest coordination and political meetings.

So much of the focus on ICTs in the revolution fixates on political uses of ICTs, and we would do well to remember that "[b]y themselves, mobile phones are not a revolutionising, independent tool, but they do influence the way citizens understand and organise democracy" (Hermanns, 2008, 79). The chapters that follow move away from ICT use in the context of overt political activism to illustrate that the importance of ICTs in the aftermath of the revolution does not lie in a single device or platform but rather in the *mobilities* (and immobilities) that they normalize and habituate, especially in moments of intense transition. As years went on, and protesting became logistically more difficult and less popular, transdimensional mobility would remain a transformative force because, like the technologies that bring it into being, it operates on both individual and collective, physical and virtual, local and global scales. It had contributed to the revolutionary moment, and in the face of both familiar and new immobilities of the post-revolution period, it would continue to be simultaneously interwoven into everyday life and tactics of transgression and subversion. Revolutionary mobilities evolved out of ordinary practices and movements, and ordinary practices can, under certain circumstances, constitute or become re-appropriated as resistance. The next chapter will problematize the boundary between the everyday and the extraordinary, resistance and resignation. But it is crucial to establish

the important ways in which mobility and mobile technologies sustained the revolutionary momentum, even long after the 18 days. The associations between the revolutionary moment and transdimensional mobility forged in those early days of post-revolution protesting would have long-lasting effects on how public space would be contested and how the revolutionary moment itself would be remembered in years to come.

4 Curfew Discoveries

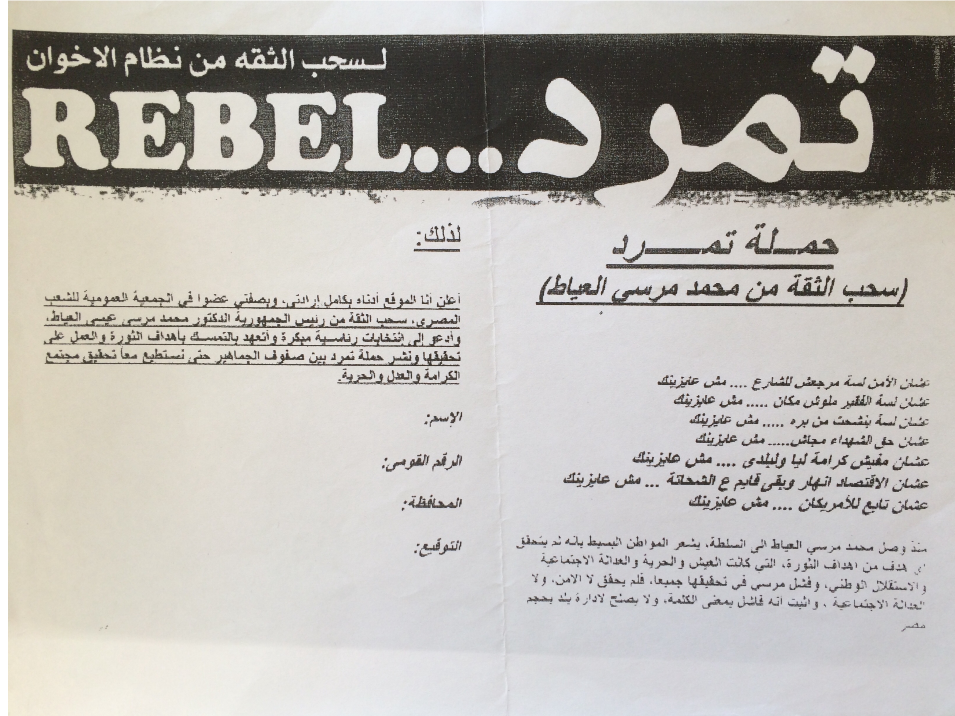
Confinement and Curfew in Post-Revolution Egypt

The 2011 revolution ushered in an extended period of spatial experimentation and overt incursions into public space as barriers of fear were broken down and the scale and diversity of sustained mobilizations, occupations, and street performances exceeded the capacity of the transitional state to consistently police and suppress. However, this time was not characterized by unbounded liberty of movement. In fact, the years after the revolution were marked by progressively greater confinement and crackdowns on such public demonstrations. The Supreme Council of the Armed Forces (SCAF) governed the country until June 2012, when Egypt concluded its first democratic presidential election in which Muslim Brotherhood candidate Mohammed Morsi won the presidency. The election was hotly contested and disputed, and it followed parliamentary elections in November and December of the previous year in which Islamist parties won a sweeping victory. After his election, protests against Morsi were widespread, gaining momentum after his government announced a constitutional declaration bestowing unchecked and nearly unlimited power on the president in November

2012 (Kirkpatrick & Sheikh, 2012). Intractable discontent found an outlet in the *Tamarod* campaign (the "rebel" campaign in Arabic), a popular movement aimed at deposing President Morsi. It galvanized support with a paper petition in advance of a large scale protest planned for June 30, 2013. The movement claimed to have gathered over 20 million signatures, and protests in June were reminiscent of the 18 days of revolution in size and scale. But despite being labeled a "grassroots" movement by many media outlets, mounting evidence suggests that *Tamarod* was sanctioned and supported by the military establishment (Bahgat, 2016), which helps to explain how—in the face of a repressed and contracting political street—this particular street campaign managed to achieve such unimpeded success.[1]

President Morsi was removed from office by the Egyptian Armed Forces on July 3, 2013, and crowds chanted "the Army and the People are one hand!" in Tahrir Square as the Egyptian military flew jets and helicopters in formation, trailing Egyptian flags. A heavy pall of confusion began settling over the events surrounding Egypt's so-called "second revolution." Questions swirled around whether this was, in fact, a counter-revolution or a coup. The army installed Adly Mansour as the interim president, and the rest of July saw an escalation of protests and clashes between Morsi supporters and security forces. The turning point came on August 14, 2013, when the military forcibly cleared large sit-ins that had been gathering for weeks in Raba'a Al Adawiyya Square in Nasr City and Nahda Square in Giza (Gehad, 2013). The violent dispersal resulted in over a thousand deaths, and Human Rights Watch called it a massacre (Human Rights Watch, 2014). That day, the interim government declared a national state of emergency, and a curfew was declared for one month in 12 of Egypt's governorates, including Cairo and Alexandria, daily from 7 PM until 6 AM. President Morsi had declared a state of

[1] I was in Egypt for fieldwork prior to the June 30th demonstrations, and I witnessed the height of the *Tamarod* street campaign. Nearly a year later, reports that *Tamarod* had been a more coordinated, centrally managed operation were corroborated in several of my interviews in March 2014, including one with Ahmed, a member of the Free Egyptians Party, who explained that the party had provided storage and meeting space for *Tamarod*.



لـسحب الثقه من نظام الاخوان

REBEL... تمرد

حمـلة تمـــرد

(سحب الثقة من محمد مرسي العياط)

عشان الأمن لسة مرجعش للشارع .... مش عايزينك
عشان لسة الفقير ملوش مكان ..... مش عايزينك
عشان لسة بنشحت من بره ..... مش عايزينك
عشان حق الشهداء مجاش..... مش عايزينك
عشان مفيش كرامة ليا ولبلدى .... مش عايزينك
عشان الاقتصاد انهار وبقى قايم ع الشحاتة ... مش عايزينك
عشان تابع للأمريكان .... مش عايزينك

منذ وصل محمد مرسي العياط الى السلطة، يشعر المواطن البسيط بانه لم يتحقق أي هدف من اهداف الثورة، التي كانت العيش والحرية والعدالة الاجتماعية والاستقلال الوطني، وفشل مرسي في تحقيقها جميعا، فلم يحقق لا الامن، ولا العدالة الاجتماعية ، واثبت انه فاشل بمعنى الكلمة، ولا يصلح لادارة بلد بحجم مصر

لذلك:

أعلن أنا الموقع أدناه بكامل إرادتي، وبصفتي عضوا في الجمعية العمومية للشعب المصري، سحب الثقة من رئيس الجمهورية الدكتور محمد مرسي عيسى العياط، وأدعو إلى انتخابات رئاسية مبكرة وأتعهد بالتمسك بأهداف الثورة والعمل على تحقيقها ونشر حملة تمرد بين صفوف الجماهير حتى نستطيع معاً تحقيق مجتمع الكرامة والعدل والحرية.

الإسم:

الرقم القومي:

المحافظة:

التوقيع:

Figure 4.1: Tamarod paper petition, handed to author in Downtown Cairo, May 2013.

emergency and issued a curfew in the conflict-stricken cities of Port Said, Suez, and Ismailia during his term in office, but this invocation of emergency law was significantly more sweeping and immobilizing. Ultimately, the curfew would be extended for nearly three months, to be lifted on November 12, 2013. The curfew stifled protests and strangled street life. Neighborhoods were guarded by military checkpoints, and the first few nights were marked by disconcerting silence and paralyzing immobility (Soueif, 2013). In its sudden imposition, the curfew appeared as yet another exceptional measure undertaken in transitional times. But, in fact, it was really a convergence of both post-revolution strategies of confinement and also pre-revolution rule-by-emergency.

Writing in early September, nearly a month into the new state of emergency, British-Egyptian journalist Sarah Carr described life in Egypt as having "mostly shrunk, politically, geographically, socially," adding:

> The invisible walls of the curfew are a variant on the physical walls the army has always been so fond of building. To walk in downtown Cairo near the Interior Ministry and Parliament is still to play human Pac-Man. Built to contain dissent after January 25, 2011, when people protested against rather than for the state, they now remain an obstacle course only for pedestrians, lost motorists and stray cats. People have knocked holes in them big enough to allow passage, using the rubble to create steps over which to scramble. And it has all become normal. (Carr, 2013)

Figure 4.2: Wall erected by security forces to block roads leading to Tahrir Square in Downtown Cairo, June 2013. Photo by author.

Over the last two years, the army had built barricades along the major arterial roads leading to Tahrir Square and surrounding key government buildings, like the Ministry of the Interior. During fieldwork in 2013, I paced around these barricades on Qasr Al-Eini and Mohammed Mahmoud Streets, a lone pedestrian wandering toward these atrophied pinch-points, now cluttered with drifts of garbage and sand.

But they had been cracked, chipped away to create ad hoc openings, windows, and thresholds, decorated in revolutionary graffiti. The post-revolution geography of the city was one of arbitrary and shifting physical immobilities, now compounded by the curfew—less tangible than urban walls, but no less immoblilizing. And it somehow felt normal. After the revolution, Egypt had been thrust into a period of prolonged transition, and this seemed to mark a new transitional phase—an interim government, the reinstatement of Emergency Law, the violent dispersal of demonstrations—but in other ways, this transitional period had its basis in a kind of normalcy. As this chapter will go on to discuss, Egypt had existed under a state of emergency for most of its history as an independent country, so rather than being the exception, arbitrary emergency powers were the rule.

On May 30, 2012, Egypt's emergency law expired for the first time in 31 years. The law had last been renewed for two years in 2010, and its expiration date passed by relatively unceremoniously, but it still seemed to mark a crucial victory for the 2011 revolution at a time when the ongoing revolutionary movements faced setbacks and divisions. "This is huge," Hossam Bahgat, a human rights activist and founder of the Egyptian Initiative for Personal Rights, told the BBC at the time (BBC News, 2012). The feeling that the expiry was a moment of change and opportunity echoed in the global human rights community, with groups like Amnesty International seizing the chance presented by the lapse in emergency rule to call for accountability on human rights abuses (Amnesty International, 2012).

Before the revolution, emergency law was a fact of everyday life; it was integral to to the governing of the country, but was also an abstraction, exerting a pervasive influence somewhere *between* the exceptional exercise of state power and the everyday maintenance of the status quo. The imposition of the 2013 curfew rendered the emergency law *visible* in new ways. Empty, silent streets were a stark reminder of state control in the form of forced immobility. Like the physical barricades erected in the streets and navigated by transdimensionally mobile protesters and pedestrians, the immobilities of the curfew were also met

with transdimensional mobilities that grew out of a legacy of both overt and quiet resistance that had developed over decades of repression. Some aspects of this resistance and subversion, like the state of emergency itself, were familiar; others were unique to the exigencies of the curfew.

In what follows, I argue first that Egypt's longstanding state of emergency can be understood as a simultaneously virtual and material condition that was long subverted by the transdimensional mobility of ordinary people and political activists, mobilities that collectively laid the groundwork for the 2011 revolution. Public spaces in Egypt's cities had already been shaped by the arbitrariness of the enforcement mechanisms under emergency rule. In these spaces, people had adapted to various conspicuous and covert regimes of confinement. Finding alternative spaces for congregation, communication and resistance has been one strategy. It is a tactic which, combined with the longstanding grievances related to material immobilities, led to revolt in 2011. As Lim (2014, 55) notes, "the importance of new/social media networks intensifies concurrently with the deterioration of traditional social networks and the disappearance of public and civic spaces from urban settings." Thus, the role of ICT mediation in these settings is shaped and intensified by the conditions of normalized oppression. Second, I suggest that the curfew, as a dramatic reimposition of emergency law, was also subverted by transdimensional mobilities when physical mobility between geographic places was curtailed, rendering the curfew, much like the revolution, a transdimensional event that I, as a researcher, was able to follow and experience online. The frontier-crossing mobilities of ICT users, between the online and the offline, may be entirely ordinary and mundane, or even ludic and playful, but it is the embeddedness of these mobilities in a particular temporal and spatial context (the curfew) that should encourage us to consider how such practices might constitute subversion, but equally, how they might lend themselves to complacency, diversion, and escape.

Transdimensional Transgressions

Already by 2013, the revolution and its media were fading from public view as the euphoria around the revolutionary moment gave way to an protracted and turbulent transition that plunged the country into a pronounced state of liminality. But ICT mediation and the transdimensional mobility it enables continued to be part of the fabric of everyday life, even (and perhaps especially) beyond its applications for protest mobilizations, and this less conspicuously "revolutionary" mobility is the focus of this chapter. On the one hand, the 2013 curfew was distinctly local, bounded and situated in a particular place (the 12 governorates of Egypt) and a particular time (a three-month duration), and its effects were quite obviously physically confining. On the other hand, the curfew was also *trans*dimensional in that its spatiality was created in the meanderings of ICT users between the online and the offline, virtual and physical spaces. "The problem with the curfew, apart from extreme boredom," Farah, a friend and activist in Egypt, wrote on Facebook in August, was that "[f]irst, it imposes a mundane, repetitive schedule [...] Second, it limits your movement as well as the number of your human interactions per day. [...] This curfew will drive us mad." Her post was geotagged: Cairo, Al Qahirah. I became fascinated with social media posts about the curfew—how geographically *specific* and yet communicatively transnational the curfew had instantly become. In an effort to "read" more curfew experiences, I began to follow the "curfew" through hashtags used by informants I already knew. Almost as soon as it was implemented, the curfew "appeared" online; it was reported in international news, and individual ICT users began posting about it on social media platforms, often using variations on the hashtag #الحظر ("curfew" in Arabic).

I was not in Egypt at the time of the curfew, so my research "experience" of the curfew deserves some reflection here. I encountered the curfew as a series of interconnected digital traces, ICT-produced content that users labeled with curfew tags. So "Egypt," to me, was a geotagged location, identified by location-awareness technology in ICT devices or self-reported using hashtags. It was an "online

manifestation," to borrow Gray's (2016) characterization. I had been in Egypt shortly beforehand, but when the curfew was implemented, I was in Oxford, and another of Farah's posts on Facebook took me *to the curfew* online via a hashtag: #اكتشافات_الحظر ("curfew discoveries" in Arabic). What I discovered in pursuing this hashtag revealed both the unavoidable transdimensionality of fieldwork and some of the agencies afforded by the situated practice of online-offline mobility in the context of forced confinement. My experience of "the curfew" was shaped both by my virtual movements through digital space and by sifting through digital traces as well as the transdimensional movements of Egyptian ICT users posting about the curfew. Paradoxically, these Egyptian ICT users were largely constrained in their physical movement and I, the distant researcher, was neither co-present in their physical spaces nor similarly restricted in *my* physical environment. Yet, I had a very real experience of the curfew; its transdimensional spatiality afforded opportunities for observation and analysis that help to elucidate how being between an ICT-mediated *here* and a nearly infinite transdimensional *there* actually creates opportunities for empirical observation on the part of the ethnographer and quotidian resistance on the part of the ICT user.

To illustrate how the curfew materialized online, I will later introduce observations from Twitter and Instagram posts using hashtags related to the curfew. Both of these platforms are optimized for use on mobile devices, so awareness of the embodied and prosthetic nature of mobile ICTs (as discussed in Chapter 3) contributes important insights in interpreting the digital content produced during the curfew. This chapter will explore how ICT-mediated transdimensional mobility can subvert physical and virtual immobilities but also how, rather than negating the importance of place and time, it is deeply embedded in spatial and temporal contexts. However, to view the curfew as a geographically inscribed and bounded spatial experience would be to neglect the significant ways in which it was also transdimensional. Looking at the geographic distribution of a selection of curfew tweets on Twitter problematizes spatial understandings of the Egyptian curfew that

treat it as a geographically fixed event while also revealing certain limitations on transdimensional spatiality, created in the dialectic between offline conditions and online networks. An exploration of photos posted on Instagram related to the curfew highlights how the documentation and dissemination of everyday, ordinary experiences constitutes a collective encroachment into virtual space. It *created* a shared space and experience in the online where congregating in the offline was prohibited. Such playful and ludic practices, often born out of boredom rather than active resistance, could be subversive.

Figure 4.3: Instagram photo tagged with curfew hashtags in Arabic, posted 6 November 2013.

Figure 4.3 shows a popular Instagram photo shared among Egyptian Instagram users and tagged with curfew-related hashtags. It is a stock image of a family, sitting together in a living room, each staring intently into a glowing screen. The caption in Arabic reads: “Curfew style. The life of an Egyptian family during

the curfew."[2] The image mocks the conditions of the curfew, which often resulted in boredom as people were forced to stay at home and spend extended amounts of time with family. But rather than talking to or interacting with one another, this family is glued to their screens—co-present but also absent, confined together but also communicatively mobile. ICT users were confined, forced to occupy the narrow spaces of the private sphere, but they could escape, transgress, and defy the curfew because even their experience of confinement was transdimensional. They turned to the ICTs they had at-hand to escape the curfew and, in so doing, also brought the curfew online.

To begin, however, this chapter seeks to situate the 2013 Egyptian curfew within the broader historical context of Egypt's relentless state of emergency and its effects on everyday life. Over time, Egypt's emergency rule had become not only institutionalized but *virtual*, deriving power from its legal and political abstraction. As it insinuated itself into everyday life, the state of emergency was made inconspicuous, de-spatialized, and extra-legal. The imposition of a curfew in 2013 made the newly reinstated state of emergency instantly visible—its effects were felt in the forced immobility of curfew restrictions on movement in public space. However, the "transgressions," as I call them here, of ICT users exercising mobility between virtual and physical dimensions, are more ordinary than extraordinary; they are everyday ICT practices that acquire meaning from their embeddedness in a particular offline context. They raise questions about how transdimensional mobility might be understood as subversive in a more permanent regime of emergency, well beyond the period of the curfew.

[2]The Arabic suggests that this is actually a reference to the South Korean pop song, "Gangnam Style." In fact, several months earlier, artist Ahmed Mahmoud posted a parody video called "El 7azr Style" on YouTube, in which he borrowed the instrumental track from "Gangnam Style" to make fun of the curfew imposed by President Morsi in Port Said and Suez (Mahmoud, 2013).

A Global Perspective on Emergency Law

In 1982, French politician and researcher Nicole Questiaux issued a report on "the implications for human rights of recent developments concerning situations known as states of siege or emergency" at the request of UNESCO's Sub-Commission on Prevention of Discrimination and Protection of Minorities. It was the first report of its kind, a study that focused on states of emergency, an umbrella term to encompass a wide range of "crisis powers" afforded states within their own judicial systems. This was a distinct area of international law in which derogation was believed to lead, invariably, to violations of human rights. There was an awareness that the application of emergency laws creates ambiguous legal environments in which the lines between the *rule* and the *exception* become blurred, with deleterious effects for human rights. The report observes:

> Any state of emergency constitutes a potential danger for freedoms. Any deviation in the application of states of emergency gives concrete form to that danger. Attacks on human rights, as we have seen, are initially caused by the undermining of institutions, the most serious effect of which is the elimination of any power of opposition. This is when the phase of massive and repeated violations begins. (Questiaux, 1982, para 171)

Questiaux goes on to establish a "reference model" for emergency laws based on a survey of national laws. States of emergency require a formal proclamation, clear definition of terms, time limits, non-violable rights, and other explicit provisions (Fitzpatrick, 1994). But the "model" is just that—an ideal form, subject to myriad real-world deviations that render the task of analyzing and comparing "emergency" powers and their outcomes an unforgiving exercise. Questiaux herself acknowledges the difficulties inherent in tackling such an elusive subject, noting the dearth of reliable information and

> the problem of knowing with a sufficient degree of exactitude

> the status of emergency law in a particular country at any given time, because of the proliferation [...] of special laws derogating considerably from the ordinary laws while assuming their form. (Questiaux, 1982, para 12)

Emergency powers may be exercised and declared without a formal declaration of emergency; they may even take on the appearance of routine. To varying degrees, other surveys of states of emergency have aimed to draw distinctions between different kinds of legitimate emergencies and other, factitious emergencies, among them a 1986 report of the International Law Association (Fitzpatrick, 1994). But the Questiaux report aims to categorize these exceptions to the exception, identifying five kinds of problematic emergencies: (1) formal emergency not notified to international treaty bodies; (2) *de facto* emergency; (3) permanent emergency, arising out of continued extensions of the emergency; (4) complex emergency, characterized by confusing legal developments; and (5) institutionalized emergency, characteristic of authoritarian governments (Questiaux, 1982).

At the time, the Questiaux report identified Egypt as a *de facto* state of emergency, where there is "no proclamation or termination of the state of emergency," though this categorization and the very definition of *de facto* emergencies could, and certainly would, later be challenged. By 1982, Egypt had arguably operated in a continuous state of emergency for nearly all of its existence as an independent state. After a brief hiatus from *de jure* emergency rule (President Anwar Sadat lifted the national state of emergency in 1980), newly appointed President Hosni Mubarak had just reinstated the emergency law in 1981, following Sadat's assassination. Whether Egypt's long history of governing-by-emergency could be called *de facto* or *de jure* is a debate founded on murky legal technicalities, a fact undoubtedly recognized by Questiaux as she formulated her report to the United Nations. What can be confidently concluded from the Questiaux study is that Egypt's application of its own emergency law constituted a distinct threat to

the protection of human rights and that Egypt had already demonstrated a pattern of emergency rule that deviated from accepted international standards to the extent that such standards could be said to exist. Emergency rule was the normal state of affairs in Egypt.

Far from "exceptional," the state of emergency was an integral part of the day-to-day *governing* of Egypt prior to 2011. Reza (2007, 532) notes that "[it has] been a vehicle for the creation of the modern Egyptian state and a tool for the consolidation and maintenance of political power by the government." The observations collated in Questiaux's summary report suggest that beyond the undeniably dire consequences for detainees and other vulnerable groups, sustained states of emergency could lead to a pronounced deterioration of citizen rights in general, manifested in the stifling of civil society, restriction of political participation, and repression of opposition. This endemic repression characteristic of states of emergency underpins the social and spatial environment in which Egypt's 2011 revolution was cultivated, resulting in material and virtual immobilities and ascribing certain context-specific attributes to the mobilities afforded by ICTs and their potential as tools of transgression. Because Emergency Law grants the state sweeping and often ill-defined coercive powers, it strengthens the security apparatus and weakens civil society, so prolonged rule by emergency becomes the natural legal (or perhaps better understood as extra-legal) mechanism for sustaining authoritarian rule. In this way, *rule by emergency* lends itself well to the project of neoliberalism, which supports and is supported by a strong and militarized police state (Harvey, 2005; Joya, 2011). In Egypt, as elsewhere, emergency rule has been integral to the promotion of the neoliberal state—both abstractions serving one another.

Following the Questiaux Report, unprecedented in its breadth and consolidation of a historically disparate and disjointed field of law, the Sub-Commission in 1985 appointed a special rapporteur, Leandro Despouy, to "draw up and update annually a list of countries which since 1 January 1985

have proclaimed, extended or terminated a state of emergency" (Despouy, 1997, para 1). Despuoy's final 1997 report builds on Questiaux's initial findings and categorizations, but the effect of Despuoy's exhaustive list, as the special rapporteur himself acknowledges, is to illustrate the startling prevalence of states of emergency worldwide. By 1997, Egypt had firmly secured a place among the most enduring emergencies, a category that attracts Despouy's particular concern: "In a word, what was temporary becomes definitive, what was provisional constant and what was exceptional permanent, which means that the exception becomes the rule" (Despouy, 1997, para 129). Distinctions between rule, exception, and exception to the exception showed clear signs of becoming blurred beyond recognition in Egypt, as in many other jurisdictions covered by Despuoy. In other words, it was apparent that "the tendency for the exception to become the rule is, in fact, a world-wide phenomenon. There appears to be no time that actually was normal [...]. Maybe 'normal times' is the biggest political myth going" (Neocleous, 2006, 204). Later reports would serve to highlight the Middle East as a region plagued by rule-by-exception. United Nations reports in 2001, 2002, and 2005 suggest that "permanent emergency" may be developing into a regionally isolated phenomenon, prevalent in the Middle East, Eastern Europe, and southern Africa and correlated with histories of colonial occupation or state fragmentation. Egypt is mentioned in all of these subsequent reports, an exemplar of perpetual emergency rule serving deep-state authoritarianism.

As these and other reports on regularized methods of state repression illustrate, most analyses of states of emergency focus on legal ramifications within human rights law. Reports document specific human rights abuses that accompany the unchecked exercise of emergency powers—maltreatment of detainees, torture, and state-sanctioned killings, among other injustices—but there is also a silent, insidious, and quotidian dimension to emergency rule that deserves attention here. Attempts at theorizing rule-by-exception face inherent difficulties. By its very nature, rule-by-exception is difficult to classify because it is *extra*-judicial; it is

written into law and yet exists *outside* of law in order to respond to changing and exceptional political realities. Agamben writes that

> [i]n truth, the state of exception is neither external nor internal to the juridical order, and the problem of defining it concerns precisely a threshold, or zone of indifference, where inside and outside do not exclude each other but rather blur with each other. (Agamben, 2005, 23)

Emergency rule is a juridical solution to political crises, but its implementation blurs the lines between the political and the juridical. The precise parameters of emergency rule are elusive. In fact, they are virtual, part of a global trend toward abstraction, evident in many arenas of a globalized, modern world, from the world economic system (Carrier, 1998; Miller, 1998), to the information and communication networks enabled by modern computing (Turner, 2006). Shields (2006, 284) writes that "the Virtual designates objects and states that exist but are not tangible, not 'concrete'. The Virtual is known only indirectly by its effects." Emergency rule is such a virtuality, recognizable only in its effects, the curfew being one manifestation, where emergency law is made visible.

Emergency rule can also be conceptualized as a a legal framework that creates conditions of liminality, which Thomassen (2014, 7) defines broadly as "any 'betwixt and between' situation or object, any in-between place or moment, a state of suspense, a moment of freedom between two structured world views or institutional arrangements." Emergency law is fundamentally liminal—it exists between the exceptional and the everyday, between the extraordinary and the ordinary. And as it is routinized and institutionalized, it makes liminality a permanent condition of governance. Szakolczai has argued that modernity itself is a state of permanent liminality:

> If everything is continuously changing, then things always remain the same. Liminality is a source of excitement and variety and a shakeup

> from the dull routines of everyday life, but nothing is more boring than a permanent state of liminality, where even the hope of escaping the routine is lost. (Szakolczai, 2000, 217)

Indeed, perpetual liminality consists of a constellation of modern abstractions, connecting emergency rule, neoliberalism, and globalization. Emergency rule provides the arbitrary legal framework in which neoliberal goals can be executed expediently from the top-down (Joya, 2011).

Meanwhile, everyday life is gradually and, at times, almost imperceptibly regulated, controlled and bounded by this field of exceptions-to-the-rule. Permanent emergency embeds itself in the everyday. Revolutions are explicitly liminal events, and for at least a brief moment, liminality takes center stage as a condition of social, economic, and political life (Thomassen, 2014, 201). They are moments of rupture and change, and they usher in transitional periods in which both macro- and micro-level social arrangements are renegotiated; liminality is what makes revolutions endlessly fascinating as subjects of research and popular consumption. However, moments of revolution can also overshadow the ways in which liminality is actually a condition of everyday life—even an impetus *for* revolution. In this case, the entrenching of emergency rule as a “normal” condition on political life has proceeded alongside the increased availability of ICTs. Thus, where rule by emergency has become the status quo, it virtually and materially influences the context in which any communicative excursions via ICTs might take place.

Egypt’s Virtual Emergency

Egypt’s Emergency Law has roots in the British declaration of martial law in 1914, established to facilitate the colonial occupation that lasted until 1922. The constitutions of all United Nations member countries contain provisions for martial law in emergencies (Reza, 2007), and Egypt’s constitutions over time are no exception in this regard. The 1923 constitution included provisions for

the imposition of martial law, and President Gamal Abdel Nasser implemented a state of emergency in reaction to the Suez crisis under the first constitution of the Egyptian Arab Republic in 1956, which lasted until 1964. But the familiar state of emergency imposed and renewed nearly without interruption for the latter half of the twentieth century was permitted under Law 162 of 1958, which had already been amended in response to specific emergencies, evolving as needed with the demands of state control (Questiaux, 1982). Invoking the 1958 law, President Nasser imposed a state of emergency in 1967 following the Arab-Israeli War, which would not be lifted until 1980. The short-lived respite from formal emergency status was abruptly ended by President Mubarak in 1981, following the assassination of his predecessor, President Sadat.

Meanwhile, Egypt had adopted a new written constitution in 1971, under President Sadat, and this constitution remained the state's governing document until the overthrow of President Mubarak in 2011. The country was already under Emergency Law when the 1971 constitution was adopted, which explicitly vested the power to declare emergencies in the presidency with approval from the People's Assembly. By 2011, Egypt had been governed by emergency uninterruptedly for 30 years, and most of the young activists who participated in the revolution had been born under emergency rule (Figure 4.4 details the history of emergency rule in Egypt). The overlapping and reciprocal evolution of laws alongside constitutional amendments created a kind of impenetrable permanency to the exceptional "emergency" that defies simple categorization or generalization, a perplexing challenge for any legal scholarship on the subject, as evidenced by the early Questiaux and Despouy reports. Despite being enshrined, however plainly, in legal governing documents, the state of emergency has also always had an extra-juridical permanence, its power derived from abstraction and its predominant effect being a state of continuous liminality. Conceived as a temporary legal measure, the *de facto* permanent emergency made temporariness and transition a permanent condition.

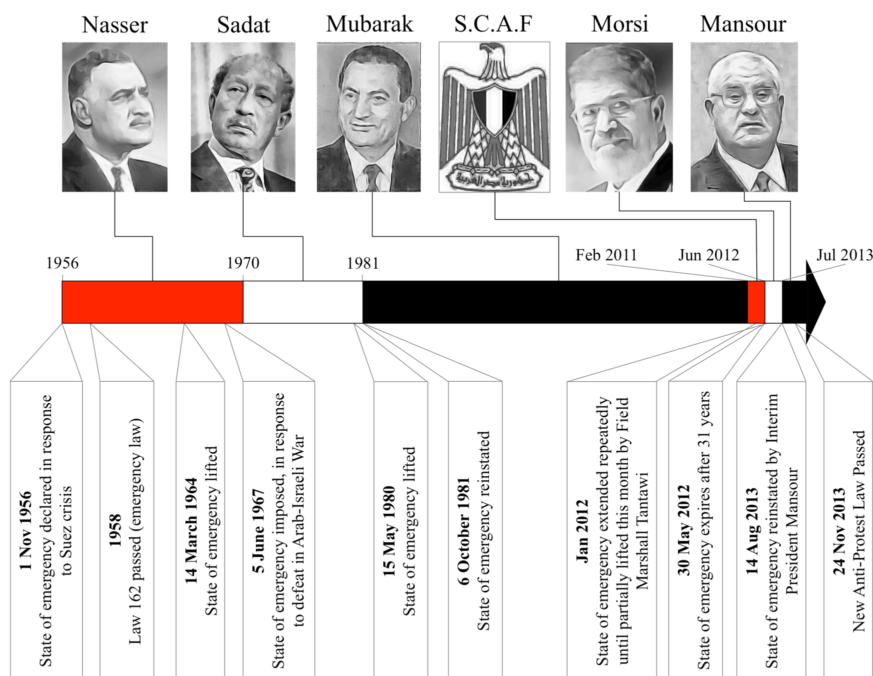


Figure 4.4: Timeline of state of emergency in Egypt.

The virtual emergency as abstraction could really be considered an accumulation of strategies and laws—codified and implied—with the intended effect of controlling and regulating public space and political participation on the societal and the individual level. Emergency *rule* has its basis in emergency law, but is in fact a comprehensive governing framework and philosophy underpinned by the suspension of certain rights and exercise of coercive state power. A 1977 Parties Law might be considered an extension of emergency rule, for instance. It aimed to control the field of possible opposition to the ruling National Democratic Party (NDP) by excluding electoral participation by parties formed on any "class, sectarian or geographic basis, nor upon sex or race" (Owen, 2012). The institutionalization of Egypt's emergency rule progressed steadily under President Mubarak and was undoubtedly an impetus for frustrations that surged in revolt between 2011 and 2014. During the entire decade of the 1990s, the Political Parties Committee rejected all applications for the formation of new

parties (Brownlee, 2002). In 1992, Egypt passed an Anti-Terror Law, which "criminalized non-violent opposition and was used to prosecute people not accused of committing or advocating violence but simply of alleged affiliation with the Muslim Brotherhood" (Singerman, 2002). Allain (2004, 196) observes that states of emergency often encompass a wide array of other non-emergency laws and policies that might be considered equally exceptional, when they have "been maintained quasi-permanently as a means of suppressing popular support in all its guises" (Allain, 2004, 196). The overall effect in Egypt was simultaneously political, social, and spatial: "the Egyptian state, in sum, ha[d] normalized the 'emergency' while criminalizing collective life in the country" (Singerman, 2002, 30).

Egypt's state of emergency and its consequences have often been analyzed within the canon of literature on international human rights, evidenced by the United Nations reports cited above and the body of critical reporting from organizations like Amnesty International and Human Rights Watch (Amnesty International, 2010; Human Rights Watch, 2010). When the state of emergency is contemplated in this context, it is being examined as an article of law, with practical implications for the observance of human rights. However, the emergency law has implications that extend beyond the realm of the legal and political—beyond the dire and extra-legal consequences for detainees, minorities and other target groups. The state of emergency is an unavoidable condition of everyday life, where the measurement and assessment of its impact are nearly as elusive as its discernible limits. Opposition takes root here, in the ordinariness of repression, to galvanize resistance that can thrive in a politically and communicatively confined space. Viewing the state of emergency as a pervasive spatial condition illuminates the tacit ways that ordinary people might seek to transgress and lay claim to alternate mobilities. In the context of the 2013 curfew, digital media create a space for transgression that enables transdimensional mobilities, circumventing the emergency law in its virtual and physical forms.

Revolt Against Emergency Rule

Emergency rule may have become a virtuality, but its tangible effects were still the focus of both active and tacit opposition and resistance. The normalcy of emergency powers stood blatantly in the way of political participation and the cultivation of civil society, and on a more insidious level, it also legitimized the entire ruling regime. Therefore, opposition groups, and the Muslim Brotherhood in particular, regularly mounted resistance to the emergency law in recognition of the fact that "a formal end to the 'state of emergency' would be the most important single act toward building an active political society" (Brownlee, 2002, 12). The Mubarak era was characterized by alternating periods of greater and lesser degrees of political openness. But as Bayat observed in 2010, "effective movements need political opportunities to grow and operate. How are social and political movements to keep up when authoritarian regimes exhibit a great intolerance toward organized activism" (Bayat, 2010, 2)?

The Muslim Brotherhood was a key instigator in the opposition to emergency rule, having taken a visible role in the political and social life of the country, running charities, hospitals, and other essential social services in various municipalities, running for election in the relatively free and fair contests for leadership positions in professional syndicates, and even running as independents for the Egyptian parliament (Roberts, 2013). Following the 2005 parliamentary elections, the Muslim Brotherhood now represented a sizable opposition bloc in the parliament, and it continued its opposition to the renewal of the emergency law from within the People's Assembly, forming the "Representatives Against the Emergency Law" group among parliamentarians, many of whom wore black sashes that read "no to emergency" on the day of the renewal vote in 2006 (Shehata & Stacher, 2013). The emergency was reinstated that year, however, the renewal being used once again as a tactic to maintain authoritarian control in the face of opposition. The Mubarak regime further reasserted its power in a package of repressive constitutional reforms in 2007 that served to entrench more "emergency"

powers in the constitution, including a protection of the practice of trying civilians in military courts (N. J. Brown, Dunne, & Hamzawy, 2007). After the 2011 revolution, military trials for civilians would become a controversial issue, taken up by the #NoMilTrials movement, a prominent online and offline campaign that could easily be identified by their bold "no" emblems in Arabic, papering the streets and adorning the clothing and Facebook pages of young revolutionaries.

By 2011, emergency rule had become a permanent virtual reality, made most visible in periods of extreme liminality. As law, it carried juridical legitimacy, when in fact, emergency *rule* in Egypt has always been a much more elusive array of policies, tactics and ideologies. Yet although the state of emergency had gradually become more abstract, arbitrary, and ordinary, this did not mean it went unchallenged. The daily consequences of an interminable state of emergency exerted very real constraints on the lives of Egyptian citizens, prompting overt challenges to the regime's rule by exception. These challenges chipped away at the emergency law's most resilient feature—its disappearance into everyday life—by pointing out the abstraction and calling it to account. During the 2010 parliamentary session debate concerning the renewal of the law, opponents staged a sit-in outside the parliament building. It was a show of public rejection of the emergency law, which demonstrated that while renewal of the law might have seemed a procedural certainty inside the chamber, outside it was perceived as a critical juncture (Mostafa, 2010). That year, the Muslim Brotherhood and other groups, including *Kifaya* and *We Are All Khaled Said* staged demonstrations and "silent stands" against the Emergency Law and its effects, including arbitrary detentions, arrests, and torture (see, for example: Wahab, 2011). Opposition to emergency rule increasingly took hold between the online and the offline. For example, the international (English language) Facebook page for *We Are All Khaled Said* advertised an event on August 20, 2010, calling for a silent stand against torture and the emergency law and inviting those who could not be physically present to participate silently from home. The event details added:

"Please email your photos to: alshaheeed@gmail.com or upload them on the fan photos section."

Decades of uninterrupted state repression were giving rise to politically, socially, and economically motivated movements whose desire to mobilize converged with technological developments that created new spaces for communication and coordination. The conditions for social uprising as theorized by Tarrow, Tilly and others, including outlets for political participation and a relaxation of repressive social constraints, simply had not existed in a sustained, meaningful way in Egypt (Tarrow, 1998; Tilly, 1978). So these movements organized quietly, in contravention of the Egyptian emergency law, utilizing communicative strategies and tools that allowed surreptitious coordination and invited individual participation from a distance. Movements like *Kifaya* became a training grounds for young, wired activists who increasingly used blogs and social media to express opposition in virtual space (Levinson, 2005).

By 2009, Alaa Al-Aswany observed that Egypt was "now witnessing a wave of strikes and protests on a scale unknown since the 1952 revolution. This widespread social unrest heralds change that is inevitable and not at all remote from democracy" (Al-Aswany, 2011, 10). It was clear that

> social media have been an integral part of political activism of the Egyptian for years, showing, for instance that 54 out of 70 recorded street protests from 2004 to 2011 substantially involved online activism. Hence, the power of networked individuals and groups who toppled Mubarak presidency cannot be separated from the power of social media that facilitated the formation and the expansion of the networks themselves. (Lim, 2012, 232)

The state of emergency laid the groundwork for the kinds of social movements that would gain traction in the lead up to the 2011 revolution, and they

> can best be understood in light of cycles of contention that preceded it and energised it through shared personnel and leadership, through

> communities of protest, through collectively learned tactics, and through creation of a space for overcoming ideological divisions. (El-Mahdi, 2009, 96)

Here the creation of space involved movements in public streets but also movement between dimensions, the online and the offline. Mobility was the tactic exercised against immobilizing strategies of spatial and political confinement and containment.

Emergency rule also contributed to less overt subversion. As law, strategy, virtuality, and abstraction, emergency rule was an inextricable condition of the neoliberal Egyptian state and influential in the policing and administration of public space. The "quiet encroachments" identified by Bayat (2010) and discussed in Chapter 1 should be understood against the backdrop of these intersecting political realities that together influence the lived spatial experiences of life in Egypt's cities. We should therefore look to the everyday as a site of creativity and subversion—a politics of liminality negotiated on the day-to-day in which *movements* of people, whether coordinated or uncoordinated might represent confrontations with the virtual and physical immobilities of emergency rule.

The 2013 Emergency and Curfew

Thus, when the interim government declared a state of emergency and imposed a curfew on August 14, 2013, it was acting in response to exceptional circumstances but invoking a legal precedent that had long been the *rule* rather than the exception. The curfew, then, was a dramatic corollary of the state of emergency; it was justified by emergency but not essential to it. In fact, it rendered the reimposition of emergency law quite obvious, in contrast to the procedural ticking-over of the emergency law in years past. On August 24, the interim cabinet shortened the curfew by two hours, excluding Fridays, when the curfew from 7 PM until 6 AM remained in place. For the next two months, the government continued to shorten the curfew, after extending the state of emergency until mid-November.

The curfew and state of emergency were lifted on November 12, but the emergency state remained a *virtual* reality.

Since the 2011 revolution, the 1971 constitution had undergone an overhaul and several rounds of major revisions. It was suspended on February 13, 2011, to be replaced by a new constitution, approved by referendum, paving the way for elections in March of that year. After the election of President Morsi in 2012, an Islamist-dominated constitution committee presented a new constitution for referendum in December 2012, which passed amid controversy, with some human rights organizations and advocates arguing that the constitution fell short of protecting basic human rights and failed to prohibit some practices that had long underpinned Egypt's emergency rule, including military trials for civilians (Human Rights Watch, 2012). In July 2013, the interim military-backed government announced that the 2012 constitution would be revised, and the new constitution was ultimately approved in a referendum on January 18, 2014. By this point, the interim government had already extended its arbitrary control over public life by means of a new anti-protest law, passed in late November, soon after the lifting of the declared state of emergency. The anti-protest law banned overnight sit-ins and unsanctioned public gatherings of ten or more people, and it required groups to seek advance permission for street rallies (Kingsley & Chulov, 2013). The anti-protest law was a way of maintaining emergency rule without declaring it, extending the state's power to act arbitrarily with impunity. The real emergency had been lifted, but the virtual emergency remained.

The curfew and the subsequent *de facto* extensions of emergency rule were met with many overt challenges—protests, rallies, clashes with police—all public displays of resentment, themselves transgressions of these laws prohibiting popular mobilizations. The imposition of a curfew as an emergency measure ground street politics and everyday life to an abrupt halt. The state of emergency in years past had cloaked itself in an illusion of normalcy, but this reimposition of the emergency law was made conspicuous and intrusive. Cairo and Alexandria, where the streets

were most lively and raucous in the nighttime hours, were instantly transformed into dark ghost towns after 7 PM. Transportation industries suffered, with the train services suspended for weeks (Alabass, 2013; Al-Masry Al-Youm, 2013). The curfew resulted in real, physical immobility. Where the ordinary life of these urban centers would typically spill out into the streets and public areas, it was forced back into the private homes, the cramped intimacy of *non*-public domains. The days still brought turmoil, but the nights were desolate. Blogger Yasmin El-Rifae wrote on her blog, *Cairo, Again*, on August 17, 2013:

> The past days have left me with a feeling of uselessness and alienation. I condemn both the Brotherhood and the security forces in their inter-locking cycle of violence and lies. There is no place for me in the street, or in a national conversation determined to start and end with chauvinistic nationalism. So I stay in and watch the city descend into silence, the streets emptying of life as military curfew approaches. On days like yesterday, I can hear gunshots, explosions, and the occasional surreal chants. Friends come and go, and we oscillate between collective media monitoring and outbursts of humor and distraction. So many have seen gruesome death, literally counting bodies and wading through blood in the course of their jobs. I wonder what this does to us, to what we know. (El-Rifae, 2013)

Still, physical transgressions occurred. After a couple of weeks, entire neighborhoods were "breaking curfew" together, attempting to restore some of the normal rhythm of everyday life within the confines of their cordoned-off zones, bounded by military checkpoints (Nordland, 2013). And public events continued in a direct challenge to the curfew's implicit intention to stifle entertainment and community gatherings. The Makan Cultural Center held "music of the curfew" all-night concerts, and initiatives like the "curfew library" emerged to cater to a new demand for stay-at-home entertainment (AFP, 2013; Bakr, 2013a). Cairo even hosted its second annual 48-hour film festival, an amateur filmmaking competition

with a 48-hour time limit, in the midst of the curfew. Filmmakers had to write, shoot, edit, and deliver their films for the festival within 48 hours, but the forced immobility of curfew hours meant that filmmakers could not move around the city after dark. On their Facebook page, festival organizers admitted that the 48-hour contest "was really more like 30 hours with the curfew" (*The Cairo 48 Hour Film Project*, 2013). One of the judges, Qassim, explained that they ultimately decided to give out "the 'bravest filmmakers in the world' award for each and every film, even those who got disqualified" to acknowledge the arduous impediments presented by the curfew.[3] Mahdi, one of the organizers, gave the filmmakers credit for their resolve—some of the teams stayed in one location all night out of necessity rather than artistic choice.[4] The films were screened on September 26 in spite of the difficulties, proving that in the face of the immobilizing effects of the curfew, the show could go on. Throughout the event, the 48-hour film festival's website and Facebook page communicated updates and confirmed the contest would proceed as planned, despite the curfew. Virtual communicative spaces opened by ICTs became congregating grounds for curfew-related chatter and commiseration.

Meanwhile, the Muslim Brotherhood and the April 6th Youth mobilized street protests against the curfew and the regime (Al Jazeera English, 2013). But even the most apolitical gatherings were part of a collective resistance—an assertion of the everyday in the face of exceptional circumstances. The presence of the people in the streets and in public spaces, in direct contravention of the government's attempts to reinstate its virtual emergency, was a visible and disruptive resistance strategy. But it existed alongside a less confrontational, tacit resistance practiced in *movement* between and beyond the confined spaces of everyday life. In this context, the exercise of mobility asserts agency in the face of disenfranchising physical constraints on movement. Such mobility can be exercised between both physical and virtual dimensions, facilitated by ICT use. This transdimensional mobility might even be essential to the destabilization of

[3] Personal communication with Qassim, 13 November 2013.
[4] Personal communication with Mahdi, 9 April 2014.

the deep *virtual* emergency that governs not only moments of political upheaval, clear liminal junctures, but also penetrates deep into everyday life.

Breaking Curfew

During the curfew, many ICT users circumvented, however unconsciously, the physical immobilities imposed by curfew restrictions by exercising ICT-enabled transdimensional mobility; they could not move around in physical spaces, so they turned to virtual ones. In her book detailing the ICT-mediated negotiation of Palestinian national and transnational identities, Aouragh discusses the role of Internet cafés during an Israeli-imposed curfew. The *Chat Net* café, she writes, "was the first to rebel, refusing to close its doors to customers while the rest of the city was like a ghost town" (Aouragh, 2011c, 217). It became a place to both physically transgress (staying out past the curfew) but also to leave the confines of geographic location to chat, email, game, or surf the web. *Chat Net* cafés were transdimensional spaces *par excellence*—a physical space for congregating and a virtual space for communicating, where Internet users could move between dimensions, in defiance of the immobilities imposed in the physical dimension. Transdimensionality in this setting, as in Egypt, does not negate the importance of one dimension in favor of another; rather, they are intertwined and co-created. The online and the offline ascribe meaning to one another, such that *going* online during a curfew must be understood as both an entirely ordinary practice and also an assertion of individual agency in relation to structural (material) constraints. The Internet café goers in the Occupied Territories may not have considered their Internet use an active resistance to the curfew; they were drawn to the café by an ordinary human desire for contact, to be at least communicatively mobile in immobilizing circumstances. The curfew café was a coping strategy, and ICT use during Egypt's curfew suggests a similar pattern. In 2013, with more pervasive personal computing and particularly with mobile phones, any Internet-enabled ICT

device has become the *Chat Net* for ordinary people seeking mobility. In this context, pursuing and achieving connectivity constitutes a circumvention of the curfew and its immobilities.

I began following the curfew online initially through individual posts, but I wanted to experience the curfew more broadly, so I turned to hashtags. On social media, hashtags group disparate and otherwise disconnected comments together into topical "threads" that are related. Hashtags are words or phrases preceded by a "#" sign, and they are both searchable and hyperlinked, meaning that any social media user can find and follow a particular topic by clicking on a hashtag attached to a particular post. Hashtags are an integral part of the virtual geography of the Internet—they are a conversational and navigational tool for congregating and meandering online. Some studies, mostly confined to the realm of politics, have suggested that hashtags can be used to *create* publics around specific topics, bringing together disparate individual ICT users in virtual space (Bruns & Burgess, 2011), and that they can be used to identify events as they happen (Cui, Zhang, Liu, Ma, & Zhang, 2012). Soon after the curfew was implemented in Egypt, hashtags about the curfew began to appear in Arabic and English on every social media platform. These hashtags created an ongoing conversation online about the curfew; connections between digital traces were mapped in the online by the use of hashtags, but they also profoundly implicated the offline.

Curfew hashtags referenced a very specific offline spatial experience, and many posts connected to curfew hashtags emphasized the physicality of curfew experiences—in particular, experiences of confinement or transgression. Documentation practices, of the kind discussed in Chapter 3, had become synonymous with and symbolic of the ongoing revolutionary moment, but it was immediately clear that documentation was also defining the curfew, which was otherwise a local event that hardly anyone without a connection to Egypt would have been likely to notice. Yet, the curfew and its online manifestation are part of the revolutionary story—contingent on the very transdimensional mobility that

created the "tahrir effect." The two social media platforms, Twitter and Instagram, that I will discuss here place emphasis on displaying real-time content and are also optimized for use on mobile phones, so they highlight the ways in which the curfew was a transdimensional spatial experience for ICT users: online and offline spaces mutually shaping and interpenentrating one another.

In what follows, I focus on three hashtags related to the curfew in particular: #الحظر (meaning "curfew" in Arabic), #اكتشافات_الحظر (meaning "curfew discoveries" in Arabic), and #7azr (the roman-script chat-Arabic form of the word الحظر in Arabic script, where the number "7" is used in place of the "ḥ" sound). Some Egyptian users posted using English curfew hashtags as well, but I have not included references to these posts, largely because of the possibility of large quantities of spurious data—English curfew Tweets, for instance, are more likely to refer to circumstances unrelated to Egypt. While #الحظر ("curfew") generically refers to the curfew, the hashtag #اكتشافات_الحظر ("curfew discoveries") was distinctly playful and sarcastic, making fun of the "discoveries" one could make while bored and confined at home. This hashtag was particularly popular on Twitter, where tweets shared revelations like "there are other people in my house," and "MacDonald's last delivery is 5 am" (Bakr, 2013b). The hashtag became a way for Twitter users to share, and even compete for, the most outrageous discoveries arising out of their boredom and confinement. Other comments included observations such as "there are 253 tiles on the floor of my apartment" and "t-shirts dry faster on the line than trousers." Curfew hashtags connected curfew experiences to one another, from the overtly transgressive and defiant to the simply bored or ludic. These hashtags map some of the online-offline traversals of ICT users during the curfew, revealing ways in which transdimensional mobility might subvert the immobilities of physical confinement.

Locating the Curfew on Twitter

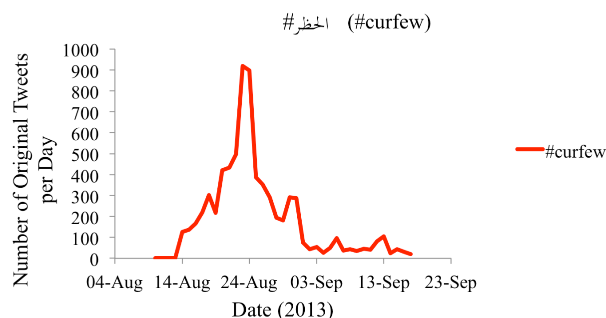
Twitter is a microblogging site on which users may publish posts consisting of up to 140 text characters. As discussed in previous chapters, Twitter gained prominence alongside Facebook as a key tool for organizing and mobilizing the large-scale protests in Egypt in 2011, prompting many primarily Western media outlets to hastily brand Egypt's Arab Spring a "Twitter Revolution." When the rampant technological euphoria began to abate, more analytical perspectives prevailed, taking into account the extremely low Twitter penetration rates in Egypt, which in 2011, were around 0.15 percent of the total population. In 2013, penetration had reached 0.61 percent, still a tiny number, with around half a million active users (Dubai School of Government, 2013). As a result, it is important to recognize the limitations of looking at Twitter data—it can reveal insights about certain ICT users, but we should be careful not to generalize much beyond the platform. However, in looking at curfew hashtags, Twitter offers certain practical advantages in that it is easy to search and quantify hashtag use, and it offers rich location data on where tweets originate. Because Twitter is optimized for use on mobile devices, such as smart phones, users regularly post tweets on the go, and geolocation—the geographic location from which a tweet is posted—is often attached to a tweet in order to connect it to the physical location of the moving Twitter user. Users must opt-in to "geotagging" for such location information to be attached to their tweets; the default is not to have geolocations attached to tweets. Nonetheless, Twitter data can provide coarse insights into the spatial and temporal patterns of ICT use, and the hashtag #اكتشافات_الحظر ("curfew discoveries") was predominantly used on Twitter; most posts on other platforms such as Facebook and Instagram using this hashtag were actually referencing posts from Twitter. Figure 4.5 shows an image of several #اكتشافات_الحظر ("curfew discoveries") tweets, which was frequently shared on Facebook, Instagram, and personal blogs.

The data I collected on curfew tweets was aggregated using a trial version of the Topsy Pro Twitter API, and I collected Tweets over the course of the first

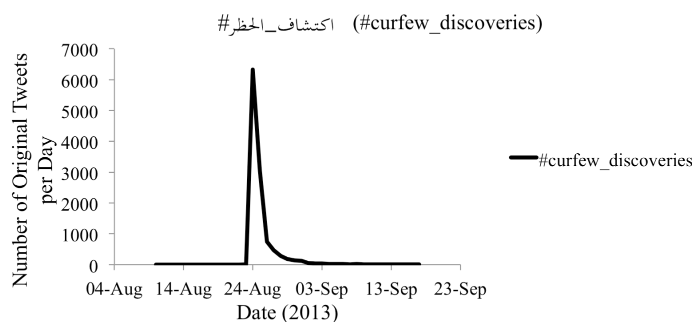
Figure 4.5: A popular image of "curfew discoveries" tweets shared on multiple social media platforms.

month of the curfew, between August 14 and September 17, 2013. Because most of these tweets were geotagged, it is possible to view the distribution of tweets geographically, which I will discuss in greater depth below. Within the first month of the curfew, around 10,500 tweets and retweets (tweets copied and shared by other users) used #الحظر ("curfew") worldwide, of which around 7,200 were original tweets. Of these tweets and retweets, 3,582 were geotagged for Egypt, of which 2,649 were original tweets. Over the same time period, #اكتشافات_الحظر ("curfew discoveries") was used in around 21,600 tweets and retweets, of which around 11,600 were original tweets. Among the total tweets and retweets, 31.5 percent originated in Egypt (6,807), and around 35.6 percent of the original tweets alone originated in Egypt (4,217). A search for the Arabic term الحظر ("curfew") (without the # symbol) returned 115,611 original tweets, of which 67.3 percent were geotagged within Egypt.

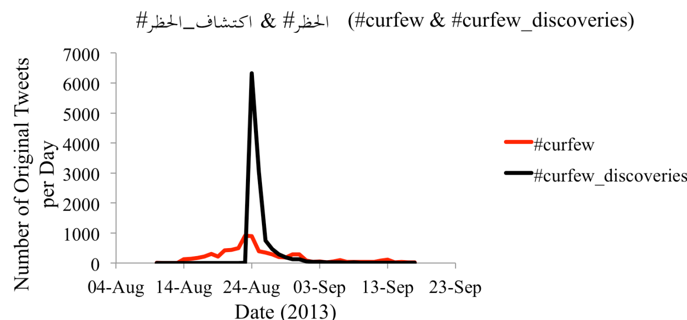
The geographic distribution and timing of the appearance of these hashtags



(a) Tweets using the curfew hashtag



(b) Tweets using the curfew_discoveries hashtag



(c) Comparing the frequency of both hastags

Figure 4.6: Timeline of tweets using "curfew" and "curfew discoveries" hashtags.

on Twitter illustrate that the online activity of ICT users using these hashtags was very much embedded in the material conditions of their offline lives. Physically confined, these Twitter users moved online to start a conversation about the curfew, making the curfew a participatory event that could be followed in virtual space. Immobility in the offline was subverted by transdimensional mobility. Thus,

curfew tweets correspond to the time-space constraints of the "offline" curfew. The tweets occur *when* the actual curfew is in effect, and they peak at the beginning of the curfew, when the immobilizing effects of the curfew are most acute (as discussed above, not only were curfew restrictions relaxed over time but more *physical* transgressions took place in public space as people tried to restore the rhythms of everyday life or mount active opposition to the state of emergency). Online activity here is a direct response to offline conditions, but viewing these dimensions as parallel and separate rather than interpenetrating would be misleading. The unconscious trespass *between* the virtual and the physical means that the curfew was an online-offline experience—it was fundamentally transdimensional—its spatiality was created in the inter-dimensional mobility of ICT users.

