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The Art of Repression: Digital Dissent and Power Consolidation in El-Sisi's Egypt

A thesis submitted in partial fulfillment of the requirement for the degree of Bachelor of Arts in Government from the College of William & Mary

by

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TITLE: The Art of Repression: Digital Dissent and Power Consolidation in El-Sisi's Egypt

ABSTRACT: Imprecise measurement tools impede the study of protest mobilization. Mobilization

proxies, such as counting protesters and protest events, result in significant outliers and variance

while ignoring sociocultural, cybernetic, economic, legal, and other features that relevant

academic literature considers essential to understanding mobilization dynamics. Without accurate

empirical models, researchers' and policymakers' investigations of autocratic repression have

little explanatory power. This thesis proposes a methodological addition to the mobilization

literature: Two three-level scales distinguish an event's potential to attract an audience from the

protest's actual output relative to similar episodes. I employ the Armed Conflict Location and

Event Data (ACLED) project to demonstrate the measurement's utility. Afterwards, I apply these

models to conduct an impact assessment of recent Egyptian cyberregulatory laws. Controlling for

the grievances of protesters and performing other robustness checks, the time series demonstrates

a strong, statistically significant relationship between the policies and the reduction of low-level

potential mobilizational capacity of Egyptian dissidents, but fails to identify an expected

relationship between police pressure and the decline of mobilizational capacity. These findings

contribute to the theoretical frameworks of mobilization scholars and policymaker discussions

regarding the value of internet censorship tools for curtailing oppositional political action.

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Professors Roessler and Shellman deserve thanks for critiquing my oral defense and guiding my research as well. Professor Shellman, out of the blue, helped me learn to use Stata to run so many regressions. Learning to think statistically, and to interpret the complexities of quantitative software, was yet another challenge this paper presented and demanded navigation. Professor Roessler's senior seminar was the first class in which I found myself properly determined to understand the dry methodology section of academic papers I would normally skip over when rushing to read the conclusion. To all three of you, thank you for teaching me to think like a political scientist.

My remaining friends: Thank you for bearing with me. The debate team, for offering me a channel to vent and to assess and to learn. Sam, for teaching me how regressions and p-values work over an eight-hour car ride to South Carolina. Ethan and Daniel, for repeating what Sam did. The abstract concepts of fall, winter, and spring break, which went well-utilized. Professor Hayden, Drs Gani, Ramsay, and Lehr at St Andrews, whose courses inspired this work. The members and staff of the joint-degree program more broadly; joining it was the best decision of my life. Jonathon, my freshman roommate and best friend, for teaching me to mail letters, wash dishes, and generally operate as a functional human being. My aunt and uncle, whose kindness and support show no end. And my girlfriend, Lilly, whose head will explode if she hears me mention Egyptian protesters one more time.

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I: INTRODUCTION

In 2007, political scientist Christian Davenport was confident enough to claim that "there have never been any analyses of the conditions under which governments effectively eliminate or reduce dissent; there have only been empirical investigations that reveal that occasionally repression increases and/or decreases the activity of state challengers" (10). That this absence appears to remain over ten years later speaks to a pressing need within the study of nondemocratic governments. Why has this insufficiency persisted? Scholars' measurement methods do not adequately assess the conditions that limit or amplify autocrats' repressive power. Oftentimes, studies count protesters or use public opinion data as proxies for leaders' success in reducing dissident activity over time (Dollbaum, 2016). These measures, however, do not tell the entire story. A place's history, culture, and social-governmental relationships condition what mobilizes people to action, and likewise, the effectiveness of efforts to repress that mobilization. That repressive governments continually expand their toolbox with new digital mechanisms for surveilling their citizens and predicting unruly behavior makes the costs and benefits even harder for observers, and participants, to calculate. Activists, hoping to undermine tyrants, must play within the rules of the game that these tools create, or innovate in ways that subvert their governments' wishes. Farrel (2012) pointed to the challenges in establishing the causal links between the motivations behind these repressive tools and their effectiveness in empirical terms. For these reasons, this paper cannot answer Davenport's assertion by conclusively analyzing the conditions of effective repression. Instead, I address these challenges by suggesting possible causal pathways that change repression patterns and extend the methodologies by which one may study them. Cyber-regulatory policies, due to their opaque nature, make for a "difficult case," if we can develop more sophisticated measurement tools for assessing the impact of such policies,

then repression theorists are better off, and activists might more readily respond to repressive authoritarians.

