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Authoritarianism, Digital Dissidence and Grassroots Media in the Middle East and North Africa region

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Abstract:

As an introduction to this special issue of CyberOrient, this text provides an insight into ongoing research in studies of digital layers of revolutions, digital communication, and dissidence in the Middle Eastern and North African (MENA) region. Providing a short overview of the latest developments of uprisings and street demonstrations in the region, the text reflects on similarities and differences between the various revolts currently taking place. Digital dissidence is part and parcel of these revolts. Zooming in on the Syrian case, this article assesses how the Syrian revolution and its digital components developed into the humanitarian crisis it has become after nine years of violence. The article then shortly reflects on the Sudanese revolution of 2019, which is seemingly the most successful uprising in the Arab world thanks to a strong digital component, as noted in the words of its own revolutionaries. This text then introduces two contributions to this special issue focused on, respectively, Egypt and the occupied Palestinian territories. The contest between what Layla Shereen Sakr calls “techies on the ground” and repressive regimes is compared to that of a race between a hare and a turtle, in which the techies continuously circumvent the attempts by the repressive regimes to curtail their means of digital communication and capacity for organizing collective action.

Keywords:

Digital Dissidence, MENA region, Arab Revolts, Syria, Sudan, Egypt, Palestine

Introduction

Just when the world was convinced that the Arab uprisings of 2010–11 were dead, the year 2019 experienced new and renewed, and surprisingly successful, mass protests in the MENA region. Emerging from Sudan to Algeria, Iraq, Lebanon and most recently, Iran, there seems to be a cyclic

pattern of recurrence. In both Lebanon and Iran, street protests occurred prior to 2019, which indicates a growing ripple effect whereby these protests are not isolated instances of resistance but cyclic movements progressing in time (Wessels 2018a). Indeed, the revolts share some important recurring similarities. Austerity and moral outrage have brought the protesters on the streets, demanding a better life, dignity, and freedom. Internet communication technology has given them the tools to communicate, organize and debunk any type of propagandistic narrative provided by their repressive governments. In fact, authoritarianism and dictatorships in the MENA region are increasingly getting past their use-by date. Although rigid dictatorial regimes still try to hang on to their power structures by brutally crushing dissent, such as Sisi's Egypt and Assad's Russian and Iranian backed Syria, in the long-run these regimes eventually will not continue to fool the younger generations of their population. Ziccardi (2013, 3) succinctly described what is happening in these times:

Thousands of digital dissidents around the world risk their liberty to protest and oppose repressive forms of government and strategies aimed at controlling the behavior of the population. Relying on little else but their own quick thinking and, often, on obsolete technologies, they are threatened and detained for the opinions they express and the news they divulge; dedicated to the development of techniques to circumvent surveillance and filter technologies and to hide, encrypt, anonymize and disclose information, they are constantly tracked by the authorities of their countries. Using smartphones, cameras, laptops and handheld video cameras, they transmit in real-time the facts of the societies in which they live. They act to eradicate filters; they fight to tear down codes of silence and to elude censorship software; they refute the theory of secrecy surrounding matters of public interest while prizing it above all else in their own private lives; they aim to erode media monopolies and to disprove false state truths.

In Lebanon, protesters were fed up with the corruption of the political leaders. Ignited by another government raise in taxes and levies on social media applications such as WhatsApp, they filled the streets (Khneisser 2019). In Iran, people were angry with the continued strain on their livelihoods and the tripling of fuel taxes, while their government spends billions to fight wars in other countries such as Syria and Yemen and flexes its muscles in Iraq. The protesters filled the streets in November 2019 but were brutally attacked by the Iranian security forces, killing hundreds of protesters (Fassihi 2019). In Iraq, opposition protesters resented both the dominant Iranian influence, the American intervention and how the Iraqi government has not properly provided in any for the human needs of its populations since the Americans declared in 2011 an end to the war, which started with the American invasion of Iraq in 2003. The Iraqi protesters want a fundamental change in the political and socio-economic systems including explicit demands for women's rights and they oppose authoritarianism, neoliberalism, poverty, inequality, exploitation, sectarianism, and religious fundamentalism.¹

Against a background of wider global protests that started with discontent with the global financial crisis in 2008, with the Occupy movement through to the current extinction movement and the Fridays for Future protests, these latest protests in the MENA region signify a crisis in political representation of the people and a rupture in both democratic and authoritarian contexts (Bray 2017; McGarry et al. *forthcoming*). One major characteristic that all these protests have in common is the resistance of presence (Tripp 2013), the protesters' visible physical presence in the parks, the squares and the streets as a statement of defiance, sometimes protected by numbers, but often risking detention or, in the case of authoritarian regimes, torture and disappearance. This physical aspect of the local runs parallel to a virtual realm, in which protesters act on a global level (Ziccardi 2013).

The creation and occupation, through global Internet communication networks, of a diverse, egalitarian and transnational virtual space facilitate communication between activists worldwide, directed at taking down

powerful elites in the neoliberal world. In his work on cosmopolitan publicity and public space, Bray (2017) discusses three main aspects of what is evident in the protests; (1) the presence of cross-cultural communication within and beyond the protests (2) physical occupation of public squares, parks, and streets for prolonged periods and consequence recurrences and finally (3) emerging transnational and global claims, values and practices, about corrupt leadership, political representation, dignity and human rights, the climate and environment, and a sustainable future, shared and translated across states and countries, beyond the control of the nation-states within the expanding virtual space. In the past decade, a global wave of protests has spread to both liberal democratic and authoritarian countries in which the representative claims of nation-states have been profoundly challenged. This article explores the extent to which these protest movements reflect cosmopolitan practices and possibilities. The central argument is that the protests created forms of “cosmopolitan publicity” in which people engaged in transnationally connected social criticism and political contestation directed at rupturing the representative authority of their state. The article first provides an account of cosmopolitan publicity, arguing that it is produced by interaction across territorial and cultural borders in which open and egalitarian publics are formed to deal with shared problems. It then argues that varying degrees of cosmopolitan publicity were generated in the recent global protests by examining the transnational communication, tactics, and claims of the Arab Spring and Occupy social movements. Finally, the article argues that these protests are indicative of ongoing crises of representation that plague many nation-states and create opportunities for new forms of cosmopolitan politics (Bray 2017). How protests and dissidence manifest in digital space, as a contested public space in which states try to exercise control, is an important focus for this Special Issue as the protesters in both the digital and material spaces, challenge the idea that the state alone has the power to determine how this public space is used (McGarry et al. *forthcoming*).

Digitization or digitalization?

It is important to make a distinction between the concepts of digitization and digitalization. Digitization and digitalization are two conceptual

terms that are closely associated and often used interchangeably in a broad range of literature. However, there is analytical value in explicitly making a clear distinction between these two terms. *Digitization* is making analog data available into a digital format, for example from a written letter into a word document or scanning a photograph. *Digitalization* is making sense of digitization, leading to a social “infrastructure that is changing under the influence of communication networks” (Castells 2009; Dijck 2007; Dijk 2006) and from this increasing digitalization, communication scholars identified that a “network society” has emerged.

Digitalization thus structures domains of social life around digital communication and media infrastructures and changes the manner in which individuals are engaged in civil society and politics, whereby forms and possibilities for collective action are also affected (Bennett and Segerberg 2013; Bimber, Flanagin, and Stohl 2012). Political participation using digital media has facilitated leaderless and decentralized forms of collective action that replace formal political leadership and organizational structures. Metadata and algorithms have become important aspects of digitalization, in contexts ranging from knowledge production and social scientific research to government surveillance (Mathes 2004). Within these digital landscapes, the distinction between the online and off line realms has effectively collapsed, because everything is now connected.

Besides helping digital dissidents communicate, organize street demonstrations and document human rights violations, digital technology also facilitates repression by authoritarian governments. It is like the race between a hare (digital dissidents) and a turtle (states and governments), whereby authoritarian governments are catching up with activists in their sophisticated use of digital technology and vice versa. This means states have increasingly enhanced capacities to censor expression, block or filter access to information, monitor online activity, and more effectively and efficiently control populations than they did in the pre-digital world (Donahue 2016). To better assess this race between the hare and the turtle, we can distinguish three major users of digitalization in a constellation of a networked digital space; (1) digital dissidents inside an authoritarian

country who communicate with each other, (2) the outside diasporas, and (3) the authoritarian regimes themselves and their response on the collective actions of the digital dissidents.

From a broader perspective, activist digital User Generated Content (UGC) also provides a means of circumventing the mainstream news media. Ordinary people at the grassroots – including local residents, holidaymakers, soldiers, democratic activists, insurgents, and terrorists – are now enabled to bypass established editorial and censorial filters and turn their personal record of an event into a public testimony that disrupts “official” perspectives carefully crafted and provided to the mainstream news media (Andén-Papadopoulos 2014, 754). While it is tempting to connect catchphrases such as “YouTube revolutions” or the “YouTubification of dissent” to such current political phenomena, it is important to remember that media have always played a central role in bringing about social change (Mercea et al. 2016; Snowden 2014; Thorson et al. 2013; Thurman 2008; Uldam and Askanius 2013, 1186). Video activism is a vital area on the interface of activism and digital platforms today but the production of videos on the ground also opens up discussions of various functions of activists’ bodies as a source of narrative. The proximity to protest violence makes these amateur recordings an extraordinary “resource for understanding the subjective experience of the ordinary people who find themselves on the front line of revolutionary struggle” (Snowden 2014, 401). Like the Egyptian Tank Man video, the majority of videos depicting the Arab Uprisings came from non-professional videographers (Westmoreland 2016, 254).