We see this more clearly in looking at the transdimensional "geography" of curfew tweets on Twitter. Unsurprisingly, tweets using the hashtags #الحظر ("curfew") and #اكتشافات_الحظر ("curfew discoveries") were prevalent in Egypt, but the conversation about the curfew was translocal in that a locally situated community was extended via transdimensional, ICT-mediated mobility into transnational contexts. However, translocality "recognises that localities continue to be important as sources of meaning and identity for mobile subjects; at the level of human experience, the distinctiveness of place is retained rather than eroded by global migration flows" (Conradson & Mckay, 2007, 168). Of course, the *production* of locality, and indeed the production of space, must be understood as the product of mobilities that not only entail movement between geographic locations but also between dimensions. Appadurai (1996, 197) explains that "the electronic mediation of community in the diasporic world creates a more complicated, disjunct, hybrid sense of local subjectivity." And the geographic distribution of curfew tweets provides some, albeit limited, insight into the *trans*-local and -dimensional spatiality of the curfew for ICT users.

Tweets about the curfew originated in geographic locations scattered

throughout the world, with Egypt as the epicenter. However, the transnational uptake of the curfew "conversation" does not render it *placeless* or de-spatialized. In fact, the curfew tweets broadly follow distinct geographic patterns, linked to their embeddedness in offline communities and places. Figure 4.7 shows the geotagged locations of tweets using the general hashtag #الحظر ("curfew"), with countries in red having the most geotagged tweets originating there. It is instantly apparent that Egypt stands out, along with Saudi Arabia. Other geotagged tweets originated in the United States (the third most geotagged location for curfew tweets), Kuwait, UAE, Mexico and Vietnam. Thus, the physical location of the curfew is apparent in the distribution of tweets about a "curfew" during this time, but the curfew conversation is also not *confined* to Egypt. Egypt becomes just one of several localities engaging with the curfew through this hashtag on Twitter. Still, physical location *matters*; to some extent, the geographic distribution of tweets worldwide has much to do with the specific conditions in Egypt. Saudi Arabia and the United States are top destinations for the Egyptian diaspora, and the prevalence of smart phones in those countries helps to explain how the curfew conversation was taken up so readily.

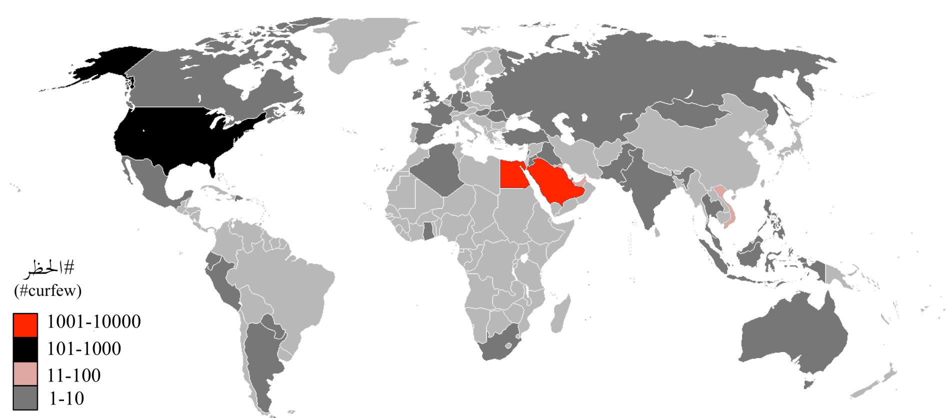


Figure 4.7: Map of the relative distribution of "curfew" tweets worldwide.

A slightly different pattern emerges in Figure 4.8, which shows the geotagged locations of tweets using the hashtag #اكتشافات_الحظر ("curfew

discoveries”). This hashtag, unlike the more general “curfew” tag, was extremely specific to the Egyptian curfew—a ludic response to the state-imposed restriction on mobility. Despite being more specific and connected exclusively to the Egyptian curfew, the map illustrates how this hashtag had a much more pronounced global following. In a short span of time, “curfew discoveries” became a kind of Internet meme. Memes are often humorous images, videos, texts or other digitally produced content that spread rapidly and by many users who all pick up on the same theme (Shifman, 2014). The “curfew discoveries” meme even attracted some news coverage in Egypt, as reporters documented the coping strategies of people dealing with the curfew (Bakr, 2013a; Batrawy & Rizk, 2013). Meme-ficiation is usually instant and extreme, appearing suddenly and fizzling out in rapid succession. This pattern is clearly visualized in Figure 4.6, where the number of tweets tagged with #اكتشافات_الحظر ("curfew discoveries") spikes around August 24 and then rapidly disappears, in contrast to the more generic #الحظر ("curfew"), which peaks around the same time but shows a gradual increase and slower decline.

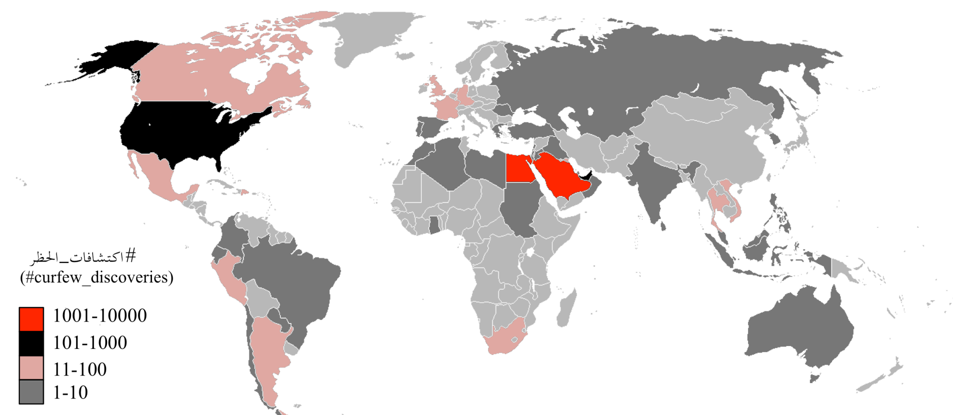


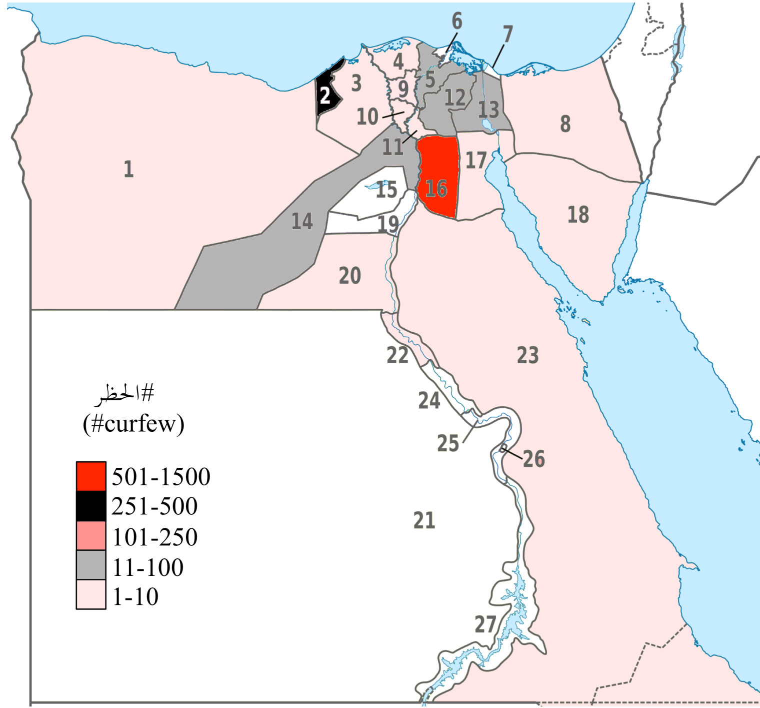
Figure 4.8: Map of the relative distribution of “curfew discoveries” tweets worldwide.

Geotagged tweets also allow us to connect the online “event” more specifically to locations in Egypt. If we take a moment to zoom into Egypt to examine the distribution of tweets about the curfew specifically, Figure 4.9 shows the distribution of tweets using #الحظر ("curfew") that were geotagged within

Egypt alone (a total of 7,177 original tweets). It is immediately apparent that the most tweets are concentrated in the urban centers of Cairo and Alexandria, which are red and black on the map, respectively. Higher concentrations of tweets (in pink) are also broadly more prevalent in governorates that were under curfew themselves.

This pattern is even more pronounced among tweets tagged with #اكتشافات_الحظر ("curfew discoveries"), pictured in Figure 4.10 (a total of 11,580 original tweets). Cairo and Alexandria are again the geographic locations with the most tweets about the curfew. There is also another important dynamic at play here. In Egypt's urban metropolises, people have the most comprehensive access to Internet connections, whether on their computers or via mobile devices due to the condition of communications infrastructure. Uneven access to ICT infrastructure places limitations on *who* can exercise transdimensional mobility and *where* people's spatial experiences are likely to be more transdimensional than others. The spatialization of the curfew online was strongly dependent on material spatialities; geotagged tweets originated in governorates most affected by the imposition of the curfew but they also originated in geographic locations where the most Internet users are located, a product of both population density and the material conditions for ICT access.

Access to ICTs and platforms like Twitter is fundamentally dependent on the availability of infrastructure, including the physical materials of connectivity (cables, telephone towers, bandwidth) and the soft economy of knowledge (education, greater income equality) (Graham & Marvin, 1996). Thus, ICT access is unevenly distributed worldwide; the geopolitical West possesses the most comprehensive infrastructure and therefore represents the largest presence in digital space. By comparison, on a global scale, Egyptian Internet users occupy very little of this digital space. Figure 4.11 shows a map of overall Twitter activity from the website *tweetping.net*, which displays real-time Twitter activity by location. Illuminated pin-points on the map increase in number and intensity to



(a)

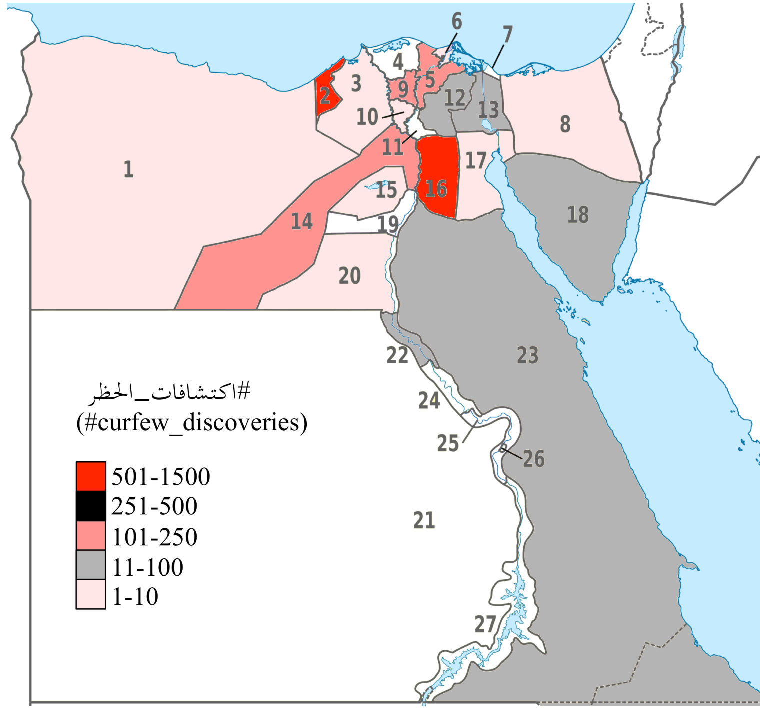
Number	Governorate	Number of Tweets
1	Matruh	4
2	Alexandria	413
3	Beheira	3
4	Kafr El Sheikh	1
5	Dakahlia	55
6	Damietta	0
7	Port Said	0
8	North Sinai	1
9	Gharbia	6
10	Monufia	2
11	Qalyubia	2
12	Sharqia	11
13	Ismailia	15
14	Giza	100
15	Faiyum	0
16	Cairo	772
17	Suez	5
18	South Sinai	8
19	Beni Suef	0
20	Monufia	2
21	New Valley	0
22	Asyut	3
23	Red Sea	6
24	Sohag	0
25	Qena	0
26	Luxor	0
27	Aswan	0

#الحظر
(#curfew)

(b)

Figure 4.9: Map of the relative distribution of "curfew" tweets in Egypt (a) and table of corresponding provinces (b).

show the areas of the most Twitter usage at that particular moment in time. On this Tweetping map, captured on February 5, 2013, Cairo appears as a tiny bright spot



(a)

Number	Governorate	Number of Tweets
1	Matruh	2
2	Alexandria	786
3	Beheira	5
4	Kafr El Sheikh	0
5	Dakahlia	189
6	Damietta	5
7	Port Said	0
8	North Sinai	4
9	Gharbia	133
10	Monufia	2
11	Qalyubia	0
12	Sharqia	38
13	Ismailia	47
14	Giza	174
15	Faiyum	1
16	Cairo	1140
17	Suez	1
18	South Sinai	11
19	Beni Suef	0
20	Monufia	2
21	New Valley	0
22	Asyut	12
23	Red Sea	27
24	Sohag	0
25	Qena	0
26	Luxor	0
27	Aswan	0

#اكتشافات_الحظر
(#curfew_discoveries)

(b)

Figure 4.10: Map of the relative distribution of “curfew discoveries” tweets in Egypt (a) and table of corresponding provinces (b).

within Africa, but it is dwarfed by the glow emanating from the United States and Western Europe. Tweetping thus roughly illustrates, in the contrast between light

and dark places, the immobilities at work between the online and the offline.

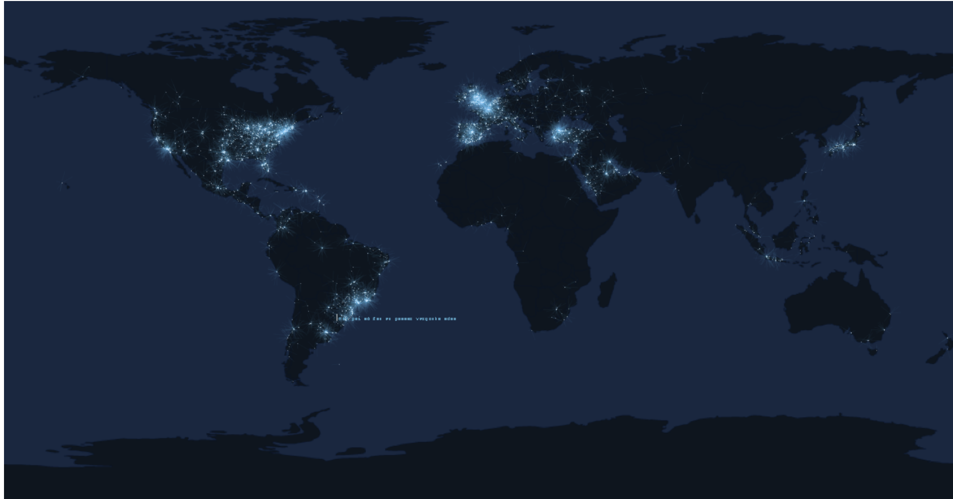


Figure 4.11: Tweetping live map, screenshot taken at 21:11 GMT on 5 February 2013, www.tweetping.net.

The migration of the curfew from the offline into the online demonstrated in one, brief instance how virtual and physical spaces co-construct one another, and how they are crucially interdependent and interpenetrating. As one Twitter user commented, using the hashtag #الحظر ("curfew") as the curfew came into effect, "Internet speed decreased by half after 7 pm." This tweet points to how interconnected the online and the offline are to Twitter users; as physical movement was restricted offline, people moved online, exercising mobility between dimensions and putting additional pressure on local ICT infrastructure. People *went* online to escape, lament, ridicule, and resist their offline confinement. And in doing so, the individual movement of atomized ICT users onto Twitter created opportunities for coming together in virtual space, linked not by co-presence in physical places but by hashtags and geotags, a transdimensional geography of confinement. Rather than transcending or negating the importance of local places and spaces, transdimensional spatiality is created in the traversal and entanglement of both virtual and physical dimensions.

While Twitter can provide macro-level insights into the transdimensional

spatiality of the curfew, it is difficult to extract deeper meaning or sentiment from tweets sharing these curfew hashtags. However, Egyptian ICT users used hashtags to document their curfew experiences on multiple platforms, and on Instagram, a photo-sharing platform, users uploaded digital photos related to the curfew that provide snapshots of everyday life under curfew.

Viewing the Curfew on Instagram

Instagram is a photo- and video-sharing social networking application for smartphones, launched in 2010. Like Twitter, it is optimized for use on mobile devices, and users often snap photos with their mobile phone camera to upload onto the platform. Instagram is widely known for its menu of in-application "filters," where users can manipulate the appearance of photographs, boosting the saturation or washing photos out to look "retro." Instagram is very much made possible by the prevalence of the personal camera phone, which enables digital photography on the go. Because the phone camera is more a "part of everyday practices than digital cameras" (Larsen, 2008, 149), mobile-friendly platforms like Instagram provide users an opportunity to post photos of life as it happens. On *Insta*gram, users are meant to post "instantly," so these photos are intended to be both spatially and temporally situated, and users may also enable geotagging of their photos. The ubiquity of camera phones and their uses during protests and demonstrations were discussed in Chapter 3, where camera phones were used to "witness" events as they occurred. In the revolutionary moment, the embeddedness of the technology in the everyday lives of users is often taken for granted, and the focus shifts to the *revolutionary* uses of the device during a period of intense mobilization and movement. However, in the context of an immobilizing curfew, mobile digital photography provides different insights into the ways in which pervasive mobile photography documents and influences movement. Here we see how "the mundane is elevated to a photographic object, the everyday is now the site of potential news and visual archiving" (Okabe & Ito, 2003), as Instagram users regularly document

their everyday lives, preserving *insta*-records of ordinary experiences.

In contrast to the revolutionary uses of digital photography during periods of intense physical movement (Chapter 3), here digital photography is taking place in a context of stifled expression and curtailed movement. Images of protests during the 18 days *created* Tahrir Square as a transdimensional place, produced in the mobility of people and data between physical and virtual dimensions. The Egyptian revolution, then, is understood very much through its ICT mediation. But transdimensional mobility contributes to the production of space and locality well beyond revolutionary moments—it comes to the fore in instances of social unrest precisely because it is exercised in the everyday. Lee (2010) notes that

> [d]igital cameras accompanied by individuals have extended the subject matter of photography. To some degree, they have reproduced traditional photo-taking practices to commemorate specific occasions, and yet they have begun to include mundane and ephemeral images in their photographic repertoire, turning ordinary scenes or banal moments into something noticeable, and thus something recordable. (Lee, 2010, 270)

Instagram, a made-for-mobile application and social media platform, provides a window—albeit a platform-specific one—into the digital photography practices during the curfew, where documenting the mundane and the everyday became a repertoire of entertainment, resistance, and solidarity.

In 2014, Instagram reported having over 300 million monthly users, 70 percent of whom were based outside of the U.S. (Constine, 2014). During 2013, the number was likely much lower, but comprehensive statistics simply do not exist. As of 2015, Instagram had only opened its API to select partners, making Instagram research and marketing very exclusive. Thus, while Instagram presents intriguing research opportunities (it offers rich data in the form of photos, sorted by hashtag, region, users, etc.), it is relatively unfriendly to "data-scraping," so few large-sample studies exist. In Egypt, Instagram penetration is small (though exact

statistics are not currently available) and reserved to those ICT users who have Internet access on their smartphones, which was around 12 million people at most in 2013 (Arab Republic of Egypt Ministry of Communications and Information Technology, 2013). In the absence of in-person participant observation, the profiles of Instagram users served as a proxy for understanding who these platform users are and what and how they post to Instagram. In what follows, I begin by roughly sketching the demographics of Instagram users posting about the curfew. In the absence of statistics, an exploration of users' public profiles and their photo galleries can begin to illuminate *for whom* Instagram offers a virtual space to transgress.

The sample of Instagram photos referenced in this chapter was collected retrospectively in mid-November 2013, shortly after the curfew was lifted. I perused hundreds of users' profiles and their photo collections throughout the curfew period, and I took a non-random sample of 51 profiles of users using curfew-related hashtags and hashtags referring to #Egypt or #مصر ("Egypt" in Arabic) to examine in depth, using Statigram, a free online Instagram search tool.[5] I used two search terms related to the curfew #الحظر ("curfew") and #7azr ("curfew") along with #Egypt and #مصر ("Egypt"). Because users must opt-in to use geotagging and they can select their location from a list of nearby options, allowing a high degree of personal subjectivity and selectivity, I used country-specific hashtags applied by users as a proxy for location, along with other visual cues within photographs themselves.

Among the 51 profiles, the overwhelming majority were men (only 14 were women), and based on casual observation of Instagram users tagging Egypt as a location, this is representative of a broader demographic trend on the platform. Most of these users listed their real names under their Instagram names in their public profiles, but almost no one gave further information (users have the option of giving an additional description of themselves). Instagram has a global reputation

[5] Statigram is now known as Iconosquare and is now a paid service.

for being a repository of photographs of both the mundane and the middle class, what Ibrahim (2015) calls "banal imaging" of the everyday. In a 2012 music video, the U.S.-based website *CollegeHumor* parodied the perception of Instagram as a virtual gathering place for the affluent to catalogue their ennui. The video, titled "Look At This Instagram," had attracted over 7.7 million views on YouTube at this writing (College Humor, 2012). In the video, Instagram is presented as a platform for hosting photos of food, clothing, architecture, and the minutiae of everyday life. It is important to understand the platform-specific aesthetic trends within users' digital photography because the platform itself exerts influences on the kinds of photographs that users are likely to upload and share.

Lee (2010, 268) writes that "[w]eb activities tend to be implicated in the photographic act of framing, taking, displaying, compiling, and reviewing photographs." In other words, users are likely to share content that is similar to other content they have observed on the site, and the *intent* to share photos online may shape their photographic practices, as they consider what to photograph and share. The platform attracts certain genres of images both as a result of its technical specifications (for instance, in 2013 Instagram only accepted images in square format) and also its user-generated content. According to Lasén (2012),

> [t]he meaning of the images and the practice is the complex result of that shared agency formed by devices and applications, individuals and groups, the platforms and their characteristics and regulations, the norms of formal use and the informal rules of etiquette, the intentions of users, marketers and regulators, and also what lies outside this intention. Thus, for example, on different platforms the same pictures will have different meanings. (Lasén, 2012, 249)[6]

Thus, the meaning of ICT-mediated images is a complex result of the constraints of the application or platform as well as its usage by individuals and groups. Users posting on Instagram about the curfew subscribe to these unwritten rules

[6] Translated by author.

on content, which likely constrain what kinds of images appear on this particular platform but also allow for some limited insight into everyday life because the platform invites and encourages photography of the mundane and photography on the move because it is optimized as a mobile platform (Ibrahim, 2015).

Figure 4.12: Relative apperance of brands in Instagram photos of users in curfew sample.

There is some evidence that Instagram users who posted about the curfew broadly fit the demographic trends and follow the practices widely observed on Instagram as a whole. All 51 profiles feature photos of ordinary activities, and they also take a distinct interest in photographing food and brands, particularly high-end products or services. With little data available on Instagram users' demographics, examining their photographic content offers some support for the claim that these are mostly young and affluent ICT users. By way of illustration, Figure 4.12 shows a distribution of "brands" that appeared regularly in photos from the sample of 51 Egyptian profiles, with the larger words representing more depictions in photographs. In addition to the commercial brands, many curfew Instagrammers were fond of posting variations on the "Keep Calm" graphic poster. These images are based on a 1939 poster produced by the British government to raise spirits during the Second World War, which read "Keep Calm and Carry On." Many

Instagrammers posted variations on the "Keep Calm" theme, including the popular "Keep Calm and Enjoy الحظر" digital poster, in turns mocking *and* celebrating the curfew (see Figure 4.13).

Figure 4.13: "Keep Calm" poster image on Instagram, posted on 21 August 2013.

Very little academic work has been conducted on Instagram to date (see, for instance: Hochman & Schwartz, 2012; Hochman & Manovich, 2013; Hu, Manikonda, & Kambhampati, 2014; Levin, 2014; Walker Rettberg, 2014; Wendt, 2014). Hu et al. (2014) demonstrate that sorting social media photos into categories can be a useful method for analyzing content within a theme or platform, across different users. In their computer-assisted study of Instagram photos, the authors used a computer vision algorithm and human coders to identify broad, platform-wide content categories of photos in order to better understand how users interact with images and other users on Instagram. In this case, I will discuss how Instagram users subverted the immobilities of the curfew through images

depicting experiences of boredom and experiences of transgression, connected to the hashtags #الحظر ("curfew") and #7azr ("curfew").[7]

There are two methodological points worth mentioning here. First, this exploration of Instagram photos occurs from a distinctly *human* rather than computational or computer-assisted perspective, meaning that these observations are based on my own encounters with curfew photos on Instagram, as I searched different curfew hashtags. Secondly, the content categories determined for the photos pertain directly to the spatio-temporal period of the curfew in Egypt. So, the "offline" event of the curfew forms the context and impetus for the aggregation of digital content. In exploring boredom and transgression, I will discuss four kinds of curfew photos that I regularly encountered. Though these categories are not exhaustive, they represent common practices: (1) Boredom selfies, photos taken of oneself while doing activities that are meant to depict periods of boredom; (2) Photos of material objects that illustrate how curfew time is being passed; and (3) Snapshots of immobility, photos that capture the disruption of everyday movement due to the curfew; and (4) Transgression photos, selfies or scenic shots that are intended to show that the photographer is physically outside in public spaces in violation of the curfew.

Instagram's focus on the everyday merely taps into a wider trend in digital photography. Studies on photography highlight the way that digital photography and photo-sharing practices take a particular interest in how people document their everyday lives with the increased ease and ubiquity of digital cameras. Murray (2008, 147) observes that social media platforms like Flickr, and now Instagram, feature amateur digital photography focused less on "rarefied moments" and more on the "small and mundane," as a result of the ability to affordably and quickly take photos and edit them. "Narrative and meta-narrative seem to run on parallel lines; like auto-ethnographers, people are documenting and reconsidering their lives" (Davies, 2007, 549). These characteristics of digital photography interact

[7] It is worth noting that #اكتشافات_الحظر ("curfew discoveries") was not prevalent on Instagram, with fewer than ten public posts.

with the specific affordances of the Instagram platform to display curated personal accounts and autobiographical narratives.

Within the Instagram application, users can "follow" other users, and the home screen displays photos posted by users being followed. The photos appear in a data stream, where the most recent photos appear first, and they are displayed by the time posted rather than by user or album. The timestamp is imprecise; time within the Instagram platform is relative—a timestamp would indicate that photos were posted 38 seconds ago, 5 minutes ago, 18 hours ago, 7 days ago, and so forth, in relation to the time they are being viewed. As a result, Hochman and Manovich (2013) point out that Instagram "suppresses temporal, vertical structures in favor of spatial connectivities." Although time always exists fluidly in relation to *now*, Instagram privileges geospatial information, allowing users to indicate their location in two ways: tagging (using # symbol in the caption of the photo) and the photomap (which places a user's photos on a world map using metadata uploaded with the photos). These geospatial tagging functions built into Instagram encourage users to express their location, so Instagram photos can provide qualitative insights into the creation of what Schwartz and Halegoua (2014) call "the spatial self." The spatial self emerges from

> a variety of instances (both online and offline) where individuals document, archive and display their experience and/or mobility within space and place in order to represent or perform aspects of their identity to others. (R. Schwartz & Halegoua, 2014, 2)

Since Instagram has been described as "autobiographical" (Fallon, 2014), personal and "authentic" (Hochman & Manovich, 2013), and it displays the well-documented tendency of amateur digital photography to capture and distribute images of the mundane everyday, it provides useful insights into the "character of a physical place and the way users associate themselves with physical place" (R. Schwartz & Halegoua, 2014, 7). In other words, Instagram can constitute a transdimensional field site, where the online/offline immobilities of Egypt's

state of emergency and curfew are negotiated, documented, and subverted via the transdimensional mobility of ICT mediation.

Boredom Selfies

The "selfie" refers to a particular genre of self-portraiture in which an individual takes a photo of herself, often with the intention of uploading and sharing it on a social networking site. In these photos, the photographer has turned the camera on herself, and often an outstretched arm at the edge of the frame reveals the "self" as both subject and photographer. Until very recently, limited academic work had been done on the selfie, with the notable exception of Lasén's research on selfie practices among teenagers in Western Europe. Lasén (2012) suggests that taking selfies and sharing them online implicates three interrelated features: presentation (of the self), representation (for oneself or for others), and embodiment (the writing of bodies through displaying and mediating them). Sharing the photos online, opening them up to a virtual audience can be a way of liberating the body, opening it into new spaces at the same time that certain technical, social, and spatial restrictions exist.

> Digital devices participate simultaneously in dual aspects: identity, reflexivity, self-awareness on the one hand; and monitoring, self-control, and dependence on the other. They mediate forms of restraint and also contribute to the strategies for liberating oneself from those restraints. (Lasén, 2012).[8]

Oxford Dictionaries named "selfie" the word of the year in 2013, by which time the photographic genre had attracted much derision, as selfies were perceived to be indicative of the moral decay and narcissism of a generation brought up on the technologies of "me" (Levin, 2014). But other authors have asserted the autobiographical potential, and therefore visual agency, of selfies, their

[8]Translated by author.

opportunities for identity performance, negotiation, and development (Fallon, 2014). In this context, during the curfew in Egypt, the autobiographical aspects of selfies and photos of the self are apparent. These photographed bodies tell a mundane story, diary-like in its ordinariness and seeming triviality.

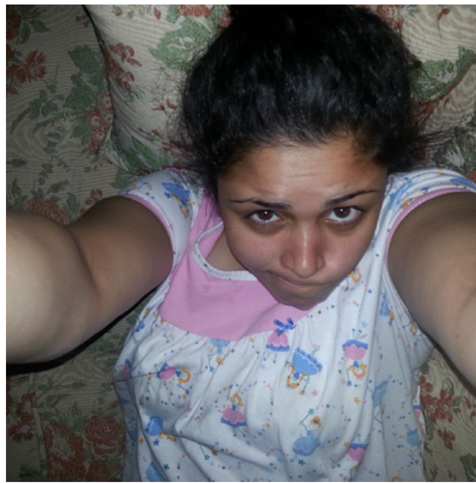


Figure 4.14: A selfie shared publicly on Instagram during the curfew, featuring hashtags in Arabic including: #curfew, #calm, #balcony, #AmrDiab.

In selfies tagged with curfew hashtags, the Instagrammers are passing time by photographing themselves, in isolation (as in Figure 4.14) or with friends and family who are also co-present in physical space with them (as in Figure 4.15). Selfies are frequently accompanied by captions explaining the mood of the subject in the photo and also what they are doing at the time. For example, selfies were frequently shared with additional hashtags indicating that the subjects were "bored." These photos were taken to pass the time during the curfew, when people were not allowed to be out on the streets. Mains (2007, 667) describes boredom as "the feeling that one not only has too much time but also that time is not meaningful because it is not passed in the progressive manner that one has come to expect." It has been the subject of some scholarly work in the global south, with particular focus on the boredom experienced by young, unemployed men in developing economies (Mains, 2007; Ralph, 2008; Jeffrey, 2010; Masquelier, 2013). Without employment prospects, these young men engage in what Jeffrey calls "timepass,"

in which they fill time with socializing activities, coping with their disillusionment in ways that are at times despairing and at other times empowering. Boredom, he finds, is not entirely unproductive.

> Unemployed young men are not passive in the face of these threats to their self-belief; they frequently play key roles in processes of political change: developing novel cultural forms, instigating social movements, and working on an everyday level to pursue political goals. (Jeffrey, 2010, 468).

Figure 4.15: A selfie shared publicly on Instagram during the curfew, featuring hashtags in Arabic and English, including: #curfew, #happy, #beautiful, #kids, #baby.

Indeed, the very economic hardships faced by the young men in these studies was an important factor in the discontent that led to Egypt's 2011 revolution, spearheaded by youth. In the discussion of Egypt's virtual emergency above, we are reminded that conditions of permanent liminality can result in crushing boredom. "[N]othing is more boring than a permanent state of liminality, where even the hope of escaping the routine is lost" (Szakolczai, 2000, 217). In such conditions, simple activities undertaken to pass time can constitute attempts at escape, and when physical constraints curtail movement in material space, escape

can be transdimensional—it can be realized between the virtual and the physical. Boredom, like that depicted during the curfew can motivate individuals to seek out mobilities that, while ordinary, also provide opportunities for innovation, creativity, and even revolt. In the context of the more permanently disenfranchising effects of emergency rule, boredom is perhaps less easy to identify, but it is no less a product of offline conditions.

However, Masquelier's research subjects in Niger also point out that boredom is "a form of disempowerment" (Masquelier, 2013, 483). Indeed, in response to sustained conditions of liminality, how could it be much else? These conflicting characteristics of boredom among youth are apparent in the Instagram photo practices evident during Egypt's 2013 curfew—boredom, in this context, was the product of immobilization and physical confinement, and it simultaneously inspired contradictory expressions of despair, frustration, defiance, and resignation. The curfew's "forced" boredom was certainly intended as a form of disempowerment, precluding street demonstrations and public gatherings. But the curfew motivated people to seek alternative mobilities, and escaping boredom by means of ICT-mediated mobility constituted a kind of subversion. The Internet has created ample new opportunities for "escape" (Schielke, 2008), and these Instagram photos represent both efforts at documentation and attempts to exercise mobility between the online and the offline, where the offline is thoroughly restricted.

As many of the Instagram photos illustrate, boredom can be entertaining, as friends and family come together to pass the time. Many of the photos depicting confinement also celebrate certain leisure and social activities that the photographers have discovered during their mandatory home detention, including playing board games and spending time with family. Some photos include hashtags such as #goodtimes or #instalove, adding a note of levity to the curfew images. Other boredom selfies feature contorted faces and lonely self-portraits in the dark, evoking the solitude of this confinement. Perhaps happiness in this spatio-temporal

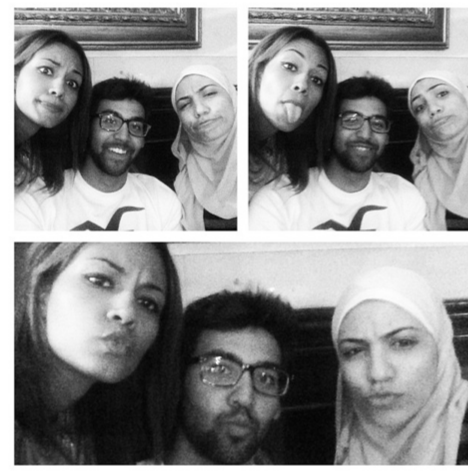


Figure 4.16: A selfie shared publicly on Instagram during the curfew, featuring hashtags in English, including: #no, #curfew, #friends, #besties, #studying.

context constitutes a kind of defiance—the curfew can be *fun*—and the solitude of the curfew is also subverted in some ways by the transdimensional dissemination and consumption of these images. Selfies are posed and posted to be shared. Of course, the transdimensionality of the images is, itself, confined in certain ways—as Lasén points out—by the limitations of the platform. The online space of Instagram is not occupied by the entire community of Internet users, only Instagram users. Thus, these curfew selfies are consumed and shared within a bounded (if transdimensional) space. Location is significant in that the digital content produced carries a meaning tied to the context of the photographed body under curfew, and the virtual spaces in which these images are shared and viewed exert influences on both the consumption and production of the image.

Selfies taken during the curfew derived meaning from the *places* and *times* in which they were photographed and shared. As with photographs taken during protests, discussed in Chapter 3, the embodied practice of photography "on the go" derives meaning from the technology being at-hand, with the photographer at a particular moment and in a particular location. Here, bodies are confined in space, and their confinement is integral to the autobiographical story that these

photos tell in the Instagram photo stream. Users further contextualize these photos with curfew hashtags, differentiating these selfies from others that might exist in their Instagram galleries and also *justifying* why they were taken. Private solitude can be shared, so the experience of being confined and being solitary is rendered transdimensional in both the practice of sharing these photos online but also the potential to do so.

Curfew Objects

When the curfew was imposed, Instagram users began cataloguing everyday artifacts of confinement, "still lifes" that I am calling "curfew objects," as evidence of how they were passing time. Instagrammers snapped shots of books, board games, junk food, Nintendo consoles, and other material objects evocative of sedentary, confined activities. The implication of these photos was that these objects explained how the photographer was "spending the curfew."

Figure 4.17: A photo of curfew objects, featuring a card game.

The objects are not indicative of hardship; a packet of crisps, a bottle of soda, and a television set hardly evoke deprivation or the disenfranchisement of forced immobility, the regulated confinement, or the coercive imposition and enforcement of the curfew. But the curfew was a strategy of arbitrary oppression under the

otherwise normalized, ordinary power of emergency rule, and in this context, these photos seem to mock the idea of "suffering" under these exceptional circumstances. The photos betray that there is much of the routine in these unusual conditions. The material evidence of the curfew were just simply the articles of everyday life.

Figure 4.18: A photo of curfew objects, featuring shisha waterpipes.

Figure 4.17 shows some curfew objects—in this case, a card game—all reassuringly familiar, the preoccupations of idle time. The artifacts of life under the curfew further conform to the unstated visual "rules" of the platform, deviating very little from other photos of material objects catalogued in these users' Instagram galleries: most images depict food (as in Figure 4.19), and many depict luxury items and international brands.

The "objects" of the curfew, then, are less a testament of deprivation and discomfort than a reaffirmation of familiar, everyday comforts that make the curfew bearable. In the context of these Instagram users' profiles, which feature collections of photos depicting branded food and products, leisure activities, and groups of smiling friends, these objects tagged with #الحظر ("curfew") or #7azr ("curfew") are glaringly normal. In fact, it is the attachment of hashtags on the part of Instagram users to these photos of *things* that contextualizes them and situates them in time and place. Otherwise, there is very little difference between these

Figure 4.19: A photo of curfew objects, featuring junk food.

images and those that depict the brands and luxury items featured more broadly in Instagram profiles, as shown in Figure 4.12.

Snapshots of Immobility

In contrast to these boredom images, in photos depicting forced immobility, illustrated in Figure 4.20, the curfew is documented as an inconvenience, resulting in physical immobility in public space. These photos mainly depict traffic jams or scenes of empty streets, taken from inside a car or building (the photographer is not physically defying the curfew to obtain the image but is still bearing witness to its effects). The curfew confines space and time in the offline sphere, but digital mediation allows this confinement to be shared, transgressed, re-spatialized, and re-interpreted online. Immobilities, as these photos suggest, take many (often inconspicuous) forms. Photos in this category often foreshadow the impending curfew hour; they depict armored military vehicles taking position, shops and malls closing for the day, and streets preemptively abandoned.

Figure 4.20: A photo of curfew immobility, featuring deserted streets and military vehicles.

In the many photos depicting traffic jams (as in Figure 4.21), captions most often convey frustration at being forced to confront Egypt's traffic congestion at a particular time, when everyone has to return home for the curfew. Photos of desolate streets feature captions expressing awe at the silence. Unlike the photos of curfew objects and selfies, photos of immobilizing traffic jams document the ways in which the curfew creates situations that deviate from the everyday—they are unusual moments.

Figure 4.21: A photo of curfew immobility, featuring a traffic jam.

The sentiments expressed toward the curfew in these photos were at times positive, negative, or indifferent, articulated mostly in captions or additional hashtags, as the photos themselves generally do not depict the faces or expressions of the photographers. Some of the Instagram users make expressly anti-military statements with their photos, using hashtags such as #anti-coup. Yet, other photos have captions embracing the calm of the silent streets. It was "eerie, quiet yet beautifully calm," wrote user @yelayat under her photo of a deserted street.

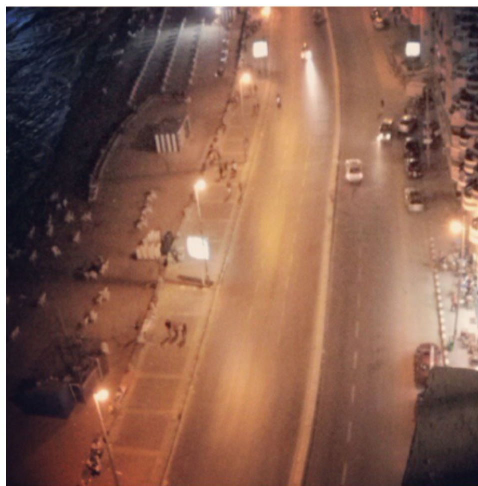


Figure 4.22: A photo of curfew immobility, featuring an abandoned highway.

The empty streets are an unmistakable reminder of the policing of public space and forced immobility. Again, the physicality of the photographic act is integral to the meaning of the photograph, further emphasized by attaching hashtags related to the curfew. By assigning curfew hashtags to these images, Instagram users are adding their posts to an ongoing conversation about the curfew, a collection of photos that *together* depict life under curfew. Lee (2010) argues that digital photographing is not merely about pressing a button—it is an act of making sense of urban space. Through Instagram, the streets and traffic jams exist online and offline, confinement confronted by the transdimensional mobility of ICT users, who experience the curfew in physical space but make it mobile in virtual space, where it can become a shared experience—open to "likes" or comments from

friends and connected to a much broader thematic conversation through hashtags.

Proof of Transgression

Proof of transgression photos entailed overlapping mobilities, as Instagrammers photographed their own physical transgressions of the curfew. These photos included selfies in deserted streets or at checkpoints, even group photos with military checkpoint guards. They also included photos taken on street level of the quiet desolation of the city at curfew hours, where the perspective of the photographer confirms that she had been *out* in the street. Like protest photos taken on camera phones, curfew photos of small acts of physical transgression acquired meaning in online space from the implication that the photographer was physically *there* in offline space. Indeed, in cases of revolutionary upheaval as well as in the course of everyday life, "[p]hotographs have functioned as objective testimony, as well as technical protheses to memory" (Lee, 2010, 269). However, transgressing during the curfew did not always entail *resistance* or *objection* to the curfew.

Figure 4.23: A photo depicting curfew transgressions, featuring several friends in a deserted street.

Figure 4.23 shows an example of a transgression photo depicting friends in a deserted street. Despite all visually depicting violations of the curfew (to varying degrees), the photos do not share one unified message about the curfew—some

celebrate the silence imposed by the curfew and remark on how nice it is to escape the ordinary chaos and commotion of Egypt's busy urban centers, while others lament the silence as a reminder of how lifeless these cities have become as a result of the militarization of public space.

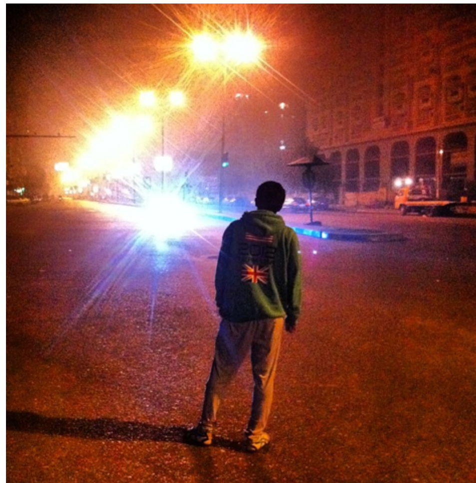


Figure 4.24: A photo depicting curfew transgressions, featuring a person standing in an empty street.

"Peace and quiet" are welcomed by some Instagrammers who have become tired of the violence, protests and clashes of the past couple of years. These photos of curfew violations, transgressions in physical spaces, actually celebrate this "normal," the elusive calm of protest- and traffic-free streets, ostensibly evocative of (a myopic view of) the way things were *before*. Some curfew-breakers show their support for this relative calm by posing with military personnel (as in Figure 4.25), guard dogs, and army vehicles in the deserted night streets. Context is of paramount importance; the military enjoyed tremendous popularity after the removal of President Morsi from office, and the *Tamarod* movement attracted support from many pro-revolution activists, who subsequently celebrated the Egyptian army as the protectors of the revolution. These photos illustrate the ambivalence of the curfew moment, where appreciation and derision of the military existed side-by-side in the virtual space created by curfew hashtags.

Some photos depicting curfew violations do not imply any explicit

Figure 4.25: A photo depicting curfew transgressions, featuring friends posing with military personnel.

endorsement or denouncement of the curfew or state of emergency; rather, the curfew, as a novelty, is just “cool” and interesting. These photos document transgressions in physical space, but they do not necessarily constitute physical resistance to the curfew. They do, however, illustrate the ways in which transgressing—moving in the physically confined spaces of the city under curfew—is an ICT-mediated experience for these mobile photographers. The act of transgressing occurs transdimensionally, between the private and public spaces of the physical city but also between the online and the offline.

Egypt’s Virtual Curfew

Egypt’s 2013 curfew was an intrusive and immobilizing reification of the country’s impenetrable emergency rule. It was a local and geographically bounded event that, unlike the revolution and the sustained culture of street politics that followed it, turned public life in 12 of Egypt’s governorates inward. However locally situated, the curfew was experienced and subverted transdimensionally by ICT users in Egypt, who brought the curfew online. Twitter and Instagram users went online to cope with the confinement of the curfew because ICT use, and specifically

mobile ICT use, was a practice embedded in everyday life. The act of meandering between the online and the offline opened the closed and confined experience of the curfew on the ground to reinterpretation, renegotiation, and re-appropriation on a global scale. It also invited voyeuristic participation by digital wanderers outside of Egypt.

Transdimensional Spatiality

The appearance of the curfew online created a transdimensional geography of the curfew, in which individual Internet users (myself included) could wander through the curfew along pathways carved out by the atomized decisions of ICT users navigating digital infrastructure—in this case, the digital architecture of hashtags. For ICT users, the spatiality of the curfew was created and navigated between the online and the offline, such that confinement and immobility in the offline could be met with ICT-mediated mobility in the online. But exercising transdimensional mobility in the face of curfew confinement did not mean *leaving* one space (physical space) for another (cyberspace); rather, these spaces were interpenetrating and co-constitutive. The exploration of tweets and Instagram photos related to the curfew illustrates that the transdimensional geography of the curfew was mapped in the movements of individual ICT users between their offline contexts (places) and online platforms. Their digital traces were tagged with hashtags referencing a very specific spatial and temporal context—the curfew—which situated their online activity in the offline and gave it significance. Where people could not easily congregate in the offline, individuals could connect their movements to the movements of other, distant individuals via the hashtag, starting a conversation and creating an uncoordinated, dispersed online public. But online, on Twitter and Instagram, the conversation could also be taken up by individuals who did not share the geographic location and confinement of people under curfew. The spatiality of the curfew online expanded well beyond Egypt, bringing other transdimensional *flâneurs* into this curfew geography in motion,

constantly renegotiated with the addition of new participants and observers.

At this point we should also consider the limitations inherent in viewing and analyzing the curfew from the virtual dimension. The curfew discussion above was guided by hashtags, labels applied to social media posts that indicate their relationship to a particular topic. Online, the curfew could be experienced by others who were not physically under curfew in Egypt by following the transdimensional paths laid by ICT users under curfew. In fact, this was my experience as a researcher connected to Egypt from afar. The avenues I followed were determined by the digital architecture of hashtags—I followed paths laid down by other ICT users, but I also navigated them in a unique way. Rather than encountering the full universe of digital traces connected to the curfew, my wandering was confined by a particular geography (of hashtags) and governed by my own choices in how to navigate them. It was opportunistic, and it provided one perspective on a diverse and dispersed transdimensional event. Much like the singular vantage point of an ethnographer moving through the streets with protesters, it is limited, but it is no less *spatially situated*. The virtual vantage point offers certain distinct insights (as discussed in Chapter 2). The curfew was imposed on the ground in order to prohibit gathering and collectivizing and to force people back into the private sphere. As ICT users moved between the online and the offline to escape, cope with, and comment on the conditions of the curfew, they shared their private experiences and spaces in a public forum. Their mobility, in this sense, actually revealed insights about timepass during the curfew that may not have be observable from a single standpoint or physical location in Egypt at the time. Gray (2016, 504) similarly found that following Russian demonstrations online gave her a unique viewpoint: "If I had been there in body, I would have been limited to being in only one location at any given time."

However, transdimensional mobility is not *transcendental*; the online spaces occupied by these Egyptian ICT users are not infinitely unbounded. Rather than being border*less*, the Internet is actually replete with borders and barriers that

confront mobile curfew breakers. Limits on transdimensional mobility confront ICT users in the online in the form of platform rules and constraints, the insularity of platform-based communities, the constraints of technological infrastructures, or device and hardware requirements. These boundaries delineate and inherently compartmentalize the communicative spaces of the Internet. In the case of both Twitter and Instagram in Egypt, the communities are quite small and dominated by young, middle class elites for whom access to ICTs is commonplace. Access is unevenly distributed in physical space, so Egyptians are therefore also unevenly represented in virtual space. The transgressions described here remain the everyday experience of primarily young, middle class Egyptians. Though access is spreading (and pervasive ICT mediation affects everyone, even the paranodal and the digitally unconnected), income gaps and the contraction of public civic spaces are also increasing. Like the revolution itself, the curfew existed between the online and the offline. Public and private space in Egypt is a transdimensional geography of virtualities and material realities, abstractions and exceptions, technologies and human actors, everyday transgressions and normalized confinement.

When Everyday Life Returns

I have suggested above that, like the uncoordinated quiet encroachments that individuals undertake in the public spaces of neoliberal cities, the mobility of individuals *between* the online and the offline should be understood as an exercise of agency in the face of confinement and enclosure in virtual and physical dimensions. Like the pedestrians walking the city, described by de Certeau (1984), the movements of ICT users between the online and the offline constitute tactics that reappropriate the spaces, rules, and structures of both virtual and physical dimensions. Thus, although the curfew was enacted and practiced on the physical spaces of specific governorates, the mobility of ICT users between physical and virtual dimensions defined a new spatiality for the curfew that can serve as a space of timepass, play, or subversion and resistance. This mobility can

itself constitute a quiet resistance against the immobilizing effects of a curfew or long-term emergency rule, even if it is not conceptualized in this way by ICT users themselves.

Although the re-instatement of the state of emergency and the imposition of a curfew occurred in the wake of significant political unrest that had typified the post-revolution period, the sudden contraction of the public sphere as a result of the curfew turned the city-inside-out back inward, to the private spaces of everyday life. As Hofheinz (referenced in Chapter 1) suggests, "the heyday of revolutionary activism will pass; everyday life will return" (Hofheinz, 2011, 1427). We need to understand the ways in which the everyday in Egypt is shaped by the liminal conditions of permanent emergency and therefore how individual acts of transdimensional mobility constitute quiet transgressions, a resistance against the authoritarian production of space. And the curfew offers a powerful insight into what this resistance might look like, and it looks very ordinary indeed.

But we must also be careful not to over-read resistance into the transdimensional mobilities exercised in everyday life by ICT users. Taking and sharing selfies on Instagram can be a subversive response to confinement, but it is equally a coping strategy for managing the boredom of immobility. The virtual emergency has always entailed a co-optation of the ordinary and the mundane, and subverting it has required disruptions to the monotony of emergency rule. In the digital age, those disruptions are sometimes less obvious—they increasingly involve seeking mobility and escape not only in the offline but also in online spaces. Digital practices, such as posting selfies, become coping mechanisms and, in some cases, expressions of defiance against enforced confinement and repression. The fact that the curfew could be consumed, mocked, criticized, and even celebrated, in these spaces undermines some of the fundamental power of the virtual emergency. It pervades everyday life, but it is also here, in the everyday practices of mobility (physical and virtual) that individuals can exert agency.

At the same time, we should critically ask whether such transdimensional

mobilities can also be complicit in a much longer-term re-entrenchment of the virtual state of emergency. As ICT use becomes increasingly and pervasively part of everyday life, the mobilities they allow also make the banal confinement of "life as normal" and the boredom of permanent liminality more bearable. The line between complacency and subversion is elusive. If, indeed, "[t]he state of waiting can also be a state of dreaming, as some people try to compensate their physical and social immobility by movement on the plane of imagination" (Schielke, 2008, 264), then boredom can motivate everyday transdimensional mobilities that might one day be revolutionary. But transdimensional mobility affords opportunities for both resistance and escape. "Online escapism in the era of Web 2.0 can even become anathema to dissent and protest since it negates the need for social-political change" (Aouragh, 2011a). The everyday transgressions documented here, in the form of Twitter posts and Instagram photos, might equally serve as a kind of "safety valve," of the kind Seib (2007) observes in print media, channeling frustration in this case into the space between the online and the offline, without directly threatening the regime's monopoly on power or its administration of physical space.

In years to come, it would be difficult to define or identify a point at which "everyday life returned." Everyday life in Egypt has almost always been governed by exception as the rule, through much less conspicuous strategies of confinement than a state-mandated curfew operating on public space and public life. However, the sudden imposition of the curfew and its spatialization online reveal the ways in which transdimensional mobility is practiced every day. It was integral to the revolutionary moment and the sustained momentum of protests and street politics after the revolution, but it also operated in the mundane spaces of people's private lives. When the curfew began, it was this everyday mobility that allowed people to transgress—it gave them agency in movement. The following chapter takes up the question of the post-revolution everyday in Cairo and how the quotidian experience of transdimensional mobility converged with the

revolutionary promise of ICT-mediated activism in the aftermath of the revolution to both inspire movements for urban change and succumb to the quiet co-optation of pre-existing neoliberal agendas.

5 Cyberutopia, the Revolutionary City

The appearance of millions of protesters in public streets in 2011, erecting camps and halting the flow of everyday life was not only visually arresting; it altered the politics of the street. The "tahrir effect," as Abaza calls it, resulted in a sudden, intense interest in urban space after the revolution, drawing attention to the public spaces now frequented by protesters and inviting new spatial interpretations.

> The blending of the virtual world and the instant events of all the square(s) in the Arab world has opened an entirely novel reading of the city in relationship to the velocity of the flow of information through social media and satellite channels and how these have redefined rules, visions and modes of action in the public sphere. (Abaza, 2014, 4-5)

For at least this reason, it is important to analyze the city as both a site of and an agent in the revolutionary changes that are still underway. During the 18 days, the city had been more than a space through and against which people moved; it was an important target of change, a repository of political, social and economic grievances that had imposed their own geography of competing mobilities and immobilities in the preceding decades.

New opportunities to lay claim to Egypt's urban landscape came with the

dispersal and retreat of police forces from the streets several days into Egypt's 2011 protests (Nagati & Stryker, 2013). The arbitrary policing of public places had been a defining feature of Egypt's pre-revolution spatial politics, and much antagonism was directed at police in the lead up to January 25. When police abandoned the streets during the peak of the January protests, handing over security to Egypt's military, a period of unprecedented spatial renegotiation and mobility began, a product of the liminal crisis of revolution in which existing social and political structures and their corresponding immobilities had broken down (Peterson, 2015, 170). The subsequent post-revolution re-mapping of public space was set against the backdrop of rapid, successive political changes in Egypt's leadership and ultimately met with an abrupt setback in November of 2013, when a second interim, military-imposed government reinstated Egypt's Emergency Law, implemented a curfew and drafted a restrictive anti-protest law, as discussed in Chapter 4.

This chapter explores the nuanced promise of transdimensional geographies charted in the aftermath of the revolution and the limitations inherent in spatial reconfigurations that occur between the online and the offline, spearheaded and celebrated by ICT users. This chapter considers the technologically mediated repertoires of public art and performance that proliferated between the removal of President Hosni Mubarak in 2011 and the imposition of a government curfew following the Raba'a Al Adawiyya Square massacre in 2013, though the transformations they inspired are still underway in different venues and forms. This particular post-revolution period, during which cries of *"al-thawra mustamurra"* ("the revolution continues" in Arabic) echoed loudly in the streets, represented not only a transitional political moment but also a transformation in the relationship between people, urban space, and communications technologies. The transdimensional mobility of Egyptian ICT users between online and offline spaces, local places and global networks, had helped to mobilize protesters in 2011 and proceeded to embed a "hybrid geography" of people and technologies, and

on- and offline *places* (Whatmore, 2002). But the influx of people into Downtown during the revolution inspired a greater general interest in the surrounding urban area, and the heterogeneous independent visions for revolutionizing urban space, largely promoted by a globally connected ICT-using elite, made the revolution an unsuspecting vehicle for a process of spatial virtualization in service to neoliberal goals.

Between 2011 and 2013, Egypt witnessed a kaleidoscoping of political movements, political and social causes, and artistic endeavors. This proliferation of activity was defined by a constantly shifting landscape of activists, movements, and politics that were broadly made up of the same constituent elements, all alternately flourishing, coordinating and reconfiguring over time and across space. The wall of fear and exclusion that had long restricted widespread participation in Egyptian politics had been slowly dismantled in the years leading up to 2011, and the 18 days of mass demonstrations breached the barrier entirely. Having occupied Tahrir Square, battled security forces and won a decisive political victory, people in the millions had witnessed what *being present* in the streets could achieve. As Peterson (2015) observes:

> The act of travel to and from Tahrir Square created a kind of double liminality. Participants were separated from their families and neighbors, traveled to Tahrir under frequently difficult, even dangerous circumstances, and were welcomed and integrated into the *communitas* of the maidan. Then, on their return, they were reintegrated into the home with new status as sources of news, recipients of praise and recrimination, and participants in something powerful that lay outside the community but nonetheless affected it significantly. (Peterson, 2015, 168)

The empowerment came, in part, from the acts of movement Peterson describes and also the documentation and dissemination of images and video footage from the 18 days. Crucial energy has been poured into subverting congratulatory narratives of

the role of Facebook and Twitter (see: Aouragh & Alexander, 2011), but many activists did feel a genuine appreciation for social media as a key tool, space, and agent of the revolution, both for mobilization and communication. And this appreciation was evident in the way that ICTs factored in nearly every social movement, campaign, and initiative after the revolution, including a number of street and public art initiatives that found a space to thrive after 2011. People's relationship with both ICTs and urban space was altered by revolution, and in a process identified by Castells as integral to the development and embedding of communications networks, "through a blossoming of initiatives, people are taking on the Net without uprooting themselves from their places. And through this practice they transform both forms of the space" (Castells, 2000, 25).