Globalization, and accelerating technological sophistication, transform the lifestyles of everyone they affect. The internet's decentralized, global infrastructure makes it difficult to dismantle, and over time, the degree of internet access continues to increase almost everywhere. It mediates politics. Almost any large-scale political event is news and conversation-worthy, and the internet provides a forum for anyone to debate anything. Internet usage empowers opinion formation and collective action, online petitions and offline organizing. Because the internet does not appear to be a temporary phenomenon, and changes peoples' lives and their methods and preferences for political engagement, the topic is essential to study. While globally, internet traffic rates continue to rapidly accelerate (Pew Research, 2016), emerging economies claim the greatest share of internet access and Internet Protocol traffic growth. Consequently, the internet's prevailing demographics will shift in favor of new internet users. This change in the distribution of internet users, less disproportionately Western and more representative of the Global South, means that the future of the internet's usage, governance, and evolution partially rests in their hands. The regions of the world with the lowest amount of internet access per capita tend to also host non-democratic regimes. Increasing internet access rates imply greater online participation in politics, and more surveillance and censorship by repressive regimes.

While the internet used to be a libertarian haven free from the law, political regimes have, in recent years, proven themselves nimble controllers of internet access and their reputations, as a product of online discussions and criticism of their governance. Repressive politicians have long controlled public narratives and quelled offline protest within their borders. With online, deterritorialized options, activists might circumvent authoritarian control to call for free and fair

elections or denounce human rights violations. Or, these governments might gain the upper hand, given advances in big data collection and artificial intelligence, to predict and respond to activist activity before it begins. Because the internet and the technical tools used to free or repress civilian populations in autocratic environments continually increase in their reach and power, we do not know which party gains more, and what other factors, such as laws, institutions, geography, and political culture, might tip the scales. Understanding how repressive governments constrain internet activism contributes to our understanding political dynamics in spaces whose citizens are increasingly online.

This project pertains particularly to activists in non-democratic states, although all types of governments could gain a wider understanding of how the internet affects their relationship with their citizens, and increasingly, those of other governments. The paper's methodological contributions assist academics in conflict studies, comparative politics, internet and telecommunication studies, and the protest and social movements scholarship. Garret (2006) points to the "sometimes-contradictory findings in the literature" regarding technology's political consequences, dependent upon context. Internet telecommunication technologies (ICTs) are at least popularly believed to upend traditional political relationships, and past research indicates they play a new role. Their widespread, constant presence, alongside expectations that they will continually evolve and proliferate, renders this absence in the literature detrimental to political science's understanding of technology's effect on governance.

II: LITERATURE REVIEW

This paper examines the mobilization of anti-regime protest under repressive conditions. To that end, it investigates the theoretical background of several interrelated concepts. First, how do people traditionally organize and network under autocratic regimes, lobbying their government for change and protesting the lack thereof? How do dictatorships (i.e., governments without competitive democratic opposition) manage their relationships with their populations, and how does repression shape protest dynamics? And finally, how do internet and telecommunication technologies (ICTs) affect these processes; who do they help or hinder? *Conventional Wisdom*

Scholars investigate protest through studies of political participation, conflict, social movements, and internet development. In the broadest sense, a protest is a method and output of collective action. Academics have discussed a wide variety of collective action issues, not all of which are political. Collective action theory offers explanations for how individuals interact with one another towards common ends that would be difficult to achieve individually. Relatedly, resource mobilization theory explains how various actors access and instrumentalize the tools at their disposal towards specific ends. Scholars also discuss the impact of repression upon these dynamics, and the role of ICTs in politics as an extension of the digital communications literature.

Within the field of comparative politics, the collective action literature examines how individuals undertake actions for their own and others' interests, even when doing so might cause then harm, or when the benefits to the individual fail to outweigh their costs (Ostrom:2009). Scholars emphasize both structural factors and temporal variables that condition accomplishment of the collective goal. Collective action's structural elements consist of the

number of participants, the homogeneity of their backgrounds and beliefs, the method by which they communicate, and whether the "good" or goal they are aiming to achieve can be fully shared or declines in quantity as it is used by more participants. Temporal conditions shape how participants view each other. Information regarding past events and actions, and previous linkages and histories between individuals shape community trust, reputations, and expectations. Individuals enter into collective action arrangements dependent upon their interests, but scholars debate the weights individuals apply to those interests, and the individuals' final calculations to join their resources with those of others. Individuals are more willing to join groups if they do not face requirements to contribute themselves. The ability to free-ride lowers perceived costs for joining groups, often at that group's detriment.