UGC and digital grassroots

UGC in the form of grassroots digital video activism in the Middle East has been around for well over a decade. The first impactful online videos in the run-up to the Egyptian uprisings in 2010 appeared on YouTube in 2007, when the video collective “Free Egypt” uploaded mobile phone UGC of severe police brutality, which solicited reactions such as “Fuck Hosni Mubarak and his family.” Eventually, these police brutality videos, in combination with other UGC, sparked street protests against state

police violence that spread all over Egypt, culminating in the 2010 massive street protests at Tahrir Square in Cairo that attracted the world's media attention.

Major studies on the digital layer to Middle Eastern politics have first been introduced in the context of the 2009 Persian Awakening and the 2010–11 Arab Spring, often framed within a revolutionary and even democratic notion linked to social media and mobile telephony (Alterman 2011; Aouragh 2014; Aouragh and Alexander 2011; Howard 2010; Kraidy 2016; 2013). Aouragh and Alexander (2011) in particular describe how the Internet creates digital spheres of dissidence and tools of revolution in the MENA region. Fielder (2012) and Ruijgrok (2017) demonstrate that through speed, distance, decentralization, and interaction, the Internet facilitates dissent within authoritarian states despite authoritarian attempts to control cyberspace. The Internet and all its connected tools for communication have become the center of attention for many surveillance scholars (Fuchs et al. 2012; Howard and Hussain 2011). That is, the politics of digital infrastructures *matters* – not the least in terms of control, surveillance and power – for the understanding of Middle Eastern politics (Howard 2010; Hussain and Shaikh 2015). We are at the start of a growing body of literature with respect to cyber ethnographies and the development of theories of digital anthropology related to the MENA region (Aouragh 2018).

The Web 2.0 social media facilitated crowd-sourcing in allowing activists to simultaneously be the audience and content creators (Lanzillo 2011). Twitter users sent tweets – short text messages posted using Twitter – marked with the “Iran Election” hashtag (i.e., labeled as being about the Iran election) at a rate of about thirty new tweets per minute in the days immediately following the election (Elson et al. 2012). In reaction to the protests, the Iranian government made tighten control over foreign websites and social networks deemed as a threat to national security, also thanks to the establishment of a cyber police (Rahimi and Faris 2016). This, in turn, impacted the technological and personal responses of the opposition. This pattern

is observed in all protests, from the first Arab uprisings to the 2019 revolts. In other words, the digital battle between the regime and the counterrevolutionaries is subjected to continuous change in which activists respond, anticipate and adapt to the limited media landscape shaped by the latest government restrictions.

“This is a shame! This is called a protest!”

Understanding intricacies of rapidly changing digital geographies and landscapes is increasingly important in Middle Eastern Studies. Over the past twenty years, the advancement of the digital age radically changed the manner in which social movements and non-violent protesters organized themselves and shared information about their protests against authoritarianism (Bray 2017; Tripp 2013; Webb 2015). Since the introduction of small handy cameras with high-quality 3CCD chips in the 2000s, the use of digital video and UGC uploaded on online video platforms was introduced in many different dissident movements such as the VJs of Burma and the Green Revolution movement in Iran.

The visible street protests of the uprisings of 2010–11 in the MENA region, were preceded by decades of less visible forms of everyday digital resistance against oppression that created a subaltern counter-culture which prepares the ground for the outpour of protests (Tripp 2013). In Syria for example, everyday resistance was veiled by a behavior of people acting “as if” they were “ideal” followers towards the authoritarian Assad government (Wedeen 2015; 1998), but in private and through proxies, they would manage to circumvent the surveillance systems and express on line resistance. Until 2011, assembly of large groups on the streets was forbidden and controlled heavily by the Assad regime through an elaborate surveillance system of informers and secret police, But there was a significant, increasingly critical counter-culture found in the arts and documentary film cinema (Cécile Boëx 2011; Wessels 2019b). When YouTube became available in Syria in February 2011 (Wessels 2011), uploads of digital videos of the first dissident street protests started to emerge.

One of the first videos recorded was an extraordinary event of an unplanned protest in the Souk al Hamidiyeh, in the old city of Damascus. It was uploaded on February 17, 2011, by Misbar Syria and quickly went viral². In grainy mobile phone footage, the video shows thousands of Syrian protesters gathered in the street in a spontaneous protest against police violence whereby Syrian citizen Imad Nassab was violently beaten by four policemen. Hundreds of mobile phones are visible in the crowd, recording the protests. The protesters (all men) repeat slogans as “Thieves, thieves” and “the Syrian people do not take humiliation!” in front of the police station. After the police cars are surrounded, the crowd breaks out into shouting the Islamic phrase “There is no other God other than Allah!” At 01’56”, someone in the crowd starts shouting for the President, most probably a civilian clothes secret police. Police cars and other security cars are surrounded by the crowd when a door opens, tens of men start shouting “Our souls and blood, we will sacrifice for Bashar.” They also urge the crowd to salute the interior minister who is emerging from one of the cars. The shaky video records the minister hanging out of his car, trying to address the crowd, when one protester shouts “By God, they are slaughtering us. Robbing the people. The thieves!” At 03’41”, the minister shouts that “This is a shame! This is called a protest!” The crowd reacts, some protesters shout that they love the President, Nassab’s brother asks the protesters to end the protest, because the minister is now there to assure Nassab is treated well. He is afraid there will be retribution to his family. A spontaneous assembly on the street could mean severe consequences. The accusation that “this is a protest!” is enough for people present to act “s if” and deflect the accusation.

Less than a month later, the protests had spread, and the same channel uploaded an iconic video on March 15, 2011, which is remembered as the start of the Syrian Revolution. The video shows a major demonstration in the Souk Hamadiyyeh, where the protesters shout “God, Syria, and Freedom Only” a play on the normally shouted slogan “God, Syria, and Bashar Only.” The videographer mentions that the protesters are Sunni and Alawite together and this is the uprising (Intifada) against the regime. The crowd shouts “Peaceful, peaceful!” In another UGC video uploaded on March 16, 2011, by the channel freedomspark77, it is clear that the crowd

is morally outraged and against the Assad regime, when they shout: “He who kills his own people, is a traitor” and “Free Syria.” The demonstrators were protesting against the repressive measures of the Assad-regime, the threats of violence, including a tightening of Internet censorship, expanded use of travel bans, and the arrest of political prisoners (Flock 2011). But protesters were also particularly enraged by the brutal arrest and torture of 15 teenagers from Dera’a on March 6 for writing “The people want the fall of the regime” (“الشعب يريد إسقاط النظام”, “Ash-sha’b yurid isqat an-nizam”) on the walls of the southern city of Dera’a. The upload of the funeral of Hamza Khateeb, one of the teenagers who was arrested and died under torture, then spiraled the Syrian revolution into an acceleration in a cycle of street demonstrations, state violence, and crackdown and funerals and a consequent rapid spread of UGC on YouTube (Wessels 2019a).

From digital grassroots to full out war

In Syria, the authoritarian state institutionalized and militarized the digital crackdown in the form of the Syrian Electronic Army (SEA), consisting of Syrian cyber warriors trained to hack into the virtual space created by opposition groups and post disinformation, as a public relations tool for Assad’s government (Al-Rawi 2014; Aouragh 2014). The Syrian popular uprisings led to an explosion of digital content on video platforms like YouTube, which helped to establish new digital geography and media landscape (Andén-Papadopoulos 2014; Andén-Papadopoulos and Pantti 2013; Cécile Boëx 2013; Cecile Boëx 2012; Stinson 2017; Wessels 2011; Wessels 2019a; 2017). Over six hundred thousand digital YouTube clips have been uploaded from Syria since the outbreak of violence (Wessels 2019a). In the early pro-democracy protests, activists made clever use of social media, Facebook groups, Twitter, and Google maps to organize themselves and avoid government surveillance. In February 2011, the Syrian government allowed access to YouTube, which prior to this, had only been accessible through the use of proxies (Wessels 2011). The motivation for this move on the part of the government, however, was for closer surveillance of protesters.

What started in 2011 as a peaceful revolution has since developed into an unprecedented humanitarian catastrophe involving different local, national and international actors. The involvement of Russia prompted an increase in the spread of fake-news and Internet trolling on twitter, social media and other digital intermediaries. This was particularly poignant during the information wars concerning the verification of digital images of chemical attacks in Ghouta in 2013, during the 2016 siege of Aleppo and during the 2018 siege of eastern Ghouta in Damascus. At the same time, Syrian pro-democracy activists both inside and outside of the country continued to work around the clock to organize themselves in on line and off line protests, verify images, use VPN, code and find new encrypted applications, communicate and share information within the wider activist community and international news agencies. They did this while avoiding being tracked by government surveillance agencies.

The experience and savviness of Syrian pro-democracy protesters had a history prior to the uprisings in 2011. For the past decade, Syrian youth had been creative about the use of proxies and VPN application to circumvent the Syrian intelligence on line. By the end of 2009, a Damascus-based scattered group of urban educated youth organized themselves in the informal Al Share' foundation (Wessels 2019b) and throughout 2010 they started to organize and bring humanitarian aid to the approximately 160 thousand internally displaced Syrian from the north-east of the country who camped around Damascus, having fled the prolonged drought in their home-area (DeChatel 2014). But in an authoritarian context, the Damascene activists in 2010 had to act secretly and could only clandestinely do their humanitarian effort. They did video record their efforts and uploaded this on line in 2010. Eventually, members of these secretive collectives of young Damascene urbanites became major media activist figures in the early phases of the Syrian popular uprisings, and those who survived continue to do so in the Syrian diaspora.