Egypt's 2011 revolution was followed by a period of spatial experimentation in which grassroots initiatives proliferated and diversified. While many political movements surfaced during this time, young activists, mobilized by their participation in the 2011 protests, also turned their attention toward the city, its urban geography, and the built environment as subjects of contestation and reform. Grievances about the dilapidation of Egypt's urban cores mingled with other political, social and economic frustrations in the lead up to revolution (Moursi, 2011), and contestations over physical spaces were central to the moment of revolution itself, bringing people into direct contact and conflict with the city (Elshahed, 2011). Transdimensional online-offline, human-technological spatial experiences had become somewhat commonplace for a middle class elite by the time that the revolution occurred, but the revolution amplified the significance of mobility-enabling ICTs; it drew attention to the ICT-mediated experiences of a few revolutionary organizers; the unremarkable *embeddedness* of ICTs suddenly represented a universe of revolutionary opportunity. Mobilizing and protesting had been the overt, ICT-mediated political practices of the revolutionary moment, and they continued to demonstrate the disruptive political potential of transdimensional, online-offline mobilities, upstaging other less overtly political

(yet still ICT-mediated) transformations taking place in public space. Meanwhile, after 2011, an array of ICT-mediated artistic initiatives emerged out of the revolutionary moment and directed their attention toward the urban landscape of Egypt's densely populated cities of Cairo and Alexandria. ICTs were integral to these projects, not just as tools, but as ideology. The revolutionary "power" of ICTs was not just the fascination of external observers and global media coverage; it also captured the imaginations of many Egyptian activists, protesters, and artists themselves.

The revolution created an atmosphere of political possibility and hopefulness accompanied by a coincident celebration of the "multi-media revolution" and ICT-mediated politics. Indeed, "[w]hatever their limits and unevenness, then, the dream of cyberutopias is by no means a monopoly of the developed Western metropoles, and may in fact hold even more attraction for the marginalized" (Sheller, 2004). ICTs featured prominently in imaginings of Egypt's post-revolutionary future, which was bound up, in important ways, with re-imaginings of the 18 days as a utopian ideal. Participants in the 18 days and onlookers in a wider Egyptian diaspora and global community had observed how ICTs helped to subvert and overcome some of the material, political, social, and technological "immobilities" of urban space, politics, and class to create the essential crucible of the revolutionary moment. In the aftermath of the revolution, ICTs continued to play an integral role in street politics, as Egyptians renegotiated their relationship with public space. The revolution very much raised the profile of ICTs, and specifically digital technologies, such that many nascent political movements and artistic urban renewal initiatives prioritized having both an online and offline presence. A belief in the inchoate promise of the Internet permeates these undertakings, even as they actively attempted to straddle the digital divide and reach outside the "network." Even the graffiti scrawled on Egypt's Downtown streets traversed the ever-eroding boundaries between concrete walls and Facebook walls, as some graffiti celebrated and referenced social media directly and photos

of graffiti were saved and shared online.

This chapter explores how the reclamation of public space for expression (political and non-political alike) has been entwined with ICT use and how the revolutionary moment accelerated and deepened that relationship after 2011. I argue that rather than being a merely a volatile period of proliferating and ephemeral political and artistic movements, only to be gradually choked by escalating repression and restrictions on public movement, this profusion of spatial experimentation permanently transformed the political landscape in Egypt and specifically the built environment and urban consciousness in Cairo. It established a transdimensional geography of people, technologies, infrastructures and spaces as a part of post-revolutionary everyday life. ICT-mediated experiments to remake politics (through initiatives like *Dustur al-Shaab*, the "people's constitution") accompanied campaigns to lay claim to public spaces (through projects like the "No Walls" graffiti movement), which all occurred alongside a persistent post-revolutionary cyberutopian dream—that the city could be remade to permanently maximize the mobilities that enabled the revolutionary moment. However revolutionary these visions for change, the cyberutopian dream also services a broader neoliberal vision of mass participation, innovation, creativity, and connection in a context of deepening political and socioeconomic division. Both the embedded and ordinary virtual reality of neoliberalism and the sudden, volitile revolutionary moment are united by conditions of liminality, where change and innovation happen at the edges. Thomassen (2014) urges that

> liminality needs to be duly and carefully problematized, and this is particularly important in a period such as ours which instinctively adopts a celebratory attitude towards anything that represents novelty and constant 'innovation', this mantra which haunts us more than ever and permeates our economy, our politics, our work, our life-conduct, our governmentalities. (Thomassen, 2014, 8)

The seemingly unbridled opportunity inherent in the liminal crisis of revolution

shares an optimism at the margins that also underpins neoliberal discourse centered on innovation, entrepreneurship, and individualism. In both cases, it is an optimism inextricably linked to technological advancement and mobility.

The chapter begins with a discussion of the ways in which urban transformations and ICTs became intertwined under neoliberalism in the decades before the revolution. The revolution was, in many ways, a rejection of this trajectory of tech-enabled neoliberalism and a technologically mediated response to the political, economic and spatial disenfranchisement it entailed. Much post-revolution attention turned toward Egypt's urban cores, especially in Cairo, where the 2011 protests gave the Tahrir Square and the surrounding Downtown area new significance and made it the focus of spatial reform. I explore how technologically mediated initiatives that grew out of the 2011 revolution sought to address urban problems in vastly different ways, aided by ICTs. Although some were politically motivated, the focus of this chapter is on *spatially* motivated and enacted initiatives that used art and music to highlight urban immobilities, illustrating how transdimensional mobility became entrenched as a means of subversion, innovation, and creativity in the years after the revolution. Egypt's various urban initiatives used, reappropriated, and even celebrated ICTs. The ICT-mediated public art initiatives that flourished in the aftermath of the revolution helped reshape public space to create new hybrid geographies that are most easily navigated by a young, technologically connected generation. The mobilizers of this transformation focused intently on the local, directing their attention to Egypt's teeming and deteriorating urban centers within Cairo and Alexandria. Their everyday transdimensional mobility, jumping scales and traversing between online and offline, inspired a reimagining of the local.

The energy of diverse and multifarious grassroots campaigns created a hospitable environment for larger scale creative projects, like the Downtown Contemporary Arts Festival (D-CAF), a multi-week arts event that has been coordinated, managed, and attended by the very same ICT-using activist generation

that became involved in ICT-mediated and issue-oriented social movements after the revolution. The discussion of D-CAF in this chapter leads into an exploration of the physical spaces that the festival uses in Downtown Cairo, choosing to occupy old Downtown buildings and a network of independent art spaces as well as newly established startup and hackerspace hubs. In the face of mounting state-led repression and political polarization, the urban art scene began to concentrate in spaces where commercial investment, entrepreneurship, and art could collaborate. As this chapter will demonstrate, ICT-enabled mobility of a young, urban elite, has created new transdimensional geographies in the urban core, building on earlier urban trajectories that pre-date the revolution. Such geographies have engendered a potential for subversion and creativity while also re-entrenching old patterns of wealth concentration and exclusion and providing new avenues for complacency and escape.

Cyberutopia in Neoliberal Cairo

The "urban question," as Castells labeled it, loomed large after the revolution. In 1977 Castells observed that

> in addition to the hold the various state organs have over the problems associated with the environment, we are witnessing increasing political intervention in the urban neighbourhoods, in public amenities, transport, etc. and, at the same time, the charging of the spheres of 'consumption' and 'everyday life' with political action and ideological confrontation. (Castells, 1977, 1-2)

In Egypt after the fall of Mubarak, these everyday spheres were replete with action and confrontation, such that urban issues—particularly urban improvement and the right to the city—were instantly swept up into the revolutionary momentum.

The "tahrir effect" had taken hold on multiple scales—a global audience was fixated on the public squares of the Arab world while a local technological

elite looked inward, to make these urban spaces more than merely *symbolic* of revolutionary ideals; they wanted to experiment with making urban space part of the revolution itself. Indeed, Gerbaudo (2012) has commented, in his research on social media and protest culture, that

> [o]ccupied squares, protest camps, mass sit-ins and the public geographies they construct can also become an object of 'fixation', as in the sense of 'mental fixation'. The almost obsessive focus on such 'trending places' can hinder a social movement's ability to reinvent itself and generalise its practices. (Gerbaudo, 2012, 167)

This spatial fixation, as Gerbaudo points out, is closely tied to technological mediations and mobilities that bring a particular space into existence and assign it meaning. On the one hand, the artistic and spatial experimentation that ensued in Cairo challenged the spatial disenfranchisement that had come to characterize Egypt's urban core with new visibility and mobility for people in public spaces; but on the other hand, it would also align in unexpected ways with neoliberal forces of enclosure and exclusion already working to reshape Egypt's cities. As Ryzova (2015) notes, "[t]his newfound interest in Downtown Cairo, perceptible not just in its valorization through law or capital, but also in the wave of public nostalgia, stems from a wider process of neoliberal reframing of Egypt's modern history." The momentary withdrawal of the state from the street, accompanied by the revolutionary popularity of ICTs, opened up opportunities for unlikely collaborations—among activists, political movements, artists, technology users and companies, and private investors, linking developments in the present to Egypt's neoliberal past.

Neoliberal economic policies had been at work on Egypt's cities for decades before the revolution, and they were an important factor in the widespread disillusionment that sustained the protests in January 2011. Armbrust observes that

> [o]ne of the things that makes the Egyptian and Tunisian revolutions

> potentially important on a global scale is that they took place in states that were already neoliberalised. The complete failure of neoliberalism to deliver 'human well-being' to a large majority of Egyptians was one of the prime causes of the revolution, at least in the sense of helping to prime millions of people who were not connected to social media to enter the streets on the side of the pro-democracy activists. (Armbrust, 2011)

Neoliberal economic restructuring started in the 1980s and accelerated in the early 1990s under Mubarak. However, Mitchell argues that the economic reforms that aimed at achieving greater privatization and shrinking the role of the state were not nearly as successful as they purported to be. The economy struggled, and only a few industries experienced growth, among them construction, real estate and tourism—all sectors of the economy that benefited from a tangled web of favors granted by the Egyptian military and political leadership to a select group of corporate interests (Mitchell, 1999b).

As such, neoliberalism has had a lasting impact on the physical geography, built environment, and everyday politics of Egyptian cities.

> In the neoliberal logic, the city is shaped more by the logic of the market than the needs of its inhabitants. It is characterized by greater privatization, deregulation and commodification. In its urban form, important responsibilities of public authorities in responding to the needs of the urbanities are transferred to non-state and private agents and corporations, which may hold little accountability to the public. (Bayat & Biekart, 2009, 817)

The state was very active in this process, as

> [t]he neo-liberal programme did not remove the state from the market or eliminate 'profligate' public subsidies. These achievements belonged to the imagination. Its major impact was to concentrate

> public funds into different hands, and many fewer. (Mitchell, 1999b, 461)

The widening gap between rich and poor, the creation of new physical enclosures and immobilities, and deepening authoritarianism fueled widespread discontent.

The flurry of real estate activity that accompanied the neoliberal turn resulted in the creation of private gated spaces and spatial enclosures for investment and development. "Under this paradigm, new sealed-off private environments, which purport to be public spaces, are intimately linked to a fusion of consumerism, entertainment, popular culture, and tourism" (Adham, 2005, 25). Shopping malls, residential complexes, and hotels became hallmarks of growth and, moreover, modernity. Successive Egyptian governments directed much of their investment and attention toward the *new*, modern developments in the desert, on the outskirts of the city (Sims, 2015). Mubarak had overseen, for instance, the creation of New Cairo, 6th of October Governorate, and Sheikh Zayed City. These were modern, planned communities designed to attract investment and to bypass the chaos, overcrowding, and infrastructural challenges of Cairo's existing neighborhoods, "a double process of, on the one hand, integration and, on the other, social exclusion and informalization" (Bayat, 2000, 534). Cairo was becoming globalized, and this integration into a global market was accompanied by urban transformations that sought to emulate the models of Dubai and Singapore while neglecting infrastructural, social and economic problems plaguing the country's cities and resulting in greater informalization of housing and employment.

Digital information and communication technologies were a less visible but pervasive element of the spatial reorganization spurred by neoliberalism. Media theorists have long contemplated the geographic effects of network technologies, which Castells calls "a key dimension of the multilayered social and technological transformation that ushers in the so-called Information Age" (Castells, 2000, 18). Thus, the spatial changes that accompanied neoliberalism in Egypt were the product of merging economic dreams with the promise of technological

connectivity. Indeed, "[p]ower stems from access to, and control over, both the material spaces of cities and the electronic spaces on telecommunications networks" (Graham & Marvin, 1996, 119). "Dreamland," one such private development in 6th of October City, illustrates the intertwining infrastructures and narratives. "While government budgets were contracting, Cairo was expanding. 'Dreamland,' the TV commercials for the most ambitious of the new developments promised, 'is the world's first electronic city' " (Mitchell, 1999b, 455). New urban developments and new technologies went hand-in-hand.

This easy communion of ideals stems from the tendency for new technological developments to be treated as modern, progressive, and salvational. "In this form of determinism, the new technological order provides the narrative mill. The new machines become both the model for society and its most conspicuous sign" (Thrift, 1996, 1471). For our understanding of urban space, this technological utopianism (also known by other terms, such as "futurology") purports that the friction of distance can somehow be overcome by technology, especially communications technologies (A. Gillespie & Robins, 1989). Utopianism of all varieties, including the technological, pervades philosophical musings on the city; it was a particular fascination of Henri Lefebvre, whose reflections on the "right to the city" have informed much of the literature around urban, and especially subaltern, movements (Lefebvre, 2010). In the digital age, cyberutopianism, or technological utopianism, sympathizes with theories of urban change that seek to remake the city in order to correct social and political ills. It is rooted in an

> assumption of both policy-makers and technological advocates [...] that the new technological systems are neutral instruments for overcoming an solving social and economic problems, for transcending social and geographical inequalities. Despite the fact that this promise has never been fulfilled and that stark disparities still persist, the belief in the potential of technological deliverance

> paradoxically remains undimmed. (A. Gillespie & Robins, 1989, 15)

Not unlike many of the assumptions underlying neoliberalism and its ally, globalization, they persist in the face of empirical evidence challenging their validity. Technological networks become what Swyngedouw and Kaika call "fetish objects" in service to a variety of cyberutopian fantasies.

> It is the materiality of the fetish objects, infused with a utopian dream that permits the visualization of the dream itself. In this way, technology and networks, although failing to deliver the promise of a better society, became wish images for a better society that could be anticipated and desired. (Kaika & Swyngedouw, 2000, 130)

In fact, both ICT hardware and the transdimensional mobility it enables are enwrapped in this utopianism, which also has a physical, spatial impact.

It is important to acknowledge, however, that cyberutopian imagination, like the ICTs and networks that facilitate it, can be put toward many different and contradictory ends. It can mislead, but it can also be a source of optimism and motivation. The dream of a better future can support an oppressive authoritarian collusion between private and public enterprise, but it can also instigate change from below. The Egyptian revolution presented an opportunity to challenge the prevailing trajectory; it ushered in a liminal moment of societal change that was brimming with opportunity, and utopian aspirations take hold here. In the revolutionary moment, people harnessed the more individually empowering potential of ICTs to overcome immobilities of class and geography, and this experience advanced an alternative narrative of technology serving the people and the political street. Many of the diverse urban movements that emerged after 2011 would take this view of the mobilizing potential of technology in and through space. For everyday ICT users, technology would become an integral and ordinary part of their visions for change. While this perspective offered opportunities for resistance and subversion, it also coalesced in subtle ways with preexisting cyberutopian urban dreams. As Swyngedouw observes,

> [d]uring periods of great social, economic, cultural, political and ecological turmoil and disorder, when temporal and spatial routines are questioned, broken down and reconfigured, important processes of geographical rescaling take place that interrogate existing power lines while constructing new ones. (Swyngedouw, 2004, 35)

Thus, alongside spatial incursions and experimentation that could most easily be observed in the sustained waves of public protests after the revolution, we should also take an interest in the more subtle spatial effects of ICT-mediated movement and its creation of both new mobilities and immobilities.

What is unique about the post-revolution period is how much of the young, ICT-savvy activist energy turned toward the old, run-down urban centers of Egypt's cities. After the revolution, the urban core of Egypt's cities attracted the attention of young activists in a recognition that the built environment reflected many of the inequalities that had fomented the revolution and therefore demanded renegotiation. There was also an awareness that transforming and laying claim to the physical spaces of the city were among the tactics that had been integral to the project of the ongoing revolution. As a result, new initiatives, from small-scale, grassroots painting projects to large, international arts festivals, focused on rejuvenating the dilapidated, Downtown spaces that had been central to the 2011 protests. Characteristically disordered and difficult to navigate for both vehicles and pedestrians, the streets leading to Tahrir Square had been maneuvered and occupied by unprecedented throngs of people during the 18 days. The revolution refocused popular attention on Downtown Cairo. People found their way Downtown via many different routes and through many varied information channels, some of which had been ICT-mediated (see, for instance, the mobilites discussed in Chapter 3). In his 2012 book on Cairo, urban planner David Sims observes that Egyptian and foreign elites had made a pastime of criticizing the city's urban jungle: "Crowds and congestion, pollution, garbage, chaos, gridlocked traffic, horrendous architecture, and no green space, all are endlessly invoked

to describe the mess that Cairo has become" (Sims, 2011, 15). The revolution suddenly offered a young, affluent generation of urban critics an opportunity to take some coordinated action to change it. Although it was rarely a stated objective, many urban initiatives envisioned remaking Downtown in the image of a revolutionary cyberutopia; perhaps ICTs could help to subvert the immobilities of the everyday urban landscape, as they did during the early days of the revolution.

All of the initiatives discussed below, from the grassroots to the more organized, hierarchical, and institutionalized, proffered solutions to certain political and infrastructural immobilities that stemmed from ICT-mediated transdimensional mobility that opened up opportunities for movement, but also creativity and expression. The role of ICT use in this process is often largely inconspicuous; the integration of ICTs into the everyday lives of many community organizers and political activists obscures their influence in reshaping the post-revolutionary city and even in inspiring these projects. ICTs had became tools to overcome the immobilities of everyday urban life, and they rendered these urban spaces more navigable, also providing at-hand platforms for coordination, documentation and information dissemination (see Chapter 3 in this volume). But the disproportionate influence of ICT-users, possessed of social and economic power that accompanies networked connectivity, has had a correspondingly disproportionate impact on the physical spaces that they came to occupy after the revolution. Their mobilities produce space in ways that affect everyone who uses and moves through the physical city—the connected and the unconnected, the network nodes and the vast interstices of the paranodal.

An Urban Revolution

When I first met with graffiti artist Ali in 2011, he had already achieved widespread notoriety for his political graffiti, stenciled on the walls of government buildings and near Mohammed Mahmoud Street in Downtown Cairo. I wanted to talk

with him about his iconic stenciling for the April 6th Movement, but at the time, he was preoccupied with another project: collecting litter on the streets of downtown Cairo. Had I noticed how dirty the trash-strewn streets of *wust al-balad* ("Downtown" in Arabic) were, he wanted to know? During the revolution, he said, it was incredible how people came together to make sure that garbage did not pile up and that the protest camp was clean. He was working on organizing a group of friends to collect litter and raise awareness about sanitation on the streets.[1] Paint-spattered graffiti stencils leant against the wall behind him, as he enthusiastically detailed his plan. It seemed *painting* the streets had caused Ali to pay more attention to them. Ali's garbage initiative reflected a growing trend among young activists who had participated in the 2011 revolution: an interest in rejuvenating the spaces in Downtown Cairo that many of them had simply overlooked, or even actively scorned, for years. February 12, 2011, the day after Mubarak's resignation, had been deemed "Tahrir Beautification Day," as young people cleaned the streets around Tahrir Square, collecting litter and re-painting the curbs. Unmanageable urban trash had been a tangible reification of the Mubarak regime's haphazard privatization drive, which resulted in declining sanitation services. Winegar (2012) observes that

> [w]hen the battalions of youth cleaned up Tahrir Square and other neighborhoods, they were expressing their desire for a city cleared of refuse. The physical cleanup was highly symbolic of the larger drive to 'purify' the Egyptian government, ridding it of the kind of mismanagement, discrimination, and corruption that characterized the sanitation crisis. (Winegar, 2012, 67)

Many of the protesters and activists I interviewed in 2011 and 2012 commented on how they felt personally invested in Downtown Cairo, an area of the sprawling megacity along the Nile that includes Tahrir Square, and some of them had witnessed or participated in subsequent "beautification days." Perhaps this was the

[1] Personal interview with Ali, 26 September 2011.

"tahrir effect," taking hold among local residents, transforming the local, which had become a site of fixation.

Downtown Cairo was once the heart of belle époque Cairo. Mohamed Elshahed, architect, researcher and editor of the urban blog *Cairobserver*, describes Downtown as being located on the east bank of the Nile, bounded by 6th of October Bridge to the north, the Egyptian Museum to the west, and approximately Tahrir Street to the south (Elshahed, 2015). The area has long been the object of cultural myth and derision among affluent, cosmopolitan Egyptians.

> To most middle-class Egyptians it is a dirty and dangerous place, associated with chaos and pollution. They extol its past glory, but rarely go there. Downtown's elegant Italianate buildings, once the heart of a colonial metropolis, betray the *déclassé* glamour of a central business district that has seen better times. (Ryzova, 2015)

It is dirty, crowded, noisy, and crumbling, and

> [b]esides the visual cacophony of deteriorating buildings and clashing architectural styles, colors and heights, the city is becoming increasingly polluted. Noise levels have risen, streets are littered with refuse, and blackish smoke hangs over a city that is subject to never-ending traffic jams. (Adham, 2005, 23)

In short, Downtown Cairo is often perceived to be and experienced as a landscape of compounding spatial and social immobilities.

But it was also the heart of the revolution, and therefore it acquired new symbolic meaning and interest among young, affluent, ICT-using activists in this part of the city. The movement of so many young people into Tahrir Square for protests provided ample opportunity for them to become (re-)acquainted with Downtown's spaces and to assign them new value. The revolution was not fixed in place to Tahrir Square—it occupied all of the axons and synapses of Downtown's nervous system. The centrality of streets like Mohammed Mahmoud and Qasr

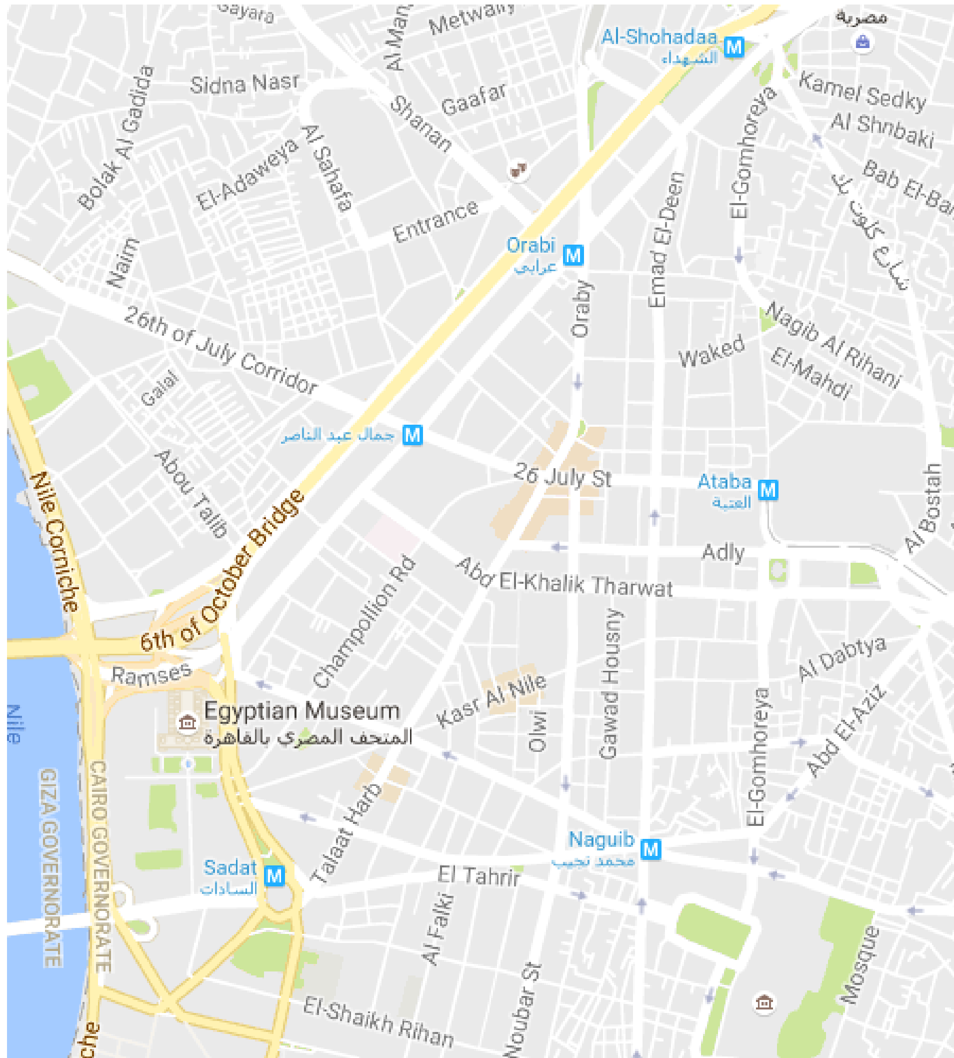


Figure 5.1: Map of Downtown Cairo. *Source: Google Maps.*

al-Nil to the revolutionary moment is well-known, but Ryzova (2015) describes how even the quieter streets, like Huda Sha'rawi, a wide street lined with car repair and antique shops and a short walk from Tahrir Square, became part of a new, revolutionary spatiality:

> People often took a break from occupying Tahrir to relax in nearby Huda Sha'rawi, which was as deserted as it was relatively safe. [...] If, temporarily, Tahrir became a new norm, then Huda Sha'rawi Street

> worked as the liminal underbelly to this momentous and utopian Republic of Tahrir. (Ryzova, 2015, 31)

Even after February 2011, as smaller protests continued regularly, the spatial identity of Downtown continued to transform, under the influence of its new interlopers. Like the revolution itself, these transformations were facilitated by ICT use and the encroachment of transdimensional mobilities on physical spaces.

Fast and Fleeting: Flash Art in Public Space

One clear manifestation of this increased interest in Egypt's urban centers, coupled with ICT use, was the appearance of short-lived and spontaneous urban "beautification" initiatives between 2011 and 2013. A number of projects surfaced—often first gaining a following on social media—that focused on cleaning, painting, and generally *improving* cities through a combination of art and mobility between the online and the offline. The revolutionary inspiration for these initiatives was obvious: much of Downtown Cairo had turned into a dynamic public art gallery of vibrant and multilayered graffiti murals, lining streets that had transformed into a carnivalesque bazaar of street vendors, bustling new cafés and meeting spaces. In the absence of a visible and proactive police presence and under the fumbling leadership of the recently elected Muslim Brotherhood, the years of 2012 and 2013 saw Downtown live up to its historic reputation as a bastion of arts, political subversion, intellectual debate, and transience.

In her foreward to the edited volume *Walls of Freedom: Street Art of the Egyptian Revolution*, novelist Ahdaf Soueif writes,

> [t]he streets of the revolution were our world; and the street art of the revolution expressed and celebrated our world. It blossomed on the walls, speaking for us and to us, a miraculous manifestation of the creative energy the revolution had released across the country. (Soueif, 2014, 5)

The book, a vivid, photographic journey through three years of political change and graffiti in Egypt, details many of the politically charged graffiti movements and projects that emerged in the months and years after January 2011. Even in this compilation, the blurring of lines between overtly political art movements and urban renewal or beautification projects is apparent. One example comes from the "No Walls" initiative, which painted over the military barricades that had been erected between 2011 and 2012 to block several of the key roads in Downtown Cairo leading to government buildings (see Figure 4.2 in Chapter 4). The murals were playful, frequently depicting hopeful scenes, or creating the illusion that the street continued, beyond the barricades, a visual contravention of the physical barrier. The paintings did not always feature explicitly political content, but their impetus, and arguably their message, were the response to a political conflict that was being carried out in public spaces, with escalating immobilizing tactics on the part of the state. Like so many of these spontaneous initiatives, "No Walls" was announced, coordinated, and documented on Facebook and Twitter, but it was experienced in the street, where it confronted structural oppression with aesthetic subversion (Hamdy & Karl, 2014, 160-61).

Cairo had become a canvas for visual art, a public stage for performance art, and a repository for the hopes and aspirations of a young, revolutionary generation. As protesters vacated Tahrir Square in February 2011, trash collection initiatives were organized on Facebook (Baraka, 2011), spectacular graffiti murals appeared on walls that lined the streets leading to Tahrir Square, and groups of volunteers assembled to paint run-down neighborhoods (Tadamun, 2015). In 2012, festivals like Al Fan Midan married art and revolutionary excitement, and by 2013, new hubs, such as CLUSTER and Cairo Urban Initiatives Platform, sought to coordinate urban research and renewal projects (Elshahed, 2013). These were diverse developments in fields as varied as art, architecture, and urban planning, but they shared important characteristics: opportunity, in the form of the post-revolutionary renegotiations of public space, and a distinct interest in Cairo's

urban core, a space that had been frequented and popularized since the protests in Tahrir Square.

It was in this environment of experimentation and mobility that Ali and his cousin started a new project, called "Coloring Thru Corruption," in 2013. He and a team of friends and volunteers organized to paint urban structures around Cairo in bold, rainbow colors. He advertised the initiative on Facebook using English and Arabic hashtags, posting photos and YouTube videos, and calling for volunteers.

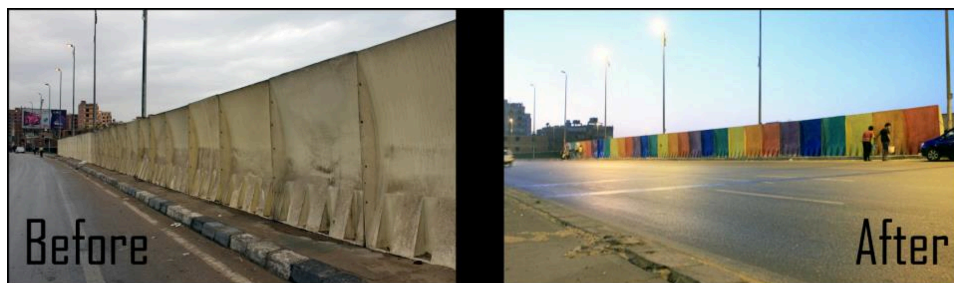


Figure 5.2: A Coloring Thru Corruption project in February 2013, on the Ring Road from Maadi to Mohandiseen in Cairo, Egypt. Photo posted on Facebook by Ali.

In much the same way that online platforms provided opportunities for activists to communicate, coordinate, and disseminate information during protests, artists like Ali also began using these tools to coordinate collective art projects that focused on remaking the city. Drawing on the momentum of grassroots protest mobilization, Coloring Thru Corruption started online campaigns for volunteers and participants to meet in a specific location at a specific time to paint an urban structure together. Ali recruited painters through a Google form that detailed the project and requested names, phone numbers and e-mail addresses. The sign-up form specified that the project was only open to residents of Cairo, pointing to the importance of local places; volunteers needed to be both virtually and physically available to participate, and they also needed to have a physical, geographic connection to this place, which was the subject of transformation. Although they organized online, Coloring Thru Corruption was a distinctly *local* initiative that depended on local knowledge and mobility. Coordination on the day required

multiple technologies and on-the-go communication. The locations and dates were announced on Facebook, but final confirmation and coordination always took place by mobile phone.[2] The project was imagined as a spontaneous response to the deteriorating urban core of Cairo, and it relied on the power of the individual to volunteer, turn up, and participate. Participants needed to be able to travel to the painting location, usually by car, and they needed to be familiar with the location in order to find it. Online organizing provided Ali the ability to coordinate quickly and at a distance, but the project materialized offline.

The online form described Coloring Thru Corruption as a beautification initiative with the dual aims of adding color to drab sections of brutalist architecture and also highlighting the neglect Cairo's infrastructure had suffered as a result of "corrupt" leadership. Coloring Thru Corruption was not overtly political, and yet, it raised open questions about accountability and community responsibility for the built environment.

I agree to join in on wave 4 of
#ColoringThruCorruption

بما اننا اخيراً حصلنا علي انتباهكم:
احنا مش جايين نلون عشان تبقي الحياه حلوة و بتا ع - بالعكس تماماً - احنا بنشد انتباهكم لواقع الامر اللي احنا عايشين فيه.
فلوسكم بتتسرق، الفلوس اللي بتدفعوها كل سنة عشان تجددوا رخصة عربياتكم و المخالفات و تطوير المرافق و الطرق و الكباري ... و فواتير المية ، و الكهربة، و الغاز و الاي كلام. الفلوس بتدخل الصناديق الخاصة، بتروح للمحافظين و المجالس المحلية و بعدين في الاخر تلاقي الطرق مدمرة، بلاعات في كل حتة بتبلع بني ادمين و تكسر عربيات، بيوت ما بيوصلهاش مية و كهربة و غاز.
هو دة الواقع المخزي.
هنلون الفساد عشان نشد انتباه الناس و بعدين نقولهم رسالتنا.
المرة دي كنا حوالي 10، المرة الجاية 20 ان شاء الله. 40، 60، 100. هنلون العشوائيات، أكبر دليل علي الفساد لما يكون واحد عايش في قصر و تعدي الشارع بس تلاقي واحد عايش في خرابة.

Please note that you have to be a resident of Cairo, otherwise please do not fill this form

* Required

Name *

Cell Phone Number *

Email *

Figure 5.3: Google sign-up form for Coloring Thru Corruption.

The offline acts of painting were also photographed and shared widely on

[2]Personal interview with Ali, 5 June 2013.

social media. Shortly after a location had been disseminated on Facebook, photos and videos of transformed streets or underpasses would appear online, and the initiative gained momentum as Ali and others brought their painted streets into these virtual spaces. The initiative was relatively small-scale, with just tens of volunteers, and it depended on this transdimensional movement—between online and offline. Some posts received hundreds of "likes," and it was clear that people were following Coloring Thru Corruption online, from a distance. The creation and assignment of a hashtag, #ColoringThruCorruption, aided those interested in wandering through the digital record. Commuters and pedestrians would stumble upon these rainbow designs in the course of their meanderings through Cairo's physical streets, but virtual wanderers might encounter them, too. Coloring Thru Corruption could be understood as a kind of small-scale, coordinated "flash mob," a term derived from Rheingold's "smart mobs," groups of people who come together quickly and efficiently, with the aid of connectivity to information networks, to perform a task (Rheingold, 2007). Connectivity and mobility (physical and virtual) was integral to the inception and execution of this project; connectivity allowed for the dissemination of information about where and how to meet, and connectivity turned this local project into a global performance, as videos and photos were disseminated by participants online after the fact. Coloring Thru Corruption was short-lived, but its impermanence was also typical of many urban renewal projects that thrived after 2011. It had been inspired by revolutionary mobility, enabled by post-revolutionary spatial freedom, facilitated by online organizing, executed on the physical street, and documented and disseminated online.

Such "flash" initiatives with an urban rejuvenation bent were not unique to Cairo. While Ali was developing Coloring Thru Corruption, another street artist was launching a series of flash musical concerts around the Downtown area of Alexandria. Rayhan called his project "Mini Mobile Concerts," and the name was emblazoned on a bright orange truck that accompanied the band to each sidewalk venue, where they would perform traditional music for unsuspecting passersby.

Like Ali, Rayhan was motivated by a feeling of disappointment and frustration with his city. He felt Alexandria had become ugly, neglected, and dirty, and the concerts were an effort to bring some "beauty" into public places through performance art. The flash concerts, which attracted large crowds in the city streets, had no political aspirations, he said. But they *were* inspired by the revolution and the incursions of people in public space.

> We are doing something new, something that would have been a lot harder pre-revolution because of the police presence in the street. There are still problems now, but they're not as bad, and if you provide good music, people gather around and enjoy it; these are the people who protect you.[3]

Flash mobilizations had achieved a degree of popularity in the aftermath of the revolution. After experiencing the effects of a politically engaged mob that had descended on Tahrir Square and demanded change, and the possibilities inherent in creating *other* mobs with *other* political and non-political agendas seemed endless.

Rayhan had thought about performing street concerts before, but the revolution provided more than inspiration; it also initiated a new politics of space that made his mobile form of performance possible. Public spaces that had previously been off-limits due to police presence and surveillance were now open to experimentation. Urban responsibility, ownership, and pride resonated among artists and activists during this time, including the collaborators in the Mini Mobile Concerts. The group chose their locations carefully. Like Coloring Thru Corruption, the volunteers made a concerted effort to plan performances in diverse and dispersed areas of the city, where different passersby would encounter their artistic disruptions. Moreover, they wanted their audiences to be spontaneous and drawn from the physical environment rather than from their virtual following online. Rayhan explained:

[3] Personal interview with Rayhan, 6 June 2013.

Figure 5.4: Mini Mobile Concert truck, Alexandria, June 2013. Photo by author.

> We don't want to advertise or publicize our concerts because we want new communities and groups to experience the music. If we had a schedule [online], we would turn up, and it would be crowded with only 'our people.' We only use our online presence to publicize the event after it has happened, with recordings and photos. We also post on Facebook with pictures while the concerts are going on, so people can join spontaneously if they see it online.[4]

From grimy, bustling tram stations to the University of Alexandria to the garden

[4]Personal interview with Rayhan, 6 June 2013.

district of Faisal City, Mini Mobile Concerts made willful attempts to live up to its name—moving throughout Alexandria to reach new audiences, its mobility a mechanism of inclusion.

The organizers wanted to engage the widest range of people—in spite of the exclusivity of the technologies that assisted them in organizing. They picked locations that would be seen by different people, rich and poor, technologically "connected" and not. They moved through the city in order to be seen, a virtue of their own personal transdimensional mobility (via cars and ICTs). Without as great a fear of police intervention or legal repercussions, this level of physical movement was more possible than it had been before. A more encompassing spatial revolution was taking place, alongside the political marches and demonstrations, in which the online and offline *sites* of the revolution were being claimed and celebrated by diverse initiatives that all sought to occupy transdimensional spaces.

Both Mini Mobile Concerts and Coloring Thru Corruption were realized through their usage of ICTs. If anything, transdimensional mobility was simply assumed to be a central component of their strategies and missions. On the one hand, there were practical reasons why these artists integrated ICTs into their projects: the Internet and at-hand communication devices were essential from a logistical standpoint. A combination of Facebook and Twitter posts, SMS messages, and emails aided them in organizing and disseminating information. It was a lesson learned directly from mobilizing quickly during what were, by then, weekly protests. But moving and communicating both online and offline were also part of the broader *ideals* of these projects. Ali and Rayhan wanted their disruptive performances to be spontaneous and participatory, and the revolution had very recently proven the value of ICTs in achieving spontaneous participation (whether by providing organizing platforms or disseminating inspirational images to the world). Coloring Thru Corruption and Mini Mobile Concerts were created *for* the offline, to take place in the street, but they *also* anticipated an online presence as well. ICTs helped *create* the opportunity for these performances, and they

also helped document and preserve them, as onlookers and the artists themselves recorded and shared photos and videos of the projects. Such photos and videos were almost immediately posted online. However, at this writing, the Mini Mobile Concerts website (*www.minimobileconcert.com*) and its gallery of images and videos is no longer available. Like the momentary street performances themselves, the virtual record is also impermanent and fleeting. Yet, at the time these initiatives actively brought the street online—an intensely spatially and temporally confined activity made mobile through ICT mediation.

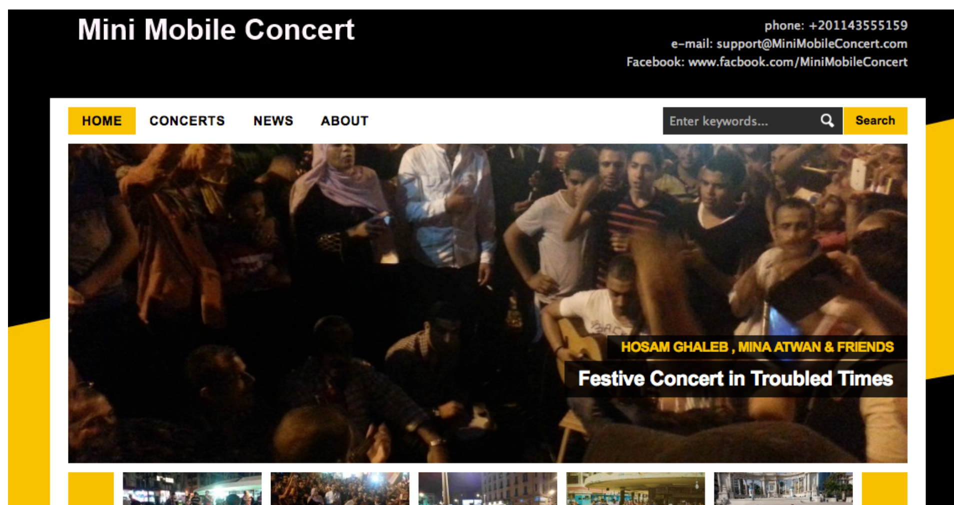


Figure 5.5: Mini Mobile Concerts Website, 2013.

The transdimensionality of this spatial experimentation is significant; its realization always implicated people and communications technologies, and the physical city was not only being tangibly transformed but also *made virtual*. These initiatives were prioritizing both the *beautification* of the city and also its *technologization*. It was a process deeply inspired by revolution, in which the revolutionary impact of people had become almost inextricably intertwined with the revolutionary promise of digital technology. Moreover, this intersection of ICT-enabled mobility, urban space, and revolutionary imaginations was becoming unbelievably ordinary. That ICTs would factor into every aspect of nascent, and at times ephemeral, post-revolutionary movements was taken for granted. So

intertwined were technology and revolution in the imaginations of these young artists that technological futures and revolutionary outcomes merged to create a transdimensional vision for change that implicated, always, virtual and physical environments. Coloring Thru Corruption and Mini Mobile Concerts were two small-scale, local initiatives that exemplified the post-revolutionary spatial, artistic, and technological experimentation that ensued in the security vacuum after 2011. But they were part of a much broader constellation of projects and movements that proliferated after 2011 to entrench visions of urban renewal spearheaded by a technological elite.

Art, Technology, and Investment Transform Downtown

While independent, individual, small-scale projects thrived, other more structured, institutional initiatives also saw an opportunity to blend art, technology, and urban regeneration. Downtown had long been an artistic hub; young revolutionaries plotted against British rule over coffees at such Downtown landmarks as Groppi's and Café Riche, and the *'ahwas* and bars in the area hosted political groups, artists, writers, and dissidents through the successive regimes of Gamal Nasser and Anwar Sadat (The Economist, 2011). Mounting repression and the implementation of a state of emergency after Sadat's assassination somewhat stifled this refuge for Cairo's intelligentsia, but the 1990s saw a new infusion of artists and art spaces into Downtown. Townhouse Gallery, an alternative art space on Nabrawy Street, was founded in 1998, and its accompanying Rawabet Theatre, which opened in 2006, became a home to independent and experimental performance artists. In 2000, Al Nitaq art festival brought

> [a] spectacle of exhibitions, concerts, lectures, performances, short films and talks, it utilized spaces in Downtown in new ways: abandoned buildings such as La Viennoise were used for exhibiting for the first time, as well as shop fronts on Talaat Harb Street, hotel rooms,

> balconies, bars, restaurants, internet cafés and local coffee shops. (El Shimi, 2015)

Al Nitaq did not last long. It fell prey to funding challenges and internal artistic disputes, but it did have the effect of drawing attention to Downtown, actively embracing its imperfect historic core during a time when the ruling leadership had set its sights on new desert developments and a radical displacement and redevelopment of Cairo's Downtown area to emulate the high-rise cities of Dubai and Abu Dhabi (Abaza, 2011b; Adham, 2002).

The Contemporary Image Collective formed in 2004 at Townhouse, later moving to Abdel Khalik Tharwat Street, and Medrar for Contemporary Art, an art collective for young visual artists, arrived in 2005. The same year, Studio Emad Eddin Foundation, a rehearsal and training space for performing artists, opened its workshop space. Collectively, these art spaces and their events attracted new audiences to Downtown Cairo, particularly a younger generation that had grown up in Mubarak's Egypt. These spaces and artistic collectives took important risks to provide room for experimentation—not only in the realm of artistic expression but also spatial expansion. They occupied old, often neglected, Downtown buildings and repurposed them. They were nestled in the heart of Downtown's grid of criss-crossing streets, tucked into the tiny alleyways between buildings, quietly occupying apartments atop dusty flights of stairs in once-glamorous European-style homes.

Dotted throughout Downtown, these art spaces were testing the limits of state control, but they also operated cautiously in a climate of unpredictable state repression. These spaces attracted enthusiastic audiences and acclaim as well as an injection of foreign capital and influence that foreboded a more globalized consortium of artists and private funders. But they also drew criticism, particularly from the state, which saw a direct challenge to its monopoly on cultural institutions (Issa, 2000). Such art spaces attracted a flow of artists and intellectuals through Downtown, but they did not necessarily *inhabit* Downtown in any fixed way.

The cultural allure of Downtown alongside increased commercialization of some Downtown areas, such as the glowing, shopping thoroughfare of Talat Harb street, rendered Downtown a site of transience, movement, and, as Ryzova captures, liminality:

> Few of the protagonists and their publics (or indeed, few of the investors who have stakes in the gentrification process) are willing to actually live there. Downtown is a site of cultural pilgrimmage: people come to hang out, and then they leave. (Ryzova, 2015)

Thus, this backdrop of a tentative but unmistakable renewed interest in Downtown in the early 2000s incubated important strands of the Egyptian revolution, advanced by artists and intellectuals with international support and funding. It was the revolution itself, however, that refocused local (and global) attention on Downtown with unprecedented intensity. As throngs of protesters descended on Tahrir Square, Downtown Cairo was so heavily technologically mediated that it became a place that transcended its physical geography. Downtown was as much image and symbol as it was reality. After the encampments in the square cleared, the intensity of technological mediation that had created Tahrir Square as symbol did not dissipate and diminish; it permeated into all aspects of everyday life as the liminality of the revolutionary moment persisted. The mobility of people in and between Cairo's Downtown spaces became commonplace, and the convergence of people and technologies in those spaces became the new normal. The extraordinary diversity of the revolutionary moment brought a flood of young people into Downtown. The very fabric of the city surrounding Tahrir Square had been permanently altered by the presence of protesters and the mediation of ICTs. In the years that followed, the sudden influx of people and their (especially mobile) technologies would make Downtown a site of not just physical movement but transdimensional mobility. And an uneven transformation that had begun in the years leading up to 2011 would be accelerated and championed by Downtown's transient revolutionaries: the virtualization of the city.

By virtualization, I refer to a complex confluence of processes—technological, political, artistic, and economic—that have collectively worked to advance an abstraction, the globally networked revolutionary city, a revolutionary cyberutopia. As ICTs became quiet conveyors of the revolution, technological dreams mingled with political and economic aspirations. However, ICTs encompass many diverse and opposing possibilities. They can be disruptive and subversive tools for rebellion. But digital technologies have also long been endowed with cosmopolitan values and employed in service to globalizing (and abstracting) markets (Harvey, 2005), so they have been—at the same time—vehicles for neoliberal agendas. In this way, they are an integral part of the political economy that Carrier and Miller describe as "virtualism." In this encompassing concept, economic practice and theory together work toward an abstraction.

> Those who adopt this view of the world can be said to perceive a virtual reality, seemingly real but dependent upon the conceptual apparatus and outlook that generate it. Perceiving a virtual reality becomes virtualism when people take this virtual reality to be not just a parsimonious description of what is really happening, but prescriptive of what the world ought to be; when, that is, they seek to make the world conform to their virtual vision. Virtualism, thus, operates at both the conceptual and practical levels, for it is a practical effort to make the world conform to the structures of the conceptual. (Carrier, 1998, 2)

In an adherence to abstract economic models, new opportunities for oppression are created in practice. It is no coincidence that the structural adjustment policies of the IMF and World Bank are held up as quintessential examples of virtualism (McMichael, 1998).

Carrier and Miller's edited volume does not explore the myriad ways in which technology and technological discourse serve economic virtualism

(and indeed generate other virtualisms of their own), but digital technology is undeniably integral to the project of virtualism and its gradual embedding (virtualization). In many ways, the revolutionary moment was the ideal agent of virtualism. Egypt's revolutionaries were predominantly, though certainly not exclusively, members of a young, increasingly globally minded generation that had grown up in the ICT era, under neoliberal economic policies. The revolution paradoxically validated some of the dominant abstractions relevant to this generation—the power of technology, the power of the consumer, and the power of the people. In addition, the retreat of the state opened up opportunities for civil society, individual entrepreneurship, and private investment to proffer solutions to the multifarious problems facing Egyptian society. All of these interests saw physical space as open to contestation, from the ICT-mediated art projects mentioned above to a proliferation of street vendors and unlicensed pop-up cafés and restaurants. Post-revolutionary Cairo was the repository of diverse revolutionary dreams, and it quickly became the subject of assorted spatial transformations in pursuit of ICT-aided abstractions: democracy, freedom, equality, rule of law, economic opportunity. This is not to say that there were not practical, concrete demands arising from the revolutionary moment; there were many such demands. It is the nature of virtualism to be encompassing and inconspicuous. Indeed, "economic abstraction and virtualism are not just webs of meaning, but also practical webs, in which many people can become ensnared" (Carrier, 1998, 9). ICT mediation served virtualism in the post-revolutionary city, as Downtown space was increasingly occupied by a wired, transdimensionally mobile, activist elite for whom technological and economic abstraction had long been part of everyday life and was now central to the transitional post-revolution period.

After January 2011, Downtown became an active hub of political, artistic and technological experimentation. The country was immediately thrust into a period of prolonged waiting that could generously be called "transitional." When

Mubarak stepped down and the Egyptian military took control of the government, protesters saw an immediate need to keep the revolution alive, articulated in the oft-chanted phrase *"al-thawra mustamurra!"* ("the revolution continues"). Keeping the revolution alive meant more than a regular schedule of protests and rallies. The revolution was not only continuously *practiced*; it was also celebrated and commemorated. The same tactics that protesters used to mediate the protests in January became part of a long-term campaign for visibility and momentum. Technology featured prominently in these strategies. Rashid, who had volunteered in the media tent in Tahrir Square during the revolution (see Chapter 3), said that after the revolution he was inundated with requests from civil society groups looking to make better use of mobile phone technology, an observation echoed by other revolutionary media volunteers, including Akil, another activist and NGO worker who now lectures abroad on media tactics.[5] Digital technologies and ICTs became important tools in carrying the revolution forward because they had been integral to bringing the revolution into being. The promise of the revolution and the promise of technology began to intertwine, such that, despite there being no explicitly technological demand articulated among the cries for democracy, they had to be realized together. The ubiquity of ICT-mediated movements, political and non- or quasi-political, after the revolution was some evidence of this reality. ICT use in coordinating post-revolution movements was pervasive, but they were also often invisible, the technological machinery behind the scenes.

In the immediate aftermath of the revolution, Cairo's Downtown art scene expanded and flourished, building on the legacy of the artistic efforts of the 1990s and early 2000s but also newly invigorated by the revolution. In addition to countless grassroots initiatives, like Coloring Thru Corruption, several art and technology festivals were established around the same time, including the Downtown Contemporary Arts Festival (D-CAF) in 2012, the Digital Art Festival in Egypt (Di-Egy Fest) in 2013, and the RiseUp Egypt Summit for startups

[5]Personal interviews with Rashid, 19 September 2011, and Akil, 30 November 2015.

in 2013. All of these festivals made use of digital technology for advertising, documentation, and even art creation and performance, but they also actively celebrated technology as revolutionary and transformative for the city. The idea that technology can be revolutionary is certainly unremarkable in historical terms, but I use the term "revolutionary" here to connote its association *with* the Egyptian revolution, and the revolution featured prominently in the narrative that sustained these festivals.

In 2012, the D-CAF website advertised the upcoming festival by emphasizing both its Downtown location and its revolutionary inspiration:

> D-CAF will break new ground by using non-traditional sites such as historical buildings, storefronts, alleyways, and rooftops as sites for performance, events, and installations, to engage audiences and performers with the city in a new way. [...] D-CAF aspires to capitalize on the newly found freedom of Egypt and its society to present to its audiences with new creative visions for the future. (Downtown Contemporary Arts Festival, 2012)

Di-Egy Fest announced on its 2013 Facebook page that "technology has profoundly changed the ways we connect, work and play now in Egypt. Technology even can start a revolution" (Di-Egy Fest, 2013). RiseUp Egypt also situated itself Downtown, and in 2013, its website announced that "the event takes place in Cairo's most dynamic district" (Rise Up Summit, 2013). A Facebook post from November 21, 2013, on the RiseUp Summit page suggests that RiseUp is about hope, and in a clear reference to revolutionary change, they thank their many supporters, writing: "If all these amazing people chose to stand up together and support new businesses in a country in a need of change, that means only one thing. We can make a change." The revolutionary connection was not lost on outside observers. A *Wall Street Journal* blog post described the event as evidence that "[y]oung Cairenes are redirecting the spirit that was released in the square a few hundred meters away in the Jan. 25, 2011, revolution" (Rooney, 2013).

These organized festivals shared key motivations and themes with many grassroots initiatives, blending art, community spirit, and technology without explicit political objectives, and they chose to occupy Downtown Cairo, the urban core that had been the principal site of revolution.

Figure 5.6: Advertisement from Rise Up Summit Website, 2013.

I first attended D-CAF in 2014, when the festival was in its third year, and it was still proudly embracing its Downtown identity. D-CAF was originally envisioned as an international arts event that spanned three weeks, welcomed both foreign and Egyptian artists, and featured exhibitions, performances, concerts, workshops, and film screenings. Event venues were scattered throughout

Downtown Cairo, and the festival took great interest in utilizing old, historic, and sometimes inhospitable venues for innovative productions. D-CAF's headquarters were located in a colonial building off of Hoda Sha'rawy Street, the very street mentioned by Ryzova (2015) as a liminal zone during revolutionary protests. Inside, the walls leading up the stairs to the D-CAF festival offices were papered with event flyers, brightly painted slogans, and stenciled images, evocative of the street art that famously lined Mohammed Mahmoud and Champollion Streets leading to Tahrir Square. Outside the offices, the walls were a canvas for a "Women on Walls" exhibition, a graffiti initiative that began in 2013 highlighting women's issues and the concerning prevalence of sexual violence against women at protests. Inside, the office was bustling with young people—mostly university graduates—whose enthusiasm for D-CAF and its mission was palpable.

Karen, a native of Ireland and director of D-CAF, met me in the staff "cafeteria" and told me that one of the festival's central aims was to reinvigorate this part of the city, Downtown Cairo. "Since the 1970s, a lot of people moved away from Downtown area, and as a result the whole area has started to disintegrate," she explained.[6] Bringing young audiences to the area and using Cairo's Downtown buildings was part of the D-CAF vision. Some of D-CAF's events that year seemingly aimed to expose the opportunities and limitations of the built environment and Cairo's crumbling Downtown infrastructure. Marianne, a visiting dancer from a Dutch dance troupe, described the challenges of putting on her performance in Cairo's Downtown Borsa neighborhood to include the tight spaces, the throngs of people, and the loose pavement and rubbish.[7] Fatima, a D-CAF organizer, admitted that some of the venues were notoriously difficult to find, tucked away in Downtown's labyrinthine streets and alleys and up flights of poorly lit stairs.[8] I myself arrived late to more than one D-CAF event, having had to ask for directions several times before locating the correct address. But

[6]Personal interview with Karen, 31 March 2014.
[7]Personal interview with Marianne, 31 March 2014.
[8]Personal interview with Fatima, 1 April 2014.

Figure 5.7: Entrance hallway of D-CAF headquarters, 2014. Photo by author.

Downtown as space, symbol, and place was integral to D-CAF; it was at the core of its identity. The festival even featured a category of events under the title "urban visions," where Marianne's outdoor dance performance was listed. D-CAF's young organizers wanted to *be there*, Downtown, and they saw D-CAF as a way to channel the revolution through art in the very place where the revolution occurred.

By 2014, much of the spatial freedom enjoyed by artists and protesters had been curtailed. A controversial protest law was signed into law in November 2013 that effectively made protesting illegal without prior approval from the Ministry of the Interior. Crackdowns by security services on protests and public gatherings

had escalated, and spontaneous "flash" projects had died down as a result. In a move symbolic of the general normalcy of spatial repression, the temporary wall that had been erected along Kasr El Aini Street leading to Tahrir Square had been replaced with permanent steel barricades that could be opened and closed at will by the Ministry of the Interior. All around locations used by D-CAF, the physical mobility of people was being severely curtailed, and street art was even being vandalized or whitewashed, but the D-CAF agenda was even more inclusive of revolutionary themes than it had been at its inception. There were, of course, the graffitied walls of the D-CAF offices, but there were also events that explicitly invoked the revolution: a discussion on "art and the political," a theatre piece presenting testimonies from the Egyptian revolution ("Zawaya"), a performance exploring corruption and the outcomes of the revolution ("The Hour of Curfew"), and a film about revolutionary music ("Underground/On the Surface").

Figure 5.8: Permanent steel walls on Qasr Al-Aini Street in Downtown Cairo, 2014. Temporary concrete block walls were replaced in some cases by permanent steel barriers in the years after the revolution. Photo by author.

Technologies of revolution were also spotlighted as well, and two events actively integrated mobile phones. "I'll Dance While You're Dancing and We Will Have Danced Together," a collaboration between American and Egyptian artists, used mobile technology to record and transmit dance movements across time and space during a live performance. Dancers in different countries shared video of their dancing in real time, allowing the dancers in each place to respond and record reactionary movements, such that there was a constant flow of visual information between the online and the offline. The SMART Mobile Film Festival ran workshops on filmmaking using mobile phones and screened participants' films in pop-up boxes in Downtown Cairo. Yasmeen, one of the SMART organizers, explained that

> the use of mobile phones allows people to express themselves in the most convenient ways with the least resources. It's not just for artistic expression but also for documenting history: some of the primary sources we now have are tweets and Facebook posts and random clips on Youtube. We have people editing all of this content together as well, sometimes just for personal use but also for sharing.[9]

She was describing the documentary impulse articulated by many protesters (and described in Chapter 3) as well as an archival impulse to save and share visual content (a topic that will receive greater attention in Chapter 6).