When *collective action* targets a regime, it is inherently *political* and *contentious*; these three elements constitute contentious politics, which Tilly (2008) defines as the series of "interactions in which actors make claims bearing on someone else's interest, in which governments appear either as targets, initiators of claims, or third parties" (5). Protest is a type of activism, but unlike campaigns to spread awareness, protest advances an agenda that if realized, would directly affect another's interest (Sharp, 1973). Protest may or may not be violent, but it generally occurs outside of the confines of traditional civic institutions, where a formal complaint might be launched and processed bureaucratically. Protest participants employ a "repertoire of contention," mobilizing their base and advancing their agenda. The contents of this repertoire are dependent upon participants' resources and experiences. "Contention" against a regime might include strikes, demonstrations, or even riots. Protesters might demand signatures for an online petition or hack government computer servers. At one end of the spectrum are mere speeches expressing disapproval, and at the other is revolution overthrowing the regime. These

actions may be the result of immediate reactions to "destabilizing events," such as a new law or a natural disaster, or they may be an output of longer-term grievances (McAdam, 2018).

We would find it exhausting to constantly protest everything that upsets us. Rather, individuals must be mobilized from rest to protest in specific instances. Motivations to protest may be personal and not clearly defined, perhaps due to peer pressure and not political fervor, or targeted towards ends in which they feel themselves deeply invested. This mobilization may take the form of physical attendance, but it also includes the resources protesters and their organizations use, including signs, money, and recruits, who must be trained and motivated in turn (Edwards and Gilham:2013). Given these conditions, the literature conceptualizes varying "potential" for an individual or group to protest.

I define protest potential as "the individual propensity to engage in unconventional forms of political behavior as a means of political redress" (Marsh et al. 1979:59). If there were no pressures reducing the potential for protest, then one might protest perpetually until their demands were met. The maximum one could protest is dependent upon myriad factors, from the individual's time commitments to the specific interest or issue motivating their protest.

Moreover, "the position one takes on a given issue are crucial for whether or not one's general propensity to engage in collective action is transformed into an issue-specific potential, and, eventually, into political action" (Kriesi, Saris, and Wille: 1993). By contrast, mobilizational potential marks the capacity for a *group* of individuals to protest. According to McAdam et al. (1988: 706), there is normally a gap between the mobilization potential of a social movement and actual participation in the movement's campaigns. Like protest potential, mobilizational potential is dependent upon the issue area and salient political arena at hand, among other factors.

To mobilize protesters, activists apply collective action frames, which offer a normative interpretation of history and ongoing events. They are mindsets that "identify injustices, attribute blame, propose solutions, and motivate collective action" (Staggenborg, 2016:23). These frames intend to identify social problems and explain how to overcome them (Martin, 2007). As a social mobilization method, they may be implemented by influential individuals and toward peripheral communities. Frames create space for trust and accountability regarding leaders and a collective identity facilitative of individual self-esteem and higher quality social relationships (Rogers et al:2018). They undergird social movements, which Tarrow refers to as "sustained claim-making campaigns" operating within political opportunity structures (2007). Social movements, in turn, often constitute the essential apparatuses by which protest mobilization can transpire.

The social movement literature captures many communicative dynamics of protest mobilization. Activists do not necessarily work within a social movement, but being member of one and co-opting its collective action frames can facilitate mobilization to activists' cause.

Narratives undergirding social movements often shape the vocabulary activists use to mobilize protesters. As such, social movements provide the context for many protests. Activists tend to work together to specialize, mobilize, and lobby collectively as part of movements (Campbell, 2013). They may bureaucratically organize or operate through informal, grassroots networks.

Their structure facilitates their communication, intra-group learning, and inspiration. According to McAdam (2018), political opportunities, organizational capacity, and "the emergence of an oppositional consciousness shape the rise of a movement and its prospects for success" (21).

