



Online Tactical Innovation and Stagnation:
Insights from the Aftermath of the Arab Spring in Syria and Tunisia

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ABSTRACT

Digital media has shaped our world in the past decade, empowering people around the globe to express their voices and share ideas. The massive pace of digitisation has also transformed social movements across geo-political boundaries, such as the 2011 Arab Spring, the #MeToo, Hong Kong's Pro-Democracy, and #BlackLivesMatter movements. Social movements have deployed several innovative online tactics to express their voices; I call these strategies *online tactical innovations*. In response, counter-movements employed methods of digital repression to target and dismantle social movements. This chess-like game between movements and counter-movements comes with consequences. However, it is hard to find a consensus in social movement scholarship on the precise impact of repression on tactical innovations offline. Thus, the overarching question guiding my research asks: when do social movements innovate online?

I zoom in on the Arab world by examining Syria and Tunisia to understand this action-reaction puzzle. In this thesis, I theorise and contextualise the conditions under which social movements innovate online tactics using a mixed-method approach. Hence, I interviewed 60 digital media experts, bloggers, and activists from Syria and Tunisia from 2019 to 2020. I selected these two case studies because both countries have experienced very different outcomes in their 2011 uprisings. Having generated the original theory of online tactical stagnation, I tested this theory quantitatively using an original dataset pulled out from Google Trends. I was able to conduct a cross-national panel study to examine the structural determinants of online tactical innovations in the Arab world.

By analysing the Syrian and Tunisian cases, I demonstrate that the movements' ability to introduce online tactical innovations depends on the magnitude of digital repression. On the one hand, I argue that movements adopt new online tactics to overcome digital repression only when digital repression is moderate and bearable. When digital repression is very low or extremely severe, movements are more likely to abandon their new online tactics, a process I refer to as *online tactical stagnation*. On the other hand, Internet users are more likely to keep employing online tactics on a daily basis despite the changing level of digital repression.

My findings contribute to the larger field of social movement studies in the digital age. By providing a theoretical and practical framework for the study of online tactical innovations, my research advances our understanding of how and when movements employ digital media practices.

إلى أبي... رَحِمَهُ اللهُ

To Dad... May he rest in peace

'I'm a little more optimistic'

Mark Zuckerberg, 2019.

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‘وَفِي السَّمَاءِ رِزْقُكُمْ وَمَا تُوعَدُونَ’

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A NOTE ON TRANSLATION AND TRANSLITERATION

In this thesis, there are the Syrian and Tunisian dialects, representing Levantine and Maghrebi Arabic. These dialects are slightly different from each other. Finding a transliteration system that could fit both dialects was extremely challenging. Hence, I decided to transliterate the names of Arab countries, cities, political parties and leaders in this thesis following the most commonly used spelling I could find in academic and news articles. In the few cases when a word or a name was not commonly transliterated before (e.g., pseudonyms of the participants), I followed the Arabic transliteration guidelines provided by *the International Journal of Middle East studies* (IJMES).

The translation of all the Arabic-language interviews is my own. I did not hire translators, a third-party company, or used a tool to translate the data.

GLOSSARY

<i>Derija</i>	The spoken dialect in Morocco, Tunisia, and Algeria
<i>Fusha</i>	Modern Standard Arabic
<i>Hijab</i>	A head cover worn by Muslim women
<i>Kefaya</i>	Enough
<i>Keffiyeh</i>	A traditional Palestinian headdress consisting of black and white squares that symbolises sovereignty and revolution
<i>Maghrebi Arabic</i>	A term used to describe the dialect spoken in Arab countries located in the western part of the Arab world (e.g., Tunisia, Morocco, Algeria)
<i>Manish Msamah</i>	I am not going to forgive
<i>Mashriqi Arabic</i>	A term used to describe the dialect spoken in Arab countries located in the eastern part of the Arab world (e.g., Egypt, Iraq, Saudi Arabia)
<i>Shabbiha</i>	A name used to describe pro-Assad thugs
<i>Sharia</i>	A religious body of law, derived from Islam
<i>Taswyat</i>	Reconciliation Agreements
<i>Yomuyat Qazift Hawen</i>	The Diaries of a Mortar Bomb

TABLE OF ABBREVIATIONS

ACLU	American Civil Liberties Union
API	Application Programming Interface
ATI	Tunisian Internet Agency
CPR	Congress for the Republic Party
CUREC	Central University Research Ethics Committee
DDoS	Denial of Service Attack
DSP	Digital Society Project
FBI	Federal Bureau of Investigation
FE	Fixed Effect Model
FEA	Free Electronic Army
FSA	Free Syrian Army
GCC	Gulf Cooperation Council
GIF	Graphics Interchange Format
GLS	The Generalised Least Squares
GT	Google Trends
ICT	Information and Communication Technology
IMF	International Monetary Fund
IP	Internet Protocol
ISIS	Islamic State of Iraq and Levant
ITU	International Telecommunication Union
LCC	Local Coordination Committees
LM	Breusch-Pagan Lagrange Multiplier
MENA	Middle East and North Africa
NCA	National Constituent Assembly
NCPR	National Council for the Protection of the Revolution
NGO	Non-Governmental Organisation
OII	Oxford Internet Institute
OLS	Ordinary Least Squares
PGP	Pretty Good Privacy

PTSD	Post-Traumatic Stress Disorder
PYD	Kurdish-led Democratic Union Party
RE	Random Effects Model
RM	Resource Mobilisation
SAS	Syrian Arab Spring
SD	Standard Deviation
SEA	Syrian Electronic Army
SMS	Short Message Service
TAS	Tunisian Arab Spring
UAE	United Arab Emirates
UK	United Kingdom
UNHCR	The United Nations High Commissioner for Refugees
UNICEF	The United Nations International Children's Emergency Fund
URL	Uniform Resource Locator
US	United States
USB	Universal Serial Bus
V-DEM	Varieties of Democracy
VOIP	Voice Over Internet Protocol
VPN	Virtual Private Network
VT	Vicarious Trauma
WSIS	World Summit on the Information Society

CHAPTER ONE

INTRODUCTION: DIGITAL MEDIA AND DIGITAL EVERYTHING

1.1 Introduction

The first attempt at a formal foundation, authentication, and institutionalisation of the field of communication studies could be traced back to the 1920s and World War II (Simonson & Park, 2015). The communication field was a modern accomplishment that arose from a positivist paradigm of the social sciences to objectify the humanistic and literary discourses about communication and media in society (Park & Pooley, 2008; Simonson & Park, 2015). Almost a century later, the world learned a lot about how mediated communication can impact, shape, and develop interpersonal relationships, social interactions, and perceptions of life, especially in the Western world. Indeed, the structure of power in the communication field led to the underrepresentation of non-Western countries and scholars for decades (Chakravartty et al., 2018).

When digital media emerged and stretched the scope of communication research, the representational gap continued with it. A structural transformation of the field took place, driven by the new advanced technology that led to an array of interdisciplinary approaches in scholarship. However, these changes occurred in Western democracies, leaving the knowledge gap unfulfilled. I undertook this doctoral thesis in an attempt to narrow this gap and answer a few questions about the impact of digital media on non-Western populations.

Artificial intelligence, the Internet of Things, virtual reality, immersive art, holograms, cryptocurrency, and other forms of digital media are among the hottest buzzwords among young adults. Facebook has about 1.7 billion users, a larger population than the population of China (York, 2022). Now, it is a tradition to see people queuing to get the latest release of the iPhone or PlayStation. It is no longer a surprise to read the news about owners of technology companies as the wealthiest billionaires on earth. Nowadays, communication scholars are rushing into developing studies and theories to understand the individual and organisational socio-political digital practices

and the many implications digital media has on our lives, including studying the communication infrastructure of social movements.

The recent advancements in digital media, including social media and web 2.0, were credited for either directly causing social movements, or contributing to the diffusion of movements' goals and ideas (Abdulla, 2014; Howard & Hussain, 2011a; Margetts et al., 2015; Zayani, 2015). Digital media provided a new structure for collective actions by recording events and diffusing information on social media platforms (Zayani, 2019). The intersection between digital media and social movements inspired waves of new studies and theories of communication. Platform companies acted as unprecedented powerful intermediary between movements and their opponents by gatekeeping and restricting content.

Undoubtedly, Google, Twitter, Meta, Reddit, TikTok, Telegram, and many other technology companies were important factors in the formation of recent social movements. The algorithmic and human content moderation designed by platform companies contributed to destabilising the power structure of the confrontations between movements and their opponents. York (2022), in her recent book 'Silicon Values: The Future of Free Speech under surveillance capitalism' described the self-regulating Silicon Valley companies as the 'new gatekeepers' and 'the new governors' that excluded those who did not abide by the platforms' rules.

In recent years, the world has witnessed how the use of digital media by social movements has evolved from tools to galvanise support into virtual battlegrounds. Digital media were venues for engagement, mobilisation, and holding people accountable in many instances, such as the 2009 Iranian Green Movement, the 2011 Arab Spring uprisings, the 2013 Turkish Gezi Park protests, the 2018 #MeToo movement, the 2020 #BlackLivesMatter movement in the US, and the 2022 Iran's women's rights movement.

The emergence of digital media has transformed and reconceptualised the concepts of participation, leadership, and movement organisation. The way movements were coordinated through digital media was described as ‘connective actions’ (Bennett & Segerberg, 2012) that were part of ‘self-mediated’ and ‘leaderless’ movements (Castells, 2012) with decentralised structure and no formal organisation. Activists have successfully used digital media over the years to disseminate their ideas and communicate with different bodies nationally and internationally, forming what became later known as ‘connective leadership’ (Ratta & Valeriani, 2012). These transformations and others have altered the structure of contemporary movements in the digital age. Thus, movements’ opponents needed to opt in the digital era rapidly.

Counter-movements co-opted digital media, benefiting from the biased AI machines and the many loopholes in the content moderation systems of social media platforms. Governments, political parties, and foreign actors manipulated the online sphere (Alimardani & Elswah, 2021; Elswah & Alimardani, 2021), causing an information disorder (Wardle & Dias, 2017). Recently, there were attempts to examine the macro-level communication infrastructure that shaped the digital battleground between movements and counter-movements (Azer et al., 2019; Moore-Gilbert, 2018; Moss, 2016; Yang, 2016). However, less work has been conducted to explore the micro communication infrastructure of modern social movements.

This micro infrastructure entails the *online tactical innovations* of both movements and counter-movements. This is what I have been investigating for the past five years—as the title of this thesis alludes. This thesis examines the role of digital media in shaping the online tactical strategies of movements and their opponents. This thesis aims to find answers concerning the role of technology in transforming contentious politics in the last ten years and the ways this impacted Internet users. While this thesis examines cases from the Arab world, its findings could represent the experiences of other movements happening elsewhere. However, I cautiously generalise my

theories here and indeed encourage the reader to further investigate what I conclude in this thesis in other contexts and regions.

This introductory chapter highlights the structure, reasoning, and motivation of my doctoral thesis. I first summarise the thesis outline. Then, I address the development of digital media studies and how they intersect with social movements. Third, I analyse the evolution of the digital media ecosystem in the Arab world, elaborating on the scholarly gap and bias in studying Arab media. Fourth, I briefly explain my positionality and the significance of this research. I explain the research questions and my thesis's theoretical contributions to communication and social movement studies.

1.2 Thesis Outline

In chapter one, I introduce the project's problem and the importance of researching this subject. I review the role of digital media in social movements and the theoretical foundation of my argument. I outline the background of my work, the motivation for conducting this research, and the rationale behind selecting the case studies. I briefly provide a preview of the origins of social movement theories and the 2011 Arab Spring. I also explain the relationship between digital repression, online tactical innovations, and activism. I finally illustrate my main findings and my theoretical contribution to the broader social movement scholarship.

In chapter two, I present the concept of social movements and how the current theories of social movement innovation have emerged and evolved over the years. I focus on the theory introduced by McAdam (1983), known as tactical interactions. I review the literature related to this concept in authoritarian contexts. Later, I summarise the association between repression and movements' tactical innovation and what is known about this so far. I shed light on the indeterminacy of the current scholarship on the impact of repression on social movements,

especially with the growing importance of digital media. This allows me to illustrate the theoretical significance of my research and the gap my research fills.

Next, I introduce the reader to the origins of the Arab Spring movements, arguing that the 2011 Arab uprisings are not surprising events given the contentious political actions that existed in the region at the time. I review the social movement literature related to the Arab Spring. I point out that the 2011 Arab Spring movements brought academic attention only in the first few years. However, the aftermath of the Arab Spring remains understudied and under-theorised. I emphasise the need to understand the ways both movements and their opponents have embraced digital media tools since 2011. I aim to fill this gap and analyse the ways digital media has been adopted since the 2011 Arab Spring.

In chapter three, I explore how social movements were mediated via digital technologies. I dedicate the majority of this chapter to illustrating the scholarship related to the intersection between digital media, the Arab Spring, and social movements. I end this chapter by discussing the concept of digital repression and offering some hypotheses about how it influences movements online and offline.

Here, I propose the need to study the nexus between digital repression and online tactical innovations by the Arab Spring movements. To my knowledge, the relationship between the two concepts has not been explored, especially in the Arab world. Therefore, there is a need to focus on the digital micro-organisational structures of movements, known as online tactics. By examining the impact of repression on tactics, it is possible to draw insights into the repression's influence on the broader movement. I specifically focus on the novel online tactics embraced by Arab Spring movements on the basis that innovative tactics are the ones that indemnify a movement against failing.

In this part, I refer to digital repression as *the use of new technologies to suppress political discussions and maintain control online* (Frantz et al., 2020), unlike physical repression which depends on coercive measures of oppression to deescalate protests on the ground. Also, I propose the term *online tactical innovation* to describe *the novel online collective actions by challengers to bypass digital repression reactively or pre-emptively*.

In chapter four, I argue that examining the impact of digital repression on the online macrostructure of a movement is empirically challenging. Hence, I use a mixed-method approach to analyse when and how Arab Spring movements innovate online tactics. In this chapter, I explain how I conceptualise the term ‘Arab World’ and why I avoid other terms like ‘the Middle East’ or ‘Islamic countries.’ I elaborate on the methodological challenges I faced during my fieldwork, including obtaining research ethics approvals, recruiting participants, accessing the field, interacting with the participants, and securing my data. I shed light on the limitations researchers from underprivileged countries encounter, such as travel visas and geopolitical restrictions. Second, I explore the related risks researchers face while interviewing traumatised participants. I focus on the inadequacy of the current ethical and safety guidelines to protect researchers under threats. Moreover, I shed light on the under-discussed risks female researchers face during fieldwork. Third, I explain why triangulation is needed to properly examine social movements and generate new theories. I clarify my decision to combine qualitative and quantitative methods to understand the digital repression-dissent nexus. Finally, I illustrate the analysis procedures that led to my findings.

In chapter five, I explore the interaction between digital repression and the Syrian Arab Spring (SAS) movement’s online tactical innovation. I argue that digital repression motivates the SAS movement’s adoption of new online tactical strategies. Rather than developing an online tactical repertoire to pre-emptively protest against the regime or rebel groups, these tactical innovations by

the SAS movement are only reactive to digital repression. Also, the SAS movement's online tactical innovations are driven only by moderate levels of digital repression, and that the movement cannot carry on innovating new tactics with severe levels of digital repression.

The online tactical innovation that was once the hallmark of the SAS movement was replaced by what I referred to as *online tactical stagnation*. The movement gradually abandoned the majority of the online tactics they previously adopted. In McAdam's (1983) writings, he noted that tactical innovation could ensure the success of a movement. In this chapter, I argued that the SAS movement's online tactical stagnation has indeed weakened the movement and that the growing digital repression has succeeded in coercing the Syrian dissenters online and offline.

This research complements the existing work on the intersection between repression and social movements. However, my findings bring new insights into the critical yet under-theorised observations on the nexus between digital repression and tactical innovation in non-Western contexts. Furthermore, by linking digital repression to the online tactical innovation of the SAS movement, I build on the work related to the use of digital media in the Arab world.

In chapter six, I look at Tunisia as the best outcome of the Arab Spring, exploring the implications of easing digital repression on the online tactical innovations of the Tunisian Arab Spring (TAS) movement. I first analyse how the movement in Tunisia has been using digital media since the Arab Spring. I illustrate the repressive digital tactics the movement encountered over the years. Next, I shed light on the evolution of these tactics after the democratic transition in the country. Finally, I elaborate on the online tactical innovations that the movement has employed and how the movement's online tactical strategy has been impacted by easing digital repression since the Arab Spring.

From the data collected, I argue that the TAS movement has introduced several online tactical innovations to avoid repressive digital tactics. With a successful democratic transition,

members of the movement had reached a stage of activism fatigue that led to online tactical stagnation. This stagnation could be explained by the declining levels of digital repression, which inhibited activists from collecting resources and mobilising others.

As much as the Tunisian Arab Spring (TAS) movement could seem different from the Syrian Arab Spring (SAS) movement, they both were able to adopt similar online tactical innovations. Nevertheless, the TAS movement did not emerge during the Arab Spring. Tunisia was a country with a robust civil society and blogging community before 2011. Hence, the online tactical innovation started earlier in Tunisia than in Syria. The TAS movement was able to innovate more tactics than Ben Ali's repressive tactics, putting activists a step ahead of the regime. This could explain why the TAS movement's tactical innovations bypassed the digital repression of the regime. However, these novel digital tactics were abandoned when digital repression decreased.

By looking at Tunisia and Syria, I conclude that online tactical innovations are indeed determined by the level of digital repression. The vitality of the deployed repressive tactics defines whether movements are able to create new online tactics and whether activists succeed in promoting the adoption of these innovations among the masses.

The vast majority of research articles on tactical innovations relied on qualitative methods to identify the tactics and the elements that ignited them. Only a few scholars were able to examine movements' tactics quantitatively, mainly by analysing data collected from newspapers (Demirel-Pegg, 2020; Wang & Soule, 2016). To this date, the determinants of online tactical innovations remain under-explored. I examine in chapter seven the factors that lead to innovating online tactics by general Internet users.

While I could not measure all the online tactical innovations I identified during my fieldwork, I empirically tested the structural determinants of one of these tactics—encrypted

messaging. This tactic was identified by both Syrian and Tunisian participants as a key tactic used by both movements to bypass digital repression. Encrypted messaging was also a tactic that was abandoned by both movements and was associated with lower or higher levels of digital repression. To better understand when encryption was more likely to be used to protest against the regime, I examined this tactical innovation across the twenty-one Arab countries—current and former members of the Arab League—to assert the factors that led to the use of encrypted messaging in these countries.

Using Google Trends, I collected data on the use of encryption in each Arab country (dependent variable). To measure the structural determinants of this tactical innovation from McAdam's (1983) lens, I examined the role of digital repression (independent variable). I also controlled for three variables: 1) anti-encryption laws, 2) protest events, and 3) Internet penetration rates. I used data from Harvard's Mass Mobilization Protest Data, the World Bank, the Digital Society Project (DSP), and newspapers.

In this chapter, I argue that Internet users adopt online tactics from movements in their countries. However, if the vitality of digital repression changed, Internet users would not abandon the online practices they employ—as opposed to social movements. In other words, online tactical stagnation is a phenomenon that impacts social movements more than Internet users. This could be due to the targeted digital repression that movements experience. While the findings of this chapter cannot be generalised to all other types of online tactical innovations, they provide insights into the factors that can lead to the introduction and stagnation of online tactical innovations.

Chapter eight summarises the main findings of the three empirical chapters and illustrates my main contributions to social movement theories. I shed light on the role of digital repression in determining online tactical innovations and the success or failure of movements.

I elaborate on the implications of my findings on the future of Arab movements and social movement research.

Table 1: Thesis Outline

Chapter	Topic	Research Questions	Method
Chapter One	Introduction		
Chapter Two	Literature Review		
Chapter Three	Literature Review		
Chapter Four	Methodology		
Chapter Five	The Syrian Case	• How did the Syrian Arab Spring movement use digital media? • What are the perceived digital tactics used to deter the SAS movement? • What is the relationship between online tactical innovations and digital repression?	• In-depth Interviews
Chapter Six	The Tunisian Case	• How did the Tunisian Arab Spring movement use digital media? • What are the perceived digital tactics used to deter the TAS movement? • What is the relationship between online tactical innovations and digital repression?	• In-depth Interviews
Chapter Seven	The Structural Determinants of Online Tactical Innovations	• What is the relationship between online tactical innovations and digital repression?	• Panel regression analysis
Chapter Eight	Discussion & Conclusion		

1.3 Digital Media and Social Movements

In 1776, underground newspapers and pamphlets were secretly distributed and passed from person to person, leading up to the American Revolution. Illegal pirate radio stations in Algeria, Tunisia, and Morocco ignited resistance against colonial governments in the 1950s (Rohlinger & Vaccaro, 2013).

In 1979, thousands of cassette tapes and pamphlets were smuggled into Iran and used extensively to coordinate the Iranian Revolution (Rahaghi, 2012). In all these instances and more, different forms of media spread marginalised and censored perspectives and contributed to sharing grievances and creating a sense of a collective identity. In recent years, digital media has also played a similar role in modern social movements.

When Mark Zuckerberg launched Thefacebook.com in 2004 in his dorm room at Harvard University, he did not know that it would play a part in the world's most significant social movements a few years after. In May 2009, one of the earliest documented examples of using social media for political purposes was when a large number of Facebook pages was used, calling for the resignation of the Guatemalan President. This mobilised what Summer Harlow (2012) described as an 'online justice movement that activated an offline movement.'

A month later, the Iranian Green Movement expanded the use of social media, earning the name of the 'Twitter revolution'. Using social media platforms, the movement successfully mobilised millions of people to protest against the results of the 2009 Presidential elections (Honari, 2018). In Tunisia, hundreds of bloggers used online forums as venues to criticise Ben Ali's government and document his corruption, magnifying the role of blogging in politics (Zayani, 2015). Egyptian bloggers were summoning people during the *Kefaya* (translated as, enough) movement using Facebook groups and Twitter posts (Lynch, 2015). However, the role of digital media in social movements was particularly prominent during the 2011 Arab Spring.

When thousands of people took to the streets in 2011 to protest against Arab rulers, digital media was used to document, share, and mobilise the masses. Bloggers and activists captured photos and videos on mobile phones, shared them on social media networks, sent SMSs to encourage people to take to the streets, and promoted hashtag protests to globalise the Arab Spring movements. The *Charmed* actress, Alyssa Milano, changed her Twitter account's profile photo, like millions of other

users, to support the Egyptian movement. The Arab Spring became a global event monitored and supported by millions of people across the world.

Western-based academics and journalists labelled the protests ‘Facebook Revolutions’ or ‘Twitter Revolutions.’ Mark Zuckerberg in 2012 accepted this credit for the pro-democracy movements, describing traditional media as ‘the intermediaries controlled by a select few’ (Alimardani & Elswah, 2021). Digital evangelists celebrated digital media for empowering people and democracy. It did not take long until the roles were re-evaluated and reversed. Counter-movements learned how to use digital media to suppress and deter movements. Across the world, movements’ opponents adopted the same activism toolkit to deter democracy advocates.

Evidence of this was found in the initial censorship of YouTube in Tunisia in 2008 (York, 2022), the total Internet blackout in Egypt in 2011 by the former President Mubarak (Howard & Hussain, 2011a), the Syrian Electronic Army’s (SEA) several cyber-attacks in 2011 against Bashar al-Assad’s opponents (Al-Rawi, 2014), and the spreading of misinformation to target Sudanese dissent during the 2018-2019 protest movement (Daffalla et al., 2021). Later, further evidence was found of how platform companies threatened democracy in the Arab world by letting governments benefit from the poorly-designed algorithms, especially with the taking down of the pro-Palestine content (Alimardani & Elswah, 2021). Examples like these and more represented what Frantz et al. (2020) have labelled as ‘digital repression.’

Digital repression is not a subject that only non-Western and less-democratic countries should alone be concerned about. Well-established democracies have been employing overt and covert coercive digital methods to suppress social movements within their borders (Earl et al., 2022; Feldstein, 2022). ‘I cannot breathe’ were George Floyd’s final words before being murdered by a Minneapolis police officer in the United States in May 2020. Captured on mobile phones and spread on social media, those three words sparked the largest social movement in recent memory,

encapsulated by the viral hashtag #BlackLivesMatter. Then, a countermovement emerged supporting the police, pushing the hashtag #BlueLivesMatter. The hashtag generated about 1.6 million tweets with more than 1.7 billion engagements (Wirtschafter, 2021). In the UK, as part of a predictive policing strategy, the police monitored social media networks to pre-emptively prevent protests and pre-plan deterrence tactics (Earl et al., 2022).

With the growing range of digitally repressive tactics around the world, it is vital to study their impact on social movements. Do they deter social movements? Do they have a backlash effect and lead to mobilise even bigger numbers? Understanding the nexus between movements' tactics and their opponents requires a mix of qualitative and quantitative approaches to theorise and contextualise this relationship. It is also significant to study this relationship in understudied regions, such as the Arab world.

1.4 Digital Media in the Arab World

The Arab world is among the top markets where the consumption of digital media is growing. According to the World Bank, more than 98% of citizens in the Gulf Cooperation Council (GCC) countries have Internet access, with the United Arab Emirates, Bahrain, and Qatar at the top of the list in the world (World Bank, 2020). It is estimated that each Internet user in the Arab world has an average of 8.4 social media accounts, rising to 10 accounts in the United Arab Emirates (Radcliffe, 2021). In a recent survey in six Arab countries, it was found that more than 50% of Lebanese and Libyans rely on social media as their primary source of news (Kayyali, 2021). As a result of the COVID19 pandemic, 57% of Arab Internet users stated that they increased their consumption of social media (Radcliffe, 2021).

Before this expansion of digital media tools, Arab citizens only had access to state-controlled and owned media outlets. Arab media ownership was dominated and managed by governments, to

keep Arab citizens uninformed and incapable of becoming active citizens (Khamis & Vaughn, 2011). Arab media did not articulate the voices of the society and acted as mouthpieces for rulers. When hundreds of Arab Satellite stations—like the pan-Arab Saudi-led Al-Arabiya and the Qatari-led Aljazeera channels—began to emerge, a new public sphere was opened (Hafez, 2008). A new media space was introduced where people expressed various views and felt empowered further by the emergence of digital media.

Over the past dozen years, digital media has formed a new information infrastructure for Arabs to come together. With Satellite TV, digital media enabled what Badr (2021) referred to as a ‘hybrid-media system.’ This system allowed an interplay and interaction between new and traditional media systems. In other words, Arab youth, or what York (2022) described as ‘Arab Techies’ used to gather in cybercafes to blog and participate in online forums, making new issues and topics unprecedentedly salient for traditional media to pick up.

In the early years of the twenty-first century, and while digital media was gaining a wider reputation among youth, Arab governments were keen on filtering content related to religious criticism, pornography, and political speech (York, 2022). One of the earliest attempts to block an entire social media platform occurred when Syria blocked access to YouTube in 2007. Tunisia followed Syria’s steps in the same year and blocked YouTube and Dailymotion. Governments rushed to buy advanced surveillance technology from Western-based companies to monitor online discourses (Privacy International, 2017). Yet, digital media did not stop activating the long-prohibited topics in the region.

Although the precise role of digital media in supporting pro-democracy movements was not consistent in the literature, emerging technologies have indeed been a part of the growing mobilisation in the region. Howard and Hussain (2013) wrote:

Digital media were singularly powerful in getting out protest messages, in driving the coverage by mainstream broadcasters, in connecting frustrated citizens, and in helping them realize that they shared grievances and could act together to do something about their situation. Indeed, digital media may be among the most proximate of causes... digital media helped turn individualised, localised, and community-specific dissent into a structured movement with a collective consciousness about both shared plights and opportunities for action.

While writing this thesis, I was cautious about the way I would present the effect of digital media on the Arab Spring and, more broadly, on social movements. I did not want to become one of those who would promote what Badr (2021) described as the ‘linear euphoric liberation effects of technology.’ I also tried to avoid underestimating the role of digital media in the upheavals, like what many anti-technology determinism researchers did. Throughout this dissertation, I emphasised that brave people were the ones that caused and created social movements, not the tools they used.

1.5 Research Motivation, Significance, and Implications

I am an Egyptian, African, Muslim and Arab researcher. I have many identities that I grew up with and indeed shaped the current piece of research that you are now reading. For me, these multiple identities have led to an endless confusion about how to identify my regional interests. When I started my degree, I had a semi-identity crisis. I did not know how to describe the regional interest of this thesis.

I used to describe myself as a Middle East expert, knowing little about this title’s colonisation connotation. When I educated myself, I realised that this name is a colonial invention and an orientalist term. This geopolitical title, which I now despise, indeed disregarded the different

identities in the region (Yamahata, 2018). I felt more content in describing my work as relevant for the term 'Arab World', referring to the current and former member countries of the Arab League. This decision is certainly still debatable.

As an Egyptian, I witnessed how digital media could influence and mobilise large masses in 2011 when I was just finishing my undergraduate degree. I saw firsthand how people blogged, tweeted, and posted on Facebook against Mubarak, and how this evolved over the years. When I first started my doctoral degree, I was motivated to further explore the role of digital media in mobilising people. I was eager to spend days and nights at the library to theorise and contextualise the aftermath of the Arab Spring.

As an Arab, I grew up watching Syrian TV shows, consuming Moroccan soap, eating Tunisian olives, wearing the Palestinian *Keffiyeh*, communicating with relatives who live in the Gulf, and listening to the songs of Lebanon's icon *Fayrouz*. I wanted to become an Arabic-language expert and teach the younger generations the Modern Standard Arabic, the *Fusha*. I grew up with an intensified Arabic identity that motivated me to conduct research that went beyond my home country, Egypt.

As a researcher, I knew that Western colonisation has shaped and transformed our lives, divided Arab countries, and erased many cities. I also knew that colonisation impacted our knowledge and culture, imposing a process of Westernisation on the Arab world. I saw the many Middle East research centres and institutes with a majority of non-Arabs White researchers who shape and identify the research on this region. I read enough literature to realise that the Arab world lacked representation and regional voices in academic research, in general, and in the communication field, more specifically.

As an Egyptian, I was motivated to study digital media and the Arab Spring. As an Arab, I was encouraged to compare and analyse several countries in the region. As a researcher, I was inspired to help decolonise the field of communication studies and fill a huge gap in the literature. Therefore,

I used a mixed-method approach to compare the ways the Arab Spring movements and their opponents used digital media in the region.

I reviewed the literature to find that researchers could not conclude the precise relationship between repression and contention. A group of researchers agreed that further repression would induce movements to think out of the box and innovate new protest tactics (Almeida, 2003; Khawaja, 1993; McAdam, 1983, 1983; Van Dyke & Soule, 2002; Wang & Soule, 2016). Another group adopted the conclusion that movements' tactical innovations could end with increasing the level of repression (Moss, 2014a; Shriver & Adams, 2016). Others developed a wider perspective emphasising that tactical innovations by movements depend on the level of repression the movement encounters (Demirel-Pegg, 2020; DeNardo, 1985; Gurr, 1970; Muller & Weede, 1990; Opp, 1994). I found that this lack of consensus was insightful and inspiring for me to pursue this research, excited to learn to which camp of researchers I would belong. Hence, I started my journey by choosing my case studies.

I selected Syria and Tunisia because both have had major uprisings, as part of the 2011 Arab Spring movements. Syria, a Levant country, has witnessed the worst humanitarian crisis in the aftermath of the Arab Spring. The Syrian case represented the worst outcome of the Arab Spring movements in the region, and it was at the end of the freedom spectrum compared to other neighbouring countries. On the other hand, Tunisia has successfully transitioned into a democracy in 2011 and democratically elected a Parliament and a government in 2014. It was on the top of the freedom spectrum in the Arab world and was considered the most successful outcome of the Arab Spring movements—at least, this was the case while I was conducting my fieldwork.

It is worth mentioning that I looked at Syria in this thesis as a case study of a revolution rather than a war-torn country. Because of the current civil war in Syria, it is usually easy to forget that, like Tunisians, Syrians fought enormously to transform into a democracy in 2011. Syria was a case

of an uprising that witnessed a large-scale repression that gradually transformed into a war. I treated the war in this thesis as an unfortunate outcome of a revolution but could not overlook the heroic efforts of Syrians to combat the al-Assad regime.

Following intensive fieldwork with bloggers, digital media experts, and activists from Syria and Tunisia, I concluded the following: a) social movements would be able to innovate new online tactics when their opponents employ moderate digitally repressive tactics, b) digital media would not be helpful when opponents master digital tools to deter movements, c) social movements would abandon digitally innovative tactics when their opponents stop employing digitally repressive tactic, even when the movements' goals have not been fulfilled yet, and that d) the level of digital repression was a determinant of movements' use of innovative tactics.

Although I initially only planned to employ a qualitative method in this study, I became more curious and wanted to test whether the theory I generated from my fieldwork would stand if I tested them on Internet users in all Arab countries. I wanted to test other structural determinants of online tactics, including digital repression. Hence, I designed a quantitative cross-national study that used a panel approach to test multiple hypotheses on the factors that would lead to the use of innovative online tactics. Among the many online tactics in this study, I selected encrypted messaging to quantify and measure. By employing this study, I found that what was applied to experts and tech-savvy activists and participants in my fieldwork, did not necessarily apply to general Internet users in the Arab world. The level of digital repression was not a determinant of whether Internet users would be interested in encrypted messaging in their country, while the lawfulness of encryption was a stronger determinant. I found that movements' online tactics could be adopted by Internet users and become a daily practice. In other words, while social movements could stagnate online tactics, these tactics could survive in the collective memory of a society.

My thesis represents a coherent research study that has theoretical and methodological implications. First, the findings contribute to the ongoing discussion on the effects of digital media on social movements. This thesis zooms in on the digital micro-strategies that both movements and counter-movements employ. I do not only investigate the types and sorts of digital strategies that are employed, but also analyse why and when these digital tactics are innovated and when they are abandoned.

Another implication I have, which is closer to my heart as an Arab researcher, is that I document the evolution of the digital practices in both Syria and Tunisia following 2011. My thesis is among the few comparatives and detailed research on the almost-forgotten Arab world. The aftermath of the Arab Spring is understudied, leaving us with little information on the further ways digital media was used.

My thesis has several methodological contributions. First, I emphasise the need to adequately train researchers prior to fieldwork on measures to ensure their physical safety and mental health. Second, I highlight the hurdles female researchers could encounter during their fieldwork. Third, I contextualise and quantify new constructs in my quantitative chapters that can be later used and tested by other researchers. Fourth, I provide a new approach to test tactical innovations using Google search data for the first time.

This thesis is a new piece in the puzzle of the nexus between movements and their opponents. After I finished my thesis, I realised that I am more likely to join the group of researchers who believe in the inverted U-shaped effect of repression on movements. I also recognised that this effect might be only limited to active members of the movement but indeed would vary to the general public. This means that there is a vital need to examine the influence of repression on the less politically involved individuals in the future to answer new pieces in the puzzle.

1.6 Research Questions

Using a mixed-method approach, I asked the big question: when do social movements innovate online? To answer this question, I compared Syria and Tunisia in terms of the relationship between their movements' online tactical innovations and the digitally repressive tactics the movements encountered. I investigated a) their micro-tactical structure, examining the types and sorts of online tactics both the Arab Spring movements and their opponents have employed, b) the relationship between movements' online innovative tactics and their opponents' digitally repressive tactics, and c) the effect of innovating online tactics on Arab Spring movements.

In this dissertation, I ask the following questions:

a) *How do political movements use digital media following the Arab Spring?*

I argue in chapters one, two, and three that there is a huge theoretical gap in understanding the role of digital media in the aftermath of the 2011 Arab Spring. To explore this, I analyse in-depth interviews with sixty Syrian and Tunisian bloggers, digital media experts, and activists collected from April 2019 to January 2020. Chapter four explains my interviewing and access to the field strategies and challenges. Detailed answers to this question can be found in chapters five and six of this thesis.

b) *What are the perceived digital tactics used to deter movements?*

I rely on my interviews to understand the types of digitally repressive tactics my respondents had to deal with. I identify the main actors who employed these tactics, the evolution of digital repression over time, and the main targets of these digitally repressive tactics. Answers to this question should be found in chapters five and six of this thesis.

c) *What is the relationship between online tactical innovation and digital repression?*

Inspired by the work of McAdam (1983), I explore the association between repression and tactical innovation in the digital age. The theoretical foundation needed to answer this question is in chapters one, two, and three. I focus here on the micro-level effect of digital repression on movements' strategic choices online. From the interviews, I observe the impact of this digital repression on the Syrian Arab Spring (SAS) movement. Also, I explore the ramifications of easing this digital repression on the Tunisian Arab Spring (TAS) movement's tactical innovations. To support my analysis, I conduct a cross-national study investigating how and when digital repression shapes online tactical innovation in the Arab world. To be able to examine this, I explore the determinants of adopting one of the online tactics that are emphasised in the interviews—encrypted messaging. Answers to this question can be found in chapters five, six, and seven.

CHAPTER TWO

SOCIAL MOVEMENTS AND TACTICAL INNOVATIONS: A CLOSER LOOK AT THE ARAB WORLD

2.1 Introduction

Although social movements started to rise during the eighteenth century, early scholarly work on them emerged only in the 1950s through the study of fascism and Nazism (Meyer, 2004; Tilly, 2004). At that early stage, sociologists described social movements as dysfunctional, irrational, and undesirable forms of organisation (Meyer, 2004). Theories of social movements only developed in the 1960s when movements started to surface in healthy democracies (Chesters & Welsh, 2010; Della Porta & Diani, 2006; Meyer, 2004; Tilly, 2004). Social movement studies were born in the West in the shadows of the 1960s American civil rights movement, student anti-war protests, and women's rights movement (Klandermans & Roggeband, 2010).

However, this has left a troubling knowledge gap in the field of social movement studies (Chesters & Welsh, 2010). Social movements in non-Western countries have remained under-theorised until recently. This bias has particularly impacted the study of movements in the Arab world. From the literature, I find that Arab movements have been *Islamised* and examined from a religious lens while undervaluing the political resilience of Arabs. This literature has also *overgeneralised* the structural determinants of Arab movements to the extent of ignoring the local social and political conditions of each Arab state.

This bias towards Western democratic values in social movement literature not only overlooked many contentious events in non-Western countries but also disregarded the elements that motivate collective action in those countries. When scholars examined the factors that mobilise movements, most researchers focused on political openings and opportunities. Unfortunately, the role of political threats and repression—the main defining characteristics of authoritarianism—remained underexplored.

In this chapter, I explain the development of social movement theories and how they are employed in the Arab world. I begin by explaining the concept of social movement and the Western-based theories around it. Then, I explore the origins of Arab movements and examine how social movement theories can be applied to them. I later shed light on the role of repression in escalating and deterring movements.

2.2 Conceptualising Movements

‘Social movement’ is a highly complex construct. Sometimes this term is used broadly to describe all sorts of societal struggles. However, this term is more limited than it is usually expressed (Tilly, 2008). I can dedicate an entire chapter to discussing the various definitions of social movements, from the simplest ones to the more complex ones. For this thesis, I will adopt Tarrow’s (1998) oft-cited definition of social movements as: ‘*collective challenges*, based on common purposes and *social solidarities*, in *sustained interaction* with elites, opponents, and authorities.’