Authoritarian and oppressive regimes have taken great effort to silence these grassroots activists, including the video activists. In Syria, the Assad regime targeted and arrested leading young civil society activists early on in the protests, some of whom disappeared in the catacombs of the Syrian prisons,

as well as specifically targeted killings of known street protesters. Examples are the incarceration, torture and eventual execution of Bassel Safadi, a renowned Palestinian–Syrian open-source software developer and pro-free speech and pro-democracy activist (McKernan 2016; Wessels 2018b) and the targeted killing in Homs of Bassel Shehadeh, a well-known video activist and talented young filmmaker, in 2012 (Wessels 2019b).

The brutal early crackdown on these young, bright, and intelligent digital dissidents in Syria resulted in a void in the organizational capacities of the digital dissidents to coordinate and plan protests and gatherings. This crackdown went hand in hand with the use of live bullets to shoot and kill protesters at street demonstrations and the deployment of heavy army artillery, tanks, and rocket grenades, as means of crowd control. The violent regime response caused many soldiers of the Syrian regime army to defect and join the opposition, eventually forming the Free Syrian Army (FSA). The militarization of the Syrian uprisings eventually led to what is now a nine-year-long brutal war and humanitarian disaster, culminating in the mass displacement of people inside and outside Syria, entry of jihadi militants and extremist Islamic armed groups to fill up voids of armed resistance, the emergence of ISIS and long-term sieges, forced displacement and ethnic cleansing of Syrian civilians from many different places and the targeted bombardments of hospitals, markets, schools, and other civilian targets.

Successful Revolutions

In other parts of the Arab world, popular uprisings against authoritarian regimes were more successful. The Sudanese revolution of 2019 has had very little coverage in the Western press. However, compared to all other uprisings in the MENA region since 2011, the Sudanese popular revolution is one of the most successful non-violent revolutions in the Arab world. In April 2019, following months of massive protests in the capital Khartoum, Omar el-Bashir, Sudan's decade long dictator and autocratic ruler, was arrested, removed from office and put in jail. A transitional government was formed to lead to an eventual process of civilian governance and general elections in 2022.

One of the major elements that Sudanese young revolutionaries pointed out themselves as crucial in the success of the revolution is the velocity of communication technology, the use of Facebook to organize the meetings and demonstrations and the response in large numbers of protesters that came to Khartoum. The trade unions, united in the Sudanese Professionals Association (SPA), led the revolution and prepared themselves through the use of Internet technology. Their WhatsApp groups organized swift meetings and reactions to government reprisals for their dissidence.³ Another major element of success was the documentation of the protests on mobile phone video clips that were shared rapidly and went viral. What emerged was a rapidly growing mass popular and non-violent movement, where mainly the youth joined the protests. Although often warning their children not to join, when the protests seemed to be making a difference, the older generations also joined the Sudanese revolution. The calls for the regime to step down became louder and although the regime tried to crush the rebellion, the size and the large numbers of protesters were instrumental to instill fear into the regime supporters. Millions went out on the streets. Thousands arrived from the far corners of Sudan into Khartoum to join the street protests. When the dictator was arrested, the protesters celebrated with a mass gathering at the Green Square, immediately baptized into the “Liberation Square.”

The Sudanese Revolution did not succeed without a heavy price. On the June 3, 2019, Rapid Support Forces (RSF), commonly called Janjaweed, flooded the city of Khartoum and killed more than one hundred protesters who were participating in a mass sit-in in front of the military air force headquarters (Akram Boshar and Bean 2019; Diab 2019). Tens of bodies were thrown in the Nile River and reports of rapes and sexual abuse emerged. Two members of the previous regime, Mohammed Hamdan Dagalo (General Hemedti) and General Abdel Fattah Abdelrahman al Burhan, are still in leading positions of the transitional government and supporters of the previous dictatorship are active in stalling the democratization process, although keeping a low-profile during this transitional period which should end in 2022. Hemedti as leader of the Rapid Support Forces (RSF) is wielding a lot of power. The government institutions in Sudan still

include many members of the previous regime and the SPA is continuously working, day and night, to make the transformation succeed, despite the resistance from the old regime supporters. However, on the ground, there is a noticeable change in the new Sudan, such as the visible freedom of speech and the near-total absence of censorship. The Ministry of Information is not monitoring journalists anymore, people are free to speak, to demonstrate and there is no active secret police presence nor Internet surveillance by the state. This is felt as a big relief for many Sudanese civilians. In Sudan, the race between the hare and the turtle seems to have been won by the young Internet generation.

Between a hare and a turtle

In the race between the hare and the turtle, an Internet savvy young generation of activists from the MENA region continuously tries to keep up and stay in front of the authoritarian states and other repressive actors. Every day, the activists need to change tactics to communicate with each other, crossing geographical boundaries, often in collaboration with other Arab and non-Arab activists outside the region. Creative dissidence is also seen in the digital memorialization of conflict and digital geographies. These developments beg deeper reflection on how memories of conflict have become publicly and collectively owned, shared and mediated in the digital space. How is scholarly research conducted into these digital developments? How we should define the virtual? Where is the boundary between a physical, off line reality in material space and a digital online reality in cyberspace?

The purpose of this Special Issue of CyberOrient is to present state-of-the-art research on digital dissidence and creative resistance in the MENA region. Digital dissidence has forged a parallel on line universe. Digital dissidence and creative resistance went hand in hand with the rise and fall of Arab blogospheres, grassroot media centers and hacker's collectives that popped all over the MENA region, opposing authoritarian state structures and oppressive groups. Anti-colonial and anti-authoritarian digital resistance can be found in the contexts of Israel–Palestine, Iran,

Syria, Egypt, Turkey, and Sudan, against autocratic governments, colonial occupiers and extremist Islamic groups.

In the article “Techies on the Ground: Revisiting Egypt 2011,” Laila Shereen Sakr (VJ Um Amel) describes the experience of the Egyptian revolution and counterrevolution on social media by analyzing tweets, posts, and blogs to describe the political culture in the virtual realm. She argues that the Egyptian experience of revolution and counterrevolution reveals the indispensability, the promises, and the limits of digital communication across borders and languages. She calls the Egyptian cyber revolutionaries “techies on the ground or grassroots technological innovators.” These techies were active long before the popular uprisings in 2010–11. When Mark Zuckerberg launched Facebook in 2004 and Twitter was launched in March 2006, scholars quickly observed the emerging Arab blogosphere and mapped it out through the Internet and Democracy Project, a research initiative at the Berkman Center for Internet and Society at Harvard University, which investigates the impact of the Internet on civic engagement and democratic processes (Etling et al. 2014). Between 2004 and 2011, the rise of the Arab blogosphere gained scholarly attention. In particular, the work of Egyptian blogger and software developer Alaa Abd al Fattah ushered in a new generation of digital activists in the Arab World. This movement sought to destabilize the existing structure to pave the way for revolutionary content

Under the guise of the Arabic-speaking cyborg named VJ Um Amel, Sakr finds a disconnect and a widening gap between academics and cyber activists, the Arab techies on the ground, which seem to run parallel to each other rather than converging. Therefore R-Shief was developed and conceived at the intersection of art, technology, and scholarship. R-Shief was a software application built to attend to critical gaps in computational and textual analysis on social media, addressing emerging shifts in cultural productions. By providing both tools and analysis through R-Shief, such as twitter data analytics, R-shief brings the two worlds of activists and scholars closer together.

Fabio Cristiano carries out a study on the Palestinian dissident cyber realm in his article “Deterritorializing Cyber Security and Warfare in Palestine: Hackers, Sovereignty, and the National Cyberspace as Normative.” In the context of profound territorial and complex geographical fragmentation, such as in the Occupied Palestinian Territories (OPT), cyberspace has become a field of contestation, digital resistance, and dissidence. The question is how territorial boundaries off line run parallel with on line boundaries. Exploring how Israeli and Palestinian strategies intersect, enact, and disrupt territorial control over cyberspace, Cristiano assesses whether these strategies are consistent with the current geographical fragmentation of Palestinian territory. The article critically questions what the boundaries and linkages are between off line realities and on line limitations and restrictions and how does this affect the effectiveness of dissident cyber activism.

Cristiano argues that the off line security cooperation between the Palestinian Authority (PA) and the occupying state of Israel is replicated in cyberspace by imposing severe limitations on user mobility and data circulation. This makes the race between Palestinian techies on the ground and the repressive Israeli and Palestinian government systems, both off line and on line, a complicated and tough battle. Faced with extremely efficient Israeli dominated high-tech and a well-developed Internet ecology that occupies Palestinian cyberspace, Palestinian hacker collectives in Gaza and the occupied West Bank wage a sophisticated, and sometimes highly effective, cyber warfare to disrupt and contest territorial occupation of Palestinian land. These include both intrusive strategies for gathering intelligence as well as disruption of Israeli services. The hackers’ collectives continue to find and improve their ability to circumvent territorial blocks, by making use of servers outside of its territory (in Germany for example). Despite the seemingly uphill battle that Palestinian hackers face, Cristiano sees a new form of spatial imaginary and de-territorialization in cyberspace that occurs primarily through the ordering, and disordering, of data circulation and user mobility.

Conclusion

This introduction to the special issue of CyberOrient on Digital Dissidence in the MENA region has aimed to put the two articles that follow in a wider scholarly and geographic context of revolutionary movements that are currently waging throughout the MENA region. Reflecting on the latest waves of street demonstrations and anti-government protests in 2019, the special issue is focused on the role of digitalization and the opportunities that grassroots techies on the ground take to disrupt, contest, and take down repressive systems of government. The off line realities and online battles go hand in hand. Compared to a race between the hare and the turtle, younger generations in the MENA region have a distinct advantage over the older generation representatives and members of authoritarian governments.