This oppositional consciousness stems from the above political opportunity debates, and tends to address the level of the state apparatus that is most likely to bend to their demands (Szymanski,

2003). The oppositional consciousness can pronounce clear political goals, identify wrongness in the status quo, and voices plans for revising the system. Repression shrinks its operational space.

The contentious politics literature examines anti-regime protest mobilization, but little empirical work has investigated the effects of online action on offline action. With internet access, activists tend to have more media at their disposal. Much of what one reads online is politicized, whether they like it or not. The internet offers populations new routes into political consciousness and therefore contentious political action. By contrast, cyber-savvy autocrats have recently added to their repertoires of repression. Non-transparent surveillance, censorship, deeppacket inspection, internet kill switches, and big data analysis all can be used to enhance governments' capacity to regulate the lives of those under their jurisdiction (Deibert, Rohinski, and Zittrain, 2011). Stein (2017) has reached inconclusive evidence regarding whether ICTs have "democratized dictatorships" by opening new forums for individuals to converse, identify each other's views, and organize collectively, or whether despots can more effectively apply technology to constrain protesters.

Collective action differs from "connective action" (Bennett and Segerberg:2012). In the former, activist organizations tend to be hierarchical. They disseminate messages downward from leaders to private individuals, volunteers, and other activists through collective action frames. Connective action, on the other hand, uses personal action frames and individualized actions. Personal reference frames, however, are more self-serving and more motivational towards more specific aims than their collective counterparts. Via collective and connective action, online individuals find themselves better equipped to organize independently. In the right political context, one can start a petition from their computer with hundreds of thousands of signatures without having had training as an activist. As such, cyberprotest might lead to a

proliferation of independent actions; it could be harder to organize and corral into sustained, systematic governmental opposition when individuals act out without leadership or coordination, and it may undermine legitimacy in the movement that motivated them in the first place, easing the efforts of repressive governments aiming to quell dissent.

By the "law of coercive responsiveness," challenges to the government's status quo will entail some form of repressive response (Davenport, 2007). Given a dearth of accountability and legitimacy, dictators may be the source of relatively more criticism than democratic leaders, incentivizing them to repress their critics and prevent their denizens from opposing them in the first place. According to Earl (2003), there are many different types of protest controls employed by dictators, based on the relationships between the protesters, repressive agents, and the type of coercion or pressure. Traditional repressive actions include unjustified detention, asset forfeiture, racketeering, and the gratuitous presence of uniformed soldiers patrolling street blocks. The internet has endowed autocrats and activists with new means for interacting with one another, and for repressive methods to interoperate (Saleh, 2012). Given the relative novelty and increasing complexity of digital tools, the literature has yet to gather much empirical evidence regarding how precisely they affect a dictator's calculus (Garret, 2007; Farrel, 2014; Stoycheff, 2018).

There are various ways to "control information" online. China regularly censors online information by removing critical pages from search engines and social media. Tracing IP addresses has enabled police to arrest dissident bloggers (Deibert, 2011; Goldsmith and Wu, 2006). To quell unrest, governments have installed and operated internet "kill switches" that temporarily disconnect restive areas from the internet (Howard and Hussain, 2011; Kathuria, 2018). Weiss (2016) has argued that greater degrees of control over information flows correlate

negatively with escalation after states repress. Foreign pressures can provide an outlet for repressed citizens to communicate with one another and make their preferences known, despite government efforts (Kuran, 1987).

Literature Debates

The digital politics literature addresses the internet in three ways. First, a critical sociological school challenges the notion of the internet as a "tool" instrumentalized by governments and end-users and instead emphasizes its covariance, in how it affects and is affected by its global userbase (Deibert, 1997). Second, scholars have studied how online action has a power of its own; cyberspace creates opportunity for actions simply impossible offline (Lessig, 2006). Rather than investigate the policy impacts of cybercrime or hacktivism, the paper examines the third dimension: how does internet activity amplify or nullify offline political action?