Social movements’ actors get involved in contentious actions or what Tarrow (1998) describes as *collective challenges*. These contentions are the main components of social movements (Snow, 2004). In Tarrow’s (1998) conception, social movements can challenge governments, elites or counter other movements by making contrary claims simultaneously to those of the original movement (Diani, 1992; Meyer & Staggenborg, 1996).

These *social solidarities* that Tarrow (1998) describes are a shared set of beliefs or belongingness (Diani, 1992). Social solidarities are the cornerstone of social movements where people gather around a single collective identity. Members of any movement must subscribe to a set of beliefs that distinguish them from the wider population (Crossley, 2002). This collective identity helps provide continuity and sustainability to the movement.

Social movements are a series of *collective actions* and *sustained interactions*. These sustained interactions can be collective or individual efforts to achieve a goal (Postmes & Brunsting,

2002). Tilly (2008) notes that different forms of contentious performances could be used in parallel to make collective claims. Although riots, individual demonstrations, strikes, occupations, and boycotts can be disconnected actions, they shape and define a social movement when they are connected (Diani, 1992).

It is necessary to refer to two types of actors within social movements: early risers and latecomers. The early risers are normally the people who the success or failure of the movement depends on the most. For instance, protests by early risers can signal the vulnerability of those in power. Subsequently, this increases the opportunities for more protests and encourages the formation of other activities (Minkoff, 1997; Tarrow, 1998). Early risers open new opportunities by exposing the regime's weaknesses that would not have been otherwise discovered (Tarrow, 1998). In addition, early risers use their ties to help recruit new members.

In addition to early risers, social movements rely on social movement organisations to influence governments and convey the movement's ideas (Santoro & McGuire, 1997). Social movement organisations are formal organisations that identify their goals with a social movement or a counter-movement and implement them by mobilising and coordinating supporters (McCarthy & Zald, 1973; Zald & McCarthy, 1979). Social movement organisations achieve an economic and social position in society through which social movements can manifest their goals (Zald & Ash, 1966). Social movement organisations can include conspiratorial movement parties, radical terrorist groups, reform-oriented political action groups, and interest groups (McCarthy & Zald, 1973).

Research on social movements has developed remarkably in the last few years. In addition to the many attempts to conceptualise the term and its defining elements, much ink has been spilt on theorising it and its origins. In the next section, I explore the development of the theories that explain *why* and *how* social movements rise.

2.3 Theorising Social Movements

Early attempts to theorise social movements asserted that movement participation was an irrational and emotional action for individuals. With the rise of the 1960s movements in the US, new assumptions were contextualised. The '*Resource Mobilisation*' (RM) approach was formalised by McCarthy and Zald (1973), shifting the theory of social movements to focus on *how* people participate in movements. Researchers who employed the RM approach studied the rationale behind social movements and moved a step forward from only studying the psychological grievances in a society (Khawaja, 1994; Meyer, 2004). McCarthy and Zald's (1973) approach emphasised that the availability of certain resources might lead to the growth and vitality of a movement.

Later, research evolved to focus on the processes by which movement activists mobilise support (Meyer, 2004). Building on this, scholars advanced the thesis of '*political opportunity structure*'—also known as, political process approach—to examine the factors that could change the costs and the possible outcomes of collective action (Eisinger, 1973). While the resource mobilisation approach had only looked for specific 'tangible resources' that mobilised contentious actions (e.g., money, and time), the theory of political process approach examined the changes in the structure of the external environment (opportunities vs. cost) of a movement (Khawaja, 1994). The political process approach has animated a great deal of scholarly research on social movements, focusing on the domestic and foreign political contexts (Meyer, 2004). Unlike what used to be believed and promoted in previous theories, this approach emphasised that movements' development, tactics, and outcomes could be affected by exogenous factors (Meyer, 2004; Meyer & Staggenborg, 1996).

This approach aimed to understand the rationale behind activists' choices by evaluating the 'rules of the game' in which these choices were made (Meyer, 2004). The theory explained the emergence, development, and outcomes of social movements by paying attention to the world outside (Alimi & Meyer, 2011). This theory focused on the elements that influenced the development

of movements, arguing that the presence of political opportunities positively impacted the ability of political activists to mobilise, support their claims, cultivate alliances, and employ tactics. But what could be constituted as political opportunities?

Over the years, scholars have broadly attempted to answer this question by conceptualising what could possibly constitute political opportunities and how they shape movements (Meyer, 2004). McAdam (1996) synthesised the literature on social movements and classified political opportunities into four categories. According to him, political opportunities could be: (a) granting more formal access to the political system by members of a movement, (b) divisions within the elite, (c) the availability of allies, and (d) diminishing the state repression. When Jeff Goodwin (2012) examined 50 historical cases of social movements to discern the relationship between political opportunities and political contention using McAdam (1996) categories, Goodwin (2012) found that political opportunities were significant factors that led to the emergence of 31 of the 50 cases. Despite that, Goodwin (2012) emphasised that 19 of his cases did not emerge because of the expansion of political opportunities. Instead, threats and repression played roles in igniting these 19 movements.

Although the vast majority of social movement scholars have argued that movements are more likely to occur when the political structure is opening up, scholars have also acknowledged the power of threats in shaping the politics of contention—especially in authoritarian settings (Alimi, 2007; Einwohner & Maher, 2011; Shriver & Adams, 2016; Van Dyke & Soule, 2002). Threats could be defined as the extent to which authorities can restrict freedoms or inflict new harms if movement members failed to act collectively (Almeida, 2003; Tilly, 1978; Van Dyke & Soule, 2002). The literature suggested that threats are structural changes in the perceived economic or political powers in a country. Threats could include a) collapsing the economy, b) increasing the political repression, and c) restricting civil rights (Almeida, 2003; Van Dyke & Soule, 2002). The role of these threats in igniting movements and shaping collective actions remains unclear.

2.4 Repression and Social Movements

Repression comes in different shapes and scales. Repression could be social (Allusson, 2018), financial (Roubini & Sala-i-Martin, 1992), religious (Sarkissian, 2015), or political (Goldstein, 2001). In this thesis, I focus on political repression. This type of repression constitutes the use of coercive and unjust power to systematically violate the human rights of a group of people (Pukallus et al., 2020). This term could overlap with another commonly used term, political oppression. However, oppression does not include the use of force but rather it includes the use of laws, customs, and practices to oppress a group of people by enforcing inequalities in a society (Pukallus et al., 2020). In this study, I am particularly focusing on the online coercive measures used by opponents to incapacitate dissenters.

While many resilient governments collapse despite employing repressive tactics, there are many other instances when repression succeeds in crushing dissident movements. What are the factors contributing to the success in deterring a movement, and when can a movement overcome repression? These questions are usually examined empirically, in an attempt to articulate a unified model for systematically predicting the impact of repression on dissent. However, social movement scholars do not agree on one model to this date.

In some cases—the positive ones—repression can escalate contention, or what is known as *the backlash effect*. Studies of the 1990s patriot/militia movement in the United States (Van Dyke & Soule, 2002), the 1976-1985 West Bank and Gaza protests against Israel (Khawaja, 1993), El Salvador 1960 and 1981 protest waves (Almeida, 2003), and the 2011 protest in Daraa in Syria (Leenders & Heydemann, 2012) show that movements can be ignited by the increasing magnitude of repression.

Explanations of this backlash effect fall into two schools of thinking. First, the relative deprivation approach proposes that the greater the frustration in a country, the greater the potential

aggression against oppressors (Gurr, 1970). In that case, the dissent sympathisers become hardened by that repression and carry on the movement at some future time—like the revolutions led by Lenin and Ayatollah Khomeini. Second, the rational action approach suggests that when the potential positive outcomes of activism exceed the cost of repression, people are motivated to protest (Muller & Weede, 1990; Opp, 1994). According to this approach, political contention rises when repression generates sudden moral shocks and grievances (Almeida, 2003).

In contrast, various other scholars are sceptical of the role of repression in igniting subsequent mobilisation. Many suggest that the presence of threats can lead to a *deterrent effect* (Escribà-Folch, 2013; Lichbach, 1987; Ortiz, 2013; Tilly, 1978). Tilly (1978) explains this deterrent effect by asserting that repression remarkably increases the cost of activism and hence depresses movements. Similarly, Ortiz (2013) asserts that repression hinders activists' ability to organise and mobilise the masses and thus reduces the possibility of future contentious events.

The deterrent and backlash effects, which are linear, have been empirically examined. However, they have repeatedly failed to explain many real-life events. Lichbach (1987) argued that one of the main drawbacks in repression-contention studies was that researchers aimed to explain only one possible outcome of this repression—successful deterrence *or* backlash escalation. Repression studies have failed to provide a robust theoretical and practical guide to understanding the many other observed effects of repression. Therefore, social movement scholars have started to examine the conditions and variables under which repression could deter or escalate movements. Some of these studies have focused on examining the impact of the changing *magnitude* of repression.

Thus, researchers suggest that the relationship between repression and contention is not linear but concave. They described this relationship as 'the inverted U-shaped effect'. Researchers assume that low and severe levels of repression can deter movements while moderate levels

accelerate the rate of contention (Demirel-Pegg, 2020; DeNardo, 1985; Gurr, 1970; Muller & Weede, 1990; Opp, 1994). In other words, repression motivates mobilisation, but there is a threshold of repression beyond which activists cannot continue carrying on their movement (Gurr, 1970). Also, low levels of repression—which usually coincide with the availability of peaceful opportunities for political participation—make revolting an undesirable action for most people (Muller & Weede, 1990). Thus, movements tend to fail to mobilise the masses during low levels of repression.

Although researchers who have proposed the inverted-U-shaped models predicted that severe repression would end movements, they also indicated that high levels of repression increases the likelihood of *violent* tactics by movements' actors. Escribà-Folch (2013) argued that severe repression only reduced non-violent activities while escalating the violent ones. When a government intensified its repression against non-violent tactics, the level of violent activities increased, known as the *radicalisation effect of repression* (Gurr, 1970; Lichbach, 1987; Opp, 1994).

This indeterminacy in discerning the impact of repression is indeed disappointing and puzzling. Escribà-Folch (2013) argues that these discrepancies stem from using various samples, measures, and levels of analysis to examine the repression-contention relationship. This lack of consistency in the findings shows that much exploration is still needed, especially in the digital repression-response nexus.

In general, the study of repression explains why movements fail (Einwohner & Maher, 2011; Khawaja, 1993) or succeed (Goodwin, 2012; Kitschelt, 1986; Kriesi, 1989; Leenders, 2013). Examining repression can also explain movements' tactical choices, innovation, and adaptation (McAdam, 1983, 2013; Tilly, 1978). Lichabach (1987) encourages the examination of the extent, intensity, duration, location, and type of tactics employed by both movements and their opponents to be able to better understand the repression-response nexus.

2.5 Tactical Interactions: The Chess-Like Game

Tactics clump into the repertoires of contention (Tilly, 2008). Repertoires refer to the distinctive group of tactics by a movement to protest against opponents (V. Taylor & Dyke, 2007). Social movements depend on tactics to claim their demands and achieve their goals (McAdam, 1983). However, if a movement relies on the same types of tactics for too long, these tactics can be easily countered by opponents. Thus, tactical innovation is essential for the sustainability and success of social movements. In some cases, movements are remembered by their innovative tactics rather than their goals and outcomes. For example, the 1960s women's rights movement's members are sometimes described as the 'bra burners' for their Miss America pageant demonstration in 1968 (Taylor & Dyke, 2007).

From a scholarly standpoint, this type of tactical evolution was conceptualised mainly by McAdam (1983). He coined the term *tactical innovation* to refer to the use of creative non-institutionalised tactics by movements that can bypass the conventional claim-making channels. Tilly (2008) and McAdam (1983) drew the example of the 1960s American civil rights movement, referring to some tactics that multiplied, mutated, and then diffused very rapidly. McAdam (1983) noted that this 1960s American civil rights movement introduced unprecedented tactics to bypass the conventional forms of protesting. These tactics were sit-ins, freedom rides, and bus boycotts.

On the other hand, counter-movements also introduce new suppressive measures to counter and neutralise movements' innovative tactics in what McAdam (1983) describes as *tactical adaptation*. Governments change their forms of repression and adapt to movements' new tactics. Some scholars argue that governments that learn and adapt quickly are more likely to succeed in demobilising protestors (Demirel-Pegg, 2020; Shriver & Adams, 2016). This chess-like game between opponents and movements is called *tactical interaction*; movements and counter-movements seek to offset the tactics of each other (McAdam, 1983, 2013).

McAdam's analysis provides several examples of these tactical interactions and how each party can adapt to the other's tactical handbook. McAdam (1983) noted that, for example, activists of the American Civil Rights movement introduced more innovative tactics, such as the widespread protest campaigns in Albany, New York in 1961. In response to these protests, segregationists chose to avoid violence against the movement to prevent provoking federal support to the movement, especially with the Kennedy's administration offering more support for the African American community.

Authoritarian regimes have also adopted soft and harsh measures to sustain their control over people (Shriver & Adams, 2016). For example, the Turkish government adopted a tactical arrest strategy to suppress protests only when heavy-handed policing had encouraged more people into the streets during the Gezi Park protests in 2013 (Demirel-Pegg, 2020). Research on the case of the environmental dissent in Czechoslovakia against the Communist government showed that the regime adopted harsher methods of social control to suppress the movement. In turn, the environmental activists manoeuvred this control and successfully reached the general public by relying on international channels. By the late 1980s, the regime's measures became inefficient, signalling an opening in the political structure of the country (Shriver & Adams, 2016). This sort of tactical interaction between movement actors and opponents emphasised the ability of both sides to be reactive and pre-emptive in selecting their tactics.

2.6 Tactical Innovation and Repression

In the previous section, I elaborated on the role of political opportunities and repression in escalating and de-escalating the overall movement. A similar notion could be applied to the conditions that determine the tactical strategy of a movement. Extensive research has been conducted on the relationship between repression and tactics. Scholars have produced mixed results, ranging from

supporting the idea that political repression ends tactical innovation (McAdam, 1983), to arguments that movements' tactical innovations were inspired by repression (Almeida, 2003; Moss, 2016; Taylor, 1998).

A review of the literature has shown that repression can dismantle tactical innovation. As McAdam (1983) noted, the absence of new political opportunities made it difficult for the 1960s civil rights movement to continue organising and evolving new tactics. Harsh tactics, such as arrests, have blunted the spread of innovative tactics and helped governments counteract tactics in Turkey and Czechoslovakia (Demirel-Pegg, 2020; Shriver & Adams, 2016).

Other researchers, however, contend that political repression and threats provoke more contention and stimulate new tactics. A movement would shift its organisational structure and strategies in response to the state's coercive policies (Almeida, 2003; Della Porta, 2014; Lichbach, 1987). Shriver and Adams (2016) argue that when activists are met with harsh repression, they shift to 'understand tactics'— such as letter writing and petitions—to avoid provoking harsher repressive measures. Another example is the significant amount of tactical creativity by the 1960s women's rights movement that was inspired by the state and counter-movement's attacks (Taylor, 1998).

Even with the advancing understanding of the role of threats in motivating offline tactical innovations, little is known about how this repression-dissent nexus performs online. Nowadays, movements rely on digital media to mobilise the masses, raise awareness, and organise activities. At the same time, governments introduce an array of digital constraints to depress and control the online sphere, forming what is known as 'networked authoritarianism' (MacKinnon, 2011). Activists manoeuvre this digital repression by introducing new tactics that would sustain the use of digital media for activism (Howard & Hussain, 2011). However, it is still unclear to this date the exact impact of digital repression on activists' tactical innovations. The determinants of the digital contention between movements and opponents are still missing many answers. In the coming sections, I will

introduce modern Arab movements, then discuss the role of repression and opportunities in shaping these movements' repertoires.

2.7 The Origins of Arab Movements

In the Arab world, it is hard to find five consecutive years since 1830 without a major movement against imperialism, occupation, or invasion (Chalcraft, 2017). However, movements in the Arab world were neglected for years in academic scholarship (Beinin & Vairel, 2013). Decades after the articulation of social movement theories, Arab dissident movements were overlooked until the so-called Arab Spring in 2011. Even though social movements scholars have scrambled to examine the Arab Spring, its aftermath remained under-theorised.

The Arab world had witnessed many movements over the years. Some of these movements left remarkable socio-political changes, such as the Arab nationalist movement. This movement started in 1883 by Mehmed Ali, who dismembered Egypt from the Ottoman Empire. The Arab nationalist movement later expanded to include Lebanon and Syria in the second half of the nineteenth century, creating a new awakening to gain autonomy from the Ottoman empire (Aziz, 2009). This movement grew bigger following the breakup of the Ottoman Empire. The nationalist energies were later directed to fight colonial powers, demanding independence from the British, French, and Italian colonial administrations (Owen, 1983). The Arab nationalist movement resulted in the removal of the Iraqi monarch, power division in Jordan, and major changes in the political systems in Syria, Lebanon, and many other countries (Lynch, 2012).

In parallel with the Arab nationalist movement, the women's rights movement and Arab feminism started to emerge in the region. The rise of the nationalist movement brought unprecedented discussions around gender roles in the Arab world (Honein, 2015). Another movement that emerged in the region is the Palestinian Arab Resistance movement in parallel with the Arab nationalist movement. The movement mainly began as a consequence of the 1967 Arab-

Israeli War (Hudson, 1969). Following that, the Palestinian First and Second Intifada in 1987 and 2000 inspired popular social mobilisation in the Arab world (Lynch, 2012). Many Arab Spring activists pointed to the Second Intifada in 2000 as the point of their awakening.

Arab movements are usually examined according to pre-existing theories formulated in other cultural contexts (Beinin & Vairel, 2013; Lafi, 2017). The aforementioned Arab movements and many others that preceded and followed are in no way merely imports of Western human rights, democracy, or thinking. Instead, they are by-products of a long history of civic participation in the region (Arenfeldt & Golley, 2012; Lafi, 2017).

Examining the literature has shown that Arab movements have been overlooked for years. Before the 2011 Arab Spring, Arab movements had been *Islamised* and examined from a religious lens rather than a political one. The social movement theories deployed to the region had often focused on the Arab world's Islamic character (Bayat, 2005; Beinin & Vairel, 2013, 2013; Durac, 2015). Scholars concentrated on Islamist movements in Algeria (Hafez, 2000), Egypt (Bayat, 1998; Lia, 1998), Lebanon (Imad, 2009), and many other countries in the region. While keeping a religious flavour to the study of Arab movements for decades, the 2011 and 2019 Arab Spring movements have shifted this scholarly interest into a more political one—at least for a short period of time.

Arab Spring movements took most Western observers by surprise. However, these movements did not surprise those who were keeping an eye on the region (Lynch, 2012). Arab dissenters' rage was flaming up and waiting for the right moment to rise (Alimi & Meyer, 2011). The 2011 Arab Spring was only a single event that represented one moment in a complex evolution of contention in the region (Lafi, 2017). Seven years later, protest movement sparked in 2019 in Sudan, Algeria, Lebanon, and Iraq to what later was described as the Arab Spring 2.0. Now, the Tunisian Arab Spring movement is considered the single success story of the Arab Spring. Other movements descended into armed conflict or were co-opted with constitutional reforms. However, Arab Spring

movements kept actively mobilising and collectively demanding more civil rights. Nevertheless, the vast majority of scholarship has focused only on the 2011 protest events, leaving many events afterward understudied.

In this thesis, I will fill this gap by focusing on the aftermath of the 2011 events and the ways through which movements sustained their activism. In the next section, I will review the attempts to theorise the Arab Spring causes and elements from the lens of social movements theories.

2.8 Theorising Arab Spring Movements

Leenders (2013) stresses on the fact that social movement scholarship has never succeeded in generating one general theory to explain contentious politics. In the coming sections, I conceptualise Arab Spring movements using: Tilly's (1978) political process approach —also known as the theory of political opportunity—and McAdam's (1983) tactical interactions. Then, I explain how I am employing McAdam's lens in my work.

2.8.1 Political Process Approach: Opportunities and Threats

Previous scholarship on social movements in the Arab world could not anticipate the 2011 popular mobilisations in the region (Goodwin, 2011). Before the 2011 Arab Spring, academic scholarship had long argued that the absence of political opportunities prevented Arab movements from rising. Researchers had assumed that the resilience of Arab governments limited the possibility of political mobilisation (Kingston, 2019). Before 2011, researchers argued that the absence of political opportunities had limited the possibilities of any contention in the region and contributed to the durability of Arab governments. Researchers attributed the lack of protest activities in the region to factors, such as: the weakness of civil society groups, the division of opposition forces, the co-optation of social forces, and the absence of strong political parties (Bellin, 2012).

Before, during, and after the 2011 Arab Spring, threats and opportunities co-existed (Costello et al., 2015). A wealth of studies has referred to the political opportunities in the region that might have led to the 2011 protest wave. Following the uprisings, political openness has been examined in the literature as an opportunity that led to the uprisings. Political openness was analysed either in relation to the role of digital media (Howard et al., 2011; Howard & Hussain, 2013), the existing political liberties (Costello et al., 2015), or the role of the Tunisian uprising in diffusing the protest wave, known as the domino effect (Leenders & Heydemann, 2012).

The new digital media has increased public access to the political system and information. Scholars have considered the expansion of satellite TV and digital technologies as facilitating political opportunities during the outbreak (Howard & Hussain, 2013; Lynch, 2012, 2015). Arab rulers could not continue crushing dissent in private because digital media allowed a 'new public sphere' (Lynch, 2012). Some scholars argue that social media, however, allowed a horizontal flow of information that undermined the censored Arab media (Abdulla, 2014). The positive role of social media, however, could be considered exaggerated in reference to some countries, such as Syria and Yemen, given the weak Internet infrastructure before 2011 in these states (Aslan, 2015; Durac, 2012; Lynch, 2012; Tkacheva et al., 2013). More details on the role of digital media in opening a new public sphere will be discussed in the next chapter.

According to Costello et al. (2015)—who examined only Tunisia and Egypt—granting more political rights and civil liberties were factors that led to igniting political mobilisation in 2011. Indeed, this first decade of the 2000s witnessed an increasing number of protest events in Lebanon, Egypt, and Palestine. The US invasion of Iraq, the Palestine-Israel war, the death of Rafik Hariri in Lebanon, and the emergence of the Egyptian *Kefaya* movement (translated as, Enough!) ignited contention and protests (Lynch, 2012). Egypt and Tunisia enjoyed thriving and large civil society groups and an active online public sphere (Howard & Hussain, 2011). Other researchers referenced the pressure of

the George W. Bush administration on Arab governments to democratise and Obama's support of the Arab uprising as key facilitators for the success of these uprisings (Lynch, 2012; Snider & Faris, 2011). However, these political openings could not be generalised to include all Arab Spring countries, especially Syria (Aslan, 2015). This country lacked the presence of a robust civil society and was known as being 'the kingdom of silence.'

Since political openness could not explain the mobilisation in all countries in the region, researchers considered other factors. One of these facilitating factors that ignited the protest movement in the region was the 'domino effect'. Abdel-Samad (2014) argued that the 2011 Egyptian and Tunisian uprisings had inspired and opened a political opportunity for the Moroccan February 20th movement. In Syria, the Arab world's most repressed country, Leenders (2013) argued that Syrians perceived the Egyptian and Tunisian protests as an opportunity for change.

The elite division was also another facilitation factor that encouraged the 2011 popular mobilisation. The Tunisian and Egyptian militaries chose not to shoot protestors in 2011, which left no choice for Ben Ali and Mubarak but to step down (Bellin, 2012). Abdel-Samad (2014) added that the elite division and limited repressive powers of the state encouraged activists to organise demonstrations in Morocco in 2011.

In 2019, when a renewed protest wave spread in four republics in the region, reaching Sudan, Iraq, Algeria, and Lebanon, a new, but limited, attention was brought again to the Arab world. On the one hand, in Algeria and Sudan, in particular, their long-term rulers were ousted out of these countries. On the other hand, the Iraqi and Lebanese prime Ministers were also removed from their positions as a result of these protest waves. Factors were examined in order to explain how protests erupted in these countries after eight years of the latest wave of revolution in the region. Csicsmann and Rozsa (2022) argued that the regime type was a factor, claiming that Arab monarchies were more resilient and that those uprisings were more likely to strike republics. In addition, the elite

division, international mediation, military intervention, and the domino effects were considered as fuelling factors that led to these protests and the Arab Spring 2.0 (Grewal, 2021; Sinno, 2020).

These factors, however, had ignored the role of the increasing repression in igniting protest movements in the region. Scholars, who had examined repressive and authoritarian contexts where political openings were scarce, argued that repression was an integral variable to propel people to act collectively against their adversaries (Almeida, 2003; Einwohner & Maher, 2011; Khawaja, 1993, 1993; Leenders & Heydemann, 2012). In the period leading up to the 2011 and 2019 Arab Springs, the increasing political and economic repression, narrowing of networks of power, and the erosion of civil rights were evident to any outsider. Kingston (2019) argued that the cumulative repression, which surpassed its ‘threshold levels’ was one of the main factors that sparked the protest events.

Poverty and unemployment rates increased in the decade before the Arab Spring protests. Bayat (2015) described the 2011 uprisings as ‘the revolution of the class-conscious underclass, the ‘aspiring businessmen,’ like Bouazizi and 64 other self-immolators, for the free market.’ On paper, Arab economies had solid growth rates in the decade before the uprising. Egypt's growth rate, for example, from 2000 to 2010 was about 6 per cent, Tunisia and Yemen were growing at 4.5 per cent a year (Ghanem, 2016). However, power concentration, corruption and social injustice squeezed the middle class in these countries (Ghanem, 2016; Lesch, 2012). In Tunisia, for example, 63 per cent of respondents to a survey said that they took to the streets in 2011 because of the weak economy (Ghanem, 2016).

Certainly, economic repression was not the only growing threat Arab populations faced in 2011. Arab Spring countries scored low in the political freedom rates (Lynch, 2012). This type of political repression was found to be the main and most significant factor in mobilising protests leading to the Arab Spring—even more important than economic repression (Costello et al., 2015). Tunisia’s Ben Ali maintained a tight grip on freedom of expression, restricted political parties, and

concentrated power in his family (Anderson, 2011). Mubarak's police brutality and Assad's unbearable repression were factors of the uprisings in Egypt and Syria, respectively.

Repression indeed had a role in escalating the Arab Spring movements. It was the main shared element among all Arab countries and the main factor that ignited the protests. However, studying the influence of repression on the macrostructure of movements is complicated. Thus, it is better to look at the microstructure of these movements and how repression influences their tactical choices.

2.8.2 Tactical Interactions in the Arab World

McAdam (1983) asserted that repression could lead to the introduction of new tactics. While this repression-dissent nexus has been examined in other contexts, it has only been examined once in the Arab world before 2011. It was examined in a study that was conducted in 1993 by Marwan Khawaja when he examined the impact of the Israeli repression in the West Bank in igniting collective actions by the Palestinians. When the 2011 Arab Spring took place, very few studies conducted in the region showed that governments employed an array of repressive tactics to depress movements. It has been argued that this repression had an impact on the tactical innovations of Arab movements (Grimm & Harders, 2018; Moss, 2014; Moss, 2018).

In her work in Jordan, Moss (2014) found that Jordanian activists responded to harsher repressive tactics—for example, arrests—by initiating demonstrations and sit-ins in order to pressure the state to ease this coercion. Grimm and Harders (2018) found that repressing the Egyptian Islamist movement in 2013 did not end the protest events. Instead, repression motivated dissenters to adapt new timings, tactics, and spaces of protests. Similarly, Moss's work on Syria (2018) demonstrated that al-Assad transnational repressive tactics that targeted the diaspora were able to diminish diaspora members' voices and tactics outside Syria. Moss (2018) contended that digital

media has globalised al-Assad's repression to suppress Syrians abroad who were assisting in anti-regime social movements. To this date, a few have investigated the interplay between government-movement tactics and whether digital repression deters movements.

In the next chapter, I will explore in detail the role of digital media in mobilising Arab collective action. Then, I will demonstrate how the technologies that were celebrated for empowering voices were co-opted to suppress the same voices digital media had once supported. Later, I will explore the architectural design of social media platforms and the ways social media contributed to digital repression in the Arab world. At the end, I will elaborate on the nexus between the online tactical innovations by activists and the digital responses to this.

CHAPTER THREE

SOCIAL MOVEMENTS IN THE DIGITAL AGE

3.1 Introduction

In the earlier chapter, I discussed how social movements have been conceptualised and theorised since the 1960s. Although social movements have been the main subject of study for over sixty years, the indeterminacy of its scholarship and contradictory findings are the common trends in this field. It was and still is difficult, if not impossible, to precisely predict when a social movement would happen, under which conditions a government or a counter-movement could survive, and to what extent movements could defeat their opponents.

Since the 2000s, things have rapidly changed since the widespread adoption of various types of digital media. Scholars have revisited their work to employ theories of social movements in the digital age. The study of social movements in relation to digital media expanded to include several theoretical and empirical advances, especially with the large-scale data coming from social media and the many dramatic events in the world (Bimber, 2017). Nevertheless, it was challenging to find an agreement among the various theories of social movements in relation to digital media (Bimber, 2017).

Digital media, especially social media, has facilitated many forms of offline protest tactics and enabled the introduction of online-based forms of expression and organisation (Postmes & Brunsting, 2002). In addition to supporting activists in mobilising, connecting, and coordinating their movements (Castells, 2012), digital media became a contestation arena. Activists introduced new confrontational and persuasive online-based tactics, such as virtual sit-ins, email bombings, hacktivism, DDoS attacks, online petitioning, writing online letters, and many others (Postmes & Brunsting, 2002).

In examining the role of digital media in mobilising social movements, the 2011 Arab Spring uprisings dominated the early studies of this field. Digital media, especially social media platforms,

were hailed for contributing to democracy and enabling a new public sphere. Techno-optimists and writers have described the people-led uprisings as ‘Facebook revolutions’ and ‘Twitter revolutions’, crediting social media platforms for forming the Arab Spring movements, and undermining the role of activists who confronted Arab rulers (Khamis et al., 2012).

However, fewer studies have analysed the digital repression-response nexus, especially in the aftermath of the Arab Spring. My study examined the relationship between digital innovation and repression as an interactive dynamic, exploring *when* movements innovate their online tactical strategies and *how* regimes adapt to movements innovations.

Broadly speaking, Howard and Hussain (2011) offer a six-phase progression of how Arab Spring movements use digital media. First, the *preparation* phase in which activists use digital media in creative ways to connect with each other and share grievances. Second, the *ignition* phase, during which an incident provokes a mass dispute and is used to mobilise the publics. Third, social media platforms and digital communications are used to mobilise and organise *street protests*. Fourth, the *international buy-in* phase in which digital activists try to communicate with global media. Fifth, the *climax* phase starts as regimes adapt to the online tactics introduced by movements. Sixth and the last phase, *follow-on information warfare* in which both dissenters and regimes compete to shape the future and gain public support using digital technologies. In this chapter, I start by introducing the first four phases—the ones that are overstudied by Arab Spring academics. In the second half of this chapter, I explore the literature around the last two phases. In the next section, I introduce the role of digital media in shaping Arab collective actions, how governments co-opt the new technologies, how the design of social media platforms empowers governments in the region, and the various ways Arab dissenters adapt to digital repression.

3.2 Digital Media and Collective Actions

Digital media has transformed the practices of activism and the repertoire of contention. Digital media has enabled public attention, escaped governments' censorship, and facilitated coordination and mobilisation efforts among movements (Tufekci, 2014). The new technologies have enabled social movements to operate more globally and bypass borders (Laer & Aelst, 2010).

Digital media, mainly social media, has been the primary tool for coordinating and mobilising several uprisings in the 21st century. In Tehran, the Green Movement in 2009 erupted, demanding the removal of then-President Mahmoud Ahmadinejad. Social media shaped this movement and provided an alternative public sphere away from Iran's censored press (Shirky, 2011). In Moldova in 2009, anti-communism protesters, who marched the streets against the government, were organised using Twitter hashtags (Hodge, 2009). In the Arab world in 2011, a wave of protests against corruption and inequality was coordinated through the use of various forms of digital media (Howard & Hussain, 2011).

After almost a decade, a new generation of tech-savvy dissenters worldwide has emerged, demonstrating a heightened awareness and an increased understanding of how to use digital media. The networked movements in Algeria and Sudan toppled their long-term regimes in 2019, coordinating on social media (Cookman, 2019). Also, private chat applications—such as WhatsApp—helped organise Lebanon's October 17th movement in 2019 (Sleiman, 2019). Likewise, the pro-democracy movement in Hong Kong used digital media for organising and documenting the large protests in 2019 (Shao, 2019). The 2020 Belarusian protests against their long-term dictator and government have greatly depended on messaging platforms, such as Telegram, to galvanise support (Edwards, 2020). Most recently, the 2022 Iranian women's rights movement organised and documented its efforts through Instagram, Twitter, and Telegram (Burgess, 2021).

Outlining the exact relationship between digital media and collective actions has been the most significant challenge facing political communication scholars (Margetts et al., 2015). Researchers debated this relationship between digital media and social movements. Not only because it has been difficult to measure the exact impact of new technologies on mobilising protests, but also because this effect has varied from one country to another. Scholars have embraced two sides of this debate: digital evangelists vs. techno realists (Comunello & Anzera, 2012). Digital evangelists have pointed to a strong role of digital media, considering these new tools indispensable for igniting protests (Castells, 2012; Harlow, 2012; Harlow & Harp, 2012; Howard & Hussain, 2013; Shirky, 2011). Alternatively, techno-realists have dismissed the power of digital media to provoke protest activities, downplaying the significance of the new tools as relevant gadgets for mobilisation (Fuchs, 2014; Gladwell, 2010; Theocharis et al., 2015).

In some cases, digital evangelists emphasised the integral role of digital media in connecting dissenters. Harlow (2012) contended that online activism could incite offline actions by pointing out the problem and identifying a solution. Harlow and Harp (2012) argued that social media was an 'essential part of activism' in the US and Latin America, noting that activists in various settings used social media in similar ways. Researchers affirmed that digital media has shifted the responsibility of mobilisation from organisations to individuals or what could be referred to as 'connective action' (Bennett & Segerberg, 2012; Bimber, 2017; Castells, 2012). Bennett and Segerberg (2012) emphasised that the digitally mediated movements were leaderless, more personalised, larger, and scaled up quickly.

On the contrary, critics of techno-optimism have argued against the extensive role of digital media. Khamis, Gold, and Vaughn (2012) emphasised that researchers need to avoid the technologically deterministic approach that gave more credit to the 'tools' than to political activists who confront dictators. Slavina and Brym (2020) pointed out that digital media had many structural

limitations that undermined its role in escalating social movements that researchers have tended to overlook. Some of these limitations included the growing digital divide and surveillance of social media platforms.

Theocharis et al. (2015)—comparing three movements from three different countries—found that activists did not use Twitter for mobilisation and coordination. Instead, Twitter was only an amplifier of information and conversations. In a cross-national study, Slavina and Brym (2020) found no relationship between the use of digital media and people’s willingness to participate in real-life social movements. The same argument was put earlier, even before the 2011 Arab Spring, by Gladwell (2010) in his oft-cited article *The Revolution Will Not Be Tweeted*. Gladwell (2010) asserted that social media users only have weak ties, which are never enough to motivate people to take to the streets in high-risk settings, where repression is more likely.

Although the indeterminacy in research findings by digital evangelists and techno-realists will not end soon, both approaches agree that digital media is part of contemporary social movements. This indeterminacy also means that further research is still needed, especially in movements that emerge outside healthy democracies.

3.3 Digital Media and Arab Spring Movements

This dispute between tech optimists and sceptics has shaped the Arab Spring and digital media scholarship. Digital evangelists have emphasised the role of the new platforms in uncovering political corruption in the region (Howard & Hussain, 2011). Egypt and Tunisia had tech-savvy civil society groups and the largest Internet penetration rates in the Arab world (Hussain & Howard, 2012). In Tunisia, platforms contributed to the formation of a collective action against Ben Ali’s regime (Breuer et al., 2015; Breuer & Groshek, 2014; Howard & Hussain, 2011a; Lowrance, 2016; Zayani, 2015). Tunisians relied on social media to break the state media blackout and to share stories about Ben

Ali's corruption. Zayani (2015) pointed out that social media brought people together in 2011 by facilitating the flow of information through the constant sharing of videos and images.

In Egypt, Wael Ghonim, a political activist, educated his followers about the brutality of the Egyptian police through his Facebook page '*We Are All Khaled Said*,' mobilising Egypt's 2011 revolution (Alaimo, 2015). Kamel (2014) highlighted that social media was a crucial driver of Egypt's political transformation by creating anti-government groups that included people from different social classes. Social media created a new space for Arab Spring activists to share content away from government control, which eventually mobilised the uprisings (Abdulla, 2014; Howard & Hussain, 2013).

This was not the case in all countries. Research about this early era of the 2011 Arab Spring showed that the role of social media in provoking protests in Syria was limited. Aslan (2015) found that Syrian activists did not depend on social media to mobilise protests, but instead on mosques and funerals. This could be explained by the low Internet penetration rates in the country which were lower than 20 per cent in 2011 (Tkacheva et al., 2013). However, social media platforms allowed the few tech-savvy activists in Syria in 2011 to organise and share the news with a global audience (Aslan, 2015; Tkacheva, 2013).

Conversely, other researchers have given less credit to social media in mobilising the 2011 protest events. Fuchs (2014) considered the notion of social media power to be a Western perspective that exaggerated the role of these platforms in mobilisation. Although Fuchs (2013) argued that social media platforms connected dissenters, he asserted that these platforms had a similar influence to the other types of traditional media. Wilson and Dunn (2011) found that, during the Egyptian revolution, people depended more on traditional media than on social media. Although it had been always hard to assess how important social media was during these uprisings, there is no doubt that these platforms were used by activists during these protests (Lowrance, 2016).

3.4 The Arabic Version of Digital Repression

Technology is not only used by human rights defenders. In what sounds depressing, Bak et al. (2018) argue that digital media does not prevent repression in authoritarian regimes. Instead, digital technologies are tools of oppression in most cases. While Internet penetration rates are increasing worldwide, human rights violations are also on the rise (Bak et al., 2018; Feldstein, 2019). As much as technology serves dissenters to mobilise and communicate, governments use the same technology more than ever all over the world (Frantz et al., 2020).

Using data from 1990-2013 in a cross-national study, it was found that the increased access to information indeed facilitated collective action, especially in authoritarian states (Ruijgrok, 2016). However, repressing and censoring this access was found to dismantle political actions. In another study, it was found that digital repression reduced the likelihood that a protest event would take place and that a regime change could happen in a country (Kendall-Taylor et al., 2020). In addition, Frantz et al. (2020) noted that digital repression complemented other physical forms of repression against dissenters.

In the Arab world, governments have adapted fast to new technologies and refashioned their repressive tools to fit the digital age. Arab rulers have borrowed counter-tactics from each other, imported surveillance tools from Western countries, imitated Internet controls and shutdowns and shared methods and technology of suppression together. In the aftermath of the Arab Spring, governments have maintained fierce control over digital media.