Comparing the uprisings against authoritarianism in Syria with the successful revolution in Sudan, the first article shows that the early brutal crackdown on protesters, digital dissidents and the disappearance of bright grassroots techies from the cyberspace, combined with an eventual militarization of the uprisings, caused a humanitarian catastrophe in which the authoritarian forces became even more brutal. In Sudan, where activists and protesters dedicate most of their success to the use of social media and Internet technology, the regime also employed a crackdown, but this was not successful and eventually conceded power.

There are vast differences between MENA countries and other political contexts in which to place digital dissidence and whether it is successful. Two articles that follow in this Special Issue highlight the respective political contexts and complexities of Egypt and the occupied Palestinian territories. The fact that rapid developments are ongoing, the streets are still being filled with Internet savvy protesters in Lebanon, Iran, and Iraq with the skills and capacity of these techies on the ground increasing by the day, means that the MENA region finds itself in the middle of a major era of transformation both online and off line. The race between the hare and the turtle is thus by far not finished yet.

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Notes

¹ Available on-line, see Alliance of MENA Socialists (2019).

² See Misbar Syria(2011)

³ Personal communication board members Sudanese Professionals Association (SPA), Khartoum, Sudan. Their declaration is available on-line, see Sudanese Professionals Association (2019).

Deterritorializing Cyber Security and Warfare in Palestine: Hackers, Sovereignty, and the National Cyberspace as Normative

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Abstract:

Cyber security strategies operate on the normative assumption that national cyberspace mirrors a country's territorial sovereignty. Its protection commonly entails practices of bordering through infrastructural control and service delivery, as well as the policing of data circulation and user mobility. In a context characterized by profound territorial fragmentation, such as the Occupied Palestinian Territory (OPT),¹ equating national cyberspace with national territory proves to be reductive. This article explores how different cyber security strategies – implemented by the Israeli government, the Palestinian Authority, and Hamas – intersect and produce a cyberspace characterized by territorial annexation, occupation, and blockade. Drawing on this analysis, it then employs the conceptual prism of (de-)–(re-) territorialization to reflect on how these strategies, as well as those of Palestinian hackers, articulate territoriality beyond the normativity of national cyberspace.

Keywords:

national cyberspace, cyber security, cyber warfare, securitization, Palestine

Introduction

Overlooking the Israeli checkpoint in Qalandyia, a Palestinian village between Jerusalem and Ramallah in the West Bank, a graffiti dominates the grey surface of the adjacent separation wall with the computer command *ctrl+alt+del*, written in giant capital letters.² Typically used to terminate an unresponsive task, the light-blue painted keyboard shortcut figuratively portrays the wall itself as a failed process that needs to be forcibly terminated. At the same time, the graffitied command also traces a continuity between spatial and cyber closures for Palestinians.

National cyber security policies, as well as offensive and defensive cyber warfare, are commonly inspired by a similar perceived continuity: the spatial correspondence between national territory and sovereignty in cyberspace. Assigning traditional territorial qualities to cyberspace, national authorities envision its protection through physical bordering and different approaches to the ordering of mobilities for both data and users.³ Regulating extent and modes of data circulation and user mobility, cyber security purports to order and secure the *national cyberspace* on the basis of its congruence with a country's territory.⁴

For its territorial fragmentation and diverse regimes regulating mobility, the case of the Occupied Palestinian Territory offers a unique perspective to reflect on the territorial qualities of cyberspace and its securitization. On one hand, territorial sovereignty represents, in fact, the ultimate *raison d'être* of the Israeli–Palestinian conflict; on the other, multiple and shifting regimes of mobility compile the complex grammar of the distributed system of control over the biopolitical life of the Palestinians. These regimes constitute the result of different degrees of Israeli territorial control: annexation of East Jerusalem, occupation of the West Bank, and blockade of the Gaza Strip.

This article explores how Israeli and Palestinian strategies intersect, enact, and disrupt territorial control over cyberspace, and whether these are consistent with the current fragmentation of the Palestinian territory. Whereas Israel's absolute control over infrastructural networks configures foremost as a direct practice of territorial bordering, recent legislations of the Palestinian Authority (PA) operate on territoriality in less direct forms. Imposing severe limitations on user mobility and data circulation, these measures ultimately replicate PA's security cooperation with Israel also in cyberspace.

Furthermore, this article advances a critique of a “static” territorial understanding of sovereignty in cyberspace through the analysis of offensive operations conducted by Palestinian hackers. Inspired by theoretical works on (de-)–(re-)territorialization (Deleuze and Guattari

1988; Deleuze and Guattari 2000; Foucault 2007), the analysis of these hacking operations further indicates how the territorial articulation of cyberspace does not linearly stem from national sovereignty. Rather, it encompasses different relational moments of becoming sovereign: whereas de-territorialization pertains to the moment in which established norms are disarticulated, re-territorialization refers to redo the undone (Petersen 2014; Waldenfels 2004).

In this light, Palestinian hacking operations can be understood as moments of “becoming sovereign” through (de-)(re-)territorialization to the same extent of national policies and strategies. Furthermore, the lack of univocal spatial boundaries in cyberspace – and a necessarily distributed approach to security – empowers Palestinian hackers to overcome the technological obsolescence imposed on them through creative forms of social engineering and manipulation (Bullée et al. 2018) As these define the territoriality of cyberspace as a function of how users and data move, this article ultimately interrogates the normative assumption that a national cyberspace reproduces tout court its corresponding national territory.

National cyberspace and national territory

In contrast with cyber-utopianist visions of a borderless Internet, national security and defense policies contributed to the current disintegration and fragmentation of cyberspace into national subdivisions (Mueller 2017; Mueller 2010; Morozov 2011). These “compartments” are thought to possess spatial and territorial characteristics that are equivalent to those of a sovereign country (Wu 1997; Mueller 2002). In classical realist terms, a delimited, continuous, and internationally recognized territory constitutes, in fact, an essential element to define national sovereignty. It is thus primarily through physical bordering that a space becomes a territory. Besides legislative implications, the bordering of a specific space creates two different spatial realities: an inside and an outside.⁵ In addition to fulfilling a spatial function, the delimitation of a territory operates then through a normative logic of inclusion–exclusion, peculiar to the ordering function that a territory plays in relation to identity.

At a basic level, national authorities enact the territorial delimitation of their national cyberspace through control over infrastructural elements of the network: the backbone, fiber cables, servers, switches, et cetera (DeNardis and Musiani 2016). National control over the backbone – also referred to as “core network” – constitutes the primary feature that sets forth national sovereignty in cyberspace. This public core (Broeders 2015) comprises a series of principal data routes and computer networks that, gathered and administered by a central authority, determine control of the physical components of the Internet network, and thus its fundamental territoriality. At the same time, with responsibilities for the security of cyberspace distributed to a variety of actors other than the state,⁶ local nodes and ramifications constitute the ultimate terrains where territoriality, and thus sovereignty, unfold (Broeders 2017).

In contravention of Art.36/3 of Oslo II (1995) – that unambiguously declares the PA’s right to infrastructural autonomy – Israeli authorities currently control the Internet backbone and the infrastructural network for the entire 1948 territory (AbuShanab 2019). From an infrastructural perspective, Israel’s absolute control of the “bare metal” elements of cyberspace in fact exceeds its legitimate territorial boundaries, and thus reproduces the illegal territorialities of annexation, occupation, and blockade over the Palestinian territory.

In 1967, in the aftermath of the Six-Day War, Israel annexed Palestinian areas east of the armistice line (the Green Line). Advancing this annexation through concrete bordering, in the early 2000s, the Israeli government put “facts on the ground” by erecting the contested separation wall. Deviating its path from the internationally-recognized border (the Green Line), the wall concretely annexes East Jerusalem, thus detaching the designated Palestinian capital from the West Bank. The territorial annexation of East Jerusalem also pertains to cyberspace. Besides controlling the Internet backbone, the Israeli annexation unfolds through the denial of service provision, with a ban outlawing Palestinian Internet service providers (ISPs) and mobile carriers from delivering and commercializing Internet service in the city (AbuShanab 2018). Operating through an archetypal logic of exceptionalism⁷ – that is the sovereign suspension of agreed norms

and political freedoms – Israeli policies ultimately purport to detach the Palestinian city also from its national cyberspace.

Whereas cyberspace in East Jerusalem undergoes complete annexation – in line with the Zionist imaginary of a unified Jewish city⁸ – the Israeli occupation of the West Bank translates into cyberspace through less direct forms of territorial control. The PA holds, in fact, the responsibility for Internet governance and service provision across the Palestinian areas of the West Bank. However, the Israeli absolute control of the infrastructure means that Palestinian ISPs depend on their Israeli homologs to supply a second-hand, and expensive, Internet connection across the territory. A 2016 World Bank report indicates that, besides detaining full control on the core network, Israeli authorities regularly block the import of ICT equipment and technologies towards the Palestinian controlled areas of the West Bank (AbuShanab 2019). At the very least, one should ask whether national sovereignty in cyberspace can ever be attained in the absence of infrastructural autonomy.

With Oslo I (1993) granting Israel jurisdiction over Area C (presently ca 61 percent of the West Bank), Palestinian Internet operators require multiple authorizations for transporting or installing technologies in the area. Citing security concerns, the Israeli Civil Administration (ICA) regularly turns them down, while Israeli providers supply Internet connection and mobile services to illegal Jewish settlements in Area C. As settler presence in the West Bank has quadrupled since 1993 (EEAS 2019) – despite several peace agreements establishing an official freeze on their expansion – Israeli ISPs improved and expanded the infrastructural network needed to serve the growing settler community (across the West Bank and East Jerusalem). Due to this, Palestinians in Area C need to roam on Israeli frequencies to access mobile Internet, commonly opting to subscribe to one of the Israeli operators (Niksic et al. 2014).