The SMART festival and D-CAF more broadly encapsulated a reality that had become increasingly pronounced: the revolution and mobile ICTs were practically and conceptually connected. D-CAF was a product of revolution; it sought to celebrate and rejuvenate Downtown Cairo, it was created by (and for) a young, mobile generation, and it was intensely ICT-mediated. Even as I sat, listening to the "art and the political" discussion at the GrEEK Campus, D-CAF organizers were posting photos of the panel on Instagram. Reflecting on D-CAF, an artist and founder of Townhouse Gallery, observed that the pervasive inclusion of

[9]Personal interview with Yasmeen, 31 March 2014.

digital technology in artistic performances and the documentation of performances themselves are particularly fashionable trends now, even though she, herself, found it a disheartening and distracting preoccupation. "If anything, it shows how empty everything is. Everything is covered by excessive communication."[10] If it had not been so already, excessive communication certainly became a part of everything—everyday life, politics, art, and aspirations—for the young, ICT-wired elite after the revolution.

D-CAF celebrated a young, revolutionary generation for whom ICT use had become part of everyday life and for whom ICTs had developed an additional, inspirational allure as facilitators of revolution. The festival articulated a desire to *overcome* limitations—immobilities—of the city to provide a dynamic, technologically mediated, and global artistic experience. Explicitly and implicitly, D-CAF made the *city* the object of transformation, emboldened initially by a political moment in which public spaces were less restricted and a technological moment in which ICT use was becoming more attainable and, as a result of the revolution, more attractive. But 2014 was an interesting time to experience a revolutionary art and technology festival that had been borne out of the relative freedom of 2012. The very fact that D-CAF continued to occupy Downtown spaces at all was notable, particularly as it continued to engage with revolutionary themes. Permission for public gatherings and performances was becoming elusive, and independent art initiatives, like Coloring Thru Corruption, had suffered the consequences. But D-CAF's continuing mobility in Downtown spaces was facilitated by a unique alignment of interests—those of artistic, revolution-inspired youth, private investment, and the state.

A major sponsor of D-CAF from the beginning was a relatively new real estate consortium under the name of Al Ismaelia for Real Estate Investment. D-CAF's choice of venues was no coincidence. Several of the buildings, including the Viennoise Hotel, the Kodak factory, Studio Emad Eddin, Townhouse, and

[10]Personal interview with Laila, 29 January 2016.

Cinema Radio, are owned by Al Ismaelia.

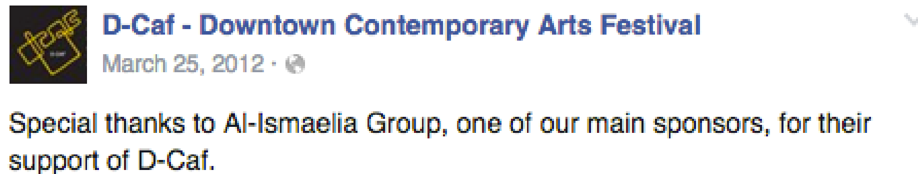


Figure 5.9: A thank you to Al Ismaelia posted on the D-CAF Facebook page on 25 March 2012.

The real estate company is

> a consortium of Egyptian and Saudi investors, made up of Egyptian billionaire Samih Sawiris (with a 35 percent share), Saudi private equity Prem Amwal al-Khaleej, Saudi investor Sherif Suleiman, Beltone Private Equities and Egyptian investors Ahmed Khaled Mostafa and Shahira Mahmoud. (Berger, 2014)

The company's stated goal is to revive Downtown Cairo, and it takes its name from Khedive Ismail, under whose supervision belle époque Cairo was constructed. According to the company website,

> Al Ismaelia focuses on acquiring prime real estate developments in Downtown Cairo with the aim of restoring the buildings and upgrading their infrastructure to suit contemporary requirements for residential, commercial, and cultural spaces, while celebrating the original edifices that comprise Downtown's architectural significance. (Al Ismaelia for Real Estate Investment, 2015b)

The consortium came together to purchase Downtown buildings in 2008, the same year that the government unveiled the ambitious Cairo 2050 vision, an urban development plan with wide-ranging objectives that included developing new desert towns, demolishing informal settlements, and building desert complexes and revitalizing Downtown in the image of commercial centers like Dubai (Tadamun,

2014). Prior to the revolution, plans to remake Cairo in the image of an idealized global city were already underway, and rejuvenating Downtown was a distinct priority.

> While viewing the past with nostalgia, this neoliberal coalition of heritage preservers sees the present moment as a time of great risk and urban decline. Cairo is portrayed as the decaying, overcrowded victim of haphazard state planning efforts and natural disasters. (El Kadi & ElKerdany, 2009, 347)

That coalition included the Ministry of Culture, foreign aid organizations, private investors, and businesspeople, Al Ismaelia among these. These various actors collaborated in a continuation of neoliberal urban development that had begun over a decade earlier, when desert developments, shopping malls, and gated communities were planned and built to attract the affluent middle classes and foreign investment (Adham, 2005; Abaza, 2011b). In that time, Downtown had become a dynamic and raucous *shaabi* area.

By the late 1990s and early 2000s, a close relationship and cultural identity was forming among neoliberal elites and the state (El Kadi & ElKerdany, 2009, 349). The result was a turn toward Downtown as a site of urban redevelopment, which aligned with the interests of the independent art scene. In a 2010 interview for *Al Masry Al Youm*, Al Ismaelia CEO Karim El Shafei, pointed to his experience of the Nitaq festival as the moment when he personally discovered Downtown:

> A lot of it came by chance but then developed in a non-random way. I learned about Downtown from Nitaq, which was an art festival in early 2001. It was the first time for me to know about Downtown. In my time, Downtown has died as a destination for young people. I am not necessarily interested in art per se, but there was a map: an exhibition in Café Riche, another in Estoril, you stop somewhere and grab a drink. The experience was fantastic and since then I fell in love with Downtown. (Strasser, Sarant, Mohsen, & Attalah, 2010)

This comment seems to presage Al Ismaelia's later support of D-CAF, an arts festival specifically catering to Downtown. Al Ismaelia seeks to purchase up to 10 percent of Downtown's buildings, and to date it has acquired around 20 buildings (Al Ismaelia for Real Estate Investment, 2015a). Although much of D-CAF's 2012 publicity called it the first such arts festival of its kind, D-CAF was surely also reviving the vision of Nitaq.

In hosting many of Downtown's art and culture spaces in Al Ismaelia buildings, Townhouse and the Contemporary Image Collective among them, and initially offering reduced or free rent to artists and artistic projects, the company began to cement a connection to both the physical spaces of Downtown but also a distinct cultural milieu that would increasingly consist of Downtown's young, artistic, ICT-using urban activists. Of course, Al Ismaelia would later raise the rents, forcing artistic collectives to fundraise in order to retain their spaces. After the revolution, many of the very concerns that brought the Cairo 2050 plan into being and attracted Al Ismaelia to Downtown were echoed by Egypt's young revolutionaries. Drawn into Downtown by the spatial and symbolic magnetism of Tahrir Square, they saw the spaces of revolution as integral to continuing the revolutionary cause, but they could also direct their impetus for reform toward the city itself. Nearly every urban design and art initiative had a web presence, but increasingly, they also had physical meeting places in *wasat el-balad*. They were realized transdimensionally, online and offline, crucially situated *between*, and their position between the virtual and the physical both provided insurance of greater longevity (when Townhouse was raided and closed, for instance, in December 2016, it remained virtually open through an active presence on social media) and also wider reach, with audiences local and distant. And almost seamlessly, urban development, art and technology were united in a local partnership firmly situated Downtown. Many of Cairo's post-revolutionary initiatives benefited from the physical spaces provided by Al Ismaelia, and Al Ismaelia gained a certain legitimacy from its association with Cairo's revolutionary

art scene. In providing these spaces, Al Ismaelia was in direct conversation with the young mobilizers of the revolution, and the revolution began to be compartmentalized, privatized, and confined in these spaces.

On their own, the Al Ismaelia development plans may not signal any fundamental transformation of Downtown Cairo, and it is important not to overstate the influence of private real estate investment in either practical urban futures or abstract neoliberal agendas. Al Ismaelia is certainly not the only company investing in Downtown, nor does its appearance mark a distinctly *new* development trajectory. Plans to polish and pedestrianize Downtown circulated in in the late 1990s, and a 1999 plan to rehabilitate the Bourse and pedestrianize the area around it was realized in a partnership between the state and private investors (El Kadi & ElKerdany, 2009, 363-365). In 2010, U.S.-based AECOM reportedly won a bid to redevelop parts of Downtown Cairo into a green, pedestrian-friendly zone (Bradley, 2010). And since the revolution, more redevelopment plans have surfaced. In 2015, British architecture firm Foster and Partners won a bid to redevelop the "Maspero triangle," the Downtown region roughly between 26th of July Street and Ramses Street and bordered by the Nile (Shenker & Michaelson, 2015). But even this more recent urban development initiative has a revolutionary connection. The Maspero plan, a collaboration between the state and various private entities, sought input from a Cairo-based architects' collective in its early stages. *Madd*, founded in 2011, conducted research, drafted strategic plans and even participated in discussions with the newly formed Ministry of Urban Renewal and Informal Settlements (MURIS). The impetus behind *Madd* was clear from a declaration on its website:

> After the 25th of January revolution, lots of initiatives and groups were formed to present projects that can help our country. The problem is that these initiatives became too many, that anyone can perceive. Madd is a platform that aims to act as a hub to connect related and active initiatives that came up with projects to each others and to

> interested experts and to possible funders, to take these projects to reality. (Madd, 2011)

This was yet another initiative of revolutionary youth, inspired by the revolution to have a say in urban change. Ultimately, though, MURIS was dissolved by the government within a year, and in the end, *Madd* was not entirely impressed with the Foster and Partners proposal (Borham & AboTera, 2015). Their suggestions had been mostly overruled. Indeed, Al Ismaelia's role in Downtown's post-revolutionary trajectory must be put in perspective, but it is also indicative of a wider process of partnership and possibly co-optation of a distinct revolutionary cohort whose physical presence Downtown was complemented by an important virtual presence—and publicity—online. This unique alignment of the urban vision of revolutionary, globally connected youth and the neoliberal coalition of state and private investment has had a lasting impact on the city.

The greatest consequence of this alignment is apparent in examining how these privately owned spaces factor into the mobile lives of Downtown's visitors and occupants. The pervasive physical and transdimensional mobility practiced by so many people in 2011 and 2012 began to be impeded in the years that followed. Importantly, the consequences were greatest for those who benefitted most from *physical*, offline mobility. Protests were fewer, smaller, and more prone to violence, whether from groups of individuals or attacks from security forces, and immobilities increased, especially in Cairo's physical streets and public spaces. The flourishing of public street life, aided for some by ICT-enabled mobility, visibly contracted. Cafés cleared, street vendors were evicted by police, and behind it all operated an ongoing campaign to forcibly remove residents from informal areas, which had actually contributed to the revolutionary outcry in 2011.[11] As opportunities for spontaneous public demonstrations decreased, the creative initiatives of ICT-connected young people continued—online, of course,

[11] Personal interview with Zainab, an EIPR (NGO) member working on several eviction cases, 7 April 2014.

and also in what were becoming more compartmentalized spaces: their privately owned and administered headquarters Downtown. Ashraf, one of the organizers of D-CAF, whom I first met in 2014, explained in 2016 that

> being associated with Al-Ismaelia helps of course—with embassies, with inviting foreign artists—we have no problem dealing with the government anyway because you can't do something on the scale of DCAF and not deal with the government. It just wouldn't work.[12]

It was clear that the physical mobility of such projects became increasingly circumscribed and contained within specific Downtown locales. While spontaneous, decentralized artistic urban movements that organized themselves online retreated from offline spaces, D-CAF and urban collectives like CLUSTER remained, sustained in part by institutional structure and international grants and in part by these privatized spatial allowances.

On fieldwork in Cairo in 2014, I was struck by the relative tranquility and silence of the streets. Cairo could hardly ever be considered a quiet city, but my first field experience of Cairo had been in 2011, after the revolution, when the streets were teeming with people, protests, street vendors and cafés. The lines between formal and informal, public and private life were blurred in the everyday movement of people through Cairo's public spaces. Now, throngs of police officers hovered on street corners, and I was occasionally challenged when taking photos in the street or even wandering down well-trodden protest routes. The very nature of physical movement through Downtown had changed, and physical mobility came with a certain degree of suspicion.

Against this backdrop, CLUSTER launched a series of Downtown tours in 2015, called Cairo D-Tours, in collaboration with Al Ismaelia Real Estate Investments. The tours aim to introduce wanderers to Downtown's history and architecture, and Al Ismaelia buildings feature prominently on the list of tour sites. On Instagram and Facebook, I can catch glimpses of these tours through the lens

[12] Personal interview with Ashraf, 5 August 2016.

of a mobile phone or compact camera. Indeed, a fascination with Downtown and the transdimensional mobility of Downtown's revolutionary advocates has lingered long into the years following revolution. But these days, those actors move between the online and an enclosed offline, spaces created in complex and often inconspicuous ways by the mobility of private capital and the state.

The GrEEK Campus and Digital Dreams

In addition to Al Ismaelia properties, many D-CAF events in 2014 took place at a new venue, the GrEEK Campus, near Tahrir Square.[13] This was the second year that D-CAF had hosted part of the festival at the GrEEK Campus, a gated complex that was formerly part of the American University in Cairo's Downtown campus on Falaki Street. In 2013, the GrEEK Campus had recently been acquired by venture capitalist Ahmed Al Alfi, founder and chairman of Sawari Ventures, who envisioned creating a silicon valley-inspired technology and innovation park on the site (Salah-Ahmed, 2013). The GrEEK Campus is steps away from Tahrir Square and is bordered by the graffiti-covered walls of Mohammed Mahmoud street, bloodied many times over in clashes between protesters and Egyptian security forces. AUC vacated its Downtown campus in 2008, relocating to New Cairo. On AUC's abandoned Downtown real estate, Al Alfi began building a "place for accidents of genius to happen" (The GrEEK Campus, 2015), where he hoped nascent technology startups could rent space alongside technological giants such as Vodafone and Google. It would be a meeting place for small entrepreneurs and huge technology conglomerates—a meeting place of minds and money.

The GrEEK Campus has quickly become a hub and a spatial symbol of Cairo's growing post-revolution startup scene. It is an example of how technology, revolution, and capital are reshaping Downtown in visible ways, but the repurposing of AUC's old academic campus into a technology park was also, somehow, unremarkable—a logical spatial manifestation of the ICT enthusiasm

[13] The "GrEEK" name comes from the original name for AUC's campus, the Greek Campus, now turned into a G(r)EEK hub.

that swelled after the revolution. The venture was met with some apprehension, however. Early rumors swirled around whether the GrEEK Campus, with its commercial imperatives, would begin to actively erase some of the revolutionary graffiti on Mohammed Mahmoud street (Eickhof, 2015; Jones, 2013). Although fears of widespread erasure were ultimately unfounded, smaller intrusions and encroachment are unmistakable. The gated entrance was guarded by private security. To attend the talk on "art and the political," for instance, required a stop at the security checkpoint and a bag search. Signs advertising GrEEK Campus events were regularly fly-posted over the spray-painted walls. It was nestled in the Downtown landscape, but it was also distinctly isolated. The boundary between the street and the campus, however blurry in the abstract, was a stark physical reality.

It is important not to over-inflate the scale or extent of its influence, but the GrEEK Campus does represent a distinct spatial manifestation of an encroaching and uneven convergence of entrepreneurship, neoliberal economic visions, and ICT-mediated transdimensional mobility in Downtown Cairo. In fact, the GrEEK Campus heralds more changes to come, as technology-based startups look for real estate Downtown, now perceived to be the epicenter of the urban entrepreneurship ecosystem by both young people and investors. Tariq, who works at a newly founded venture capital firm (VC) said:

> If you want to work in startups, if you want to get a bit of culture, you want to be Downtown—you can get a big warehouse space and create a nice culture for people to work in. There's just so much more happening in the Downtown area than in anywhere else in the city.[14]

When asked why Downtown was perceived to be the center of startup activity, Tariq barely paused before saying that a big factor was the GrEEK Campus. For the last several years, Downtown was undeniably becoming "the place to be" for young, ambitious artists, activists and innovators, making it an appealing location to establish an incubation space for startups. I had met Tariq through mutual friends

[14]Personal interview with Tariq, 2 March 2016.

completing business degrees at Oxford, as Tariq had also studied business in the UK. Graham (1998, 174) points out that "[n]ew information technologies, in short, actually resonate with, and are bound up in, the active construction of space and place, rather than making it somehow redundant." Downtown was becoming an appealing place for technology investment, and technology investment, in turn, was creating new spatial dynamics Downtown. Now the GrEEK Campus was becoming a pull factor itself, a localized brand for ICT-mediated initiatives, from the artistic to the entrepreneurial. With the injection of capital from private investment, the campus has concentrated the ICT revolution on this particular site, with all of its revolutionary connotations and, now, its cyberutopian promise. The GrEEK Campus has not so much spatially *erased* the revolution as much as it has become *part* of the revolutionary transition.

The GrEEK Campus even sought to emulate the spatial experiences of global technology companies, such as U.S.-based Google and Facebook, whose cheerful and immersive office parks have become a workplace model for other tech startups. The GrEEK Campus intended to bring together established media companies and startups on one "campus," and it adopted a bright primary color scheme, evocative of the Google brand, with outdoor tables and chairs painted red, blue, yellow, and white. Beanbags scattered in common areas and offices provide an alternative to traditional office chairs. It is a place where young entrepreneurs can go to "hang out," a serene technology retreat in the midst of Downtown Cairo. Moreover, it is no wonder that the GrEEK Campus attracts both entrepreneurs and artists whose passion for the Downtown area was sparked by the revolution; the startup hub has capitalized on the energy of ICT-mediated post-revolution movements and translated it into the spatial vernacular of the global ICT industry. But the GrEEK Campus is a new venue in an old space, and it is also a recent manifestation of a long lineage of investment.

Sawari Ventures launched its fund in 2011, just before the revolution, seeded by the partners and sponsored by Naguib Sawiris, Chairman and CEO

of Orascom Telecom Holding. Samih Sawiris, the Naguib's brother, is CEO of Orascom Development Holding and an investor in Al Ismaelia Real Estate Investments. The Sawiris family are commercial giants, and their group of companies have been key players and beneficiaries in the privatization drive of the late 1980s and 1990s, both in real estate and in telecommunications. Orascom, which launched the first Egyptian mobile operator, Mobinil, helped build the crucial network infrastructure that underpins the kinds of ICT-enabled mobilities discussed in Chapter 3. Although a recent addition to Downtown, the GrEEK Campus is connected in important ways to the historical geography of private investment in urban space and communications infrastructure, connecting technological development to economic opportunity and spatial transformation.

Figure 5.10: Map of the GrEEK Campus, Downtown Cairo, 2014.

So when D-CAF began hosting events at the GrEEK Campus in 2013 and 2014, it joined the continuing creation of a revolution-inspired cyberutopian geography that was becoming part of everyday life in Downtown Cairo. The partnership between D-CAF and the GrEEK Campus that began in 2013 was only the cementing of a connection that had long existed beneath the surface between burgeoning creative urban initiatives and a broader, less conspicuous

ICT revolution. In the day to day, the partnership was more practical than philosophical; the GrEEK Campus had plenty of event space to offer, and D-CAF needed physical *space* to host its programs. But a tech-driven transformation was taking place—unobtrusive in comparison to the protests that continued to fill the streets on many Fridays, but no less real. Downtown was becoming home to new spatial enclosures to accommodate the ICT-enabled "activist-entrepreneur," as *wasat al-balad* was being reshaped and inhabited by a mobile, ICT-connected elite. Accustomed to ICT-enabled transdimensional mobility, between physical and virtual spaces, the mobilizers behind the festivals, art initiatives, galleries, tech parks, and community cafés that flourished after the revolution were simultaneously looking inwardly to change the local urban landscape, but they were also looking outwardly to the global network. In fact, it was through conversations with young Cairenes over coffees and our laptops at cafés Downtown and in Zamalek that I first heard about RiseUp and Di-Egy Fest. In these free wifi enclaves, aspiring entrepreneurs discussed ideas for startups and social innovation, and they frequented the GrEEK Campus for events. Thus, some of the new spaces that became prominent youth meeting places Downtown were situated in between seemingly opposing influences: the local and the global, the grassroots and the corporate. And the GrEEK Campus embodied this dualism. It adopted the same ICT-influenced vernacular of innovation, creativity and revolutionary change espoused by other ICT-mediated art initiatives, but it also embraced a neoliberal assumption that ICTs could be harnessed for economic development.

The ICT-for-development (ICT4D) philosophy, as it is often known, holds that increased use of and access to ICTs allows people and communities greater opportunities to join the global market and achieve economic gains in a world economic system characterized by globalization (Unwin, 2003). The motivation is economic opportunity, but ICT-for-development also promises corollary gains—in social and political arenas; it is a market-driven vehicle for democracy (Ebo, 2001; Ya'u, 2004). As such, it works by performing a kind of deception of scale.

ICT4D places the onus of innovation and change on the individual, at the micro or local level, in order to effect macro or global transformations. The digital age has provided both the technologies and the narrative for this development model; as the machinery of computing as gotten smaller (micro to nano to pico processing) and more personalized (the mobile Internet revolution), ICT4D centers on the power of the smallest unit, the individual, to shape economic outcomes. Combined with latent IT optimism that associates technology with modernity and progress (Graham & Marvin, 2001; Kaika & Swyngedouw, 2000), then, the digital age facilitates a conflation of extreme scales—where the individual is made responsible for macro transformations in the global market, and the startup is equated with the media conglomerate in terms of transformative potential. The logic of ICT4D personalizes the problems of structural and systemic economic, political and spatial *immobilities* by offering opportunities for individuals to achieve ICT-enabled mobility by joining a globally connected network as an independently productive node. And the entrepreneur is the champion of this economic narrative. Entrepreneurship has long been a pillar of neoliberal thinking, and it had already made its way into the discourse of privatization in Egypt from the 1990s onward. As Peterson points out in reference to the rise of the cosmopolitan class in Cairo:

> Creative entrepreneurship is articulated as an important tool that can overcome the obstacles created by lingering public enterprise structures, and the success stories of entrepreneurs who have managed these obstacles are promoted as evidence of progress. (Peterson, 2011a, 178)

This personalization holds great appeal to young ICT users who have grown up, even in the world's developing economies, with ever-increasing personal access to networked information and communication.

In the years following revolution, technology-driven entrepreneurship gained popularity among many young people who had joined various independent,

grassroots movements for change. Amid heightening political repression and disillusionment, social movements and political protests faced significant setbacks, while entrepreneurship continued to flourish. "I don't know. I don't know if it's hope or despair," Tariq, who works at a Cairo-based VC, said, reflecting on the motivations behind growing enthusiasm for technology startups in Cairo. "People have embraced the startup culture because ultimately it's a non-traditional way of getting something done," he said.[15] The "startup scene" was offering young people with revolutionary ideas an alternative outlet for their creativity.

Innovation in the post-revolutionary context took many forms, and clearly some of these were commercial. Street vendors flocked to public squares, unlicensed cafés sprang up near protest sites, and ICT users who also saw business opportunities in the post-revolution environment saw them in the ICT-enabled startup sector. A report from Wamda Research Lab on trends in startups in the Middle East shows a tremendous increase in institutional support for startups in Egypt, with the launch of over 25 new funding sources, support organizations, technology parks, co-working spaces, and incubators between 2011 and 2015 (Wamda Research Lab, 2015). Among ICT-using young people, the very technologies that offered them subversive political mobilities also presented opportunities for economic mobilities. For the ICT-connected, post-revolution Cairo was a space increasingly accommodating to activism and entrepreneurship, both facilitated by and couched in the language of change. They saw this period of political transition and opportunity as one of economic opportunity as well.

Between Mobility and Enclosure Downtown

It was only natural that ICTs would factor heavily in creative urban projects, from the political to the entrepreneurial, during the post-revolution period; many of the prominent organizers of the 2011 protests (and subsequent popular movements) were themselves trained as software developers, engineers, and data scientists.

[15]Personal interview with Tariq, 2 March 2016.

Wael Ghonim, the Facebook administrator behind the page *We Are All Khalid Said* is a computer engineer, who worked for Google at the time of the revolution and, at this writing, had recently founded an ICT startup in Silicon Valley. Alaa Abdel Fattah, a blogger and prominent organizer of the #NoMilTrials campaign, is a software developer. In the days following revolution, software engineers and computer experts could be found in the offices of many a revolutionary organization, running websites and Facebook pages or providing training and workshops in ICT use. This generation of ICT users did not singlehandedly or spontaneously create the conditions for Egypt's 2011 revolution, but they *were* many of its figureheads, who continued to organize and mobilize an astonishing number of political movements, community projects, and grassroots initiatives in the following years.

Events like D-CAF and spaces like the GrEEK Campus raise an important question, particularly as they gain popularity and influence against a backdrop of a contracting political arena. For whom and by whom are these ICT-facilitated urban experiments undertaken? It should prompt us to consider who has been included in the process of reshaping the city and for whom this new, ICT-mediated and mobile urban core exists. As sociologist and mobilities theorist Mimi Sheller points out, in reference to mobile publics,

> those who have been swept up in these changes (or promoted them) have a disproportionate impact on 'public life' in both Western and non-Western societies not only because of their economic, social, and political influence, but also because of the concomitant restructurings of space and time that they foment. The enacting of new practices of mobility and communication enwraps those who are excluded as much as those who are included. (Sheller, 2004)

Where these ICT-mediated projects have succeeded, they have facilitated mobilities to subvert the immobilities of everyday life in the city. Where they have failed, they have revealed the opposing potentialities inherent in transdimensional

mobility—to resist on the one hand and to suppress and exclude on the other. As Chapter 3 demonstrated, the revolutionary moment was, among other things, a triumph and a success story of transdimensional mobility, mediated by ordinary mobile ICTs. But ICT-enabled mobility is not unlimited. "Rather, time and space barriers become reconstituted and reformed within global geometries of flow, incorporation and exclusion" (Graham, 1998, 175). The concentration of art, real estate investment, and startup enthusiasm in Downtown after the revolution thus entailed the entrenching of certain immobilities, as networked connectivity became localized in specific venues. In this way, the digital divide that had been so successfully bridged during the 18 days began to be (re-)spatialized and (re-)entrenched Downtown. While constantly acknowledging the importance of the street, ICT-using youth found more and more secluded and enclosed spaces to occupy. Some of those spaces were physical, as in the case of art and technology hubs Downtown, some were virtual, as in the case of echo chambers online discussed in Chapter 3, and some existed between these zones.

In her acclaimed historical account of Cairo's urban development, Janet Abu-Lughod described a dichotomous city, divided by access to modern amenities, dissected by the conceits of colonial power:

> One entered the old city by caravan and traversed it on foot or animal-back; one entered the new by railroad and proceeded via horse-drawn victoria. In short, on all critical points the two cities, despite their physical contiguity, were miles apart socially and centuries apart technologically. (Abu-Lughod, 1971, 98)

The starkness of this binary calls for important reservations; the making of modern Cairo entailed an essential fluidity between the modern and the traditional and between the local and the colonial. However, Abu-Lughod's broader observation that technology and access to it can be divisive within an urban landscape continues to be relevant in the context of contemporary network infrastructure and digital communication. Exclusion is a powerful and spatially creative force in this context.

In Mitchell's description of colonial Cairo, "[t]he identity of the modern city is created by what it keeps out. Its modernity is something contingent upon the exclusion of its opposite" (Mitchell, 1988, 165). Like the colonial construction of new transportation corridors, ICTs are charting the pathways of information flow through and beyond the city, and they are also creating new immobilities and enclosures. Indeed, in the post-revolution ICT-friendly hubs, we see

> the 'distance-shrinking' characteristics of the new communications technologies, far from overcoming and rendering insignificant the geographical expressions of centralized economic and political power, in fact constitute new and enhanced forms of inequality and uneven development. (A. Gillespie & Robins, 1989, 7)

Writing about the neoliberal economic turn under Mubarak, Adham similarly observes the creation of bounded spaces of different varieties with the influx of private investment. Malls, gated communities, and other developments gradually controlled and isolated neoliberal space, and "they enforce codes of behavior to uphold the utopian imagery which gives them their economic and symbolic value" (Adham, 2005, 25). The risk, of course, has always been that advancing telecommunications innovation would serve this neoliberal turn in that it would eventually

> penetrate all countries, all territories, all cultures, all communication flows, and all financial networks, relentlessly scanning the planet for new opportunities of profit-making. But it will do so selectively, linking valuable segments and discarding used up, or irrelevant, locales and people. (Graham, 1999, 930)

Such spatial inequalities have always been a feature of the urban landscape in Egypt, contributing to a geography of uneven immobilities that are themselves transdimensional, operating between the online and the offline.

The revolution, as we have seen in this and earlier chapters, provided space for people to imagine subverting the long historical trajectory of inequality as immobility. But alongside this spatial experimentation, new enclosures have emerged to circumscribe some of that revolutionary energy. As the dust settled around Mubarak's departure and the long arm of the Egyptian security apparatus reached back into public space and public life, many revolutionary projects and movements faltered and retreated from public view, including the grassroots art initiatives described above. By late 2013, police presence in the streets had increased and a new protest law made public demonstrations and gatherings illegal, stifling many of the grassroots projects that had relied on flash gatherings, demonstrations or street performances. Small projects, like Coloring Thru Corruption and Mini Mobile Concerts, dependent on grassroots organizing and spontaneous public gatherings, ultimately died down, and the larger initiatives, like D-CAF, have (so far) endured.

Meanwhile, certain ICT-driven initiatives that aligned with longstanding neoliberal objectives survived. Importantly, the evidence of this cybertutopian transformation is still apparent, even as public space has become more confined. The art-investment-entrepreneurship ecosystem that emerged out of the revolutionary moment has been one of the revolution's most enduring urban legacies with spatial implications. "Compared to so many other initiatives, the startup scene is still alive," said Tariq.

> It's still alive. And you know why? It's probably only still alive because the Government is ok with it because it's income-generating. It has nothing to do with people who live there, it has nothing to do with anti-government movements, it has nothing to do with human rights. It's purely and simply capitalist, and capitalism is agnostic.[16]

The foundations of Cairo's burgeoning startup scene were being laid before the revolution, as were the channels of private investment Downtown. As one

[16] Personal interview with Tariq, 2 March 2016.

investment manager in Cairo's venture capital community put it:

> It started out with the so-called revolution—there was the rhetoric of the youth: they were taking a lot more risks and they wanted to get more entrepreneurial. To be honest, as someone who was on the inside, it really wasn't like that. If anything, the entrepreneurship scene happened despite the revolution. The revolution was nothing more than a hindrance in many ways: the economy was slow, investment into the country was a problem, all Foreign Direct Investments went down the drain. No one wanted to sign anything for two years because no one knew who the next leader would be.[17]

Many of Egypt's post-revolution urban initiatives had implicit cyberutopian aims, and when their other political and social agendas were curtailed or impeded, the production of cyberutopian spaces nonetheless proceeded.

The fragmented pursuit of a cyberutopian vision for urban change ultimately engendered processes of exclusion, and even depoliticization, where revolutionary politics were sometimes slowly and almost imperceptibly supplanted by the revolutionary promise of technology. For those with access to it, the cyberutopian city, a transdimensional geography mapped onto Egypt's revolutionary capital, continues to provide opportunities to be part of the ongoing revolution without practicing revolutionary politics; in the face of mounting political repression, a revolutionary generation can pursue an ICT dream in the expectation that it will eventually lead back to opportunities for future resistance against the immobilities of everyday life. But "[i]t is too easily forgotten that while capital expands its geographical reach and breaks through all manner of geographical barriers, new boundaries are created while older ones are broken down or become more porous" (Swyngedouw, 2004, 30). Boundaries and enclosures were materializing rapidly after the revolution—from police barricades and checkpoints on the street to private, walled spaces for art and technology innovation.

[17] Personal interview with Amira, 17 March 2016.

Yet, in parallel, other barriers were revealed to be more pervious, particularly those that could be traversed by transdimensional mobilities. One of the founders of Townhouse Gallery quoted earlier in the chapter is also herself an accomplished local artist and activist, whose recent work has focused increasingly on the digital revolution. She lamented that

> the youth that were born after 1996, when the Internet first came to Egypt, they are a different type. I don't know if we can even call them Egyptians anymore. They are not identifying with their grandparents. They identify with another activist in Hong Kong. They identify with another musician in Paris.[18]

She questioned the "Egyptianness" of Egypt's youth, somehow less homegrown because of their increased contact with the outside world. They exist in multiple spaces, multiple dimensions, at once—they are are persistently mobile, so are they ever really *here*? Hers was a common perception among an older generation, and it captured an important reality: mobility, for the young and affluent, was so much a part of everyday life that it shaped their identity as a generation. In fact, their mobility extended beyond meanderings between the online and the offline. The ICT-connected youth were often *physically* mobile between local and global places, and that mobility also crucially implicated communications technologies.

Indeed, the transdimensional mobility of certain activists and educated young people accompanied, and in some cases translated directly into, physical movement across the globe. Dalia, a founder of a revolutionary women's organization, described in 2014 how her life was globalized by her involvement in revolutionary causes. She was the owner of a hostel Downtown and said that in many ways "we didn't go to the revolution; the revolution came to us." Soon after the revolution, international organizations took an interest in her newly formed Revolutionary Women's Coalition, and a U.S.-based non-profit provided funding for her and other activists to travel abroad for training and workshops. "This was

[18] Personal interview with Laila, 29 January 2016.

Figure 5.11: Graffiti in Old Cairo, 2014. Photo by author.

at the very beginning, this was 2011 when I was very new in this," Dalia said. "And actually they were—first thing that happened was that they invited me to go to the AWID [Association for Women's Rights in Development] forum, and they helped me to, like, apply and write the application and all these things."[19] By 2014, Dalia was a regular international conference participant, networked with other women's rights groups throughout the region. Her collaborators were based in Turkey, France, and the United States, among other places. And Dalia was, incidentally, also a local entrepreneur, having followed the success of her hostel by opening a very popular (and wifi-enabled) café Downtown, a popular stop-off for young visitors to the GrEEK Campus.

The post-revolution period revealed that those with access to mobility-enhancing technologies could more easily move between, across, and through both physical and virtual enclosures. But "[t]he construction of

[19]Personal interview with Dalia, 6 April 2014.

spaces of mobility and flow for some [...] always involves the construction of barriers for others" (Graham & Marvin, 2001, 11). After the revolution, the transdimensional mobility of certain young activists also went hand-in-hand with material global mobility. It accompanied the return of many young Egyptians, who had been educated and living abroad, for whom the 2011 revolution had been largely experienced online. This return of such "digital natives," as Palfrey and Gasser (2008) call them, is particularly apparent now in the startup community in Cairo, where many entrepreneurs have themselves lived or worked abroad and, in many cases, had not been living in Egypt when the revolution took place in 2011. Transdimensional mobility also facilitated material escape for certain ICT-using activists, who subsequently left Egypt and physically relocated to other places, namely the United States, the United Kingdom and other European countries. In this case, their transdimensional lives, conducted both online and offline, had allowed them to cultivate both local and global audiences and ultimately provided new opportunities for physical mobility.

Obstructed by post-revolution local immobilities, some activist-entrepreneurs have pursued the ultimate ICT-enabled mobility, emigrating from Egypt to become ICT innovators in the technology markets of the United States and Europe. Facebook activist Wael Ghonim, graffiti artists Ganzeer and Zeftawi, and many other filmmakers, software developers, and artists, have left Egypt to pursue their interests abroad. Concerns for personal safety and disillusionment were key motivating factors for activists fleeing Egypt after the revolution, but their exile overseas has often been enabled by their digital notoriety. Ghonim has found success in Silicon Valley as a result of both his technical skill set and also his revolutionary credentials. The revolution and its technologies have effectively exiled many activists and also facilitated their reemergence as leaders in new tech-focused arenas abroad.

In many cases, those who have left continue to work on projects inspired by their revolutionary experiences, and in the digital age, the Egyptian diaspora has

much to contribute to internal politics. Those who left after the revolution were often persecuted and pursued by the authorities for their activism; their politics pushed them out of Egypt, but their technology use opened up new (economic) opportunities abroad and, moreover, allowed them to stay connected virtually to Egypt from afar. Akil, an Egyptian blogger and activist with the Egyptian Initiative for Personal Rights (EIPR), is another such digital activist, who left Egypt after the revolution and now lives abroad. He is constantly on the move, without permanent residency or asylum, and he has continued to speak about issues related to online activism, the Internet and human rights.

> I'm living out of a suitcase in London. It was the first visa I could get, and I'm just here for safety now. In Egypt I received a number of threats from sources we suspect are inside the government, but we haven't been able to confirm that yet. I decided whatever the outcome of the current situation it's best for me to deal with it with being physically safe.

Akil has cobbled together a precarious itinerant career as a guest speaker and digital security consultant, his revolutionary experience both the motivation for his leaving Egypt and also the basis of his career in exile. He explained:

> Like before the revolution, I'm still helping people use technology for social change now. I still have an involvement with EIPR, but more remotely. My main focus now is on technology as a topic itself—I want to look at the systems and the legal or policy framework surrounding technology. There's still a lot of work to do, and I'm glad I can continue it to some degree from London.[20]

Meanwhile, many young Egyptians returning to Egypt after the revolution have distinctly entrepreneurial aspirations. As a moment of political opportunity contracted, new economic opportunities continued to beckon. "Whether you're

[20]Personal interview with Akil, 30 November 2015.

an Islamist or a liberal, everyone's just slowly crawled back into their hole that they came out of in January 2011. The startup movement is the only thing that has survived," Tariq, himself one such returning entrepreneur, said. He spoke with a tone of authority, tinged with resignation. "If we have learned two things from the revolution, it's political awareness and the startup community." The intermingling of revolutionary and technological promises are spotlighted by events like D-CAF and the RiseUp Summit and imprinted on the urban geography by places like the GrEEK Campus and Cairo Hackerspace. In these venues and among ICT-using young elites, political awareness dovetails with technological experience to conjure cyberutopian ambitions. They see technology as a tool for change during uncertain times. With international degrees, fluency in multiple languages and native familiarity with ICTs, these young people returned after the revolution to a marketplace of contradictory contingencies—of agency, entrepreneurship, and despair.

Resistance Behind Closed Doors

The post-revolution period engendered unexpected transdimensional mobilities and immobilities that have influenced the nature and shape of Egypt's ongoing movements for change. In this context, ICTs have enabled greater transdimensional mobility, compressing time and space to bring revolutionary activists, onlookers, and entrepreneurs *closer* to one another and traversing boundaries between people and spaces both online and offline. But mobility also creates distance and enables movement *away*, and it can precipitate the development of unanticipated *im*mobilities. Yet, even where cyberutopian aspirations contribute to the attenuation of the political street, there are still opportunities for resistance. These spaces of converging capital and utopian vision continue to be sites of possibility and liminality and, therefore, subversion. The production of post-revolution cyberutopian partitions and enclaves has occurred unevenly, imbued with revolutionary significance by ICT-users, who tend to be young and

affluent. Yet, Castells reminds us:

> Wherever there is the imposition of meaning, there are projects of construction of alternative meaning. And the realms of this resistance and this autonomous meaning are ubiquitous—which means, concretely, that while the space of flows has been produced by and around dominant activities and social groups, it can be penetrated by resistance and can be diversified in its meaning. (Castells, 2000, 21)

So although ICT-enabled activism has contributed in nuanced ways to what Denis calls the "exclusivist geography of neoliberal Cairo" (Denis, 2006, 68), even this landscape of enclosures and selective mobility can incubate resistance to neoliberal trajectories as well.

When it comes to examining the role of technology and technological dreams in that project, spatiality and mobility alike often elude analysis because, as Gordon and de Souza e Silva write, "we don't enter the web anymore; it is all around us" (E. Gordon & de Souza e Silva, 2011, 3). Of course, this pervasive web is only experienced by certain individuals at certain times and with certain tangible hardware at their disposal. I will revisit a quote from Massey here: space

> is a product of relations-between, relations which are necessarily embedded material practices which have to be carried out, it is always in the process of being made. It is never finished; never closed. Perhaps we could imagine space as a simultaneity of stories-so-far. (Massey, 2005, 9)

Massey's description of space as a "simultaneity" is meaningful here. Among the many spatial influences after the revolution, technological narratives make up some of the most important stories-so-far—they aligned with neoliberal forces of liminality and spatialization that had been engaged in the pre-revolutionary production of space. Since 2013, even as Egypt's revolutionary movements and

political organizations have faced mounting repression, the ICT revolution has persisted. It walks a fine line between politics and economic development—neither wholly apolitical nor wholly subversive. And a rapidly contracting political scene since 2013 has obscured the lasting effects of Egypt's urban, cyberutopian experiments.

In 2014, I attended a sold-out concert by incendiary Egyptian rap artist Aly Talibab, a friend of graffiti artist and Coloring Thru Corruption creator, Ali. The concert was held in the creaking shell of a Victorian building that had been converted into a nightclub in Downtown Cairo. Young, smiling D-CAF workers handed out promotional material at the door, and neon D-CAF flyers littered the ground. Inside, Aly Talibab gave a fiery performance, reciting his rhythmic poetry about the crimes of a corrupt Egyptian military state, the bravery of revolutionary martyrs, and the lost promises of the 2011 revolution. While his lyrics pulsed through the speakers, a screen behind him displayed a montage of video clips and artwork, compiled by Ali and others, that featured footage of protesters fleeing security forces, then shots of reeling, injured demonstrators.

It was reminiscent of the video compilations that used to be screened at demonstrations by groups like *3asker Kazeboon* ("the military are liars") and *Mosireen* ("we are determined"). *3asker Kazeboon* and *Mosireen* were media collectives that emerged out of the 2011 revolution to create and compile amateur protest footage and citizen journalism, recorded on mobile phones and digital cameras. According to Salman, an organizer with *Mosireen*, whom I met quietly in an empty café in Zamalek in 2014, these collectives had also envisioned new futures for Egypt's urban spaces, facilitated by ICTs, and for that reason, they made a point of screening digital video in public places, where passersby could encounter this content without *going* online. In hushed tones, we discussed how at protests, makeshift screens would be erected to show ICT-recorded footage of other, prior protests—other Egyptian streets—as a reminder that the revolutionary city was everywhere; every protest was part of this new transdimensional geography

Figure 5.12: Audience members take photos and videos on their mobile phones at an Aly Tallibab concert in Downtown Cairo in 2014. Photo by author.

that brought the virtual actively into physical space and visa versa.[21] The background footage at Aly Talibab's concert was an unmistakable nod to these media collectives and their efforts to remember and re-spatialize the revolution.

As the concert went on, the crowd of mostly young, smartphone-carrying fans would raise their mobile devices to take a photo, record a video, or snap a "selfie." The entire performance was a gripping reminder of how very ICT-*mediated* the revolution had been and how very much alive ICT-created digital content could make the revolution appear. At this particular moment, however, the intensely political message at the microphone and on the screens was very carefully contained, within this smoke-filled nightclub, loosely connected to a curated arts festival designed to showcase Downtown Cairo as a hub of creativity, youth, innovation, and international art. When the concert concluded in the small hours of

[21] Personal interview with Salman, 27 October 2014.

Figure 5.13: Screening of *3asker Kazeboon* footage at a protest outside the Ministry of Culture, 2013. Photo by author.

the morning, the crowd from within poured out into the street and rapidly dispersed. By that time, a throng of so many young people congregating on the street would have attracted unwanted attention. I had not noticed it before, but now, as we departed the venue, a huge, multi-story poster of then presidential candidate Abdel Fattah Al-Sisi loomed over us. Al-Sisi had announced the removal of President Mohamed Morsi and subsequently led the military takeover of the Egyptian government. He was instrumental in installing the interim leadership after Morsi's deposition (Kingsley & Chulov, 2013), and he was, in his capacity as a military leader, implicated in the ensuing military crackdowns on protesters, including the Raba'a al-Adawiyya Square massacre, which left almost one thousand people dead (Human Rights Watch, 2014).

Al-Sisi looked on as the concert-goers scattered to return home or linger somewhere on the street to download their photos and videos of Aly Talibab's performance. These digital mementos would undoubtedly be uploaded onto various social media platforms, texted to friends, or saved in a personal archive. For all of its unbounded shareability, this revolutionary rapper and his message were

Figure 5.14: Abdel Fattah Al Sisi poster, Downtown Cairo, 2014. Photo by author.

still neatly contained. He had been compartmentalized, made part of an exclusivist geography that, like the spaces of contention opened on the street after the 18 days, was also an enduring legacy of revolution. Perhaps, one day, the energy of this vocalist and his video footage will once again burst forth from the bounded space of Cairo's Downtown nightclub and back onto the street. Perhaps these very enclaves of art and technology will become the incubators of new transformations, even revolutions. But that is the thing about building—even unconsciously—a cyberutopian city where a revolution once was: it can be a site of resistance or a vehicle of escape, and often both at the very same time.

6 Wandering the Digital Archive

Click to Save a Revolution

On October 16, 2014, popular photo-hosting service Twitpic announced it would be shutting down. The announcement came after weeks of negotiation, as the company attempted to find a buyer that might save it from obsolescence (Lukerson, 2014). The platform, which was used to store and publish photos to Twitter, had been eclipsed by Twitter's own native photo-sharing capabilities and other, more dynamic hosting and sharing services. When Twitpic launched in 2008, it quickly became one of the most popular services for sharing photos on Twitter, particularly among citizen journalists documenting live events, evidenced by the occasional controversy and outcry surrounding changes to Twitpic's user agreements that would affect how newsworthy photos were shared (Sonderman, 2011). But with the announcement of its impending closure, all of those images were in jeopardy. On its website, Twitpic advised users to download their own photo archives and provided step-by-step directions to aid users in saving and storing their photos before it was too late (see Figure 6.1). Fewer than ten days later, no one—not even the photographers themselves—would have access to the Twitpic archive anymore.

This announcement went relatively unnoticed, apart from in technology news circles, not least because of previous false alarms (the company had announced closure in early September and then retracted the statement, saying a sale was imminent) (Everett, 2014; Knibbs, 2014). In the end, Twitpic gave users little time to consider what might happen to those photos, where they would go, who owned them, and what users could do about it. Documentary material from nearly every major news event over the previous five years was sitting in the digital Twitpic repository. Although most of these images had been "published" in the public sphere—posted, shared, retweeted on Twitter—at one point or another, the survival of the complete record now depended not so much on the countless digital consumers who had seen and shared the images but on the original producers who had initially uploaded the photos. Paradoxically, in order to save this public record, it would have to be made private again. Individual users would have to actively download their photos from the shared Twitpic servers onto personal computers and storage devices. Perhaps these images would be shared again somewhere new, or perhaps they would simply be added to burgeoning personal archives on personal harddrives, rapidly reaching unmanageable proportions. At the final hour, Twitter agreed to "save" Twitpic by acquiring its digital collection of images and keeping the links to Twitpic photos active, but the acquisition was a stop-gap measure, and it was unclear how the Twitpic archive, now the proprietary content of Twitter, would be maintained in the future (D'Orazio, 2014).

In the Twitpic shutdown announcement, some activists, journalists and other Twitter users saw the potential for great losses as many photos from Twitter, digital "artifacts" of the revolution, faced permanent deletion. They tweeted, texted and posted pleas for Twitpic users to preserve their photos, knowing that at least part of the revolutionary story was stored on Twitpic servers (see Figure 6.2). I received several such SMS messages in activist WhatsApp groups urging individuals to save their photos.

The Arab Spring reinforced our collective enchantment with social media,

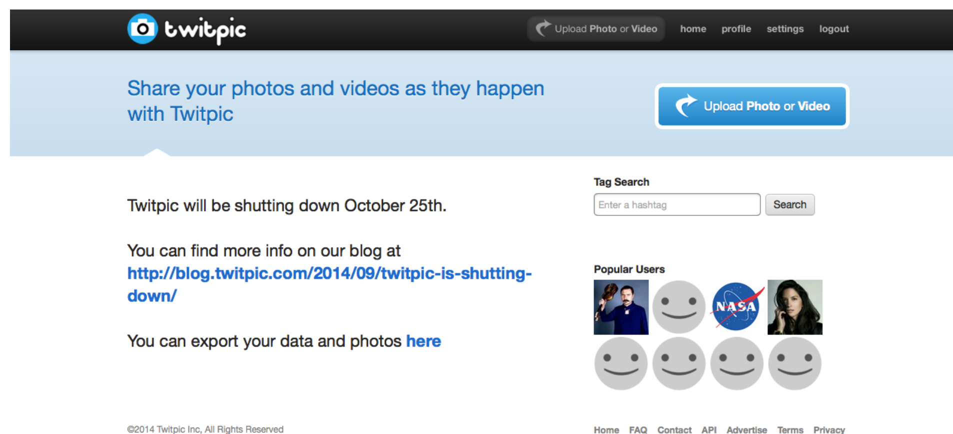


Figure 6.1: Twitpic announcing its shutdown online.

as events across the Middle East and North Africa were broadcast on TV and computer screens worldwide. The revolutions were organized, documented, and transmitted through ICTs, which supported some early and misguided perceptions that social media *was* the revolution, rather than the longstanding historical cries for political and economic reform. Social media was certainly important politically in fomenting and sustaining revolutionary momentum, but it is also crucially important historically for the preservation, recollection, and interpretation of the past. Technology plays a central role in the revolutionary narrative, which is underpinned by the preponderance of digital texts that we—academics, journalists, activists, and others—use to construct and deconstruct it.

Figure 6.2: Tweets related to the imminent shutdown of Twitpic.

The rapid demise of Twitpic happened suddenly and fairly quietly, and in the end, it attracted very little broader discussion or reflection. The expiry of this particular digital archive was met with the kind of resignation that might accompany misplacing an old USB flashdrive or accidentally erasing a voicemail. The reality is that digital deletion is remarkably commonplace, but the story of Twitpic should give us pause. Specifically, it should raise an number of critical questions about ownership, memory, and forgetting in the digital age. What happens when individuals entrust their photos to a digital storage company, and that company then makes a market-based decision to change ownership or close down? What happens when collections of digital "artifacts" must leave the public domain (and return to a private one) in order to be preserved? Who is ultimately responsible for the preservation of digital "texts"—producers, hosting services, users, or even viewers? Moreover, when a single digital repository contains whimsical cat photos alongside eye-witness documentation of protests in Tahrir Square, which "artifacts" deserve to be saved?

The goal of this chapter is not to tackle the full universe of questions associated with digital archives—such a task is beyond the scope of this thesis. Instead, the aim is to consider both the unique and the universal archival challenges that emerge in the politically charged, digitally mediated context of the Egyptian revolution. In answer to Burton's call for "archive stories," or "narratives about how archives are created, drawn upon, and experienced by those who use them to write history," this is a qualitative reflection on the experiences of creating and using digital archives of the revolution (Burton, 2005, 6). As Stoler (2002) puts it, this is an exploration of archive-as-subject rather than archive-as-source. It is a recognition that history is a product of "selection, interpretation, and even creative invention" subject to the demands of a particular moment (Burton, 2005, 7-8). From the outset, the Egyptian revolution has been catalogued, archived and remembered in multifarious ways by activists, artists, institutions, and organizations. Since the earliest incarnations of archival practices, archiving

has been a repertoire of resistance as much as a "tool of hegemony" (J. M. Schwartz & Cook, 2002, 13). This practice of saving and remembering, like so many other practices between the everyday and the revolutionary, has been intensely mediated by ICTs. Previous chapters have problematized the relationship between digitally produced, online content—what I will call "texts" or "artifacts" of the digital archive—and offline contexts, influences, pressures, and opportunities. In the critical space between the online and the offline, looms the inconvenient and inevitable problem of historicization.

Transdimensional mobility results in an abundance of digital traces—artifacts of the mobile experience between the online and the offline. As a result, the virtual dimension and its online spaces have become repositories of mobile memories of revolution. A vast digital record of the revolution exists, and much of that record is (or has recently been) available online. The transdimensional archive is multiple, dispersed, and in motion, where the lines between creator, curator, and visitor are blurred. Like institutional archives of the past, this archive derives authority and legitimacy from its architectural form and the provenance of its materials: the ease of digital recording and storage result in a wealth of artifacts that together suggest a completeness of the historical record. Speaking to informants between 2011 and 2016, who all engaged in active "saving" of revolutionary footage revealed how the embeddedness of ICTs (and particularly mobile ICTs) in everyday life allowed them to be always at-hand and therefore seemingly reliable and comprehensive witnesses to events. And because anyone can be a producer of content with archival "value," the transdimensional archive seems to present an unusually diverse collection of accounts, from different vantage points. Its strength is in abundance.

This archive is also imbued with assumptions of permanency and indestructibility, particularly in the context of the post-revolution period, characterized by cycles of creativity and destruction typical of profound transitional moments. We could be forgiven for assuming that the digital record

of the revolution stands a chance of achieving a kind of transcendental immortality in comparison to physical erasures like the removal of revolutionary graffiti or the erection of a feckless memorial in the center of Tahrir Square (Talon, 2012; Rayman, 2013). The challenge of preserving the "memory" of the revolution loomed large, even during the 18 days, and it was on the minds of many activists, artists, academics, and even the state—all of these stakeholders recognizing the significance of archives in creating and sustaining national narratives. I myself have been a frequent visitor to the "digital archive" of the revolution in the course of this research, and I have been and continue to be a curator of my own personal archive of digital ephemera related to Egypt. Many informants would refer me to online collections of images and texts about the revolution and contributed to and utilized these themselves. It is in the course of wandering the digital archive that the issues I will raise in this chapter came to the fore.

In what follows, I will introduce several concerted efforts at preserving the memory of the revolution in a transdimensional archive—somewhere between the online and the offline, the virtual and the material. In doing so, I highlight certain significant but largely overlooked limitations and drawbacks to such an archive and the strategies that individuals and groups have employed to cope with the abundance of material and the exigencies of preserving it. Their efforts reveal that every archival effort has grappled with distinct choices about what to save and how to save it, and the exercise of curatorial discretion is often openly embraced in a recognition that there can be no objective memory of the revolution. Further, these attempts to preserve the digital record rely on transdimensional mobility *between* the virtual and the physical, either digitizing material artifacts or attempting to take born-digital (meaning created originally in digital format) artifacts "offline." Ultimately, however, this examination of the transdimensional revolutionary archive reveals that there are many opportunities for loss and forgetting in the space between the online and the offline. Perhaps more than ever, the task of history-making and preservation must occur in the present in

order to confront the political, technological, and commercial forces of forgetting at work in transdimensional spaces.

Nearly five years after the Egyptian revolution, we are trying to make sense of the historical arc of the recent past. With each passing year, we grapple for the kind of new, objective insights we have been conditioned to expect with ever greater temporal distance. I would argue that these insights have been elusive, in part because of our reliance on an unprecedented deluge of digital "texts," which form what *The Atlantic* contributing editor Alexis Madrigal calls the "kaleidoscopic" media perspective, where "it's hard to tell just what the hell is going on half the time" (Madrigal, 2011). The problem is multifaceted, stemming from the fragmentary and excessive production of digital content but also from a distinct lack of purposive processes for archiving it. And over time, scholarship on the Egyptian revolution has revealed a gaping omission: the critical analysis of technologically mediated memory preservation, storage, and retrieval. The digital research methods we so often apply to analyses of the Arab Spring (from big data social network analysis to small-sample ethnographic studies) presuppose the collection and analysis of digital artifacts (Tweets, photos, Facebook posts, blog entries, and even metadata). Yet very little scholarly work has addressed what the production, preservation, and loss of digital artifacts may reveal about this particular historical moment and the transdimensional spatial logic that upholds it.

This is not to say that the issues surrounding digital archives and technologically mediated memory have not received mention in relation to the Arab Spring. There are a few notable examples, mostly in journalism, including Dougherty's (2011) piece outlining a number of existing documentation projects, an article in *The Guardian* on the then newly formed Committee to Document the January 25 Revolution (Shenker, 2011a), and a brief piece in *The Atlantic* (Madrigal, 2011). In a 2012 *Jadaliyya* article, Judy Barsalou acknowledges that "[d]igital technologies are now serving as platforms on which different versions

of history do battle daily" (Barsalou, 2012). In her analysis of the ways in which activists have "used historical narratives and memorialization to promote their diverse agendas," the collection of digital material is one among a range of strategies she explores. However, little academic work has problematized *memory* of the Egyptian revolution as contributing to technological narratives of the Arab Spring.

The previous chapter closed with a scene from a Downtown concert in 2014, in a country on the cusp of another electoral transition. At such a turning point in historical time and in this thesis, we should reflect on the memory of the Egyptian revolution and to consider how we will historicize the Arab Spring. What will be our sources? Who will be our curators? Where will our archives be located? As this chapter will explore, the answer is rooted in the inconspicuous, everyday technologies that have also contributed to revolutionary mobilization. Like ICT-enabled mobilities in public space, online curfew transgressions, and collective public art initiatives, the digital archives of the Egyptian revolution are paradoxical sites of utopic promise, complacency, resistance, preservation, and erasure, created and preserved in the everyday traversals of ICT users between the online and the offline. While the unique characteristics of the political and technological moment of revolution present unprecedented opportunities to retain, save, and remember multi-media artifacts, they also encompass a shocking potential for loss, deletion, and forgetting.

The stories of the digital archival projects emerging from the 2011 Egyptian revolution follow similar trajectories, beginning with ambitious vision and design but succumbing to converging virtual and physical immobilities. This chapter will examine several expressly "archival" projects that emerged after the revolutionary moment, from state-sanctioned institutional initiatives (the Committee to Document the January 25 Revolution) to grassroots collectives (*Mosireen*) in order to explore the differences and similarities between their archive stories. This is an exploration of the creation, provenance, and use of

these archives in the post-revolution context. Other approaches to the issue of transdimensional archives might perform extensive content analysis from *within* the archives themselves. But here I want to highlight how these archives were made possible and also, in some cases, thwarted by transdimensionally mobile practices. These efforts to actively collect, save, and curate the digital material produced through the revolution follow the perverse curvature of the revolution's historical arc, and they depended on movement between online and offline spaces. The limitations of these digital preservation projects have become more pronounced in recent years, such that these flawed technologically mediated memory projects must themselves be historicized, problematized, and contextualized. They point to the embeddedness of technology in this particular political moment.