3.4.1 Digital Repression Before 2011

Arab rulers have evolved oppressive apparatuses to maintain control and withstand challenges (Lynch, 2011). Arab countries were experts in physical repression before the 2011 Arab Spring. They

were so good to the extent that the US government used to ship terrorism suspects to the region to be interrogated by state-of-the-art Arab torture techniques (Human Rights Watch, 2008). The same torture mechanisms had been used against Arab dissenters. Activists had been targeted in Ben Ali's Tunisia (Howard & Hussain, 2011; Zayani, 2015), Bashar's Syria (Yassin-Kassab & Al-Shami, 2016), and Mubarak's Egypt (Howard & Hussain, 2013) even before the Arab Spring uprisings in 2011. Bloggers had been targeted, beaten, and imprisoned for years.

Before the 2011 uprisings, Arab regimes had adopted primitive digital tools to control the Internet and prevent oppositional movements online. One of the earliest conventional tactics was content filtering—a technology that was imported from Western technology companies. Arab governments used filtering to block access to websites and applications. Two types of content filtering were deployed: a) denying access to specific domain names, and b) blocking access to groups of websites that were considered illegal based on their content—such as pornographic and human rights websites (Deibert, 2008). Ben Ali blocked YouTube and Dailymotion in 2007 following the spread of videos critical of the regime's corruption (Ben Gharbia, 2007; Howard & Hussain, 2011). During Ben Ali's era, the Tunisian regime bought an advanced American filtering product called 'Smartfilter' to block Tunisian Internet users from accessing certain websites (Deibert, 2008).

In 2008, the Syrian regime blocked access to Facebook, Twitter, and YouTube until February 2011 (Aslan, 2015; Yassin-Kassab & Al-Shami, 2016). Content filtering in Syria was implemented using a Canadian software called 'ThunderCache' for URL filtering (OpenNet Initiative, 2007b). However, some countries did not adopt content filtering before 2011, like Egypt, and users enjoyed unfiltered Internet until the 2011 uprisings (OpenNet Initiative, 2007a).

Surveillance systems in the Arab world were not sophisticated before the 2011 uprisings. Most of the time, governments relied on traditional methods of surveillance like 'people snitching on each other' and 'human monitoring' of Internet cafes (OpenNet Initiative, 2007b). Communication

infrastructure was centralised to be able to monitor mobile phone conversations (Wagner, 2011). Mobile service providers reported and shared users' data with governments to help identify dissenters (OpenNet Initiative, 2007a). In Tunisia, people who used sensitive keywords in their conversations had their phone connections cut off (Wagner, 2011). Others reported that Ben Ali's regime had intercepted and checked the content of emails before the uprising (OpenNet Initiative, 2007c).

When Arabs took to the streets in 2011, demanding economic and political reforms, regime responses varied. Nonetheless, all rulers relied on digital media to depress the unprecedented protest movements. Over the years, these regimes have escalated their digital repression to suppress the use of digital media for mobilisation. Ever since the 2011 uprisings, Arab rulers have spent billions of dollars to alter and control the structure that surrounds the use of digital media.

3.4.2 Digital Repression and the Arab Spring's Aftermath

The spread of demonstrations in the region in 2011 has motivated more arrests and human rights violations. The number of arrests of dissenters has dramatically increased in all Arab countries in the post-2011 era. By 2020, more than 100,000 Syrians have been forcibly disappeared by the Syrian regime (Syrian Network for Human Rights, 2020). Transnational arrests of dissenters who fled their countries have also been coordinated through foreign allies and spies. Local regulations and laws were formulated to supplement technical controls and to facilitate the arrests of activists who rely on digital technologies. In addition, other laws were issued to criminalise the use of VPNs and encryption tools in many countries in the region (Comparitech, 2020).

Full or partial Internet shutdowns were also common control tactics by Arab rulers. The Egyptian President Mubarak was among the early adopters of Internet shutdowns when his regime cut all communications in the country during the protests in Egypt in January 2011, causing more

than US\$90 million loss (Aouragh & Alexander, 2011; Bowman & Camp, 2012; Howard & Hussain, 2011). Mubarak's Internet blackout resulted in a surge in more people taking to the streets, motivated by the urge to find out what was going on outside (Howard & Hussain, 2011). Libya's Gaddafi followed Mubarak's steps and shut down the Internet when the protests first erupted in Tripoli in 2011. Likewise, Algeria also tried to implement this method when the protests had erupted in Tunisia but could not succeed because they lacked the infrastructure to pull the plug (Howard & Hussain, 2011).

Despite the drastic economic ramifications of Internet shutdowns, Arab governments have carried on implementing such tactics even more. The Iraqi government, for example, suppressed Internet access multiple time in July 2018 amid the growing protests in Southern cities over corruption and poor services, which cost the country more than \$40 millions per day (Mohammed, 2018; NetBlocks, 2018). In addition, countries like Syria, Iraq, Sudan, Mauritania, and Algeria cut off access to the Internet frequently for non-political reasons. These governments implemented a total blackout during national exam days to prevent cheating methods and avoid leaking the exams (Belson, 2022; SMEX, 2018).

In addition to this, the world witnessed one of the most extended Internet shutdowns in 2019, during what became later known as the Arab Spring 2.0. The Sudanese interim government suppressed Internet access for unprecedentedly extensive period to depress protests in June 2019 (Feldstein, 2022; Hamad, 2020). In Iraq, the government disrupted access to the Internet in 2019 amid national protests (NetBlocks, 2019). In 2021, the global economy lost more than \$5 billion due to the Internet shutdowns, with more than 182 shutdowns happening in 34 countries—many of them were Arab nations (Hamilton, 2022). On the other hand, other governments have abandoned this tactic, like Egypt, Tunisia, UAE, and Saudi Arabia, realising the inefficiency of Internet shutdowns.

Internet censorship has also been on the rise since 2011. Regimes continued blocking access to opposition-related websites, VoIP services, and online censorship circumvention tools. Since 2011, more governments have realised that blocking access to social media platforms made monitoring the IP addresses of users more difficult. Thus, Arab countries, such as Syria and Sudan, have unblocked social media platforms to encourage dissenters to abandon VPNs (Kantrowitz, 2020; Khamis et al., 2012).

Internet surveillance in the Arab world was facilitated by Western companies—or what Timm and York (2012) described as ‘dictator’s little helper.’ These companies sold their surveillance technology to Arab governments to exploit movements’ security flaws to identify their locations and monitor communication. The Syrian regime, for example, relied on an Italian company to build a massive surveillance center. The Gaddafi regime used technology from a French company to inspect journalists’ emails and Facebook messages (Timm & York, 2012). Recently, an Israeli company developed a hacking software called ‘Pegasus’ that was sold and licensed to many governments in the region. This hacking software was able to hack and harvest data from thousands of phones to transfer it to the attackers (Pegg & Cutler, 2021).

3.5 Social Media Platforms and the Post-Arab Spring Era

Academic scholarship that has once credited social media for enabling democracy in the region has shifted to blaming online networks for the failure of the Arab Spring. As much as these platforms have empowered social movements, they enabled governments to oppress oppositional movements. The architectural design and technical affordances of social media platforms were criticised for empowering governments and silencing civil society groups (Elswah & Howard, 2020; Youmans & York, 2012).

Social media companies primarily focus on increasing their revenues by attracting users and improving the usability of their platforms. These commercial goals are embedded in the platforms’

architectural design, policies, and users' agreements. These goals often conflict with the aspirations of Arab civil society groups and activists. The design and governance of these commercial platforms allow anti-revolutionary actors to crush Arab dissent (Youmans & York, 2012).

Facebook—the Arab world's most popular platform—fails to adequately design its platform to manage the political contexts in the Arab world. Although anonymity is vital for activists, Facebook does not tolerate pseudonymity (Howard & Hussain, 2011). Facebook compels users to use real identities (Cirucci, 2015; Schlesinger et al., 2017). Facebook marketing director argues that anonymity online leads to an 'anti-social behaviour' (Van der Nagel & Frith, 2015). This real-name policy requires users to provide real identities and information and to be limited to one profile. Users can file a report against an account for using a 'fake name.' Then, this account might be a subject to identity verification and deletion by Facebook (Drake, 2015). Forcing users to use real identities has limited pseudonymity on the platform and made users easy targets (Youmans & York, 2012).

In addition to the non-anonymous design of Facebook, the algorithmic content moderation of Facebook fails to meet the political context of the Arab world. Automated moderation is crucial to help platforms delete illegal content in a short time window, especially with the increasing pressure from governments (Gorwa et al., 2020). This system depends on machine learning to classify users' content and make decisions about it—whether or not to take down accounts and pages (Gorwa et al., 2020).

Facebook's algorithmic moderation has censored and deleted Arabic-language content on various occasions. In July 2019, any content that mentioned the Syrian icon Abdul Baset al-Sarout—a prominent activist who later became a rebel leader—was removed by Facebook. With pressure, Facebook removed the ban, and people were able to post about Al-Sarout on the platform (Kopty, 2019). In June 2020, Facebook deleted dozens of Syrian, Palestinian, and Tunisian accounts of activists and journalists who work in the human rights field. These accounts were miscategorised as

linked to terrorism by the company's algorithmic moderation (Solon, 2020). In May 2021, hundreds of Palestinians struggled to get their voices heard on Instagram and Facebook while the algorithms removed the majority of their views that criticise Israel—a phenomenon that was referred to as ‘digital apartheid’ (Alimardani & Elswah, 2021).

In addition to the machine learning-powered automated flagging, platforms depend on their user community to flag content. These reports are then checked by a human moderator to discern whether the reported content violates ‘community standards’ or not (Al Jaloud et al., 2019). These content moderators are trained to follow community guidelines that are set to meet US laws and regulations (Kopty, 2019). In some cases, state agents abuse the crowd-sourced reporting feature and repeatedly report accounts and pages to remove anti-regime content (Al Jaloud et al., 2019; Youmans & York, 2012). Human content moderators sometimes cannot make accurate decisions, especially with content from volatile environment, such as the Arab world.

Platforms have tried to avoid mass reporting errors. Facebook announced that content moderators ‘check’ these reports qualitatively not quantitatively to avoid orchestrated campaigns (Pizzi, 2014). Although platforms had employed measures to protect against orchestrated abuse, this did not prevent mass reporting campaigns to be used to silence Arab activists (Youmans & York, 2012).

It has also been reported that Facebook has received governments’ direct requests to delete content. In 2016, reports were circulated on the Israeli government proposing to Facebook 158 requests to delete certain Palestinian accounts (Greenwald, 2017). Israel has threatened the company to block its platform in the country if they did not comply with the deletion orders (Greenwald, 2017). This has led to the deletion of many accounts of Palestinian activists (Gostoli, 2016). Following pressure against Facebook, the company apologised for this action, and these accounts were eventually retrieved.

YouTube has also received a lot of criticism in relation to silencing the voices of Arab movements by deplatforming several channels. In 2011, YouTube announced that the company would allow content that document Arab Spring events, even if this content was not in line with YouTube's community guidelines (Youmans & York, 2012). However, many videos that included violent content from Syria were taken down. By 2019, YouTube deleted more than 200 thousand videos and erased hundreds of channels owned by Syrian activists (Al Jaloud et al., 2019; El Deeb, 2017; O'Flaherty, 2018).

This has led to a global outcry since these videos were considered the only evidence of human rights violations by the regime and armed groups. The number of takedowns has increased following Google's reliance on automated moderation using machine learning algorithms to detect and delete extremist content in 2017. Automated moderation has flagged graphic videos from Syria for violating YouTube's community guidelines (O'Flaherty, 2018). While YouTube has retrieved some of these videos, hundreds of thousands of videos remain lost to this date (El Deeb, 2017).

To conclude, governments were able to co-opt social media platforms either directly by submitting requests to silence and censor certain dissenters, or indirectly by benefiting from the platforms' biased algorithms and poorly designed Community Standards. While this kind of tactical adaptation might seem like an unplanned and unfortunate consequence of digital media, the commercial platforms have done little to avoid this co-optation. Despite this, movements were able to adapt to this digital repression.

3.6 Arab Movements and Online Tactical Interactions

Digital media has expanded and complemented movements' repertoire of collective action by setting up new forms of online tactics. In addition to supporting offline tactics, digital media has introduced new virtual Internet-based tactics (Laer & Aelst, 2010). Online tactics emerged in the 1990s—such as

online petitioning and letter writing—through portals like *peta-online.org* and many others (Postmes & Brunsting, 2002). Other tactics relied on hindering traffic to and from a certain website, such as email bombings, DDoS attacks, hacking, virtual blockades, and many more (Laer & Aelst, 2010; Postmes & Brunsting, 2002; Rolfe, 2005). The increase in the various types of Internet-based tactics was called 'repertoire of electronic contention' (Laer & Aelst, 2010; Rolfe, 2005). These online tactics were referred to as an equivalent alternative to offline tactics (Postmes & Brunsting, 2002), and sometimes they were considered complementary to the offline ones (Laer & Aelst, 2010).

Online tactical innovations had existed in the region even before the 2011 Arab Spring. Howard and Hussain (2011) pointed out that Tunisian activists overcame blocking YouTube and Facebook by relying on alternative online newscasts, SMS networks, and creating virtual spaces for anonymous discussions. Anonymous and Telecomix—hacker communities outside Tunisia—helped by launching software programs that could get around the state firewall and executed DDoS attacks against government websites (Howard & Hussain, 2011). During the 2011 Egyptian protests, activists manoeuvred the Internet shutdown using satellite Internet and dial-up connections to communicate with the world. Libyans used dating websites to discuss anti-regime narratives with the public and to hide arrangements for meetings (Howard & Hussain, 2011).

Academic research examining the online tactical innovations following the 2011 uprising is scarce. The only study conducted to this date is by Moore-Gilbert (2019) with Bahraini activists. She argues that the opposition was able to circumvent censorship and promote messages on social media in the aftermath of the Arab Spring. She points out that opposition members were using cautious measures to keep their identities hidden online to avoid getting arrested in post-spring Bahrain.

To this date, it has not yet been analysed when Arab Spring activists would deploy novel protest tactics. The majority of the work examined the first phase of the Arab Spring, explaining *how* and *why* Arab movements benefited from digital tools (Costello et al., 2015; Eltantawy & Wiest, 2011;

Howard et al., 2011; Wolfsfeld et al., 2013) to manoeuvre offline and online repression in 2011 (Howard & Hussain, 2011a; Khamis et al., 2012; Moore-Gilbert, 2018). However, less work has examined the Spring's aftermath.

My thesis aims to fill this gap. I analyse this chess-like game from the movements' perspectives. I explore the evolution of the online dissent-response nexus after the escalation of both offline and online repressive tactics. I examine the ways through which dissenters reacted to digital repression to continue protesting their governments online.

CHAPTER FOUR

METHODOLOGY: THE UNSPOKEN HURDLE OF EXAMINING NON-WESTERN CASES

4.1 Introduction

When I first designed the proposal for this thesis in 2018, I had an ambitious yet narrow view of what I could potentially do through this work. It was ambitious in terms of how simple I thought the data collection and analysis could be. It was narrow in relation to the methods I suggested and the limited implications I thought this research would have. Almost five years later, there was nothing simple or easy about studying regions that were not studied extensively by other researchers before. Yet, these limitations were rarely discussed in academic textbooks or literature.

While there are tons of books on protecting our participants, there are very few on protecting ourselves—researchers. I believe this is because researchers do not want to cut the grants that support their work, scare their sponsoring organisations, or maybe because many researchers just do not want to talk about their worst memories and feelings. In addition, researchers, in some cases, spend more time preparing their fieldwork and much less time establishing preventive measures to protect their physical and mental health.

Initially, I wanted to write this chapter to be only about the reasoning behind my methodological choices, with sections on my fieldwork methodology and participant demographics. However, during my experience, I realised that the methodological choices that researchers take to examine non-Western case studies may indeed have a greater impact on their mental and physical health. I also realised how greatly a researcher's identity could influence the fieldwork, from which passport the researchers are carrying to which faith they believe.

I feel obligated to share my experiences to help prepare future researchers to examine less democratic contexts and study trauma survivors. Despite all the hurdles I have been through, I still have the same eagerness to explore more Arab countries in the future. I hope that many readers can use this effectively without limiting anyone's creativity or enthusiasm to go beyond studying the

Western world. These kinds of hurdles are under-discussed or hardly even mentioned in many of the methods textbooks.

In this chapter, I begin by discussing my methodological choices and how I benefited from using a mixed-method approach. I then summarise the process of ethical approvals, my fieldwork methodology and my participants' demographics. Later, I provide details on my own personal experience from 2019 to 2020 during my fieldwork in London, Tunis, and Istanbul. I elaborate on the reasoning behind my case selection and the obstacles I faced while trying to access the field and find participants. I discuss what I learned through the hurdles I faced and what I wish I had known at this stage. Then, I provide a few recommendations for other researchers who wish to study similar international settings through fieldwork. I also briefly discuss what measures academic institutions should implement to protect their researchers' physical and emotional health.

4.2 The Mixed Method Approach

Mixed method research design—also known as methodological triangulation or multi-method approach—entails the integration of qualitative and quantitative approaches in one study to examine complex social and human phenomena (Creswell, 1999; Halcomb, 2019; Johnson et al., 2007). The quantitative and qualitative methods could be used sequentially or simultaneously in one study. One of them could be dominant, or they both could have the same equal impact on the findings of the research (Wilkinson & Staley, 2019).

Independently, quantitative and then qualitative studies had their own global academic recognition and acceptability for successfully answering many research questions. Early attempts of juxtaposing or combining the two methods started in the fields of sociology and psychology in the 1950s. The attempts combined the use of in-depth case analysis with quantitative experiments and surveys to establish multiple viewpoints. However, the mixed-method approach was only adopted in the 1980s by many researchers as a new paradigm or research movement (McKim, 2017). Cook

et al. (2020) explained that the mixed method approach flourished because it was able to end the ongoing struggle among social scientists on the use of quantitative and qualitative methods. They wrote:

This methodology emerged as a natural evolutionary approach as it dealt with the ongoing tension between quantitative and qualitative research methods. It created a natural avenue for both types of research approaches to find common ground and its struggle was not as intense because researchers were seeking ways to strength the quality of their results and welcomed a methodology that allowed a position of relatively equal standing in a world where the power of quantitative research was recognized but the power of the qualitative approach was powerful in finding and solving intense social problems. Many researchers saw the inherent power of combination of the methods leading to a reduction of tension and easy acceptance of this new approach (Cook et al., 2020).

However, this approach comes with many challenges. First, applying mixed methods generally consumes more time. It requires good time management skills from researchers to complete the collection and analysis of two different types of data (Almalki, 2016). Second, researchers must seek additional funding to be able to cover the cost of the qualitative and quantitative data collection and analysis (Wisdom & Feters, 2015). Third, researchers are expected to have more knowledge and a broad range of research skills to conduct different types of methods and analyses (Halcomb, 2019; McKim, 2017). Both qualitative and quantitative analysis should meet the standards of reliability and validity of scholarly research (Wilkinson & Staley, 2019). Also, qualitative and quantitative analysis rely on different software programs that a researcher must be familiar with.

In this thesis, the mixed method approach was not my initial plan. I admit that because, in social sciences, qualitative researchers could tend to deny that their work could be messy, especially during long-term projects like a doctoral thesis or a book, and that it could change according to circumstances, funding, or the researcher's on-going curiosity. Unlike the structured postpositivist quantitative-only research, qualitative research designs are not a 'straight line' plan (Roller, 2010).

Initially, I planned on using in-depth interviews to understand 'how' digital repression impacts social movements' tactical innovation. I chose qualitative methods because qualitative research could go beyond the abstraction I could face if I relied only on quantitative methods. Also, I was searching for answers to a phenomenon that was understudied and underexplored. Therefore, I selected the qualitative approach to be able to theorise the impact of digital repression from the data I collected in the fieldwork (Ritchie & Lewis, 2003). Hence, I planned on studying two case studies from the Arab world, Tunisia and Syria, using in-depth interviews. After successfully conducting the research and establishing the theory of online tactical stagnation, I realised that I still could and want to learn more about this theory.

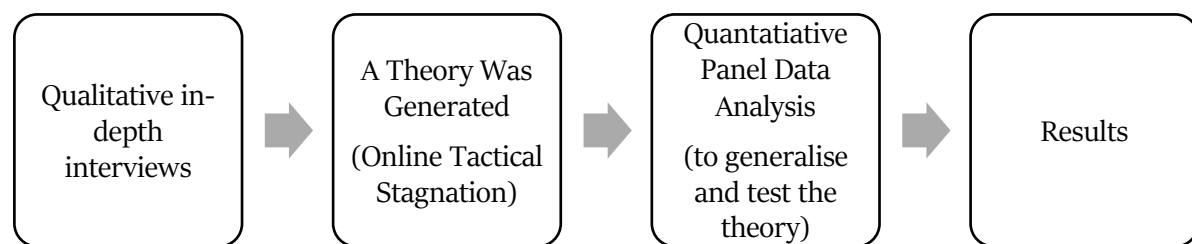
Would my theory stand in other case studies in the region? How would my theory look like if I applied it to general Internet users? All these questions and more drove my curiosity to run a cross-national study on 21 countries in the region. I needed to figure out how to quantify the online tactics construct, how to measure the impact of digital repression on online tactics, and what variables I want to control for in this study. I used data from Google Trends, V-Dem's Digital Society Project, Harvard's Mass Mobilization Protest, and the World Bank datasets.

As I mentioned, mixed-method research could come with many challenges. Indeed, I, a researcher who spent two years of my doctoral program primarily focusing on collecting qualitative data, needed to collect extra quantitative data using advanced computational methods. This has added an extra year to my doctoral journey, which also required securing extra funding. In addition,

I needed to learn extra skills to master the statistical tests I executed in this study. Although this came as an extra burden, mixing the qualitative and quantitative data has crystallised my understanding of the potential impact of digital repression on social movements and general Internet users.

In this thesis, I first collected in-depth interviews from which I generated the theory of online tactical stagnation (see Figure 1). Then, I used quantitative panel data to generalise and test the theory on 21 Arab countries. Later, I reached an overall understanding of the potential presence of online tactical stagnation among social movements vs. the general Internet users.

Figure 1: The Mixed-Methods Employed in My Thesis



4.3 Thesis Evidence

In this section, I elaborate on the process of ethical approvals that I had to obtain before collecting my qualitative and quantitative data. Then, I provide a summary of the of days and nights I spent conducting interviews, the ways I obtained consents from participants, and protected their data. Finally, I provide a summary of the general demographics of my participants and the challenges I faced while conducting the interviews.

4.3.1 Ethical Approvals

In November 2018, I started a long application process to get my ethics approvals from the University of Oxford. Following my peers' steps, I filled out some regular ethics forms and sent them to the

Central University Research Ethics Committee (CUREC) for approval. As a rare exception and because I was studying content that entailed a 'complex of ethical issues' according to the University's guidelines, I had to go through a stricter ethical approval process, known as CUREC2 applications. I believe this decision was made because I wanted to study Syria as a case study.

This lengthy process included questions that primarily focused on the ways I approach my participants, my criteria for selecting participants, the physical and emotional risks on participants, data protection management, measures of anonymisation, my approaches to avoid physical harm, obtaining participants' consents, and the future implications of my findings. Other sections of the CUREC2 application included questions on whether the participants would be at risk of prosecution when my research is published, whether I am recruiting children, and if I would use deception or concealment methods with my participants to collect my data.

To approve my travels, I had to fill in an additional application known as the 'academic activity risk assessment form' for my pre-planned trip to Tunisia. This form focused primarily on protecting the researcher and participants from potential physical harm. This form asked questions related to my emergency contacts, in-city contact and support, my accommodation, forms of transportation, interview arrangements, any contingency plans in case of sudden local crises, and the number of times I will check in with my supervisor and in-city contact. Only one question was about whether this trip might be emotionally distressing and how I was going to mitigate this effect. After filling up these forms, I received the approval in January 2019 with the reference number R61055/RE001.

Following the approvals, I started my fieldwork in London and online while I was preparing for my trip to Tunis. I needed additional approvals from my department before my trip in June 2019. These approvals were essential so I could be insured by the University in case of any emergency. These approvals have also focused primarily on my physical safety. When I returned from my Tunis

trip and continued interviewing Syrians in London, my participants advised me that I needed to travel to Istanbul, where more Syrians were located. This minor change has required amending my original CUREC2 application and approving my trip to Istanbul.

When I decided to conduct the quantitative chapter, I needed to request a waiver of the ethics approval. Since I was relying on open-source data (i.e., Google Trends) and secondary datasets, I did not need to obtain specific approvals for this chapter. I only needed to provide an Internal Research Ethics Checklist (IREC) to get the ethics waiver from my department. Despite all these approvals and steps, I still faced many unexpected hurdles that I did not plan well for. I will discuss these hurdles in the below sections.

4.3.2 Days and Nights in the Field

Before starting my fieldwork, I spent a lot of time and effort planning my data management. I wanted to securely anonymise my participants, encrypt the interviews, and avoid mentioning any identifiable information that could be associated with my participants in the memos or the thesis. I was keen on the anonymisation, even if a participant wanted their identity revealed because the political situation could change and what could seem safe now could endanger them later. Hence, I decided to obtain oral consent instead of the usually written consent to avoid carrying and keeping signed documents with my participants' names on them.

Also, I planned on using an encrypted laptop for extra safety from the date I started communicating with participants. I only used encrypted chat applications to arrange the interviews to protect my participants' privacy. I recorded the interviews only on my small offline portable recorder, transferred the data to my laptop right after each interview, permanently erased the data from the recorder and only kept the copy on my laptop. In total, I collected more than 76 hours of

interview data from 60 participants from Syria and Tunisia during the period from April 2019 to January 2020. I spent about 35 days away from London divided between Tunis and Istanbul.

Because I was travelling to destinations where I did not know anyone, especially in Istanbul, my supervisor and I made a compulsory check-in arrangement. Every day, I would send him an email to confirm that I was safe and well. In addition, I made another arrangement with a friend to check-in with her after I finished each interview. In case I was doubting the safety of the location or had extra doubts about a participant prior to the meeting, I would share my location with my friend, in case of any emergency. Despite all these check-in measures, this did not reduce my fears, especially in Istanbul.

As a woman travelling solo, I always had this sound in my head reminding me of all the horror movies that I have watched about solo travellers. What made things worse was that I was subjected to a sexual harassment situation on a tram on my first day in Istanbul. This made my stress level increase to unprecedented levels. It made me extra worried about meeting my participants. Those participants were people I had never met in person and all I knew about them was what they shared online or what was written about them. They were strangers to me, and I was a stranger to them.

What added to my fears was that I would ask them to choose a café or a place where we could meet for the interview. I wanted them to trust me and to be in a place where they could speak freely and confidently. However, I kept thinking, what if something went wrong and one of the participants had an evil plan? I had two choices at this stage: cancel the interviews or just swallow my fears and do the interviews.

As a researcher, I was more excited about collecting more data than I was worried about possible unfortunate scenarios. Luckily, all my research participants were kind, compassionate, and decent. They offered me free food, coffee, city tours, and sometimes subway tickets. To this date of

writing, I sometimes think of how things could have gone wrong. I was, with no doubt, a lucky one to a great extent.

4.3.3 Participants Profiles

As a qualitative researcher studying foreign countries where I did not have the strongest social capital, I had to allocate my participants online. I started my search by looking for digital media experts and advocates that could speak about their experiences in Tunisia and Syria. I was keen on selecting those who self-identify as Syrians and Tunisians, even if they no longer reside in their countries. I was also keen on having a gender-balanced sample.

To find my participants, I took several steps. First, I attended many events and conferences related to the Syrian Spring in London to meet potential participants. Second, I checked the literature to find the ‘icons’ of the SAS and TAS movements. Second, I searched newspaper articles to identify those who were previously interviewed for topics related to the digital aspects of the Arab Spring in these countries. Third, I double-checked the names I found in order to learn more information about them. Fourth, I tried to find their emails, LinkedIn profiles, or Twitter accounts to be able to start communicating with them. Fifth, I relied on snowballing to find further participants that I could not initially indicate.

With these steps, I was able to meet more participants than I thought I could get to interview, given all the hurdles I faced in my field trips which I will discuss below. I was able to collect a gender-balanced sample to a great extent, with 28 out of the 60 participants self-identified as women. In total, the majority of the interviews were in person and only twelve were conducted online with Syrian participants. All Tunisian participants were interviewed in person in Tunis. In the below section, I will discuss the many challenges and obstacles I encountered interviewing participants.

4.4 The Hurdles of Accessing Fieldwork

I originally planned to do all my interviews in person because in-depth interviews were framed as being more effective than computer-mediated ones. Hence, when I contacted Syrian participants, I asked them to meet me in London. This undoubtedly limited my sample to Syrian participants only living in England. I realised that this practice was also problematic because many of the participants I met in London told me that the socioeconomic backgrounds of Syrians in the UK were different from those who live in other countries. Therefore, I altered my approach. I expanded my sample. I started reaching out to Syrian participants in the US, Turkey, and France but avoided reaching out to those who resided in Syria. I was unsure if I could secure my communication with them and did not know if I could effectively protect their data.

Using VoIP, I did more interviews with Syrian participants via Skype and Zoom. Despite that online interviews were easier to conduct, my experience during the in-person interviews was more effective because I was able to create a faster rapport with the participants. Compared to the in-person interviews, participants I met online shared fewer details. Going forward, I decided to only conduct in-person interviews with both Tunisian and Syrians. Therefore, I started planning my trip to Tunisia. I aimed to travel in June 2019 on my first visit to Tunis. The travelling itself was arduous.

Accessing the field is always challenging and requires a lot of effort from the researcher to manage safe and efficient access. Researchers need to identify where they will stay, the budget they need during their fieldwork, how to travel within the city, how to communicate with their participants, how to protect their data, and whether they know anyone in the city they are visiting in case of emergency. However, there are some variables that researchers cannot control when they want to visit a specific field, such as their own personal backgrounds. The identity of the researcher indeed plays a big role in their accessibility to the field and their ability to extract data for a certain topic.

I had to challenge another hurdle because of my nationality. I needed to get a visa to access Tunisia. As an Egyptian with only an Egyptian passport, getting a visa to any country was never guaranteed. However, after I started reaching out to participants in Tunis, I was told by close friends that getting a Tunisian visa was extremely difficult for Egyptians. Indeed, visas were something I did not plan well when I wrote my research proposals or submitted my ethical approvals. I continued anyway to communicate with potential participants in Tunis, hoping that I still could make it and do the fieldwork. I was advised to participate in a conference in Tunis that was going to take place in June 2019 anyway. With this conference's invitation letter, my chances of getting a visa were higher. I applied to speak at this conference and was able to secure myself a seat to attend this event in Tunis.

I prepared my conference invitation letter, university enrolment letter, flight ticket, hotel booking, HR letter, and my passport and went to the Tunisian embassy in London. I paid the expensive visa fees and was told to wait at least three weeks. My flight to Tunis was planned to take off on June the 2nd, and I was only able to get a visa on the day before. The amount of uncertainty prior to this trip was overwhelming and distracting. In addition, there was the added burden of preparing to speak at this conference which also distracted me during my fieldwork.

Visas are limited and expire quickly. Regular fieldwork trips are limited to budget, data saturation, and, in a few cases, safety concerns. In my case, my fieldwork trip was also limited to the visa duration I was given. My fieldwork duration was indeed determined by the Tunisian embassy in London. I was only given a 30-day visa. However, I was advised to stay less than this so I could be granted another Tunisian visa later without being suspected of staying for a long period in the country.

Hence, I needed to do all my interviews in less than two weeks. I had to accomplish this goal in a city I had never visited while speaking at a conference to keep my word to the organisers. Initially, I wanted to conduct 20 interviews, at this stage, and return later in the year to continue the

interviewing process. I successfully conducted the 20 interviews before I left the city. At this point, I was unsure if I would be able to return to the city again and whether I would be able to get another Tunisian visa.

When I returned to the UK, I carried on interviewing Syrian participants in London. I however realised that I needed a trip to Istanbul, where many participants were residing. Then, I had to plan for a trip to Tunis and Istanbul together to start in November 2019. To be granted a second Tunisian visa, I again participated in a workshop in which I was a speaker in order to get another invitation letter. I prepared my paperwork, paid the fees, and went to the Tunisian embassy. I almost did not get this visa until I spoke with them at the embassy and convinced them to give me the visa. I went back to Tunis in December 2019 and did a few more interviews. Yet, this time I had a workshop to speak at and manage.

Ten days after, I had my Istanbul trip to plan. Luckily, I needed no visa at this point because I held a UK residency card. My access, however, was again limited to 30 days and I was strongly advised to stay less than this in Istanbul. I again had to meet as many participants as I could in less than two weeks in a city I had never been to before. These aforementioned access hurdles and more were not easy to overcome and were indeed one of the toughest and most stressful parts of this doctoral project.

4.5 Sharing Feelings: Vicarious Trauma (VT)

Research has been associated with rationality, objectivity, and logical thinking. Hence, the discussions about the negative emotional impact that research could cause were rarely brought up in academic methodological debates (Močnik, 2020; Moran & Asquith, 2020). Therefore, researchers tended to be poorly prepared for their fieldwork and underestimated the risk of transmitting traumas. The emotional labour was even greater with researchers who studied and examined topics

closer to their homes, personal lives, or could have any connection with them (In my case, I am an Egyptian researcher studying the Arab world) (Moran & Asquith, 2020).

In May 2018, I took a short vicarious trauma workshop at the University of Oxford's Social Sciences Division before my fieldwork began. This workshop was intended to train researchers on the measures they should employ to avoid emotional distress during their fieldwork. Little did I know; I only took this workshop to fulfil my department's requirement to pass my Transfer of Status and to be able to execute my research proposal. At this stage, I did not think I would suffer from emotional distress by the end of my fieldwork. I asked myself this question: why would a doctoral thesis on online tactical innovations have any traumatic material that could have a potential emotional impact or any psychological cost?

Yet, interviewing Syrian digital rights activists, bloggers, and experts was an intense and stressful fieldwork experience. All my research participants from Syria suffered from either direct or indirect traumatic experiences as a result of the war, forced immigration, and the destruction they witnessed. In any interview with a Syrian participant, I would hear their stories of violence, killings, rape, and abduction of their family members. Although I never asked them about these stories, they shared their pain with me. I assumed this was the case because I was sharing the same language, culture, and, in many cases, religion. My participants perceived me as some sort of a therapist whom they could trust, especially since they spoke to me under anonymity. My participants told me that speaking with me made them release some of their pain and share stories they had never told anyone. Countless times, my research participants cried during the interviews. One of the participants broke down when she discussed her brother who has been missing for more than ten years. Another one cried because he could not go back to Syria to see his parents.

These stories and more were bearable, to an extent, when I was interviewing the participants in London. At this early stage of my thesis, I was doing the interviews in my comfort zone, London,

and at a slow pace. In London, I used to do one interview per week. In Istanbul, on the other hand, I had to do two or three interviews per day for ten days without taking any breaks. 'I hate this' and 'this is too much for me to handle' were my personal reflections in my field notes in Istanbul. At this stage, I started having vivid dreams of ISIS attacking me or people running after me. My wellbeing deteriorated even more when I finished the fieldwork.

It was a series of an infinite number of other symptoms. I had several panic attacks with my chest aching so badly. I used to get these panic attacks whenever I would hear any news or watch any thriller movie. I would even get them with no reason and without any triggers. I started isolating myself from my friends, my colleagues, and my family. I avoided going to my department and seeing familiar faces; I did not want a reminder that life was still normal, because my life was not. These feelings made me crave junk food, which made me gain eight kilograms in less than a month. I struggled to sleep at night because of the endless nightmares I used to have. I could not touch my field notes or discuss my trip with anyone. This lasted for three months.

I undertook several measures to be able to connect again with people. I started an intense series of counselling sessions. I joined a kickboxing school in Oxford to be able to manage my panic attacks and control my emotions. I did many meditation sessions, breathing exercises, and yoga to get me through the day. I even tried aromatherapy accompanied with lavender oil to put me to sleep. I had to hide this from my family and friends at home to avoid making them worry for me. I was so desperate to get my old self back again.

My counsellor diagnosed me as suffering from 'vicarious trauma.' It is a trauma that was transmitted to me from my fieldwork and from listening and recklessly empathising with my Syrian participants. This ill-prepared empathetic engagement with trauma survivors led to cognitive changes in my perception of the world and my self-identity (Močnik, 2020). It caused similar symptoms to posttraumatic stress and led to intrusive and constrictive symptoms (Bell et al., 2003).

After numerous counselling sessions, my symptoms started to disappear, and with a lot of measures, I regained my old self again.

While having my vicarious trauma, I spent time exploring the preventive measures I should have employed to avoid getting affected by my interviewees. The majority of the available recommendations were intended to help counsellors and social workers (Gerding, 2012; Jordan, 2010; M. L. Lewis & King, 2019; Trippany et al., 2004), but rarely these recommendations were designed for researchers during their fieldwork. These recommendations varied from limiting the number of trauma exposures per week (Bober & Regehr, 2006; Trippany et al., 2004), practicing spiritual activities (Dombo & Gray, 2013; Gerding, 2012), and using different types of self-care (Lewis & King, 2019).

For researchers, the primary focus on preventing vicarious traumas has been on individual measures and personal coping mechanisms. Institutional prevention and intervention practices are rarely discussed as essential factors to support researchers in overcoming the emotional impact of their fieldwork. This said, there should be an organisational prevention package of systematic fieldwork debriefing and counselling.

A systematic and compulsory debriefing of trained members should help decrease the symptomatology of vicarious trauma. Indeed, in many instances, it is found that sharing experiences with other trained peers could normalise the VT experiences and emotions (Trippany et al., 2004). I argue that universities should a) carefully scrutinise whether a potential research project could have an emotional impact on the researcher, b) have a team of trained students whom their colleagues could debrief to after they finish each interview, c) impose a confidential debriefing process on researchers studying potential trauma survivors, and d) if the trained peers noticed any symptoms of traumas, they should refer the researcher to a counsellor.

4.6 Conclusion

In this chapter, I discussed why I selected mixed methods as my main methodological approach in this thesis. I also outlined the ethical approvals I had to obtain before I started collecting my qualitative and quantitative data. I illustrated the hurdles I have been through as a researcher from the Global South. These obstacles impacted my fieldwork accessibility, mental health, and my relationships with others. These challenges are rarely discussed in academic literature and made my doctoral journey more overwhelming and painful than it should have been.

In the coming chapters, I will elaborate on my case studies from Syria and Tunisia, indicating how I positioned my findings from each case to form a new theory and fill a gap in the social movement and digital media literature. I will then discuss how I tested my theory using quantitative panel data from 21 countries in the region.

CHAPTER FIVE

**REFASHIONING DIGITAL REPRESSION: THE ONLINE
TACTICAL STAGNATION OF THE SYRIAN ARAB SPRING
MOVEMENT**

5.1 Introduction

In his well-known article on the American civil rights movement, McAdam (1983) explained the impact of repression on reshaping movements' tactical handbook. Much scholarship on the repression-response nexus has examined the influence of repression on movements' overall escalation (Almeida, 2003; Escribà-Folch, 2013; Goldstone & Tilly, 2001; Khawaja, 1993; Lichbach, 1987), and on activists' micro-level tactical strategies (McAdam, 2013; Moss, 2014; Shriver & Adams, 2016; Taylor & Dyke, 2007). Scholars have repeatedly emphasised that repression motivates the introduction of new tactics, a process referred to as *tactical innovation*. McAdam (1983) argued that the novelty of protest strategies sustains the success of a movement by bypassing the conventional forms of claim-making. Despite all the literature on the relationship between repression and dissent, the exact conditions under which a movement would introduce new protest tactics and when activists would abandon these newly adopted performances remain unknown.