In absence of absolute control over service provision, the Israeli occupation translates in cyberspace through measures of less concrete and direct bordering. Whereas the annexation of East Jerusalem in cyberspace marks

a continuity with the erection of the separation wall, the occupation of cyberspace in the West Bank hinders service delivery in ways that are reminiscent of Israeli roadblocks, (flying) checkpoints, and its Kafkaesque permit system (Berda 2017).

Internet governance in the Gaza Strip functions through a setup similar to the one in the West Bank. Relying on the Israeli core network, Palestinian ISPs deliver a secondhand service across the Hamas-governed territory (Tawil-Souri 2012). Since 2006, however, following Hamas' success in the Palestinian elections, Israel has imposed a territorial blockade on the Gaza Strip. The Israeli illegal blockade severely limits the mobility of goods and people, thus further isolating the area from the rest of the Palestinian territory (Erakat 2012). As a result, Gaza currently relies on Israel even for the provision of basic services such as electricity, water, and sewage treatment (World Bank 2019). Likewise, Israeli authorities control the entire telecommunication system, including wired and wireless Internet. For this reason, Palestinian ISPs need permits to access the Gaza Strip in order to perform infrastructural maintenance, but these are regularly turned down (Abou Jalal 2017). Furthermore, Israeli bombardments on ICTs, as well as regular power cuts, further compromise the infrastructure and service delivery (Weinthal and Sowers 2019). As territorial blockade extends to bandwidth, spectrum, and frequency allocation, Israeli measures force Gaza into a state of technological obsolescence and dependency. Through infrastructural control and cyber security, Israel upholds territorial sovereignty over Gaza's seized cyberspace.⁹

Cyber security as territorial bordering

Israel currently organizes its national cyber security in the light of a centralized governance model. Since 2017, a single unit – the National Cyber Directorate (NCD) – holds responsibility for the protection of both civilian and military nodes of the national cyberspace, thus conflating security and defense strategies. Besides infrastructural control and cyber defense, the Israeli territorial control over Palestinian cyberspace heavily relies on cyber security measures that are conventionally enforced in domestic contexts.

In addition to traditional cyber espionage, Israeli security forces recur to the algorithmic parsing of Palestinian online content as part of predictive policing and pre-crimes. This flagging primarily focuses on social media, wherein the automatic scanning examines contents to detect data of alleged security relevance (Cristiano 2018). Evidence indicates that – besides a pool of blacklisted Arabic words such as *freedom*, *martyr*, *Al Aqsa*, et cetera – the algorithms intercept status updates and content flagged solely for their political connotation and indicating no warning of violence of any kind (AbuShanab 2018). These measures target Palestinians across the 1948 territory as well the international diaspora, thus superseding any rationale of national and territorial sovereignty.

The PA and Hamas enforce cyber security strategies that further hinder mobility in cyberspace for the Palestinians. In 2018, the PA approved a controversial cybercrime law: operating through two focal aspects – content management and access regulation – this legislation purports to protect “national unity” and “social harmony” (Article 51) across its national cyberspace. In practice, it urges Palestinian ISPs and hosting services to take down those websites, blogs, and online content that PA and its security agencies flag as a threat to national security or values (Abdeen 2018). Citing concerns to national security, the legislation also outlaws connection via alternative routes (Article 31) such as VPNs, mesh networking, I2P, and the like. Banning these methods reenacts Israeli territorial control as it purports to constrain traffic along the occupied national network. In other words, outlawing alternative routes ultimately reterritorializes potential Palestinian “escapes” into a preserved spatial status quo (Arafeh et al. 2015).

Conversely, Hamas government retains marginal power over its national cyberspace. The absence of locally-controlled infrastructures and service provision severely hinders Gaza’s ability to develop its own strategy of cyber security. In 2012, Hamas tried in vain to regain sovereignty over its cyberspace by introducing a ban on the use of Israeli connection services. With little or no authority over infrastructure and service delivery, Hamas’ cyber security unfolds by tightening control over endusers and local nodes of the network. Its security forces employ in fact extensive surveillance to

motivate the arrest and prosecution of political opponents or dissidents (AbuShanab 2019). These same techniques are used for policing compliance to Islamic precepts: having enforced a ban on “immoral websites”, security forces regularly raid Internet cafes to monitor how users roam online (AbuShanab 2019).

Hacking as (de-)–(re-)territorialization

The previous sections illustrate how different cyber security strategies function as devices of territorialization for (fragments of) Palestinian cyberspace and corroborate evidence of a strong correspondence between national cyberspace and national territory. While operating in a context defined by territorial sovereignty, these national strategies construct and reinforce territorial ordering in cyberspace on their own. In this sense, cyber security articulates and orders the boundaries of sovereignty through the creation of an outside “other”.

Palestinian hackers – autonomous or operating as a cyber wing for a political faction (Hamas, PFLP, Jihadists, etc.) – participate in this articulation of sovereignty through offensive techniques, targeting Israeli cyberspace on both its military and civilian nodes. These include both intrusive strategies for gathering intelligence (spear-phishing, spyware, ransomware, etc.) as well as disruptive ones (distributed denial-of-service attacks, takedowns, redirects, defacements, etc.) (Rudner 2013). Whereas these attacks intensify in concomitance with violent escalations, they constitute an immanent feature of regional cyber warfare; despite vastly asymmetric cyber potentials in Israel–Palestine, these campaigns have proved a great asset for Palestinian groups.

These operations commonly feature somewhat unsophisticated coding, but advanced social hacking techniques, thus crediting their success to well-designed baits tricking Israeli users into allowing passage for malicious contents. Context-tailored emails, deceitful apps (gaming, dating, news, etc.) and fake social media links specifically target military and governmental personnel (IDF 2017). In 2018, Palestinian hackers

implanted a spyware into an app mimicking the Red Alert, a service that warns Israeli users in the event of imminent rocket attacks from Gaza. This technique exploited the logic of ubiquitous securitization: attacking through a software that warns about attacks (ClearSky 2018).

Besides low-tech hacking, Palestinian cyber operations have at times shown unanticipated levels of sophistication and effectiveness, in spite of the obsolete infrastructures across the territory. In 2013, for example, the cyber wing of the Izz ad-Din al-Qassam Brigades (IADAQ) took control of a series of Israeli websites and servers through a technique of direct de-territorialization. Whereas not unique in terms of outcomes – as thousands of Israeli websites have been taken down or defaced by Palestinians in the last fifteen years – this operation appeared at the time unique for the sophisticated design of Distributed Denial-of-Service (DDoS).¹⁰ Palestinian hackers coded a programming language that, operating on the controlled zombie-network, allowed them to access a larger bandwidth needed for carrying out the attack. Through the manipulation of codes, hackers successfully expanded the bandwidth available to them.

On other occasions, Palestinian hackers combine complex operations with the aforementioned social hacking techniques. One of Israel's basic cyber security provisions consists of blocking the mobility of all data coming from the Gaza Strip in order to prevent them from reaching its network endpoints (AbuShanab 2019). In these conditions, the success of cyberattacks launched from Gaza primarily depends on the ability to circumvent this territorial block. In 2015, Gaza-based hackers launched a massive spear-phishing attack on Israeli cyberspace: bypassing the blockade, the operation compromised and accessed databases belonging to public offices, military departments, private companies, and individual users (Trend Micro Threat Research Team 2015). Palestinian hackers leveraged these attacks – referred to as Operation Arid Viper – on servers based in Germany. Through this expedient, the Israeli cyber dome failed to detect them as originating from Gaza and thus approved their passage. On the other hand, the attack employed diverse bait contents for different targets, in line with one of the social hacking precepts: vulnerability resides

in users' behavior and choices, to a degree uncontrollable for national cyber security and its normative understanding of sovereignty.

Conclusions

In August 2017, a 64-year-old Palestinian man, resident of Isawiya in East Jerusalem, recounted to me his frustration over a recent economic loss. A few days earlier, a cyberattack had irremediably compromised his company website and databases. Together with the message "Freedom to Palestine", the defacing image of an armed cyborg holding a Palestinian flag was now peeping out the homepage of his family business website. A historical advocate of the Palestinian cause, and member of the Palestinian Liberation Organization (PLO), had himself fallen victim of hackers targeting Israeli cyberspace in solidarity with Palestine.

These hackers apparently acted on the common creed that domain names are a sufficient indication of territorial identification: attacking websites hosted on the domain *.il* would equate to attacking Israel. In general terms, country code top-level domains (ccTLDs) are indeed reserved for sovereign polities and formally extend the boundaries of national jurisdictions to cyberspace (Mueller and Badiei 2017). Together with national control on core networks, this conventional arrangement marks a linear continuity between national cyberspace and national territory. As argued throughout this article, the complex spatial realities across the Palestinian territory demonstrate the issues associated with this assumption.

Above all, the architecture of cyberspace assigns extensive control functions to its network nodes (van den Berg and Keymolen 2017). Unique to this architectural structure, the resilience of the system allows for the rerouting of data traffic through alternative routes in case of closure (Ruiz and Barnett 2015). Network nodes are thus part of how territories are articulated in cyberspace in ways that are independent of a static correspondence with the national territory. Besides infrastructural control, this article has argued that (de)–(re)territorialization in cyberspace occurs primarily through the ordering, and disordering, of data circulation and user mobility.

Israeli and Palestinian national cyber security strategies, as well as hacking operations, operate in fact in light of a spatial imaginary that, while being consistent to respective national imaginaries, moves away from (legitimate) territorial sovereignty. By articulating an exception, this very estrangement creates a sovereign space. In these terms, cyber security strategies (or the hacking thereof) can do more than enacting a preimagined territory: they can create a new one.