A greater understanding of the online-offline dynamics of digital forgetting in Egypt illustrates the broader significance of Twitpic's unceremonious near-expiry. The agents of forgetting in the revolutionary moment are numerous and operate between the online and the offline. They are *mechanical*, as technological devices and platforms succumb to the limitations of their digital architecture. "The finite lifetime of information is implicit to the protocols on which the interconnected and dynamic totality of virtual culture relies" (Mackenzie, 1997, 59). They are *political*, as counterrevolutionary voices swell in spaces that were once bastions of revolutionary fervor, and new regimes of law and order actively erase the physical traces of the revolution. They are *individual*, as activists, protesters, witnesses, and bystanders lose their own records or simply lose the will to maintain them out of exhaustion or fear. And these agents of forgetting are also *commercial*, as in the case of Twitpic, which perfectly demonstrated how "taking memory out of the hands of specialists, diffusing its practices over time and space, runs the risk of merely privatizing rather than really democratizing it" (Gillis, 1996, 19-20). All of these forces act on the digital archival projects explored here. Where the affordances and limitations of digital archival technologies intersect with the exigencies of the revolutionary moment,

digital forgetting becomes as facile and ordinary as clicking to save.

Earlier chapters have touched on the issue of the technologically aided preservation of digital material—from photographs and text messages to tweets. In the digital age, preservation is almost inextricable from production, and digital content is labeled with metadata that organizes it and makes it searchable (Beer & Burrows, 2013). In Chapter 3, activists used mobile phones to "witness" events as they happened, documenting their protest experiences in order to preserve a reliable record of the circumstances and often retaining a personal archive of footage. Chapter 4 implicated the act of everyday documentation in practices for coping with boredom. What might otherwise be a distinctly individualist and offline experience, became a public display, saved and shared on social media platforms, such as Instagram and Twitter. As Instagram founder Kevin Systrom once said, "When I think about what Instagram is, I think about moments. [...] We're forever on a quest to take a moment and record it forever in time" (Buchanan, 2013). In Chapter 5, the recording and documentation of street art and musical performances became a priority, especially for small grassroots art projects, which allowed these performances to be shared beyond the physical spaces in which they occurred and to be preserved virtually, a more long-lasting record of ephemeral public performances.

The platforms, devices, and ICT mediation that have featured in the transdimensional realization of the Egyptian revolution enable, in their architecture, nearly simultaneous production and preservation. They are the mechanical processes by which the everyday is brought into history-making. The ease of preservation via ICTs means that at least on the individual level, it requires barely any forethought to save digital traces (Burton, 2005). Further, memorializing the trivialities of everyday life can be valuable, expressive, even subversive, but it also makes it difficult to determine what is worth observing or preserving. Is a curfew, for instance, as worthy a subject of documentation and preservation as a protest? States have traditionally been the owners and

collectors of archives, but they have rarely taken an interest in the trivialities of everyday life, so there is little precedent for what is to be done with digital artifacts that blur the lines between the trivial and the significant, personal and collective interest (Rosenzweig, 2003). Transdimensional mobility between the online and the offline produces digital artifacts as well as the spatial geography in which they can be found; mobility between dimensions is a constant interplay of production, consumption, *and preservation*, all contributing to what Featherstone (2006) calls life "lived in the shadow of the archive."

It is not enough to take for granted, as previous chapters have, the creation and availability of digital records that inform collective memory and sustain scholarly methodologies. We get so caught up in what *is* there—observable, analyzable, collectible—that we fail to interrogate what is *not*. This oversight is caused, in part, by lingering strands of technological and orientalist essentialism situated in the *archive*. So while previous chapters have implicitly dealt with production and preservation of digital artifacts, this exploration of digital archives of the Egyptian revolution addresses obsolescence, omission, and deletion. Disparate fields of scholarly inquiry, from library sciences to Middle Eastern and media studies, have each contemplated the archive and, more recently, the implications of digital production for long-term preservation and storage, but these fields have rarely come together to consider the same research questions. This chapter brings these different disciplines into conversation with one another in order to address the unique characteristics of digital archives of the revolutionary moment. The characteristics of ICTs and the characteristics of the political moment together impact the ways the Egyptian revolution is being remembered and forgotten.

A Note on Terminology

In this chapter, I use the term "digital artifact" to refer to any technologically mediated material that exists as a digital trace, in line with Gehl, who has also

employed this encompassing term to examine the digital archive (Gehl, 2011). I choose to refer to the content of digital archives as "artifacts" for two reasons. First, the term is evocative of the familiar nomenclature of archives and museums, storage facilities that aggregate historical documents and items. There is a tendency in media studies to invent new terminology to capture the semantic nuances of our technologically mediated lives. While this can be useful, it also has the unintended effect of distancing our analysis and discussion from the more "familiar" vocabulary of analog times. It isolates the digital age and media research, treating the digital age as a distinct break from the past. By contrast, it can be useful to apply and expand the definition of these familiar concepts, such as "artifacts," to draw attention to the ways in which digitally mediated practices exist on a continuum with analog practices. Technology and mechanization processes have always influenced the production of archival material, and digital artifacts face many of the same challenges of encoding and obsolescence as other mechanically-produced and -preserved content (Rosenzweig, 2003). Because the digital age presents certain unique challenges to the aggregation of a revolutionary archive, using archival language allows for a more critical lens to be applied—what is the *same* and what is *different*?

Second, "artifact" is used here as an encompassing term, capturing the wide array of digital content that may be stored in a digital repository. The distinctive categories traditionally applied to archived material—documents, photographs, microfilm, painting, and so forth—do not distinguish digital content quite so easily. Where material attributes differentiate physical objects, digital "objects" are not materially classified in this way. They have the same internal architecture, so all digital content (regardless of type) can be stored in the same repositories because different "objects" (videos and blog posts, for example) are universally encoded as data (Manovich, 2001; Rosenzweig, 2003). It is in part because of this feature of digital content that the relationships between different digital "objects" are problematic in creating a vocabulary for digital archives. Any artifact in electronic

form allows an observer or reader to instantaneously move to (or search for) to another, related artifact (Featherstone, 1998, 920). Of course, it is important to recognize that there is also a distinction between *digitized* artifacts, which are physical artifacts that have been made digital, and *born-digital* artifacts, which originated as digital traces. In being converted into the same underlying language, digitized and born-digital artifacts can also be brought into conversation and connection with one another in new ways. In fact, creating archives that encompass *both* digitized and born-digital artifacts is seen by many revolutionary archival projects as part of the process of democratizing and expanding their archives.

Great attention has been paid to the impact of the digital age on "texts," with a particular focus on the disruptive effects of *hypertext*, or a system of cross-referencing and linking between texts and other material (McKnight, Dillon, & Richardson, 1991; Tyrkkö, 2007). Implicit in these discussions of hypertext is a recognition that hypertext does not just allow a digital text to reference other texts and objects but to actually make those referents *part of the text*. A full discussion of digital textuality exceeds the remit of this chapter, but for all of the reasons briefly outlined here, the term "artifact" is intended to more holistically encompass not only the internal complexity of digital texts and objects but also their possible relationships to one another. In fact, the term "artifact" has also been adopted by the Internet Archive (The Wayback Machine, 2015), a U.S.-based non-profit archive initiative, which partnered with the Bibliotheca Alexandrina in Egypt in 2002 to provide a "recorded memory of the all the web pages on every website on the Internet" (Bibliotheca Alexandrina, 2015). There is reason to consider whether the longstanding language of museums and archives deserves further deconstruction in light of postmodern critiques of institutions and their lexica, but for the purpose of this chapter, a broad understanding of the term "artifact" has greater value than its thorough disaggregation.

Archival Origins of Technological Orientalism

Previous chapters have addressed how *technological orientalism* and its corollary essentialist imaginaries, from technological utopianism to ICT4D, pervade discussions of technology and the Arab Spring. Within technological orientalism, two essentialist-idealist perspectives converge: one, which holds that the technological developments of the digital age, notably micro-computing and computational cybernetic networks, represent a distinct break from the technologies of the analog age and provide unparalleled opportunities for non-hierarchical organization and democratic participation; and another, which holds that the countries and societies of the "non-West" are undeveloped, politically stagnant, and homogenous. Technological orientalism infiltrates many popular discussions of the Arab Spring, which focus on the role of "liberation technologies" in galvanizing protests, under the assumption that "specifying the boundaries of networks would reveal politically meaningful relations" (Howard, 2010, 31). In other words, more complex readings of unfolding events could be reduced to how technology tipped the balance. To quote Mackenzie (1997):

> This thinking can happen via a dogmatic reduction of the networks to a medium of communicative communion. But it can also happen through proclamations of the novelty and revolutionary import of the virtual as liberation from the restrictions of the past. In both cases, the virtual is reduced by thinking that we know its limits, that we can perceive what lives in it, and what separates and closes it off from what it is not. (Mackenzie, 1997, 60)

As in previous chapters, it is important to treat each encounter with "the virtual" as one in which the limits must be explored and interrogated—in which ethnographic enquiry extends to the ICT tools as much as the ICT users themselves. In the case of digital archival practices, we must explore the essentialist assumptions that creep into our conceptions of digital technology for preservation and what

those assumptions mean for our understanding of the Egyptian revolution, an unprecedentedly technologically mediated spectacle, where, in Debord's view,

> [i]mages detached from every aspect of life merge into a common stream, and the former unity of life is lost forever. Apprehended in a partial way, reality unfolds in a new generality as a pseudo-world apart, solely as an object of contemplation. (Debord, 1994)

Indeed, representation of the Orient in traditional, paper archives contributed significantly to the foundations of orientalism and the objectification of the Orient in history (Said, 1979), and such processes of appropriation and objectification are at work in transdimensional archives as well. The treatment of digital archives as a break with the past, a new kind of preservation process, fills them with promise for archive creators and visitors alike. Perhaps these archives will be more democratic, more representative, more permanent, more accessible than the physical archives of the past. In fact, the digital archives, like their analog predecessors, engender their own representations and exclusions. However, there are notable similarities and differences in how digital archives abstract reality, and I will explore some of these below, as they are also the basis of assumptions about digital memory that conceal the forces of loss and forgetting.

Although the excessively euphoric and techno-centric language used to discuss the Arab Spring and the Egyptian revolution has largely been put to rest, we must continue to apply a critical perspective to issues of technology, politics and power as they pertain to the transformations underway in the Middle East and beyond. The tendency to conflate the new with the revolutionary and the digital with the democratic always persists. In conversations with some of Egypt's revolutionaries, the promise of perfect preservation and documented proof held particular allure, as the January 2011 revolution slips further into the past, and a rapid succession of different political regimes cements an impression of Egypt in tumult rather than Egypt in revolution. Because the boundaries between the online and the offline are blurry (and increasingly, illusory), we are prone to

artificially delineate binary zones: the virtual and the material. These dichotomies do not reflect the real ways in which people experience, use, and produce digital content, and they hinder our efforts to make sense of digital history-making. This process occurs in the messy interaction of the online and the offline and in the transdimensional production of and visitation to the archive.

Before introducing several archive projects of the Egyptian revolution, I will offer a brief overview of some of the expectations and criticisms associated with digital archives, as these archival initiatives in practice often wind up confronting these very tensions between the promise and disappointment of ICT-mediated memory preservation. The Egyptian revolution will be remembered and recorded through multi-media artifacts. The ease of production, dissemination, and consumption of digital content in the Internet age means that there will likely be more digital artifacts of the Egyptian revolution than there have ever been analog artifacts of any prior historical moment. The speed, intensity, and global interest in the Arab Spring have provided an incredibly important opportunity to consider the ways in which technology and new media will factor into practices of remembering the revolutions. But "[e]mbedded within much technological discourse is a utopian, techno-centric belief in an infallible memory-machine, in contrast to a notionally capricious, context-dependent and therefore fallible human memory" (Van House & Churchill, 2008, 296). The digital memory machine—ICT-assisted archiving—seems to offer an antidote to some of the most problematic characteristics of archives and memory. Now there is no limit to what can be saved, so we can save everything; archives can be anywhere and nowhere, accessible online rather than in a fixed geographic locale; everyone can be an archivist, and different versions of the same history can vie for credibility; authority to save, catalogue, and retrieve can be mechanized and isolated from human subjectivity. But these assumptions fuel technological orientalism; as our faith in the classical archive is eroded, our reliance on the digital archive may intensify. When we look to the digital archive and digital traces to make sense

of the Arab Spring, three key assumptions about digital archives tend to privilege remembering over forgetting, and, therefore, also expectations about the reliability and authority of digital artifacts: the limitless quantity of available artifacts, the wide participation in archive creation and interpretation, and the imperishability of data.

The Limitless Archive: Selectivity, Inclusion, and Space

Heidegger described the modern age as marked by the arrival of the gigantic and the incalculable (Heidegger, 1977, 135). Digital ICTs have rendered this observation more prescient with every new technological development, pushing the limits of size, space, and time to otherwise unimaginable extremes. Humans now produce an enormous amount of data, as more and more aspects of our lives are digitized. We have moved, according to Rosenzweig (2003), from an era of scarcity of historical records into one of overwhelming abundance. As immaterial "bits," data is supremely storable, and from the outset, storage has been an integral part of modern computing; it is built into the very architecture of computers (Gehl, 2011). This means that ICT users are constant, often unknowing, creators of data archives all the time. In other words, "remembering has become the norm, and forgetting the exception" (Mayer-Schonberger, 2011, 52). Further, because we are constant creators of data, we tend to save all of it indiscriminately, an impulse that perhaps merely lacked the mechanics to bring it about (Gillis, 1996; Nora, 1989).

As the boundaries between individual and collective artifact preservation become increasingly blurred by greater access to personal ICTs, defining the parameters of digital "archives" becomes correspondingly more difficult. The digital age is defined by "convergence," the ability of technologies and platforms to perform many different tasks at once, using the same fundamental architecture and infrastructure. As a result, any technologically mediated accumulation of data traces begins to converge in the archive. Every e-mail account, every blog, every Facebook page is its own archive; there are countless, distributed archives

of potentially meaningful data. Because everything digital *can* be saved, digital repositories (from laptop hard drives to server farms) are glutted with the debris of mediated, everyday lives, raising questions about what constitutes an archive or an archival project. The very fact that we could consider the *We Are All Khaled Said* Facebook page to be an "archive" in itself deserves consideration. Although the page may be used in organizing, information dissemination, and memorialization, it may also be a site of archival practices on the part of page administrators and even page visitors.

Presented with a montage of such traces in increasingly incalculable proportions, the viewer or reader of the digital archive must rely on the in-built mechanical processes to make sense of it, order it, and recall it. An effect of this preservation impetus has been a deference to the authority of computational memory and the selective mechanics of algorithms in order to search and categorize vast quantities of digital content (Van House & Churchill, 2008; Beer & Burrows, 2013; T. Gillespie, 2016). In other words,

> [b]ecause of such practical concerns in modern technicist cultures, the explicitly political *who* is often reduced to the technically instrumental *how*—that is, political-moral questions are displaced to nonmoral and nonpolitical technical discourse. (R. H. Brown & Davis-Brown, 1998, 18)

In this context, the authority traditionally (if problematically) vested in the archive and the curator is resurrected in the authority of the algorithm. The authority now situated in digital technologies carries out to an extreme degree the transformation described by Sekula in reference to photographic collections, where

> the spectator comes to identify with the technical apparatus, with the authoritative institution of photography. [...] the machine establishes its truth, not by logical argument but by providing an *experience*. (Sekula, 2003, 448)

As time and space are compressed by ICTs, the desire (and capacity) to preserve a present that will almost instantaneously become past have intensified, and "the scale of collecting increases in inverse proportion to our depth of perception. Now that old is equated with yesterday, we allow nothing to disappear" (Gillis, 1996, 15). This perception of digital archives allowing universal preservation of *everything* is persistent if flawed. Writing in 1989, historian Pierre Nora reflects that

> [m]odern memory is, above all, archival. It relies entirely on the materiality of the trace, the immediacy of the recording, the visibility of the image. [...] [H]ence the obsession with the archive that marks our age, attempting at once the complete conservation of the present as well as the total preservation of the past. (Nora, 1989, 13)

This compulsion to save, collect, and display has indeed been made easier and more distributed by digital technology. In Chapter 3, images recorded on mobile devices were valued as evidence that protests occurred and acts of repression were witnessed. This "memobilia," as Reading (2009) calls it, allows memories to be recorded and saved while moving and for an archive of those memories to be "wearable." The importance of the mobile phone as a recording device was predicated on its production of "material traces," even as those traces defy the physical laws of tangible *things*. What Derrida (1995) described as "archive fever" has become a pandemic, but a wonted one, so commonplace it is built into the very infrastructure of new technologies. But the ease of storage and the perception that nearly everything can be "saved" suggests a completeness of the archival record that is misleading. Whereas traditional archives have come to be understood as limited collections, representing only *what has survived* or *what was deemed historically valuable* in the face of forces of material degradation that act on physical artifacts, the quantitative immensity of digital archives suggests that everything is *there*.

The Democratic Archive: Bias, Participation, and Access

In contrast to pre-digital archives, stored in monumental structures and guarded by history-keeping elites, the vast digital archives enabled by ICTs and limitless storage can (theoretically) be created and maintained by anyone with access to digital technologies. Unlike the privileged record-keeping practices of the past, physically situated in institutions, where the most comprehensive archives are inextricably linked to legacies of power, class, and economics, democratization of *access* to ICTs has enabled a democratization of *production and preservation* in the digital age. “According to a rather optimistic view of the technology, the ‘distributed cognition’ of the Internet no longer is contained or owned by anybody in particular”(Lynch, 1999, 80). The closure of Twitpic should cause us to question how democratic the distributed archive can truly be, and, as digital archival projects from the Egyptian revolution will reveal, online archives are deeply entangled in offline inequalities. But however misleading the liberating promise of digital archives may seem, ICTs have certainly entrenched memory-keeping as a pastime of ordinary people.

Over centuries, documentary memory preservation has moved from being the preoccupation of elites toward being a more individualistic, private, and popular endeavor (Gillis, 1996). The embedding of digital preservation (saving) practices in everyday life (evidenced in previous chapters as users save digital records of their protest activities, artistic performances, and even moments of boredom) stands in opposition to more official narratives and centralized archival practices and institutions. In an era of pervasive computing, the everyday encompasses everything, from the trivial to the revolutionary. Thus, digital technology offers some opportunities to subvert the authority and hierarchy of institutional archives, and this has been a growing concern among archivists (Nesmith, 2002; Cook, 2007). Existing scholarship on archives and memory has critiqued and deconstructed the role of traditional archives in creating and presenting history. Archives have classically represented “official” collections of documents; the

archivist, as curator, makes decisions about what to retain and what to eliminate, so archives are also repositories of authority and power. It is an authority that is often obscured behind the apparent objectivity of material documents, objectivity that archives and archivists have a vested interest in maintaining (J. M. Schwartz & Cook, 2002, 6).

Indeed, "we may say that archives are the manufacturers of memory and not merely the guardians of it. It is not that archivists do not tell the whole truth about reality. It is that they cannot tell it" (R. H. Brown & Davis-Brown, 1998, 22). There has been a growing critique of traditional archives, in light of the influences of post-colonialism and post-modernism, which deconstructs their "objectivity" to reveal that "archives are as much products of historical struggle as they are primary sources for writing histories" (Lynch, 1999, 67). Much of this project to deconstruct the archive focuses on issues of authority, objectivity, and representativeness to reveal how archives have always been products of particular contexts and put to use in the exercise of power (Foucault, 1972). Recent scholarship that has criticized the *invention* of authoritative structures has encouraged archival studies to look inward and explore how archival practices enact certain biases and are not neutral (J. M. Schwartz & Cook, 2002; Manoff, 2004; Burton, 2005). This criticism, too, has been accelerated by the rise of digital technologies, where alternative recollections of events can be documented and shared widely, and where authority to "curate" is distributed rather than specialized and centralized in a designated official locale known as the "archive" (Rosenzweig, 2003).

Because more people can create both archival content and archives themselves, there is a perception that digital archives will be more representative and democratic than physical, analog archives, and this was a recurrent theme in interviews with revolutionary activists.

> This vision of democratic access also promises direct and unmediated access to the past. Electronic commerce enthusiasts tout

> ‘disintermediation’—which is the elimination of the insurance and real estate broker and other intermediaries—and the emergence of one like eBay made up of only buyers and sellers. In theory, the universal digital library might bring a similar cultural disintermediation in which people interested in history make direct contact with the documents and artifacts of the past without the mediation of cultural brokers like librarians, archivists, and historians. (Rosenzweig, 2003, 756)

In many ways, this view of digital archives is positioned in stark contrast to archival sites and practices critiqued in the last few decades. Those archives were distinguished (and criticized) as physical *places*, where both the site and its contents were curated to present an official narrative; the spatial experience of the archive was integral to its meaning and symbolism. Archives were specialized locations that contained a discrete, physical collection of documents, where visiting them may not only entail long-distance travel and special qualifications but also a tangible *experience* of entering, crossing a threshold into the archive (Derrida, 1995; R. H. Brown & Davis-Brown, 1998; Lynch, 1999). Thus, ICTs offer not only to democratize the making of archives but also the experience of visiting them.

To enter an archive has always been a spatial experience; one is meant to feel she is entering a special zone (Lynch, 1999). It is the archive’s spatial fixity that makes it available for perusal. “It is thus, in this *domiciliation*, in this house arrest, that archives take place. The dwelling, this place where they dwell permanently, marks this institutional passage from the private to the public” (Derrida, 1995). The physical archive creates a locale that invites visitors, but it often comes hand-in-hand with greater control. When the archive can exist in virtual space, access is less impeded by the physical immobilities and impositions of “offline” archives. As Rosenzweig critically articulates in the quote above, there is a perception that digital archives will enable direct access to digital artifacts in a manner that not only subverts the spatial experience of entering an archive but also evades the influence of history “brokers” who have traditionally held something of

a monopoly over what an archive *means*.

The spatial *experience* of archives can be understood by way of an example. In Cairo, using the Egyptian National Archives can be an ordeal. The archives, *Dar al-Watha'iq*, are housed in a monumental structure, the *Dar al-Kutub*, on the Nile Corniche, and viewing "sensitive" documents, which encompasses a wide range of historical material, requires a security clearance and an affiliation with an Egyptian researcher or research institution. The process to obtain permission can take an indeterminate length of time. Historian Lucie Ryzova describes how

> [m]uch of the historical material found in Egyptian archives is discovered by chance. These institutions are like libraries with no indexing systems and their objects like free electrons with constantly shifting locations, and this leaves them easy victims of loss, destruction, or theft. (Ryzova, 2014, 1033)

In this context, digitization presents possible antidotes to an exclusionary archival system that is already plagued by loss, deterioration, and inaccessibility. Indeed, "[m]any Egyptian intellectuals see in digital technology the solution to decades of deteriorating public education and academia, as well as the problems of storage, preservation, and access" (Ryzova, 2014, 1043). This expectation pervades both academic and activist revolutionary archive projects as well. Some of the drawbacks of digital records, including the flattening of context as disparate items are jumbled together as data points (which Ryzova duly notes in her discussion of digital image collections), seem less jarring when the available analog archives are similarly movable and disjointed. If the "database represents the world as a list of items which it refuses to order" (Manovich, 1999, 85), then Egyptian archives easily lend themselves to database logic. However, the risk of digital archival initiatives is their inherent *promise* of the democratization of content and access and the ways in which the potential for bias and exclusion is obscured.

The Infallible Archive: Perishability, Permanence, and Memory

Memory and forgetting have a long association with pre-digital archives (Foote, 1990; Klein, 2000). "Memory, like history, is rooted in archives. Without archives, memory falters, knowledge of accomplishments fades, pride in a shared past dissipates. Archives counter these losses" (J. M. Schwartz & Cook, 2002, 18). Still, memory and the archive have been at odds to some extent as cultural practices, often juxtaposed: memory as the subjective, individual, private recollection of the past and archives as the objective, collective, public repositories of history (Nora, 1989, 11). However, many theorists of the archive have drawn a clear connection between collective or national memory and archives (R. H. Brown & Davis-Brown, 1998; J. M. Schwartz & Cook, 2002; Stoler, 2002). In assisting with recalling memories, archives have often been perceived as "arbiters of truth" (Burton, 2005, 6), an assumption that has made their thorough deconstruction and demystification a significant postmodern project (Nesmith, 2002).

The fact that the concept of "memory" has featured prominently in relation to computing and digital technology is probably not surprising. Storage and retention of data have been integral concerns of modern computing since its inception, such that the term "memory" is used to refer to the capacity of computers to retain and recall information, and "archive" refers to the machine-assisted action of transferring data to a particular storage structure (J. M. Schwartz & Cook, 2002). An archival impetus is effectively built into the technological systems that distinguish the digital age from its pre-digital antecedents. It seems there is nothing more ordinary in the digital age than to save and retain everything. In fact, digital storage and retrieval have become so much part of the everyday, at least in the developed world, that we have become reliant on digital archives not just to assist in remembering but to *remember for us*. Modern computing offers the *potential* to remember everything that can be recorded as a digital trace, but the reality is often very different from the ideal. Data preservation also offers the promise of an *infallible* memory, where both the production of the trace and the process of

cataloguing and storing it are mechanized, creating an inhuman recollection to aid human memory (Garde-Hansen, Hoskins, & Reading, 2009).

Digital technologies have, in many ways, cheated the natural forces of degradation that plague analog texts and artifacts. In fact, the perceived imperishability of digital artifacts has recently been confronted with the assertion that perhaps data should be made *more* perishable. Growing public concern with the burgeoning "memory" vaults created by our personal data traces has manifested in a push-back that situates itself as contrary to memory: an assertion of the right to be forgotten (Mayer-Schonberger, 2011). Encoded as bits of data, digital artifacts evade the corrosive effects of warping, staining, mold, wear, and disintegration that threaten the longevity of tangible objects and texts. Their material integrity is ostensibly ensured by their immateriality, such that the imperishability of digital artifacts belies their susceptibility to manipulation, omission, and deletion. Assumptions about the permanence of digital artifacts emerge from the characteristics, affordances, and architecture of digital ICTs themselves, but they are not immune to degradation. As Rosenzweig (2003, 741) points out by way of illustration, "[p]rint books and records decline slowly and unevenly—faded ink or a broken-off corner of a page. But digital records fail completely—a single damaged bit can render an entire document unreadable."

Still, we have become dependent on ICT aids to memory.

> Human memory is fallible, easily distorted and open to loss and degradation on a social and neurological level. Media have been seen to supplement human memory, adding to and replacing the capacity for humans to remember in the face of their organic limitations. (Garde-Hansen et al., 2009, 11)

We increasingly expect technology to document and therefore *prove* that events really happened, as several of the activists quoted in Chapter 3 remarked. In mechanizing the production of artifacts (in the form of digital records) and their retrieval and retention (in the form of algorithms), ICTs seem to subvert the

authorial bias and curatorial distortion inherent in archives since time immemorial. So the digital trace and the mechanized, technologically mediated processes that produce it are the new archival authority.

> Dependent on several collective memories, but masters of none, we are only too aware of the gap between the enormous obligation to remember and the individual's incapacity to do so without the assistance of mechanical reminders, souvenirs, and memory sites. (Gillis, 1996, 15)

In this situation, we often defer to the digital artifacts created in the interaction between online and offline practices of production, sharing, consumption, display, and politics, but the limits of the technology and the characteristics of the political moment together impact the ways the Egyptian revolution is being remembered and forgotten.

Forces of Forgetting in the Archive

The forces of forgetting in this context are varied and derive from both the exigencies of the revolutionary moment (and its aftermath) and the affordances and limitations of the communications technologies that mediated it. In many ways, they are similar to forces of loss that have acted on traditional archives since their inception. These forces are at times political, commercial, and technological. And often, these categories overlap and intersect, compounding and accelerating the potential for erasure. Political factors, in this case, stem from the precarious revolutionary context in which digital practices of preserving, cataloguing and retaining have taken place. Rapidly changing offline conditions, including cycles of political freedom and repression, had a direct effect on even mostly online efforts to archive the revolution. Commercial factors come from the (political) economy of ICT use, and acknowledging them helps to conceptually ground ICT practices in tangible, offline infrastructures and economic systems of ownership. Finally, technological factors are determined by the characteristics and affordances

of the ICTs themselves, which simultaneously offer the opportunity to traverse great geographic distances, compress time and space, and create indelible data records while also presenting certain limiting restrictions based on the architecture of the technologies themselves. The archival attempts detailed in this chapter have all been confronted by a confluence of these factors.

Deletion and the Revolutionary Moment

Despite the affordances of digital technologies that facilitate remembering, digital archives, like their analog predecessors, cannot truly escape forces of forgetting that now operate both online and offline. Although Egypt's revolution erupted nearly as much online as in the streets, its appearance in cyberspace did not *de*-spatialize technologically mediated events. Thus, digital archives of the revolution have been subject to the influences of both online and offline contingencies. And as the forces of forgetting have acted upon the revolution in offline spaces in recent years, so too have they escalated in online spaces. Erasure, like efforts at preservation, has occurred transdimensionally as well. The lived experience of the revolution, then, is less an unproblematic recording of infallible ICT-mediated memory than a shifting and contested process of collecting, saving, cataloguing, and sharing digital material. Deletion online has accompanied deletion offline; erasure has occurred within and between virtual and physical dimensions. As other chapters have discussed, transdimensional mobilities are spatially creative, charting hybrid geographies between the online and the offline, a process that entails constructing new spaces and also destroying others. And the post-revolution period has also witnessed significant erasures and deletions on the part of various actors, the state chief among them, in an effort to write over the recent past.

Even before the revolution, the precarious nature of digital content housed in virtual spaces was occasionally made apparent. By November 2010, the Facebook page *We Are All Khalid Said* was a buzzing political space, and administrators had

already organized "silent stands," popular protests where people wore black and stood silently along major roads to protest the injustice of Khalid Said's murder. Two days before the parliamentary elections in November 2010, the page was taken down by Facebook, citing violations of Facebook's user agreement. Frantically, page administrators, including founder Wael Ghonim, tried to ascertain the reason for the page suspension. Users had reported the content as inappropriate, and Facebook also prohibits page administrators to be anonymous. With help from colleagues abroad and phone calls to Facebook offices, the page was restored with a "real" administrator, who then generously offered access to Ghonim, providing him continued anonymity (Ghonim, 2012). In the end, this suspension was temporary, but it was a formative confrontation over the freedoms and restrictions of digital space. Deletion, erasure, and forgetting have always threatened digital repositories, but they have become a pronounced part of the terrain (online and offline) of everyday life in Egypt after the 2011 revolution.

Alongside President Sisi's rise to power, the military-bureaucratic complex behind the transitional government between 2013 and 2014 began an active campaign of spatial and bodily deletion. Erasing the revolution from the streets became a preoccupation that perpetrated violence against the physical geography of Cairo (and, indeed, the rest of Egypt) as well as the digital geographies of resistance that had been charted online since long before 2011. Some of these deletions were conspicuous and brutal—the forced eviction of peaceful protesters from Raba'a al-Adawiyya Square, for instance—and others were gradual—the growing pro-military support in Facebook pages like that of *Tamarod*, where comments in 2013 quickly turned toward praising the leadership of then Defense Minister Sisi. As more counter-revolutionary voices joined the Internet platforms of the revolution, from blogs to Facebook, activists increasingly retreated into information bubbles. In interviews as early as 2011 and 2012, politically active Internet users discussed Facebook and Twitter platforms as though they represented political factions. According to Taha, for instance, a socialist and member of the

Tagammu' party, the leftists were on Twitter. The Muslim Brotherhood were taking over Facebook. Everyone had an opinion on Facebook, but the real political minds were focusing on Twitter.[1] From these conversations, greater online participation was resulting in less an online meeting of diverse perspectives for dialogue and debate than a self-segregation into safe "territories" on the web and selectivity about where to go for information. Online spaces were noticeably changing, and these transformations were writing over the digital landscape of the revolution.

The removal of President Morsi from power was depicted by some, and particularly by the military regime, as a continuation of the 2011 revolution—the full realization of the promise of January 25. Battles were raging in the streets between protesters and security forces, and cultural battles were being waged over the legacy of those 18 days in 2011 (Barsalou, 2012). The spatial effacing of the revolution has been at work in city streets and online since 2011. In the immediate aftermath of the 2011 revolution, Cairo's downtown walls had become canvases for numerous graffiti artists to paint their narratives of revolution—images of martyrs, anti-government slogans, colorful and inspirational murals, and more. Almost immediately, a campaign of "white-washing" began, with walls being painted over in the night. Bloggers, artists, activists, and journalists decried the erasure online, seeing it as an attempt to obliterate the memory of the revolution (Morayef, 2011b, 2011a; Zeinobia, 2012). In response, Zeinobia, the blogger behind *Egyptian Chronicles*, did what many frustrated observers did: she posted images of what the walls *used to* look like in defiance of the blatant erasure. In 2012, she wrote:

> [H]ere is my photo gallery for the Graffiti murals painted right after Mohamed Mahmoud clashes in November 2011 and in February 2012 after the horrible Port Said massacre. They are not the best photos but it shows you a glimpse of how beautiful and artistic Mohamed Mahmoud graffiti murals were. (Zeinobia, 2012)

As graffiti artists re-painted the walls with new, defiant art, photos of previous

[1] Personal interview with Taha, 23 September 2011.

artwork appeared online. Cairo's graffiti faced repeated "deletions" that were documented and combatted both online and offline. Many graffiti artists welcomed the whitewashing, seeing the erasure as a blank canvas waiting to be filled. They also recognized the ephemerality of street art, which they also saw as intrinsically tied to digitization. The paintings were temporary, but their real permanence would be in galleries online.

But painted walls were not the only sites of erasure, and this erasure was perpetrated by many different actors—the state, protesters, activists, ordinary people, security forces, police, and others. Acts of deliberate offline, spatial erasure were also a subversive protest tactic. At the height of demonstrations on January 28, 2011, protesters stormed and torched the National Democratic Party headquarters, the towering symbol of President Mubarak's ruling party that stood a short distance from Tahrir Square, next to the Egyptian Museum. However, this destructive act was followed by the appearance, online, of scanned "secret" documents, allegedly removed from the NDP building and other government departments during the revolution, on a website called *25Leaks.com*. Out of this destructive act came a new preservation project—a publicly available archive of state security documents. In a promotional video for the document-hosting website shown in Figure 6.3, *25Leaks.com* offers some insight into the impetus for "digitizing" these documents, saying that in spite of physical wreckage, "some documents don't deteriorate." This would be a theme among archival efforts emerging form the revolution—in the midst of destruction, caused by both protests and security crackdowns in turn, digital repositories offered an opportunity to defiantly *preserve* a digital record, even of artifacts that were originally physical, paper documents.

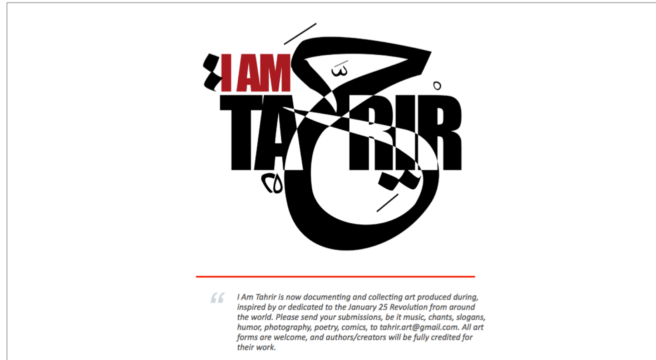
In November 2013, a hasty monument was erected in Cairo's Tahrir Square, unveiled in an ostentatious ceremony featuring a brass band and waving flags (Kingsley & Chulov, 2013; Rayman, 2013). Just hours later, protesters tore down this structure that attempted to write over the topography of Tahrir (Mackey

Figure 6.3: A frame of a *25Leaks* promotional video from YouTube.

& Stack, 2013). The monument was short-lived, but other erasures have been long-lasting and more difficult to reverse. Many activists who flooded the streets of Cairo in 2011 and 2012 have been arrested; others have left the country and are now living in exile. There was growing concern regarding forced disappearances and arbitrary detention (Nader, 2015). In one way or another, the people themselves who participated in Egypt's 2011 revolution are being deleted from public space. The Muslim Brotherhood was outlawed by court order in 2014, and political parties face restrictions on membership (BBC, 2014). New laws threaten independent journalism and the registration of non-governmental organizations (BBC, 2015; Amnesty International, 2016).

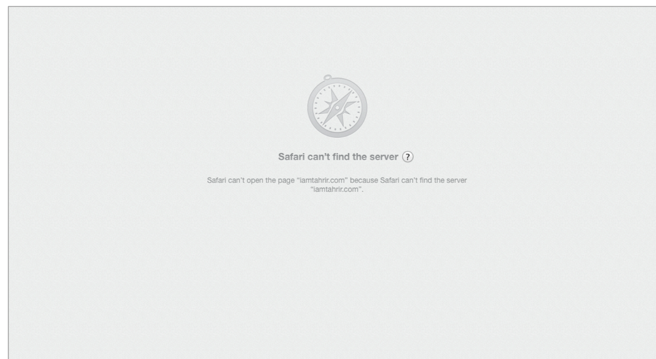
Both online and offline, deletion is not always overtly political. Time alone changes the geography of both physical and virtual spaces. Where the web space *IamTahrir.com* once hosted a website for aggregating revolutionary art in 2011, a Thai blog about football had appeared in 2012. In 2014, the actual Tahrir Square reverted to a construction site, not for a new revolutionary memorial but for a parking garage, a long-awaited continuation of a project started before 2011.

From the outset, a powerful politics of online and offline deletion has taken place in Cairo alongside the burgeoning production and preservation of digital artifacts online, many documenting these very deletions or attempting to counter them. I first contacted Adel in 2014, after he had been working to document arrests



(a) February 2011-February 2012

(b) July 2012-March 2014



(c) April 2014-Present

Figure 6.4: The website for the *I Am Tahrir* archive project over time at www.IamTahrir.com.

and deaths during the post-revolution period for several years on a website known as *WikiThawra*. The politics of deletion were a motivating factor in his creation

of the *WikiThawra* database. "For example, some NGOs who were documenting the killed people during the 18 days, they just removed the killed people of the security [services]," Adel said. "And the official institutions, they have their own martyrs, and they just deleted the other ones. So it's a big problem that faces us." Vocabulary alone entailed perceived erasures.

> We were facing a lot of problems and arguments with our friends, with our parties. They just told us, hey why are you using this vocabulary to describe our martyrs? He's not a 'killed one,' he's a martyr. And the other party, which was from the security, he's a killed one, and he has no rights. He deserved to be killed.[2]

Adel and others once described the wiki as a "collective memory," but one which ultimately required curation and management.[3] In order to preclude the possibility of future deletions, he had to limit access to the editing features of the site. Thus, online initiatives geared toward preserving revolutionary artifacts have been taking place in the midst of a constant, everyday struggle between saving and deleting. And the escalating political repression that followed President Morsi's ouster exacerbated the forces of forgetting. Digital archives of the revolution anticipated the need to resist deletion and erasure from the beginning, but situated in the revolutionary moment and located in the revolutionary city, they have not been immune to the fierce conflict inherent in history-making. As Benjamin once observed in an earlier, pre-digital age, "every image of the past that is not recognized by the present as one of its own concerns threatens to disappear irretrievably" (Benjamin, 1968, 255). New technologies alone did not make the revolution, and for many reasons—technological, political, and commercial—they may not be able to save it, either.

[2]Personal interview with Adel, 11 August 2016.
[3]Personal interview with Nadia, 28 October 2014.

Online/Offline Memory and Forgetting

This chapter focuses on digital archive projects that were established in the first place for the purpose of documentation, preservation, and memory. They explicitly concerned themselves with the question of the "archive" in light of the vast amount of digital (and non-digital) content produced during Egypt's 2011 revolution, so they provide important insights into the centrality of active archiving to the revolutionary moment. These projects show a recognition and reverence for the legacy of the classical archive—Derrida's "domicile"—where visitors or users have an experience of visiting a curated collection. They articulate concerns about memory and loss, authority and subversion, and they were conceived, in one way or another, as remedies to the forces of forgetting that have forever acted on history's archives and were therefore destined to act on the revolutionary moment as well.

These archival projects are important units of analysis because they problematize the archive and the practices of collecting, disseminating, and cataloguing that underpin it. They actively engaged with the archival impetus behind saving a record of the revolution. Such projects represent a critical starting point for interrogating how the Egyptian revolution will be remembered and forgotten through its digital artifacts. Moreover, because these projects were actually concerned with saving certain digital traces, and they suffered important setbacks, we can only imagine the potential for loss inherent in less concerted archival efforts. These projects range from the official (an initiative of the Egyptian National Library) to the grassroots (a film collective of artists and activists). Their goals vary from the dispassionate collection of the widest possible range of artifacts to the subjective aggregation of evidence to support a cause. Some treat the archive as fundamentally a site of preservation, others as performance art. Yet, they share a preoccupation with memory, with the technological production of "artifacts," and with the temporality of the revolutionary moment. Together, they demonstrate how the revolutionary archive is circumscribed by the ordinariness of ICT-enabled

preservation and the exigencies of political context.

National Archives and the Bibliotheca Alexandrina

President Mubarak had only just resigned when the Committee to Document the January 25 Revolution began to assemble. Khalid Fahmy, then Chair of the History Department at the American University in Cairo (AUC), took a call from the head of Egypt's national archives, who asked that Fahmy begin planning a project to document the January 25 revolution (Mourad, 2011). A team of volunteers started to organize, and initial news reports indicated that the body included academics from various Cairo universities, information technology specialists, and some activists (Dougherty, 2011; Shenker, 2011b). The project was wide-reaching and only loosely defined, but it reflected an early concern among academics and public officials for the memory of the revolution. Creating a national archive seemed more than just a good idea; it was imperative.

As a recognized public intellectual at one of Cairo's preeminent institutions, Fahmy headed the committee and quickly became its spokesman. In interviews, Fahmy repeatedly stressed that the goal of the archive was not storytelling but historical preservation, seemingly pre-empting criticisms that were likely to swirl around such an ambitious project during such a politically charged moment. The Committee would have no narrative or political motive; they were collectors of artifacts, and they wanted to collect the widest possible range of material. Further, technology and the technologically mediated artifacts of the revolution were immediate concerns for the Committee. In a 2011 interview published in the newspaper *Al Ahram*, Fahmy is quoted saying,

> We're not only concerned with collecting material, but also about storage, retrievability and accessibility in the future when technologies are upgraded. This concern is leading us to think a lot about what we are going to do with the material we gather. Our thoughts about how to divide, categorise, tag and link material are making up a lot of the

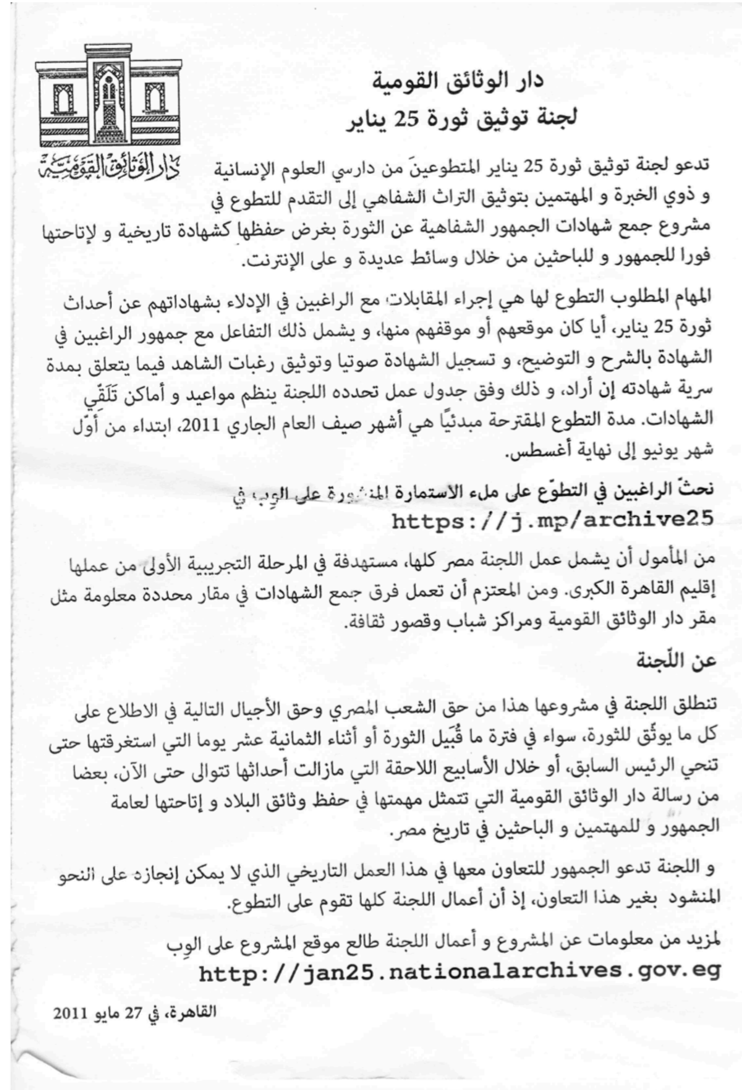
effort. (Mourad, 2011)

It was an acknowledgement of the mediated moment—the Egyptian revolution had produced an unprecedented amount of digital content, and the producers and users of the archive were likely to need access to revolutionary memories in the form of *data*. In March 2011, AUC published a Facebook note on their Arabic Facebook page in which Fahmy is quoted on the importance of preserving digital artifacts: "these websites or video clips may be deleted with the passing of time" (The American University in Cairo, 2011c).[4] Deletion—both offline and online—was an ever-present concern for the Committee to Document the Revolution.

The final product would be a digital archive—a website—in an effort not only to accommodate the vast quantity of digital artifacts that would natively integrate into an online domicile but also to anticipate the end user, likely a digital ICT user for whom ICTs have become part of the fabric of everyday life. The website would also subvert and disrupt the limiting characteristics of the traditional, physical archive: in contrast to some collections in Egypt's National Library and Archives, this January 25 web archive would not require a security clearance, and it would be open to a global public, who could visit at all hours of the day, all over the world, by way of an Internet connection (Mourad, 2011). The digital archive would also collect more than exclusively born-digital artifacts; it would actively *digitize* memories of the revolution in the form of oral histories. Figure 6.5 displays a call for volunteers and participation in the Committee from May 2011, outlining responsibilities and tasks, which included interviewing people about their revolution experiences and collecting oral histories.

Many early Committee members came from large universities with prestigious academic backgrounds; they exemplified the concentration of authority and expertise that typified guardianship of classical archives. The Committee was made up of academics, intellectuals, government-appointed officials, and IT experts. But from the outset, the Committee sought to counter a tendency of

[4]Translated by author.



دار الوثائق القومية
لجنة توثيق ثورة 25 يناير

دار الوثائق القومية

تدعو لجنة توثيق ثورة 25 يناير المتطوعينَ من دارسي العلوم الإنسانية و ذوي الخبرة و المهتمين بتوثيق التراث الشفاهي إلى التقدم للتطوع في مشروع جمع شهادات الجمهور الشفاهية عن الثورة بغرض حفظها كشهادة تاريخية و لإتاحتها فورا للجمهور و للباحثين من خلال وسائط عديدة و على الإنترنت.

المهام المطلوب التطوع لها هي إجراء المقابلات، مع الراغبين في الإدلاء بشهاداتهم عن أحداث ثورة 25 يناير، أيا كان موقعهم أو موقفهم منها، و يشمل ذلك التفاعل مع جمهور الراغبين في الشهادة بالشرح و التوضيح، و تسجيل الشهادة صوتيا وتوثيق رغبات الشاهد فيما يتعلق بمدة سرية شهادته إن أراد، و ذلك وفق جدول عمل تحدده اللجنة ينظم مواعيد و أماكن تَلَقِّي الشهادات. مدة التطوع المقترحة مبدئيًا هي أشهر صيف العام الجاري 2011، ابتداء من أوّل شهر يونيو إلى نهاية أغسطس.

نحثّ الراغبين في التطوّع على ملء الاستمارة المنشورة على الوِب في
https://j.mp/archive25

من المأمول أن يشمل عمل اللجنة مصر كلها، مستهدفة في المرحلة التجريبية الأولى من عملها إقليم القاهرة الكبرى. ومن المعتزم أن تعمل فرق جمع الشهادات في مقار محددة معلومة مثل مقر دار الوثائق القومية ومراكز شباب وقصور ثقافة.

عن اللّجنة

تنطلق اللجنة في مشروعها هذا من حق الشعب المصري وحق الأجيال التالية في الاطلاع على كل ما يوثّق للثورة، سواء في فترة ما قُبَيل الثورة أو أثناء الثمانية عشر يوما التي استغرقتها حتى تنحي الرئيس السابق، أو خلال الأسابيع اللاحقة التي مازالت أحداثها تتوالى حتى الآن، بعضا من رسالة دار الوثائق القومية التي تتمثل مهمتها في حفظ وثائق البلاد و إتاحتها لعامة الجمهور و للمهتمين و الباحثين في تاريخ مصر.

و اللجنة تدعو الجمهور للتعاون معها في هذا العمل التاريخي الذي لا يمكن إنجازه على النحو المنشود بغير هذا التعاون، إذ أن أعمال اللجنة كلها تقوم على التطوع.

لمزيد من معلومات عن المشروع و أعمال اللجنة طالع موقع المشروع على الوِب
http://jan25.nationalarchives.gov.eg

القاهرة، في 27 مايو 2011

Figure 6.5: Scanned paper call for participation in the Committee to Document the January 25 Revolution archival project, retrieved from Tahrir Documents.

deferring to "experts" by publicly placing emphasis on digital artifacts and online access to counter the hegemony of traditional, fortressed archives and actively inviting participation via a Gmail address and a Google form (Figure 6.6), which was available by following the URL provided in the document in Figure 6.5.

The online portal provided an opportunity for anyone—with an Internet connection—to not only contribute but even to contact the archival committee.

مشروع توثيق ثورة 25 يناير - دار الوثائق القومية

حرصا من دار الوثائق القومية على التوثيق لثورة 25 يناير، فقد شكّلت لجنة لتنفيذ مشروع يهدف إلى جمع المادة المتعلقة بالثورة لإتاحتها لاحقا للجمهور. و اللجنة تدعو الجمهور للتعاون معها في هذا العمل التاريخي الذي لا يمكن إتمامه على النحو المنشود الذي يتفق مع جلال هذا الحدث التاريخي، بغير هذا التعاون، واثقة أن مشروعها يهم كل مواطن ومواطنة شهدت هذا الحدث.

تنطلق اللجنة في مشروعها هذا من حق الشعب المصري – صاحب الثورة ومفجرها – وحق الأجيال التالية في الاطلاع على الوثائق و الصور و الأفلام و الشهادات المتعلقة بشتى نواحي الثورة، سواء في فترة ما قُبَيل الثورة أو أثناء الثمانية عشر يوما التي استغرقتها حتى تنحي الرئيس السابق، أو خلال الأسابيع اللاحقة التي مازالت أحداثها تتوالى حتى الآن، كجزء من رسالة دار الوثائق القومية التي تتمثل مهمتها في حفظ وثائق البلاد و إتاحتها للمهتمين و الباحثين في تاريخ مصر.

و اللجنة إذ تدرك أن جهات أخرى تضطلع حاليا بجمع المادة المتعلقة بالثورة فإنها تود أن توضح أن عملها لا يتعارض مع عمل تلك الجهات، و أنها تستفيد من خبرة دار الوثائق في التوثيق و الفهرسة.

كما تود اللجنة أن توضح أن عملها لا يقتصر على مدى زمني محدود، فعملها لا يقتصر على جمع المادة المتعلقة بالثمانية عشر يوما الأولى للثورة؛ كما توضح اللجنةُ أنها تقوم على العمل التطوعي بالكامل.

و قد وضعت اللجنة تصورا للسعي إلى إقامة أرشيف أقرب ما يمكن إلى الكمال؛ مفهرس و محفوظ طبقا للأصول المرعية في المجال. يشمل الأرشيف المستهدف جميع الوسائط الرقمية و المادية من وثائق ومكاتبات و صور و أفلام و لافتات و منشورات و أغاني و أعمال فنية و نكات؛ بالإضافة إلى تسجيل شهادات من شاركوا في الثورة منها، على سبيل المثال لا الحصر، شهادات من شكّلوا اللجان الشعبية في شتى أنحاء الجمهورية.

تولي اللجنة اهتماما خاصا بمكاتبات الإدارات الحكومية المختلفة، من وزارات و هيئات حكومية و مؤسسات عامة، التي يتعلق نشاطها بشكل مباشر بالثورة وبأحداثها، مع الأخذ في الاعتبار أن عمل اللجنة في هذا الصدد تحكمه القوانين و اللوائح المعمول بها في دار الوثائق القومية و المتعلقة بالحفاظ على سرية المكاتبات والوثائق الرسمية للدولة و تنظيم تداولها و نشرها.

بناء على ذلك، سوف يشمل عمل اللجنة الأنشطة التالية:

- جمع شهادات شخصية ممن شاركوا في الثورة، سواء بالتخطيط أو بالسير في المظاهرات أو بالاعتصام في الميادين، وكذلك شهادات من لم يشارك بشكل مباشر في أي من هذه الأحداث لكنه شهدها أو تأثروا بها على أي وجه.
- جمع الصور و أفلام الفيديو و التسجيلات الصوتية المواكبة لأحداث الثورة أثناء الثمانية عشر يوما من 25 يناير وحتى 11 فبراير؛
- جمع الملصقات و اللافتات و المنشورات و الأعمال الفنية التي أنتجت أو وزعت في الشوارع و الميادين أثناء أيام الثورة؛
- جمع الجرائد والمجلات والتسجيلات التليفزيونية المواكبة لأيام الثورة؛
- الاتصال بلجان تقصي الحقائق المختلفة التي شُكِّلت في أعقاب الثورة وجمع المادة الوثائقية التي أنتجتها تلك اللجان أثناء فترة عملها؛
- الاتصال بمنظمات حقوق الإنسان وجمع التقارير التي أصدرتها عن انتهاكات حقوق الإنسان التي حدثت أثناء الثورة؛
- جمع الشعارات والهتافات والأغاني والنكات التي انتشرت أيام الثورة؛
- رصدُ دور المؤسسات والجماعات الدينية (الرسمية و غير الرسمية) و مواقفها من الثورة، و جمع ما يُنسب إليها من منشورات أو أحاديث صحفية للمنسوبين إليها أثناء أيام الثورة؛
- رصد دور الأحزاب السياسية و النقابات المهنية و جمع التقارير و المنشورات و الأحاديث الصحفية التي صدرت عن المنسوبين إليها أثناء أيام الثورة.

وسوف توالي اللجنة تحديث هذه الصفحة لإطلاع الجمهور على تقدم عملها و الإرشاد إلى كيفية المشاركة بعد إتمام إعداد الموقع و المستلزمات الأخرى للتوثيق.

للحصول على تحديثات المشروع و عمل اللجنة يمكنكم الاشتراك في القائمة البريدية:

الاسم: ______ عنوان البريد: ______ اشترك انسحب

أو كذلك متابعة نشاط اللجنة على صفحة المشروع على فيسبوك.

Figure 6.6: Committee to Document the January 25 Revolution Google form from December 2011, inviting participation in the archival project.

The process of artifact collection was thus a kind of managed crowd-sourcing. Contributors would have to opt-in to participate, but the Committee could also presumably seek out potential contributors as well. In some cases, where artifacts did not exist in digital form already, this process of procuring artifacts would be more consequential—the Committee and its volunteers would be responsible for converting non-digital artifacts (oral histories, physical objects, etc.) into a digital format that could be displayed through the website.

The Committee to Document the January 25 Revolution was not the only official (meaning state-endorsed) project to attempt to collect artifacts from the

revolution. A similar project to document the January 25 revolution was announced at the Bibliotheca Alexandrina (BA), Egypt's iconic library located on Alexandria's Mediterranean coast. The BA is an imposing, UNESCO-sponsored monument, which also entered a partnership with the U.S.-based Internet Archive in 2002 to maintain a mirror copy of its entire digital repository. The BA was reportedly working on a January 25 archive that would be "housed" within its online "Memory of Modern Egypt" digital library (Figure 6.7). An announcement on the BA website in February of 2011, only days after President Mubarak stepped down, invited "all contributions, printed or electronic" to be sent to the head of the Memory of Modern Egypt research unit via e-mail (Bibliotheca Alexandrina, 2011b). This announcement was made shortly after Dr. Ismail Serageldin, Director of the BA, posted a passionate message on the BA website, thanking the "great youth of Egypt," who had formed a human chain to protect the library during protests earlier that month (Bibliotheca Alexandrina, 2011a).

Figure 6.7: Memory of Modern Egypt from the Bibliotheca Alexandrina website.

There is a reason that this explanation has been largely written in the conditional tense; in the cases of both the Committee to Document the January

25 Revolution and the Memory of Modern Egypt collection, many of their stated goals were ultimately never realized. While the fate of the BA project remains unclear, an online archive of January 25 artifacts never really emerged. The BA did host numerous events related to the revolution throughout the following year, including seminars, training sessions for activists, and discussion forums, all of which demonstrated and emphasized the importance of community outreach through social media platforms (El-Ramady, 2011). Apart from the lingering digital traces of these events—Facebook and Twitter posts as well as BA website pages—to date, no single repository of January 25 artifacts is accessible through the BA's online portal.

The National Library and Archives initiative, like the Committee to Document the January 25 Revolution, also never came to fruition. Today, an attempt to visit the government portal for the project will return the result shown in Figure 6.8: an error message and a dead link.