Digital media has created new species of online protest tactics (Postmes & Brunsting, 2002). Movements have either performed these tactics entirely online or employed them in parallel to other offline activities. Sooner than later, governments have adapted to digital media to inhibit movements from using technologies. Governments have invested their money and human resources to deploy unprecedented digital tools of repression. Until now, little knowledge is available on how movements respond to this digital repression.

In this thesis, I refer to digital repression as *the use of new technologies to suppress political discussions and maintain control over the online sphere* (Frantz et al., 2020), distinct from physical repression that depends on coercive measures of oppression for deescalating protests on the ground. I also propose the term *online tactical innovation* to describe *the computer-mediated collective actions conducted by challengers to bypass digital repression reactively or pre-emptively*. In this chapter, I

provide a substantial analysis of the digital repression-dissent puzzle, focusing primarily on the Arab Spring's kingdom of silence, Syria.

In particular, the nexus between the tactical innovation of social movements and repression by opponents has rarely been examined in the Arab world. Two factors could explain this. First, the fact that the Arab world has long been ignored by social movement theorists and has been considered a region of Islamic and extremist movements only. Second, the methodological and theoretical challenges inhibited researchers from conducting scholarly work in this region. This was the case until 2011, when the Arab Spring took many researchers by surprise. Social movements scholars started to examine this region from a new perspective to determine the internal and external factors that motivated the uprisings using various quantitative, qualitative, and computational methods (Abdulla, 2014; Alimi & Meyer, 2011; Allam, 2014; Eltantawy & Wiest, 2011; Howard et al., 2011; Lynch, 2015; Tufekci, 2014). In this chapter, I focus mainly on the digital repression by the Syrian regime, ISIS, and rebel groups and its effect on the SAS movement's online tactical innovations.

In the early days of the 2011 Arab Spring, the Syrian regime's digital tactics were limited to two types: a) censorship, and b) surveillance. Later, al-Assad invested in more tactics to cope with the tech-savvy activists and to regain control of the lost territories. Little is known about the types of repressive tactics used against the SAS movement and how they affect the online tactical game. One of the most cited repressive tactics is the initiation of cyberattacks by the Syrian Electronic Army (SEA), a pro-government group of hackers that pioneered local and international online attacks to support al-Assad's regime (Howard & Hussain, 2011; Howard, 2020). There are undoubtedly many digitally repressive tactics that are not adequately recorded, reported, and analysed systematically. Likewise, the influence of digital repression has not been widely elucidated in relation to Syria. In this chapter, I will examine the nexus between digital repression and the movement's online tactical innovation, largely contributing to the body of literature on social movements and digital repression.

In this chapter, I argue that digital repression has generated and motivated the Syrian Arab Spring (SAS) movement's implementation of novel online tactical strategies. Rather than developing their online tactical repertoire pre-emptively, the movement's tactical innovations were only reactive and adaptive to the digital repression the SAS movement faced. Also, the movement's online tactical innovation depended on the magnitude of the digital repression. The innovation was driven only by a moderate level of this repression. Based on the interview data, the SAS movement could not carry on deploying new online tactics in response to severe levels of repression.

In this chapter, I make the argument that online tactical innovation, which was once the hallmark of the SAS movement, has been replaced by what I refer to as *online tactical stagnation*. A gradual process by which movements have gradually abandoned many of the online tactics they had previously adopted. This stagnation could explain why violent tactics were later embraced and have become part of the Syrian repertoire of contention.

What are the types of online tactical innovations in Syria? What are the implications of digital repression on the SAS movement's tactical innovation? To answer these questions, this chapter first assesses the development of the role of digital media in challenging the Syrian President Bashar al-Assad. This part analyses the transformation of the SAS movement and how the armed conflict influenced the reform-oriented Syrian activism. In the second section, I summarise the digitally repressive tactics employed to control the SAS movement online. To explain this, I explore the evolution of the repressive digital practices used in the Syrian context. Finally, I elaborate on the online tactical innovations of the movement over the years and how they evolved.

5.2 Background: Explaining the Conflict in Syria

Syria took a different turn than most of its Arab Spring neighbours. The UNICEF (2017) described Syria as 'the largest humanitarian crisis in the world, with grave protection and human rights

violations occurring daily.' About six million Syrians have fled their homes to escape the increasing conflict, while more than half a million were killed during the dogmatic conflict (UNHCR, 2016). This has created the world's largest refugee stream since World War II, with Syrians fleeing to neighbouring Turkey, Egypt, Lebanon, Jordan, western Europe, and overseas territories (UNHCR, 2016).

In 1971, Hafez al-Assad, Bashar al-Assad's father, was declared Syria's President by winning a plebiscite (Polk, 2013). When Hafez died in 2000, Bashar al-Assad inherited his father's presidential role and has ruled the country ever since. In March 2011, the Arab Spring swept the streets of Daraa governorate in south-western Syria against al-Assad, demanding political freedom and economic development in the country. This led to significant confrontations that spread to other cities in Syria until the deployment of the army to quell the protests (Rohde et al., 2016).

The Syrian regime used violent methods to crush the protests and suffocate the non-armed movement in the early days. With the increasing violence, a small number of army defectors formed the Free Syrian Army (FSA) in July 2011, representing the armed opposition to unseat al-Assad (Humud & Blanchard, 2020). By 2012, militant groups affiliated with Al-Qaeda emerged, such as *Jabhat al-Nusra* (translated as, Al-Nusra Front). In addition, the Islamic State of Iraq and Syria (ISIS) conquered Shia strongholds with more than 30,000 fighters to establish its caliphate in 2013 (Thomas & Ellen, 2014). In the same year, Al-Nusra Front controlled the city of Idlib, but now this group has merged with other militant factions and formed what is now known as *Hayat Tahrir Al-Sham*.

Syria became an international war zone when foreign parties intervened. In 2013, Iran sent troops and militants to preserve the authority of al-Assad, one of Iran's main allies in the Arab world. Besides, the Lebanese Hezbollah, a Shia Party backed by the Iranian government, provided major support by supplying al-Assad's regime with arms, militiamen, and money. In 2015, the Russian

government announced its military assistance to al-Assad. In this particular year, the opposition was driven out of many cities, including Aleppo. The regime reasserted control over most of the territories it had lost before the armed opposition and rebel groups.

With Hezbollah, Iran, and Russia's support, al-Assad has endured through nine years of this dogmatic conflict. ISIS lost the cities they once dominated in 2018. Currently, only a few cities are not under the regime's control. Al-Assad is trying to recapture the last opposition stronghold of Idlib using brutal force with the help of Russian air power. In parallel, the Turkish President, Recep Tayyip Erdoğan, declared his intention to expel the Kurdish-led Syrian Democratic Forces (SDF) in northern Syrian cities. The announcement by Trump in 2019 about the withdrawal of the American troops from northern Syria has left his Kurdish allies with no military support. In 2021, al-Assad won the 2021 Presidential elections with more than 95% of the votes. To this date, the violent atrocities against Syrian civilians remain ongoing.

In this chapter, I will divide the parties involved in the conflict into five groups: the Syrian regime, the Kurds, ISIS, rebel groups, and the SAS movement. Although the Kurds, ISIS, rebel groups, and the SAS movement form the al-Assad opposition, each group has promoted contrary goals and carried a different ideology. For instance, ISIS has fought against other parts of the opposition as well as the Kurds (Corstange, 2019). Currently, ISIS is no longer a main actor in Syria, but I am including it in this chapter to document the group's violations and its digitally suppressive tactics.

5.3 Fieldwork Methodology in Syria

To understand the intersection between digital repression and tactical innovation in Syria, I carried out semi-structured in-depth interviews with thirty-two Syrian bloggers, digital experts, and activists from April 2019 to January 2020. To allocate my participants, I attended several conferences

and events in London and Oxford related to the Syrian conflict and was able to meet some of the participants who later agreed to be interviewed. Also, I looked for potential candidates in newspapers who were previously interviewed in relation to digital media in Syria. In addition, I checked previous literature to find names of experts on the SAS movement. After each interview, I would ask my research participants to recommend a few names so I could interview them. I relied on this snowball sampling technique and interviewed those identified by their peers as bloggers, and digital media experts with substantial experience in using digital media. I also aimed to interview participants from different governorates of Syria to ensure a geographically representative sample. I succeeded in interviewing research participants from ten Syrian governorates (see Table 2).

The majority of the interviews were conducted face-to-face in Istanbul and London. Only a few interviews were conducted using VoIP with participants in the US and other countries in Europe. The initial plan was to do online interviews with participants inside Syria as well. However, with the escalation of the violence in the country, I decided not to interview anyone based in Syria so as to shield potential interview participants against the risk of harm.

The interviews lasted from forty minutes to three hours, with an average of sixty minutes per interview and a total of forty hours of interview data. Creating a rapport with the participants was not challenging as I am a native Arabic speaker and share the same religion with many of the participants. Due to reaching theoretical saturation and the traumatising experience of interviewing the participants, I terminated data collection in January 2020.

Table 2: Study Participants, By Governorate

Governorate	Number of participants
Damascus	11
Aleppo	5
Idlib	4
Homs	4
Latakia	2
Al-Raqqah	2

Deir ez-Zor	1
Al-Hasakah	1
Rif Dimashq	1
Tartus	1

Source: Author's analysis of the interview data

Note: These locations do not represent where the interviews were conducted, but they only represent the locations where participants were based in Syria and actively participated in the movement.

In many interviews, participants broke down in tears and shared painful personal experiences. Although my interview questions were not related to their traumatising experiences, all the participants brought up their difficult experiences and shared their current fears. For many participants, sharing their traumatising stories with me was perceived as therapeutic. The trauma of activism left the participants with painful emotions and disturbing memories that remain unresolved. Despite that I had received adequate training before starting these interviews, speaking with participants had a heavy impact on me and I needed to take time off to recover from my fieldwork.

All the interviews were conducted in Arabic, except for two participants who preferred to speak in English. Detailed field notes were taken during the interviews, memos were developed after each interview, and synthesis memos were drawn following every five interviews to identify the common themes among the participants (See more, Halcomb & Davidson, 2006). In this study, I use pseudonyms to refer to the participants to protect their identities.

5.4 Analysis of the Organisational and Tactical Innovation in Syria

5.4.1 Organisational Dynamics of the SAS Movement Online

The Syrian Arab Spring (SAS) movement emerged at a time when the Tunisian and Egyptian repertoire of contention relied mainly on digital media to help mobilise and organise protest events (Abdullah, 2018; Breuer et al., 2015; Eltantawy & Wiest, 2011). While Syrian activists were optimistic

about achieving a similar scenario, they knew that their repertoire could not rely on digital media for mobilisation; given the sparse degree of the spread of social media usage in the country.

Indeed, unlike the Tunisian and Egyptian governments, the Syrian government had the benefit of time to prepare for the protests. Ever since 2011, al-Assad advanced its policing and arresting tactics to nip the physical protests in the bud. Furthermore, the country's low Internet penetration rates made such digitally enabled mobilisation implausible (Aslan, 2015; Tkacheva et al., 2013). This reflects the limitation of the role of digital media in social movements because of the already existing digital divide and the socioeconomic gap (Slavina & Brym, 2020).

The poor Internet infrastructure in the country has made the role of digital media, especially social media, limited to coordinating and organising protest events, instead of publicly mobilising people. With the increasing armed conflict in the country, the use of social media declined into only facilitating humanitarian assistance, raising the awareness of the international community, and documenting violations. The limited role of digital media in Syria shows that digital media as a resource varied in its uses from one country to another. I contend that explaining the relationship between digital media and Arab uprisings will not be sufficient without considering the local uniqueness of each Arab country (Khamis et al., 2012).

5.4.1.1 Digital Media as Coordinators (2011-late 2012)

In March 2011, a group of 14-year-old schoolchildren in the south-western city of Daraa drew graffiti on their school walls. They wanted to show their opposition to al-Assad on their school's wall after being inspired by the uprisings in Tunisia and Egypt. This spray-painted graffiti ignited the first spark of the Syrian uprising. Shortly afterward, fifteen children were arrested and tortured by the police. People of Daraa took to the streets, demanding the release of the schoolchildren. State security forces responded violently, killing several protesters immediately. In response to the bloodshed in

Daraa, people protested in the central cities of Syria against the long-standing corruption and repression and started the most massive uprising in Syria's history.

At this stage, social media platforms and VoIP applications, mainly Facebook, Skype, and YouTube, had a prominent role in the organisational structure of the SAS movement. The movement lacked experience, organisation, and a conventional form of leadership (Aslan, 2015). Social media made 'connective leadership' possible in a country that had not revolted in decades, by setting the movement leadership in the hands of various individuals simultaneously (Azer et al., 2019). The SAS movement started offline in Daraa, relying on social networks and personal ties (Leenders, 2013), and was organised online using secret Facebook groups and Skype conversations to facilitate offline activities (Aslan, 2015).

In the Syrian case, social media was a space for coordinating protest events rather than mobilising the masses. Participants told me that they could not announce the times and dates of the demonstrations, fearing that their gatherings would be attacked. Instead, Syrians' strong social networks and personal ties expedited the mobilisation of protest events through mosques and funerals (Aslan, 2015; Leenders, 2013). Mustafa elaborated:

In the beginning, it was impossible to use social media to announce demonstrations. We only shared the location of a demonstration with a small circle of trustworthy people, about 20 people. We would start a demonstration at a mosque. We would be the first flame, and people would join us from the mosque (Mustafa, personal communication, 2020).

SAS members set up a stratified system of social movement organisations across the country, known as the Local Coordination Committees (LCC). Every street had one or more LCCs, with SAS members organising events using private groups on Facebook. Each city had a main LCC where the leaders of

the smaller LCCs participated. These LCCs organised the uprising. Mustafa, from Idlib LCC, expressed:

People who used to film the demonstrations collaborated together. We were only five or six people at the beginning. We founded the main Idlib LCC and published all our material on the LCC's Facebook page. We coordinated with other LCCs to publish our content together. By the seventh month, we grew really big, and people started joining us. During demonstrations, people donated money to us so we could buy equipment. . .

We later set up a media centre for the LCC (Mustafa, personal communication, 2020).

Approximately, 120 LCCs emerged across the country in the first two years (Aslan, 2015). The LCC system fascinated digital media scholars of how seemingly it operates like an online network. Each LCC had a civil committee responsible for organising events and a media committee to communicate with journalists and publish content on social media. Abu explained:

LCCs started in March [2011] on Facebook. The entire Syrian uprising was based on LCCs in 2011, 2012, and 2013. In big cities like Aleppo, you will find an LCC for each neighbourhood. These LCCs organised and motivated people to protest. . . . LCCs were the leading organisations of the Syrian uprising. They collected funds, and they had huge media centres (Abu, personal communication, 2020).

In addition to coordination, social media kept the national and international audiences abreast of developments in Syria. Facebook and WhatsApp groups were created to connect with journalists to provide them with real-time news. Nagy, a founder of a Facebook group that fed journalists with news from Syria, pointed out:

With strict security controls, you do not have any independent newspapers ... Thus, Facebook is still the only tool through which you will get to know what is happening in other neighbouring cities (Nagy, personal communication, 2019).

5.4.1.2 Deescalating the Movement (2013- 2020)

While Al-Assad was losing control over many territories in the country, the organisational dynamics of the movement changed drastically. Members of the SAS movement have become the main target of al-Assad, the Kurds, ISIS, and the other rebel groups in the country. The cost of online activism has increased, and the hostility towards any form of dissent has been amplified. The interview participants described this stage as the one when many parties wanted to silence them.

The role of digital media, particularly social media, as a platform for coordination has diminished gradually with the violent crackdown and the escalation of military efforts. At this stage, social media was primarily used for news sharing to document human rights violations and to raise awareness globally. Participants spoke about their responsibilities in the media centres and the data security challenges they faced when sharing videos and news with journalists. For example, Osama oversaw one of the media centres where his primary mission was to share the news with journalists using social media. He had access to a computer device, a satellite Internet dish, and a phone to access the Internet. His daily mission was to send photos and videos to journalists at Al Jazeera and Al Arabiya. Osama used to upload footage to his fake Facebook account so others could share. Later in 2013, Osama watched his media centre getting blown to pieces by al-Assad's forces.

Moreover, many participants noted that they used digital media for the systematic documentation of events for future war crimes justice. All participants considered their Facebook pages and YouTube channels as 'historical archives' for documenting the al-Assad and armed groups violations. The interview participants pointed out that using social media platforms to save documentation of regime brutality was safer than storing such archives on external USBs and hard disks.

In addition to al-Assad, other groups wanted to silence members of the SAS movement. Interview participants described ISIS atrocities as similarly violent to the regime's and, in some instances, more brutal. Other armed factions like Jabhat al-Nusra and Ahrar Al-Sham attacked, detained, and executed activists. Participants have also accused the Kurdish-led Democratic Union Party (PYD, the Kurdish acronym) in northern Syria of many violent acts targeting unarmed digital media experts. With the growing discontent in the country, LCCs focused primarily on using digital media to scale up humanitarian funding and coordinate rescue efforts. By 2015, the LCCs were dismantled. Hashem, from Damascus, stated:

In 2012, LCCs started to focus on humanitarian aid, and by 2015 they [LCCs] almost died. . . The admins of the LCC pages fled the country or got killed or arrested. This is why LCC died in Syria. They were replaced by local Facebook pages or Telegram channels (Hashem, personal communication, 2020).

Rafeat also said that LCC members were either dead or arrested or had fled the country:

Some LCCs' Facebook groups were last active in 2012. Half of their members are now dead. I regret even checking these groups now, especially the posts by those who died. A secret group of 30 members, 18 of them died. I know all of them (Rafeat, personal communication, 2020).

Over the years, the SAS movement scattered and became demoralised as they struggled to coordinate safely online. The organisational structure of the LCCs on the national level was shattered as the brutality escalated. Members of the movement sought refuge in different places. Ramzy noted:

Many of our fellows whom we used to work with had joined ISIS. Those activists gave ISIS access to our private Facebook and Skype groups. ISIS was able to reach us through our fellow activists much easier compared to the regime (Ramzy, personal communication, 2019).

Mustafa talked about other SAS members joining the FSA—the Free Syrian Army. Mustafa said: ‘In 2013, we got separated, but we continued filming events. Some of them [activists] joined the FSA and filmed the armed conflict and the FSA operations.’ (Mustafa, personal communication, 2020). The dismantling of these online-based LCCs, through which the SAS movement used to manifest its goals, contributed to the de-escalation of the movement.

Although many of the interview participants were still politically active on social media platforms, it would be unwise to ignore those who are no longer motivated to pursue advocacy. Sara, from Damascus, expressed her enthusiasm to establish an advocacy organisation in London when she first fled Syria in July 2011. However, this revolutionary fever has passed. Sara is now dispirited and will not continue transnational activism after being traumatised by the bloodshed she witnessed. Many of the participants told me that they could no longer continue to be unpaid because they must make a living. Essam, a member of Homs LCC, elaborated:

Some activists are still working, while others have given up everything already.

Eventually, people have a specific capacity to continue working in activism per se. Some could not continue; they needed to gain money, get a proper education, and support their families. However, some are still motivated to this date (Essam, personal communication, 2020).

The SAS movement has scattered over the years. The way the role of digital media has changed reflected the increased offline and online violence. While it is difficult for social movement researchers to assess the impact of repression on the overall macrostructure of a movement, this is usually feasible by examining the microstructural tactical strategies of the movement. In the following section, I illustrate the digitally repressive tactics employed against the SAS movement over the years. Then, I highlight how the movement has adapted to this unprecedented digital repression, emphasising the micro-interactions between challengers and their opponents.

5.4.2 Syrian Digital Repression Repertoire

Over the course of my interviews, I discovered that while members of the SAS movement deployed six online tactical innovations (See Table 4) to express their opinions online, they were subjected to nine digitally repressive tactics (See Table 3). Most of these tactics were developed after the uprising, and they are still used to oppress the SAS movement to this date.

Arrests were the most common physically repressive tactic used to punish dissent and control the online sphere in Syria. Forced disappearances and inhumane detentions were the main strategies of al-Assad's repertoire of physical repression before and after the 2011 uprising. In reprisal for their social media practices, seventeen of the participants were arrested and tortured by the regime, the Kurds, ISIS, and other rebel groups. Many of the participants in my study described how they still suffer from Post-Traumatic Syndrome Disorder (PTSD) from the time they spent in prison.

The interview data showed that al-Assad was not digitally prepared to counter the tech-savvy SAS movement when the uprising started in March 2011. Several participants laughed when they recalled the number of times their houses were searched for something called 'Facebook.' Gradually, the Syrian regime adopted pre-emptive and preventive digitally repressive tactics. With the help of foreign cyber armies, the regime developed and refined a whole arsenal of digitally repressive tools to control dissent voices online. In addition, other armed factions have employed various digitally repressive tools by imitating or mutating the regime's tactics. Over the years, sophisticated digital repression became part of the Syrian repertoire of contention.

Interview participants described several digitally repressive tactics that continue to be used to control and suppress members of the SAS movement. These tactics were, in most cases, pre-emptive strategies. Based on the interview data, I classify nine types of digitally repressive tactics

illustrated in Table 3. The only two digital tactics that were in use prior to the 2011 uprisings were censorship and surveillance—which the regime invested in by collaborating with European security companies (Privacy International, 2017). Later, Syrian dissenters faced several digitally repressive strategies, which systematically deescalated their movement's online tactical innovations.

Table 3: Syrian Digital Repression Repertoire Targeting the SAS Movement (2011-2020)

Repression Type	Description	Actor(s)	Duration
Censorship	Filtering and blocking access to certain domain names or content online.	Al-Assad	2006-to present
Surveillance	Either using advanced technology to detect the IP (Internet Protocol) addresses of users or hiring people to monitor users' online activities.	Al-Assad and ISIS	2006- to present
Hacking	Cyber troops to hack and target people online.	Al-Assad and ISIS	March 2011-to present
Internet Shutdowns	Blocking Internet access and telecommunications in a certain city.	Al-Assad and ISIS	Late 2011- to present
Inauthentic Access	Accessing people' social media accounts by either co-opting others or using force.	Al-Assad, the Kurds, Rebel Groups, and ISIS	Late 2011-to present
Mass Reporting	Abusing the reporting feature of social media platforms to delete anti-Assad accounts and pages.	Al-Assad	Late 2011-to present
Spy Networks	Pro-Assad actors who masquerade as pro-revolution to report and monitor activists online.	Al-Assad	2012-to present
Disinformation	Spreading false information to demobilise and discredit a movement.	Al-Assad and ISIS	2013-to present
Creating Fake Pages	Creating pro-revolution Facebook pages to attract and identify people.	Al-Assad	2014-to present

Source: Author's analysis of interviews with Syrian participants collected from April 2019- January 2020.

Note: The duration of using each repressive digital tactic is estimated from the interviews and Open Net Initiative. Participants attributed these actors and that they were responsible of employing digitally repressive tactics against the SAS movement.

5.4.2.1 The Older Tactics

Censorship existed before the Arab Spring uprisings. Al-Assad exercised heavy-handed means to censor the Internet. The regime has monopolised the telecommunication infrastructure, filtered online content, and intimidated dissent (Tkacheva et al., 2013). The bluntest and earliest digitally

repressive tactic was blocking access to websites and blogs that criticised the government (Deibert et al., 2008). By 2010, access was denied to more than 3,000 blogs associated with opposition and human rights advocates (Taki, 2010). Moreover, Facebook, Wikipedia, Blogpost, and YouTube were blocked until February 2011 (Freedom House, 2010). Abu, a blogger, noticed that 'Facebook and Twitter were not just blocked in Syria, but there was also a sense of societal betrayal if someone used these platforms.' (Abu, personal communication, 2020).

As the conflict increased and the country was divided into al-Assad and opposition areas, Internet censorship changed. In regime-controlled areas, more blockings were imposed on domain names, including human rights websites, independent newspapers, and censorship circumvention tools like VPNs (Virtual Private Networks) (Freedom House, 2019). In contrast, people in the opposition-held cities did not access the Internet using the local servers and relied on wireless networks from neighbouring countries instead. My research participants said that there was no content filtering taking place in the opposition-held cities. Most of my participants explained that the other armed factions did not have the facilities and resources to filter online content.

In addition to the Internet disruption and access control, self-censorship intensified in all Syrian areas simultaneously. Rafeat described speaking against al-Assad in regime-held areas as 'impossible! It is impossible that any person would write anything online in the regime-held areas. Even with online pseudonyms, no one would dare.' (Rafeat, personal communication, 2020).

Moreover, participants stated that people could not criticise ISIS, the rebel and Kurdish groups in their cities, fearing that these armed factions would target them. Mohamed noted:

Tahrir Al-Sham is controlling the opposition areas, and anyone who says a word against them would be arrested. The regime follows the same classic methods. The Kurds promote the idea that they are diverse, but a lot of activists were arrested and were not welcomed in these areas (Mohamed, personal communication, 2020).

With al-Assad regaining control of some cities in 2015, social media censorship became a core element in the reconciliation between the regime and the armed opposition. The regime's reconciliation agreements, *taswyat*, with people in opposition areas, offered a safe passage for them to surrender. Syrians who accepted this truce and wanted to stay in their cities needed to sign 'required forms' where they identified any social media account they use, Hashem explained:

In the opposition areas and when the regime wants to make deals with opposition members 'reconciliation deals,' everyone is asked to submit links to the Facebook pages and accounts they run. This happened in Daraa and Homs. You put the email and password of this Facebook page and your other social media pages, and then you sign a paper to pledge that you will not 'harm the state' (Hashem, personal communication, 2020).

In addition to censorship, digital *surveillance* was a main tactic of the repressive strategy. Surveillance offered a multitude of unprecedented opportunities for governments to monitor and identify threats. When the Egyptian and Tunisian uprisings erupted, the Syrian regime wanted to monitor its own online sphere to arrest those participating in political discussions. However, digital surveillance required a certain level of Internet access to reveal the precise locations of the SAS movement members. The blocking of social media platforms in Syria censored the regime's access to information on precise targets (Gohdes, 2020). Hence, the regime had to unblock Facebook, YouTube, and Twitter in February 2011 to detect the IP addresses of the SAS members and to monitor their digital exchanges. Abu said:

Facebook was blocked, and I used a proxy or a VPN to access it. On the 19th of February 2011, they unblocked Facebook so they could locate our IP addresses, and they did. They found me this way. I let my guard down and did not use a VPN to access Facebook, and they arrested me at that moment (Abu, personal communication, 2020).

In parallel, ISIS relied on traditional forms of surveillance in the cities they controlled. With no stable Internet connection, Syrians under ISIS authority felt isolated and were striving to communicate with their families who had fled the country. ISIS leaders felt the need to allow limited Internet access. They established 'men-only' Internet cafes where Syrians could connect with their families and use social media. My research participants said that these Internet cafes were guarded by ISIS militants who checked credentials before allowing people in. The activities of users were monitored by the militants who were roaming inside the Internet cafes. Shahin elaborated:

They allowed Internet cafes where Syrians must submit their credentials and which devices they are using. ISIS leaders only allowed people they knew to open Internet cafés. Usually, an ex-militant who can no longer fight. . . . ISIS did everything to prevent access to the Internet. . . . Yet, this was perceived negatively by Syrians under ISIS rule, and people wanted to revolt against ISIS. Hence, they needed to provide Internet access through Internet cafés (Shahin, personal communication, 2019).

This constant surveillance created an atmosphere in which the average Syrians living under ISIS rule had little knowledge of what was happening in the world. Syrians were only exposed to what ISIS wanted them to see (Greenberg, 2011). To overcome this surveillance, Syrians secretly obtained Turkish SIM cards to access social media and communicate with the outside world. ISIS established checkpoints in the streets to search for phones. One of the participants said that if ISIS-militant found a phone with the encrypted messaging application Signal, they would inspect the whole phone and search for the messages sent. On the other hand, according to the participants, rebel-held cities and Kurdish areas did not have advanced technologies to allow for surveillance or Internet shutdowns.

5.4.2.1 The Newer Tactics

Participants attributed the *hacking* attacks, as a tactic of repression, to both the Assad regime and ISIS. None of the participants reported any hacking attacks by rebel or Kurdish groups. The SEA (Syrian Electronic Army) group performed hundreds of documented hacking attacks against Syrian and foreign targets. Although the SEA claimed autonomy, all my participants described the group as ‘pro-regime thugs.’ In addition, the SEA websites were hosted and registered on the Syrian Computer Society, an organisation that was established by al-Assad’s family in 1989 (Al-Rawi, 2021). The SEA had been hailed by Bashar Al-Assad for its operations, being ‘a real army in a virtual reality’ (Harding & Arthur, 2013). These FBI ‘Cyber Most Wanted’ hackers executed high-profile cyber operations. They performed hacking attacks against Facebook, Microsoft, New York Times, The Times, The Independent, The Sun, Sunday Times, US military websites, in addition to many others (Greenslade, 2014; Temperton, 2016). The SEA ran many websites, Facebook pages, and YouTube channels to publish their ideas and to defend al-Assad (Al-Rawi, 2021).

From the interviews, participants mentioned two main methods the SEA hackers relied on to perform attacks against the SAS movement. Some of these methods were less advanced than expected, which led one of the participants to describe the SEA as a ‘stupid group’ and ‘overrated.’ The first method involved arresting activists and taking over their Facebook accounts to send crafted messages or malicious files to their friend lists. The second method depended on masquerading as journalists or attractive women to bait members of the movement to send them messages or files. The phishing message would have a link that leads to a phishing page where the victim would be tricked into entering their social media or Google account’s password. The malicious files would deliver malware to the activists’ computers to gain access to their social media accounts. These attempts would result in taking control of activists’ computers, monitoring their online activities,

auto-posting to activists' timelines, or blasting messages to their friend lists with other phishing links and malicious files.

Each participant I interviewed had a hacking story to share. Some were able to avoid it, and some were not as lucky. Sohaila, from the south-western city of al-Ghouta, received a message from her best friend on Facebook with a file to download. Later, she noticed that her Facebook account was sending spamming messages to her friends, asking them to download the same file. Sohaila realised that she had been hacked. Through this attack, hackers were able to trick many of her friends into downloading the same harmful file.

In some cases, the hacking attacks were used to blackmail members of the SAS movement. Gaining access to social media accounts, especially chat conversations, gave the regime power. Hackers would access private Facebook chat conversations to blackmail activists. Salma explained:

The hacking attacks were deadly. They were aiming to obtain private information to blackmail us into changing our political positions. Plenty of FSA [Free Syrian Army] members were blackmailed into changing their position towards the revolution and spreading rumours against the rebels (Salma, personal communication, 2019).

On the other hand, the study participants pointed out that ISIS also performed advanced hacking attempts. ISIS benefited from the many engineers and computer scientists who joined the group and founded what was known as the Cyber Caliphate. Ramzy stated:

The technological expertise that ISIS had was way more advanced than us and the regime. They had engineers and tech experts. They hacked many pages and accounts several times. They deleted many accounts this way (Ramzy, personal communication, 2019).

In addition to hacking activists' accounts, ISIS had performed several hacking attacks against foreign targets. However, from the interview data, the SEA operatives were more harmful than ISIS hacking.

In addition to hacking, restricting and controlling Internet access in Syria was a common practice by all factions in the country.

Internet shutdowns are a rudimentary digital repressive tactic. They do not require a substantial digital capacity for a regime to implement (Frantz et al., 2020). The Syrian regime avoided large-scale Internet shutdowns and long-term total blackouts when the revolution erupted in March 2011. Instead, the early shutdowns were strategic and proactive to prevent the movement from coordinating events and sharing news. The regime only cut off the Internet during weekends and days when demonstrations were likely to happen (Khamis et al., 2012). A few weeks after the escalation of tension in the country in March 2011, the regime shifted its nationwide blackout policy to localise the disruption of telecommunications in besieged cities where authorities wanted to restore control. Saïd, from Duma, pointed out that:

Whenever the regime wanted to suppress and regain control of a town or a neighbourhood, it would cut off all landlines, mobile phones, and the Internet. There was no way to publish anything on social media (Saïd, personal communication, 2019).

In addition to targeted Internet disruption, other short-term large-scale shutdowns were reported. In November 2012, Internet services were suspended for three days, blaming 'terrorists' for the blackout (BBC, 2013). On the 6th of May 2013, Syria disappeared from the Internet for eighteen hours when the four fibre-optic lines connecting the country were cut (Thompson, 2013). In general, the country suffers from poor communications to this date, and mass blackouts are expected to happen due to the weak infrastructure in the country.

Internet shutdowns by the regime were not the most extreme version of repression Syrians had to deal with. People in ISIS-held cities had to suffer from strict censorship of online activities. In 2015, ISIS cut off private Wi-Fi access in its strongholds of al-Raqqah, Deir Ez-Zor, and Tadmor cities. ISIS disabled Internet access that was enabled through private Wi-Fi companies. The extremist group

confiscated satellite Internet dishes, raided homes to check for Internet devices and established checkpoints to search phones. In general, the interview participants pointed out that ISIS's control of Internet access was even more substantial than the regime.

On the contrary, rebel and Kurdish groups did not cut access to the Internet. Participants said they enjoyed a stable Internet connection in rebel and Kurdish areas over the years. One of the participants expressed that Internet connections in opposition-held areas were faster and relatively cheaper than in the regime areas.

In addition to controlling Internet access, *inauthentic access* was another main threat. Al-Assad was forcibly accessing the backdoors of the SAS movement's social media accounts. Based on the interview data, the regime has repeatedly relied on arresting activists to forcibly access activists' social media accounts. Somia, from Damascus, was arrested twice, once for participating in a demonstration and another when her friend's Facebook password was beaten out of him. Somia expressed:

They arrested me in 2013. They had a copy of my WhatsApp messages and my Facebook messages. I was kept in prison for six months. Activists who are tortured cannot stand extreme abuse and must give up their Facebook passwords. . . . I forgive him [my friend] for giving me up to the authorities (Somia, personal communication, 2019).

Alternatively, armed factions co-opted several activists to secure access to the SAS movement's online networks. According to the participants, some activists joined ISIS, the Kurdish-led PYD, and the many other armed rebel groups. Those activists wanted to avoid being targeted by these groups. Other activists joined these groups, believing peaceful methods were no longer feasible. Mourad said:

They breached our groups. Our fellow activists started joining the PYD [Democratic Union Party, a Kurdish Party] and leaking our data to them. They gave the PYD lists of names (Mourad, personal communication, 2019).

When inauthentic access did not succeed, *mass reporting* was often used to delete and suspend social media accounts related to the movement. The social media platforms' feature to report community members was exploited. Pro-Assad accounts coordinated several mass reporting campaigns against the SAS movement in order to suspend the anti-regime accounts. All the interview participants said that they were subjects to mass reporting campaigns, especially on Facebook. Mass reporting campaigns have succeeded in removing activists' accounts, pages, and groups over the years. Mourad, from the north-eastern city of Qamishli, pointed out that mass reporting campaigns were easier to perform than hacking and did not require advanced methods.

Hisham, a tech-savvy Syrian from Damascus, woke up one day to a friend's call, warning him about a pro-Assad Facebook group targeting his fiancé's Facebook account. Hisham elaborated:

There are Facebook closed groups, not open to everyone. They were using them to share accounts of people they want to attack. For example, if I wrote something on Facebook and a pro-regime person saw it, someone would post my profile's URL on these groups. Members of the group would aggressively comment on my profile and report it. Those *Shabbiha* (commonly known as pro-regime thugs) might want to escalate this and attack people in real life (Hisham, personal communication, 2019).

Hisham's fiancé was not the only one targeted by regime-supporters. Facebook pages and groups were created to coordinate mass reporting attacks against members of the SAS movement (See Figure 1). Throughout the interviews, participants accused the SEA of orchestrating these reporting campaigns. Others said that the *Shabbiha* were the ones behind it.

The SAS movement's accounts were reported on the ground that they published graphic images and videos of the war atrocities. The reporting campaigns would claim that the movement's pages and accounts were violating Facebook community standards by inciting violence and publishing graphic content. Facebook content moderators, based in the Arabic-language unit of the

company's Dublin office, would evaluate the reports, and take down the pages and accounts (Pizzi, 2014). Facebook has apologised several times for shutting down pro-revolution pages and accounts (Hennessy, 2014).

None of the participants has related any mass reporting campaigns to the Kurds, the rebels, or ISIS. To this date, mass reporting campaigns are still orchestrated while content moderation fails to protect activists in Syria and in other Arab countries (Alimardani & Elswah, 2020; Youmans & York, 2012). Indeed, the Syrian case is an example of how a government could adapt to and benefit from platforms' poorly designed content moderation system.

Figure 2: Coordinating Mass Reporting Campaigns



Source: (The Facebook page of 'Fans of President Bashar al-Assad,' 2020)

Note: A pro-Assad Facebook page posting the steps to report an anti-Assad account. The page suggests that followers should report the account for 'inciting violence.' The account shared had been removed by the time the screenshot was taken.

A snitching culture was encouraged online in Syria, forming what was similar to *spy networks*. All participants talked about how the regime planted spies on social media to extract information about the SAS movement. Those spies created Facebook accounts and pretended to be critical of the regime to convince activists to add the spies to the secret LCC groups. Spies used to set ambushes to either arrest activists or to collect data from the SAS movement's Skype or Facebook groups. Alaa added:

They [the regime] used 'spies' to track us on Facebook secret groups. They used to pretend to be anti-regime and masquerade as revolutionary characters so we could allow them into the groups. However, they were only there to gather data

for the regime. Then, the police would arrest all the group members. In some cases, these spies were arrested with the group members, so the spies' cover would not be revealed (Alaa, personal communication, 2019).

Rana, from Aleppo, pointed out that in 2012 and 2013, she noticed fake accounts, claiming to be supportive of the revolution. These accounts crept into the secret groups and communicated with members of the movement. Spies would set meetings with activists, which would be ambushed to get to them. Mourad said:

Two of my brothers were arrested because of the pro-regime spies. You know what? They accessed the Facebook group we had and pretended to be anti-Assad. They were able to have a list of activists in the group and report everything to authorities (Mourad, personal communication, 2019).

This particular tactic was only attributed to the regime by the participants. Other armed factions did not need to employ this tactic. Instead, those factions relied on co-opting activists who would report their fellows.

The Aleppo activist Rana pointed out that it was all about using spies to gain access to activists' secret groups in the first two years. Later, however, trolling and *disinformation* were tactically adopted by the regime. At the beginning of the uprising, participants said that the regime was only denying the protests and the clashes. Later, the disinformation narrative included portraying activists as traitors and spies supported by Qatar.

Social media was a tool to orchestrate further smearing campaigns that targeted activists extensively. Salma, an activist from Latakia, was a victim of a smearing campaign. She suspended her Facebook account for six months to avoid trolling. Salma pointed out that disinformation on Facebook has discredited many Syrian leaders, she said:

It [Facebook] played an integral role at the beginning, but later it started harming us. . . . Facebook destroyed everything. Suddenly, you will find a smearing campaign that would destroy the reputation of a revolution figure with no evidence. We no longer trust any figure, and that made the revolution leaderless. We needed someone to lead us, but Facebook destroyed this (Salma, personal communication, 2019).

In addition to the regime's propaganda, participants were targeted by foreign trolls. Essam, a Syrian media advisor, told me that he had been the subject of many trolling campaigns by English-speaking Russian accounts. The Russian campaigns against the White Helmets succeeded in framing the group as extremists. Iranian propaganda also supported al-Assad's regime and targeted Arab users on Twitter to promote his government (Elswah et al., 2019).