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Notes

¹ In line with the conventional use of the United Nations, conventional this article employs the definitions Palestine, Occupied Palestinian Territory, Palestinian territory to refer interchangeably to the recognized Palestinian territory in its entirety: East Jerusalem, West Bank, and the Gaza Strip.

² Painted by artist Filippo Minelli in 2007, for further details see Minelli (2019).

³ The spatial and territorial connotations of cyberspace are themselves highly disputed conventions. On this topic, see Cohen (2007). Of course, countries regularly recur to offensive cyber operations targeting foreign infrastructures or users. When attributed, these are however commonly framed in terms of national security and preventive strategies.

⁴ User mobility refers, in this article, to different forms of users' movement in cyberspace: access, handover, roaming, et cetera.

⁵ On the concept of "territoriality rule" in cyberspace, please see Kostopoulos (2012).

⁶ These include security contractors, commercial cyber security, service providers, as well the individual choices of users who, in this particular context, hold unique shares of responsibility.

⁷ As theorized by Agamben in the *State of Exception* (2005).

⁸ This territorial imaginary is also reinforced within interactive digital spaces, such as augmented-reality gaming (see Cristiano and Distretti 2017).

⁹ This argument also provides the rationale for Israeli monitoring of parts of the Palestinian cyberspace that fall outside perceived territorial boundaries: Internet cafes in Jordan or Lebanon, but also pro-Palestinian international blogs and websites. In other words, the Israeli security apparatus operates on those spaces that are envisioned to be Palestinian regardless of their territorial configuration.

¹⁰ These consist in taking control over a large number of unsuspecting computers (known in jargon as "zombies"). Joining these together into a robot network (the botnet), hackers use zombies to flood targeted websites with access requests until they collapse.

Techies on the Ground: Revisiting Egypt 2011

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Abstract:

This article studies social media and popular social movements in the early 21st century in the Middle East and North Africa, with a focus on Egypt. Rather than ethnography or political theory exclusively, I employ a data analytics of analyzing tweets, posts, and blogs to describe the political culture of social media. And then I perform the results under the guise of the Arabic-speaking cyborg VJ Um Amel. The article argues that the Egyptian experience of revolution and counterrevolution reveals the indispensability, the promises, and the limits of digital communication across borders and languages.

Keywords:

software localization, data analytics, cyborgs, Arab spring, social media

Introduction

When activists in the Middle East and North Africa (MENA) took to social media to push for political change, digital media captured the imagination of scholars, interest groups and multiple publics. Pundits coined the Arab uprisings of 2011 “Facebook and Twitter revolutions” and the “Arab Spring.” However, *New Yorker* writer Malcolm Gladwell took a different position, downplaying the significance of new technology to the uprisings in an article he published in February, 2011:

Acts of communication, by themselves, are not especially interesting. We have always had protests, riots, and revolutions, and the people who carried them out have always found ways to spread the word. If the medium for those communications shifts from word of mouth, to printed flier, to telephone, then to texts and Twitter, what does it really matter? Technology

becomes an important part of the story only if it's changing the nature of the events – and the nature of the social groups that are carrying them out (Gladwell 2011).

For most everyone, Arab activists' use of social media became a model for other social movements immediately thereafter. These included Occupy Wall Street, From Ferguson to Palestine, the Umbrella Revolution in Hong Kong, and 12M and 15M in Spain. These movements quickly adopted similar tactics enabling people around the world to participate virtually as witnesses to contemporary events. In an act of transnational solidarity, in February 2011, an Egyptian activist ordered pizza for labor union protesters in Madison, Wisconsin (Kroll 2011). The international phone call from Egypt was just one of many messages of solidarity streaming into Wisconsin from all over the world on mobile devices and social media.

My focus on the *Arab Spring* allows us to see how that phenomenon brought to international attention – albeit in stereotyped and overstated ways – that now, the revolution also happens on social media. And secondly, this social media was created in Egypt and in resistance to dominant trends and language systems in the West. In other words, the U.S. did not create the infrastructure for this revolution. This revolution, though implicated in capitalism, also highlights mechanisms to circumvent its Western instantiations. The infrastructure was neither neoliberal nor capitalist. It was a production of what I term “techies on the ground or grassroots technological innovators.” Similar to the way in which *Our Women on the Ground: Essays by Arab Women Reporting from the Arab World* (Hankir 2019) gives voice to an often absent narrative, “Techies on the Ground” frames its narrative from the often absent voice of those who built the machine. Thus, this article seeks to recover this narrative and what it implies, showing Egyptian techies on the ground to be in advance of Zuckerberg and his entourage.

To the extent that the reputation of digital activism in the region is credited to the Facebook-ifying and Twitterizing of contemporary media, Tunisia and Egypt differ in significant ways, and in many ways, were ahead of Facebook and its followers. In 2004, the Harvard seniors were updating their online

program “Facemash,” which allowed users to objectify fellow students by comparing photos of their faces and selecting who they deemed as “hotter,” to the first iteration of Facebook, an English-based social networking site. By 2004, techies on the ground in Egypt had already begun to change the nature of the interrelation between the world of technology¹ and the humanities or social movements and non-hegemonic institution building.

Two important movements in Egypt were emergent at the time: the open-source software and localization movement to Arabic and the Kefaya political party, who used both websites and online journalism to campaign. It started when, in December 2004, more than fifty people gathered outside the attorney general’s office, making demands far beyond the established boundaries of free expression for the time. Their banners called for the cancellation of the state of emergency law and read “The Egyptian Movement for Change.”² In 2004, developers were still building applications to enable Arabic characters on a keyboard. Only in the years that followed did several open-source projects develop software for Arabic on Drupal, Yamli, Google, and other platforms, thereby enabling Arabic-language content to grow dramatically.



Figures 1 and 2. Images collected from Twitter by R-Shief in February 2011 from posts using the hashtag #Jan25 (R-Shief 2011).

Cyborgs and Bloggers Emerge on the Arab Media Scene

Much academic scholarship on the Arab world has situated its discussions on new media within the existing discipline of news journalism, and as

an apparatus of the state.³ One can place the beginning of print media in the region around the end of the Ottoman Empire. And before modern journalism, Arab societies practiced formal conventions for public communications. According to Samar Al-Roomi, for example, “Kuwait’s heavy reliance on tribal *Dywaniahs* (in which men meet regularly to talk about public and private concerns) plays a more significant role in determining Kuwait’s communication process and news’ validity than do Web pages/blogs” (Al-Roomi 2007, 148). In addition to formal spaces, throughout the Middle East, neighborhood coffee houses and other informal social spaces have also served as loci to communicate reliable public information.

Indeed, implicit in the debate about how to examine a popular, social media culturally specific to the Middle East is a distinction between media that emerged from the influence of dominant powers and media that grew out of localized practices. In a text published in 2003, Dale Eickelman made a distinction between professional journalists and bloggers. Eickelman (2003, 141) described the phenomenon by explaining that “bloggers tend to have less tolerance of conventional wisdom and less trust of governments. By the same token, some bloggers are also less concerned than professional journalists about commitments to accuracy and objectivity.” While this well-intended position to remain true to a set of professional standards, the methods from which these standards are derived are not equipped to understand the nuances of the politics of growing up Arab in the age of the Internet. Similar to Eickelman, Naomi Sakr made the point that “pronouncements about new media influence have too often been limited to observations about causality that are broadly positivist in character but without being grounded in empirical research,” in her introduction to *Arab Media and Political Renewal: Community, Legitimacy and Public Life* (Sakr 2007). As bloggers became citizen journalists – playing an active journalistic role, sending instant messages and images on mobile phones or blogging their views on the Internet – their power grew. At the 2010 Arab Media Forum Dubai, Ali Al Karni, Director, Al Jazirah Newspaper Chair for International Journalism, King Saud University, was famously quoted as saying, “the new tribe has emerged as the ‘Fifth Estate,’ achieving a coup d’état against the traditional Fourth Estate” (Dhal 2010).

However, the transnational scale of media circulation has posed serious challenges to feminist scholars eager to understand how media are decoded and translated as they travel from one cultural context to another. The decentralized, sometimes autonomous, collective, and networked nature of culture production requires academic accounts that are themselves decentralized, collaborative and networked. It is critical to implement a feminist digital humanities method and its focus upon effect, networks, scholarship, and practice; and to insist on applying it to Middle East social media, particularly in the same fashion that feminist digital scholars understand venues, spaces, archives as computers that store and process most of its data as embodied, interactive, and live.

Over the past decade, I have expanded my work in new media and design to include interactive visualization and digital performance and have produced a combination of scholarly and creative projects that include publications, interactive artworks, and online media systems. My interest in creating VJ (video jockey) Um Amel (Arabic for “Mother of Hope”) is to bring together seemingly disparate groups of audiences: those interested in motherhood, those interested in VJ’ing, and those interested in transnational culture.

From A VJ Manifesto

(1) I call upon the early work of techno-feminist Donna Haraway, “A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s,” here she described a cyborg as a “creature that skips the step of original unity in a postgender world and does not dream of community on the model of organic family, this time without the Oedipal project.” A cyborg is free from biological, technological, or physical determinism.

(2) Using a method described by Chela Sandoval as “oppositional consciousness,” I then ask: what does the child of a cyborg look like? What does it mean to us that a cyborg procreates?