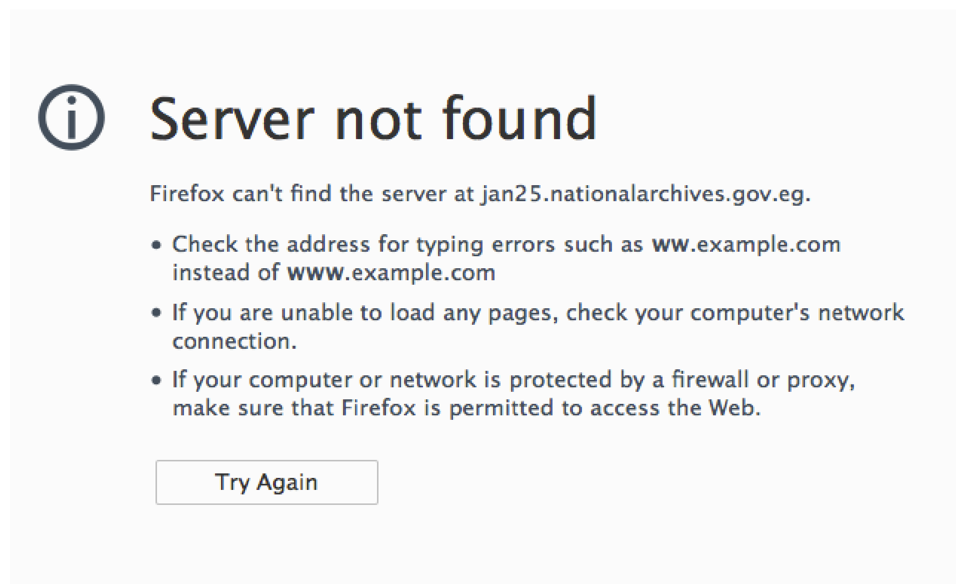


Figure 6.8: Committee to Document the January 25 Revolution website in 2015.

The Committee faced numerous obstacles, some political, some financial, and some technological. First, there was no allocated funding for the archive (Mourad,

2011), and recruitment was on a volunteer basis only. From early on, the Committee was concerned about how to collect and catalogue the vast quantity of content (digital and non-digtal) that would occupy the archive, a problem that became insurmountable, according to Akil, who provided IT expertise.[5] The cost was too high, the prospective collection too expansive, and the revolution too precarious. As the political context changed in the aftermath of the revolution, with greater crackdowns and repression under SCAF leadership, there were additional concerns about the safety and security of witnesses and informants (Fahmy, 2015). What began as a government-supported and -endorsed project was now caught up in the active process of historical narrative-creation, in which history-making was a contested project. In a 2015 interview for *Al-Masry Al-Youm*, Fahmy said, "In the end, if we think philosophically, we'll find that the tragedy of the committee is that the revolution was never completed, and as a result, revolutionary work has become criminal now" (Sarur, 2015). The committee more or less dissolved in 2013, having raised many more questions about remembering the revolution than it answered.

University on the Square

Many of the members of the Committee to Document the January 25 Revolution came from the American University in Cairo, and ultimately, AUC produced its own revolutionary archive that, at least partially, realized the goal of the *Dar al-Watha'iq* project. "University on the Square" is an online, digital collection of "oral histories, photographs, video recordings, and visual art that document the January 25th Revolution" (The American University in Cairo, 2011d). With funding from the U.S.-based Andrew W. Mellon Foundation, a team of faculty members and students at AUC began collecting photographs and paraphernalia from demonstrations in Tahrir Square in 2011 (The American University in Cairo, 2011a). As of this writing, the website, part of AUC's Rare Books and Special

[5]Personal interview with Akil, 30 November 2015.

Collections Digital Library, is still available and active. While the archive accepts digital artifacts, it also *digitizes* physical artifacts and oral histories, posting photos and recordings that can be accessed through the online portal. Artifacts range from music recordings to photos of protest banners to videos of protesters chanting. For both the digital and physical artifacts, the impetus for starting the collection came from the ephemeral nature of the revolutionary moment. According to George, an archivist at AUC directly responsible for the project, “unlike traditional archival collecting, there is an urgency as the chances that material will persist over time are minimal.”[6]

Figure 6.9: The American University in Cairo’s University on the Square website, 2014.

The archive is searchable by location, topic, and artifact type, and in speaking casually with members of AUC involved in the project between 2012 and

[6]Personal communication with George, 16 July 2015.

2015, they showed interest in maintaining it as an open resource and continuing to add to it as the aftermath of the revolution drew on, despite moved on to other projects.[7] Most of the contributions come from AUC faculty, students and alumni, or people connected in some way to the university. In that way, it is a window into the revolution from an distinct institutional standpoint as well as a particular class perspective; faculty and students at AUC tend to be fairly affluent and middle class. The university also created another digital archive using *archive-it.org*, a service of the Internet Archive that allows institutions to build online archives of web content. In its *archive-it.org* collection, "Egypt Revolution and Politics," AUC has saved "access to blogs, Twitter feeds, local and regional media coverage, and other sites related to the January 25th Revolution" (The American University in Cairo, 2011b). Much like the University on the Square archive, this collection had to be curated and managed by the institution. The *archive-it.org* collection tapers off in 2013, and the University on the Square archive also struggled to stay on top of unfolding events by that time. Yet, this online repository of digital artifacts, both born-digital and digitized, remains active and available for perusal.

Mosireen

In contrast to the more institutionalized projects, *Mosireen* (meaning "we are determined" in Arabic) emerged in 2011 as a grassroots, activist- and artist-led video production and collection initiative. Its founders included filmmakers and activists Tamer El-Said, Omar Robert Hamilton, Aida El-Kashef, Lobna Darwish, and Philip Rizk, and activist and actor Khalid Abdullah. Many early participants in what would become *Mosireen* were active during the 18 days in January in the makeshift "media tent" that served as a technology and media hub during the protests. Thus, the collection of video content that would ultimately comprise the *Mosireen* archive came not only from *Mosireen* founders but also from other people who contributed their amateur and professional footage to the group. By August

[7] For instance: personal communication with Rabia, 16 October 2014.

2011, *Mosireen* had a YouTube channel and had begun screening collected footage in public places throughout Cairo in a collaborative effort with artist and activist Lara Baladi. These public screenings were known as "Tahrir Cinema."

Figure 6.10: Four frames from a *Mosireen* promotional video, accessed on YouTube (4 March 2012).

From its inception, *Mosireen* was enthusiastically "digital," operating a website, YouTube channel, Vimeo channel, Twitter account, and Facebook page, but it was also active on the ground and in the streets, with a physical office space in Downtown Cairo off of Talat Harb Street. The group invited broad participation, and having a Downtown meeting space was integral to that mission. The website featured a volunteer sign-up form, through Google forms, but the group also held office hours and provided training programs for aspiring activists, journalists, and filmmakers. Although a core group of media experts managed the video archive, *Mosireen* encouraged a decentralized system of usage and sharing. Late in 2011, in an effort to bring Tahrir Cinema to as many local neighborhoods and streets as possible, the website shared instructions on how to set up a DIY street cinema, including suggestions on how to avoid the suspicion of security forces (Mosireen, 2012a). High quality videos were made available for download so that anyone

visiting the site could use them for their own purposes.

Because of its emphasis on sharing, outreach, and collaboration, it is difficult to consider *Mosireen* in any kind of isolation from other performative media collectives during the aftermath of the 18 days. *Mosireen* offered not only a repository of video footage but also provided professionally edited montages and technical expertise, so the group regularly partnered with movements like #NoMilTrials and *3asker Kazeboon* ("the military are liars" in Arabic), which gained traction during the post-Mubarak SCAF leadership.[8] In an illustration of the constant flow of artifacts between online and offline, audio speakers from a *3asker Kazeboon* event, at which digital video footage was screened in a public street, were donated in 2015 to the AUC University on the Square archive, where they were photographed and added to AUC's digital collection.[9]

In 2012, *Mosireen* launched a fundraising campaign on the crowd-funding platform Indiegogo that raised over 40,000 USD (Mosireen, 2012b). The Indigogo campaign suggested specific donation amounts to help with individual *Mosireen* initiatives, from training to equipment. It also emphasized the role of *Mosireen* as a digital archive, suggesting a 50 USD donation to "help cover some of the cost of the new hard drives we need to store our ever-expanding archive of the revolution." The creation and success of the Indiegogo campaign, alongside the addition of a PayPal donation button on the *Mosireen* website, pointed to a key challenge of the digital archive: funding. Although this video archive was not housed in a four-walled *domicile*, its digital space required maintenance that not only cost money but also required certain material provisions, including equipment like hard drives, which then had to be physically stored somewhere. The question of storage and security of the material hardware needed to maintain such a digital archive became a political one, as hardware is always vulnerable to confiscation. Perhaps born out of the experience of technologically mediating events in January 2011, with an Internet and mobile phone blackout that lasted for days, *Mosireen*

[8]Personal interview with Salman, 24 October 2014.
[9]Personal communication with George, 16 July 2015.

recognized the *materiality* of data and the potential for loss. In speaking to four founding members of the collective, they all stressed the importance of backing-up data online and on multiple devices. The backups were a strategy for physically distributing the record, diversifying and multiplying the possible online and offline *places* that the video archive could exist.

The *Mosireen* video archive is still available online, and *Mosireen* maintains a digital presence, with active Facebook and Twitter accounts. However, the YouTube channel has lulled over the past two years, and by 2013, the Downtown office was rarely open during "office hours." Talking about *Mosireen* in 2014, Salman, an activist with the group said most of their volunteers were laying low, trying to take stock of the circumstances.[10] More than a few *Mosireen* activists and filmmakers had moved on to other projects—*Mosireen* was a largely dormant project by then. The lively street cinemas of 2011 and 2012 already seemed a distant memory, as a curfew, a reinstatement of the state of emergency, and the 2013 protest law cracking down on public assembly had stifled activity in the streets. I made several visits to the *Mosireen* space Downtown in 2014 during office hours, always arriving to find the door locked, a label wedged next to the door: "مصرين" ("Mosireen") scrawled by hand on a piece of printer paper. "*Mafeesh*," ("they're not there") the *bawab* said on one of these occasions, coming up behind me on the stairs. "Tomorrow maybe? Or later this week?" I asked. "No," he said, as he shuffled past. "Not there for a long time."

#18DaysinEgypt

Mosireen developed out of a grassroots initiative by filmmakers to both document the revolution and also to *tell a story* of revolution. It was performance and preservation in one ICT-mediated project. *#18DaysinEgypt* was also conceived as an experiment in both preservation and narrative—a film project that would tell a story about Egypt's revolution through the social media that had brought the

[10]Personal interview with Salman, 24 October 2014.

revolution to computer and television screens worldwide. It began in February 2011, the brainchild of journalist and filmmaker Jigar Mehta and software developer Yasmin Elayat. It quickly surfaced in articles about the contentious process of memory-making and -keeping in revolutionary Egypt (Dougherty, 2011; Barsalou, 2012). In a Facebook post on February 19, 2011, *#18DaysinEgypt* called itself a "project to create a crowd-sourced interactive documentary of events in Egypt during the 18 days of revolution (25 January to 11 February) before President Mubarak stepped down." It began as an experiment in storytelling, in which digital preservation was a means to an end (the end being, in this case, a documentary film), but the essential prerequisite—the aggregation of digital artifacts—would change the very nature of this endeavor. First, crowd-sourcing contributions for the documentary film resulted in a "digital bias," artifacts created exclusively by regular ICT users on ICT devices, who already had access to online platforms for sharing digital content. The technology that would enable the *#18DaysinEgypt* project to succeed was also *becoming* the narrator—selecting the voices that would be heard. Second, unable to reconcile the vast quantity and diversity of eye-witness experiences, the medium itself unsettled the idea of a singular "story" and gave way to a mutiplicity of "stories." Thus, two earlier beta-versions of the *#18DaysinEgypt* website were scrapped, in favor of a crowd-sourced, crowd-curated, and crowd-narrated platform with a significant offline drive to collect non-digital "artifacts." [11]

#18DaysinEgypt was launched by collaborators who were outside of Egypt when the 2011 protests erupted. Both Mehta and Elayat were based in New York City, though Elayat had family in Egypt. *#18DaysinEgypt* thus benefited from a kind of spatial subversion enabled by digital archival projects. Digital archives offer an opportunity to capture spatial multiplicities; the revolution was unfolding in the streets of Cairo and online, and there would be few technological impediments to documenting this local event on a global platform. Although

[11] Personal interview with Yara, 8 August 2015.

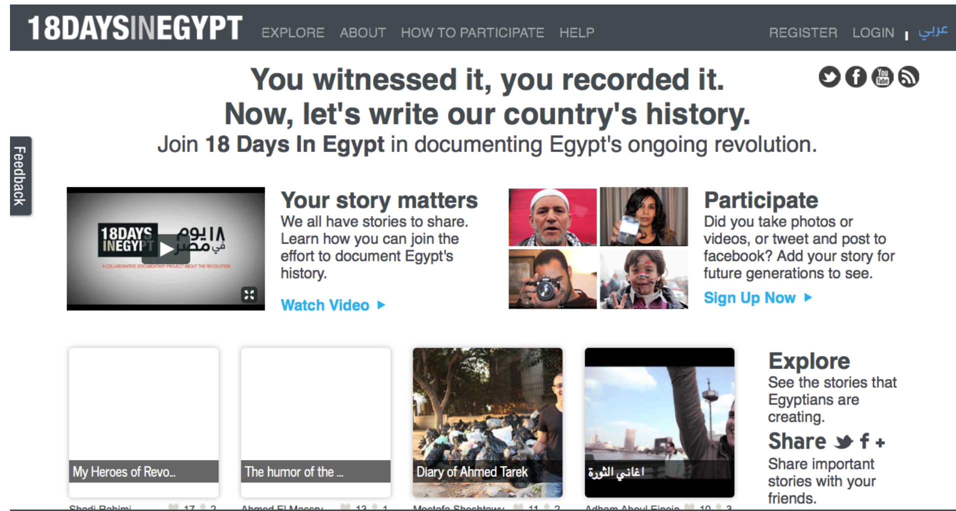


Figure 6.11: #18DaysinEgypt Website, 2015.

artifacts were being *created* in Egypt, they could be hosted, stored, curated, and archived anywhere. *#18DaysinEgypt* received funding from several U.S.-based organizations, including the Ford Foundation, Tribeca Film Festival, and Sundance Institute, to pursue its goal of crowd-sourcing stories from the Egyptian revolution. Project organizers also launched a crowd-funding campaign on the U.S.-based platform, Kickstarter, raising over 20,000 USD (Mehta & Elayat, 2012).

The funding was essential to support the collection of digital artifacts both online and offline in an effort to address the inherent bias of collecting artifacts from ICT users alone. According to the founders and fellows, the digital divide and the limits of Internet penetration in Egypt presented a challenge—how to collect artifacts and create a story that was inclusive of non-wired Egyptians. For Internet users, *#18DaysinEgypt* enabled participation by allowing "contributors" to log into their social media accounts and grant the *#18DaysinEgypt* platform permission to pull content from those personal feeds using an API (application programming interface). Contributors could create "streams" that tell stories of personally significant events, and they could invite others to contribute to their streams. In this way, *#18DaysinEgypt* served as a central repository for individuals' streams, containing digital artifacts selected by the stream creators. In order

to access a less ICT-wired demographic, Mehta and Elayat started a fellowship program, where fellowship recipients would collect oral narratives on the ground in Egypt and upload them to the *#18DaysinEgypt* website, with photos, video, or audio (Mehta, 2012).

The result is an online archive of several hundred story “streams” that are neither exhaustive nor entirely representative of the Egyptian revolution, but they do offer a personal glimpse into events as they unfolded through the eyes of various contributors. *#18DaysinEgypt* thus falls somewhere between its original goal of a single, crowd-sourced and curated narrative of the revolution and its secondary intention of being a searchable and sharable archive, hosting crowd-donated digital artifacts from the revolution. The archival effort extended many days beyond the initial 18 in 2011, coming to encompass the continuing revolution (*“al-thawra mustamurra”*). Some streams in the archive cover subsequent elections, President Morsi’s term in office, the #NoMilTrials campaign, and other post-revolution developments.

The *#18DaysinEgypt* archive is still available as of this writing, but its future is precarious. Although the revolution continued, and interest in the “memory” of the revolutionary moment has only heightened (among activists, government officials, and indeed, the academy), participation in*#18DaysinEgypt* dwindled after 2013, mirroring the experiences of the other revolutionary archive projects detailed here. Although Mehta and Elayat had committed years to the project, and Elayat spent significant time in Egypt after the 18 days, they have also moved on to other outlets while keeping *#18DaysinEgypt* live. “I dont know. I dont know if it was fatigue, I dont know if it was just like a mix of that and plus our funding and our outreach stopped. I think we kind of also, as a team, had all moved on to other projects, and it maybe wasnt our primary thing,” Yara, a coordinator and founder of *#18DaysinEgypt* said. “And that’s the kind of thing where you really need to give it a lot of love and keep reaching out to the community to keep going. So it

could be a mix of all these things."[12]

Around the time that participation in the project dropped off, the revolution itself was subject to many counter-narratives and doubts. With an unpopular Muslim Brotherhood presidency and, subsequently, a military intervention and security crackdown, the legacy of the revolution was being actively contested, redefined, and manipulated offline (and in the streets). Furthermore, when the funding ran out, on-the-ground information gathering ceased without the human labor to collect oral histories and seek out analog artifacts, and the platform reverted to collecting born-digital content that could be scraped using APIs rather than investing in expensive *digitizing* efforts. Such transdimensional traversals require resources and energy that were in short supply. Moreover, *#18DaysinEgypt* is made available through a purchased URL that may prove financially unsustainable, and it is enabled by bespoke software code that may face obsolescence as social media platforms change their own back-end architecture (APIs, etc.). Speaking about the project in 2015, Yara sounded unmistakably resigned. A platform designed to resist the historical erosion of the sands of time appeared to be succumbing to them.

Tahrir Documents

In contrast to the other digital archives outlined here, which aimed to collect both born-digital and digitized artifacts, *Tahrir Documents* is a digital platform built to display non-digital artifacts: paper documents. The motivations behind the project and its active website (*www.tahrirdocuments.org*) were varied: to translate revolutionary documents from Arabic to English and to digitize the perishable paper flyers from protests, demonstrations, and other public events in order to disseminate them more widely and also to store them in a "lightweight" format that did not need to take up physical *space*. Tahrir Documents began in March 2011, about a month after President Mubarak stepped down and SCAF took over

[12]Personal interview with Yara, 8 August 2015.

as an interim government. The "editors" of the archive were Cameron Hu, Levi Thompson, Elias Saba, and Emily Drumsta, all Arabic language students from U.S. institutions, and the project received support from the University of California, Los Angeles. Between 2011 and 2012, the archive collected and published over 500 documents on the website, collected by the editors themselves, volunteers, and other sporadic contributors. Contributions were welcome via a Gmail e-mail address, listed on the website.

Tahrir Documents fundamentally entailed the transdimensional mobility of the artifact collectors between the online and the offline, as paper documents were collected in the street, scanned, and distributed online—first for translation, then for publication on the website. The artifact collection process, in this case, was almost entirely *offline*, even though the archive itself is located online. Of course, documents could be sent via e-mail to the editors, but most of these documents began as paper flyers or pamphlets; their appearance online depended on a process of *digitization* in the interests of preservation and dissemination. Once documents were collected offline, in the streets, the editors used a system of Google spreadsheets, Google documents, and e-mail to coordinate translations and to post documents online.[13]

By 2012, the activity on the Tahrir Documents archive was already trailing off, in part because many of the editors and volunteers had been studying abroad, and their studies were coming to a close over this period, and in part due to the changing political climate in Egypt, where demonstrations were often met violence in the form of teargas, rubber bullets, and live ammunition. After President Morsi was deposed in June 2013, a new online documentation project launched, called *Egypt in Translation*. Its goal was to pick up where Tahrir Documents had left off, collecting paper artifacts during the post-Morsi transitional period. But the project was short-lived. Amelia, an Arabic language student at the time, helped to organize *Egypt in Translation* and was quick to acknowledge its limits. The

[13]Personal communication with Lloyd, 29 July 2015.

editors of *Egypt in Translation* were mostly students from the Center for Arabic Study Abroad (CASA), and their collection efforts were hindered by a repressive political environment. Amelia described the mounting difficulties:

> I personally felt that the project was becoming too dangerous, what with the shift in power in Egypt after the coup. It also became increasingly difficult to find original documents, because we (as foreigners) were trying to avoid protests to avoid being labeled as spies and also to avoid getting caught up in violence being perpetrated by the security apparatus.[14]

Tahrir Documents, as an initiative to collect and digitize tangible, paper documents, was acutely affected by the opportunities and limitations of the offline context. In response to greater restrictions on public spaces and greater security forces crackdowns on public demonstrations, Tahrir Documents needed to scale back its activities. It was dependent on offline artifact collection in the streets and supported by a volunteer team, composed of mostly foreign students. Although Tahrir Documents saved some documents from destruction through a process of digitization, moving them between offline and online spaces, the long-term success of this online initiative was determined by offline circumstances. In 2013, the physical documents that formed the *Tahrir Documents* online archive were donated to the University of California, Los Angeles Special Collections library (Thompson, Hu, Saba, & Drumsta, 2011), entrusting the tangible artifacts to an institutional repository. The gesture provided an insurance policy against loss, both online and offline, but situated the material record in a traditional institutional structure geographically located in the United States. Like their online domicile, the physical location of these Tahrir Documents is spatially remote from the site of the revolution itself.

[14]Personal communication with Amelia, 22 July 2015.

Revolutionary Archives After the Revolution

The archives of the Egyptian revolution are unlikely to find themselves housed in monumental libraries or museums, in part because their value and significance are vehemently disputed in a country experiencing a drawn-out political transition. Such liminal moments render memory keeping difficult. But they are also unlikely to find a home in such traditional repositories because they are perplexingly material and immaterial, tangible and intangible, the products of constant (but uneven) transdimensional mobility of artifact creators and archivists. The archive, uprooted from physical spaces and deconsecrated in this way, is hardly recognizable, and it challenges our scholarly ability to observe, analyze, and evaluate it.

The digital archives examined here recognized this dilemma and sought to confront it, in real time. Tahrir Documents, *#18DaysinEgypt*, *Mosireen*, and the Committee to Document the Revolution all leapt into action in response to the evident speed of production and destruction of revolutionary artifacts. Timeliness, as I will elaborate below, is of paramount importance in both establishing and visiting such revolutionary digital archives. For all of these efforts, some of which are still accessible online, there are many more that have already been lost to the forces of forgetting that act on Internet spaces. This digital erasure often leaves hardly a trace—less, perhaps, than the crumbling ruins of brick and mortar buildings or the black ash of incinerated paper files. There were once, for instance, online repositories of digital artifacts on *25Leaks.com*, a website dedicated to digitizing documents seized from the downtown headquarters of Mubarak's National Democratic Party, and *qomra.org*, a crowd-sourced archive of digital artifacts. Those sites are now unavailable. And even the archival initiatives that have thus endured the test of (recent) time have also faced limitations and often, ultimately, dissolution.

The graph in Figure 6.12 shows relative Internet activity on several revolutionary archival websites between 2011 and 2015. The figures have been

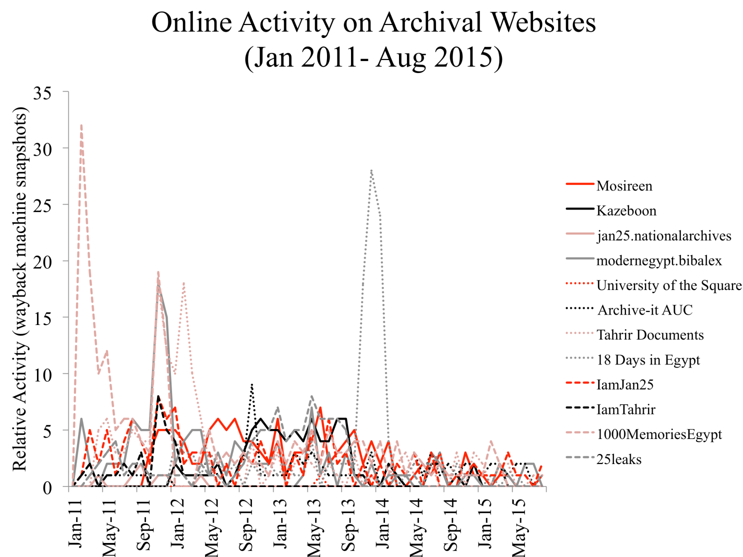


Figure 6.12: Relative Internet traffic on archival sites between 2011 and 2015. Data collected from: The Wayback Machine

taken from the Internet Archive (also known as the Wayback Machine), which records "snapshots" of active websites over time. Far from a perfect measure of activity on a site, the Internet Archive simply records more snapshots when pages are changing frequently and experiencing high volumes of traffic and fewer snapshots as they become less active. Thus, this graph shows the frequency of snapshots taken of different archive websites over time, roughly illustrating a clear trend, with all of the sites becoming increasingly dormant in recent years—fewer updates, fewer visitors, and therefore, fewer snapshots. The digital forces of forgetting that have acted on multi-media revolutionary archives derive from the very attributes that render them subversive and resilient. Forgetting, erasure, and deletion are inherent in the transdimensional digital archive that straddles the inchoate boundaries between the online and the offline.

Forces of Forgetting

Egypt's post-revolution political climate has taken an obvious toll on political life, from a contracting protest culture to electoral intimidation, and revolutionary archive initiatives have also felt the impact of an increasingly restrained political context. Many revolutionary archival efforts were borne out of the immediate revolutionary moment and instigated by revolutionary activists, who had mobilized in 2011, when there was the largest level of participation in street demonstrations and public political life. As this and previous chapters have shown, recording the revolution and its aftereffects was very much *part* of the entire transitional moment. Thus, many of these projects were *activist* archives, and some (like *Mosireen*) were openly political and engaged with the debate about the future of the revolution. As political activism became more dangerous, evidenced by the mounting arrests of protesters and journalists, sexual harassment of female protesters, and physical violence, activists were beset by disillusionment and exhaustion. It was the inevitable cost of such a prolonged period of instability and repression. Hatim, once an April 6th member, who took to the streets in 2011 and had suffered severe injuries when security forces used live ammunition on demonstrators during the 18 days, described the prevailing disillusionment just a few years later. "Now we're taking a vacation, and we're treating our wounds," he said.[15] Many activists I spoke to between 2013 and 2016 described their situation similarly, saying they were taking time to "heal," or "laying low."

As I mentioned above, all of the online archival initiatives considered the *online* and *digital* aspects of their projects to be distinct strengths that might help their preservation efforts evade the deteriorating effects of time and political whims. However, all of these projects were also deeply embedded in offline context and even dependent on offline aggregation of material for the purpose of *digitization*, so the stifling effect of repressive politics on the street carried

[15]Personal interview with Hatim, 21 October 2014.

over into these online spaces. Far from being liberated from the immobilities of physical spatial containment, the virtual and the physical dimensions were intimately interdependent on one another, such that the prospect of recording and sharing documentary material online influenced how activist-archivists moved through their physical spaces and came to terms with the changeability of their spatial and political conditions, and their physical context shaped what could and should be preserved and distributed online.

Filming protests became more difficult, as citizen journalism became suspect. Hosting live video showings in public places would attract crowds that had become suspicious in light of the new anti-protest law. Gathering oral histories became a challenge, as possible participants became concerned about their personal safety and identification. Ayesha, an activist and statistician working at the Egyptian Center for Economic and Social Rights (ECESR), said:

> [Gathering information at protests] doesn't happen anymore. It really doesn't because, I mean, the protests themselves have decreased. The protests in Cairo have definitely decreased. They've dropped like crazy. And we just lost a lot of these networks for some reason. It was natural in the whole country, where people kind of just stopped. Like no one has the energy any more to talk to anyone else...everyone is just, like, too exhausted to deal with anything.

She was describing the difficulties in gathering data for the ECESR-sponsored database, *WikiThawra*. "We still do try to, if we hear of a protest that is nearby, we still do try to send a photographer," she added. "But that person would go and check. Like, if they see too many police, they wouldn't do anything, and they'd just come back. It's not worth people getting arrested for."[16]

Documentation, like protesting, was becoming criminal; the would-be archive was a political target. Other archival efforts failed when official, institutional support waned under new leadership. The Committee to Document the

[16]Personal interview with Ayesha, 28 October 2014.

January 25 Revolution disbanded, in large part, due to the Egyptian government's changing narrative on the January 25 revolution. A diverse, multi-media archive of artifacts that spoke with multiple (and even conflicting) voices does little to serve any official narrative of events, and when the Egyptian army ousted President Morsi and declared his removal a protection of the January 25 revolution ideals (Al-Sisi, 2013), it was imminently clear that the ensuing military-driven political project would depend on highlighting *certain* recollections of the revolution and dismissing others.

In addition, efforts to coordinate and collaborate across archive initiatives encountered roadblocks due to both the political climate and political motivations. According to an activist working on one of the projects, representatives working on the various archival efforts, including the Committee to Document the Revolution, *Mosireen*, *#18DaysinEgypt*, *Qomra*, and others met at the *Mosireen* office Downtown, with coordination from the Arab Digital Expression Foundation (ADEF) to discuss strategies for sharing and cataloguing content using a single system. The collaboration also resulted in an exhibition at Cairo's Townhouse Gallery between February and March of 2013, co-hosted by several of the archival initiatives that aimed "for the first time, to bring this network of initiatives into real space" (Townhouse Factory, 2013). Like the Tahrir Cinema, this exhibition expressed a desire to situate digital content from the revolution in physical space, where people could encounter it offline. However, conflict arose between the groups, each with different funding sources and imperatives. For instance, while some initiatives had investment from international NGOs and charities, including the U.S.-based Ford Foundation, others were ideologically opposed to accepting support from U.S. institutions and refused to share content with foreign-funded projects. This funding rift illustrates that the political forces of forgetting originated within and among the projects themselves and were not purely external.

However, escalating external forces, from restrictions on public protests to intimidation and imprisonment of activists also threatened the permanence

of digital archives, as even digital artifacts and their hosting platforms must be maintained through human effort. Websites must be managed, videos must be stored (on local hard drives or distant servers), and documents must be scanned and saved or uploaded onto web platforms. Thus, physical threats to the people behind these archival initiatives raised concerns about the longevity and infallibility of the digital record. Recognizing the possibility of loss, erasure, and ultimately forgetting, *Mosireen* decided to send hard drives out of the country with various *Mosireen* activists, volunteers, and family members.[17] Under rapidly changing political conditions, preserving the group's digital videos, widely shared and distributed online (and even in the streets), still hinged on tactics that operated between the online and the offline. In an effort to ensure preservation, *Mosireen* lived up to its moniker; they were determined to diversify the *physical* distribution of its data, moving several tangible storage devices throughout the world. This movement of hardware was made possible, in part, by the new geographic dispersion and physical mobility of a generation of Egyptian activist-entrepreneurs (as discussed in Chapter 5), of which many *Mosireen* activists were members. The very technical skills that made these activists early revolutionary archivists would also serve them in education and employment abroad.

Yet, political factors were also compounded by what I have called "commercial" considerations, and these include the very funding issues that swirled under the surface of the ADEF meetings mentioned above. Hosting digital content and managing Internet platforms are not cost-free endeavors. Even to use Facebook (an online service with no registration fee), there are preconditions; users must have access to an Internet connection and the essential hardware to access the site, whether a desktop, laptop, or mobile phone. Purchasing hardware requires funding, as illustrated by the *Mosireen* Indiegogo fundraising campaign or the *#18DaysinEgypt* Kickstarter campaign, which asked for donations for equipment and hard drives. In addition, maintaining a website, as *Mosireen*, *#18DaysinEgypt*,

[17] Personal interviews with Salman, 24 October 2014, and Yara, 8 August 2015.

and Tahrir Documents all do, requires purchasing a domain name (or URL) for a yearly fee, often paying for a web hosting services (such as Wordpress), and sometimes paying for server space. As such, projects like these are always at risk of expiry, deletion, and neglect because they are supported by a technological infrastructure that makes itself invisible and yet governs functionality of the world wide web—at a cost. The cost of access to ICTs is therefore a key factor in *who* can be a digital curator or archivist, *where* these digital archives can be located, and for *how long*. Grassroots projects relied heavily on the voluntary contributions of members, in terms of money, hardware, labor, and time. But fundamentally, these archives were imagined and maintained by groups of digital elites, with technological fluency and expertise. They often involved international participants (Egyptians and non-Egyptians alike), with high levels of education and linguistic ability in Arabic and English. This elite status crucially made these revolutionary archivists capable of seeking funding from a wide, international, online pool of donors and resulted in support from individuals (through crowd-funding platforms like Kickstarter) and organizations (like the Ford Foundation).

Further, the situation faced by Twitpic at the beginning of this chapter illustrates the inherent risk of hosting content through proprietary platforms. Much of the Internet infrastructure that has enabled the recording, saving, and dissemination of such gargantuan quantities of digital content is owned by a small number of companies—Facebook, Twitter, Google, Wordpress, Dropbox, and so on. For instance, many of the projects detailed in this thesis (from Coloring Thru Corruption to Tahrir Documents) relied on services like Gmail and Google Documents, both owned by Google and subject not only to Google's user policies but also the vagaries of Google's evolving corporate vision. The spatial configurations of the Internet are in constant flux, and features, tools, and sites that were once available can be quickly reformatted or retired. When Twitpic's acquisition deal with Twitter nearly fell through, the possible result was a complete closure of the Twitpic service. In the end, the ownership of the hosting platforms

for digital artifacts can have profound effects on their ultimate longevity and accessibility.

In the face of funding shortages and the erosion of political will, some of the most successful archival efforts have been those with large scale, institutional support. Tahrir Documents, for instance, is supported by the University of California, Los Angeles. And the AUC University in the Square archive is still thriving in comparison to countless other online and offline collections that have either disappeared or never materialized. George, at AUC, acknowledged this, saying, "I do think that the fact that documentation projects like *Qomra* and the 'I was in Tahrir' website are no longer functional indicate the need for the infrastructure and persistence that institutions can offer."[18] In contrast to the precariousness of commercial platforms, university websites and servers offer a more permanent physical place for storing digital revolutionary archives, as most universities host their own digital content and have a robust funding framework for ensuring their long-term stability. Paradoxically, these digital archives have found the most stability in the supportive infrastructure of traditional archival institutions, like university libraries, which are less reliant on the distributed, grassroots, "crowd-driven" support networks of other distinctly virtual projects.

Finally, there are technological forces of forgetting at work, by which I mean certain characteristics of the technologies of digital production and preservation that restrict and even actively threaten the longevity of digital artifacts. Perhaps the most glaring limitation on digital preservation is the sheer quantity of digital artifacts in need of storage. Although videos, images, documents, blog posts, and other digital "artifacts," do not take up physical space like analog archives, they do require storage *space* on hard drives and servers. It is partially because of the storage space required to retain digital content that commercial platforms have become such an important repository of revolutionary archives; Facebook and Twitter can provide huge amounts of digital storage at no cost to the user, and

[18] Personal communication with George, 16 July 2015.

as a result, there is a relatively small number of corporate owners of most of the online "spaces" where archives are held. The vast quantity of digital artifacts also presents at least two further challenges to the revolutionary archive. First, artifacts can get lost in the shuffle of so many millions of data traces; saving everything (particularly in one place) is a near impossibility. Using platform-specific APIs, as *#18DaysinEgypt* and another large-scale archival project, *R-Shief*, do, allows digital content to be collected indiscriminately but still involves choices over what to "pull" into the archive and then how to search through it later. Determining *what* to save was a challenge cited by participants in every archival project.

Secondly, the quantity of available artifacts presents distinct storage problems. *#18DaysinEgypt* addressed this conundrum by hosting an archive that did not require storage capabilities, a solution made possible by the distinct architecture of popular revolutionary Internet platforms like Facebook and Twitter, which rely on data streams. Using an API, *#18DaysinEgypt* was able to pull content from other social media sites and display it on the *#18DaysinEgypt* website without actually holding the original data in storage. But, as a result, some of that content, which *#18DaysinEgypt* displayed as story streams on its site, has since disappeared because it has been removed or taken down from the original hosting (storage) site. When the original content disappears, *#18DaysinEgypt* cannot retrieve it because it never stored or owned it to begin with. APIs provided a good solution for aggregating revolutionary artifacts in a "lean" way, but they bypassed a key technological challenge to digital archiviving: storage, which has incidentally also traditionally been a concern and challenge of analog archives.

Another technological factor is the distribution of digital artifacts across proprietary platforms and users. Although the digital nature of the revolutionary artifacts discussed here makes it easy to store different types of content in the same format (bits) and therefore in the same storage repositories, these artifacts still must be collected somehow. The ease of production and dissemination of content means that photos, videos, online posts, and even digital scans of documents are

distributed in many different and dispersed digital *spaces*. Bringing these artifacts together under one virtual "roof" was the goal of the Committee to Document the January 25 Revolution, and it was never realized. No other project attempted to collect such a wide range of distributed artifacts from every far corner of the Internet, but neither have these other projects come close to comprehensively archiving digital artifacts of any kind. They are independently useful resources, but they are, by their own admission, incomplete. The infinite "preservability" of digital content has not resulted in any exhaustive archives of digital revolutionary content; rather, these are partial collections through partisan filters, subject to many of the same limitations in scope and representativeness that have long confronted analog archives.

A confluence of forces of forgetting has been implicit in these digital archival processes, and those forces emerged out of the convergence of the specific revolutionary political context and the characteristics of the technologies that enabled the digital preservation of revolutionary memories. Rather than being a fixed constellation of artifacts, storage facilities, curators, owners, and sites, the digital landscape of revolutionary memory is highly fluid, changeable, and mobile. In this way, "the finite lifetime of information is implicit to the protocols on which the interconnected and dynamic totality of virtual culture relies" (Mackenzie, 1997, 59). The changeability of the technological infrastructure of the digital archive renders the archive a site of active contestation and negotiation and, therefore, loss. The "dynamic totality" of digital technology lends itself to inventive re-imaginings of the archive, undermining traditional conceptions of a spatially and historically bounded document repository or museum. But inherent in this dynamic virtual infrastructure is an under-explored potential for loss and deletion. Attempts to archive the Egyptian revolution and preserve the vast array of revolutionary digital artifacts, from videos to tweets, have exposed the archive as a product of competing online-offline interests and mobilities.

The Mobile Archive

Importantly, the archival impulse that emerged from the revolutionary moment was contingent on converging mobilities (and immobilities) of technologies and people. From the discussion above, it is already apparent that revolutionary archives of digital artifacts have been created out of purposeful movements of people and objects between the offline and the online. In addition, these archives themselves have been mobile—in both virtual and physical space. We should also reflect on how *users* of these archives experience them and how the movements of archive "visitors" (myself included) constitute a creative process that *produces* the archive. Accessing or "reading" these archives is an experience contingent on navigating offline and online contexts and spaces, and the process of *using* these archives entails certain challenges for scholarship on the Egyptian revolution. As this chapter is concerned with the question of the loss and forgetting of Egypt's recent digitized past, it will be important to turn to the role of the scholar or researcher in making sense of digital traces. This thesis has drawn heavily on both digital (technological) and human sources, observations between the virtual and the physical, and this chapter has directly addressed some of the challenges in making sense of these materials—the forces of forgetting and the underlying assumptions about the archival potential of digital technologies come to bear on the conclusions we make about the causes, participants, and outcomes of Egypt's 2011 revolution.

Issues of representativeness and exclusion have been recurring themes in all of the revolutionary archival initiatives that sought to document Egypt's unfolding revolution. From the beginning, prospective participants or curators were concerned with *who* was creating the archive and *what* would be included within it. In an effort to counteract the exclusive properties of largely digital archives (creators had to be "wired" and tech-savvy, and content had to be storable in digital format), each project attempted to find solutions that focused primarily

on aggregation or access. During the aggregation or collection phase, archive creators would often attempt to include participants or artifacts that were not born-digital but had to be actively moved between the physical and the virtual dimensions. *Mosireen* trained filmmakers to document events that might otherwise not have been digitally recorded; *#18DaysinEgypt* sent "fellows" into the streets to collect personal narratives from low-income, largely non-wired citizens; Tahrir Documents physically collected paper pamphlets and flyers and scanned them to create digital records; and the AUC archive took photos of physical objects and recorded oral testimonies.

In all of these projects, the archivists (amateur, activist, or professional) expressed concern that collecting exclusively born-digital artifacts (those that were *created* in digital format) would provide an incomplete record of the revolution. The solution, in all cases, was to digitize physical items or digitally record testimony from revolutionary participants and observers who are not as "wired" as the archivists themselves. The perceived solution was a homogenization of artifact type in the form of the digital trace. In contrast to an analog archive, which may contain microfilm, papers, books, and other items, these archives would unify their collections as data. Of course, this required traversals of both physical and virtual space; it demanded that these archival projects move *between*, to be present in both the street and online. In much the same way that mobilizing millions in 2011 required both online and offline strategies that employed multiple technologies (see Chapter 3), preserving a record of the revolution would depend on the same transdimensional traversals and hybrid human and non-human intermediaries. In a unique reversal of this common movement of offline objects and observations to the online, *Mosireen* made a concerted effort to re-introduce the archive to the street in the form of Tahrir Cinema, public showings of aggregated video content in outdoor locations throughout the city. The idea was to take the digital, online content and (re-)introduce it offline, in places where perhaps it had not been seen

before, *Mosireen* coordinator Salman explained.[19] Alongside efforts to digitize and "make virtual" otherwise physical artifacts and events, Tahrir Cinema attempted to bring virtual content into physical spaces, to re-situate it in the offline contexts where it had been created.

The impetus to *digitize* is directly linked to the issue of access to the archives. A recurrent theme across revolutionary archive projects was a desire to provide broad, popular access to the material. Motivated in no small part by the feeling that 2011 was the "people's" revolution, creating these archives was a process that was intended to both invite popular participation and also provide access for everyone, thereby achieving some of the utopian promise that many felt had been lost after the 18 days. Instead of building monumental document storage facilities that would be spatially fixed in one geographic location, a website of revolutionary content could be "constructed" in minutes and visited from anywhere in the entire world. The push for digitization was a direct product of the revolutionary moment, which had been so extensively technologically mediated and also distinctly *trans*dimensional, available between both the online and the offline.

The vision for universal access developed naturally when so many curators of these digital archives were, themselves, mobile, transnational participants in the archival effort, in part because "[m]ass media fosters the construction of a common shared memory beyond what people have witnessed together or a witness told a friend, and beyond the narrow confines of geographic proximity" (Mayer-Schonberger, 2011). For the archives discussed here, the core participants were both Egyptian and non-Egyptian, local and global. And the competing local and global scales of these endeavors have presented unexpected challenges. For instance, video footage might be gathered in the street, but funding for storage or hosting might come from abroad, as in the case of nearly all of these projects. And the storage locations themselves were often based in the

[19] Personal interview with Salman, 27 October 2014.

U.S. or Europe on servers owned by a few Internet companies. In other words, the human-technological infrastructure that makes these archives possible entails mobility of both people, capital, and data, and this mobility is often obscured by the embeddedness of these technologies in everyday life. Digital technologies enable these traversals everyday, making the archival process part of the ordinary user experience; as discussed above, remembering and recording are inherent properties of digital technologies. Rather than setting the archive apart, these largely invisible online-offline mobilities make archiving appear like a less onerous, less precarious, less exclusive task than it might have been in the past. Indeed, a key motivation for digitizing content and saving born-digital content in widely accessible online locations was an expectation that the process of digitization would provide additional protection from the temporal forces of deterioration and distortion. The more people who could access and download digital artifacts, the more distributed and resilient the archive.

Wandering the Revolutionary Archive

The inconspicuous infrastructures, mobilities and forces of forgetting that affect these digital archives collectively contribute to what Featherstone calls life lived under "the shadow of the archive," a blurring of the boundaries between historical archives and everyday life, which create distinct challenges for scholarship (Featherstone, 2006, 591). Although there have been specific projects aimed at creating digital *archives* of digital artifacts from Egypt's revolution (some of which have been highlighted in this chapter), memory-making has been part of all of the technological mediations that took place during the revolution. Thus, transdimensional archiving is not always a purposeful practice, and digital archives are not necessarily bounded, recognizable places (virtual, physical, or otherwise). Identifying what constitutes an archive is a challenge, and this is just one reason I have focused on expressly *archival* collections of digital artifacts in this chapter, an attempt to approach the question of transdimensional mobile memories from the

perspective of *conscious* archiving. Digital archives and archivists of the Egyptian revolution are global, networked, and mobile, and they have created a distinct digital geography of remembering that must be navigated in new ways.

This thesis has been the product of certain meandering explorations of the expansive (and expanding) digital archives of the Egyptian revolution, a kind of searching and wandering akin to virtual *flânarie*, a term that Featherstone (1998, 921) borrows from Benjamin (1999). Here,

> the prevalent experience of the archive drive is the feeling of being-within a space of culture. It supports a quasi-spatial experience of the virtual as terrain or a site in which space is organised by chains of images and signifiers through which subjects take up contingent and shifting positions of identification. (Mackenzie, 1997, 62)

In this transdimensional archive, the archival researcher is required to make herself mobile within the full, online and offline spaces of the archive. Featherstone observes that

> [t]he electronic *flâneur* is capable of great mobility; his pace is not limited to the human body's capacity for locomotion—rather, with the electronic media of a networked world, instantaneous connections are possible which render physical spatial differences irrelevant. (Featherstone, 1998, 921)

However, this transdimensional mobility of the archive, the archivists, and the archive users themselves presents distinct challenges in accessing and analyzing the digital artifacts of the revolution. Scholarly "wanderings" in these digital archives and the maps we create from them (this thesis being one such projection) entail their own patterns of loss and omission, subjectivity and bias. I mentioned this potential for omission in Chapter 4, where my electronic *flânarie* followed pathways laid by certain architecture of the "built environment" of social media in the form of hashtags. Yet although my movements through the virtual curfew

online entailed following these digital trails, I also exercised choice and agency within that space; like all participant-observation, this was subjective.

The motivation for this chapter came from an early recognition of my own efforts to navigate, save, and archive digital "artifacts" from the revolution. Not knowing what would be relevant later on, and capable of saving almost limitless amounts of digital data (thanks to a growing personal collection of external hard drives and paid cloud storage), I became an avid online "collector" of everything from video clips to personal e-mails. Like the archival projects discussed here and many more that did not claim to be "archives" or repositories of any sort, my archive is incomplete, jumbled, and difficult to catalogue. It records less a complete or comprehensive picture of the revolution than a distinct map of my own, rhizomatic wanderings between the offline and the online. As de Certeau writes of wandering the city, we "are walkers, *Wandersmänner*, whose bodies follow the thicks and thins of an urban 'text' they write without being able to read it" (de Certeau, 1984, 93). Rather than following a predetermined path or map, wanderers in the digital archive try to make sense of spatially and temporally shifting "texts" or artifact collections, and our wanderings *create* the digital geography we are trying to observe in conjunction with the algorithmic architecture of digital spaces.

Using digital archives of the revolution entails straying far from any predefined path and drawing connections across and between different artifacts and archives because when

> the work itself ceases to posses a bounded quality, one can equally jump across texts or works and once data have been marked up in hypertext form, or once one possesses the relevant search engines or programmed 'agents,' it is possible to regard all electronically inputted material as part of the database. (Featherstone, 1998, 921)

Digital artifacts are made possible by a data infrastructure that enables connectivity and referencing, meaning that every digital artifact points outside of itself and connects it to a wider network of artifacts due to protocols like hypertext, linking,

and metadata (Hochman, 2014, 5). Hashtags (as in Chapter 4) are such a protocol. Connections can exist across and between dimensions as well. Tahrir Documents features a flyer from the April 6th Youth Movement, calling for protests on September 9, 2011, against military trials for civilians (see Figures 6.13). The document lists phone numbers and features the iconic #NoMilTrials logo, which, by that time, adorned many a Facebook profile in solidarity. It also lists the URLs for the April 6th Youth Facebook accounts. Upon visiting the Facebook accounts, there would be April 6th and #NoMilTrials logos, links to #NoMilTrials campaign information, and hashtags connecting posts, photos, and videos to thematic topics like #nomiltrials and #jan25, which link to streams of content that users had tagged with these labels. This single document, originally a physical paper document distributed and collected in the streets, is part of a transdimensional record that encompasses "artifacts" far beyond the catalogued collection of the Tahrir Documents website. It references outside itself, a paper document embedded in a geography of hypertext, even before it is *digitized* for the Tahrir Documents archive. Featherstone (1998, 910) even goes so far as to reflect that "[w]ere Benjamin alive today, one can speculate that his project could be more fully realised through hypertext and multimedia." Collecting and analyzing artifacts from the Egyptian revolution entails such movements of archivists, historians, and ethnographers, between the offline and the online, because this transdimensional mobility was part of the lived experience of the revolution.

Further,

> [e]ach classification system opens up new avenues in to the material, yet it also closes off others. It is impossible to approach the data in a way in which it can be made to speak neutrally, objectively and once and for all. The archivist, librarian and professional researcher create the maps and record the journeys into the archive that produce the images we have of the possibilities of the material. (Featherstone, 2006, 593)

Figure 6.13: Scanned April 6th flyer calling for protests, retrieved from Tahrir Documents.

Navigating dispersed digital archives involves making choices, some of which are determined by the mechanical architecture of ICTs and some of which are left up to human *flânarie*. Haskins observed in research on a digital 9/11 terrorist attack archive that

> [a]s distinct from brick-and-mortar exhibitions, digital displays do not offer a spatially continuous sequence of artifacts but instead work by inviting one to choose an item for display from a menu. It is the viewer's own preferences and interests, then, that ultimately shape her

> experience, even though the Web designer is responsible for the range of her choices. (Haskins, 2007, 416)

As such, we should interrogate what is saved and what is lost in these visits *to* the revolutionary archive. In some ways, the subjectivity of the researcher, using the vast, unevenly curated, digital "archives" available to her, precipitates a tremendous potential for omission, deletion, and misrepresentation. In part, this is due to the enormity of the digital record available—any investigation into the digital record of the Arab Spring would be inherently limited and partial. This potential for omission would also be due to the allure of digital "artifacts"—easily accessible, numerous, and seemingly uncorrupted. Internet researchers are increasingly forthcoming about these limitations. In a recent blog post, an Internet researcher and DPhil student at the London School of Economics explains that the reason he uses Twitter data to answer questions about health in the digital age is fairly simple: Twitter, unlike other social media platforms, makes it relatively easy to aggregate, collect, and analyze content through the API and searchable tags (Ahmed, 2015).

In short, the technological architecture of this social media site makes it friendlier to the artifact collector than some alternatives. For instance, I had to manually download and save hundreds of Instagram photos tagged with curfew hashtags, a time consuming task that also did not enable these photos to be searched later on by hashtags (without viewing each photo individually). The abundance of digital "artifacts" produced in the course of the Egyptian revolution lend themselves easily to digital aggregation and analysis. But in preserving and utilizing them, we must recognize their limitations—the ways that mechanical and human processes created them, and how they are the products of certain inequalities of access to technology. That said, identifying these limitations and exploring them are tasks well suited to the human electronic *flâneur*. Due to the embeddedness of ICTs in the everyday lives of young, affluent, wired, revolutionary Egyptians, never have the *lieux de memoire*, as Pierre Nora conceived of them, been more "mixed, hybrid, mutant [...] enveloped in a mobius strip of the

collective and the individual, the sacred and the profane, the immutable and the mobile" (Nora, 1989, 19). It is precisely because of the inherent precariousness, incompleteness, and mobility of ICT-mediated archives that transdimensional ethnography and historicization, which navigate between the offline and the online, are so crucial.

The Transitional Present and the Challenge of Active Historicizing

Time has been an important but under-explored archival consideration in this chapter so far, but it has also threaded through the chapters of this thesis as a critical element of the "offline context" that influences so many ICT-mediated experiences. I have emphasized how it is essential to situate ICT-mediated practices, behaviors, and events within local context and historical time because the time- and space-compressing effects of pervasive ICT use can render this task difficult. Although memory is built into the very hardware of ICTs, it has also complicated historical record-keeping by creating an experience that "positions subjects in the interaction between the two limits, between the converging 'now' of real time and the expanding totality of the archive" (Mackenzie, 1997, 62). It is in this interstitial space between the ever-refreshing, updating, and proliferating present and the vast reaches of overwhelmingly large digital archives that the digital ethnographer begins to engage in "active historicization," a response to the problems of history-making in the digital age. Where the sites of memory-keeping are mobile and unstable, and "[v]irtual culture is immersed in a particularly complex marking of limits" (Mackenzie, 1997, 68), it is increasingly important to engage with the task of historicization in the *present*. Many of the difficulties faced by revolutionary digital archival projects are the product of active historicization, aided by ICTs. Yara from the *#18DaysinEgypt* archive said they were always "at the mercy of current events," and her comments were echoed by fellows on the project. In particular tumultuous or celebratory moments, people would contribute more stories to the project, but the yo-yoing between extremes also resulted in

archival exhaustion and burnout.

There is an argument to be made that the Egyptian revolution is too recent an event to be subjected to scholarly scrutiny and perhaps that a discussion of revolutionary "archives" is premature. But as Egyptian novelist and activist Ahdaf Soueif wrote in 2014,

> [i]n the streets of the revolution we talked a lot about how the people were ahead of the political classes, ahead of academia and the theoreticians. The people were leading the way. But we needed the political scientists, the academics to catch up; the revolution needed them to describe it, to theorize it, to map it. (Soueif, 2014)

Already, only five years after the fall of Mubarak, academics are having to "catch up" in order to engage with the unfolding revolution. And the changeability of the digital record of the revolution highlights many important reasons why. Rather than being a hindrance, such a close vantage point has become essential. In fact,

> [d]igital memory is, then, an enactment and engagement with difference and the use of digital media to remember is not about taking a passive approach to the passage of time, however fast it appears to be. Rather, it is the active, subjective, organic, emotional, virtual and uncertain production of the past and the present at the same time. (Garde-Hansen et al., 2009, 7)

ICTs are the product of a technological infrastructures that "continually overwrite the past with the present" (Hochman, 2014, 12), and this logic underpinned archives like *#18DaysinEgypt*. In his exploration of the "data stream" as an integral part of the technological architecture of online platforms, Hochman explains that these streams, which present "continuous sequences of items" organized in order of their appearance, offer a "multiplicity of coexisting temporalities" (Hochman, 2014, 3). Reverse chronology, wherein older data traces are quickly replaced by new ones, is the predominant ordering structure

of contemporary social media platforms (Gehl, 2011; T. Gillespie, 2016). Thus, ICT users are constantly bombarded with rapidly produced and disseminated *new* digital content while older content is pushed into an archive (but one which can often be called up instantaneously using searches and queries). After such popular (and more recent) trending topics as #tamarod (in the lead up to the June 30, 2013, protests against Morsi) and #anticoup (following Morsi's removal), who would remember the fleeting popularity of #اكتشافات_الحظر ("curfew discoveries")? In 2016, who but the people who years earlier had experienced (offline) and followed (online) the flash Mini Mobile Concerts would search out their website or YouTube videos? Traces of these transdimensional events exist, but finding them now almost certainly requires having *been there*—the "there" of this ethnographic field site being both spatially *and* temporally contingent.

The temporalities created by ICT-mediation are distinctly presentist (Hartog, 2015), rendering them increasingly inaccessible when confronted with the converging offline and online forces of forgetting that act on digital traces. Many websites, Facebook pages, Twitter accounts, and other digital repositories associated with the revolution are no longer accessible, and new restrictions and rules internal to platform APIs change which content and how much of it will be accessible to researchers in the future. As Rosenzweig (2003) rightly cautions:

> This uncertainty and disarray would not be so serious if we could assume that it could be simply sorted out in another thirty years. But if we hope to preserve the present for the future, then the technical problems facing digital preservation as well as the social and political questions about authenticity, ownership, and preservation policy need to be confronted now. (Rosenzweig, 2003, 746)

Digital archives, formulated in the midst of Egypt's ongoing revolution, are the products of this new presentist regime, blurring the boundaries between past, present and future, and making historicization a task that must be undertaken in the present.

A Revolution Saved, A Revolution Deleted

In summary, any scholarly effort to consider the Egyptian revolution must also grapple with how it utilizes and contributes to revolutionary archives. If "[s]cholarship is essentially an interpretation of and a contribution to the historical record" (Manoff, 2007), scholarship must also reflect on the current state of digital revolutionary archives and how to interpret them. Writing in 2015, AUC professor and former chair of the Committee to Document the January 25 Revolution Khalid Fahmy described one "tragedy of our revolution" as the "inability as a people to look into the past to choose a (imaginary) moment which we could all agree on as a basis that could serve as a starting point for the future" (Fahmy, 2015). The paralysis Fahmy describes is undoubtedly the product of both the revolutionary context (political, social, economic) but also the technological mediations and mobilities that now structure our engagement with the past. It is a tragedy that is already evident in the digital efforts to archive the revolution, and it will continue to present difficulties for scholarship on Egypt's Arab Spring.

Digital content has tremendous representational power; it can, and does, define an entire moment. Videos, images, and blog posts streaming out of Tahrir Square helped the entire world make sense of Egypt's revolution. We must make sure that after we are certain the "Twitter and Facebook revolutions" trope is well and truly put to rest, we do not go on to build shrines to digital content and social media in our archives. The digital age has rendered archiving a practice we must engage with in the present. Nora invites us to

> [i]magine a society entirely absorbed in its own historicity. It would be incapable of producing historians. Living entirely under the sign of the future, it would satisfy itself with automatic self-recording processes and auto-inventory machines, postponing indefinitely the task of understanding itself. (Nora, 1989, 18)

For the many reasons discussed above—the fracturing and dispersal of curation, the

explicit and implicit forces of forgetting, the ephemeral nature of online content, and the processes of re- and over-writing—archiving has to be a conscious part of the unfolding revolutionary moment. The archival projects that emerged in the aftermath of Egypt's Arab Spring recognized that the task of "archiving" could not be left simply to the "auto-inventory" machines of digital technologies. Though they have faced distinct challenges, these initiatives also made novel efforts to move artifacts between the online and the offline and to capitalize on the transdimensional and hybrid human-technological mobilities that created so many digital traces of the revolution. They recognized that we must consider how to incorporate digital artifacts into our practices of remembering, or like the fallible and vulnerable documents of the past, these archives may too be lost to new forces of forgetting.