Moreover, propaganda was one of the main strategies employed by ISIS. ISIS militants spread disinformation campaigns on social media against the politically-active Syrians and represented them as 'enemies of Islam,' Essam contended:

Jihadist factions used the same discourse promoted by the regime but with a religious taste. For instance, the regime would accuse people of threatening the national security of Syria. ISIS would accuse activists of leaving Islam (Essam, personal communication, 2020).

There are no reported disinformation campaigns by other rebel groups that targeted Syrian activists.

Another disinformation tactic that was employed is the emergence of many *fake pages*. They were created to attract activists and supporters of the movement in 2013. These pages would later reveal their true ideology and promote al-Assad's image. According to nine participants, a Facebook page called *Yomuyat Qazift Hawen* (translated as, the Diaries of a Mortar Bomb) was created in 2014, holding a pro-revolutionary narrative. Thousands of Syrians followed this page. Only after being followed by more than one million people, the true political affiliation of this page was revealed.

Suddenly, the page's narrative had changed to support al-Assad's regime and negatively represent the movement. Alaa elaborated:

This page presented itself as a pro-revolutionary one, and we blindly followed it because it looked like us. This page was so objective at the beginning and showed the aftermath of the bombings in Syria. In a brief period, we have realised that this page holds a pro-regime narrative. It only showed the mortar bombs fired by armed-opposition groups attacking pro-regime cities to represent the opposition negatively. In 2013, the page's affiliation was uncovered after it had more than one million followers (Alaa, personal communication, 2019).

This page is now followed by four million people. Many pages at a smaller scale followed this approach. None of the participants reported that any rebel group utilised this tactic.

5.4.3 Syrian Online Tactical Innovation

The SAS movement introduced the world to unprecedented offline and online tactical innovations. Both offline and online innovations were adopted because the regime's repression prevented conventional methods of protest. Offline tactical innovations included demonstrations on the fly, distributing stickers about people killed by the regime, anti-regime graffiti, sending freedom balloons into the sky, and many others (Khamis et al., 2012).

In this section, I shed light on the under-theorised online tactical innovations by the SAS movement. I propose the argument that a moderate level of digital repression had a backlash effect. The movement was more prepared at the beginning to bypass the very few digitally repressive tactics, such as censorship and surveillance. I argue here that the SAS movement introduced many online tactical innovations in the first two years of the uprising. From the data, participants referred to abandoning these innovations gradually with the increasing levels of digital repression. I call this

process 'online tactical stagnation.' This stagnation did not happen in one day. It was a gradual process that coincided with changes in the political structure and the perceived cost-benefit nexus. Also, the stagnation of online tactics by the SAS movement was in parallel with the increasing adoption of violent tactics or actors giving up activism more broadly.

Although this study is the first to examine the nexus between online tactical innovation and digital repression, my findings agree with other researchers who examined the relationship between offline tactical innovation of movements and physical repression (Demirel-Pegg, 2020; Moss, 2014). From the interviews, I categorise six different types of online tactical innovations (See Table 4). All of them are reactive adaptations to digital repression, and none is pre-emptive to prevent the repressive tactics before conception. In many cases, the movement would only copy the regime's tactics to counterpunch it.

Three of the SAS movement's online tactical innovations were persuasive tactics (revolutionary pseudonyms, encrypted messaging, and hashtag protests). These were mainly used for expressing and publicly protesting against the regime and other armed groups. The three other tactics were confrontational tactics (hacktivism, counter-mass reporting, and counter-disinformation) to perform collective attacks against their opponents directly. Four of these online tactical innovations adopted by the SAS movement have stagnated by now. The only two online tactical innovations that still exist are 'hashtag protests' and 'counter-disinformation.' But even these two are now running on a smaller scale.

Interestingly, none of these tactical innovations was a response to digital repression from the rebel or Kurds groups. Most of these tactical innovations were introduced in 2011, a year when digital repression remained moderate in Syria. By the time rebel groups controlled cities, the regime's digital repression was increasingly affecting the movement's capacity to innovate any

Table 4: Online Tactical Innovation of the SAS Movement Repertoire (2011-2020)

Tactical Innovation	Description	Type	Duration
Counter-Mass Reporting	Abusing the reporting feature of social media platforms to report the opponents' accounts and pages to suspend them	Confrontational/Collectivistic	2012- 2015
Counter- Disinformation	Spreading false information about the opponent	Confrontational/Collectivistic	2011- to present
Hackivism	Cyber troops to hack the opponent-affiliated actors	Confrontational/Individualistic	2011-2013
Encrypted Messaging	Relying on VPNs, proxies, and encrypted browsers, such as ToR to send and publish criticising messages	Persuasive/Individualistic	2011-2013
Hashtag Protests	Calling, organising, and implementing a protest event online using a hashtag	Persuasive/Collectivistic	2013-to present
Revolutionary Pseudonyms	Using aliases that are critical of the regime on social media platforms.	Persuasive/Individualistic	2011-to 2016

Source: Author's analysis of interviews with Syrian participants collected from April 2019- January 2020. Types of tactics are inspired by the work of (Postmes & Brunsting, 2002).

Note: Collectivistic tactics are the ones that require the participation of many activists, while individualistic ones are those that could be undertaken solely to achieve a collective goal. Persuasive tactics are those whose primary goal is to persuade others, while confrontational tactics are those that engage and confront opponents.

protest tactic or sustain the ones they introduced. In the following paragraphs, I explain the rise and fall of the Syrian movement's online tactical innovations.

5.4.3.1 Confrontational Tactics

By imitating al-Assad's tactic, Syrian dissenters utilised *counter-mass reporting* to attack the regime-affiliated accounts and pages on social media. Like most of the online tactical innovations of the SAS movement, counter-mass reporting was initiated in response to the regime's reporting campaigns on Facebook. Counter-mass reporting was another reactive tactic motivated by the regime's digital repression.

In 2012, members of the SAS movement initiated counter-mass reporting groups on Facebook, which were joined by thousands of anti-Assad Syrians. Similar to the regime tactic, activists shared on these groups the pro-regime accounts or pages and asked members to report these accounts to suspend them. One of these groups was called the 'Chinese Army' affiliated with a page called 'The Chinese Revolution Against the Chinese President.' This Chinese army comprised of hundreds of Syrians who devoted their efforts to reporting the regime's accounts. Later, this protest tactic was transformed into a rescue tactic. Counter-mass reporting groups were used to suspend the social media accounts of activists who got arrested. Mourad said that this tactic saved his brother from further interrogations:

When they arrested my brother in late 2014, we first contacted Facebook to delete his account. . . . We communicated with so many people there, but no one replied. My brother was with them [the regime], and if anyone of them [police authorities] logged into his account, he would have been in a great danger. Then, I posted the URL of my brother's account on the 'Chinese Army' Facebook group. In fifteen minutes, the group members reported the account, which was deleted. We only used primitive ways to remove accounts (Mourad, personal communication, 2019).

Some of the participants argued that counter-mass reporting was not efficient. They described it as a defence mechanism that was needed to survive the arrests and cyber attacks. They pointed out that the SEA's cyber troops were more aggressive. Rami—from Aleppo—noted that their reporting defence teams mainly deleted accounts of arrested people and rarely initiated attacks against the regime. With the increasing number of repressive digital tactics, especially Internet shutdowns and inauthentic access, mass reporting groups scattered and became less efficient over time. Now, these groups no longer exist in Syria.

In the earlier sections, I analysed how the regime weaponised disinformation to silence al-Assad's opponents by relying on his strong and well-funded media apparatus. The SAS movement used the same regime tactic to delegitimise al-Assad and his allies. All the participants agreed that dissidents weaponised *counter-disinformation* to some extent but on a lesser scale. The regime used several apparatuses to design smearing campaigns against the SAS movement. These apparatuses included TV channels, printed and online newspapers, and social media platforms. On the other hand, the SAS movement was only able to use two methods to spread counter-disinformation: social media platforms and, occasionally, misleading journalists. Despite that, participants disagreed on whether counter-disinformation benefitted their movement. Asala told me about a disinformation campaign that was initiated:

We once reported that there was a Russian ship docked in a Syrian port, and that Syrian military officials fled to Russia on this ship. This news did not influence the revolution, but we asked people to share it on their accounts and pages so it would reach the regime's supporters. Many pro-regime elites started to hide in Latakia and Tartous, and people went to the port to check the ship. We did not lie; we were only attacking the regime through its supporters (Asala, personal communication, 2019).

Asala did not feel any guilt while spreading this rumour against the regime. During the interview, she said that members of the SAS movement were able to promote counter-disinformation.

Other participants argued that counter-disinformation was harmful to their movement, especially the stories that exaggerated the number of casualties and atrocities to gain international sympathy. Salma said that this type of exaggeration made the movement lose the support of many Syrians in the country. Counter-disinformation harmed the regime's victims, Alaa stated:

My colleagues at this [Daraa] prison were tortured and humiliated but not raped.

However, to gain the sympathy of the Muslim community all over the world, you point

to the 'sexual rape of women' by the regime officers. No, they did not rape those girls at this particular prison. . . .When I fight to try to tell people that the regime did not rape those girls, I do not do this because I like the regime or try to legitimise it, but this is the truth, and this is history. They [the opposition] are harming those girls by damaging their reputation in a male-dominated society. Some families have killed their daughters because of rape allegations (Alaa, personal communication, 2019).

Participants mentioned that dissidents lost the trust of the international community because of exaggeration in reporting incidents. Moreover, the regime started to uncover the counter-disinformation and used it to undermine the movement. Like many other tactical innovations, this tactic is no longer as advantageous as it used to be. Counter-disinformation, however, still exists but with less organised effort.

Hacktivism was also implemented by the SAS movement. Despite the fact that they are used interchangeably, the terms hacktivism and hacking are different. Hacktivism is a mix of hacking and activism techniques against a target online (Al-Rawi, 2021). With the spread of regime-affiliated hacking and phishing attacks, activists needed to build groups of IT specialists to retrieve the pages and accounts they lost. With time, these groups turned into defence teams for attacking the regime-affiliated Facebook pages, accounts, and emails. This disruptive tactical innovation was a direct response to the regime-affiliated Syrian Electronic Army. Ramzy stated 'hacktivism attempts were only to make a statement to the regime that we are here, and that we have the same technical knowledge the regime has' (Ramzy, personal communication, 2019).

From my interviews, I learned that there were a variety of hacktivist groups across the country. Many of these groups were running on a small scale with a few members. The most prominent hacktivist group called themselves the 'Free Electronic Army' (FEA). The group emerged

in response to the Syrian Electronic Army (SEA) and performed several hacking attacks against the regime. Rana said:

This cyber army [FEA] arrived a while after the SEA and did not gain much publicity.

The FEA has succeeded in hacking Bashar al-Assad and his wife's emails, revealing secret relationships with Bashar and information on expensive jewellery bought by his wife (Rana, personal communication, 2019).

All participants specified that hacktivism is no longer active in the country, and these groups have been dismantled with the increasing digital repression. Also, many of the participants pointed out that they could not compete with the SEA because the SAS movement lacked adequate funding and support. In addition, the far-reaching cyber support from Russia and Iran to the regime against the SAS movement compromised and weakened the hacktivists groups.

5.4.3.2 Persuasive Tactics

Pseudonyms could help build movements, mobilise people, and pressure opponents while providing the challengers with the needed privacy without remaining completely anonymous (Arrington, 2019). The use of revolutionary pseudonyms on social media platforms became a symbol of protest against the Syrian regime. Pseudonyms also protected the movement members from the regime's digital repression. Based on the interview data, real-name activism on social media in Syria made members of the movement easy targets in real life. Rafeat explains:

I used my real name and my photo. Everyone knew me. People were cautious about appearing with me because I am a well-known person, and they could get arrested if seen with me. . . . Pseudonyms are useful. I do not regret using my real name, but it added a lot of burden on me, including the fact that my friends, who know me so well, were careful to appear publicly with me (Rafeat, personal communication, 2020).

The use of revolutionary pseudonyms was a main tactical innovation of the Syrian digital repertoire. The deployment of revolutionary pseudonyms was a reactive tactical strategy that the SAS movement relied on for claim-making to bypass the regime's repressive digital tactics. Activists used pseudonyms, such as 'the revolution flower,' 'the Syrian martyr', 'the Syrian rebel' to represent their opposition while being mindful of its digitally repressive tactics. In addition, the majority of the social media pseudonyms included the letters 'SY'—signalling support for the Syrian revolution. Others used various forms of non-revolutionary pseudonyms. These pseudonyms gained popularity to the extent that these names turned out to be revolutionary icons later.

This tactic was inspired by the growing numbers of spies recruited by the regime, and the regime's increasingly inauthentic access to Facebook groups and chat conversations. Many participants said that they used their real names on social media in the first few weeks, believing that they would remove Bashar al-Assad shortly. Saïd stated:

In the beginning, we used our real names. We thought this regime would fall in a few months only like Egypt's Mubarak. Huh! We had some optimistic dreams (Saïd, personal communication, 2019).

The adoption of *revolutionary pseudonyms* started when members of the SAS movement realised that al-Assad was more resilient than other Arab dictators and that the regime was monitoring social media platforms. Alaa described using pseudonyms among activists on social media in Syria as an 'addiction.' Alaa elaborated 'we had so many pseudonyms on social media. We had a flood of pseudonyms. If you tried to access Facebook, you would have thousands of account names that end with SY [for Syria]' (Alaa, personal communication, 2019).

The movement communicated on social media for years without knowing the real identities of each other. Saïd stated:

We used pseudonymised accounts, and we did not include any personal information or add any of our friends to them. We used these accounts to communicate or to upload videos on the Syrian Revolution Facebook page. We never used real accounts (Saïd, personal communication, 2019).

From the interviews, many of the participants had at least two pseudonymous accounts on Facebook. Members of the SAS movement would use one account to actively engage in planning and organising events. The other one would be a fake one where they forged their support for al-Assad. If they got arrested, they would provide the police with the account in which they support al-Assad. Hend, an early-riser activist from Damascus, had multiple Facebook accounts:

I had three Facebook accounts. The first one was the main account and was pseudonymised. The second one was also with the same pseudonym but with no anti-regime data. The third account was with my real name, but it is very clean. If we were arrested, we would give them [the police] the account with our real name. In case someone reported us, and they became aware of our pseudonymised accounts, we would give them [the police] the second fake account, which is clean (Hend, personal communication, 2020).

The Syrian pseudonym-based tactic on social media became an offline practice. Many of the participants I interviewed preferred to hide their real names from their fellows. They decided to use pseudonyms even when they dealt with each other in person. This aligns with Tarrow's (1998) argument that tactical innovations get embedded in movement members' ongoing daily practices and remain part of their lives, even after a movement ends. Sabry, who worked with seven LCC members and shared a house with them, never knew their real names until he fled the country.

Pseudonymous participation was not only challenged by the regime's spies, arrests, inauthentic access, and cyberattacks, but also the algorithmic moderation of platforms. On social

media, revolutionary pseudonyms faced multiple suspensions by Facebook algorithms for not meeting its 'real-name' policy. Besides, the regime benefited from the platforms' community standards and initiated mass reporting campaigns against pseudonymised accounts. One of the participants said that he had managed eighteen pseudonymised accounts for criticising the regime because he expected at least half of them would be reported and deleted.

The use of revolutionary pseudonyms was one of the tactical innovations that lasted for a long while. With the increasing digital repression from both the regime and rebel groups, the use of revolutionary pseudonyms gradually faded away. Participants said that there was no need to use pseudonyms, especially after the regime employed heavily repressive digital tactics to target, identify, and attack the movement. Moreover, after some Syrians joined ISIS and shared information about their fellows' identities, and allowed access to Facebook secret groups, pseudonyms were no longer useful.

The use of revolutionary pseudonyms gradually stagnated in Syria, like many other innovative tactics, when the cost of activism increased to the extent that harm became inevitable. Activists had to either leave the country or to self-censor to stay in regime-controlled areas. Hend said 'once my family and I fled the country, I deleted my fake accounts, and I am currently using my real name on social media. There is nothing I am afraid of now' (Hend, personal communication, 2020). Members of the movements who stayed and those who fled abandoned their pseudonyms and used their real identities. Now, none of the participants I spoke with rely on pseudonyms online to criticise the regime. In addition to pseudonymity, encryption was vital to sustaining the movement's communication infrastructure.

Encrypted messaging was the most common online tactic innovated by the SAS movement. The form of 'anonymous messaging' was used to covertly protest in the 1790s in rural England to express public demands (Wells, 2015). In the digital age, sharing information about a government's

misconduct on blogs or social media platforms anonymously was a common protest tactic. However, anonymity could not be guaranteed because users left traces through their IP addresses, locations, and device IDs when they navigated the web. Consequently, governments relied on advanced mass surveillance technologies to trace activists and detect their online messages. However, the use of encryption facilitated a new form of 'anonymous messaging' online to protest against opponents and anonymise users' identities.

The Syrian regime's surveillance methods motivated the SAS movement to use encrypted messaging. Encrypted messages were published on social media, and blogs and shared among activists to sustain the movement. Thus, it was one of the main tactics the regime systematically oppressed. Activists took the risk of being arrested, if spotted, routing their Internet connection through a VPN, or using platforms, such as Signal.

The SAS movement only deployed this tactic when they realised that the regime was capable of monitoring and detecting their locations. Alaa explained:

We were naive when we thought that the regime was outdated and did not know how to use technology. We used to make fun of how ignorant the regime was... because we thought the regime was outdated, we were naive at first when we first used Facebook. Then, we started noticing that people were being arrested after following their IP addresses. Many networks were uncovered at the beginning because of this (Alaa, personal communication, 2019).

The SAS movement was not introduced to encryption when the uprisings erupted in Syria. Instead, they were aware of the tools before the first cries of the Arab Spring were heard in Tunisia. From the interviews, the use of VPNs, ToR, and proxies, as censorship circumvention tools, was common among Syrians because many websites were blocked. At that stage, it was not a tactic of activism, but a tool to access blocked websites.

When the regime unblocked Facebook and YouTube, many activists abandoned the use of encryption, thinking that the regime did not have the technology to locate them. After months of massive arrest campaigns, activists reintroduced this tactic to manoeuvre online surveillance. Saïd stated ‘we decided to use proxies after seven months. We knew people abroad who work as programmers and engineers who told us about proxies and how to use them’ (Saïd, personal communication, 2019).

When the conflict escalated, and the country was divided, encrypted messaging started to lose its protection benefits. By late 2012, all participants who used to be in Kurdish and rebel-controlled cities said that they began to rely less on encrypted messaging as a tactic since 2013. The majority of the participants asserted that they abandoned encryption in the rebel-controlled cities, feeling that being away from the regimes' servers would protect their identities. Other SAS participants said that being in rebel-controlled areas already made them wanted by the regime, whether their protest messages on social media were encrypted or not. Osama, from Aleppo, said ‘all of us in the rebel-controlled cities are wanted by the regime anyway, encryption or not, it does not matter’ (Osama, personal communication, 2019).

Abandoning encryption to write critical messages against the regime online was related to the increasing levels of digital repression, especially Internet shutdowns and inauthentic access. ToR, for instance, started to lose its popularity in late 2012 in Syria. This could be explained by the fact that Internet access became decentralised due to the increasing number of Internet shutdowns. This decentralisation made Syrians in besieged areas use Satellite Internet and Foreign Wi-Fi, away from the regime's servers.

In addition to encrypted messaging, *hashtag protests* were commonly used as a tactic. It is a form of discursive protest on social media that is organised through a hashtag (Yang, 2016). This tactic is adopted by people who are more likely to experience police brutality and disinformation in

the media (Bonilla & Rosa, 2015). Hashtag protests usually aim to raise awareness or to mobilise people for offline protest by the temporal push of a large number of comments and retweets on social media at the same time using a certain hashtag (Yang, 2016)

In the Syrian case, by 2020 hashtag protests were among the very few tactical innovations left for Syrian activists to galvanize international outrage. Unlike routine hashtags that were used in the early stage of the uprising, Syrians relied on hashtag protests at a large scale when censorship and disinformation by both the regime and its international allies increased. Disinformation and censorship efforts discredited the SAS movement locally and globally and presented them as terrorists. The SAS movement needed to create a new narrative and attract international support to its case using hashtag protests.

All participants believed that this tactic had no real impact in terms of policy change, and none of their hashtag protests had succeeded in preventing nor claiming a policy change. However, one of the participants expressed that this hashtag activism makes Syrians feel ‘less alone’ and that Syria’s voice could be shared and heard.

Participants said they had promoted many digital hashtag protests since 2013, when the country was divided into regime and opposition areas. Hashtag protests started and ended at a specific time and by agreed-upon methods, such as hashtags profile pictures and posts. In all the examples that participants mentioned, the SAS movement promoted hashtag protest in both English and Arabic. When I met the Istanbul-based participants in early 2020, they were organising a hashtag protest using #SaveIdlib and #ادلب_تحترق.

#AleppoIsBurning حلب_تحترق had been referenced several times by the participants as being the most prominent hashtag protest. This 2016 hashtag protest urged people to change their Facebook and Twitter profile pictures to red icons to raise awareness of the Syrian humanitarian bloodshed. Millions of people worldwide took part in this digital protest in solidarity with the SAS

movement. In addition to the red icons, the protests encouraged people to close their Facebook accounts at midnight on the 30th of April for one day, hoping to reach 100,000 account deactivations so Facebook could lose money. This intended to pressure Facebook company, now META, to acknowledge the horrendous 2016 attacks in Aleppo.

Although this campaign found a lot of online support worldwide, it did not have a real impact on the ground. Doha, a prominent Syrian blogger, said:

This [the Aleppo is burning campaign] meant solidarity, which meant that people saw us. I do not know how impactful it was because no one really intervened, but it was important to us because it helped us define a narrative (Doha, personal communication, 2020).

To this date, hashtag protests are still used to raise the awareness of the international community to the crisis in Syria.

5.5 Conclusion

The Syrian Arab Spring movement originated from the Arab world's most repressive regime. The movement was able to use digital media at the early stage, benefiting from the fact that the regime was not as digitally repressive as it was physically. Thus, they were able to outmanoeuvre the early digitally repressive tactics the regime imposed. With the increasing level of digitally repressive tactics by the regime, ISIS, the Kurds, and rebel groups, the SAS movement could not sustain its online tactical innovations. Thus, online tactical stagnation became inevitable, and members of the movement gradually abandoned the tactics they were once pioneers in using.

The growing level of digital repression in Syria occurred in parallel with an increasing level of physical repression. While I cannot conclusively determine which type of repression had a bigger impact, I can emphasise that digital repression is a reflection of a regime restoring its control offline.

Likewise, online tactical stagnation is an indicator of a movement that is getting scattered on the ground. More conclusive explanations of the structural determinants of online tactical innovation and stagnation will be explored using quantitative data in chapter seven.

Table 5 shows that the SAS movement's online tactical innovations were motivated by digital repression. For instance, the disinformation campaigns against the SAS movement motivated activists to promote anti-regime disinformation, rely on hashtag protests to reach global audiences, and perform cyber hacktivism. Surveillance ignited activists to rely on encrypted messages and employ pseudonymity online. Nevertheless, what was prominent in the case of the SAS movement was that all the online tactical innovations were reactive to the digitally repressive tactics they encountered from the regime, ISIS, rebel groups, and the Kurds. The SAS movement did not employ pre-emptive online tactical innovations. The movement was a step behind and only adopted digital innovations when they were pressured to do so. Yet, the SAS movement could not carry on innovations when the number of digitally repressive tactics increased. Thus, a gradual stagnation of online tactics happened.

This online stagnation does not take place in one day. It is a gradual process that coincides with changes in the structure of the online practices by movements' opponents. It is also associated with the ways a movement would perceive the risks and outcomes of online activism. This stagnation

Table 5: The Nexus Between Digital Repression vs. Online Tactical Innovation in the Syrian Case (2011-2020)

Online Tactical Innovation	Digital Repression
Revolutionary Pseudonyms	Inauthentic access, surveillance, hacking, spies
Encrypted messaging	Surveillance, censorship, and inauthentic access
Hacktivism	Hacking, disinformation, and fake pages.
Mass Reporting	Mass Reporting, hacking, disinformation, and fake pages.
Counter-Disinformation	Disinformation, and fake pages
Hashtag protests	Disinformation, and censorship

Source: Based on the author's analysis of interviews with Syrian participants collected from April 2019- January 2020.

of online tactics by the SAS movement is in parallel with its increasing adoption of violent tactics, or actors giving up activism more broadly.

My argument may be disappointing to tech optimists who believe that digital media can challenge all forms of tyranny. Sometimes it is easier for academics to write about Arab activists as fighters who can challenge dictators and get over arrests and torture, forced displacement, and abuse by only using digital media. There is evidence to the contrary in this case study. The Arab Spring experiences prove to us that there is a certain capacity for digital repression through which movements can still use digital media for collective action. This capacity I refer to as 'moderate level of digital repression.' At this level, movements can introduce online tactical innovations to overcome such repression. When this digital repression increases and becomes unbearable, digital media's technological affordances can no longer be used for collective action.

CHAPTER SIX

A DISENCHANTED SOCIETY: THE CASE OF TUNISIA

6.1 Introduction

In the previous chapter, I deconstructed how digital repression has shaped, ignited, and dismissed the use of online tactical innovations by the SAS movement. Given the complex and repressive status of the Syrian regime, another perspective was needed to generate a solid theory of the precise impact of digital repression on online tactics. The SAS movement showed us how severe levels of digital repression could suppress the use of online tactical innovations. However, a big piece of the puzzle remained missing—what would happen if digital repression was declined or eliminated?

Despite the rich literature contending that repression motivates the adoption of new tactics (Demirel-Pegg, 2020; Moss, 2014; Tilly, 1995), only a few scholars discuss the impact of a situation where repression has been eliminated (Muller & Weede, 1990). Even fewer consider the role of digital media in this equation of contention and struggle. This chapter digs into the uses of digital media-driven tactics in response to digitally repressive tactics by democracy advocates in Tunisia over the years.

What are the types of online tactical innovations in Tunisia? What are the implications of digital repression on the TAS movement's tactical innovation? To answer these questions, this chapter first assesses the development of the role of digital media in Tunisia. In the second section, I summarise the digitally repressive tactics employed to control the TAS movement online. To explain this, I explore the evolution of the repressive digital practices used in the Tunisian context. Finally, I elaborate on the online tactical innovations of the movement and how they evolved over the years.

The Tunisian Arab Spring (TAS) movement introduced a lot of innovative tactics earlier than its counterpart in Syria. The TAS movement's innovations developed preventive measures to evade the system's repression. In the Tunisian context, Ben Ali's regime did not use advanced digitally

repressive tactics, as opposed to al-Assad's regime. While Tunisia was the first country in the region to witness a revolution, this did not give Ben Ali the opportunity to advance his digitally repressive repertoire. By examining the Tunisian case, I found a regime that was optimistic about silencing opposition by relying on primarily censoring and monitoring its citizens.

Based on the interview data, the Tunisian and Syrian movements employed similar online tactics. Indeed, the SAS movement and the Syrian regime learned from their neighbours how to revolt and how to end movements. In this chapter, I argue that the TAS movement, based on its early online innovations, was the source of many online tactics that were later adopted by other movements in the region.

This chapter demonstrates that despite the significant variation between the Syrian and Tunisian case studies in relation to the Arab Spring outcomes, online tactical innovation in Tunisia also stagnated. In the Tunisian case, members of the TAS movement felt that their source of oppression was removed and thus gradually abandoned the tactics they once pioneered. None of the tactics that were used in 2011 are currently administered by the movement. Similar to the Syrian case, the TAS movement also scattered due to the absence of a target whom all the activists could be united against. Currently, members of the TAS movement have different goals and moved on with their careers, except for a few who, despite being active on social media, refuse to describe themselves as activists.

Based on the data collected, I argue that the TAS movement has introduced several online tactical innovations to avoid digital repression. With a successful democratic transition, activists had reached a stage of activism fatigue that led to online tactical stagnation. This stagnation could be explained by the declining levels of digital repression in the country which inhibited activists from collecting resources and mobilising others. In this atmosphere, activists struggled to make their voices heard amidst the pollution of contesting political parties.

As much as the Tunisian Arab Spring (TAS) movement could seem different from the Syrian Arab Spring (SAS) movement, they both encountered almost the same level of digital repression at the beginning and were able to adopt similar online tactical innovations. Nevertheless, the TAS movement did not emerge during the Arab Spring. Tunisia was a country with a robust civil society and a well-connected bloggers' community before 2011. Hence, online tactical innovations started earlier in Tunisia than in Syria. This could explain why the TAS movement's tactical innovations bypassed the digital repression of the regime. However, these online novel tactics were abandoned when digital repression decreased. The online tactical stagnation happened faster in Tunisia compared to Syria in line with the dramatic decline of digital repression level following the fall of Ben Ali's regime.

Before you read this chapter, it is important to note that I performed this analysis between 2019 and 2020. This was a time before the government of Kais Saied took over and before things subsequently changed in Tunisia. While I will try my best to reflect on the current political and technological developments in the country based on my qualitative work, there will be limitations on how my data could reflect on the current online activism in Tunisia.

6.2 Background: The Tunisian Hope

Political scholars were optimistic about seeing a successful transition following the 2011 revolution in Tunisia—referred to as the Jasmine Revolution. Tunisia maintained a homogeneous society, as well as a class of moderate Islamists, represented in the *Ennahda* Party (translated as, the Renaissance), and a relatively open economy. These three elements were among the reasons Tunisia had better luck in transforming into a democracy (Wolf & Lefèvre, 2012). Quamar (2015) described Tunisia as the only country that did not fall back to an authoritarian regime or collapsed following the Arab Spring.

Tunisians impressed the world by organising peaceful marches against Ben Ali through social media. After Ben Ali fled the country to Saudi Arabia on the 14th of January in 2011, the army refused to intervene in the political affairs of the state. Ben Ali's Prime Minister Mohamed Ghannouchi claimed the right to become an Interim President (El-Khawas, 2012). One day later, on the 15th of January, the Constitutional Court had a fallout with Ghannouchi and appointed the Speaker of Parliament, Fouad Mebazaa, as Tunisia's Interim President (El-Khawas, 2012; Koehler & Warkotsch, 2014). Mebazaa asked Ghannouchi to form an interim government. Ghannouchi did not hesitate to include ministers from the old regime, which led to the resentment of the opposition and provoked protests again in Kasbah Square in Tunis (El-Khawas, 2012; Koehler & Warkotsch, 2014). Ghannouchi stepped down on the 27th of February in 2011, and a new government was formed under Beji Caid Essbsi, a former Minister during Bourguiba's government who later became the first democratically elected president in 2014 (El-Khawas, 2012).

Political parties and opposition elites, including Ennahda and the 14th of January Front, coalesced into the National Council for the Protection of the Revolution (NCPR). The NCPR joined a governmental commission for political reform to establish 'The High Commission for the Fulfilment of Revolutionary Goals, Political Reform, and Democratic Transition.' The High Commission led the negotiations related to the transition and played a significant role in ensuring a democratic transition for the country until the first elections (Aghrout, 2014). In October 2011, the first elections were held to select the members of the National Constituent Assembly, known as the NCA (Aghrout, 2014). The NCA primary mission was to draft the country's first constitution following the revolution. The transitional government held the Constituent Assembly elections, which were considered the first victory toward democracy (Pickard, 2011).

The Islamist Ennahda Party won the majority of seats (89 out of 217 seats), becoming the largest party in this NCA in 2012 (Ayari, 2015). Therefore, the Ennahda Party was responsible for

forming a new interim government and electing an interim President (El-Khawas, 2012). A three-party coalition government was formed, representing members from Ettakatol Party, Congress for the Republic Party (CPR, the French acronym), and Ennahda Party. The CPR's Monsef Marzouki was elected as an interim President, Ettakatol's Ben Jaafar was elected as a speaker for the assembly, and Ennahda's Hamdi Jebali as a Prime Minister (Ayari, 2015).

Following Ennahda win, fears of imposing Sharia law, the Islam-inspired law, grew among secularists (El-Khawas, 2012). The assassinations of prominent leftist leaders that started to take place in 2013 led to more demands for the formation of a new government (Ayari, 2015). Ansar al-Sharia, a local radical Islamist group, was accused of these assassinations. Ennahda was accused of being lenient with this group and its crimes (Quamar, 2015). This unexpected turn of events threatened to derail the transition. However, several factors kept the democratic process on track, including the formation of the Tunisian National Dialogue Quartet in 2013. It consisted of a coalition of civil society groups to set a roadmap for the country following the previous unrest (Borger, 2015). The national dialogue process concluded with an agreement to replace the Ennahda-led government with a technocrat and to hold the presidential elections within a year (Masmoudi, 2018).

After two years of ruling the country, Ennahda Party was no longer electorally popular. In October 2014, the House of People's Representatives elections were held, and Nida Tounes Party won the most seats. In the same year, the presidential elections took place in December 2014. Essebsi of Nida Tounes beat Monsef Marzouki of CPR, who was supported by Ennahda (Quamar, 2015). All the political parties accepted the results, which showed a high degree of faith in the democratic transition process. Nida and Ennahda worked together to form a coalition government along with two other parties (Masmoudi, 2018).

Although Tunisia has impressed the world with its transition into a democracy and its political model of consensus, its economy has always been in shambles. This led to an unprecedented increase

in the unemployment rates in the country (Masmoudi, 2018). This unresolved growing economic problem provoked protests across the country in January 2018. Thousands of unemployed youth marched in protests after the government imposed new taxes to meet the demands of the International Monetary Fund (IMF) (Burke, 2018; Chandoul, 2018). Consequently, 800 people were arrested and one was killed by the police forces in an attempt to curtail the protests (Khelifa & Hamouchene, 2018).

The latest Tunisian Parliamentary and Presidential elections took place in November 2019. Presidential candidates and political parties competed in using digital media during these elections. Misinformation, trolling, and bots were extensively employed by candidate campaigns on social media (Elswah & Howard, 2020). Following the electoral win of the current President Kais Saied, a constitutional law professor, he suspended the Parliament, fired the Prime Minister, monopolised the executive power, and drafted a new constitution. With this, more concerns were raised about restricting digital rights in Tunisia and targeting social media users (SMEX, 2021). While this chapter predates Kais Saied's era, its findings could be used to evaluate and assess the current uses of digital media in Tunisia as a hegemonic and counter-hegemonic tool.

6.3 Fieldwork Methodology in Tunisia

To understand the intersection between digital repression and online tactical innovation in Tunisia, I interviewed 28 Tunisian bloggers, digital media experts, and activists during the period from June 2019 to January 2020. I visited Tunisia twice, each time for about two weeks. I was planning to stay for a longer period; however, visa restrictions prohibited me from staying further. Despite that, I was able to travel in June 2019 and in December 2019.

Before my trips, I reviewed the literature and newspapers to find potential participants who were previously interviewed for their expertise in digital media in Tunisia. After forming a list of

potential participants, I reached out to them on social media platforms to ask for interviews. Many have agreed to meet with me, while others never responded to my messages. In addition, I relied on snowball sampling to be able to meet this number of participants during a short period of time. I interviewed those who self-identified or were identified by their peers as having substantial experience using digital media for advocacy.

All the interviews were conducted face-to-face in Tunis, the Capital of Tunisia. Unlike the Syrian case, the uses of digital media would not extensively vary from one governorate to another, and hence I only stayed in Tunis. I met participants in cafes, offices, and even at their houses. Even though I am an Arabic-native speaker, I could not have a strong grasp of the Tunisian dialect, known as *Derija*. As an Egyptian, I am more familiar with Eastern Arabic, *Mashriqi Arabic*, while Tunisians practice Western Arabic, *Maghrebi Arabic*. Hence, most of the interviews were conducted in English or in a soft Tunisian dialect mixed with Modern Standard Arabic, *Fusha*.

Unlike my intense experience during the fieldwork for the Syrian case, Tunis felt more like home. The city was safe, friendly, and welcoming. Participants also spoke freely without any fears or doubts that they could be harmed. In addition, the discussions were not traumatising but rather were optimistic and left me hopeful for a brighter future for this country and the region.

The interviews lasted from one hour to three hours, with an average of seventy minutes for each interview and a total of 36 hours in total for all the interviews together. Compared to Syrian participants, I felt that the Tunisian participants were harder to find and approach. Also, I felt that my hijab created a hurdle between myself and potential interview subjects and was a factor in my lack of success in attaining as many interviews as I did with my Syria study. My hijab seemed to be perceived as a marker of my identity as anti-liberal, and less intellectual. Before the 2011 uprisings, Tunisia had a long history of banning the hijab and discriminating against women wearing it.

Detailed field notes were taken during the interviews, memos were developed after each interview, and synthesis memos were drawn following every five interviews to identify the common themes among the participants (See more, Halcomb & Davidson, 2006). In this study, I used pseudonyms to refer to the participants to protect their identities. Although many participants wanted their real names to be mentioned in the study, I chose not to due to the many unprecedented changes in the political scene in the country.

6.4 Analysis of the Organisational and Tactical Innovation in Tunisia

6.4.1 The Rise of Cyber Activism (2011-late 2012)

Tunisian cyber activism could be traced back to 1998 when a group of students created an online forum called *Takriz* (translated as, anger) which was hosted on a server in Canada (Gordner, 2016; Zayani, 2015). In 2000, this forum was banned, but other alternative online forums, blogging platforms, and websites emerged that stood up against censorship, such as Nawwat, TUNeZINE, and Tunisnews. When Ben Ali hosted the United Nation's World Summit on the Information Society (WSIS) in 2005, which intended to discuss 'ICT for development', NGOs launched protests to question the suitability of Tunisia as the host of this meeting in a country where Internet freedoms are repressed. Ever since then, the blogosphere has been the main channel for challenging Ben Ali's regime (Zayani, 2015).

Participants noted that cyber activism was more advanced in Tunisia compared to other countries in the region, such as Syria. Participants expressed extreme pride in being a pioneer country in blogging and using social media for advocacy. They referred to Tunisia as the country that 'taught' other neighbouring countries how to use blogs for political participation.

During my interviews, the name of Zouhair Yahyaoui was mentioned repeatedly as the first cyber activist that was arrested for blogging against Ben Ali in 2004. Zouhair created a blog and led

open discussions on many issues, including women's rights, economic problems, and freedom of expression. Hussien, a Tunisian blogger, described Zouhair's work:

In Tunisia, cyber activism had been well established before the revolution. Tunisia gave the first martyr of cyber activism in the world. I cannot but speak about Zouhair Yahyaoui. He did not do anything apart from creating an online platform where people would write about the regime. This was not liked by the regime and caused his arrest and death. There was a whole generation that followed Zouhair Yahyaoui's steps (Hussein, personal communication, 2019).

Zouhair died shortly after he was released in 2005, weakened by the dire conditions he had in jail. Inspired by Zouhair's death, many bloggers were encouraged to write in public forums against Ben Ali's rule. A secret community of bloggers was formed in 2005, creating a more rigorous sense of belonging to this cause. Nasser elaborated:

Back then, being an activist was a commitment and a dangerous mission. We were not too many. We were about 400 bloggers only. Being a blogger in itself was a sign of activism because you were writing on the Internet without the government's consent. In 2005, there was the first bloggers' meet-up in Tunisia. They would meet and talk about the issues. We had a sense that the police were watching us. We felt that something was going on. Those meet-ups and gatherings created some kind of lobbying and brotherhood among us (Nasser, personal communication, 2019).