(3) The concept of “Arab” or a unified sense of “Arab” culture has been a point of debate since before the mid-century. Arab migration and histories of Arab Diasporas are rich and range from the late nineteenth century to the present. I believe that trends in migration and the emergence of a new Arabic speaking Diaspora over the last few decades have given rise to a reemergence of “Arab” as a symbol of culture. A brief glimpse of this work includes Ilham Khuri-Makdisi, Sarah Gualtieri, Nadine Naber, and Evelyn Alsultany. Being situated in a post-911 United States, I feel the urgency to bring up the subject “Arab” again. As scholars have shown, the very formation of Arab as a modern identity as both regional and national has a long history. See Hourani’s *Arab Thought in the Liberal Age*, and more recently, the reassessment of Arab liberalism in the two volumes by Jens Hanssen and Max Weiss. See also Omnia El Shakry’s *The Great Social Laboratory*, as well as Marwa Elshakry’s *Reading Darwin in Arabic, 1860–1950*. However, implicit in the debate on how to examine that which is culturally specific to the Arab world is a distinction between what emerges from the influence of dominant powers and what grows out of localized practices in the region.

(4) On the issue of materiality, in *My Mother Was a Computer*, Katherine Hayles articulated that words are pre-material. She argues that we need to think of text as being simulated from nothing – that there was nothing to deconstruct. Her argument, though, concentrated on seeing words through navigation, instead of investigating narratives as embedded in topical environments. I think it is necessary to see the word as interwoven within a world of layered images and simulated documents; and then an integrated piece of all components become signifying practices. Now the exciting thing for me is to perform Arab, Mother, and Cyborg all at once – as VJ Um Amel (VJ Um Amel 2017).

Throughout the remainder of this article, I will include a second narrative voice, a first-person narrative of events as told by the cyborg VJ Um Amel. Her words will appear in italics and against the right-side margin.

The approach to analyzing data emerged from an intention to remix discourse in order to include the input of a “community–author” rather than a single subjectivity – whether expert, popular, or imaginative. The configuration of a “community–author,” a subjectivity that is virtual and hybrid, by definition, activates landscapes of discourse that present a virtual embodiment of what can only be a 21st century “virtual” imagination. These analytics of Internet data are not claims about material bodies or the intentions of communicators, but traces of an embodied moment of intentional use of digital media. Every data point has an embodied analog at some moment. And blogs have a very particular (historically specific, geo-specific) moment of origin that is exceedingly tangled with material bodies. My aim here is to determine what the emerging patterns tell us about the Arab media scene.

Egyptian Bloggers



Figures 3, 4, 5, 6. Screenshots from famous Egyptian blogs taken in 2011.

A Year after Iraq War

How did a generation of people under thirty maintain themselves as a state-oppositional presence on a global platform, and find the

resources to do so? Born into a corrupt system under Mubarak's regime, this new generation of activists in Egypt began to fashion themselves as part vigilante, part technological expert, in order to expose the irreality of Mubarak's "leadership." In so doing, they crafted mutable identities for themselves – Blogger–Activist, Techie–Activist, Blogger–Journalist–Artist, Artist–Techie, Artist–Techie–Scholar, et cetera. Their technological sophistication and political sensibilities were reinforced by a 1990s culture jamming, guerrilla aesthetic – a refusal to be one single thing. In many ways, these are the theorists who have guided much of my research through genuine friendship and collaborations mainly in Egypt.

Challenging Mubarak's leadership was always central. It was March 20, 2004 when Alaa Abdel Fattah and Manal Bahey el-din Hassan first went live with their blog: "Manal and Alaa's Bit Bucket" in Cairo. They were exploring and experimenting with web publishing platforms that would facilitate the web presence of other groups and small initiatives. Alaa and Manal's "Bit Bucket" was one of the earliest blogs to come out of Egypt and the Arab world. Its content was born of a public event: March 20, 2004 was the first anniversary of the massive global protests against the war on Iraq. At the time, I was a fellow open source designer building Arabic and English websites for academic and activist communities in Washington D.C. I met Alaa and Manal in 2007 through the Arab network of designers and programmers on Drupal while building the BETA version of the R-Shief software.⁴

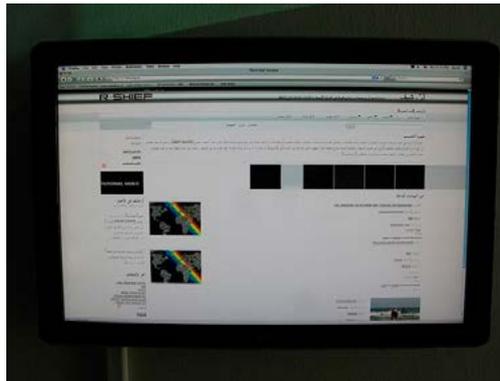


Figure 7. R-Shief Beta installation at the Santa Cruz Museum of Art and History, 2009.

From its inception, R-Shief was conceived at the intersection of art, technology, and scholarship. R-Shief was built to attend to critical gaps in computational and textual analysis on social media, addressing emerging shifts in cultural productions. A growing number of posts in Arabic by bloggers in the Arab world used digital space as a site of information distribution and organizing, and the emergence of social media personas throughout the Arabic speaking world gave voice. In Gaza, activists like @Gazamom rose into the public eye through her tweets on the 2008 war. She introduced me to Twitter.

The use of creative commons licensing and praxis of Free–Libre–Open Source Software (FLOSS) production using social networking programs such as Drupal, MediaWiki, Ning, and WordPress emphasized a commitment to a new model of media production. It was free and open access and grew from the contributions from a forum of developers worldwide. That is when I first encountered, and ultimately, participated among the network of Arab techies and activists in the region. I chose to build the prototype (or BETA version) in Drupal because of its large network of programmers who has already developed Arabic localization modules. Software localization is a process of translating an application to local languages (for example, making sure string wrapping supports various grammar rules), cultures (dialects), and legal requirements (ownership and censorship laws widely vary).

There was a time, as the Arab blogosphere was emerging, when we could not get the Arabic glyph encoded properly onto web interfaces. Nor could we program the web interfaces to read from right to left. These two basic limitations presented quite a challenge from both technological and visual design perspectives. It took many months to resolve. One problem was that the Arabic glyph appeared much smaller than the Roman glyph. In the case of R-Shief, a bilingual site, it was very difficult to design the Arabic legibly without having English looking dramatically large. Allegorically ironic, it was much like the power the English language had in the early years of the Internet.

There were many localization issues concerning right-to-left non-roman script languages. Drupal's network of Arabic language developers continued to find design solutions. For example, Drupal developer

@Amr released the FireFox Yamli extension, an Arabic search engine with a smart Arabic keyboard, and spent some time packaging a Drupal module to integrate the Arabic comma as a separator for Drupal tags (Yamli 2019). Drupal development in Arabic (right-to-left programming and UTF-8 encoding for Arabic script)⁵ grew tremendously, as I mentioned earlier in this article, with over fifty software developers contributing to Drupal's open-source platform. One of the Arabic Team administrators for Drupal is the same Alaa of "Manal and Alaa's Bit Bucket" blog (Drupal Translations 2019). He posted the following biography on his profile in 2004:

From his work with children using Facebook to ridicule their teachers in the Arab digital expression camps, to his work with pro-democracy activists using blogs to mobilize thousands of Egyptians against the government in the Kefaya movement, Alaa just loves helping people use ICTs to stick it to the man. By day he works as a Free/Open Source Software developer, by night he dons his mask and cape and patrols the streets of Cairo, jumping from campaign to campaign, building websites, providing support and training, looking out for activists in need. He likes to pretend that his work on the Egyptian Blogs Aggregator helped bring in a new era of citizen journalism and usher in a new generation of digital activists, while the rest of the world acts as if his blog is relevant (Drupal 2019).

One thing Alaa was mistaken about was that his work did not "pretend" to "bring in a new era of citizen journalism." In fact, this on the ground techie work did usher in a new generation of digital activists. Between 2004 and 2011, the rise of the Arab blogosphere demanded rigorous attention. Alaa's blog posts swayed like a pendulum between issues on RSS aggregators – a method of distributing websites – and the 2005 Egyptian constitutional referendum to establish direct elections for the presidency.

Open Source and Arab Fem-Tech meet Twitter

This is also the era when one of the largest forums on the World Wide Web (as the Internet was first termed) was a community for Egyptian women called Fatakat. Originally established as a forum among three sisters, mainly sharing recipes, in the summer of 1997, it quickly grew into the largest hub of Internet communication for MENA women, emerging alongside forums for gamers as well as techies before the advent of social networking sites (Al-Shagra 2010).



Figure 8. Fatakat Forum has been in operation since 1997.

Through an ongoing process of collaboration between techies, artists, activists, youth leaders, educationalists, and others, what has been established as the Arab Digital Expression Foundation (ADEF) unfolded over the past decade. On its website, ADEF describes itself as committed to “open culture that freedom of expression and right to knowledge thrives and becomes a force that drives us to explore and discover our endless potential.” The foundation emerged when its cofounders, Ranwa Yehia and the late Ali Shaath, began hosting Arab Digital Expression Camps in 2007. Here young people, from across the Arab world, gathered in a residential camp and embarked on an experiential educational journey where technology and art became fertile avenues for self-expression and identity exploration. Among the first cohort of trainers were fellow techies from the Drupal forum including Ahmad Gharbeia, known for Arabizing Wikipedia, bloggers like Alaa and Manal, founder of SuperMama, independent journalists from Egypt Independent, a blog on Torture in

Egypt,⁶ and a network hub of progressive, feminist programmers and designers, many of whom worked at an Egyptian web-publishing company, Open Craft.

At the same time, that Mark Zuckerberg launched Facebook in 2004 and Jack Dorsey launched Twitter in March 2006, academic institutions were already analyzing this Egyptian blogosphere. In 2007, Harvard's Berkman Center for Information and Society published a groundbreaking article: "Mapping the Arab Blogosphere: Politics, Culture, and Dissent."