7 Conclusions

The Egyptian revolution is likely to be the subject of much scholarly research and debate for many years to come. It will form an integral part of an open conversation about the nature of political change in the Middle East and the transformative effects of communications technologies. For this very reason, it is critical that we treat it as a call to action, an opportunity to destabilize some of the more crippling assumptions and essentialisms that have limited research on the Middle East and ICTs. The human-technological agencies that facilitated the revolutionary moment must be understood as part of a social system that is unavoidably hybrid (human and non-human) and multiple (Haraway, 1991; Latour, 1991). The Egyptian revolution reveals and was predicated upon the covalence of different scales and dimensions: the global and the local, the human and the technological, the virtual and the physical, the online and the offline, mobility and immobility. It also points to the necessity of researching and writing *between* these false binaries. The experience of ICT users in Egypt, as elsewhere, is one of constant, quotidian movement between, across, and through such dimensions, but this mobility engenders other immobilities for ICT users and non-users alike. Thus, research into the transdimensionality of this experience and the potential for

resistance within it must be transdimensional itself. I introduced the concept of transdimensional mobility to encapsulate the ICT-mediated movement of people through online and offline spaces, in which the virtual and the physical are constantly overlapping and interpenetrating.

Transdimensionality, as a kind of liminal condition, provides a useful lens for exploring ICT-mediated experiences because it moves away from a fixation on cause and effect. It is not platform- or even hardware-specific, so through this optic, we can move away from simplistic and technologically orientalist arguments that would treat the Egyptian revolution as a "social media revolution." If we view the revolutionary moment as underpinned by the experience of transdimensional mobility exercised by a growing number of young, ICT-using activists, then their continued everyday mobility *between* the online and the offline can be seen to continue to contribute to the outcomes of and expectations about Egypt's post-revolution transition. The ability to move between dimensions affects how ICT users experience *all* spaces; it continually, inconspicuously, and simultaneously *creates* spaces for movement, resistance, diversion, and escape. Like all "in-between" conditions, it engenders ambiguous opportunities and outcomes that challenge any spurious equation of mobility with exclusively emancipatory effects and immobility with stagnation and repression.

Indeed, transdimensional mobilities and immobilities have played a significant role in the aftermath of the revolution precisely because they are part of everyday life. In fact, transdimensionality is so ordinary among ICT users that it is difficult to isolate, identify, and interrogate, but it is therefore also an important subject of ethnographic enquiry. It can only be understood through local, geographically, and temporally specific description. As this thesis reveals, transdimensional mobility has the potential to enable both calamitous revolutionary upheaval and quiet everyday resistance, but it can equally have placating effects, facilitating personal entertainment and even modes of virtual and physical escape for some, with immobilizing effects for others. The story of the revolutionary

uses of technology is best told as a chronicle of diverse ICT-mediated experiences with contradictory outcomes. Chapter 1 conceptualized the Egyptian revolution as embedded in a social, political, and economic landscape of diverse virtual and physical mobilities and immobilities. In the lead up to the revolutionary moment, ICT access had facilitated certain mobilities, which contributed to the gradual erosion of authority in physical spaces, as bloggers and other online activists documented abuses of power, created forums for discussion and debate, and coordinated direct action in response. But ICT access was also enabled by a virtual and physical geography of immobilities, a product of neoliberal economic policies that prioritized technological development and disenfranchised many people on the margins of both network connectivity and the formal economy. Therefore, the mobility-enhancing potential of ICT use must be understood to be contingent on certain immobilities and inequalities of power that long pre-dated the revolution.

The revolutionary moment drew new attention to the mobility of people, ideas, and data, as images of the Egyptian revolution spread globally through ICT-mediated channels, including via social media. The revolution was contingent on the converging mobilities of people and technologies and movement between the online and the offline, and it thrust Egypt into a prolonged state of transition that obscured, in many ways, how transdimensional mobility and conditions of liminality had gradually become embedded in everyday life. But as revolutionary fervor and optimism gave way to disillusionment and repressive techniques of control, transdimensional mobility continued to offer avenues of resistance, reform, and innovation while also enabling modes of diversion and escape. The gradual transition into this new "normal" after the revolution reveals more nuanced insights into the diversity of ICT-mediated mobilities at work in virtual and physical spaces than a focus on the revolutionary moment alone could provide.

In Chapter 2 I presented an interdisciplinary and mobile method for studying ICT use and activism. The study of transdimensional lives demands transdimensional methods that traverse the online *and* the offline. Research

methods often draw a tenuous distinction between these dimensions—focusing either on socially constructed "culture" or technologically produced "data." Digital lives produce a great deal of data, digital artifacts, so it is tempting to collect and read that data without reference to the social processes and conditions that produce it. Too often we read revolutionary tweets, for instance, without contemplating Twitter as a socially, economically, politically, and structurally contingent experience, shaped by the affordances and limitations of hardware, geography, and local processes of meaning-making. But a comprehensive research methodology for making sense of our technologically mediated lives must resist this bifurcation of culture and data and instead understand the social world as the product of human-material-communicative-technological processes and systems, a task well-suited to ethnography. Drawing on Christine Hine's ethnographic treatment of the Internet as embedded, embodied, and everyday, this chapter encouraged a qualitative, multi-sited, transdimensional approach that views ICT use as contingent on local context, personal experiences, and historical circumstances. It is a holistic perspective that recognizes how the online and the offline interpenetrate, influence, and construct one another.

Importantly, the Egyptian revolution starkly challenges a long-debated premise of field-based research: the fixity of the field site. The archetypal distinction between "home" and "away" has long been eroding in anthropological research, but ethnographies of ICT mediation have gradually problematized this opposition and embraced multi-sited ethnographic methods that are *mobile* between the online and the offline and recognize the field as both geographically circumscribed and communicatively dispersed. Research into the ICT-mediated activism of the Egyptian revolution must be situated locally—embedded in the offline—but it must also encompass a broader conception of the field, in which the researcher remains engaged with the field through ICT mediation even after physically traveling out of Egypt. Where ICT mediation is part of everyday life, it should therefore also become part of the ethnographic method. Further, this

transdimensional ethnography demands reflection on the relative mobility of the researcher and her subjects; and this relationship is far more complex than the juxtaposition of a mobile researcher with fixed, immobile informants. The "field" is constructed out of the multiple, intersecting, opposing, and symbiotic mobilities of researchers and their subjects (both human and non-human).

Transdimensional ethnography is also well suited to telescoping between macro and micro scales—the transformative, systemic forces of history and the local minutiae of everyday life. It is capable of "integrating the macro into the micro" (Marcus, 1986), connecting local phenomena to global systems in order to write ethnographic observations in light of larger political and economic circumstances and projects, such as neoliberalism. In the context of the Arab Spring, there is tremendous value in boring down into everyday lives without losing perspective on the ways in which micro observations contribute to and are contingent on global flows. This thesis takes such a transdimensional approach as well as a longitudinal perspective, exploring ICT use over several years following the revolution, a vantage point that strikingly reveals the ways in which online and offline interpenetrate and influence one another under changing circumstances. I also advocate an engagement in active historicization, the process of situating current events within historical time while also attempting to contemplate the immediate present as part of "history" and anticipate the ramifications for historical reflections in the future. The intense ICT mediation of events like the Egyptian revolution presents distinct challenges for making sense of the present in the context of history past and history yet to be written in that the present is so abundantly *full* of observable events and collectible artifacts. It is paradoxically ever more important to be "there"—temporally and spatially—in order to observe the transdimensional realization of events. As in traditional ethnographic practice, where the subjectivity and positionality of the researcher are integral to (and inseparable from) the integrity of the study, the path that a researcher charts between the online and the offline during the course of her research then offers just

one perspective on a much more complex geography of people, objects, and digital traces. But it is also a perspective which may reveal insights that are increasingly out of reach with the passage of time and the ephemerality of virtual spaces.

In the immediate aftermath of the revolution, profound spatial renegotiations and contestations took place in Cairo. The retreat of the security apparatus and a lack of police presence in particular ushered in a period of unprecedented physical mobility in public space, which is not to say that the resultant proliferation of protests and public gatherings were not met with violence and repression. However, there was an unmistakable recognition that the 18 days of revolution that toppled President Hosni Mubarak had broken through a barricade of fear, and people flooded through this opening—with increased physical, psychological, and expressive mobility and freedom. And unsurprisingly, this was a period of intense liminality in which social movements multiplied, and demonstrations, large and small, became a feature of everyday life in the city. Chapter 3 explored how this spatial renegotiation was mediated, how street protests were a transdimensional experience, facilitated in large part by the ubiquity of mobile phones among protesters. Although Internet platforms like Facebook and Twitter received much of the attention in coverage of the Egyptian revolution, Internet penetration was only about 33 percent at the time of the revolution. Facebook penetration was around 6 percent, and Twitter was only around 0.15 percent (Arab Social Media Report, 2011). The statistics alone betray that the Egyptian revolution could not have been solely an "Internet revolution." Transdimensional mobility is the product not of one ICT or platform (the Internet, for instance)—it is the encompassing experience of ICT mediation. And the intense movement of people and technologies in public space after the revolution was accompanied by and rendered transdimensional in multifarious ways by the widespread use of mobile phones.

Chapter 3 thus examined ICT use in the context of physical movement on and through the streets, where ICT mediation was embodied and very much at-hand

in the form of mobile phones. Most people—young, old, affluent, poor—owned a personal or family mobile phone at the time of the revolution, and their mobile phones moved *with* them into the streets during demonstrations. Some particularly tech-savvy activists put their phones to new, revolutionary uses, hacking them into mobile modems and bluetooth relay hubs, but most people used their phones in much the same way that they had become accustomed to using them everyday, to enhance their corporeal and communicative mobility. In the post-revolutionary context, however, these uses took on new meanings and highlighted how this ordinary ICT had been engaged in negotiating a new spatial politics long before the 18 days. Protesters used mobile phones to gain greater command over the geography of the city, navigating the physical streets with the aid of virtual communication and online mapping. Mobile phones were also used to contact family, friends, and colleagues to check on personal safety. Mobile phones had become so much a part of everyday life—always on, always communicatively connected—that an unanswered phone call sent directly to answer phone or an undelivered text message stood for more than disconnection from the "network"; it signaled that the body in possession of the phone was likely compromised. Activists also used their phones to record events, to technologically witnesses and remember what they were subjectively witnessing themselves. And importantly, activists used mobile phones to bridge the digital divide between Internet users and non-users, to accommodate the paranodal individuals who exist between or even outside the communicatively connected network (Mejias, 2009). However, as time went on and protests became smaller scale and more fragmented, mediating across this divide became less common; in the absence of the physicality of the protest experience—the shared space of the square—transdimensionally mobile activists were less successful in overcoming the immobilities of differential ICT access.

Mobile phones formed an integral part of the hybrid human-technological networks that allowed information to flow between the online and the offline, helping to popularize a revolt that originated on a Facebook page. Communication

needed to occur across and through platforms, people, and dimensions. Global impressions of the Egyptian revolution were dramatically influenced by ICT mediation, but the experience of the local *crowd* itself was also inseparable from the ways in which its mobility was mediated. This experience of online and offline mobility would shape expectations about ICTs and their revolutionary potential in the years following revolution, and this chapter highlighted how the revolution and the physical mobilities that multiplied in its immediate aftermath were contingent on transdimensional mobility between the online and the offline but also between the normal experience of everyday life and the exceptional conditions of revolution.

The unprecedented physical mobility exercised by protesters after the revolution came to an abrupt halt in 2013. Demonstrations were met with violent crackdowns by security forces in the intervening years, but protests had continued despite mounting numbers of arrests and deaths. However, the brutal dispersal of a sit-in supporting the recently deposed President Mohammed Morsi in August 2013 marked a turning point in the spatial politics of the city. After attacking the demonstrators, the Egyptian army re-instituted a state of emergency and imposed a curfew to restrict movement in the streets after 7 pm. Chapter 4 focused on this period in 2013 and how some ICT users negotiated their offline spatial confinement in online spaces. This was a re-entrenchment of old policies in a new context, coupled with distinct spatial restrictions; Egypt had been governed under Emergency Law for over 30 years, until the state of emergency was lifted in 2012. Rather than being reserved for exceptional circumstances, emergency law was employed in a regime of emergency *rule*—the state of emergency was fundamental to the governing strategy of the Mubarak regime, and it had become so much a part of daily life as to become an abstraction and a virtuality. But its re-implementation in 2013 was hardly inconspicuous. Barricaded streets and a curfew meant that the emergency was *felt* in the curtailment of physical movement. It had the effect of (mostly) stopping demonstrations but also obstructing everyday life.

In the face of this forced immobility, ICT users seamlessly *moved* online, coping with their offline immobility by exercising transdimensional mobility. In taking to social media platforms to post about the curfew, they brought the curfew online. Their online actions were dramatically influenced by their offline conditions; the curfew was hyper-local but also transdimensional—it existed in the offline *and* the online. This chapter specifically traces the connections Egyptians made online using hashtags on Twitter, a microblogging website and mobile application, and Instagram, a photo-sharing mobile application. The hashtags #الحظر and #اكتشافات_الحظر ("#curfew" and "#curfew_discoveries" in Arabic) were used playfully and subversively to tag and link posts pertaining to the curfew. In photos, people posted images of their lives under curfew, ranging from photos documenting transgression (standing in a deserted street in violation of curfew rules) to photos depicting scenes of isolation and boredom (piles of junk food or lone selfies).

Collectively, the social media activity related to these curfew hashtags constituted a form of collective subversion, a gathering of voices online that were otherwise being kept physically apart offline. But importantly, these acts of subversion were not coordinated in the way that street protests were; they were quiet acts of sometimes unconscious transgression, confronting offline immobility with online mobility simply because this kind of communicative movement *between* dimensions was enmeshed in everyday life. In some cases, posts about the curfew online expressed passionate opposition to the state of emergency and military rule, but in most cases, they were simply a reflection of what life was like under curfew. In turning their private experiences outward, sharing the experience of confinement online, where the curfew could flow out beyond the police checkpoints and national borders, these ICT users quietly resisted their forced immobility and opened the curfew to outside participation and observation. But these transdimensional transgressions should also caution us against over-reading resistance in to everyday activities. These mobilities, borne out of the frustrations

of life under curfew, carry the potential of revolt as much as they serve as an outlet for diversion, distraction, and escape.

The previous two chapters brought into focus the ways in which the transdimensional mobility of Egyptian ICT users enables movement *between* virtual and physical spaces and how these dimensions are intersecting, overlapping, and mutually productive. The revolution became a catalyst for diverse political and social changes, and it also became an inspiration for urban change as well, and Chapter 5 explored how the extraordinary scale of physical and ICT-mediated mobility during the revolutionary moment sparked new and renewed interest among young activists in Downtown. This chapter examined how transdimensional mobility in the post-revolution years both actively and implicitly exerted influences on the physical spaces of Downtown Cairo. The revolution permanently altered the relationship between young activists and the city—unfettered movement through the streets (discussed in greater depth in Chapter 3) caused many young people feel a personal connection, a sense of ownership and responsibility, to the built urban environment. Of course, this experience of movement (and immobility) was heavily mediated by ICTs.

Thus, the aftermath of the revolution, particularly between 2012 and 2014, saw a flourishing of locally engaged, urban, grassroots movements that focused on the city (rather than explicitly targeting politics or the state) as a site of transformation. Groups like Coloring Thru Corruption in Cairo and Mini Mobile Concerts in Alexandria saw their urban environments as a spatial manifestation of corruption and inefficiency, and they aimed to improve the experience of hostile urban spaces through "flash" art projects and performances. These small, loosely coordinated initiatives greatly relied on ICTs for organization, publicity, and documentation. As a result, these punctuated, ephemeral art installations could be experienced in simply wandering the city, encountering by happenstance, moving through specific places at specific times. But they could also be seen in the course of *virtual* meanderings online. Increased policing of urban space,

particularly after 2013, resulted in a general contraction of street movements, performances, and demonstrations. Small artistic projects often fractured and disbanded, but the *city* still loomed large in revolutionary imaginations. And crucially, the post-revolution Downtown renaissance continued via certain distinct channels that were, unsurprisingly, also extensively ICT-mediated. Young people populated a post-revolution art scene that consisted of new Downtown festivals and spaces that were universally framed as artistic and innovative as opposed to political—which is not to say that they did not occasionally engage with political themes. Events like the Downtown Contemporary Arts Festival (D-CAF) and its frequent event space, the GrEEK Campus, were outward-looking, globally focused projects that were promoted and celebrated by the young, technologically wired revolutionary generation.

More than ever before the revolution, the online and offline geographies of Downtown Cairo were converging, as the trandimensional movements of this young, urban elite reshaped certain corners of the urban environment in the image of a cyberutopian revolutionary city, most navigable and readable by those who can facilely move between the offline and the online. In subtle ways, Cairo began to reflect the tacit cyberutopian aspirations of this transdimensional class. Moreover, as the political sphere contracted after 2013, the language of revolutionary change and activism converged with and was co-opted by the language of innovation an entrepreneurship to create a new heroic figure in the form of the activist-entrepreneur. Thus, Chapter 5 revealed how, over time, the transdimensional mobility of ICT-using revolutionary youth aligned easily with pre-existing neoliberal visions of political, economic, and spatial change. By this point, many revolutionary activists had left Egypt entirely to live in exile, as students, lecturers, IT consultants, and entrepreneurs—their trandimensional mobility throughout the revolution serving to facilitate, however precariously, their material escape from the country. Meanwhile, other young people, many of whom had not participated in person in the 2011 revolution, returned to Egypt from

abroad. For many of them, the legacy of the revolution would still be one of mobility, but in the form of economic opportunity and entrepreneurship.

What this and previous chapters revealed was that ICT mediation had a role to play in the revolution and its aftermath, but this role was complex and not without contradictions. The transdimensional mobility of activists can constitute a channel of resistance at the same time that it is embedded in and contingent on the abstractions and state structures of neoliberalism. These revelations go a long way toward destabilizing narratives of the Egyptian revolution that equate ICT use with democratic potential. But the centrality of ICTs to the narrative of the Egyptian revolution and its aftermath was also the result of the preponderance of digital "artifacts"—social media posts, photos, videos, data—produced throughout the revolution. For protesters in Tahrir Square, Egyptians at home in their living rooms, and a global audience watching television and scanning the Internet, the Egyptian revolution was *read* and understood through ICTs, even though this reading was partial and chimeric. Earlier chapters touched on the production of such artifacts, but Chapter 6 interrogated how this excess of digital traces influences the ways the Egyptian revolution is being recorded, stored, remembered—and forgotten. My own efforts to save, store, and document my fieldwork experience between the online and the offline as well as many conversations over time with activists working to save revolutionary content brought these issues to the fore. The ease of production and storage makes digital artifacts easy to aggregate, creating an illusion of abundance and permanence. It also destabilizes established notions of authority, as any ICT user can become a producer and curator of digital traces. However, much like analog artifacts of the past and the archives that house them, digital artifacts from the Egyptian revolution are subject to authorial and curatorial bias, and they are often subjected to forces of deletion and omission, which means that despite their *quantity*, they can never convey a complete picture of the revolution on their own.

During the earliest days of revolution in 2011, activists became concerned

with the question of how to preserve the memory of the Egyptian revolution, and that concern turned to action in the form of concerted efforts to aggregate, save, and share digital content related to the revolution. Because the algorithmic fabric of social media favors the present over the past, with a constantly updating feed of current information, efforts to save digital artifacts must be urgently undertaken in the present, part of the process of active historicization. The chapter detailed several specific documentation and archival projects aimed at collating digital content to reveal the vulnerability digital traces and the transdimensional strategies for preserving them. From the beginning, activists interested in documenting the revolution recognized that a revolutionary archive had to exist *between* the online and the offline, and many people attempted to digitize material objects while printing or downloading onto hard disks various born-digital artifacts. In exploring both official and state-supported efforts (the Committee to Document the January 25 Revolution) and grassroots, activist initiatives (*Mosireen*), this chapter highlights the ways in which archival strategies universally operated between the online and the offline and were subject to forces of loss and forgetting that undermine the success and longevity of such projects, despite the relative ease of collecting and hosting artifacts online.

Digital archives of revolutionary content are threatened by many forces of deletion, including forced takedowns, the expiry of website services, prohibitive costs of maintaining server and web space, and curatorial burn-out, as dispersed volunteer “archivists” take on alternative projects. Erasure is also an inherent property of the sheer volume of digital traces; there is *so much* data from the revolution that it simply cannot all be catalogued. As a result, the digital memory of the revolution is maintained not as a singular narrative but only as the fragmented meanderings of individuals, wandering through the vast and dispersed digital repository of the Internet. In contemplating how to make use of this burgeoning archive of digital traces—tweets, Facebook posts, Instagram photos, WhatsApp messages, and much more—we come back to the importance of taking a reflective

and transdimensional ethnographic perspective, which acknowledges not only the limitations of one researcher's personal meanderings through the archive but also stresses the embeddedness of these digital traces in offline contexts. If we read the revolution through digital artifacts alone, we risk perpetuating a narrow technological narrative of the Arab Spring and concluding that the experiences of an ICT using elite speak for an entire nation.

James Clifford writes of ethnography that "[t]there are no whole pictures that can be 'filled in,' since the perception and filling of a gap lead to the awareness of other gaps" (Clifford, 1986, 18). Thus, this thesis must be taken as a contribution toward a growing body of academic research that seeks to interrogate the role of ICT use in the Egyptian revolution. While it fills some gaps, it invariably leaves and reveals many others. We would do well, for instance, to remember that immobilities always accompany mobilities, and although the title of this thesis betrays a focus on *mobility*, it opens a conversation on the immobilizing effects of unequal ICT access and the immobilities inherent in a state of suspension between local and global scales and flows. ICT users and non-users, technological elites and the marginalized poor, are all bound up in transdimensional geographies. Thus, there is a great deal more to interrogate about this in-between, and how those outside the "network" play a role in it, for example. Through specific cases, observed over the course of five years, this thesis argues that ICT-mediated resistance is borne out of the everyday experience of transdimensional mobility of Egyptian ICT users between, through, and across the online and the offline. But this is only a small view into a much broader phenomenon. Thus, this thesis must be taken together with other ethnographic work on ICT use in Egypt, and it must be considered alongside ethnographies of non-users and big data analyses of digital content from the revolution. There is no single narrative of revolution and its effects; only multifarious, disparate, alternative, and personal accounts. The revolution is realized in between.

In many ways, Egypt's Arab Spring has come to simultaneously epitomize

and problematize revolution in the 21st century. It was a landmark political transition in the digital age; for a young generation, the Arab Spring represents their only experiences of revolution beyond those recorded in history books. It has given definition to the very concept of revolution, even if that definition is actively debated. It has certainly been actively (technologically) mediated. The mechanics of mobilization as well as the artifacts produced in the revolutionary moment are predominantly and unprecedentedly digital, so information and communications technologies have become facilely and deeply entangled in the narrative of the Arab Spring. Therefore, it is crucial to reflect at this point on how revolutions captivate us but also blind us to the ways in which moments of change are predicated on sustained conditions of liminality. In other words, there is much of the everyday in the extraordinary. For at least this reason, we need to develop a vocabulary for discussing the very real importance of ICTs in the revolution and its aftermath, but this lexicon must also connect the *revolutionary* to the *ordinary*. Moreover, it must empower us to subvert binary distinctions between online and offline, the virtual and the physical, so that we can conceptualize movement between and across these dimensions and observe the hybrid spatial configurations created in that movement.

I have adopted the terms "transdimensionality" and "transdimensional mobility" to facilitate this conversation and to capture the cross-cutting and interpenetrating nature of virtual and physical domains. Even though it has not traditionally been addressed in these precise terms, transdimensional mobility has always been integral to conditions and processes that come to bear on the social world of ethnographic enquiry: globalization, neoliberalism, capitalism, the network society. It is also constitutive of everyday life, normality, the status quo, resistance, and revolution. The transdimensionally mobile practices of ICT users in Egypt in the aftermath of the Egyptian revolution point to perhaps the most significant characteristic of transdimensionality and ICT mediation more broadly: the indeterminacy of outcomes. In stark contrast to various deterministic outlooks that treat technology (and the mobilities it enables) as producing either inherently

positive or negative effects, transdimensionality is ambivalent. Its effects are ambiguous, its origins and practices contradictory. The Egyptian revolution and the ICTs of revolutionary activism will inevitably retreat further into history and out of the limelight, but the revolution has assigned new meanings and values to transdimensional mobility that are likely to influence practices and perceptions around transdimensional mediations for the foreseeable future. And in this way, the revolution is becoming part of everyday life, part of the traversals of ICT users between the online and the offline, and part of the transdimensional geography of the post-revolutionary city. In making sense of the promises and disappointments that have followed Egypt's Arab Spring, we must begin by de-mystifying ICTs and their role in this moment and its memory.

A Informant List

The tables below list the pseudonyms of informants who gave semi-structured interviews and comments. For their safety, names of all informants have been anonymized. The author retains a full list of informants' names and their pseudonyms in an encrypted personal file. Listed affiliations are not exhaustive; these tables only include affiliations disclosed to the author. For individuals with non-political affiliations (such as journalist, NGO, etc.), I have indicated where they consider themselves "revolutionary youth," meaning that they were participants in revolutionary politics (protests and demonstrations) from 2011 onward. I selected illustrative comments from a few informants in each chapter, but although not all of the informants listed here are quoted in the thesis, their interviews contributed significantly to the trajectory of my research and to the conclusions I have drawn. I would also like to point out that many other informants contributed to this research through casual conversations and comments, all of which collectively enriched my field experience and field notes throughout this project. In addition, several informants gave multiple interviews over the course of this research, but each informant is only listed once, according to their earliest formal interview. Subsequent interviews are indicated in the text, with footnotes detailing the dates.

APPENDIX A. INFORMANT LIST

2011

Pseudonym	Age	Affiliation(s) / Activities	Location	Date
Hassan	35-45	NGO	Cairo	August
Abbas	25-35	April 6th Youth	Cairo	September
Anwar	45-55	Professor, writer	Cairo	September
Nadine	25-35	Journalist	Cairo	September
Rashid	25-35	NGO, revolutionary youth	Cairo	September
Reem	35-45	NGO	Cairo	September
Taha	35-45	Revolutionary Socialists, Tagammu' Party	Cairo	September
Mustafa	25-35	April 6th Youth	Cairo	September
Hanif	45-55	Professor, journalist	Cairo	September
Ali	25-35	April 6th Youth, graffiti artist, filmmaker	Cairo	September
Othman	25-35	April 6th Youth, graffiti artist, filmmaker	Cairo	September
Bashir	25-35	April 6th Youth, Muslim Brotherhood (previous)	Cairo	September
Salma	25-35	April 6th Youth, Muslim Brotherhood (previous)	Cairo	September
Naima	18-25	April 6th Youth	Cairo	September
Aya	18-25	April 6th Youth	Cairo	September
Samia	18-25	April 6th Youth	Cairo	September
Zahida	25-35	NGO	Cairo	September
Jameel	25-35	April 6th Youth, translator	Cairo	September
Farah	25-35	NoMilTrials	Cairo	September
Maryam	25-35	NoMilTrials	Cairo	September
Asim	25-35	NoMilTrials, blogger	Cairo	September
Attar	25-35	April 6th Youth	Cairo	September

APPENDIX A. INFORMANT LIST

2012

Pseudonym	Age	Affiliation(s) / Activities	Location	Date
Michael	35-45	Journalist	USA	January
Nahla	18-25	Revolutionary youth	Cairo	February
Talal	18-25	Revolutionary youth	Cairo	February
Zara	18-25	Journalist, revolutionary youth	Cairo	February
Nayma	18-25	NGO, revolutionary youth	Cairo	February
Sahar	18-25	Revolutionary youth	Cairo	February

2013

Pseudonym	Age	Affiliation(s) / Activities	Location	Date
Sadeq	18-25	Revolutionary Socialists	Cairo	June
Rayhan	25-35	Artist, revolutionary youth	Alexandria	June
Qassim	25-35	Filmmaker, revolutionary youth	Cairo	June / November
Sana	25-35	Musician	Alexandria	June
Mehdi	35-45	April 6th Youth	London / Cairo	April / June
Jamal	25-35	April 6th Youth, translator	Cairo	June
Malek	25-35	Journalist	Cairo	June
Farah	25-35	NoMilTrials, revolutionary youth	Cairo	June
Bashir	25-35	April 6th Youth, Muslim Brotherhood (previous)	Cairo	June
Tim	35-45	Journalist	London	September
Mahdi	25-35	Filmmaker	Cairo	November

2014

Pseudonym	Age	Affiliation(s) / Activities	Location	Date
Nadia	25-35	NGO, revolutionary youth	Cairo	March
Ayesha	25-35	NGO, revolutionary youth	Cairo	March
Karen	18-25	D-CAF	Cairo	March
Fatima	18-25	D-CAF	Cairo	March
Yasmin	18-25	D-CAF	Cairo	March
Natalie	35-45	D-CAF, artist	Cairo	March
Marianne	35-45	D-CAF, artist	Cairo	March
Ashraf	35-45	D-CAF, artist	Cairo	March
Samir	25-35	Revolutionary youth	Cairo	March
Mohsen	25-35	NGO, revolutionary youth	Oxford	April
Dalia	35-45	Revolutionary Women's Coalition, revolutionary youth	Cairo	April
Tariq	25-35	Blogger, revolutionary youth	London	April
Elham	25-35	Anti-Sexual Harassment	Cairo	October
Sara	25-35	NGO, revolutionary youth	Cairo	October
Fahad	18-25	Anti-Sexual Harassment, revolutionary youth	Cairo	October
Salman	25-35	Filmmaker, academic	Cairo	October
Zainab	25-35	NGO, NoMilTrials, revolutionary youth	Cairo	October
Hatim	25-35	NGO, revolutionary youth	Cairo	October
Madeeha	18-25	Anti-Sexual Harassment, NGO	Cairo	October
Bilal	25-35	Anti-Sexual Harassment	Cairo	October
Ahmed	25-35	Free Egyptian's Party, revolutionary youth	Cairo	October
Rabia	25-35	Academic	Cairo	October

APPENDIX A. INFORMANT LIST

2015

Pseudonym	Age	Affiliation(s) / Activities	Location	Date
Patrick	25-35	Filmmaker, Mosireen	Cairo	April
Lloyd	25-35	Tahrir Documents	Los Angeles	July
George	45-55	Academic	Cairo	July
Amelia	25-35	Tahrir Documents	USA	July
Andrew	25-35	Tahrir Documents	New York	August
Cole	25-35	Tahrir Documents	Chicago	August
Yara	25-35	18DaysinEgypt	New York	August
Mina	25-35	Journalist, artist	Cairo	November
Akil	25-35	NGO, Mosireen, Committee to Document the Revolution	London	November

2016

Pseudonym	Age	Affiliation(s) / Activities	Location	Date
Laila	35-45	Artist, revolutionary activist, Mosireen	Boston	January
Tariq	25-35	Blogger, revolutionary youth, venture capital	Cairo	March
Amira	25-35	Venture capital	Cairo	March
Wasil	25-35	Facebook activist, revolutionary youth	San Francisco	August
Ashraf	35-45	Artist, D-CAF	Cairo	August
Adel	25-35	Blogger, NGO, revolutionary youth	Cairo	August

References

3Arabawy. (2011, February 16). Sinai Bedouins support the #Jan25 Revolution [Blog post]. *3Arabawy*. Retrieved from http://arabawy.org/25388/bedouins

Abaza, M. (2011a, September 27). Academic tourists sight-seeing the arab spring. *Al Ahram*. Retrieved from http://english.ahram.org.eg/News/22373.aspx

Abaza, M. (2011b). Critical Commentary. Cairo's Downtown Imagined: Dubaisation or Nostalgia? *Urban Studies*, *48*(6), 1075–1087. doi: 10.1177/0042098011399598

Abaza, M. (2014). Post January revolution Cairo: Urban wars and the reshaping of public space. *Theory, Culture & Society*, *3*(7/8), 163–183. doi: 10.1177/0263276414549264

Abdelrahman, M. (2009). 'With the Islamists?—Sometimes. With the State?—Never!' Cooperation between the Left and Islamists in Egypt. *British Journal of Middle Eastern Studies*, *36*(1), 37–54. doi: 10.1080/13530190902749556

Abdelrahman, M. (2014). *Egypt's long revolution: Protest movements and uprisings*. Oxford: Taylor & Francis, Ltd.

Abu-Lughod, J. L. (1971). The origins of modern Cairo. In *Cairo: 1001 years of the city victorious* (pp. 98–117). Princeton, NJ: Princeton University Press.

Achcar, G. (2013). *The people want: A radical exploration of the Arab uprising*. London: Saqi Books.

Aday, S., Farrell, H., Lynch, M., Sides, J., & Freelon, D. (2012). *Blogs and bullets: New media in contentious politics* (Tech. Rep.). Washington, D.C.: Institute of Peace.

Adham, K. (2002). Cairo's urban deja vu: Globalization and urban fantasies. In Y. Elsheshtawy (Ed.), *Planning middle eastern cities: An urban kaleidoscope in a globalizing world* (pp. 134–168). London: Routledge.

Adham, K. (2005). Globalization, Neoliberalism, and New Spaces of Capital in Cairo. *Traditional Dwellings and Settlements Review*, *17*(1), 19–32. doi: 10.2307/41758302

Adorno, T., & Horkheimer, M. (1993). The culture industry: Enlightenment as mass deception. In S. During (Ed.), *The cultural studies reader* (pp. 31–41). Routledge.

AFP. (2013, September 3). Cairo musicians jam through the night. *Al Ahram*. Retrieved from http://english.ahram.org.eg/NewsContent/5/33/80675/Arts--Culture/Music/Cairo-musicians-jam-through-the-night-curfew-.aspx

Agamben, G. (2005). *State of exception*. Chicago: University of Chicago Press.

Agar, J. (2003). *Constant touch: A global history of the mobile phone*. Cambridge: Icon Books Ltd.

Ahmed, W. (2015, July 10). Using Twitter as a data source: An overview of current social media research tools [Blog post]. *Impact of Social Sciences Blog*. Retrieved 2015-10-05, from http://blogs.lse.ac.uk/impactofsocialsciences/2015/07/10/social-media-research-tools-overview/

Al Ismaelia for Real Estate Investment. (2015a). *History of the company [Web*

page]. Retrieved from http://al-ismaelia.com/about/history-of-us/

Al Ismaelia for Real Estate Investment. (2015b). *Project Concept [Web page].* Retrieved from http://al-ismaelia.com/about/project-concept/

Al Jazeera English. (2013, November 25). Egyptians plan rallies over protest law. *Al Jazeera*. Retrieved from http://www.aljazeera.com/news/middleeast/2013/11/egyptians-plan-rallies-over-protest-law-20131125153150177979.html

Al-Masry Al-Youm. (2013, August 19). Railways lose LE20 million since curfew enforced. *Egypt Independent*. Retrieved from http://www.egyptindependent.com/news/railways-lose-le20m-curfew-enforced

Alabass, B. A. (2013, August 29). Egypt's curfew takes toll on transport, shipping businesses. *Al Ahram*. Retrieved from http://english.ahram.org.eg/News/80190.aspx

Al-Aswany, A. (2011). *On the state of Egypt*. Edinburgh: Canongate.

Albrecht, H. (2012). *Raging against the machine: Political opposition under authoritarianism in Egypt*. Syracuse: Syracuse University Press.

Alexander, A. (2011). The Egyptian workers' movement and the 25 January Revolution. *International Socialist Journal*(133), 1–18. Retrieved from http://isj.org.uk/the-egyptian-workers-movement-and-the-25-january-revolution/

Alexander, A., & Aouragh, M. (2014). Egypt's Unfinished Revolution: The Role of the Media Revisited. *International Journal of Communication*, *8*, 890–915.

Alexander, A., Bassiouny, M., & Sroka-Miller, K. (2014). *Bread, freedom, social justice: workers and the egyptian revolution*. London: Zed Books.

Allain, J. (2004). *International law in the Middle East: Closer to power than justice*. Surrey: Ashgate.

Allmann, K. C. (2014a). Activism on the move: Mediating protest

space in Egypt with mobile technology. *Jadaliyya*. Retrieved from http://www.jadaliyya.com/pages/index/18261/activism-on-the-move_mediating-protest-space-in-eg

Allmann, K. C. (2014b). Mobile Revolution: Toward a History of Technology, Telephony and Political Activism in Egypt. *CyberOrient*, *8*(2). Retrieved from http://www.cyberorient.net/article.do?articleId=9145

Al-Sisi, A. F. (2013, July 4). Egypt army chief Gen Abdul Fattah al-Sisi statement [Translation]. *BBC News*. Retrieved from http://www.bbc.co.uk/news/world-middle-east-23175529

Amit, V. (Ed.). (2000). *Constructing the field: Ethnographic fieldwork in the contemporary world*. London: Routledge.

Amnesty International. (2010). *Egypt: Amnesty International report 2010* (Tech. Rep.). Amnesty International. Retrieved from http://www.amnestyusa.org/research/reports/annual-report-egypt-2010?page=4

Amnesty International. (2012). *Egypt must return to rule of law as state of emergency ends.* Retrieved 2012-06-20, from https://www.amnesty.org/en/latest/news/2012/06/egypt-must-return-rule-law-state-emergency-ends/

Amnesty International. (2016). *Egypt: Unprecedented crackdown on NGOs.* Retrieved from https://www.amnesty.org/en/press-releases/2016/03/egypt-unprecedented-crackdown-on-ngos/

Aouragh, M. (2011a). Confined Offline, Traversing Online: Palestinian Mobility Through the Prism of the Internet. *Mobilities*, *6*(3). doi: 10.1080/17450101.2011.590036

Aouragh, M. (2011b). Framing the Internet in the Arab Revolutions: Myth Meets Modernity. *Cinema Journal*, *51*(4), 1–9. doi: 10.1353/cj.2012.0120

Aouragh, M. (2011c). *Palestine online: Transnationalism, the internet and the construction of identity*. London: I. B. Tauris.

Aouragh, M. (2015). Revolutions, the internet and orientalist reminiscence.

In R. Abou-El-Fadl (Ed.), *Revolutionary egypt: Connecting domestic and international struggles.* London: Routledge.

Aouragh, M., & Alexander, A. (2011). The Egyptian Experience: Sense and Nonsense of the Internet Revolution. *International Journal of Communication*, *5*. doi: 19328036/2011FEA1344

Appadurai, A. (1996). Modernity at large: Cultural dimensions of globalization. Minneapolis: University of Minnesota Press.

Arab Republic of Egypt Ministry of Communications and Information Technology. (2011). *ICT indicators in brief: January 2011* (Tech. Rep.). Cairo: Arab Republic of Egypt Ministry of Communications and Information Technology. Retrieved from http://www.egyptictindicators.gov.eg/en/pages/Publications/PublicationsDoc/ICTBriefJan2011_en.pdf

Arab Republic of Egypt Ministry of Communications and Information Technology. (2013). *ICT Indicators in Brief: January 2013* (Tech. Rep.). Cairo: Arab Republic of Egypt Ministry of Communications and Information Technology. Retrieved from http://www.egyptictindicators.gov.eg/en/Publications/PublicationsDoc/EnglishFlyernewJan2013.pdf

Arab Republic of Egypt Ministry of Communications and Information Technology. (2016). *ICT Indicators in Brief: July 2016* (Tech. Rep.). Cairo: Egyptian Ministy of Communications and Information Technology. Retrieved from http://www.mcit.gov.eg/Upcont/Documents/Publications_2582016000_EN_ICT_Indicators_in_Brief_July_25_8_2016.pdf

Arab Social Media Report. (2011). *Civil movements: The impact of Facebook and Twitter* (Tech. Rep.). Dubai, UAE: Dubai School of Government. Retrieved from http://unpan1.un.org/intradoc/groups/public/documents/dsg/unpan050860.pdf

Armbrust, W. (2011, February 24). A revolution against neoliberalism? *Al Jazeera*. Retrieved from http://www.aljazeera.com/indepth/opinion/2011/

02/201122414315249621.html

Atkinson, R., & Flint, J. (2001). Accessing Hidden and Hard-to-Reach Populations: Snowball Research Strategies. *Social Research Update*(33). Retrieved from http://sru.soc.surrey.ac.uk/SRU33.html

Augé, M. (1995). *Non-places: Introduction to an anthropology of supermodernity*. London: Verso.

Ayish, M., & Mellor, N. (2015). *Reporting in the MENA region: Cyber engagement and pan-Arab social media*. London: Rowman and Littlefield.

Bahgat, H. (2016, March 14). Anatomy of an election: How Egypt's 2015 parliament was elected to maintain loyalty to the president. *Mada Masr*. Retrieved from http://www.madamasr.com/sections/politics/anatomy-election

Bakr, T. A. (2013a, September 22). Books as curfew companions. *Daily News Egypt*. Retrieved from https://www.dailynewsegypt.com/2013/09/22/books-as-curfew-companions/

Bakr, T. A. (2013b, August 26). Curfew discoveries. *Daily News Egypt*. Retrieved from http://www.dailynewsegypt.com/2013/08/26/curfew-discoveries/

Baladi, L. (2013, September 16). When seeing is belonging: The photography of tahrir square. *Creative Time Reports*. Retrieved from http://creativetimereports.org/2013/09/16/lara-baladi-photography-of-tahrir-square/

Baraka, H. (2011, February 17). The Lotus Revolution: An environmental awakening in the making? *Egypt Independent*. Retrieved from http://www.egyptindependent.com/news/lotus-revolution-environmental-awakening-making

Barsalou, J. (2012, June 22). Recalling the past: The battle over history, collective memory and memorialization in Egypt. *Jadaliyya*. Retrieved from http://www.jadaliyya.com/pages/index/6007/recalling-the

-past_the-battle-over-history-collect

Basar, S., Coupland, D., & Obrist, H. U. (2015). *The age of earthquakes: A guide to the extreme present*. New York: Penguin Books.

Batrawy, A., & Rizk, M. (2013, January 25). Egyptians Protest on 2nd Anniversary of Revolution. *Associated Press*. Retrieved from http://news.yahoo.com/egyptians-protest-2nd-anniversary-revolution-125200375.html

Bauman, Z. (2000). *Liquid modernity*. Cambridge: Polity Press.

Bayat, A. (2000). From 'Dangerous Classes' to 'Quiet Rebels': Politics of the Urban Subaltern in the Global South. *International Sociology*, *15*(3), 533–557. doi: 10.1177/0268580900015003005

Bayat, A. (2010). *Life as politics: How ordinary people change the Middle East*. Stanford: Stanford University Press.

Bayat, A. (2011, jul). Arab Revolutions and the Study of Middle Eastern Societies. *International Journal of Middle East Studies*, *43*(03), 386. doi: 10.1017/S0020743811000468

Bayat, A. (2012). Politics in the City-Inside-Out. *City & Society*, *24*(2), 110–128. doi: 10.1111/j.1548-744X.2012.01071.x.I

Bayat, A., & Biekart, K. (2009). Cities of Extremes. *Development and Change*, *40*(5), 815–825. doi: 10.1111/j.1467-7660.2009.01584.x

BBC. (2014, August 9). Egypt court bans Muslim Brotherhood's political wing. *BBC News*. Retrieved from http://www.bbc.co.uk/news/world-middle-east-28722935

BBC. (2015, August 17). Egypt's al-Sisi imposes strict anti-terrorism laws. *BBC News*. Retrieved from http://www.bbc.co.uk/news/world-middle-east-33955894

BBC News. (2012, June 1). Egypt state of emergency lifted after 31 years. *BBC News*. Retrieved from http://www.bbc.co.uk/news/world-middle-east-18283635

Beer, D., & Burrows, R. (2013). Popular Culture, Digital Archives and the New Social Life of Data. *Theory Culture & Society*, *30*(4), 47–71. doi: 10.1177/0263276413476542

Beinin, J. (2007, September 29). The Militancy of Mahalla al-Kubra. *Middle East Research and Information Project*. Retrieved from http://merip.org/mero/mero092907

Beinin, J. (2009). Workers' struggles under 'socialism' and neoliberalism. In P. Marfleet & R. El-Mahdi (Eds.), *Egypt: The moment of change* (pp. 68–86). Zed Books.

Benjamin, W. (1968). *Illuminations*. New York: Schocken Books.

Benjamin, W. (1999). *The arcades project*. Cambridge, MA: Harvard University Press.

Berger, M.-J. (2014, July 17). Cultural enlightenment for Cairo's downtown futures. *Mada Masr*. Retrieved from http://www.madamasr.com/sections/culture/cultural-enlightenment-cairo%E2%80%99s-downtown-futures

Bibliotheca Alexandrina. (2011a). *A greeting to the great Egyptian youth.* Retrieved from http://www.bibalex.org/ar/news/details?documentid=3134&keywords=&datefrom=20110201&dateto=20110215&searching=1&page=1

Bibliotheca Alexandrina. (2011b). *Memory of Modern Egypt documents the 25th of January revolution.* Retrieved from http://www.bibalex.org/en/News/Details?DocumentID=3136&Keywords=

Bibliotheca Alexandrina. (2015). *The Internet Archive [Web page].* Retrieved from http://www.bibalex.org/en/project/details?documentid=283

Boler, M. (2008). *Digital media and democracy: Tactics in hard times* (M. Boler, Ed.). MIT Press.

Borham, A., & AboTera, M. (2015, November 15). The Maspero competition entries: A reflection. *Cairobserver*. Retrieved from

http://cairobserver.com/post/133235472724/the-maspero-competition-entries-a-reflection#.Vsm3YIyLQy4

Bradley, M. (2010, July 17). Redevelopment of Cairo aims to trade chaos for elegance. *The National*. Retrieved from http://www.thenational.ae/news/world/africa/redevelopment-of-cairo-aims-to-trade-chaos-for-elegance

Brewer, J., & Dourish, P. (2008). Storied Spaces: Cultural Accounts of Mobility, Rechnology, and Environmental Knowing. *International Journal of Human Computer Studies*, *66*(12), 963–976. doi: 10.1016/j.ijhcs.2008.03.003

Briggs, A., & Burke, P. (2005). *A social history of the media from Gutenberg to the internet*. Cambridge: Polity PRess.

Brown, N. J., Dunne, M., & Hamzawy, A. (2007). *Egypt's controversial constitutional amendments* (Tech. Rep.). Washington, D.C.: Carnegie Endowment for International Peace. Retrieved from http://carnegieendowment.org/files/egypt_constitution_webcommentary01.pdf

Brown, R. H., & Davis-Brown, B. (1998). The Making of Memory: The Politics of Archives, Libraries and Museums in the Construction of National Consciousness. *History of the Human Sciences*, *11*(4), 17–32. doi: 10.1177/095269519801100402

Brownlee, J. (2002). The Decline of Pluralism in Mubarak's Egypt. *Journal of Democracy*, *13*(4), 6–14. doi: 10.1353/jod.2002.0063

Bruns, A., & Burgess, J. (2011). The use of Twitter hashtags in the formation of ad hoc publics. In *6th european consortium for political research general conference (ecpr 2011)* (pp. 1–9). Reykjavik.

Buchanan, M. (2013, December 12). My own private Instagram. *The New Yorker*. Retrieved from http://www.newyorker.com/tech/elements/my-own-private-instagram

Burrell, J. (2009). The Field Site as a Network: A Strategy for Locating

Ethnographic Research. *Field Methods*, *21*(2), 181–199. doi: 10.1177/1525822X08329699

Burton, A. (2005). Introduction: Archive fever, archive stories. In A. Burton (Ed.), *Archive stories: Facts, fictions, and the writing of history* (pp. 1–24). Durham, NC: Duke University Press.

Buscher, M., Urry, J., & Witchger, K. (2011). Introduction: Mobile methods. In M. Buscher, J. Urry, & K. Witchger (Eds.), *Mobile methods* (pp. 1–19). London: Routledge.

The Cairo 48 Hour Film Project. (2013). Retrieved from https://www.facebook.com/Cairo48HourFilmProject

Caputo, V. (2000). At 'home' and 'away': Reconfiguring the field for late twentieth-century anthropology. In V. Amit (Ed.), *Constructing the field: Ethnographic fieldwork in the contemporary world* (pp. 19–31). London: Routledge.

Cardon, D., & Aguiton, C. C. (2007). The Strength of Weak Cooperation: an Attempt to Understand the Meaning of Web 2.0. *Communications & Strategies*, *65*, 51–65. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1009070

Carey, J. W. (2005). Historical Pragmatism and the Internet. *New Media & Society*, *7*(4). doi: 10.1177/1461444805054107

Caron, A. H., & Caronia, L. (2007). *Moving cultures: Mobile communication in everyday life*. Montreal: McGill-Queen's University Press.

Carr, S. (2013, September 11). Egypt after the clampdown. *The Nation*. Retrieved from http://www.thenation.com/article/egypt-after-clampdown/

Carrier, J. G. (1998). Introduction. In J. G. Carrier & D. Miller (Eds.), *Virtualism: A new political economy* (pp. 1–24). Oxford: Berg.

Castells, M. (1977). *The urban question: A Marxist approach*. London: Edward Arnold.

Castells, M. (1996). *The rise of the network society: Economy, society, and culture*. Oxford: Wiley-Blackwell.

Castells, M. (2000). Grassrooting the space of flows. In J. O. Wheeler, Y. Aoyama, & B. Warf (Eds.), *Cities in the telecommunications age: The fracturing of geographies* (pp. 18–27). New York: Routledge.

Castells, M., Fernandez-Ardevol, M., Qiu, J. L., & Sey, A. (2007). *Mobile communication and society: A global perspective*. Cambridge, MA: Massachusetts Institute of Technology Press.

Chun, W. H. K. (2006). Introduction: Did somebody say new media? In W. H. K. Chun & T. Kennan (Eds.), *New media/old media: A history and theory reader* (pp. 1–11). London: Routledge.

Clark, J. A. (2006). Field Research Methods in the Middle East. *PS: Political Science and Politics*, *39*(3), 417–424.

Clifford, J. (1986). Introduction: Partial truths. In J. Clifford & G. E. Marcus (Eds.), *Writing culture: The poetics and politics of ethnography* (pp. 1–26). Berkeley, CA: University of California Press.

Clifford, J. (1997). *Routes: Travel and translation in the late 20th century*. Harvard: Harvard University Presss.

Cohen, A. A., & Lemish, D. (2005). When the bombs go off the mobiles ring: The aftermath of terrorist attacks. In K. Nyíri (Ed.), *A sense of place: The global and the local in mobile communication* (p. 117-128). Vienna, Austria: Passagen Verlag.

Cohen, N., & Arieli, T. (2011). Field Research in Conflict Environments: Methodological Challenges and Snowball Sampling. *Journal of Peace Research*, *48*(4), 423–435. doi: 10.1177/0022343311405698

Coleman, E. G. (2010). Ethnographic Approaches to Digital Media. *Annual Review of Anthropology*, *39*(1), 487–505. doi: 10.1146/annurev.anthro .012809.104945

College Humor. (2012). *Look at this Instagram (Nickelback parody).* YouTube.

Retrieved from https://www.youtube.com/watch?v=Nn-dD-QKYN4

Committee to Protect Journalists. (2015). *With more journalist arrests, press freedom further declines in Egypt* (Tech. Rep.). New York: Committee to Protect Journalists. Retrieved from https://www.cpj.org/2015/07/with-journalist-arrests-press-freedom-egypt.php

Conradson, D., & Mckay, D. (2007). Translocal Subjectivities: Mobility, Connection, Emotion. *Mobilities*, *2*(2), 167–174. doi: 10.1080/17450100701381524

Constine, J. (2014, December 10). Instagram hits 300 Million monthly users to surpass Twitter, keeps it real with verified badges. *TechCrunch*. Retrieved from https://techcrunch.com/2014/12/10/not-a-fad/

Cook, T. (2007). Electronic Records, Paper Minds: The Revolution in Information Management and Archives in the Post-Custodial and Post-Modernist Era. *Archives & Social Studies: A Journal of Interdisciplinary Research*, *1*(0), 399–443.

Cornwall, A., & Lindisfarne, N. (1994). Dislocating masculinity: gender, power and anthropology. In A. Cornwall & N. Lindisfarne (Eds.), *Dislocating masculinity: comparative ethnographies* (pp. 11–47). London: Routledge.

Cresswell, T. (2004). *Place: A short introduction*. Oxford: Wiley-Blackwell.

Cresswell, T. (2010). Towards a Politics of Mobility. *Environment and Planning D: Society and Space*, *28*(1), 17–31. doi: 10.1068/d11407

Cui, A., Zhang, M., Liu, Y., Ma, S., & Zhang, K. (2012). Discover breaking events with popular hashtags in twitter. In *Acm international conference proceeding series* (pp. 1794–1798). New York. doi: 10.1145/2396761.2398519

D'Andrea, A., Ciolfi, L., & Gray, B. (2011). Methodological Challenges and Innovations in Mobilities Research. *Mobilities*, *6*(2), 149–160. doi: 10.1080/17450101.2011.552769

Davies, J. (2007). Display, Identity and the Everyday: Self-Presentation Through Online Image Sharing. *Discourse: Studies in the Cultural Politics of*

Education, *28*(4), 549–564. doi: 10.1080/01596300701625305

de Souza e Silva, A. (2006). From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces. *Space and Culture*, *9*(3), 261–278. doi: 10.1177/1206331206289022

de Souza e Silva, A., & Frith, J. (2010). Locative Mobile Social Networks: Mapping Communication and Location in Urban Spaces. *Mobilities*, *5*(4), 485–505. doi: 10.1080/17450101.2010.510332

Debord, G. (1994). *The society of the spectacle*. New York: Zed Books.

de Certeau, M. (1984). *The practice of everyday life [Kindle e-book]*. Berkeley, CA: University of California Press.

Deibert, R. (1997). *Parchment, printing, and hypermedia: Communication in world order transformation*. New York: Columbia University Press.

de Koning, A. (2009). *Global dreams: class, gender, and public space in cosmopolitan cairo*. Cairo: American University in Cairo Press.

Denis, E. (2006). Cairo as neoliberal capital? In D. Singerman & P. Amar (Eds.), *Cairo cosmopolitan: Politics, culture, and urban space in the new globalized middle east.* Cairo: American University in Cairo Press.

Derrida, J. (1995). Archive Fever: A Freudian Impression. *Diacritics*, *25*(2), 9–63. doi: 10.2307/465144

Despouy, L. (1997). *Report by the UN Special Rapporteur, Mr. Leandro Despouy, on the question of Human Rights and States of Emergency* (Tech. Rep.). New York: United Nations Economic and Social Council.

Di-Egy Fest. (2013). *Di-Egy Fest [Facebook page]*. Retrieved 2013-04-03, from `https://www.facebook.com/Di.EgyFestival/`

Donner, J. (2008). Research Approaches to Mobile Use in the Developing World: A Review of the Literature. *The Information Society*, *24*(3), 140–159. doi: 10.1080/01972240802019970

D'Orazio, D. (2014, October 25). Twitpic saved by Twitter just hours before planned shutdown. *The Verge*. Retrieved from

http://www.theverge.com/2014/10/25/7070585/twitpic-saved-by-twitter-just-hours-before-planned-shut-down

Dougherty, R. L. (2011). Documenting Revolution in the Middle East. *Focus on Global Resources*, *31*(1). Retrieved from https://www.crl.edu/focus/article/7437

Downtown Contemporary Arts Festival. (2012). *D-CAF Homepage [Web page].* Retrieved 2012-03-04, from http://d-caf.org/

Dubai School of Government. (2013). *Twitter in the Arab Region [Statistical data].* Retrieved from http://www.arabsocialmediareport.com/Twitter/LineChart.aspx

Dwyer, T. (2010). *Media convergence*. Maidenhead: Open University Press.

Ebo, B. L. (2001). *Cyber imperialism? Global Relations in the new electronic frontier* (B. Ebo, Ed.). Westport, CT: Praeger Security International.

Eickhof, I. (2015, April 7). Graffiti, capital and deciding what's inappropriate. *Mada Masr*. Retrieved from http://www.madamasr.com/sections/culture/graffiti-capital-and-deciding-whats-inappropriate

El Kadi, G., & ElKerdany, D. (2009). Belle époque Cairo: The politics of refurbishing the downtown business district. In D. Singerman & P. Amar (Eds.), *Cairo cosmopolitan: Politics, culture, and urban space in the new globalized middle east* (pp. 345–274). Cairo: American University in Cairo Press.

El Shimi, R. (2015, March 8). A beginner's guide to downtown's alternative art scene. *Mada Masr*. Retrieved from http://www.madamasr.com/sections/culture/beginners-guide-downtowns-alternative-art-scene

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

El-Mahdi, R. (2009). The democracy movement: Cycles of protest. In R. El-Mahdi

& P. Marfleet (Eds.), *Egypt: The moment of change* (pp. 87–102). London: Zed Books.

El-Mahdi, R. (2011). Labour Protests in Egypt: Causes and Meanings. *Review of African Political Economy*, *38*(129), 387–402. doi: 10.1080/03056244.2011.598342

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

El-Ramady, A. Z. (2011). How the Bibliotheca Alexandrina is supporting the 2011 revolution. *American Libraries Magazine*.

El-Rifae, Y. (2013, August 17). Dispatches [Blog post]. *Cairo Again*. Retrieved 2013-08-18, from https://cairoagain.wordpress.com/2013/08/17/dispatches/

Elshahed, M. (2011, February). Tahrir Square: Social Media, Public Space. *Places Journal*. Retrieved from https://placesjournal.org/article/tahrir-square-social-media-public-space/

Elshahed, M. (2013, May 15). CUIP: Introducing the Cairo Urban Initiatives Platform. *Cairobserver*. Retrieved from http://cairobserver.com/post/50488059942/cuip-introducing-the-cairo-urban-initiatives#.Vrd9mFLEJSU

Elshahed, M. (2015). The prospects of gentrification in Downtown Cairo: Artists, private investment and the neglectful state. In L. Lees, H. B. Shin, & E. López-Morales (Eds.), *Global gentrifications: Uneven development and displacement.* Bristol: Policy Press.

El-Shinnawy, A., & Handoussa, H. (2004). Egyptian case studies. In K. E. Meyer & S. Estrin (Eds.), *Investment strategies in emerging markets* (pp. 88–125). Cheltenham: Edward Elgar Publishing Ltd.

Eltantawy, N., & Wiest, J. B. (2011). Social Media in the Egyptian Revolution: Reconsidering Resource Mobilization Theory. *International Journal of Communication*, *5*, 1207–1224.

Ess, C., & Jones, S. (2003). Ethical decision-making and internet research: Recommendations from the AoIR ethics working committee. In E. A. Buchanan (Ed.), *Readings in virtual research ethics: Issues and controversies* (pp. 27–44). Calgary: Idea Group Inc.