Blogging was a dangerous career path. Participants described it as a 'risky commitment' that could have put them behind bars. Many of their digital collective actions back then were not persuasive but somewhat confrontational. Their actions confronted Ben Ali by showing society that the bloggers' community existed and had a collective presence in the country. Nasser told me about the first collective actions that bloggers organised:

In March 2006, there was a campaign called ‘the blank post’ in which all bloggers had to post a blank blog simultaneously. This was the first collective action we did together. I think 206 blogs and articles were created online. It was something because doing the same thing at the same time meant a lot. It meant that we were committed and ready (Nasser, personal communication, 2019).

On the 17th of December 2010, the revolution erupted following the self-immolation of the street vendor Mohamed Bouazizi in a small city in Tunisia called Ben Arous. Bouazizi sparked public anger because his self-immolation was a response to the confiscation of his cart, leading to losing his only source of income. Protests were organised and mobilised across the country on Facebook. Gameel elaborated:

Social media played an integral role in the Tunisian revolution when mainstream media outlets supported the regime. Bloggers and advocates only used social media to mobilise and exchange information and coordinate protests on these platforms (Gameel, personal communication, 2019).

Through social media, protests moved from the city of Ben Arous to the Capital, Tunis. Manal explained:

The revolution did not start in the Capital. It would not have been a revolution without the protests reaching the Capital, Tunis. How did the revolution move to the Capital? It did through social media platforms. Without Facebook, the impact would not have reached Tunis (Manal, personal communication, 2019).

However, a few participants disagreed that social media was used for mobilisation but mainly for coordination. Hussein argued:

In comparison to Egypt’s ‘We Are All Khaled Said’ [a Facebook page that mobilised thousands of people], we did not have such a page. Yet, we had a large and connected

community. Social media was used to coordinate the revolution; we used social media as a tool to coordinate. We used social media to keep people informed, but when the revolution erupted, there was a shift. Here, social media became the finality and the end itself. You share just to share; there was no mobilisation within. So, when we were against Ben Ali, we had one target who was Ben Ali (Hussein, personal communication, 2019).

6.4.2 A Scattered Movement (2014- 2020)

Following the 2011 revolution, participants pointed out that cyber activism had evolved dramatically in Tunisia. They all agreed that the 2011 TAS movement had scattered and was no longer present as a collective act. Unlike the SAS movement, which was impacted by external factors, the TAS movement scattered due to local and personal factors. Participants pointed out that the movement scattered for four reasons: a) the absence of a target, b) the need to survive, c) the absence of affective publics, and d) failure to adapt. Based on my interviews, I argue that the TAS movement anxiously tried to survive during the transition but could not sustain an organised form of collaboration after 2014—when the first Presidential elections were held.

6.4.2.1 The absence of a Target

Removing Ben Ali was the goal that took people to the streets in 2011. In the aftermath of 2011, the lack of a collective goal drove activists to follow different paths. All participants noted that it was the main reason they could not carry on as a collective movement because they did not have a shared target they all wanted to remove, weaken, or oppose. Cyber activism emerged from only a few hundred of bloggers to a large scale of less tech-savvy citizens. According to the interviews,

participants thought that with many people joining cyber activism and criticising many issues, there was no current 'enemy' that could unify all these voices. Nasser explained:

Before 2011, you had a blog, and you were against the system, then you were an activist.

We all agreed on that, even people who were against us. But today, everybody is against everybody. Everyone calls themselves an activist somehow (Nasser, personal communication, 2019).

With a new generation of activists growing in the country, bloggers followed different paths and lost the collective sense that used to unite them. Sara remembered, in a sad voice, how Tunisian bloggers were no longer connected:

The bloggers of 2011, a lot of them, are no longer in Tunisia. Even those who came back to the country, left again. Those who were here, they moved out. We [bloggers] used to have these Friday Cuscus gatherings, all of us. We would meet weekly. We would have a long table of people eating Couscous. Then, we stopped. And the gathering stopped for a year and a half. These gatherings had started before 2011 and stopped three years ago.

Some people were not in Tunisia for a long time (Sara, personal communication, 2019).

When I was conducting the interviews, my research participants described cyber activism as a 'no longer a risky task' and that Tunisians can now freely criticise the government online. Participants described civil society organisations as able to speak openly about their goals and aspirations as opposed to the censorship prior to 2011. Some participants were eagerly optimistic about the current political status and noted that there was nothing to mobilise against, describing that their 2011 demands were fulfilled. Participants stated that the current online mobilisation is focused on different gender issues, education, and the environment.

Other participants argued that the current mobilisation attempts cannot be labelled 'activism' but rather 'campaigning.' Unlike the situation in 2011, during which activism constituted

fighting the system and risking the activists' safety, participants said that this was no longer the case. Hence, Nasser believes that they no longer should describe themselves as activists but rather should be called 'campaigners', he posited:

The first thing that changed was the traditional way of activism as we knew it. Now, everybody is free, and everybody has the right to speak online. Before 2011, an activist was someone who was committed to fighting the system. Being an activist was dangerous and you had to keep your identity anonymous. Nowadays, everybody with Internet access can promote a cause. Some of them are dedicated and are present at every event. Those I will not describe them as a full-time-activist, but I will call them dedicated campaigners (Nasser, personal communication, 2019).

The absence of a goal was not the only reason the TAS movement scattered. At this stage, blogging and activism were not profitable and valued actions. Members of the TAS movement needed to find alternative practices that could help them survive on a day-to-day basis.

6.4.2.2 The Need to Survive

Participants noted that members of the TAS movement needed to abandon activism and carry on with their lives. Activists could not afford basic living expenses, such as food, water, and medicine because they had devoted their lives for many years to the movement. From the interviews, participants described cyber activism as an occupation that was, most of the time, an unpaid practice. Azza pointed out that bloggers and activists needed to carry on living and supporting their families; she noted:

You cannot ask people to rally all the time. About 90% of people who have been blogging are now having full-time traditional jobs. There were only a few bloggers who could afford to live from different resources and have more time for the causes (Azza, personal communication, 2019).

Participants noted that members of the TAS movements either took political positions in the government, travelled abroad to find jobs, ran for the Parliament, formed NGOs or organisations, or took non-political jobs.

This change was reflected on the Facebook pages that were used in 2011 for mobilisation. One of those pages was called 'Tunis, Tunisia, Tunisie'. This page had more than one million followers in 2011. After Ben Ali fled the country, the battle that used to unite the people ended. The page was later taken by a group of people who promoted other commercial and non-political matters to profit from the page. Amira stated:

Before the revolution, there were thirty or forty admins managing the page. You can easily talk to ten or twenty and convince them of something. After Ben Ali had left, there was nothing to unite them anymore. So, at this point, people only cared about their personal interests. For example, 'Tunis, Tunisia, Tunisie' page was taken over by a group of people.... There were a lot of admins, they took everybody out. They started selling the page...they used it for commercial stuff (Amira, personal communication, 2019).

6.4.2.3 The Absence of Affective Publics

Following a long period of romanticising and idealising the revolution, I argue that Tunisians were hit by a 'revolutionary fatigue.' While the TAS movement scattered over the years in Tunisia, the movement lost the support of the general public. Inflation, poverty, and unemployment, which continued growing in Tunisia, were factors that made people become less interested in supporting online campaigns. Amr, a blogger, elaborated that 'in 2018-2019, we were experiencing a disenchantment. People started to lose interest and started to question all the online campaigns on Facebook.' (Amr, personal communication, 2019).

Participants noted that Tunisians were no longer affected by online mobilisation. In her book, Papacharissi (2014) coined the term ‘affective public’ to describe people who engage in politics as an effect of consuming offline and online media. Indeed, Tunisians were pioneers in becoming affective publics. Following the removal of Ben Ali, Tunisians had become less mobilisable. They also started attacking and discrediting any attempts of mobilisation online. Sara stated:

I feel like we disappointed our people a lot. Civil society was not able to push back and fight so many things because we were basically using the wrong approach. People did not respond positively to a Facebook event and took to the street... Overall, the use of social media for mobilisation and protesting was no longer efficient and was no longer the same (Sara, personal communication, 2019).

All participants during my fieldwork talked about a campaign they were part of from 2015-2016. This campaign, known as *Manish Msamah* (translated as, I am not going to forgive), was promoted against a law that former President Essebsi wanted to pass to reconcile with former members of Ben Ali’s regime. The Tunisian civil society leaders protested against this law and launched an online movement to mobilise people to take to the streets. Participants noted that despite the massive online campaign, they could not succeed in mobilising people to revolt. Sara elaborated:

It was a great movement and stood up against the reconciliation law for three years, which the President came up with. People protested for three years. The movement was efficient somehow, but the law has been passed anyway. It was very unfortunate. People were so tired. People were not taking to the streets. We were about 3000 or something. Passing a law like that would have made people go out in 2011. It was something very important. We invested a lot in it. After this movement, we realised that we were missing a lot and that people were no longer in the street (Sara, personal communication, 2019).

During the time I spent in Tunis, I witnessed two protest events. One event organised by the Manish Msamah movement where people wore t-shirts with the movement's logo printed on them. In the second event, people protested against the sluggish economy in the country. In both events, I noticed that only a few people assembled in these protests. Streets were not disrupted, and people passed without paying attention to these events. Despite that, my participants blamed themselves and the entire civil society community in Tunisia for failing to adapt quickly to the new political and economic changes in the country.

6.4.2.4 Failure to Adapt

Participants stated that 2011 bloggers and activists failed in 'transitioning' themselves after Ben Ali was removed and after the political situation had improved. Hussein mentioned:

First, I think we did not transition well from being anti-agenda to becoming pro-agenda.

All we knew was how to oppose something but not how to promote an idea to reform the country. Second, Cyber activism was an act of heroism when there was censorship.

When censorship was removed, everyone was able to share their opinions. Activists and bloggers became like everyone else... They also got old. People migrated from blogs to Instagram and Facebook. Bloggers, who just kept on doing the same things, were no longer famous. Older generations knew the names of these bloggers, but younger generations did not... bloggers stopped being the superstars of 2011. Some were hit by the ego that they were no longer superstars. Some of them accepted this (Hussein, personal communication, 2019).

Digital media is no longer the optimal tool for mobilisation in Tunisia. Participants noted that Tunisians are 'fed up' with cyber activism and admirable slogans about freedom of expression. Dina, a long-term Tunisian icon, believes that 'people are fed up with freedom of speech and media. They no longer defend those who blog and write. We should look for alternative options' (Dina, personal

communication, 2019). Heba, an advocate, notes:

In 2011, the use of the Internet was a lot more effective because it was a channel to facilitate political activism. It took the regime by surprise. Whereas now, you can say the Internet lacks effectiveness in similarly positioned campaigns (Heba, personal communication, 2019).

For these reasons and more, the TAS movement scattered and lost its ability to mobilise people. Yet, after the current President Kais Saied froze the parliament and dismissed the government in July 2021, thousands of Tunisians took to the streets again, denouncing Saied's actions. A new generation of civil society groups mobilised people to demonstrate using Twitter hashtags and Facebook groups, organising the largest protest event since 2011.

In the following sections, I will elaborate on the digitally repressive tactics employed by Ben Ali to control and restrict Internet access. Later, I will illustrate the online tactics the TAS movement employed in the aftermath of the 2011 revolution.

6.5 Tunisian Digital Repression

In the previous chapter, I stated that the SAS movement was a subject to different pre-emptive digitally repressive tactics employed by local and foreign actors. These tactics lasted to this date and even became more sophisticated. On the other hand, the TAS movement was targeted by a mix of pre-emptive tactics that failed to dismiss the contention. Disinformation is the only tactic that is still currently employed by the contesting political parties in the country. Based on the interview data, I classified three types of digitally repressive tactics illustrated in the following section (see Table 6).

Table 6: *Tunisian Digital Repression Repertoire (2011-2020)*

Tactic	Description	Actor(s)	Duration
Censorship	Filtering and blocking access to certain domain names or content online	Ben Ali	2000-2011
Surveillance	Either using advanced technology to detect the IP (Internet Protocol) addresses of users, or hiring people to monitor users' online activities	Ben Ali	2008-2011
Disinformation	Spreading false information to demobilise and discredit a movement	Ben Ali and political parties	2008-present

Source: Author's analysis of interviews with Tunisian participants collected from June 2019- January 2020.

Note: The duration of using each repressive digital tactic is estimated from the interviews and Open Net Initiative. Participants attributed these actors and that they were responsible of employing digitally repressive tactics against the TAS movement.

6.5.1 The Old Tactics

From the interviews, participants noted that Ben Ali misunderstood the power of digital media. All participants agreed that Ben Ali's digitally repressive tactics were not as advanced as other neighbouring countries in the region. Yet, Ben Ali's regime focused its efforts and money on *censoring* online content. During Ben Ali's rule, more than a thousand websites were blocked, including YouTube and DailyMotion (Zayani, 2015). The first website to be blocked was *Takriz* in 2000 and the first social media platform to be censored was YouTube in 2007. YouTube only became accessible when the protests erupted in 2011. Because of this, Tunisia was one of the most restrictive countries in accessing online content (Zayani, 2015). Heba noted:

Ben Ali used to have a whole team who did this, but in his last days as a ruler, it seemed he could not really understand how social media could be used against him. He used to focus on limiting access to social media rather than on how to use it against his opponents. He focused on shutting down websites, and how to limit freedom but not on how to use these tools against opponents (Heba, personal communication, 2019).

These censorship attempts became known locally in Tunisia as ‘Ammar 404’. Ammar was a fictional character that activists coined to describe Ben Ali’s thugs and alliances. The number 404 was the one that was shown on the screen when a website became inaccessible to signify ‘Forbidden 404.’

After blocking YouTube and successfully banning many websites, Facebook was also subject to a censorship attempt in 2008, which lasted only for two days. Ben Ali was pressured to undo this Facebook ban due to the heightened tension in the country, ignited by the bloggers’ community.

Fawzy elaborated:

Under the regime of Ben Ali, some blogs were not accessible, and all you got was ‘404 forbidden’. This was due to the Tunisian Agency of the Internet, which had all the control over all the electronic intelligence. Ben Ali tried to ban Facebook in Tunisia. He did, for two days only after many people advised him not to because this ban would backfire.

Nevertheless, he banned YouTube for a long time (Fawzy, personal communication, 2019).

Interestingly, a few participants pointed out that despite Facebook being accessible during Ben Ali’s tenure, specific pages for prominent bloggers and activists were blocked, like the user profile of Lina Ben Mhenni, an Internationally recognised blogger and a noble prize nominee. After the uprising, all websites and social media platforms became accessible following Ben Ali’s fall. Now, Tunisians are enjoying an unfiltered Internet.

The second tactic that Ben Ali relied on was *surveillance*. All participants agreed that they had been subjected to surveillance during that era. Participants noted that surveillance tools were based at the Tunisian Internet Agency (ATI, the French acronym) and that all the conversations were monitored by this agency. One of the participants was confronted by the police with screenshots from her private Facebook messages in 2009, Fayza stated:

With Ben Ali, we did not have any freedom at all. I received a message on Facebook in 2009, the message was about organ trafficking. I just forwarded the message to warn parents that they should not add their children's photos on Facebook to protect their kids. The police showed me this message and they wanted to speak with me. I was sentenced to eight months in jail for a message I received (Fayza, personal communication, 2020).

When the revolution took place, the surveillance equipment was found at the ATI building and was confiscated and removed.

All the participants lived in a 'surveillance status' that lasted for decades, even before the presence of advanced digital media tools. After 2011, Tunisia transited suddenly into a country that would let people speak, listen, and do things unmonitored. While this transition seemed to happen when the government changed, Ben Ali's surveillance state left a ghost that the participants felt and fought its shadow for years after. I call it here the 'surveillance trauma'. All participants expressed that they could not get rid of the feeling that they were being monitored immediately and kept using the same tools to counter-surveillance for a while. Steadily, and in most cases, the trauma faded away. Nevertheless, in a few cases, some participants still felt they were being monitored, although they did not have any proof of this.

Many participants stated that surveillance was no longer a tactic that was used against bloggers, activists, or the public. They referred, however, to the use of surveillance tools for counterterrorism, which was described as a legitimate practice. Heba noted:

Now, we do not have the same online surveillance at all as we did before, but this culture still exists. Online surveillance now does not exist, with the exception of targeted surveillance against defendants and counterterrorism cases. This is articulated in the

anti-terrorism law (Heba, personal communication, 2019).

Hatem also emphasized:

We have a law against terrorism that allows authorities to keep an eye on social media.

After 2014 they figured out that social media is the most important place where ISIS recruits people (Hatem, personal communication, 2019).

However, some participants argued that surveillance was employed during Ennahda era. Participants noted that Ennahda Party had a team to report the online activities of their opponents during the 2014 elections. Hamdi stated:

Ennahda had its own Internet team. We did know that they have a team to monitor the Internet and to write reports about what is going on. This was part of the work they did. They had a communication team; we called it the propaganda team. They used to be very active during the 2014 elections and municipal elections, they were very active online and used all the platforms. But they are no longer active, I do not know why (Hamdi, personal communication, 2019).

Despite that, many participants expressed that they are no longer afraid of speaking up on social media. Even though many participants referenced the terrorism law as a method used to impose surveillance, the law was described as an essential 'national security' matter.

6.5.2 Current Tactics

Disinformation was the last tactic that Ben Ali used during his ruling and the only one that lasted after his removal. Participants pointed out that they were targeted years before 2011 with fake news circulating online, particularly on Facebook. Ben Ali's regime co-opted social media to discredit

bloggers, activists, and advocates. Sara, who herself was a primary subject of smearing campaigns at that time, stated:

Ben Ali created an entire online army at the Tunisian Internet Agency. He created an army pretending to be Islamists going online trying to get in touch with dissents in the country. In 2013, people were able to go into the headquarters of the ATI and go to the basement, where Ben Ali did all the tactics and saw all the equipment (Sara, personal communication, 2019).

Participants did not agree on whether Ben Ali employed bots and trolls, but three participants affirmed that trolls were in use during that time. Hamdi, who had met a troll, stated:

It was not used [bots]. We did not notice that the regime or its supporters were using automated bots. But Ben Ali had trolls. He had an army of cyber police of people who, some of them, were known by face and name. Some of them apologised for what they had done to me. Yes, trolls were used on social media by Ben Ali, for sure (Hamdi, personal communication, 2019).

When Ben Ali was ousted, and Ennahda took over in 2012, disinformation continued. Participants accused the Islamist Party of targeting 2011 activists and bloggers with smear campaigns. The bloggers and experts I met described Ennahda Party as ‘the one with the largest cyber army,’ pointing out that they had the fund that could facilitate such operations. Fawzy added:

The most organised online militias are Ennahda’s. They would attack you online if you would say anything against Ennahda. Some of them are organised by the leaders, and some others are just loyalists to the Party. They were active during Ennahda’s rule, but now they only appear when you criticise Ennahda (Fawzy, personal communication, 2019).

Hussein sees that all Islamist groups in Tunisia have cyber armies. He noted:

Islamists were mean to the bloggers. They [bloggers] seemed very credible and very widely popular. Islamists hated this. Islamists built a digital army to smear them, like Lina Ben Mhenni. They made them the most hated people in Tunisia. All these bloggers were liberals. Islamists used their liberal ideology against them (Hussein, personal communication, 2019).

Disinformation was a form of digital repression used by the one political party in power in 2011. With the introduction of multiple parties after the revolution, disinformation as a repressive tactic took on a more egalitarian framework. All political parties are now employing and using different forms of computational propaganda to compete on power, Nasser explained:

Disinformation is the biggest market in Tunisia. It is happening right now. It is the market between political parties and Facebook admins. An average Facebook page with 8,000 followers is worth 5,000 to 10,000 dollars a month during the election peak. It is a parallel market, and it is thriving in Tunisia (Nasser, personal communication, 2019).

Disinformation moved from being a tool of suppression into a political tool to win elections. For instance, iWatch members, a prominent anti-corruption NGO in Tunisia, became a target of smearing campaigns on Facebook for publishing reports on the 2019 Presidency-runner Nabil Karoui. Photos of female members of iWatch spread on Facebook, accusing them of obscene acts. Female members of the organisation were attacked in the streets as a result of this campaign.

During my fieldwork, I went to a political party that was newly formed in Tunisia. I met some members of the Party to get to know how they used digital media to promote their political activities.

During this meeting, I met their leader and their social media specialist who happened to be an expert on all the tactics of online manipulation. The Party leader stated:

If you have social media, then you have a team, and you must have trolls. Each political party has at least 200 persons working only to promote the Party online. Ennahda movement has hundreds of people who manage their social media... we do have a social media team. Our cyberteam—those who support me when I write something online—and another team based at the Party's headquarters. In every province in Tunisia, there is a team to promote me in the coming elections (Party leader, personal communication, 2019).

The Party's social media specialist proudly explained the method they used to manipulate the online sphere and target their opponents. He emphasised that these tactics were employed by all political parties in Tunisia. He stated that his party owned unofficial pages to target the other opponents indirectly. These pages were also used to promote cases the Party cannot make an official statement about. He explained:

You must own some unofficial pages through which the political party can promote itself indirectly. These pages are used to support issues the Party cannot take official stands on them. Politics is about being a good attacker. Political competition is about using all methods to attack opponents. The easiest way is through social media pages, especially the unofficial ones...official pages do not attack anyone. They are only used to make official statements that represent the Party. The smearing campaigns happen on unofficial pages... We use both Facebook pages and accounts. Pages are used to speak to the Party's supporters and activists—those who will share information.

Accounts are used to comment on these posts (Social media expert, personal communication, 2019).

Despite that, the TAS movement and the new generation of activists were able to innovate several online tactics to overcome digital repression.

6.6 Tunisian Online Tactical Innovation

The TAS movement was a pioneer in the region in using digital media to express their voices, oppose Ben Ali, and develop online collective tactics. They were pioneers as their tactics were later adopted by other movements in the region. Similar to the SAS movement, the TAS movement's online tactics were preventive and were a response to Ben Ali's repressive tactics. The movement was able to develop more tactics than its opponent in 2011, which I argue that it aided the movement in countering Ben Ali's limited forms of digital repression (see Table 7). However, most of these tactics gradually disappeared after 2011 as censorship and surveillance in the country eased.

In this chapter, I argue that the TAS movement has developed many of its online tactics to be able to politically participate in the country and perform their collective actions despite Ben Ali's digital censorship and repression. The movement has perceived Ben Ali's digitally repressive tactics as less advanced compared to other neighbouring countries. Indeed, Tunisia was the first country to witness a mass protest in the region. That did not give Ben Ali the time to prepare for advanced manipulative and repressive tactics.

As such, the TAS movement was able to develop several tactics in response and forestall digital repression. These tactics varied from encrypted messaging to countering disinformation. However, with the removal of Ben Ali, these repressive tactics were reconfigured to the new realities of the post-revolution. What was left was only counter-disinformation which was weaponised by a new generation of civil society. Hence, members of the TAS movement abandoned the tactics they once introduced in 2011.

Compared to the SAS movement, the TAS movement used fewer online tactics. However, the TAS movement was more strategic in the way they employed their tactics in terms of time and goals. The movement's innovations outpaced the Ben-Ali regime's repressive ones. The TAS movement also did not need to employ more online tactics than its SAS counterpart because of the lesser repression the TAS movement had to encounter. In Tunisia, there was only one villain that unified a whole movement against him. Unlike Syria, Tunisia did not witness foreign actors' online repression and hence there was no pressing need to adopt or innovate new online tactics after the removal of Ben Ali.

In the post-Ben Ali era, it became clear that political parties were the actors that dominated the online sphere and not the new generation of civil society. The new online tactics that were used by the new generation of civil society groups were not adopted widely and were mainly context-specific, such as campaigns around elections. In the below sections, I elaborate on the many ways the TAS movement adopted online tactics and adapted to Ben Ali's digital repression. I argue that despite the differences between the SAS and the TAS movements, there were many similarities between the two movements in terms of the ways they selected their online tactics.

Table 7 : Online Tactical Innovation of the TAS Movement Repertoire (2011-2020)

Tactical Innovation	Description	Type	Duration
Revolutionary Pseudonyms	Using aliases that are critical of the regime on social media platforms to overcome surveillance.	Persuasive/Individualistic	2006-2011
Encrypted Messaging	Relying on VPNs, proxies, encrypted browsers, such as Tor to send and publish criticising messages	Persuasive/Individualistic	2008-2012
Counter- Disinformation	Activists spread false information about the regime	Confrontational/Collectivistic	2010- to present
Hactivism	Cyber troops to hack the regime-affiliated actors	Confrontational/Individualistic	2011-2011
Co-opting algorithms	Taking advantage of social media algorithms to generate genuine support to the movement	Persuasive/Collectivistic	2013-to present

Source: Author's analysis of interviews with Tunisian participants collected from June 2019- January 2020. Types of tactics are inspired by the work of (Postmes & Brunsting, 2002).

Note: Collectivistic tactics are the ones that require the participation of many activists, while the individualistic ones are those that could be undertaken solely to achieve a collective goal. Persuasive tactics are those whose primary goal is to persuade others, while confrontational tactics are those that engage and confront opponents.

6.6.1 Persuasive Tactics

The TAS movement was a pioneer in using *revolutionary pseudonyms* to shield activists' identities from Ben Ali's surveillance apparatuses. The use of revolutionary pseudonyms started even before bloggers knew that Ben Ali was heavily investing in surveillance machines. Most participants said that they used pseudonyms on Facebook, Twitter, and blogs. Only a few declared their identities during Ben Ali's era and revealed their names. Nasser, who used a pseudonym himself to publish his blog, stated: 'only 10% of the bloggers were openly against the system. The others were anonymous and used aliases online.' (Nasser, personal communication, 2019).

However, a few did. I met one of those bloggers who revealed their identities to Ben Ali's regime. She mentioned that revealing her identity cost her a lot and put her at unnecessary risk. Dina stated regretfully that she was 'stupid and naïve.' She added 'I did not think through the

consequences. I wanted to challenge things, and that is all. I did not think thoroughly of what could go wrong.’ (Dina, personal communication, 2019).

The fear of revealing the bloggers’ identities was abolished during the transition. Members of the movement no longer used pseudonymity to oppose the regime and to protest online. However, a few wanted to carry on embracing their revolutionary names. Unlike the SAS movement’s members who revealed their identities, some bloggers from the 2011 TAS movement chose to conceal their real names and carried on using aliases for a while. However, this was a personal choice rather than an activism necessity. Nasser explained:

A lot of Tunisian bloggers are still anonymous to this date. No one knows them. Because some of them, for example, do not want to be involved in anything. Others think that being anonymous is very cool... from 400 bloggers who mobilised against Ben Ali, we know the identity of very few. About 60% of them are still anonymous (Nasser, personal communication, 2019).

However, participants noted that pseudonymity is no longer used within the online Tunisian sphere as a method to avoid surveillance. I argue that with the absence of surveillance, members of the TAS movement abolished pseudonymity as an innovative tactic to protect themselves. With digital repression declining, online pseudonymity moved from being an online innovative tactic into a self-branding strategy.

Encrypted Messaging was another innovative tactic that was employed by the TAS movement. Encrypted messaging was a necessary survival tactic for the TAS movement to access blocked content and to communicate with each other. All participants stated that they used Tor, VPNs, and many other encryption tools to access blocked websites and to communicate during Ben Ali’s era. The utility of these tools, according to my interviews, was mainly to circumvent censorship and not to protect against surveillance. The amount of blocked content during Ben Ali’s era was the

highest in the region. Hence, the use of encryption tools became an online activism tactic to show Ben Ali that his censorship and surveillance would not succeed. Encrypted messaging was also necessary to trade information that his regime wanted to conceal. Sara explained:

I actually asked this question to other bloggers: did we use VPNs to protect ourselves or to overcome censorship? I think we were just using them to overcome the censorship, not for protection. I do not know, but most of my peers used VPNs only when they needed to check the news (Sara, personal communication, 2019).

Encrypted messaging as a tactic stagnated gradually. Some participants pointed out that they no longer use encryption because there are no blocked websites in Tunisia, Sara stated:

We no longer have censored pages, so we no longer use VPNs or hotspot. It is something that everyone is happy, and no one is using it anymore like in some other Arab countries.... The use of VPN, we no longer see it as important as we used to (Sara, personal communication, 2019).

Others, however, pointed out that they abandoned encrypted messages because they were no longer cautious as they used to be because they felt safer, and that surveillance was no longer present in the country. Habib noted:

People no longer use encryption because they have more trust in the government. Before that, we used to heavily rely on VPNs and proxies. Now we no longer use them (Habib, personal communication, 2019).

Dina, who was targeted by extremist groups, asserted that she no longer relies on encrypted messaging because of being less afraid of the state. Dina said:

I never hid my identity, but I needed VPNs for censorship and surveillance. In the past, the situation was clear to me. I was targeted by the regime, but now the situation is so

different. I am targeted by the regime and others like extremists. In the past, I was only targeted by the police, but now I am protected by the police. I do not use encryption now. I do not protect myself. I really do not care (Dina, personal communication, 2019).

While pseudonymity and encryption were used to conceal information and trade data among members of the TAS movement, other online tactics were deployed to engage and confront Ben Ali's regime.

6.6.2 Confrontational Tactics

In response to the smearing campaigns and censorship, bloggers and activists unleashed *Counter disinformation* campaigns against Ben Ali. The TAS movement only used social media platforms to target Ben Ali. Nasser confirmed that activists in 2011 used trolling to fight repression 'we were trolling the system to surpass oppression. It was for a good cause (Nasser, personal communication, 2019). One of the participants, an Iconic Tunisian blogger, told me, feeling ashamed, that he did use trolls against Ben Ali but declined to tell me further details, fearing of harming the movement's image. While many participants agreed that some type of counterpropaganda tactic was used against Ben Ali, two participants denied using trolls or bots to demote Ben Ali's regime.

After the removal of Ben Ali, members of the movement and civil society groups were again targeted by political parties and politicians. Therefore, some participants stated that they used online trolls to respond to the targeted disinformation campaigns against them, Ahmed elaborated:

We troll the troll. We have no TV or any media channels. So, we created our own social media channels. We took the battle to social media. We watched every show of theirs. We made videos, memes, GIFs, and everything to fight back. Facebook was our medium... we did not start this fight (Ahmed, personal communication, 2019).

Hamdi, a blogger, and a civil society member, mentioned that bots are now being used by civil society and activists to debunk disinformation and share factual news. He elaborated:

I think from both sides, advocates, civil society, and activists have launched bots to fight against fake news and disinformation campaigns. Bots will also be used by the other side to influence the dynamics. Political parties will use that as well to disseminate fake news and launch disinformation campaigns against their rivals. Activists will use bots for good reasons, though (Hamdi, personal communication, 2019).

Therefore, fact-checking initiatives emerged in Tunisia amid the first Presidential elections in 2014 to verify the information circulating online. During my visit to Tunisia in 2019, I witnessed teams of different civil society organisations, collaborating together to build teams of fact-checkers. Hamdi emphasized:

There is a coalition to start fact-checking platform and build a campaign to fight misinformation during the elections... three NGOs will do this work with volunteers... bots will be used on Twitter, too (Hamdi, personal communication, 2019).

In Tunisia, counter disinformation was the main confrontational tactic used online. However, there were limited attempts to employ *Hactivism*, as an online tactic. Some participants could not recall the presence of any organised hacktivism attacks against Ben Ali's regime. A few only recalled one operation that came to be publicly known later as 'Operation Tunisia'. This operation was supported by *Anonymous* by launching a series of DDoS attacks against government websites. Fawzy stated:

One of the acts of activism was Operation Tunisia by the Anonymous group in January 2011. Anonymous targeted many websites with DDoS attacks, including the website of the Ministry of Interior affairs. Many Tunisians participated in that operation. They used DDoS attacks using the ION tool and VPNs like Tor. But some people were linked to these attacks and were later on arrested (Fawzy, personal communication, 2019).

Hacktivism was not a strategic operation in Tunisia. Hence, this online tactic was abolished very quickly following the fall of Ben Ali in 2011. At this stage, the movement scattered, and a new generation of civil society and activists emerged to continue the battle. I spoke with the members of the TAS movement who joined new civil society groups or created their own organisations. When I spoke with them, I found that none of the above tactics were currently employed to dismantle digital repression. However, a new tactic emerged to make their voices heard in an atmosphere that was dominated by very well-funded political parties.

During my fieldwork, I came to know a new online tactic that was developed by a few members of the TAS movement who are still active in the political life in Tunisia. This particular online tactic is not a part of the Syrian digital repertoire, nor any other movement's repertoire. Because civil society organisations could not afford to sponsor ads on social media platforms, an online tactic was invented that contends understanding and co-opting the platforms' algorithms to promote alternative campaigns online. The *co-opting algorithms* tactic was developed in response to the increasing competition between political parties, which had the funding and capacity to sponsor ads and hire trolls to dominate the online sphere.

This co-optation tactic had three strategies: a) using visual aids, b) warming up the algorithms, and c) relying on influencers. The use of visual aids generates more engagement and hence keeps the content produced by a civil society group at the top of the news feed of the user. Fawzy elaborated:

We learned from mistakes, from doing and trying things on social media. We understood the algorithms of Facebook, we understood what Instagram was. We also understood what millennials want to see... we use memes, GIFs, graphics, and videos. One of the most engaging posts we did on Facebook was just a GIF. The GIF was not even made by us. We shared it and posted something about the Prime Minister. This really went viral (Fawzy, personal communication, 2019).

The other strategy is to ‘warm up the algorithms.’ It relies on generating a negative or positive engagement in order to make future posts on a page salient on the news feed. Hussein elaborated:

We use another tactic we call ‘Warm up the algorithms.’ Sometimes we put up something on our Facebook page that is super lame. People would come to insult us for these posts. However, the fact that they interacted with us means they are stuck with us for the next two weeks. The algorithms would know that they should see more of our content. So, before we campaign, we warm the algorithms and put something lame or controversial so people can see it (Hussein, personal communication, 2019).

The last strategy employed was generating generic engagement by depending on their influencer fellows. Hussein explained:

We know how to manage our content. We have a strategy we call ‘the second circle of influencers.’ So, people think that the Facebook pages that share the information must be popular. But we believe that the second circle of people who share posts from these Facebook pages is what is really influential. So, when our page posts something, we make sure that our first users or first adopters are very trusted in their community... our theory is that when we use the second circle of influencers, it is like running a campaign without a leader, a leaderless campaign. (Hussein, personal communication, 2019).

6.7 Conclusion

The Tunisian Arab Spring movement was a pioneer in the region in three ways. First, it introduced the first generation of bloggers in the region and the first Internet martyr in the world. Second, the TAS movement innovated many tactics that were later imitated by many neighbouring movements, such as the SAS movement. Third, while online tactics were preventive against Ben Ali’s repression, the TAS movement was able to innovate more tactics than the regime could.

Table 8: Digital Repression and Tactical Innovation in Tunisia (2011-2020)

Online Tactical Innovation	Digital Repression
Counter-Disinformation	Disinformation
Encrypted Messaging	Surveillance, and Censorship
Hackivism	Censorship and Disinformation
Co-opting algorithms	Disinformation
Revolutionary Pseudonyms	Surveillance, and censorship

Source: Author's analysis of interviews with Tunisian bloggers, activists, and digital media experts collected from June 2019- January 2020.

Note: The digitally repressive tactics were employed by Ben Ali's regime and political parties in Tunisia. These tactics targeted the movement over the years. In response, they deployed online tactical innovations.

Even though the Tunisian version of digital repression was resilient, it was limited and moderate to the extent that the TAS movement succeeded in deploying more tactics than Ben Ali's regime. The movement was creative, organised, and well-connected. Compared to the SAS movement, which was divided into different LCCs across the country, members of the TAS movement knew each other well by their pseudonyms, met at weekly gatherings to hang out, and maintained a strong unity. The cohesion in this movement was unprecedented, but it was certainly not sustainable.

When Ben Ali was removed, the enemy that used to unite the movement vanished. When that happened, the movement scattered, and its members followed different paths. Political parties were established, presidential elections were held, and a semi-successful transition into a democracy was accomplished. Life moved on, and the movement faded with it. A new generation, however, emerged and is still trying to keep the democratic transition in place.

The relationship between digital repression and online tactical innovations is very similar to what the data showed in the Syrian case. The TAS movement emerged in moderate digital repression and was able to innovate many tactics to survive and overcome this regime. Moving forward, when Ben Ali's repressive apparatuses at the ATI were removed, the movement's innovations stagnated gradually (See Table 8).

This is in line with the findings of Demirel-Pegg (2020), DeNardo (1985), Gurr (1970), and Opp, (1994) and supports the idea that repression and innovations are associated with what could look like an inverted U-shaped relationship. In other words, movements can only innovate when repression is moderate. Declining or increasing the levels of repression could lead to what I call online tactical stagnation.

To test this theory further, I conduct a cross-national panel study on 21 countries in the Arab world to examine the impact of digital repression on the online tactics of Internet users. In particular, I test the interest rates of encrypted messaging as an online tactic from 2004 to 2020. In the next chapter, I illustrate my findings and the ways I quantified and measured encrypted messaging in the region.

CHAPTER SEVEN

**THE STRUCTURAL DETERMINANTS OF ONLINE
TACTICAL INNOVATION: A CROSS-NATIONAL
COMPARISON**

7.1 Introduction

The vast majority of research articles on tactical innovations have relied on qualitative methods to identify the tactics and the elements that ignited them (Moss, 2014b; Taylor, 1998; Zajak et al., 2021). A fewer number of these articles were able to examine innovative tactics quantitatively, mainly by analysing data collected from newspapers (Demirel-Pegg, 2020; Leal, 2020; Wang & Soule, 2016). To this date, the determinants of online tactical innovations remain under-explored—especially in regions that receive less scholarly attention, such as the Arab world.

Online tactical innovations are not well-documented or reported in the press and academia, especially in countries where media freedom is restricted. While it might be methodologically and practically challenging to measure all the online tactical innovations I identified during my fieldwork, I can empirically test the structural determinants of one of these tactics—encrypted messaging. This tactic was identified by both Syrian and Tunisian participants as a key method used by both the SAS and TAS movements to bypass digital repression. In addition, encrypted messaging, at some point, was abandoned by both movements due to unprecedented changes in the levels of digital repression in these countries. To systematically document the impact of digital repression on novel online tactics, I examine encrypted messaging across twenty-one Arab countries—current and former members of the Arab League. I excluded Palestine from this chapter due to the limited data available.

In this chapter, I analyse the relationship between digital repression and encrypted messaging by employing panel data regression analysis on data representing the years from 2004 to 2020. Using Internet search indices from Google Trends, V-Dem's Digital Society Project, Harvard's Mass Mobilization Protest, and the World Bank datasets, I measure the impact of digital repression on the use of encrypted messaging in the Arab world. I also control for the effect of imposing anti-encryption laws, protest events, and Internet penetration rates in each country in the region.

Findings showed that the levels of digital repression are high and have not declined from 2004 to 2020 in the Arab world. The only country where digital repression has drastically changed due to the 2011 Arab Spring is Tunisia. On the contrary, interest in encrypted messaging has been on the rise since 2004. In this chapter, I found that digital repression is a statistically significant predictor of the interest in encrypted messaging in Arab countries. However, this relationship could not be found when the level of digital repression changes.