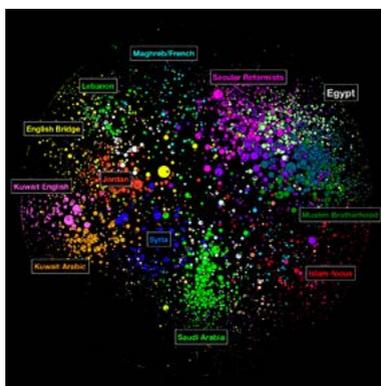


Figure 9. The Arab Blogosphere (Etling et al. 2009).

However, nowhere in the article do they reference the blogs themselves, which were written in casual Arabic. Unfortunately, these two trends – one organized by activists and one by academics – seemed to run parallel to each other rather than converging. By providing both tools and analysis through R-Shief, this work attended to critical gaps between academics and activists.

In December 2008, the Arab Techies⁷ collective convened for the first time in Cairo around the objective of promoting techies' support and engagement with community-based projects and initiatives. At the first meeting, a cohort of techies engaged with digital activism and citizen media initiatives, media aggregators and social web portals managers, techies providing training for activists, artists and social entrepreneurs, software developers involved in innovative startups, graphic designers, and more discussed Arabic content

on the web, citizen media, open-source software, digital activism, mobile telephony, aggregators, and social networks. At its conclusion, evaluation forms revealed significant criticism of the lack of women techies at the meeting. The same criticism emerged at the following Arab Techies event, a workshop focused on programmers working to solve Arabic language support issues and Natural Language Processing (NLP)⁸ problems and to improve issues such as search normalization and text indexing. Out of sixteen assembled software developers, only two were female – and hence emerged the idea of organizing a women-only Arab Techies gathering. As part of the Arab Techies initiative, the crux-goal of the women gathering was to promote the contribution of female techies to communities concerned with social change and who are in dire need for technical support. The feminist ethos developed from within this eclectic community.



Figure 10. Screenshot from VJ Um Amel's website in 2010.

In May 2010, the Arab Techie Women gathered in Jounieh, Lebanon. It was a workshop with around thirty participants. We were asked to collectively create the agenda and lead workshops. Over the course of five days, there was so much information circulating that we decided collectively to use Twitter to document the conference. The common id we used was hashtag #ATWomen. A few weeks after the conference, we tried to capture the Twitter feeds in order to make meaning of the data through visualizations or otherwise. However, since we were not storing the tweets soon enough, we were unable to retrieve past tweets because Twitter only stores the prior seven days. Frustrated by the loss of the documentation of our Arab Techie Women's conference, I started researching various ways to capture data from Twitter. I discovered that once captured, there is a lot that can be done with Twitter data – from artistic visualizations to materials for practical research. I have only begun to think through how to use Twitter as a research tool, specifically for scholarship on the region.

From this departure point, R-Shief developed methods for capturing and parsing digital feeds such as Twitter, blogs, RSS feeds, and their applications to behavioral and social sciences. The purpose has been to provide researchers with a communication of abstract data (large and unwieldy hashtags), through the use of interactive visual interfaces for creative and scholarly works. And so began R-Shief’s “Information Mappings” of Twitter with these four hashtags: #gaza, #flotilla, #abdulemam, and #KhaledSaid. All of these topics trended on Twitter are in some way related to censorship or larger systems of oppression. For example, the hashtag #abdulemam signifies Ali Abdulemam, a blogger and the founding editor of BahrainOnline.org. He was arrested on September 5, 2010 for “publishing false news” on the popular portal.

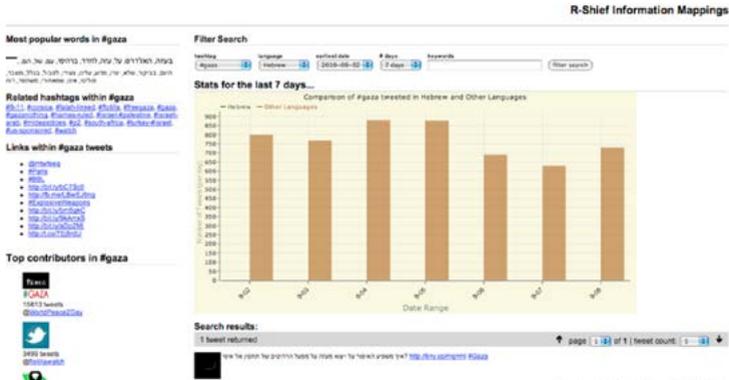


Figure 11. Screenshot of R-Shief’s first Twitter Data Analytics Dashboard in 2010.

#Jan14, #Jan25

This informal network of Arab techies developed over the years as we forged new relationships and initiatives. These included the Jordanian blog 7iber, TakeBackTech feminist collective in Lebanon, and my own Twitter archiving project using R-Shief. Authoritarianism, poverty, social and economic injustice, and state brutality fueled the Arab uprisings, which we conventionally think of as beginning in 2010 when Tunisian street vendor Mohammed Bouazizi set himself on fire to protest the police’s arbitrary seizure of his vegetable stand. It was in Tunisia that the original call “the People Demand the Fall of the Regime” first permeated the streets

and captured imaginations. It would not be long before the contagion of hope would spread to Egypt. Earlier that year, in the summer of 2010, the Egyptian police brutally beat an Alexandrian blogger, Khalid Said, to death. His brother photographed his mangled face at the morgue; Khalid would inspire a Facebook page titled “We are all Khaled Said” and his brutalized image would become the face of the revolution.

Several months later, as a student who had been working with other open-source developers on Arabic software localization, at the request of the State Department, I found myself at the U.S Secretary of State’s office explaining to her my predictive Twitter analytics of the fall of Qaddafi in Libya in August 2011. A month earlier, at a rooftop restaurant in downtown Cairo locally known as the Greek restaurant.

I was chatting with Alaa and Manal about another invitation I had received to give an open lecture at the State Department on my work on semantic analytic software. We were excited about community building that we were engaged in shaping through the efforts of open source developers globally – Arabic speakers building community through Facebook pages, or Iranian election campaigns on Twitter. In 2011, we did not know where we were heading; we were building platform infrastructure and growth.

The confluence of accumulating injustice and the political possibility of a free and active civil society catalyzed uprisings from Cairo to Libya, Syria, Yemen, Bahrain. Regimes fell and new ones emerged. It was not long before the forces of counter-revolution would take hold bringing in a civil war, reconsolidation of authoritarianism, military recalcitrance, and the imprisonment of activists and bloggers.

The charge – it appears – is that I participated in inviting people to protest yesterday, in front of the Shura Council building, against placing – for the second time – an article in the constitution legitimizing the court-martial of civilians

The strange thing is that both the Prosecutor and the Ministry of the Interior knew that I was present for 8 hours at First Police Station New Cairo in solidarity with the people arrested yesterday on the same charges. But neither

the Prosecutor nor the MOI ordered my arrest at the time or demanded that I be questioned. This probably means that they intend to put on a show where I play the criminal-in-hiding (Abd El Fattah 2013).

A framing that upends the literature that portrays the “Arab Spring” as a Facebook revolution, contrasted against literature analyzing the media infrastructure empowering Arab digital activism, can broaden our understanding of the networks operating in (and behind) contemporary debates on the social media tools of counterrevolutionary bots and fake news. “Techies on the Ground” thus provides an alternative to both analysis of social media as a progressive tool of revolution, or as a technological platform for the counterrevolution and ultra-right conservatives in the Trump–Putin era. “Techies on the Ground” lays a foundation for critical inquiry into technical semiotics and politics.

This article is a node in a larger project that lies at the intersection of all these disciplines as a site of digital humanities. It asks us how we might think of the digital humanities as a bridge–site for bringing together different ways of knowing. While it may be tempting to dismiss media such as Twitter as corporate structure, we must also recognize how techies like Alaa Abd AlFattah developed software to destabilize the corporate form to realize revolutionary content. The key here is to recognize the Internet’s potential to both reify and challenge dominant economies of knowledge production; but, and, also, to recognize how that interrelation between infrastructure and content varies. These varying relationships enable different political effects in the Middle East and in the US, a non-global understanding of locality that ostensibly speaks globally.

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Notes

¹ The history of Egypt's technological infrastructure emerged from a broader political and economic condition that grew over decades. Internet started in Egypt in 1993 with a cable connection to France of a 9.6 kbps bandwidth to the Egyptian Universities Network and the Cabinet Information and Decision Support Center (IDSC), with the National Telephone Organization (predecessor of Telecom Egypt) providing the infrastructure. The number of users at that time was estimated to be between two and three thousand, which is about 35 percent of its population.

² Kefaya is a coalition of loosely knit diverse political parties and perspectives. Similar to Ukraine's Orange Revolution and Poland's Solidarity movement, the Kefaya movement drew its support from urban intellectuals from Nasserists, Islamists, Liberals, Marxists, to Secularists. They came of age in 2005.

³ See Eickelman and Anderson (2003) and the *Journal of Arab Media and Society* (2007–present), which was founded in 1998 as *Journal of Transnational Broadcasting Studies*.

⁴ At UC Santa Cruz, L. Sakr built a prototype of this bilingual Arabic digital archive towards completion of MFA.

⁵ Computers read fonts through various encoding–decoding software: ASCII for is English, UTF-8 is for Arabic. Translation in digital medium happens semantically as well as programmatically.

⁶ Accessed October 7, 2016, <http://tortureinegypt.net/>. The website is no longer available.

⁷ Arab Techies was a collective that started with the goal to bring together a varied group of techies who vigorously utilize their IT skills to support their communities on the route of development and social change, to share experiences and knowledge, learn from each other and collaborate on solving common problems.

⁸ Natural Language Processing (NLP) is a field of study combining linguistics, computer science, information engineering, and artificial intelligence to understand the communication and interaction between computer languages and human (natural) languages.

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