Everett, N. (2014, September 4). *Twitpic is shutting down [Blog post].* Retrieved 2014-10-26, from https://blog.twitpic.com/2014/09/twitpic-is-shutting-down/

Fahmi, W. S. (2009). Bloggers' Street Movement and the Right to the City. (Re)claiming Cairo's Real and Virtual "Spaces of Freedom". *Environment & Urbanization*, *21*(1), 89–107. doi: 10.1177/0956247809103006

Fahmy, K. (2015, January 26). Dr. Khaled Fahmy writes about the memory of the January 25th revolution and why we will prevail: The revolution continues [Arabic]. *Al-Shorouk*. Retrieved from http://www.shorouknews.com/columns/view.aspx?cdate=26012015&id=c62319b0-6d99-4418-865a-f460a6991399

Fallon, K. (2014). Streams of the Self: The Instagram Feed As Narrative Autobiography. In H. Moura, R. Sternberg, R. Cunha, C. Queiroz, & M. Zeilinger (Eds.), *Proceedings of the interactive narratives, new media & social engagement international conference.* Toronto. Retrieved from http://interactiveconference.spanport.utoronto.ca/resources/Fallon.pdf

Farah, N. R. (2009). *Egypt's political economy: Power relations in development*. Cairo: American University in Cairo Press.

Faris, D. (2013). *Dissent and revolution in a digital age: Social media, blogging and activism in egypt*. London: I.B. Tauris.

Featherstone, M. (1998). The Flaneur, the City and Virtual Public Life. *Urban Studies*, *35*(5-6), 909–925. doi: 10.1080/0042098984619

Featherstone, M. (2006). Archive. *Theory, Culture & Society*, *23*(2-3), 591–596. doi: 10.1177/0263276406023002106

Fitzpatrick, J. (1994). *Human rights in crisis: The international system for protecting rights during states of emergency*. Philadelphia: University of Pennsylvania Press, Inc.

Foote, K. E. (1990). To Remember and Forget: Archives, Memory, and Culture. *The American Archivist*, *53*(3), 378–392. Retrieved from http://www.jstor.org/stable/40293469

Foucault, M. (1972). *The archaeology of knowledge and the discourse on language*. New York: Pantheon Books.

Garde-Hansen, J., Hoskins, A., & Reading, A. (2009). Introduction. In J. Garde-Hansen, A. Hoskins, & A. Reading (Eds.), *Save as... digital memories* (pp. 1–26). London: Palgrave MacMillan.

Gazzard, A. (2011). Location, Location, Location: Collecting Space and Place in Mobile Media. *Convergence: The International Journal of Research into New Media Technologies*, *17*(4), 405–417. doi: 10.1177/1354856511414344

Geertz, C. (1973). *The interpretation of cultures: Selected essays*. New York: Basic Books.

Gehad, R. (2013, August 15). Crackdown on pro-Morsi sit-ins leaves Egypt in a state of emergency. *Al Ahram*. Retrieved from http://english.ahram.org.eg/NewsContent/1/0/79019/Egypt/0/Crackdown-on-proMorsi-sitins-leaves-Egypt-in-a-sta.aspx

Gehl, R. W. (2011). The Archive and the Processor: The Internal Logic of Web 2.0. *New Media & Society*, *13*(8), 1–17. doi: 10.1177/1461444811401735

Gerbaudo, P. (2012). *Tweets and the streets: Social media and contemporary activism*. New York: Pluto Press.

Gerbaudo, P. (2013). The Impermanent Revolution: The Organizational Fragility of the Egyptian Prodemocracy Movement in the Troubled Transition. *Social Justice*, *39*(1), 7–20. Retrieved from http://www.jstor.org/stable/41940965

Gergen, K. J. (2002). The challenge of absent presence. In J. E. Katz & M. A. Aakhus (Eds.), *Perpetual contact: Mobile communication, private talk, public performance* (pp. 227–241). Cambridge: Cambridge University Press.

Gergen, K. J. (2008). Mobile communication and the transformation of the democratic process. In J. E. Katz (Ed.), *Handbook of mobile communication studies* (pp. 297–309). Cambridge, MA: MIT Press. doi: 10.7551/mitpress/9780262113120.003.0022

Gergen, K. J. (2010). Mobile Communication and the New Insularity. *QWERTY*, *5*(1), 14–28. Retrieved from www.ckbg.org/qwerty/index.php/qwerty/article/download/65/57

Ghannam, F. (2002). *Remaking the modern: Space, relocation, and the politics of identity in a global Cairo*. Berkeley: University of California Press.

Ghonim, W. (2012). *Revolution 2.0: The power of the people Is greater than the people in power: A memoir [e-book]*. New York: Houghton Mifflin Harcourt.

Ghonim, W. (2015). *Wael Ghonim: Let's design social media that drives real change.* Geneva, Switzerland: TED Talks. Retrieved from https://www.ted.com/talks/wael_ghonim_let_s_design_social_media_that_drives_real_change?language=en#t-7199

Gillespie, A., & Robins, K. (1989). Geographical Inequalities: The Spatial Bias of the New Communications Technologies. *Journal of Communication*, *39*(3), 7–18. doi: 10.1111/j.1460-2466.1989.tb01037.x

Gillespie, T. (2016). #Trendingistrending: When algorithms become culture. In R. Seyfert & J. Roberge (Eds.), *Algorithmic cultures: Essays on meaning, performance and new technologies* (pp. 1–23). London: Routledge.

Gillis, J. (1996). Introduction: Memory and identity: The history of a relationship. In *Commemorations: The politics of national identity.* Princeton, NJ: Princeton University Press.

Gladwell, M. (2010, October 4). Small change: Why the revolution will not be tweeted. *The New Yorker*. Retrieved from http://www.newyorker.com/magazine/2010/10/04/small-change-malcolm-gladwell

Goode, L. (2009). Social News, Citizen Journalism and Democracy. *New Media & Society*, *11*(8), 1287–1305. doi: 10.1177/1461444809341393

Gordon, E., & de Souza e Silva, A. (2011). *Net locality: Why location matters in a networked world*. Chichester, West Sussex: Wiley-Blackwell.

Gordon, J. (2007). The Mobile Phone and the Public Sphere: Mobile Phone Usage in Three Critical Situations. *Convergence: The International Journal of Research into New Media Technologies*, *13*(3), 307–319. doi: 10.1177/1354856507079181

Graham, S. (1998). The End of Geography or the Explosion of Place? Conceptualizing Space, Place and Information Technology. *Progress in Human Geography*, *22*(2), 165–185. doi: 10.1191/030913298671334137

Graham, S. (1999). Global Grids of Glass: On Global Cities, Telecommunications and Planetary Urban Networks. *Urban Studies*, *36*(0191), 929–950. doi: 10.1080/0042098993286

Graham, S., & Marvin, S. (1996). *Telecommunications and the city: Electronic spaces, urban places*. London: Routledge.

Graham, S., & Marvin, S. (2001). *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition*. London: Routledge.

Gray, P. A. (2016). Memory, Body, an the Online Researcher: Following Russian Street Demonstrations Via Social Media. *American Ethnologist*, *43*(3), 500–510. doi: 10.1111/amet.12342

Gupta, A., & Ferguson, J. (1997). Discipline and practice: 'The Field' as site, method, and location in anthropology. In A. Gupta & J. Ferguson (Eds.), *Anthropological locations: Boundaries and grounds of a field science* (pp. 1–46). Berkeley, CA: University of California Press.

Haleh Davis, M. (2012, March 20). The invention of the savage : Colonial exhibitions and the staging of the Arab Spring. *Jadaliyya*. Retrieved from http://www.jadaliyya.com/pages/index/4744/the-invention-of-the-savage_colonial-exhibitions-a

Hamdy, B., & Karl, D. S. (2014). *Walls of freedom: Street art of the Egyptian revolution* (B. Hamdy & D. S. Karl, Eds.). Berlin: From Here to Fame.

Hands, J. (2011). *is for activism: Dissent, resistance and rebellion in a digital culture*. London: Pluto Press.

Hanieh, A. (2013). *Lineages of revolt: Issues of contemporary capitalism in the Middle East*. Chicago: Haymarket Books.

Hannam, K., Sheller, M., & Urry, J. (2006). Editorial: Mobilities, Immobilities and Moorings. *Mobilities*, *1*(1), 1–22. Retrieved from http://www.lancaster.ac.uk/fass/projects/medmobilities/docs/Editorial-Mobilities.pdf

Hanson, J. (2007). *24/7: How cell phones and the internet change the way we live, work, and play*. Westport, CT: Praeger Publishers.

Haraway, D. (1991). *Simians, cyborgs, and women: the reinvention of nature*. London: Routledge.

Hartog, F. (2015). *Regimes of historicity: Presentism and experiences of time*. New York: Columbia University Press.

Harvey, D. (2001). Globalization and the "Spatial Fix". *Geographische Revue*, *2*, 23–30. Retrieved from http://publishup.uni-potsdam.de/files/2251/gr2_01_Ess02.pdf

Harvey, D. (2003). The Fetish of Technology: Causes and Consequences. *Macalester International*, *13*(1), 3–30. Retrieved from http://digitalcommons.macalester.edu/macintl/vol13/iss1/7/?utm_source=digitalcommons.macalester.edu/macintl/vol13/iss1/7&utm_medium=PDF&utm_campaign=PDFCoverPages

Harvey, D. (2005). *A brief history of neoliberalism*. Oxford: Oxford University

Press.

Haskins, E. (2007, oct). Between Archive and Participation: Public Memory in a Digital Age. *Rhetoric Society Quarterly*, *37*(4), 401–422. doi: 10.1080/02773940601086794

Heidegger, M. (1977). *The question concerning technology and other essays*. New York: Harper & Row.

Herbert, S. (2000). For Ethnography. *Progress in Human Geography*, *24*(4), 550–568. doi: 10.1191/030913200100189102

Hermanns, H. (2008). Mobile Democracy: Mobile Phones as Democratic Tools. *Politics*, *28*(2), 74–82. doi: 10.1111/j.1467-9256.2008.00314.x

Hine, C. (2005). Virtual methods and the sociology of cyber-social-scientific knowledge. In C. Hine (Ed.), *Virtual methods: Issues in social research on the internet.* Oxford: Bloomsbury.

Hine, C. (2007). Multi-sited Ethnography as a Middle Range Methodology for Contemporary STS. *Science, Technology & Human Values*, *32*(6), 652–671. doi: 10.1177/0162243907303598

Hine, C. (2015). *Ethnography for the internet: Embedded, embodied and everyday [e-book]*. London: Bloomsbury.

Hirschkind, C. (2011). From the Blogosphere to the Street: Social Media and the Egyptian Revolution. *Oriente Moderno*, *91*(1), 61–74. Retrieved from http://www.jstor.org/stable/23253706

Hjorth, L., & Pink, S. (2014). New Visualities and the Digital Wayfarer: Reconceptualizing Camera Phone Photography and Locative Media Introduction: A Glance into the World of Emplaced Visuality. *Mobile Media & Communication*, *2*(1), 40–57. doi: 10.1177/2050157913505257

Hochman, N. (2014). The Social Media Image. *Big Data & Society*, *1*(2). doi: 10.1177/2053951714546645

Hochman, N., & Manovich, L. (2013). Zooming Into an Instagram City: Reading the Local Through Social Media. *First Monday*, *18*(7). Retrieved from

http://firstmonday.org/article/view/4711/3698

Hochman, N., & Schwartz, R. (2012). Visualizing Instagram: Tracing Cultural Visual Rhythms. *AAAI Technical Report*, 6–9. Retrieved from https://www.aaai.org/ocs/index.php/ICWSM/ICWSM12/paper/viewFile/4782/5091

Hofheinz, A. (2011). Nextopia? Beyond Revolution 2.0. *International Journal of Communication*, *5*. Retrieved from ijoc.org/index.php/ijoc/article/download/1186/629

Howard, P. (2010). *The digital origins of dictatorship and democracy*. Oxford: Oxford University Press.

Howard, P., Duffy, A., Freelon, D., Hussein, M., Mari, W., & Mazaid, M. (2011). *Opening Closed Regimes: What Was the Role of Social Media During the Arab Spring?* doi: 10.2139/ssrn.2595096

Hu, Y., Manikonda, L., & Kambhampati, S. (2014). What We Instagram: A First Analysis of Instagram Photo Content and User Types. In *Proceedings of the eighth international aaai conference on weblogs and social media* (pp. 595–598). Ann Arbor: AAAI Press. Retrieved from http://rakaposhi.eas.asu.edu/instagram-icwsm.pdf

Human Rights Watch. (2010). *Egypt: Cosmetic changes can't justify keeping emergency law* (Tech. Rep.). Cairo: Human Rights Watch. Retrieved from https://www.hrw.org/news/2010/05/12/egypt-cosmetic-changes-cant-justify-keeping-emergency-law

Human Rights Watch. (2012, November 30). *Egypt: New constitution mixed on support of rights.* Cairo. Retrieved from https://www.hrw.org/news/2012/11/30/egypt-new-constitution-mixed-support-rights

Human Rights Watch. (2014). *All according to plan: The Rab'a massacre and mass killings of protesters in Egypt* (Tech. Rep.). Human Rights Watch. Retrieved from https://www.hrw.org/report/2014/08/12/all-according-plan/raba-massacre-and-mass-killings

-protesters-egypt

Humphreys, L. (2010). Mobile Social Networks and Urban Public Space. *New Media & Society*, *12*(5), 763–778. doi: 10.1177/1461444809349578

Ibrahim, Y. (2015). Instagramming Life: Banal Imaging and the Poetics of the Everyday. *Journal of Media Practice*, *16*(March), 1–13. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/14682753.2015.1015800 doi: 10.1080/14682753.2015.1015800

Idle, N., & Nunns, A. (2011). *Tweets from Tahrir: Egypt's revolution as it unfolded, in the words of the people who made it.* London: Or Books.

International Telecommunications Union. (2011a). *ICT facts and figures* (Tech. Rep.). Geneva: International Telecommunications Union. Retrieved from https://www.itu.int/ITU-D/ict/facts/2011/material/ICTFactsFigures2011.pdf

International Telecommunications Union. (2011b). *World Telecommunications Indicator Database.* Geneva: International Telecommunications Union. Retrieved from www.itu.int/en/ITU-D/Statistics/Pages/stat/

Iskandar, A. (2012). Muslim, Christian - One Hand! In M. Alhassen & A. Shihab-Eldin (Eds.), *Demanding dignity: Young voices from the front lines of the arab revolutions* (pp. 145–158). Ashland, OR: White Cloud Press.

Iskander, E. (2011). Connecting the National and the Virtual: Can Social Media Have a Role in Institution-building After Egypt's January 25 Uprising? *International Journal of Communication*, *5*. Retrieved from http://ijoc.org/index.php/ijoc/article/view/1165/598

Issa, I. (2000). Cairo's first arts festival - Al Nitaq. *Medina Magazine*, 84–87.

Ito, M., Okabe, D., & Anderson, K. (2009). Portable objects in three global cities: The personalization of urban places. In R. Ling & S. W. Campbell (Eds.), *The reconstruction of space and time: Mobile communication practices.* New Brunswick, NJ: Transaction Publishers.

Jeffrey, C. (2010). Timepass: Youth, class, and time among unemployed young men in India. *American Ethnologist*, *37*(3), 465–481. doi: 10.1111/j.1548-1425.2010.01266.x

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.

Jones, S. (2013, November 15). Cairo's Tahrir Square to get a new neighbor: A mini Silicon Valley. *The Huffington Post*. Retrieved from http://www.huffingtonpost.com/2013/11/15/tahrir-square-tech-park_n_4280590.html

Joya, A. (2011). The Egyptian Revolution: Crisis of Neoliberalism and the Potential for Democratic Politics. *Review of African Political Economy*, *38*(129), 367–386. doi: 10.1080/03056244.2011.602544

Jurkiewicz, S. (2011). Blogging as counterpublic? The Lebanese and Egyptian blogosphere in comparison. In N.-C. Schneider & B. Gräf (Eds.), *Social dynamics 2.0: Researching change in times of media convergence: Case studies from the middle east and asia* (pp. 27–48). Berlin: Frank & Timme GmbH.

Kaika, M., & Swyngedouw, E. (2000). Fetishizing the Modern City: The Phantasmagoria of Urban Technological Networks. *International Journal of Urban and Regional Research*, *24*(1), 120–138. doi: 10.1111/1468-2427.00239

Kandil, H. (2014). *Soldiers, spies and statesmen: Egypt's road to revolt*. London: Verso.

Katz, J. E., & Rice, R. E. (2002). The Telephone as a Medium of Faith, Hope, Terror, and Redemption: America, September 11. *Prometheus*, *20*(3), 247–253. doi: 10.1080/08109020210144882

Kavanaugh, A., Yang, S., Sheetz, S., Li, L. T., & Fox, E. (2011). Between a Rock and a Cell Phone: Social Media Use during Mass Protests in Iran, Tunisia and Egypt. *ACM Trans. of CHI*, *1*(212), 1–10. doi: 10.1145/0000000

.0000000

Kellner, D. (2002). Theorizing Globalization. *Sociological Theory*, *20*(3). doi: 10.1111/0735-2751.00165

Khamis, S., & Vaughn, K. (2011). Cyberactivism in the Egyptian Revolution: How Civic Engagement and Citizen Journalism Tilted the Balance. *Arab Media & Society*, *13*. Retrieved from http://www.arabmediasociety.com/?article=769

Kingsley, P., & Chulov, M. (2013, July 3). Mohamed Morsi ousted in Egypt's second revolution in two years. *The Guardian*. Retrieved from http://www.theguardian.com/world/2013/jul/03/mohamed-morsi-egypt-second-revolution

Kirkpatrick, D. D., & Sheikh, M. E. (2012, November 23). Citing deadlock, Egypt's leader seizes new power and plans Mubarak retrial. *New York Times*. Retrieved from http://www.nytimes.com/2012/11/23/world/middleeast/egypts-president-morsi-gives-himself-new-powers.html?_r=0

Klein, K. L. (2000). On the Emergence of Memory in Historical Discourse. *Representations*, *69*, 127–150. Retrieved from http://www.jstor.org/stable/2902903

Knibbs, K. (2014, October 17). Twitpic is shutting down after all. *Gizmodo.com*. Retrieved from http://gizmodo.com/twitpic-is-shutting-down-after-all-1647578907

Korany, B., & El-Mahdi, R. (2012). Introduction. In B. Korany & R. El-Mahdi (Eds.), *Arab spring in egypt: Revolution and beyond* (pp. 2–7). Cairo: American University in Cairo Press.

Kupfer, J. (2007). Mobility, Portability and Placelessness. *Journal of Aesthetic Education*, *41*(1), 38–50. Retrieved from http://www.jstor.org/stable/4140238

Kwan, M.-P. (2007). Mobile Communications, Social Networks, and

Urban Travel: Hypertext as a New Metaphor for Conceptualizing Spatial Interaction. *The Professional Geographer*, *59*(4), 434–446. doi: 10.1111/j.1467-9272.2007.00633.x

Langohr, V. (2004). Too Much Civil Society, Too Little Politics: Egypt and Liberalizing Arab Regimes. *Comparative Politics*, *36*(2), 181–204.

Larsen, J. (2008). Practices and Flows of Digital Photography: An Ethnographic Framework. *Mobilities*, *3*(1), 141–160. doi: 10.1080/17450100701797398

Lasén, A. (2012). Autofotos. Subjetividades y Medios Sociales. In *Jóvenes, culturas urbanas y redes digitales. prácticas emergentes en las artes, el campo editorial y la música* (pp. 243–262). Madrid: Ariel.

Latour, B. (1991). Technology is Society Made Durable. In J. Law (Ed.), *A sociology of monsters: Essays on power, technology and domination* (pp. 103–132). London: Routledge.

Latour, B. (1993). *We Have Never Been Modern*. Cambridge, MA: Harvard University Presss.

Lee, D.-H. (2010). Digital Cameras, Personal Photography and the Reconfiguration of Spatial Experiences. *The Information Society*, *26*(4), 266–275. doi: 10.1080/01972243.2010.489854

Lefebvre, H. (1974). *The Production of Space*. Malden, MA: Blackwell.

Lefebvre, H. (2010). The Right to the City. In E. Kofman & E. Lebas (Eds.), *Writings on cities* (pp. 147–159). Oxford: Wiley-Blackwell.

Levin, A. (2014). The Selfie in the Age of Digital Recursion. *InVisible Culture*(20).

Levinson, C. (2005, August 24). Egypt's growing blogger community pushes limit of dissent. *Christian Science Monitor*. Retrieved from `http://www.csmonitor.com/2005/0824/p07s01-wome.html`

Licoppe, C. (2004). 'Connected' presence: the emergence of a new repertoire for managing social relationships in a changing communication technoscape. *Environment and Planning D: Society and Space*, *22*(1), 135–156. doi: 10

.1068/d323t

Liebmann, M. (2006). Media Convergence. *In J. Treadwell Chair Libraries and Collaboration Session of the Library of the 21st Century Symposium.*

Lim, M. (2012). Clicks, Cabs, and Coffee Houses: Social Media and Oppositional Movements in Egypt, 2004-2011. *Journal of Communication*, *62*(2), 231–248. doi: 10.1111/j.1460-2466.2012.01628.x

Lim, M. (2014). Seeing Spatially: People, Networks and Movements in Digital and Urban Spaces. *International Development Planning Review*, *36*(1).

Ling, R. (2004). *The Mobile Connection: The Cell Phone's Impact on Society*. Burlington, MA: Morgan Kaufmann Publishers Inc.

Ling, R. (2006). Life in the Nomos: Stress, Emotional Maintenance, and Coordination via the Mobile Phone in Intact Families. In A. Kavoori & N. Arceneaux (Eds.), *The cell phone reader: Essays in social transformation* (pp. 61–84). New York: Peter Lang.

Ling, R., & Donner, J. (2009). *Mobile Communication*. Cambridge: Polity Press.

Ling, R., & Haddon, L. (2001). Mobile telephony, mobility, and the coordination of everyday life. In J. E. Katz (Ed.), *Machines that become us: The social context of personal communication technology* (pp. 245–266). London: Transaction Publishers. doi: 10/citeulike-article-id:612802

Ling, R., & Yttri, B. (2002). Hyper-coordination Via Mobile Phones in Norway. In J. Katz & M. A. Aakhus (Eds.), *Perpetual contact: Mobile communication, private talk, public performance* (pp. 139–169). Cambridge: Cambridge University Press.

London Stock Exchange. (2016). *Telecom Egypt signs mobile license agreement.* London: London Stock Exchange. Retrieved from http://www.londonstockexchange.com/exchange/news/market-news/market-news-detail/TEEG/12949324.html

Lotan, G., Graeff, E., Ananny, M., Gaffney, D., Pearce, I., & Boyd, D. (2011). Revolutions Were Tweeted: Information Flows during the 2011 Tunisian

and Egyptian Revolutions. *International Journal of Communication*, *5*.

Lukerson, V. (2014, September 4). Twitpic is shutting down, and it's blaming Twitter. *Time*. Retrieved from time.com/3270519/twitpic-twitter/

Lynch, M. (1999). Archives in Formation: Privileged Spaces, Popular Archives, and Paper Trails. *History of the Human Sciences*, *12*(2), 65–87.

Lynch, M. (2007). Blogging the New Arab Republic. *Arab Media & Society*, *Spring*(1). Retrieved from http://www.arabmediasociety.com/?article=10

Lynch, M. (2012). *The Arab Uprising: The unfinished revolutions of the Middle East*. London: PublicAffairs.

Mackenzie, A. (1997). The Mortality of the Virtual: Real-time, Archive and Dead-time in Information Networks. *Convergence: The International Journal of Research into New Media Technologies*, *3*(2), 59–71. doi: 10.1177/135485659700300208

Mackey, R., & Stack, L. (2013, November 18). Egyptian protesters destroy Tahrir Square monument erected by interim government. *The New York Times*. Retrieved from http://thelede.blogs.nytimes.com/2013/11/18/egyptian-protesters-destroy-tahrir-square-monument-erected-by-interim-government/

Madd. (2011). *Madd Homepage [Web page]*. Retrieved 2015-12-20, from http://maddplatform.tumblr.com/

Madrigal, A. C. (2011, February 24). Preserving the online legacy of the Egyptian revolution. *The Atlantic*. Retrieved from http://www.theatlantic.com/technology/archive/2011/02/preserving-the-online-legacy-of-the-egyptian-revolution/71675/

Mahdavi, P. (2007). Meeting, Mating, and Cheating Online in Iran. *ISIM Review*, *19*, 18–19. Retrieved from https://openaccess.leidenuniv.nl/bitstream/handle/1887/17118/ISIM_19_Meeting_Mating_and_Cheating_Online_in_Iran.pdf

Mahmoud, A. (2013). *El 7azr Style.* YouTube. Retrieved from https://www.youtube.com/watch?v=BrXOsIGuQBI

Mains, D. (2007). Neoliberal Times: Progress, Boredom, and Shame Among Young Men in Urban Ethiopia. *American Ethnologist*, *34*(4), 659–673. doi: 10.1525/ae.2007.34.4.659.American

Malky, R. A. (2007). Blogging for Reform: the Case of Egypt. *Arab Media & Society*, *February*. Retrieved from http://www.arabmediasociety.com/?article=12

Manoff, M. (2004). Theories of the Archive from Across the Disciplines. *Libraries and the Academy*, *4*(1), 9–25. Retrieved from http://uwf.edu/dearle/capstone/manoff.pdf

Manoff, M. (2007). *Volatility, Instability, Ambiguity: the Evolving Digital Record* (No. April). Cambridge, MA. Retrieved from http://web.mit.edu/comm-forum/mit5/papers/MarleneManoff.pdf

Manovich, L. (1999). Database as Symbolic Form. *Convergence: The International Journal of Research into New Media Technologies*, *5*(2), 80–99. doi: 10.1177/135485659900500206

Manovich, L. (2001). *The Language of New Media*. Cambridge, MA: MIT Press.

Mansell, R. (2002). Introduction. In R. Mansell (Ed.), *Inside the communication revolution: Evolving patterns of social and technical interaction* (pp. 1–20). Oxford: Oxford University Press.

Marcus, G. E. (1986). Contemporary problems of ethnography in the modern world system. In J. Clifford & G. E. Marcus (Eds.), *Writing culture: The poetics and politics of ethnography* (pp. 165–193). Berkeley, CA: University of California Press.

Marcus, G. E. (1995). Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography. *Annual Review of Anthropology*, *24*. doi: 10.1146/annurev.an.24.100195.000523

Marcus, G. E., & Mascarenhas, F. (2005). *Ocasião: The marquis and the*

anthropologist, a collaboration. Lanham, MD: Rowman and Littlefield.

Marcuse, H. (1985). Some social implications of modern technology. In A. Arato & E. Gebhardt (Eds.), *The essential frankfurt school reader* (pp. 138–163). New York: Continuum.

Masquelier, A. (2013). Teatime: Boredom and the Temporalities of Young Men in Niger. *Africa*, *83*(03), 470–491. doi: 10.1017/S0001972013000272

Massey, D. (1993). Power-geometry and a progressive sense of place. In J. Bird, B. Curtis, T. Putnam, G. Robertson, & L. Tickner (Eds.), *Mapping the futures: Local cultures, global change* (pp. 59–69). London: Routledge.

Massey, D. (2005). *For Space*. London: Sage Publications.

Matsuda, M. (2005). Mobile communication and selective sociality. In M. Ito, M. Matsuda, & D. Okabe (Eds.), *Personal, portable, pedestrian: Mobile phones in japanese life* (pp. 123–142). Cambridge, MA: MIT Press.

Mayer-Schonberger, V. (2011). *Delete: The virtue of forgetting in the digital age*. Princeton, NJ: Princeton University Press.

Mazzarella, W. (2010). The Myth of the Multitude, or, Who's Afraid of the Crowd? *Critical Inquiry*, *36*(Summer), 697–727. Retrieved from http://www.jstor.org/stable/10.1086/655209

McGuigan, J. (2005). Towards a Sociology of the Mobile Phone. *Human Technology*, *1*(1), 45–57. Retrieved from http://humantechnology.jyu.fi/archive/vol-1/issue-1/mcguigan1_45-57/@@display-file/fullPaper/mcguigan.pdf

McKnight, C., Dillon, A., & Richardson, J. (1991). *Hypertext in context*. Cambridge: Cambridge University Press.

McMichael, P. (1998). Development and structural adjustment. In J. G. Carrier & D. Miller (Eds.), *Virtualism: A new political economy* (pp. 95–116). Oxford: Berg.

Mead, M., & Métraux, R. (2000). *The study of culture at a distance*. Oxford: Berghahn Books.

Mehta, J. (2012, March 6). 18 Days in Egypt: How we launched our web-native documentary. *Tribeca Film*. Retrieved from https://tribecafilm.com/stories/5136579a1c7d7698e9000017-18-days-in-egypt-how-we-l

Mehta, J., & Elayat, Y. (2012). *Kickstarter: 18 Days in Egypt [Web page].* Retrieved from https://www.kickstarter.com/projects/18days/18-days-in-egypt

Meital, Y. (2006). The Struggle Over Political Order in Egypt: The 2005 Elections. *The Middle East Journal*, *60*(2), 1–18. Retrieved from http://www.jstor.org/stable/4330249

Mejias, U. A. (2009). The Limits of Networks as Models for Organizing the Social. *New Media & Society*, *11*(8). doi: 10.1177/1461444809341392

Mejias, U. A. (2011, January 30). *The Twitter Revolution Must Die [Blog post].* Retrieved from http://blog.ulisesmejias.com/2011/01/30/the-twitter-revolution-must-die/

Mejias, U. A. (2013). *Off the network: Disrupting the digital world*. Minneapolis: University of Minnesota Press.

Miller, D. (1998). Conclusion: A theory of virtualism. In J. G. Carrier & D. Miller (Eds.), *Virtualism: A new political economy* (pp. 187–216). Oxford: Berg.

Miller, D., & Slater, D. (2000). *The internet: An ethnographic approach*. Oxford: Berg.

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

Mitchell, T. (1999a). Dreamland: The Neoliberalism of Your Desires. *Middle East Research and Information Project*(Spring). Retrieved from http://www.merip.org/mer/mer210/dreamland-neoliberalism-your-desires

Mitchell, T. (1999b). No factories, No Problems: The Logic of NeoLiberalism in Egypt. *Review of African Political Economy*, *26*(82), 455–468. doi: 10.1080/03056249908704412

Mitchell, T. (2002). *Rule of experts: Egypt, techno-politics, modernity [e-book]*. Berkeley: University of California Press.

Morayef, S. (2011a, February 6). No war on graffiti: SCAF vandalists versus graffiti artists [Blog post]. *Suzee in the City*. Retrieved from https://suzeeinthecity.wordpress.com/2012/02/06/war-on-graffiti-scaf-vandalists-versus-graffiti-artists/

Morayef, S. (2011b, August 18). Pop goes graffiti: The faces of Cairo street art [Blog post]. *Suzee in the City*. Retrieved from https://suzeeinthecity.wordpress.com/2011/08/18/pop-goes-graffiti-the-faces-of-cairo-street-art/

Mosireen. (2012a). *Mosireen homepage [Web page].* Retrieved from http://mosireen.org/?p=661

Mosireen. (2012b). Mosireen: Independent media collective in Cairo [Web page]. *Indiegogo*. Retrieved from https://www.indiegogo.com/projects/mosireen-independent-media-collective-in-cairo##/

Moss, M., & Townsend, A. M. (2000). How telecommunications systems are transforming urban spaces. In J. O. Wheeler, Y. Aoyama, & B. Warf (Eds.), *Cities in the telecommunications age: The fracturing of geographies.* London: Routledge.

Mostafa, N. (2010, May 11). Opposition groups protest renewal of emergency law. *Egypt Independent*. Retrieved from http://www.egyptindependent.com/news/opposition-groups-protest-renewal-emergency-law

Mourad, M. (2011, May 28). We will document Egypt's revolution, not dictate the story: AUC professor. *Al Ahram*. Retrieved from http://english.ahram.org.eg/News/13026.aspx

Moursi, M. (2011, January 23). Where does urban harmony begin? *Egypt Independent*. Retrieved from http://www.egyptindependent.com/opinion/where-does-urban-harmony-begin

Murray, S. (2008). Digital Images, Photo-Sharing, and Our Shifting Notions of Everyday Aesthetics. *Journal of Visual Culture*, *7*, 147–163. doi: 10.1177/1470412908091935

Murthy, D. (2008). Digital Ethnography: An Examination of the Use of New Technologies for Social Research. *Sociology*, *42*(5), 837–855. doi: 10.1177/0038038508094565

Nader, E. (2015, August 31). 1,250 forced disappearances since beginning of year: NGO. *Daily News Egypt*. Retrieved from http://www.dailynewsegypt.com/2015/08/31/1250-forced-disappearances-since-beginning-of-year-ngo/

Nagati, O., & Stryker, B. (2013). *Archiving the city in flux: Cairo's shifting urban landscape since the Januray 25th revolution*. Cairo: CLUSTER. Retrieved from http://issuu.com/clustercairo/docs/archiving_the_city_in_flux

Neocleous, M. (2006). The Problem with Normality: Taking Exception to"Permanent Emergenc". *Alternatives: Global, Local, Political*, *31*(2), 191–213. doi: 10.1177/030437540603100204

Nesmith, T. (2002). Seeing Archives: Postmodernism and the Changing Intellectual Place of Archives. *American Archivist*, *65*(1), 24–41. Retrieved from http://archivists.metapress.com/index/RR48450509R0712U.pdf

Nora, P. (1989). Between Memory and History: Les Lieux de Memoire. *Representations*(26), 7–24. Retrieved from http://www.jstor.org/stable/2928520

Nordland, R. (2013, August 26). As Egyptians Ignore Curfew, Talk of a U.S.-Brotherhood Conspiracy. *The New York Times*. Retrieved from http://www.nytimes.com/2013/08/26/world/middleeast/as-egyptians-ignore-curfew-talk-of-a-us-brotherhood-conspiracy.html

Okabe, D., & Ito, M. (2003). Camera Phones Changing the Definition of Picture-Worthy. *Japan Media Review*. Retrieved from http://www.itofisher.com/mito/archives/camphones.okabeito.pdf

Okely, J. (1992). Anthropology and autobiography: Participatory experience and embodied knowledge. In J. Okely & H. Callaway (Eds.), *Anthropology and autobiography* (pp. 1–28). London: Routledge.

Omer, M. (2011, February 1). Revolution spreads to Egypt's deprived Sinai. *The Electronic Intifada*. Retrieved from https://electronicintifada.net/content/revolution-spreads-egypts-deprived-sinai/9208

Osman, T. (2010). *Egypt on the Brink: From the Rise of Nasser to the Fall of Mubarak*. New Haven: Yale University Press.

Owen, R. (2012). *The rise and fall of Arab presidents for life*. Cambridge, MA: Harvard University Presss.

Pain, R., Grundy, S., Gill, S., Towner, E., Sparks, G., & Hughes, K. (2005). 'So Long As I Take My Mobile': Mobile Phones, Urban Life and Geographies of Young People's Safety. *International Journal of Urban and Regional Research*, *29*(4), 814–830. doi: 10.1111/j.1468-2427.2005.00623.x

Palfrey, J., & Gasser, U. (2008). *Born digital: Understanding the first generation of digital natives*. New York: Basic Books.

Pariser, E. (2011). *The filter bubble: What the internet is hiding from you*. New York: Penguin Press HC.

Peck, J., & Tickell, A. (2002). Neoliberalizing Space. *Antipode*, *34*(3), 380–404. doi: 10.1111/1467-8330.00247

Peters, B. (2009). And Lead Us Not Into Thinking the New is New. *New Media & Society*, *11*(13), 13–30. doi: 10.1177/1461444808099572

Peters, P., Kloppenburg, S., & Wyatt, S. (2010). Coordinating Passages: Understanding the Resources Needed for Everyday Mobility. *Mobilities*, *5*(3), 349–368. doi: 10.1080/17450101.2010.494840

Peterson, M. A. (2011a). *Connected in Cairo: Growing up cosmopolitan in the modern Middle East*. Bloomington: Indiana University Press.

Peterson, M. A. (2011b). Egypt's Media Ecology in a Time of Revolution. *Arab Media & Society*, *13*. Retrieved from http://www.arabmediasociety

.com/?article=770

Peterson, M. A. (2015). In search of antistructure: The meaning of Tahrir Square in Egypt's ongoing social drama. In A. Horvath, B. Thomassen, & H. Wydra (Eds.), *Breaking boundaries: Varieties of liminality* (pp. 164–182). Oxford: Berghahn Books.

Plant, S. (2002). *On the mobile: The effects of mobile telephones on social and individual life* (Tech. Rep.). Motorola. Retrieved from http://www.momentarium.org/experiments/7a10me/sadie_plant.pdf

Postill, J. (2016). Digital ethnography: 'being there' physically, remotely, virtually and imaginatively. In S. Pink, H. Horst, J. Postill, L. Hjorth, T. Lewis, & J. Tacchi (Eds.), *Digital ethnography: Principles and practices.* London: Sage.

Postill, J. (2017). Doing remote ethnography [forthcoming]. In L. Hjorth, H. Horst, A. Galloway, & G. Bell (Eds.), *The routledge companion to digital ethnography.* London: Taylor & Francis, Ltd.

Postill, J., & Pink, S. (2012). Social Media Ethnography: The Digital Researcher in a Messy Web. *Media International Australia, Incorporating Culture & Policy*, *145*.

Questiaux, N. (1982). *Question of the human rights of persons subjected to any form of detention or imprisonment: Study of the implications for human rights of recent developments concerning situations known as states of seige or emergency* (Tech. Rep.). UNESCO. doi: E/CN.4/Sub.2/1982/15

Radsch, C. C. (2011). Citizen journalists, alternative media and post-millennial social movements in the Arab world. In J. Downing (Ed.), *Sage encyclopedia of social movement media.* London: Sage.

Ralph, M. (2008). Killing Time. *Social Text*, *26*(4 97), 1–29. doi: 10.1215/01642472-2008-008

Rapport, N. (2000). The narrative as fieldwork technique: Processual ethnography for a world in motion. In V. Amit (Ed.), *Constructing the field: Ethnographic*

fieldwork in the contemporary world (pp. 71–95). London: Routledge.

Rayman, N. (2013, November 18). Tahrir Square memorial angers Egyptian activists, who say it will be destroyed. *Time*. Retrieved from http://world.time.com/2013/11/18/tahrir-square-memorial-angers-egyptian-activists-who-say-it-will-be-destroyed/

Reading, A. (2009). Memobilia: The mobile phone and the emergence of wearable memories. In J. Garde-Hansen, A. Hoskins, & A. Reading (Eds.), *Save as... digital memories* (pp. 81–95). London: Palgrave MacMillan.

Reza, S. (2007). Endless Emergency: The Case of Egypt. *New Criminal Law Review*, *10*(4), 532–553. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1088827

Rheingold, H. (2007). *Smart mobs: The next social revolution*. New York: Basic Books.

Rheingold, H. (2008). Mobile media and political collective action. In J. E. Katz (Ed.), *Handbook of mobile communication studies* (pp. 226–238). Cambridge, MA: MIT Press. doi: 10.7551/mitpress/9780262113120.001.0001

Rise Up Summit. (2013). *Rise Up Summit [Web page]*. Retrieved from http://riseupsummit.com/

Roberts, H. (2013, September 12). The revolution that wasn't. *London Review of Books*. Retrieved from http://www.lrb.co.uk/v35/n17/hugh-roberts/the-revolution-that-wasnt

Robins, K. (2000). Cyberspace and the world we live in. In D. Bell & B. M. Kennedy (Eds.), *The cybercultures reader* (pp. 77–95). London: Routledge.

Röder, M., & Rinke, E. M. (2011). Media Ecologies, Communication Culture, and Temporal-Spatial Unfolding: Three Components in a Communication Model of the Egyptian Regime Change. *Journal of Communication*, *5*, 1273–1285. Retrieved from http://ijoc.org/index.php/ijoc/

article/view/1173

Rooney, B. (2013, November 28). Egypt's uprising sparked startup revolution. *Tech Europe Blog: The Wall Street Journal*. Retrieved from http://blogs.wsj.com/tech-europe/2013/11/28/egypts-uprising-sparked-startup-revolution/

Rosenberg, T. (2011, February 17). Revolution U. *Foreign Policy*. Retrieved from http://foreignpolicy.com/2011/02/17/revolution-u-2/

Rosenzweig, R. (2003). Scarcity or Abundance? Preserving the Past in a Digital Era. *The American Historical Review*, *108*(3), 735–762. Retrieved from http://www.jstor.org/stable/3523084

Rubinstein, D. (2005). Cellphone Photography: The Death of the Camera and the Arrival of Visible Speech. *The Issues in Contemporary Culture and Aesthetics*, *2*(1), 113–118.

Russell, A. (2011). Extra-National Information Flows, Social Media and the 2011 Egyptian Uprising. *International Journal of Communication*, *5*. Retrieved from http://ijoc.org/index.php/ijoc/article/view/93/630

Ryzova, L. (2014). Mourning the Archive: Middle Eastern Photographic Heritage Between Neoliberalism and Digital Reproduction. *Comparative Studies in Society and History*, *56*(04), 1027–1061. doi: 10.1017/S0010417514000486

Ryzova, L. (2015). Strolling in Enemy Territory: Downtown Cairo, its Publics, and Urban Heterotopias. *Orient-Institut Studies*, *3*(Divercities: Competing Narratives and Urban Practices in Beirut, Cairo and Tehran). Retrieved from http://www.perspectivia.net/publikationen/orient-institut-studies/3-2015/ryzova_strolling/view/++widget++form.widgets.IPSJOfficeDocTransformer.psj_pdf_repr/@@download/ryzova_strolling.doc.pdf

Sabry, T. (2012). On Historicism, the Aporia of Time and the Arab Revolutions. *Middle East Journal of Culture and Communication*, *5*(1), 80–85. doi: 10

.1163/187398612X624409

Safwat, H. (2013, December 7). Cairo journalists protest arrest of photographers. *Al Ahram*. Retrieved from http://english.ahram.org.eg/NewsContent/1/64/88503/Egypt/Politics-/Cairo-journalists-protest-arrest-of-photographers.aspx

Said, E. (1979). *Orientalism*. London: Vintage Books.

Salah-Ahmed, A. (2013, November 23). The GrEEK Campus. *Mada Masr*. Retrieved from http://www.madamasr.com/sections/economy/greek-campus

Saleh, N. (2010). *Third world citizens and the information technology revolution*. New York: Palgrave MacMillan.

Sarur, S. (2015, January 28). Khaled Fahmy: The view that the revolution is a conspiracy is firmly held by the Ministry of the Interior. *Al Masry Al Youm*. Retrieved from http://www.almasryalyoum.com/news/details/644110

Schielke, S. (2008). Boredom and Despair in Rural Egypt. *Contemporary Islam*, *2*(November), 251–270. doi: 10.1007/s11562-008-0065-8

Schwartz, J. M., & Cook, T. (2002). Archives, Records, and Power: The Making of Modern Memory. *Archival Science*, *2*(1-2), 1–19. doi: 10.1007/BF02435628

Schwartz, R., & Halegoua, G. R. (2014). The Spatial Self: Location-Based Identity Performance on Social Media. *New Media & Society*(April), 1–18. doi: 10.1177/1461444814531364

Scifo, B. (2005). The domestication of camera-phone and MMS communication: The early experiences of young Italians. In K. Nyíri (Ed.), *In a sense of place. the global and the local in mobile communication* (pp. 363–374). Vienna: Passagen Verlag.

Seib, P. (2007). New media and prospects for democratization. In P. Seib (Ed.), *New media and the new middle east.* New York: Palgrave Macmillan.

Sekula, A. (2003). Reading an archive: Photography between labour and capital. In L. Wells (Ed.), *The photography reader.* London: Routledge.

Shehata, S., & Stacher, J. (2013). The Brotherhood goes to Parliament. *Middle East Report*, *Winter*. Retrieved from http://www.merip.org/mer/mer240/brotherhood-goes-parliament

Sheller, M. (2004). Mobile Publics: Beyond the Network Perspective. *Environment and Planning D: Society and Space*, *22*(1), 39–52. doi: 10.1068/d324t

Sheller, M. (2008). Mobility, freedom and public space. In S. Bergmann & T. Sager (Eds.), *The ethics of mobilities: Rethinking place, exclusion, freedom and environment* (pp. 25–38). Farnham, UK: Ashgate Publishing Limited.

Sheller, M., & Urry, J. (2006). The New Mobilities Paradigm. *Environment and Planning A*, *38*(2), 207–226. doi: 10.1068/a37268

Shenker, J. (2011a, August 12). How youth-led revolts shook elites around the world. *The Guardian*, 10–13. Retrieved from http://www.guardian.co.uk/world/2011/aug/12/youth-led-revolts-shook-world

Shenker, J. (2011b, July 15). The struggle to document Egypt's revolution. *The Guardian*. Retrieved from http://www.theguardian.com/world/2011/jul/15/struggle-to-document-egypt-revolution

Shenker, J., & Michaelson, R. (2015, December 23). Norman Foster's Cairo redevelopment has locals asking: where do we fit in? *The Guardian*. Retrieved from http://www.theguardian.com/cities/2015/dec/23/norman-fosters-cairo-redevelopment-has-locals-asking-where-do-we-fit-in?

Shields, R. (2006). Virtualities. *Theory Culture & Society*, *23*(2-3). doi: 10.1177/0263276406023002 39

Shifman, L. (2014). *Memes in digital culture*. Cambridge, MA: MIT Press.

Shirky, C. (2009). *Here comes everybody: How change happens when people come together*. New York: Penguin Books.

Silberman, S. (1999, September 1). Just say Nokia. *Wired*. Retrieved from

https://www.wired.com/1999/09/nokia/

Silver, D. (2004). Internet/Cyberculture/Digital Culture/New Media/ Fill-in-the-Blank Studies. *New Media & Society*, *6*(1), 55–64. Retrieved from http://nms.sagepub.com/content/6/1/55.short doi: 10.1177/ 1461444804039915

Silverman, D. (1985). *Qualitative methodology and sociology: Describing the social world*. Aldershot: Gower.

Sims, D. (2011). *Understanding Cairo: The logic of a city out of control*. Cairo: The American University in Cairo Press.

Sims, D. (2015). *Egypt's desert dreams*. Cairo: American University in Cairo Press.

Singerman, D. (2002). The Politics of Emergency Rule in Egypt. *Current History*(651), Singer. Retrieved from http://www.currenthistory.com/Article.php?ID=185

Sonderman, J. (2011, May 19). Twitpic changes reveal conflict as users, journalists, and photo sharing services have competing goals. *Poynter*. Retrieved from http://www.poynter.org/2011/twitpic-changes-reveal-conflict-as-users-journalists-photo-sharing-services-goals-compete/133055/

Soueif, A. (2012). *Cairo: My city, our revolution*. London: Bloomsbury.

Soueif, A. (2013, August 23). Egypt after the revolution: curfew nights and blood-stained days. *The Guardian*. Retrieved from https://www.theguardian.com/books/2013/aug/23/egypt-after-revolution-curfew-days

Soueif, A. (2014). Foreward. In B. Hamdy & D. K. Stone (Eds.), *Walls of freedom: Street art of the egyptian revolution* (pp. 5–6). Cairo: From Here to Fame.

Srivastava, L. (2005, mar). Mobile Phones and the Evolution of Social Behaviour. *Behaviour & Information Technology*, *24*(2), 111–129. doi: 10.1080/01449290512331321910

Steger, M. B., & Roy, R. K. (2010). *Neoliberalism: A very short introduction*. Oxford: Oxford University Press.

Stoler, A. L. (2002). Colonial Archives and the Arts of Governance. *Archival Science*, *2*, 87–109. Retrieved from https://www.nyu.edu/classes/bkg/methods/stoler.pdf

Strasser, M., Sarant, L., Mohsen, A. A., & Attalah, L. (2010, May 17). Downtown reborn? The Ismaelia consortium's vision for urban regeneration. *Egypt Independent*. Retrieved from http://www.egyptindependent.com/news/downtown-reborn-ismaelia-consortiums-vision-urban-regeneration

Sunstein, C. (2001). *Republic.com*. Princeton: Princeton University Press.

Swyngedouw, E. (2004). Globalisation or 'Glocalisation'? Networks, Territories and Rescaling. *Cambridge Review of International Affairs*, *17*(1), 25–48. doi: 10.1080/0955757042000203632

Szakolczai, A. (2000). *Reflexive historical sociology*. London: Routledge.

Szakolczai, A. (2015). Liminality and experience: Structuring transitory situations and transformative events. In A. Horvath, B. Thomassen, & H. Wydra (Eds.), *Breaking boundaries: Varieties of liminality* (pp. 11–38). Oxford: Berghahn Books.

Tadamun. (2014, July 10). Cairo 2050 revisited: A planning logic [Blog post]. *Tadamun Website*. Retrieved from http://www.tadamun.info/2014/07/10/introduction-cairo-2050-planning-logic/?lang=en#.V91xGpMrKRs

Tadamun. (2015, March 15). Painting initiatives: Can they make Egyptian cities better places to live? *Tadamun Website*. Retrieved from http://www.tadamun.info/?post_type=initiative&p=5497&lang=en&lang=en#.Vrd7pFLEJSU

Talon, C. (2012, October 9). Cairo's superficial clean-up brings graffiti artists out in force. *The Guardian*. Retrieved from https://www.theguardian.com/

world/2012/oct/09/cairo-graffiti-egypt-morsi

Tarrow, S. (1998). *Power in movement: Social movements and contentious politics*. Cambridge: Cambridge University Press.

Tawil-Souri, H. (2012a). Digital Occupation: Gaza's High Tech Enclosure. *Journal of Palestinian Studies*, *XLI*(2), 27–43. Retrieved from http://www.jstor.org/stable/10.1525/jps.2012.xli.2.27

Tawil-Souri, H. (2012b). Egypt's Uprising and the Shifting Spatialities of Politics. *Cinema Journal*, *52*(1). doi: 10.1353/cj.2012.0105

The American University in Cairo. (2011a, March 14). American University in Cairo: Grants Database. *Andrew W. Mellon Foundation*. Retrieved from https://mellon.org/grants/grants-database/grants/american-university-in-cairo/21100101/

The American University in Cairo. (2011b). Egypt revolution and politics [Web page]. *Archive-it*. Retrieved from https://archive-it.org/collections/2358

The American University in Cairo. (2011c, March 22). *Head of AUC history department chairs national archives committee to document the ongoing revolution (Arabic) [Facebook post].* Retrieved from https://www.facebook.com/notes/10150115772447879/

The American University in Cairo. (2011d). *University on the square: Documenting Egypt's 21st century revolution.* Retrieved from http://digitalcollections.aucegypt.edu/cdm/landingpage/collection/p15795coll7

The Economist. (2011, December 15). A Riche history: The café at the heart of revolutionary Cairo. *The Economist*. Retrieved from http://www.economist.com/node/21541715

The GrEEK Campus. (2015). *GrEEK Campus [Web page].* Retrieved 2015-09-12, from http://www.thegreekcampus.com/#!vision/csac

The Wayback Machine. (2015). *Frequently asked questions [Web page].* Retrieved

2015-08-20, from https://archive.org/about/faqs.php#21

The World Bank. (2012). *Information and Communications for Development: Maximizing Mobile* (Tech. Rep.). Washington, D.C.: International Bank for Reconstruction and Development/The World Bank. Retrieved from http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/IC4D-2012-Report.pdf

Thomassen, B. (2014). *Liminality and the modern: Living through the in-between [e-book]*. Surrey: Ashgate.

Thomassen, B. (2015). Thinking with liminality: To the boundaries of an anthropological concept. In A. Horvath, B. Thomassen, & H. Wydra (Eds.), *Breaking boundaries: Varieties of liminality* (pp. 39–60). Oxford: Berghahn Books.

Thompson, L., Hu, C., Saba, E., & Drumsta, E. (2011). *Tahrir Documents Project: flyers, newspapers, and other ephemera (Collection 1977).* Library Special Collections, Charles E. Young Research Library, UCLA.

Thrift, N. (1996). New Urban Eras and Old Technological Fears: Reconfiguring the Goodwill of Electronic Things. *Urban Studies*, *33*(8), 1463–1494. doi: 10.1080/0042098966754

Tilly, C. (1978). *From mobilization to revolution*. Reading, MA: Addison Wesley.

Tilly, C. (2000). Spaces of Contention. *Mobilization: An International Journal*, *5*(2), 135–159. Retrieved from http://mobilizationjournal.org/doi/abs/10.17813/maiq.5.2.j6321h02n200h764?journalCode=maiq

Townhouse Factory. (2013). *Digitizing memory exhibition.* Retrieved from http://www.thetownhousegallery.com/exhibitions/past/Qomra-Digitizing-memory

Townsend, A. M. (2000). Life in the Real-Time City: Mobile Telephones and Urban Metabolism. *Journal of Urban Technology*, *7*(2), 85–104. doi: 10.1080/713684114

Tripp, C. (2013). *The power and the people: Paths of resistance in the Middle East*. Cambridge: Cambridge University Press.

Turner, F. (2006). *From counterculture to cyberculture: Stewart Brand, the whole earth network, and the rise of digital utopianism*. Chicago: University of Chicago Press.

Tyrkkö, J. (2007). Making Sense of Digital Textuality. *European Journal of English Studies*, *11*(2), 147–161. doi: 10.1080/13825570701452722

UN-HABITAT. (2015). *Parallel Urban Practice in Egypt* (Tech. Rep.). Cairo: 10 Tooba. Retrieved from http://www.10tooba.org/en/wp-content/uploads/2015/07/UNHABITAT-Parallel-Urban-Practice-in-Egypt-En.pdf doi: 10.1017/CBO9781107415324.004

Unwin, T. (2003). *ICT4D*. Cambridge: Cambridge University Press.

Urry, J. (2007). *Mobilities*. Cambridge: Polity Press.

Van House, N., & Churchill, E. F. (2008). Technologies of Memory: Key Issues and Critical Perspectives. *Memory Studies*, *1*(3), 295–310. doi: 10.1177/1750698008093795

Villi, M. (2007). Mobile Visual Communication. *Nordicom Review*, *28*(1), 49–62. Retrieved from https://shop.aalto.fi/media/attachments/43460/Villi.pdf

Villi, M., & Stocchetti, M. (2011). Visual Mobile Communication, Mediated Presence and the Politics of Space. *Visual Studies*, *26*(2), 102–112. doi: 10.1080/1472586X.2011.571885

Virilio, P. (1991). *The lost dimension*. New York: Semiotext(e).

Wahab, N. (2011, May 25). Flash mob in Egypt: Protesters find a way around Emergency Law. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/nadine-wahab/first-flash-mob-in-egypt_b_618412.html

Walker Rettberg, J. (2014). *Seeing ourselves through technology*. New York: Palgrave Macmillan.

Wall, M., & Zahed, S. E. L. (2011). I'll Be Waiting for You Guys: A YouTube Call to Action in the Egyptian Revolution. *Journal of Communication*, *5*, 1333–1343. Retrieved from http://ijoc.org/index.php/ijoc/article/view/1241/609

Wamda Research Lab. (2015). *Country Insights: Exploring Trends and Challenges to Scale for Startups in Egypt, Jordan, Lebanon, and the UAE* (Tech. Rep.). Dubai, UAE: Wamda Research Lab. Retrieved from http://womena.co/2015/10/19/challenges-to-scale-in-mena/

Wark, M. (1994). *Virtual geography: Living with global media events*. Indianapolis: Indiana University Press.

Weaver, M., Siddique, H., Adams, R., & Hill, T. (2011, January 28). Protests in Egypt - as they happened. *The Guardian*. Retrieved from http://www.theguardian.com/news/blog/2011/jan/28/egypt-protests-live-updates

Wellman, B. (2001). Physical Place and Cyberplace: The Rise of Personalized Networking. *International Journal of Urban and Regional Research*, *25*(2). doi: 10.1111/1468-2427.00309

Wendt, B. (2014). *The Allure of the Selfie: Instagram and the New Self-Portrait*. Amsterdam: Network Notebook Series.

Weyman, G. (2007). Speaking the Unspeakable: Personal Blogs in Egypt. *Arab Media & Society*, *Fall*(3). Retrieved from http://www.arabmediasociety.com/?article=425

Whatmore, S. (2002). *Hybrid geographies: Natures cultures spaces*. London: Sage.

Wilken, R. (2008). Mobilizing Place: Mobile Media, Peripatetics, and the Renegotiation of Urban Places. *Journal of Urban Technology*, *15*(3), 39–55. doi: 10.1080/10630730802677939

Wilson, C., & Dunn, A. (2011). Digital Media in the Egyptian Revolution: Descriptive Analysis from the Tahrir Data Set. *International Journal of*

Communication, *5*. Retrieved from http://ijoc.org/index.php/ijoc/article/view/1180

Winegar, J. (2012). The Privilege of Revolution: Gender, Class, Space, and Affect in Egypt. *American Ethnologist*, *39*(1), 67–70. doi: 10.1111/j.1548-1425.2011.01349.x

Wolman, D. (2011). *The instigators [e-book]*. The Atavist.

Woolgar, S. (2002). Five Rules of Virtuality. In S. Woolgar (Ed.), *Virtual society? technology, cyberbole, reality* (pp. 1–22). Oxford: Oxford University Press.

Wydra, H., Thomassen, B., & Horvath, A. (2015). Liminality and the search for boundaries. In A. Horvath, B. Thomassen, & H. Wydra (Eds.), *Breaking boundaries: Varieties of liminality* (pp. 1–10). Oxford: Berghahn Books.

Ya'u, Y. Z. (2004). The New Imperialism and Africa in the Global Electronic Village. *Review of African Political Economy*, *31*(99), 11–29. doi: 10.1080/0305624042000258397

Zeinobia. (2012, September 19). Erase the Graffiti as you want, you can not erase history [Blog post]. *Egyptian Chronicles*. Retrieved from http://egyptianchronicles.blogspot.co.uk/2012/09/erase-graffiti-as-you-want-you-can-not.html