The results also showed that interest in encrypted messaging is likely to increase when anti-encryption laws are imposed and when the Internet penetration rates are high. Protest events do not have a direct effect on users' interest in encrypted messaging—indicating that this particular online tactic is used not just by activists, but by the general public.

Findings from my quantitative analysis show a comprehensive understanding of how the overall population on the Internet mitigates digital repression and deploys online tactics, which contributes to a more general understanding of how online tactical innovations are adopted by digital rights advocates, discussed in the qualitative analysis in the thesis. The findings from this chapter show that when digital repression is massively employed, Internet users will imitate activist tactics to mitigate that repression—even for non-political needs. I also argue that the results in this chapter might vary when applied to other online tactical innovations and that further research must explore other tactics.

It is worth mentioning that my participants highlighted the use of proxies, VPNs, and Tor as the main methods they used to mitigate surveillance and censorship. While these tools are often used for political reasons, these tools can be also used for non-political reasons, such as accessing blocked pornography websites, torrenting and online movie pirating websites, VoIP services, or the non-regional Netflix libraries. In this study, Google Trends data could not indicate the intention behind

the use of the encryption tools. Although the GT data is in line with political events in the region, this remains one of the main limitations of my study.

7.2 Hypotheses

The impact of repression on social movements has been empirically tested in different contexts (Almeida, 2003; Khawaja, 1993; Leenders & Heydemann, 2012; Van Dyke & Soule, 2002). In particular, research has shown that repression motivates movements to adopt novel tactics to circumvent state repression (Araj, 2008; Lee, 2018; O'Brien & Deng, 2015). Despite the limited number of studies examining this subject in the digital age, the relationship between digital repression and innovative tactics was found to be positive when it was tested (Lee, 2018). For example, Lee (2018) argued that restricting digital freedoms has led civic actors in Cambodia, an authoritarian regime, to expand their tactics and adopt more measures to avoid repression. This association has not been quantitatively tested in the Arab world to this date.

Hypothesis 1 (H₁): *If digital repression increases, then users' interest in encrypted messaging increases.*

On the other hand, this positive impact of repression on tactics was not proven under all conditions in my fieldwork. A review of the literature has shown that repression could dismantle tactical innovation (al-Anani, 2019; McAdam, 1983; Shriver & Adams, 2016). Other researchers suggested a concave effect, known as the inverted U-shaped effect. Low and severe contexts of repression deterred movements, while moderate levels accelerated the rate of contention (Demirel-Pegg, 2020; DeNardo, 1985; Gurr, 1970; Muller & Weede, 1990; Opp, 1994).

During my fieldwork, I found that digital repression can motivate the adoption of novel tactics and can also discourage them. Based on the interviews, Tunisian and Syrian activists introduced novel online tactics during times when digital repression was moderate and bearable. My participants, however, expressed that they abandoned these new tactics when digital repression was unprecedentedly high or low—reflecting an inverted U-shaped relationship between digital repression and online tactical innovation. In this study, I will assess this concave association between the different levels of digital repression and online tactical innovations—focusing in this chapter on encrypted messaging. I will examine this relationship in Arab countries where digital repression is low, moderate, and high.

Accordingly, I will test the following hypotheses:

Hypothesis 2 (H₂): *If digital repression increases, then users' interest in encrypted messaging decreases, where digital repression is high.*

Hypothesis 3 (H₃): *If digital repression increases, then users' interest in encrypted messaging increases, where digital repression is moderate.*

Hypothesis 4 (H₄): *If digital repression decreases, then users' interest in encrypted messaging decreases, where digital repression is low.*

In general, imposing laws could deter people from performing certain actions (Matthews & Agnew, 2008). Governments seek to regulate the use of encrypted communications by introducing new laws to either force technology companies to decrypt data on demand (Everett, 2016), or criminalise the use of encryption overall (O'Brien, 2020). Many countries in the Arab world introduce laws to prevent

the use of encryption without authorisation (Bischoff, 2020). Therefore, it is necessary to examine the role of anti-encryption laws and regulations on users' interest in encrypted messaging. To this date, no study has examined this association.

Hypothesis 5 (H₅): *If encrypted communication is banned, then the interest in using of encrypted messaging decreases.*

The original theory of tactical innovations pertains to the idea that activists employ new tactics to neutralise state repression (McAdam, 1983). According to this theory, activists tend to employ various types of tactical innovations during protest events as a countermeasure to their opponents' repression (McAdam, 1983; Moss, 2014b; Wang & Soule, 2016). Thus, I will measure the impact of protest events to understand if they have a particular impact on the users' interest in encrypted messaging.

Hypothesis 6 (H₆): *If protest events increase in number, then the interest in encrypted messaging increases.*

Despite the increasing Internet penetration in the Arab world, Internet access variations among countries in the region remain pronounced (Raz, 2020). While Arab Gulf countries have the highest Internet penetration rates in the world, some other countries in the region have the lowest rates of online access in the world. In 2021, the UAE had a 105% Internet penetration rate, while only 12.8% of Somalia's total population have access to the Internet on a daily basis (InternetWorldStats, 2021). This discrepancy in Internet usage has several causes, such as poverty and civil wars in the region

(Raz, 2020). These variations among Arab countries might impact the interest in encrypted messaging, and hence I hypothesise the following:

Hypothesis 7 (H₇): *If the Internet perpetration rates are high, then users' interest in encrypted messaging increases.*

7.3 Longitudinal Data and Methods

7.3.1 Dependent Variable: Encrypted Messaging

7.3.1.1 Selecting the Google Search Indices

Google is considered the largest search engine, with 92.18% of the world's search engine market share (Statcounter, 2020). Numerous studies have established the validity of the publicly available Google Search data to track, estimate, and predict massive social phenomena (Yang et al., 2015). Compared to other big data sources, Google search data is less influenced by social censorship and can give better insights on socially sensitive topics and taboos (Stephens-Davidowitz, 2014). Stephens-Davidowitz (2012) argues that the large number of online searches on adult content and sensitive health information—topics that surveys cannot test effectively—is evidence that users are less likely to censor themselves on Google and that its data could express Google users' 'real' interests.

By aggregating millions of searches, Google search data was found to be in line with other alternative data sources (Stephens-Davidowitz, 2012). In addition to proving its correlation with other data proxies, scholars have used Google data to estimate and predict other variables. Google search data was used to examine and real-time track the flu outbreak (Clemente et al., 2019; Liu et al., 2012; Ning et al., 2019; Nsoesie et al., 2021; Xu et al., 2017; S. Yang et al., 2015), BitCoin prices and users (Kristoufek, 2013; Wilson & Yelowitz, 2014), inflation (Li et al., 2015), suicide rates (Mackellams et al., 2016), and public interest in the environment (Mccallum & Bury, 2013).

Google has offered a variety of open data sources to researchers. Among these early tools were Google Insights—a website that was launched in 2008 through which researchers could find information on search trends. Another tool that was launched in 2011 was called ‘Google Correlate’—a tool that was introduced to help researchers identify the correlated keywords at a certain period (D’Amuri & Marcucci, 2017). Google Correlate was shut down in 2019 due to the low traffic the website received. Currently, Google’s most sustainable tool is Google Trends (GT), which merges the features of both Google Insights and Google Correlate. GT now provides a) time-series data of a sample of actual anonymised and aggregated user searches on Google; b) data that goes back as far as 2004 and up to the present time; c) keywords that represent the related search queries and their correlations (Google Trends, 2021).

The rapidly increasing Internet penetration rates in the Arab world have encouraged researchers to rely on online search data to better understand the public opinion in this region where conventional sources of data are absent, censored, or unreliable (Koehler-Derrick, 2013). During the post-Arab Spring transitions, Google search data was able to provide insights into the cross-cutting societal developments (Koehler-Derrick, 2013). However, to this date, using Google search data to examine Arab social movements has been rare—leaving this valuable data source untested and unused. In this chapter, I will extract Google search data to understand the impact of digital repression on users’ interest in encrypted messaging in the Arab world.

One of the main challenges scholars face while using Google search data is deciding the keywords that represent the phenomenon under examination (Marthews & Tucker, 2014; Reyes et al., 2018). Selecting the particular keywords that could reflect the interest in encrypted messaging in the region was a challenging process. I relied on some of the steps proposed by Reyes et al. (2018) and Mellon (2014) to select the keywords and topics that can measure the salience of the interest in encrypted messaging in the Arab world.

During my interviews from April 2019 to January 2020 with Syrian and Tunisian activists, participants stated that they encrypted their messages using three main tools: VPNs, Proxys, and Tor. According to Reyes et al. (2018), these three concepts would be the main starting points for finding representative, valid, and reliable keywords that could reflect the changes in a phenomenon.

In order to find the keywords that could be representative of the three main concepts, I used Google Keyword Planner. It is a tool associated with Google Ads to help advertisers generate a list of words with high search volumes. Google Keyword Planner's algorithms provide a set of keywords that have been previously used by Google users to search for a specific word (Reyes et al., 2018). The Keyword Planner suggests the same list of keywords for a language regardless of the location.

For the purpose of this chapter, I identified Arabic as the language of the search on Google Keyword Planner and the location as 'Egypt'. Egypt is the country with the highest number of signed-in searchers using Google sites and applications in the Arab world—more than 30 million users to the date of writing this chapter. Then, I entered in the Keyword Planner the three main concepts that represent *encrypted messaging*—according to the interviews: VPN, Tor, and Proxy. The Keyword Planner suggested 1,120 words for *VPN* and 1,127 words for *Proxy*, and 398 words for *Tor*.

Although Reyes et al. (2018) did not recommend a filtering process at this stage, I decided to only select the keywords with more than 5,000 average monthly searches. Hence, I had a final list of 26 keywords that represent 'VPN', 'Tor' and 'Proxy' based on the suggestions of the Keyword Planner with more than 5,000 searches. Then, I manually tested each of these suggested keywords on Google Trends (GT) to eliminate the keywords that did not generate any data on GT in both the 'interest over time' and 'interest by sub-region' sections. GT cannot generate data for keywords with low search volume. For consistency, I identified Egypt as the location of the search on Google Trends and the time range from the 1st of January 2004 to the 30th of December 2020.

During this refinement process and for each keyword with a high search volume, I checked the ‘related queries’ section in GT to add new keywords. I took this step to ensure that my final list of keywords is going to be inclusive and representative. The ‘related queries’ is a feature in GT that generates a list of related keywords that users have also previously used when searching for a similar search query in Google in the past. GT’s related queries also provide the percentage of the correlation with the original keyword based on historical search data (Reyes et al., 2018). Hence, I only considered adding the related words with an 80% or higher correlation to the list of keywords.

After these elimination and refinement steps, the total number of keywords was 22, representing the dependent variable *encrypted messaging*. According to Mellon (2014), each of these keywords needs to be valid to guarantee significant insights while relying on Google Trends. I employed Mellon’s (2014) face and content validity in this chapter.

To include keywords with high validity, I eliminated keywords that lacked *face validity*—terms that could not measure the *encrypted messaging* from 2004 and 2020. These terms include encryption tools that were released recently and might skew the data, for example: *VPN X*, *RADMINE VPN*. Then I showed the list to five Arab communication scholars to ensure *content validity*—the extent to which these keywords reflect the concept of *encrypted messaging*. In total, I had a final list of 17 keywords representing the concept of *encrypted messaging* (see Table 9). I later pulled out data on each of these keywords from GT. I set the geolocation to the name code of each of the 21 countries in my sample. I set the time frame to 2004-01-01 until 2020-12-30. I have decided to exclude data from Palestine due to the absence of such data in some of the other datasets.

Table 9: Final List of Keywords for Each Concept

Concept	Final Keywords
VPN	vpn, vpn free pc, vpn pc, vpn chrome, vpn for pc, free vpn vpn free, vpn download free, download vpn, download vpn free,

	hotspot shield
Proxy	proxy, proxy free, كسر بروكسي
Tor	tor, tor browser, متصفح تور

Source: Author's analysis of Google Search Data

Note: This is the final list of keywords that were used to pull out data from Google Trends. The location identified to find the keywords is the country name code—using ISO 3166-1 alpha-2 country codes — and the time range is from 01/01/2004 to 30/12/2020

GT normalises data by dividing each data point by the total user searches in a place at a certain time (Carneiro & Mylonakis, 2009). GT data are scaled from 0 to 100, while 100 is the highest (Google Trends, 2021). A search that appears as '100' on the GT scale does not necessarily mean that the term is popular, only that there is an increasing interest in this particular keyword. GT does not provide data on very low search volumes. In other words, if only a very few people were searching for a keyword, the search volume would appear as '0.'

After collecting the data from each keyword and in order to calculate the variable 'encrypted messaging' for each country from Google Trends, I used Reyes et al.'s (2018) method to calculate the mean of each month among the 17 keywords to represent the interest in encrypted messaging. Later, I converted the monthly dataset into a yearly one by computing the means of all 12 months. I took the decision of transforming the dataset to a yearly one so I can compare the interest in encrypted messaging with the other yearly independent and control variables I have in this study.

7.3.2 Independent Variable: Digital Repression

I rely on a dataset provided by the Digital Society Project (DSP)—a project that is run by the Varieties of Democracy (V-Dem) Institute (Mechkova et al., 2020). The DSP dataset relies on the same methodological measures employed by V-Dem, which depends mainly on surveying experts in the digital media field. DSP surveyed more than 3,200 experts using a Likert scale (values ranging from 0 to 4) to examine 35 variables related to information operations, digital media freedom, Internet

regulations, online media polarisation, and social cleavages. This dataset has been used in several studies to examine digital repression (Frantz et al., 2020), misinformation (Chang et al., 2020; Piazza, 2021; Wilson & Wiysonge, 2020), and the uses and gratifications of digital media (Safarov, 2021).

To measure digital repression, I rely on six variables from this dataset tested by Frantz et al. (2020) when they examined the relationship between digital repression and autocracy. The first variable is social media censoring (v2smgovsmcenprc). According to Frantz et al. (2020), this variable examines the degree to which a government would restrict political content on social media. The second variable is social media monitoring (v2smgovsmmon), indicating the extent to which political content is monitored online. The third variable is social media shut down (v2smgovsm), referring to the many times access to social media is shut down. The fourth variable is Internet shut down (v2smgovshut), measuring how many times domestic Internet access is blocked. The fifth variable is Internet filtering (v2smgovfilprc), testing the frequency of filtering and blocking political content online. The last variable is social media alternatives (v2smgovsmalt), examining whether the social media platforms used in the country are fully controlled by the government, such as WeChat in China.

I used these six variables suggested by Frantz et al. (2020) to measure the construct of digital repression, focusing on Arab countries from 2004-2020. The Digital Society Project (DSP) dataset (V3) transformed the ordinal variables into interval scales using the V-Dem measurement model (Mechkova et al., 2020). The scale of the V-Dem measurement model is between -5 and 5— similar to a normal Z score (Mechkova et al., 2020). In this dataset, -5 is the highest score and 5 is the lowest one. Hence, I had to reverse the six variables and transform them into scales from 0 to 100—a similar method to Chang et al. (2020). Therefore, in this analysis, a higher value implies more severe digital repression in a country.

7.3.3 Control Variables

In this chapter, I test several control variables that might confound the relationship between encrypted messaging and digital repression.

7.3.3.1 Social Movements

I used the Mass Mobilization protest dataset Version 4.0 developed by Harvard University (Clark & Regan, 2021). This dataset covers the number of yearly protests that target local governments in 162 countries from 1990-2020. For a protest event to be included in this dataset, at least 50 protestors must have been part of the protest (Clark & Regan, 2016). This protest event catalogue was collected from newspapers, including but not limited to *New York Times*, *Washington Post*, *Christian Science Monitor*, and *Times of London*, and *the Jerusalem Post*.

From this dataset, I counted the yearly protests in each of the 21 countries in my sample. Despite being a relatively comprehensive dataset, it does not cover protest events in Palestine, so I decided to remove Palestine from this analysis.

7.3.3.2 Internet Penetration Rates

I adopted the World Telecommunication/ICT Indicators (WTI) data from the International Telecommunication Union provided by the World Bank (World Bank, 2020). This dataset covers the period from 1960-2019. Despite the comprehensiveness of this dataset, several values were missing especially in Sudan, Libya, and Somalia. Unlike the other explanatory and control variables, this dataset does not include data from the year 2020. Thus, I estimated the missing values and values in 2020 by measuring the growth rate for each country.

7.3.3.3 Anti-Encrypted Communications Laws

I use a dummy variable (1=a law exists; 0= a law does not exist) to represent the existence of a policy or a law that bans the use of encrypted communications in a country. To create this variable, I collected information from various news sources and blogs that cover stories related to the legality of using encryption. These sources include *Addictivetips.com*, *ProtonVPN.com*, *Norton.com*, *thenextweb.com*, *comparitech.com*, and *cyberdefensemagazine.com*.

7.4 Model

Using mean-aggregated annual data, I tested the following panel regression model on 357 observations to examine the predictive power of digital repression on the interest in encrypted messaging. The below Equation was used to estimate this effect where Y_{it} represents the interest rate in using encrypted messaging and β_o is the intercept term.

In this model, B_{t-4} are the coefficients of the explanatory and control variables, DR represents the explanatory variable ‘digital repression’, PE is the control variable that represents the number of protest events, EL is the dummy variable that represents whether a country has banned encrypted messaging or not, and IR is the control variable that represents the Internet penetration rates. Finally, U_{it} is the idiosyncratic error term of the model.

$$Y_{it} = \beta_o + \beta_1 DR + \beta_2 PE + \beta_3 EL + \beta_4 IR + U_{it}$$

7.5 Analysis

7.5.1 Descriptive Statistics

7.5.1.1 Encrypted Messaging in the Arab World

By analysing data from 2004 to 2020, encrypted messaging did not have high consistent popularity in the Arab world during the 17 years included in the analysis. From the data, the majority of the Gulf Cooperation Council countries—United Arab Emirates, Saudi Arabia, Bahrain, Kuwait, and Oman—had the highest means of users' interest in encrypted messaging across the Arab World (See Table 10). In particular, Saudi Arabia had the highest mean of users' interest in encrypted messaging in the Arab world (mean = 38.99, sd = 24.89). Relatedly, the United Arab Emirates and Oman—where VPNs and many of the encrypted communications are illegal and require authorisation—had high rates of users interested in encrypted messaging (mean = 36.68, sd = 21.27; mean = 33.98, sd = 18.31). Unlike the aforementioned countries, Bahrain and Kuwait do not officially criminalise the use of encrypted communications. However, encrypted messaging was relatively high in both countries (mean = 30.38, sd = 16.47, mean = 30.33, sd = 10.9). While the highest interest in encrypted messaging could be found in the GCC countries, the lowest rates could be found in Iraq, Mauritania, and Comoros (mean = 6.64, 4.65, 2.12 respectively).

However, the use of encrypted messaging in the Arab world is not consistent over the years. The data shows that the majority of Arab countries had high standard deviations—indicating high discrepancy and variability in the interest in encrypted messaging throughout the past 17 years. Thus, further exploration of variables that impact encrypted messaging in the Arab world is necessary to explain this strong variability.

Table 10: Descriptive Summary of User Interest in Digital Encryption in the Arab World

Country	Min	Max	Mean	SD
Saudi Arabia	10.55	84.28	38.99	24.89
United Arab Emirates	11.77	79.7	36.68	21.27
Oman	9.8	66.17	33.98	18.31
Bahrain	5.19	55.24	30.38	16.47
Kuwait	15.36	47.25	30.33	10.9
Morocco	9.77	65.52	29.94	20.94
Qatar	5.28	72.68	28.33	19.8
Egypt	9.71	54.38	25.35	14.91
Syria	3.72	45.34	17.77	13.22
Algeria	3.73	42.84	16.66	12.82
Lebanon	5.83	32.06	15.03	7.83
Jordan	4.27	35.04	13.83	7.5
Tunisia	4.99	21.8	13.8	5.18
Yemen	1.28	30	13.52	8.38
Djibouti	0	21.53	12.2	6.78
Libya	0.9	32.38	12.15	11.49
Sudan	2.82	34.12	11.91	7.51
Somalia	0	29.23	9.95	11.41
Iraq	1.85	21.89	6.64	6.36
Mauritania	0	8.75	4.65	2.5
Comoros	0	8.33	2.12	2.64

Source: Author's analysis of data collected from Google Trends from 2004-2020.

Notes: Google Trends normalized and scaled the data from 0 to 100; 0 representing the lowest level of users' interest in encrypted messaging and 100 represents the highest.

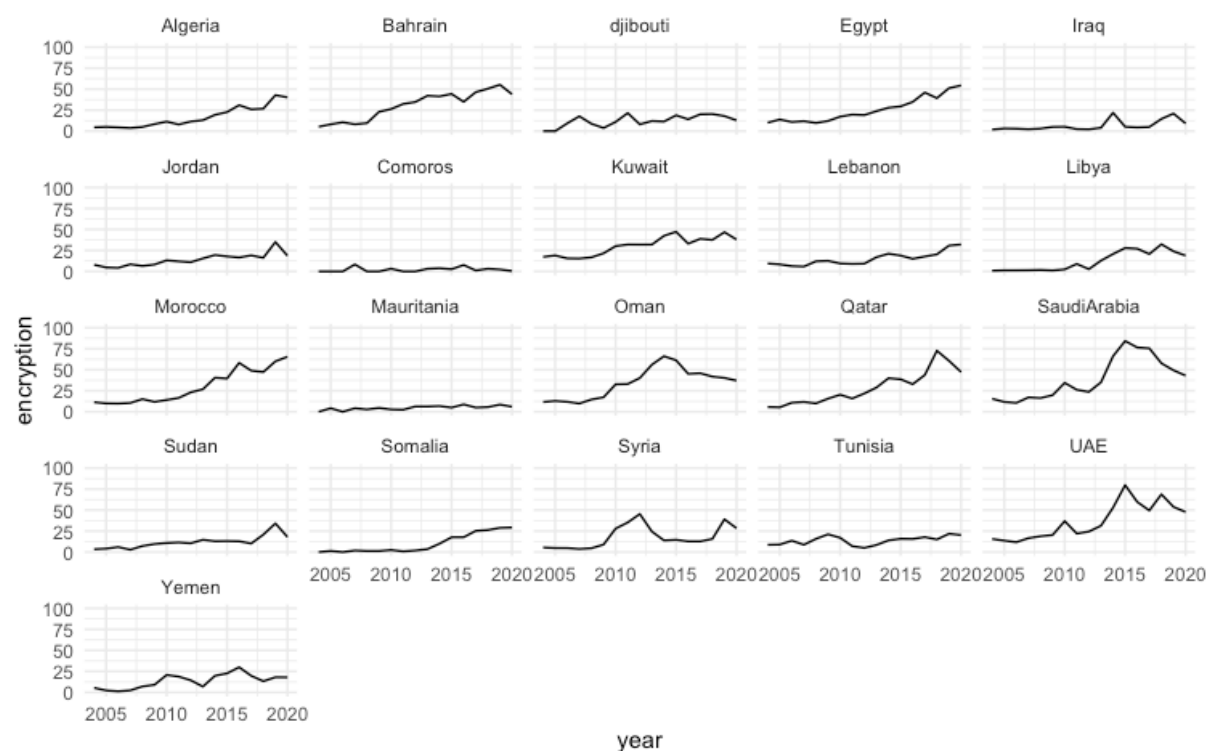
From Figure 4, the interest in the use of encrypted messaging in the Arab world had its increase, fall, and peak points during the 17 years of analysis (See Figure 4). In some countries, the users' interest in encrypted messaging has increased in line with the 2011 Arab Spring events. These countries are Bahrain, Oman, Kuwait, Jordan, Egypt, Algeria, Syria, Morocco, Qatar, and UAE. On the other hand, Google users in Tunisia, Libya, Yemen, Saudi Arabia, and Djibouti became less interested in encrypted messaging following the 2011 Arab Spring. Yet, the interest in encrypted messaging in Sudan, Comoros, Iraq, Somalia, Lebanon, and Mauritania was hardly influenced by the 2011 Arab Spring events.

While this thesis focuses mainly on the 2011 Arab Spring countries, it is difficult to unsee the impact of the second wave of demonstrations and protest events in the region in 2019. From late

2018 and until the end of 2019, Sudan, Algeria, Egypt, Lebanon, and Iraq witnessed mass protests.

In Figure 4, Internet users' interest in encrypted messaging drastically increased—and later decreased—during this period in these countries.

Figure 3: *Encrypted Messaging in the Arab World (2004-2020)*



Source: Author's analysis of data collected from Google Trends from 2004-2020.

Notes: Google Trends normalized and scaled the data from 0 to 100; 0 representing the lowest level of interest in encrypted messaging and 100 represents the highest.

7.5.1.2 Digital Repression in the Arab World

Digital repression was a common variable across the 21 Arab countries. Despite the high variability in the interest in encrypted messaging, digital repression was consistent and stable (see Table 11). The range of digital repression in the Arab world is only 22.67. The highest level of digital repression had a mean = 70.74 in the United Arab Emirates and the lowest number was found in Comoros with mean = 48.07. In addition, across the region, the standard deviations of digital repression were relatively small, indicating a low dispersion among the data points and a small variability in digital repression across time in each country—except for Tunisia, which had a high standard deviation = 16.83.

Table 11: Descriptive Summary of Digital Repression in the Arab World

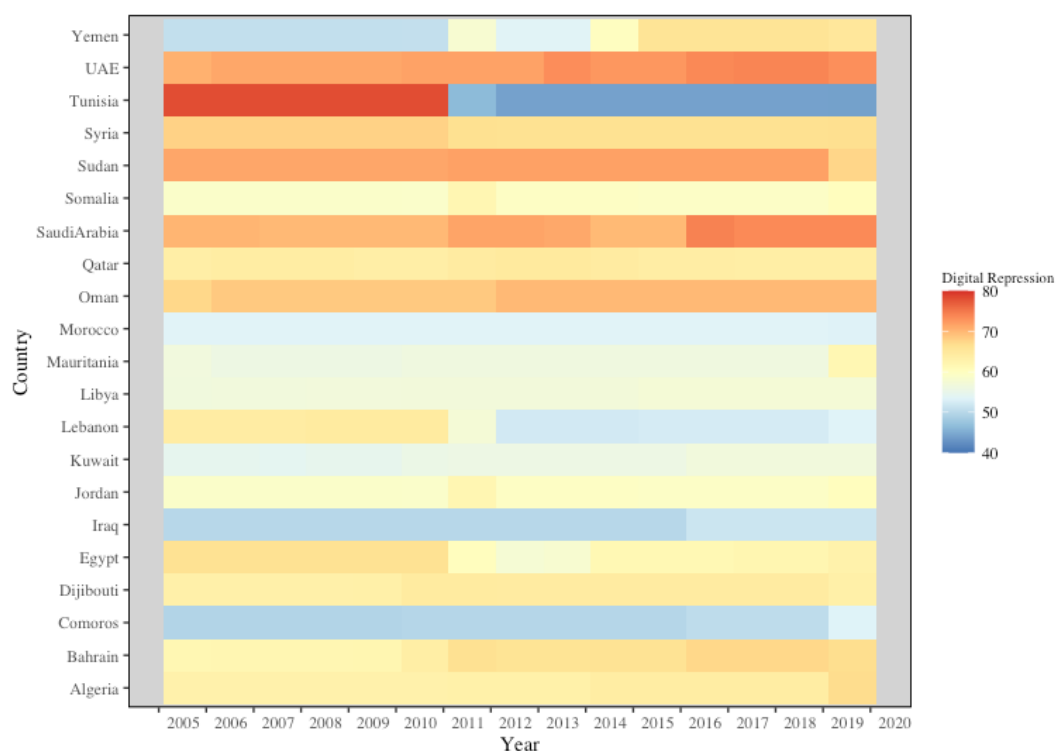
Country	Min	Max	Mean	SD
United Arab Emirates	69.24	72.5	70.74	1.08
Saudi Arabia	68.88	72.54	70.15	1.44
Sudan	66.1	70.73	70.16	1.22
Oman	65.03	67.42	66.68	0.88
Syria	62.34	66.95	64.39	1.63
Qatar	62.31	63.35	62.72	0.37
Algeria	61.67	68.16	62.87	1.81
Djibouti	61.37	62.87	62.38	0.43
Bahrain	59.48	64.86	62.13	2.15
Jordan	57.87	60.32	58.35	0.59
Somalia	57.87	60.32	58.35	0.59
Egypt	57.4	64.39	62.49	2.18
Lebanon	53.43	54.55	53.95	0.32
Mauritania	53.33	59.63	54.18	1.54
Morocco	51.43	53.25	51.54	0.44
Kuwait	49.83	53.08	51.41	1.2
Iraq	49.63	54.78	51.56	1.7
Libya	48.36	63.55	54.99	7.33
Yemen	47.55	61.54	53.76	6.36
Comoros	47.16	51.02	48.07	1.19
Tunisia	42.21	75.73	56.22	16.83

Source: Author's analysis of the DSP dataset from 2004-2020

Notes: The data was scaled from 0 to 100; 0 representing the lowest level of digital repression, and 100 represents the highest.

In Figure 4, Tunisia was the only country where digital repression had drastically declined following the 2011 Arab Spring. The change in the level of digital repression was barely visible in other countries. A small decrease in digital repression could be found in Syria, Lebanon, and Egypt. On the contrary, a small increase in digital repression following 2011 could be found in Yemen, Sudan, Somalia, Jordan, and Bahrain. Countries in which digital repression was not impacted by the 2011 Arab Spring included: Morocco, Mauritania, Libya, UAE, Kuwait, Iraq, Djibouti, Comoros, and Algeria.

Figure 4: Digital Repression in the Arab World



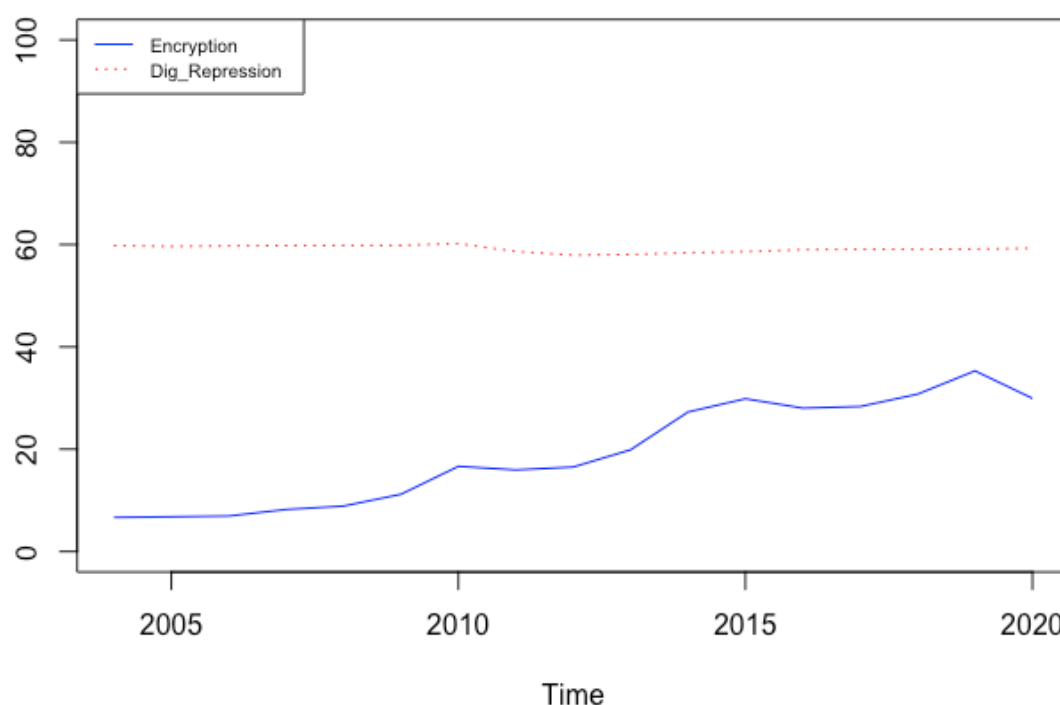
Source: Author's analysis of the DSP dataset from 2004-2020

7.6 Digital Repression and Encrypted Messaging in the Arab World

When mean-aggregating the levels of digital repression across the region, I found that the levels of digital repression did not drastically change in the past 17 years (see Figure 5). Digital repression in the Arab world was static in general and was considerably high in the region. There was a small decline in the level of digital

repression following the 2011 Arab Spring. On the other hand, the interest levels in encrypted messaging were much lower compared to the levels of digital repression in the region. From Figure 5, I found that despite the comparatively low levels of interest in encrypted messaging, this interest increased in 2010 and in the aftermath of the 2011 Arab Spring. This interest in encrypted messaging was at its highest level in 2019 (~35/100), this could be explained by what was later known as the Arab Spring 2.0 in Sudan, Algeria, Iraq, and Lebanon.

Figure 5: Digital Encryption and Repression in the Arab World (2004-2020)



Source: Author's analysis of data collected from Google Trends and DPS from 2004-2020.

Notes: The blue line represents users' interest in encrypted messaging and the red dots represent the level of digital repression in the Arab world.

7.7 Regression Analysis

In order to determine the appropriate model and choose between Ordinary Least Squares regression (OLS), Fixed Effect (FE) and Random Effect (RE) models, a number of tests were employed. I first employed tests to examine the appropriateness of panel methods compared with the pooled-OLS (McManus, 2011). First, I employed the F-test for individual effects to choose between the OLS and FE. F-test produced a p-value < 0.05 . Thus, the OLS model was ignored, and the FE method was considered a good fit.

Then, I applied the Breusch-Pagan Lagrange Multiplier (LM) test to examine whether OLS or RE is more suitable (Torres-Reyna, 2010). The null hypothesis of this test assumes that the variance between entities is zero and thus the pooled OLS estimator was adequate (Akbar et al., 2011). The LM test results showed that the p-value is < 0.05 and thus I rejected the null hypothesis and accepted the RE model to be more adequate.

Finally, to choose between RE and FE models, I employed the Hausman test, which assumes that the unobserved individual effects are not correlated with the conditioning regressors (Amini et al., 2012). The test showed that the p-value was > 0.05 (p-value = 0.78), which meant that the RE model was preferred in that case. This showed that the individual-specific effect was random and unrelated (Schmidhein, 2020) and independent of the explanatory variables (Jirata et al., 2014)—indicating a variability among countries.

To test the heteroskedasticity level of the model, I employed the Breusch-Pagan test, where the null hypothesis assumed the homoskedasticity of the panel (Torres-Reyna, 2010). The results showed that the p-value was < 0.05 . This meant that heteroskedasticity was present and that the variance of the errors in the model was inconsistent and dependent on the values of the regressors (Jirata et al., 2014). This was against the classical linear regression assumptions (Jirata et al., 2014).

Thus, the Generalised Least Squares (GLS) Estimator was employed to robust the standard errors (Benfratello, 2014).

7.8 Model Specification and Estimation

According to the GLS model, users' interest in encrypted messaging in the Arab world was positively affected by digital repression, imposing anti-encryption laws, and Internet penetration rates (see Table 12). In line with Ho1, when digital repression increased by 10 points, the users' interest in searching for encrypted messaging increased by about 3.1 points. Interestingly and unlike what I hypothesised in Ho5, when laws that deter the use of encrypted communications were present, the interest in encrypted messaging increased by 5.07 points. This could be explained by the possibility that these deterrent anti-encryption laws have driven unintentional attention to encrypted tools and, thus more interest in searching for them online. It could also be related to the fact that governments that banned encrypted communications also blocked access to many websites and tools. This has driven a need to access encrypted messaging and hence the increase in interest rates.

In addition, I found that there was no statistically significant relationship between protest events and interest in encrypted messaging. This indicated that encrypted messaging is a tactic that has been adopted by the masses to evade censorship and surveillance. In other words, this showed that online tactical innovations could move from being a tool for contention into a tool that is employed by Internet users on a daily basis.

This model also showed that when Internet penetration rates increased by 10 per cent, the interest in encrypted messaging increased by 4 points. Thus, there was a positive relationship between these two variables which supported Ho7. This was expected because users need an Internet connection to be able to access Google and search for encrypted messaging tools.

Table 12: Results of the GLS Model

Variable	Coefficients	Standard Error	t-value	p-value
Digital Repression	0.315177***	0.072363	4.355467	0.0000
Laws	5.070682 ***	2.156989	2.350815	0.0193
Protest Events	0.111325	0.080270	1.386878	0.1664
Internet Penetration Rates	0.392827***	0.019750	19.889503	0.0000
Log Likelihood	-1345.794			
Number of observations	357			

Source: Author's analysis

Note: This is data representing the 21 countries of the Arab league from 2004-2020.

*** indicates statistical significance at the 100% confidence level

To gain a better understanding of the association between digital repression and encrypted messaging, I divided the 21 countries into three categories: low, moderate, and high in relation to the level of digital repression. I categorised them based on the minimum level of digital repression in each country during the 17 years included in this analysis. I avoided the mean values because some countries have highly skewed values, such as Tunisia (SD = 16.8) which might bias the categorisation. According to this, highly digitally repressed countries are Djibouti, Sudan, Oman, Qatar, United Arab Emirates, Algeria, Saudi Arabia, and Syria. Countries with a moderate level of digital repression are Bahrain, Jordan, Somalia, Egypt, Lebanon, Mauritania, and Morocco. Finally, countries with low levels of digital repression are Kuwait, Iraq, Libya, Yemen, Comoros, and Tunisia. Indeed, this categorisation might not reflect the precise reality in all countries, and that is one of the limitations of this study.

To test how digital repression impacts the users' interest in encrypted messaging in *highly* digitally repressed countries, I employed similar tests to the ones I conducted in the previous model. First, I employed the Hausman test and found that the p-value was < 0.05 , indicating a preference for the Random Effects model. This panel model also did not have heteroscedasticity and there was a constant variance in the data.

The results of the GLS model showed that in the context of highly digitally repressed countries alone, the relationship between digital repression and the interest in encrypted messaging did not stand (see Table 13). However, the effect of imposing deterrent laws was significant in raising users' interest in encrypted messaging. Additionally, protest events did not have an impact on the encrypted messaging in this highly digitally repressed context (p-value was > 0.05). Expectedly, Internet penetration rates had the strongest impact on the interest in encrypted communication—compared to other variables.

In the context of moderate digital repression, I employed the GLS model due to the Hausman test having a p-value of < 0.05 and the model having heteroscedasticity. The GLS model showed that the relationship between digital repression and the interest in encrypted messaging could not be supported in the moderate digital repression context (see Table 13). In addition, I found that protest events did not influence users' interest in encrypted messaging. Yet, imposing anti-encryption laws led to increasing the interest in encrypted communications in countries where digital repression was moderate, known as the backlash effect. The only variable that had an impact in all contexts was the Internet penetration rates.

To test this model in countries where digital repression is *low*, I followed the same steps above. The Hausman test showed that the RE model is preferred and that this panel model has heteroscedasticity. Thus, I employed the GLS model to test the hypotheses. In countries where digital repression was low, the GLS model showed that—unlike what I hypothesised—digital repression did not have an impact on the users' interest in encrypted messaging (see Table 13).

Interestingly and unlike the highly digitally repressed countries, proposing laws that ban the use of encrypted messaging can lead to a negative impact on the interest in encryption in countries where digital repression is low. This could be explained by the fact that users in these countries do not experience significant digital repression that might motivate them to 'break the law.' In these

countries, websites are less likely to be banned, and censorship is less likely to be present. Thus, issuing laws that could deter the use of encrypted communications will not be perceived by users as an act of state tyranny, but rather a necessary action to protect national security.

Also, there was no relationship between protest events and the users' interest in encrypted messaging. Similar to other country categories, Internet rates were positively associated with the users' interest in encrypted messaging.

Table 13: Results of the GLS Model for the Three Categories of Countries

Variable	Highly repressed countries	Moderately repressed countries	Low repressed countries
	Coefficients (t-value)	Coefficients (t-value)	Coefficients (t-value)
Digital Repression	0.411151 (1.396825)	0.052190 (0.215371)	0.159240 (1.849145)
Laws	6.743682* (2.030164)	22.447479* (3.598142)	-11.810484*** (-4.100807)
Protest Events	0.251825 (1.654198)	0.083886 (0.596060)	0.106203 (1.109011)
Internet Penetration Rates	0.434655*** (11.738407)	0.358590*** (10.683507)	0.367073*** (13.581533)
Loglikelihood	-523.4928	-445.0123	-345.0429
Number of observations	128	119	102

Source: Author's analysis

Note: This data is representing the 21 countries of the Arab league from 2004-2020.

*** indicates statistical significance at the 100% confidence level

*Indicates statistical significance at the 96% confidence level

Thus, three out of the seven hypotheses I proposed are accepted (see Table 14).

Table 14: A Summary of the Significance Testing Results of the Hypotheses

Hypothesis	Coefficient	T-Value	P-value	Significance	Reject or not
H1	0.315177	4.355467	0.0000	Significant	Not Rejected
H2	0.411151	1.396825	0.1648	Not significant	Rejected
H3	0.052190	0.215371	0.8299	Not Significant	Rejected
H4	0.159240	1.849145	0.0675	Not Significant	Rejected
H5	5.070682	2.350815	0.0193	Significant	Rejected
H6	0.111325	1.386878	0.1664	Not Significant	Rejected
H7	0.392827	19.889503	0.0000	Significant	Not Rejected

Source: Author's analysis

7.9 Discussion

This chapter compiles and examines novel evidence showing the impact of digital repression on encrypted messaging in the Arab world. Encrypted messaging is more widespread among politically active individuals to evade surveillance and censorship circumvention tools (Braun & Oostveen, 2019; Danitz & Strobel, 1999). In previous chapters of this thesis, Arab activists in Syria and Tunisia have pointed out that encrypted messaging was a vital innovative tactic for them to carry on their social movements following the 2011 Arab Spring. Analysis of longitudinal cross-sectional panel data from 2004-2020 in 21 Arab countries shows that the levels of digital repression have not decreased in the last 17 years in the Arab world. This is similar to the previous work of Frantz et al., (2020) that found that digital repression was not declining in both democracies and autocracies (Frantz et al., 2020). Despite this pessimist result, the data shows that Internet users' awareness of using encrypted messaging has increased drastically over the last ten years—explicitly following the 2011 Arab Spring protests.

To better understand the precise impact of digital repression, the panel regression analysis showed that digital repression positively affects users' interest in encrypted messaging. This is unlike what some researchers concluded in previous studies in relation to the deterrence effect of repression on tactical innovations (al-Anani, 2019; McAdam, 1983; Shriver & Adams, 2016). However, this positive impact could not be seen when dividing the countries into low, moderate, and high in terms of the level of digital repression. This could be because digital repression's impact could not be observed when country specifications are relatively similar in terms of the oppression level.

This could also be explained by the fact that movements receive a harsher version of digital repression than general Internet users. In the previous qualitative chapters, I documented the many forms of digital repression that targeted the SAS and TAS movements. Collectively, digitally

repressive tactics have led to both online tactical innovations and stagnation. While the descriptive statistics in this chapter showed evidence of online tactical stagnation in line with the qualitative data, the level of digital repression was not the primary contributor to the stagnation. In this chapter, I measured how general Internet users' interest in encrypted messaging is affected by digital repression. However, this digital repression is not directed at them, like the one that targets movements. The digital repression I measured here was implemented on the entire nation. Hence, the public response to the changing levels of digital repression may not lead to online tactical stagnation quickly.

In addition, this chapter reveals that when governments impose new laws that criminalise the use of encrypted messaging, a backlash effect happens, and the users' interest in encrypted messaging increases. This countervailing effect of laws happens when these laws are perceived as lacking legitimacy (Parisi & von Wangenheim, 2004). This countervailing effect was precisely found in countries where digital repression is high and moderate—where the legal systems might be in line with the rulers' goals. However, the anti-encryption laws were found to be successfully deterring the use of encryption in countries where digital repression is low—where laws are respected and enforced.

The interest in using encrypted communication was not impacted by protest events in all contexts. This could reflect that encrypted communication became a daily necessity regardless of protest events. This was against the findings of Braun and Oostveen (2019), who found that the use of PGP encryption was mainly dominated by Western male tech-savvy Internet users who might be involved in political discussions. Thus, I argued that encrypted messaging in the Arab world has shifted from being an online tactical innovation introduced by activists against governments' censorship and surveillance into a tactic that was adopted by Internet users for the daily uses of the Internet.

In addition, Internet penetration rates impact the interest in encrypted messaging in all cases. This is not surprising because, indeed, more access to the Internet will lead to an increasing need to have a secure connection that overcomes censorship and surveillance.

7.10 Study Limitations and Future Research

There are a number of limitations in this study that I have to declare to better understand the conditions under which the above results were found. First, it is important to note that Google Trends only provides data that could show the search engine users' interest in a subject. However, Google Trends data cannot measure the actual use of encrypted messaging in a country. Nevertheless, Google Trends still provides invaluable data and insights about the growing or declining importance of a subject (Clemente et al., 2019; Liu et al., 2012; Ning et al., 2019; Nsoesie et al., 2021; Xu et al., 2017; S. Yang et al., 2015). While there are available resources that could provide data on Internet censorship, there is almost no other source that can measure the use of encrypted messaging from 2004-2020 in the Arab world that could have been used in this study.

Second, the study relies on the data by V-Dem's Digital Society Project, which itself depends on expert surveys. Despite the accuracy of the V-Dem project datasets, expert surveys are vulnerable to hindsight bias and measurement errors (Levick & Olavarria-Gambi, 2020). An analysis of the V-Dem's data that relies on 3000 expert surveys showed that coders' answers depend on their knowledge of the subject—which might lead to systematic errors in judgement (Levick & Olavarria-Gambi, 2020).

Third, the Harvard Mass Mobilization Protest dataset relies on Western newspapers to collect and code protest events. Relying on Western information sources in similar off-the-shelf datasets could lead to missing out on some protest events, especially in regions where the coverage is often sparse (Clarke, 2021). Fourth, although Google search data is less likely to be impacted by societal

pressure, the increasing level of political surveillance is found to have an effect on search behaviours (Marthews & Tucker, 2014). Future research should investigate the impact of digital repression on users' search behaviours. Fifth, the digital repression categorisation of countries I employed in this study might not reflect the reality of digital repression in some of these countries (e.g., Bahrain and Oman). However, I chose to categorise them based on the minimum level of digital repression in order to avoid skewing the results that would occur if I depended on the mean level. Future research should explore other categorisation system.

Lastly, this research investigates the interest in encrypted messaging among all Arab users and not only activists. There was no method to isolate those interested in encrypted messaging for political purposes from those who might use it for entertainment, strengthening privacy, or socialising. To mitigate this limitation, I controlled for the effect of protest events and found that users' interest in encrypted messaging is not specifically impacted by political contentions. This shows that encrypted messaging—which was promoted by political activists as an online tactical innovation—has become a daily necessity and the need to use this tactic is no longer driven only by protest events.

7.11 Conclusion

This quantitative chapter has complemented the data I collected from my interviews with Syrian and Tunisian activists, advocates, and digital media experts. During my interviews, my participants indicated that moderate levels of digital repression ignited and motivated their use of novel online tactics—including encrypted messaging. To test this theory, I conducted a cross-national longitudinal study on 21 countries, representing the former and current members of the Arab League. I examined panel annual data from 2004 till 2020 using a variety of reliable data sources. I found that despite the steady levels of digital repression in the Arab world, Internet users have gained a sense of mass

resilience. Digital repression has motivated more interest in depending on encrypted tools in the Arab world.

The data from the Digital Society Project (DSP) that measured digital repression tested the wide nation digitally repressive tactics in each country. I argue that if this data represented the repression the movements were targeted with, the results might have been different. Members of the SAS movements stated that they abandoned online tactics because they felt that these tactics were no longer going to save them. The TAS movement has also abandoned its online tactics because its reality has become safer. For the general Internet users in the Arab world, online tactics are not a matter of life or death but rather a way to add an extra layer of safety and security. This might explain why online tactical stagnation was less likely to occur when measured beyond social movements.

Also, my theory of online tactical stagnation is inspired by two case studies: the TAS and SAS movements. As with any other new theory, the theory of online tactical stagnation needs further investigation in other contexts. Despite the fact that Syria and Tunisia share many factors with other neighbouring countries, the geopolitical characteristics of each country are still significant. Hence, the factors that might have led to the stagnation in Syria and Tunisia, might not stand in other countries. Therefore, further qualitative research is needed in other parts of the world to test the theory of online tactical stagnation.

While the findings in this chapter might not be definitive, they were gathered from twenty-one countries. I believe these findings might differ fundamentally if it was tested on other online tactics, primarily on tactics that are employed mainly by activists, such as hacktivism. Future research should examine the impact of digital repression on other digital tactics and mass mobilisation.

CHAPTER EIGHT

DISCUSSION AND CONCLUSION

8.1 Introduction

Digital media has transformed the fundamental nature of how people communicate and interact. Communication researchers rushed to discover the impact of the new advanced technologies on the political, social, and economic affairs in our world. However, studying digital media was challenging due to the interdisciplinary nature of this field. Examining digital media required acquiring innovative methodological and analytical skills to be able to establish a real understanding of their power and impact. In the early 2000s, when digital media studies were still emerging, Guido H. Stempel III and Robert K. Stewart predicted that:

The Internet appears to be a mixed blessing. It offers new opportunities for both audience research and content analyses, yet old problems researchers have encountered over the years remain. Whether mass communication research will be better off or worse off will depend on the skill of researchers in using the Internet (Stempel & Stewart, 2000).

Digital media studies were slowly growing at that time. A decade after, when social movements started to rely on blogs, online forums, and social media platforms to express their opinions and participate in political affairs, the number of studies on digital media rapidly increased. When the events of the 2011 Arab Spring took place, there was a major interest by researchers, funders, and think tanks to highlight the possibilities of digital media to advance democracies. This was the ‘golden age’ of digital media research. Indeed, APIs were open, data was easy to download and analyse, researchers were speaking freely, and above all, digital media was not fully co-opted by governments. This was when I personally became interested in digital media research.

This, however, did not last. Digital media was re-evaluated for its impact on democracy, especially in relation to misinformation, hacking, and hate speech (Lewis & Molyneux, 2018). The

demand for more digital media research escalated after the 2016 US elections and the Brexit referendum. It became necessary to learn and master computational methods to examine how bad actors can pollute the online sphere. At this stage, Twitter was overly examined by researchers for possible information operations. Facebook limited its API to restrict access to its data, forcing researchers to abandon examining this platform. In return, research examining information operations on WhatsApp, Instagram, and Telegram started to emerge as new alternative platforms.

Despite the growing trend in examining and defining the role of new technologies in our social and political lives, studies on digital media have focused on the Global North. It was challenging to find peer-reviewed articles in the different communication journals that focus on the Global South. Major Communication conferences would be swamped with research presentations on the US and the EU, leaving many countries under-explored. Inspired by my background as an Arab researcher who witnessed the Arab Spring firsthand, I wanted to examine the region where I spent most of my life. I intended to inspect the role of digital media in the success or failure of social movements in the region.

Social movements communicate, organise events, and implement collective actions using various digital forms. These forms include encrypted messaging, pseudonymity, counter-reporting, counter-disinformation, and many others—I call these methods online tactical innovations. In response, counter-movements adopt similar tools and methods to dismantle movements—known as digital repression or online tactical adaptations. These adaptive methods can include surveillance, censorship, disinformation, hacking, and reporting troops.

Across the world, evidence of this action-reaction puzzle exists, such as the movements of the Arab Spring, Occupy Wall Street, #MeToo, #BlackLivesMatter, and Hong Kong's Pro-Democracy. While these movements and others witness digital repression and use digital tools to make their

voices heard and to win the contention, how precisely digital repression can influence the communication infrastructure of these movements remain unknown.

In this thesis, I aspired to be among the first to examine how and when social movements innovate online tactics. I focused on the understudied Arab world, examining the micro-tactical structure of Arab Spring movements. I examined two countries representing two different outcomes of the 2011 Arab Spring: Tunisia and Syria. Both movements were motivated by the same goal, removing the regime and achieving democracy. Although it could be argued that Syria was and still is a war-torn country that could be difficult to compare with another relatively stable country, I argue that the war is an unfortunate outcome of the uprising. I also believe that it is an important reminder to recall that what happened in Syria was not just a civil war but a brave revolution against a tyrant that escalated to a war. In this thesis, I look at Syria as a case of Arab Spring uprisings rather than a case of a war.

Using a mixed-method approach, I interviewed 60 bloggers, activists, and digital media experts from Tunisia and Syria from 2019-2020. I proposed a theory of online tactical stagnation, representing gradually abandoning online tactics when the opponents' digitally repressive tactics either were removed or became intolerable. Later, I expanded my theory to examine the online tactical stagnation in 21 Arab countries, testing the effect of digital repression on the general Internet users' innovations.

On the one hand, I conclude that social movements could innovate multiple online tactics when digital repression is moderate. However, their innovations will be impacted and stagnated when the level of digital repression drastically increases or decreases in their countries. On the other hand, while Internet users' innovations are generally affected by digital repression, these innovations would not be abandoned by the users due to the changing level of digital repression in a country.

My plan when I moved out from Egypt was to offer a contribution that could help to decolonise the communication field. I insisted on studying the Arab world and becoming one of the region's leading experts in digital media. That, nevertheless, came with a price. First, finding resources to learn about digital media in the region was challenging. Second, my fieldwork came with many surprises due to the lack of resources written by authors from the region. Third, my nationality limited my accessibility to the field to a great extent. Despite all of this, I believe this work has filled many gaps in the literature on digital media, the Arab world, and social movements.

8.2 Answering the Research Questions

When McAdam (1983) proposed his concept of tactical innovation, he was studying the civil rights movement in the US in the 1960s. McAdam discussed innovations, such as sit-ins and bus boycotts. These tactics were organised in response to the repression employed by the movement's opponents—then, the segregationists. McAdam's pioneer theory did not explain why this particular movement was able to innovate and when and how these tactics disappeared right after. Following McAdam's article, further research has been conducted to understand the association between repression and tactical innovations.

Quantitative and qualitative research showed that, in most cases, repression influenced tactical innovation, as McAdam predicted (Demirel-Pegg, 2020; Khawaja, 1993, 1994; Lichbach, 1987; Moss, 2014b; Shriver & Adams, 2016). However, most of this research was conducted to examine offline tactical innovations. Only a few tackled the online forms of tactical innovations (Lee, 2018; Moore-Gilbert & Abdul-Nabi, 2021; Moss, 2018). In other words, the many ways in which digital media transformed tactical innovations remain unexplored.

In this thesis, I asked three questions. First, *how do movements use digital media following the Arab Spring?* During the 2011 Arab Spring, digital media was considered a resource that helped

mobilise Arab movements in 2011 against corruption and repression (Abdullah, 2018), a new opportunity that allowed for an unprecedented flow of information (Abdulla, 2014; Howard & Hussain, 2013), a new public sphere (Lynch, 2015), and a news hub for the globalisation of the Arab Spring movements (Bennett & Segerberg, 2012).

Arab movements have been hailed for introducing new tactics using digital media. Innovative tactics helped activists organise their movements and survive governments' surveillance and censorship (Howard & Hussain, 2011). I referred to these tactics as *online tactical innovations*. On the contrary, Arab governments have adapted fast to digital media and employed more advanced circumvention methods to control digital media (Howard & Hussain, 2011). This was what I described in this thesis as *digital repression*.

Based on my fieldwork examining the SAS and TAS movements, I found that digital media was used differently in Syria and Tunisia, depending on the political contexts in each country. In Syria, a country where online activism and blogging were not strong prior to 2011, digital media was more of a coordinator than a mobiliser for three reasons. First, The SAS movement could not rely on social media platforms to mobilise people; rather they relied on other traditional methods, such as gathering people after Friday prayers and funerals. Second, the fear of regime surveillance exceeded the mobilisation potentials of the new technologies. Third, Syria had a very poor Internet infrastructure, leading to a huge digital divide in the country.

On the other hand, the TAS movement relied primarily on digital media to expand the protests in 2011 from small cities in the country to the Capital, Tunis. Members of the TAS movement, however, have experienced the potential of digital media by organising several online collective actions prior to the Arab Spring. In addition, Tunisia was the leading country in the Arab Spring movements. This gave Ben Ali's regime less time to co-opt digital media to curb the protests,

as opposed to al-Assad regime in Syria. Hence, there were more opportunities to use digital media for coordination and mobilisation in Tunisia.

Following the Arab Spring sparks in 2011, both movements admitted that they were no longer able to coordinate and mobilise people to take the streets through methods of digital media. My participants also argued that members of both movements got scattered. Communicating and coordinating through digital media became less feasible than before. In Syria, members of the LCCs died, fled, or got arrested. The iconic history of the Syrian LCCs ended a few years after the Arab Spring uprisings. Moreover, when Syria was divided into regime and opposition-held areas, coordination through digital tools became more difficult. Digital media, however, continued to be the voice of the revolution by connecting the SAS movement with a global audience through Twitter and Facebook.

In Tunisia, although for more optimistic reasons, members of the movement moved on with their lives and careers. They either left Tunisia to work abroad or joined one of the many political parties that were later established in Tunisia. Those who used to be iconic Tunisian activists and bloggers no longer wanted to be called ‘activists’ but rather ‘campaigners.’ Even though the 2015 anti-corruption campaign ‘Manish Msamah’, translated as ‘I do not forgive,’ intended to mobilise people to take the streets to resist the Reconciliation Law, the campaign only succeeded in gathering a few hundred Tunisians to protest against the law. During the 2019 presidential elections, social media platforms were polluted by misinformation and divisive content, sponsored by foreign and local adversarial actors.

Based on my interviews, I also found that platform affordances played different roles in these movements. As previously mentioned, the SAS movement was not looking for a platform to mobilise masses, rather it only intended to find a platform where they could safely coordinate their collective actions securely. Hence, the movement moved from one platform to another to avoid hackers and

spies. First, the movement started organising and coordinating the revolution in 2011 on Facebook private groups because it was the most used platform. When these groups were hacked and undermined by al-Assad's militia, the movement moved to Skype, it was not too long until Skype was compromised as well. At this point, the movement immigrated all its digital practices to encrypted chatting platforms like Telegram and Signal.

Alternatively, the TAS movement's main priority while selecting their primary platform was popularity. The TAS movement sought to mobilize masses through social media and blogs. Hence, they chose Facebook for being the most used among Tunisians. Until 2020 and while I was conducting the interviews, Facebook remained their top choice for mobilisation. At that point, Instagram was also used by the new generation of civil society and political parties to distribute online content. In both the Syrian and Tunisian cases, Twitter was not seen as an optimal option for coordination and organisation; it was neither encrypted nor popular.

My second research question was, *what are the perceived digitally repressive tactics used to deter movements?* I found that there were many similarities between the methods used by both governments in Syria and Tunisia. Surveillance, censorship, and disinformation were all employed against the TAS and SAS movements. However, the Syrian regime used more advanced digitally repressive methods than the Tunisian regime. I argue that this was the case because the Syrian uprisings took place months after both the Tunisian and Egyptian revolutions had occurred. In other words, Assad had the advantage of the time to invest in expanding his digital repression repertoire. This was something Ben Ali could not do.

In the Syrian case, these digitally repressive tactics were still being implemented while I was conducting the interviews in 2019-2020. On the other hand, when Ben Ali was removed and fled to Saudi Arabia, his censorship and surveillance apparatuses were removed from Tunisia. The Tunisian digitally repressive repertoire has been demolished in the country—at least that was the case during

my fieldwork experience that ended in early 2020. This was in line with the quantitative data from the DSP, showing that digital repression has drastically declined in Tunisia following the 2011 revolution and until 2020.

My third research question in this thesis was *what is the relationship between online tactical innovation and digital repression?* Protest tactics include various forms and target many actors. They could be non-violent actions, such as sit-ins, boycotts, strikes (McAdam, 1983), bargaining, and demonstrations (Moss, 2014). They could be violent, like plane hijacking, mutiny, tax rebellions, food riots, and collective self-immolation (Tilly, 1978). Also, they could be confessional, like the ones used in the 1830s when people participated in public confessions to challenge drinking and slavery (Young, 2002). Other tactics could include cross-burning, street performances, public chanting, prayers, violations of laws, thefts, anonymous threatening letters, arson, and other unlimited possibilities (Taylor & Dyke, 2007; Wells, 2015).

When tactics are imitated and repeated over the years, opponents learn how to depress them. Based on the works of McAdam (1983), Moss (2014), Shriver and Adams (2016), and Wang and Soule (2016), I define tactical innovation as a new or an existing protest tactic that a movement has not yet employed in its repertoire of contention. By contrast, regimes innovate new suppressive measures to counter the movements' tactical strategies in what McAdam (1983) describes as *tactical adaptation*. This chess-like game is known as *tactical interaction* in which each party innovates and introduces new methods to dominate the other.

Which factors motivate tactical innovations, and how do innovations end and disappear? The structural determinants of a movement's tactical innovation are a subject of debate among researchers. McAdam (1983) notes that a movement's tactical innovation is determined by repression, meaning that movements' actors are more likely to introduce new tactics when the conventional methods of protests are censored. Researchers argue that tactical innovations are

driven by threats, mainly political repression (Demirel-Pegg, 2020; Moss, 2014; Tilly, 1995). Scholars also disagree on how repression could shape tactical innovation and movements' repertoire. Some argue that severe repression ends tactical innovation (Demirel-Pegg, 2020), and some assert that all levels of repression will motivate actors to shift movements' tactics (Moss, 2014). Others contend that repression can alter non-violent tactics into new violent forms (Lichbach, 1987).

Based on my work, I found that online tactical innovations are preventive responses to digital repression. Movements do not pre-emptively innovate tactics to win the contention, but they only introduce new tactics when their opponents use repressive ones. For example, the SAS and TAS movements used encrypted messaging in response to surveillance and censorship. Many of the innovative tactics were imitating their governments' repressive tactics—disinformation vs. counter-disinformation tactics.

However, this relationship between digital repression and online tactical innovation was only present when the level of digital repression was moderate. These online tactical innovations would be abandoned when the level of the repression would change and become high or low—a phenomenon I referred to as 'online tactical stagnation.' This could happen for two reasons. First, in the severe case of digital repression, the price of contention would be perceived as higher than the outcome. Second, when digital repression declines, a feeling of safety would replace the need to revolt and protest—as a result of activism fatigue.

When I examined the broader impact of digital repression on general Internet users, I found that digital repression also impacts online tactical innovations—specifically, encrypted messaging. However, this relationship is not affected by the changing level of digital repression. This could be explained by the fact that general Internet users are not subjected to direct repression as the one exerted on social movements. In other words, I found that online tactical stagnation is a phenomenon that is more related to social movements.

8.3 The Theory of Online Tactical Stagnation

In this thesis, I propose the term ‘online tactical stagnation.’ A phenomenon that describes gradually abandoning online tactical innovations by a social movement due to the changing levels of digital repression in a country. Online tactical innovations are temporary and short-lived. When online tactics are introduced by a social movement, their stagnation is inevitable. The stagnation happens due to either activism fatigue or changes in the perception of the cost of contention. Movements’ online tactical stagnation is gradual, and slow, but unavoidable. In the Syrian case, online tactical innovations stagnated for two years, from 2011 to 2013. In the Tunisian case, the innovations, which started a few years before the 2011 uprisings, were abandoned by the time Ben Ali was removed.

This theory of online tactical stagnation was generated from studying the SAS and TAS movements’ online micro-tactical structure. When I tested this theory on Internet users in the Arab world, I found that online tactical stagnation was only relevant to members of social movements who were subjected to targeted digital repression. On the one hand, the SAS movement abandoned its tactics when the repression increased to levels they did not anticipate. On the other hand, the TAS movement stopped using tactical innovations when Ben Ali’s repression ended. In other words, online tactical innovations were introduced and employed only when the level of digital repression was moderate and bearable.

Nonetheless, Internet users are less likely to abandon their innovative measures even when laws are issued to prohibit the use of these measures. This is not because the general Internet users are braver than members of social movements, but because Internet users know that these laws and other countermeasures are not specifically targeting them. In addition, when Internet users adopt and imitate online tactical innovations from social movements, they use them on a daily basis to communicate and work online. In other words, this adoption is not intending to temporarily revolt

against a regime. Instead, online tactical innovations would be continuous, becoming a daily practice by Internet users. Hence, Internet users' tactical stagnation is slower and unpredictable compared with social movements.

8.4 What's Next? My Reflections

In this thesis, I analysed how social movements used digital media to make their voices heard. I tried to avoid looking at the role of digital media with an exaggerated eye or underestimating its power. I realised that digital media had become a part of the battlefield. It was the weapon that both parties were using to win a contention. Modern social movements have grown, practising activism through digital media. The survival of their members, most of the time, relied on the use of digital tools.

I also realised that the general users of digital media learn tactics from tech-savvy activists. Millions of Arab Internet users adopted the use of encrypted messaging on a daily basis, regardless of the level of digital repression in their countries. Indeed, online tactical innovations could stagnate and could no longer be used for activism. However, they could become general and fixed online practices that do not aim to promote cases or opposing leaders. In Chapter Seven, I illustrated how protest events had no particular influence on users' interest in encrypted tools. I also provided evidence of this in Chapter Six when members of the TAS movements kept using their pseudonyms as a self-branding tactic.

The Arab world is male-dominant region where gender inequalities are well-embedded (Evans, 2022; Lyons, 2017). However, gender was not a major variable in defining the digital practices of both the SAS and TAS movements' members. While interviewing a gender-balanced sample from Syria and Tunisia, the participants I interviewed did not report a gender-specific experience in digital repression. Governments did not make any gender-based distinction in the way

they treated activists. They were targeted with the same tactics of offline and online repression. I also noticed that all activists deployed the same online tactics against their opponents.

In this thesis, I adopted the use of a mixed-method approach. I concluded that the implementation of mixed methods was essential to answer questions that previous theories failed to answer. With the computational social sciences movement growing, more researchers were abandoning the use of qualitative methods to understand societal and political phenomena. This has left us with so little knowledge about the precise role of digital media in our lives. I argued that the use and knowledge of both qualitative and quantitative methods were essential to generate new knowledge. Additionally, I argued that there was a need to test the theories that researchers generate from their qualitative work. In this thesis, when I tested my theory, I gained a broader understanding of how general Internet users could adopt online tactical innovations.

As I stated earlier, this thesis only examined the communication infrastructure of two social movements in the Arab world. While this thesis could help us draw some insights into the impact of digital repression, cautious generalisation should be implemented when applying my findings to other case studies. Although the two case studies had similar outcomes with online tactical stagnation, the two countries were Arab nations with many similar socio-political conditions. Thus, further investigations on online tactical stagnation should be conducted in other regions with different conditions and by using other methods.

When I started working on this thesis, I wondered which school of thought I would belong to. Was I going to join the researchers who concluded that repression had a direct backlash effect on movements and can escalate more contention (Almeida, 2003; Khawaja, 1993; Leenders, 2012; Van Dyke & Soule, 2002)? Was I going to relate more to the pessimistic point of view arguing that repression could indeed end contentions and defeat movements (Escribà-Folch, 2013; Lichbach, 1987; Ortiz, 2013; Tilly, 1978)? Or was I going to join those who referred to a possible third scenario

in which repression can defeat and escalate contentions based on its severity (Demirel-Pegg, 2020; DeNardo, 1985; Gurr, 1970; Khawaja, 1993; Muller & Weede, 1990; Opp, 1994)? I realised that I belong to the third school. Indeed, I found that digital repression impacted online tactical innovation when the repression was bearable. I found that it was not a linear relationship but a conditional one that relied on the magnitude of repression.

However, I added several things to this school of literature. First, this inverted U-shaped relationship is also applicable to the digital world. Second, it might take years for tactics to stagnate gradually. Third, this concave relationship cannot be employed by Internet users. This is because Internet users experience digital repression differently than social movements. Lastly, while tactics could be stagnated when the repression level changes, they could again re-rise when this level changes again.

Moreover, I finished my data collection in early 2020. A lot of changes have taken place ever since. In Syria, Bashar al-Assad secured a fourth term by winning the 2021 presidential elections, gaining more than 95 per cent of the votes. The shortage of basic goods and items continued while the currency depreciated. Tension in Northern Syria escalated, with Russian-Syrian bombings increasing in this area. Tunisia, on the other hand, has witnessed more noticeable political changes. President Kais Saied suspended the Parliament, assumed the executive authority, and removed the Prime Minister in July 2021. These actions were perceived to be threatening democracy and freedom of expression in Tunisia. Civil society groups report that the level of restrictions on digital rights is currently increasing.

I argue that the level of digital repression remains the same in Syria and that tactical innovations remain stagnated. In Tunisia, I believe that the newer generations of civil society groups might innovate newer tactics to overcome the current restrictions, given that the level of digital repression only increased in 2021 with the introduction of new laws and measures. These tactics

might stagnate again if the level of repression continues to escalate in the country. Further investigation should be implemented to examine online tactical stagnation in both Tunisia and Syria using different methods.

The theory of online tactical stagnation is pessimistic. Indeed, the theory argues that the level of digital repression is the factor driving and ending the online tactical innovations of a movement. These innovations are the ones needed to win contention and mobilise people. These tactics will stagnate when repression increases or decreases, contributing to the failure of many movements' demands. However, this theory holds a bright side. These innovative tactics do not demolish and end from the collective memory entirely. Some of these innovations pass to Internet users who employ them in their daily practices. In addition, new generations of tech-savvy individuals and new movements emerge and imitate new tactics. The level of digital repression is not static; things change, and new opportunities will certainly open up.

History has witnessed many occasions when social movements were unpredictable and were not in line with theories drawn by the world's smartest people. Despite all the evidence I found that reflects that the magnitude of digital repression was the main variable that led to online tactical innovation and stagnation, I saw many small-scale initiatives brought up by brave digital rights activists in very repressive contexts. While online collective actions are unlikely to take place during severe levels of digital repression, I need to leave a room in my theory of online tactical stagnation for the unpredictability of movements and to the power of faith in a brighter future.

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APPENDIX I

Information Sheet for Participants (CUREC 2)

1. *What is the purpose of this study?*

This qualitative study aims to explore the usage of social media by political opposition in the Arab world to communicate with citizens, to organize themselves, and to disseminate their ideas. It contributes to the emerging area of social media research by using a multiple-case study approach to examine this understudied region.

2. *Why have I been invited to take part?*

You have been invited because you have either been an active critic of the politics in your country. You might also have been invited for your activism on the Internet and your role in raising political awareness in your country.

3. *Do I have to take part?*

No. You can ask questions about the study before deciding whether or not to participate. If you do agree to participate, you may withdraw yourself and your data from the study at any time, without giving a reason and without penalty, by advising the researcher of this decision. You can also withdraw after ten days from the actual date of the interview.

In case of rejecting the interview, your relationship with the Oxford Internet Institute or the University of Oxford will not be affected.

4. *What will happen to me if I take part in the study?*

If you are happy to take part in the study, you will be asked to select a day and an hour for us to meet face to face. If you would rather meet online, we can arrange a Signal or WhatsApp call at the time that best suits you. Upon starting, I will walk you through the study procedures and give you a chance to ask any questions. I will audio record the interview, so I can analyse it deeply later on.

You will be asked a few demographic questions and then questions related to the topic of the study. You can stop me at any point, and you have the right not to answer any question you do not feel comfortable answering.

This should take approximately an hour. The interview will be recorded and the data will be encrypted. Identifiable data will be only accessed to by the researcher. I will assign a pseudonym while referring to you in the interview memo and your identity will be kept confidential.

5. *Are there any potential risks in taking part?*

There is no physical risk that will happen to you if you agree to the interview. Although your confidentiality will be my top concern, there is always a risk of the data falling into the wrong hands or hacking attempts.

In order to mitigate any potential risks, I will assign a pseudonym to your data that will be stored on encrypted laptops. Your identity will be only known by me, and it will be kept safe in an encrypted external hard drive to avoid hacking attempts.

6. *Are there any benefits in taking part?*

There will be no direct benefit to you from taking part in this research. Yet, the findings of this research may further our understanding of the political culture in your country. It's a very understudied topic in the Arab region and you being part of it will add to the value of the study.

7. *Expenses and payments*

There will be no payment for taking part in this study.

8. *What happens to the data provided?*

We will minimise our use of personal and sensitive data in the study as much as possible.

The **research data** will be stored using pseudonyms to refer to your identity which I and the supervisor will have access to. Your real identity will only be known to the researcher. Your responses will be pseudonymised. Using the information you will provide; I will write a memo and might take some quotes as well. I would like your permission to use direct quotes, but not against your name. If the quote could reveal your identity, it will not be included in the study. The data you will provide will be aggregated with other information from other subjects to compare the

differences and similarities between you and them.

The **research data** will be stored confidentially using encrypted laptop and by using pseudonyms.

Personal / sensitive data will be stored confidentially using encrypted hard drive and will be separated from the research data.

Personal data will be anonymised. The researcher will be the only one who would have access to identifiable research data. The researcher is using only one laptop which is encrypted, and no one else has access to.

All research and personal data and records will be stored for a minimum retention period of 3 years after publication or public release of the work of the research.

We would like your permission to use anonymized data in future studies and to share data with other researchers (e.g., in online databases). All personal information that could identify you will be removed or changed before files are shared with other researchers or results are made public.

My supervisor (Professor Philip Howard) will have access to the pseudonymized research data. Responsible members of the University of Oxford may be given access to data for monitoring and/or audit of the research.

9. *Will the research be published?*

This research is part of my Doctoral degree at the University of Oxford, and the University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

The research will be written up as a thesis. On successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future research. The thesis will be published open access. Also, I will publish several articles from my thesis in academic journals

and will eventually write a book using the pseudonymised data. I will not reveal your identity in any of these publications. Although I will do my best to keep all data confidential at all times, there is always a small risk of a breach of confidentiality in case of data leaks/theft.

10. *Who is organizing and funding the research?*

This study is my dissertation for my Doctoral degree at the Oxford Internet Institute at the University of Oxford.

11. *Who has reviewed this study?*

This study has been reviewed by and received ethics clearance through, the University of Oxford Central University Research Ethics Committee. (ref. no. R61055/RE001)

12. *Who do I contact if I have a concern about the study or I wish to complain?*

If you have a concern about any aspect of this study, please speak to myself, Mona Elswah [+447881587527] or my supervisor Philip Howard who will do his best to answer your query. I should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you remain unhappy or wish to make a formal complaint, please contact the relevant chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter in a reasonably expeditious manner: Chair, **Social Sciences & Humanities Inter-Divisional Research Ethics Committee**; Email: ethics@socsci.ox.ac.uk; Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD

13. *Data Protection*

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest.

Further information about your rights with respect to your personal data is available from
<http://www.admin.ox.ac.uk/councilsec/compliance/gdpr/individualrights/>.

14. *Further Information and Contact Details*

If you would like to discuss the research with someone beforehand (or if you have questions afterward), please contact:

Mona Elswah

Mona.elswah@oii.ox.ac.uk

+447881587527

APPENDIX II

Interview Guide

Pseudonym:
Date:
Time:
Location:
Duration of the Interview:

ABOUT THE SUBJECT

Q.1 What is the gender of the subject?

- 1 Male
- 2 Female

Q.2 In your judgment, what is the socio-economic status of the subject?

- 1 Upper
- 2 Middle
- 3 Lower

BACKGROUND QUESTIONS FOR SUBJECT

Ask the subject questions about their background.

- Q.1 What year were you born?
Q.2 What city or village do you live in?
Q.3 Of what country are you a citizen?

Q.4 If you have travelled or lived outside of the country, in what capacity did you travel or live outside the country?

- Personal
- Business
- Tourism
- Shopping
- Other [RECORD]:
- Not applicable

Q. 5 What is your highest level of education?

- No Degrees
- Primary Education
- *Thanwya A'ma* (High School)
- Institute/University (bachelor)
- Postgraduate Degree ماجستير
- PhD
- Other [RECORD]: _____

QUESTIONS FOR SUBJECT

Q.6 Can you describe your typical day?

Q.7 How active are you in using social media platforms?

Q.8 In your opinion, is social media a free and open space where you can freely discuss whatever you want?

Q.09 Why do you oppose the current government?

Q10 How do you disseminate your ideas and communicate with the public?

Q11. What online platforms do you use most to reach out to people in (name of the country).

Q.12 What platforms do you use to corporate and organize your ideas with other opposition individuals?

Q13 Can you mention some of the pages you use? And how often do you post on them?

Q14. Do you think social media is more effective than traditional media in conveying your messages to the public?

Q.15 Have you ever been told not to publish something online? Were there any restrictions you faced in participating online?

Q.16 Do you sometimes use bots or fake accounts online? Do you see this phenomenon in your country?

Q.17 How do you use bots or fake accounts? And how much powerful they are in your opinion?

Q.18 Why are you using counterpropaganda method?

APPENDIX III

Oral Consent Script

Hello again, I'm Mona Elswah from the University of Oxford and I wanted to talk to you about the project I gave you information about before. To recap, the broad aims of my project are to examine the role of social media in Arab countries in enabling political opposition, and whether social media platforms could be used as a counterpropaganda tools or not in the Arab World.

Are you still interested in taking part in the project. Now I'd like to confirm some of the details of the project to make sure you understand what's involved for you:

The study is being used for my postgraduate research.

- If you agree to take part, I'll need you to take an interview lasting approximately an hour in a location you select.
- You don't have to agree to take part; you can ask me any questions you want before or throughout; you can also withdraw at any stage without giving a reason.
- The researcher, project team, and my supervisor will have access to the research data which will be anonymized. I am the only one who will have access to any personal data you provide which will be secured separately from the research data. In 10 days after the interview, if you have decided to withdraw, I will delete the data afterwards.
- You have the right to withdraw before the data is anonymized which is normally ten days after the interview.
- You are aware that an Oxford University Research Ethics committee has approved this research project and how to contact me (in the first instance) or the committee in case of any concerns or complaints. I have given you the project's ethics reference number and relevant contact details.
- I won't use your name next to data you provide.
- I will store any information you provide safely and confidentially on using encrypted laptops that is accessed using only encrypted laptops, and I will keep the research data for three years after publication.
- I would like to be able to use your anonymized data in future studies and to share this data with other researchers

- I would like to audio record you.
- You're aware that my written work will be published online but that I will use a pseudonym to refer to you in the study.
- The project will be published in a thesis, academic journals, and a book
- Are you still willing to take part? Do you give your permission for me to audio record you?
Do you give your permission for me to re-contact you to clarify information?

[*Await confirmation*] So if you're happy with all of that, and have no more questions, let's start