Scholars examine three major intervening mechanisms by which the internet may lead to offline political outcomes, according to Farrel (2012). First, it can reduce preference falsification, by which individuals feel the need to shield their real preferences to protect themselves from violent government censors. The anonymity of online communication, some scholars argue, might encourage individuals to honestly portray their political opinions. Knowledge of consensus could facilitate mobilization because collective organizers could gauge who and how many they could recruit, but it is difficult to measure this effect without gauging an individual's honesty offline. Second, the internet can create an environment conducive to homophily, whereby individuals can more easily find and cultivate relationships with those who share their views. Online forums (such as subreddits) enable individuals who would never meet offline to bond over shared interests digitally. If those interests are political, then social consciousness and

activism may result. Finally, the internet can lower the costs of organization and collective action (Ruijgrok, 2017). Social media sites enable event planners to rapidly gain a following, communicate a message to millions, and organize incidents of protest at almost zero financial cost. Planners can better gauge public opinion (through Facebook polls and clearly voiced preferences that can be easily tweeted) and redirect their messaging and contention repertoires to more effectively mobilize constituents and recruit new ones.

The literature is deficient in empirical analysis regarding precisely *how* the internet causally effects protest outcomes, but it is conventionally understood that the internet's communicative features are its most significant dimension for politics (Garret, 2006). Generally, ICTs affect politics in *degree* and *form*. First, ICTs make communication that would have happened anyway happen more quickly. Social media, forums, chat rooms, emails, encrypted instant messaging, visual imagery and video-sharing apps have not merely reduced distances between conversation members, but eliminated them entirely. Moreover, the proliferation and accessibility of information through hyperlinked web-pages and search engines have made it easier for individuals to learn and share data about themselves, their allies, leaders, events, and ideas, and their enemies. Theoretically, the internet makes it less costly to obtain up-to-date information, particularly from the media, and reduces the number and thickness of institutions one must cut through to identify and meet similarly interested parties.

A wealth of literature applies these concepts to debate how actors mobilize and sustain protest. The political and organizational context (Zald, 1973), economic situation (Paige, 1975, Bermeo and Bartels:2014), institutional design (Vráblíková, 2014), international environment, political values (Grasso and Giugni:2018) and social history can all play a role in how many participants will protest, to what degree, for how long, where, and in what way. Eisinger (1973)

degree of vulnerability of a political system to challengers. The interaction of strategies, cleavages, and alliances among domestic groups shape how dissenters engage their authorities (Kriesi:1995), but the degree to which each of these features matters compared to another is uncertain. Early theoretical work examined only empirical inputs to the political opportunity structure (such as Lipsky:1968), until Tilly (1978) and McAdam (1982) began to incorporate the non-empirical perception of threat as an input. Regimes that appear more susceptible to protest might then experience more protest. Other scholars have criticized political opportunity theory for its structural bias, arguing that it had a deterministic quality that left little room for constructive context (Bloom, 2015). On the other hand, Walder (2009) has critiqued the literature for being too movement-focused and not sufficiently considering the above structural variables, or for relying too much on a movement's opposition to the state and not towards other, non-state actors.

ICTs flatten geographic and ideological boundaries, insofar as they lower the risks and organizational costs for rebellious citizens to identify similarly minded individuals and facilitate protests antithetical to otherwise unaccountable authorities (Farrel, 2012; Melkote and Steeves, 2015). Nevertheless, dictators have generally invested in broadband infrastructure for economic gain and public oversight (Stein, 2017). Even the most reserved dictatorships, like Iran's and North Korea's, have not been able to halt the proliferation of ICTs within their borders. It may be that the regimes recognize the power to control their citizens in this way, or that the price paid by restricting this access in terms of unrest is too great, or that they have conceded they cannot control their population in this way (Stein, 2017). Rød and Weidmann (2015) empirically suggest that regimes aiming to prevent an independent public sphere are more likely to install

ICT technologies, but do not identify any significant correlation between internet access and political institutional strength or degree of democratic consolidation. We do not know how dictators choose to distribute internet services across a country's social groups, or how politics drives provision; ethnic favoritism and fear of unrest may drive how national governments choose to supply internet access (Weidmann et al., 2016).

Either way, the internet suggests a causal mechanism by which societies might liberalize and threaten autocratic rule. Dictators seeking to control information online need to reduce the information asymmetry between their regimes and dissidents; if a regime can accurately identify protest planners, police can prepare themselves accordingly, rather than resort to indiscriminate crackdowns (Wintrobe, 2005). While modern autocrats have many repressive ICTs at their disposal, kill-switches and censorship have dominated the scene in Egypt. Regulators can shut down parts of the internet in a restive region (Howard and Hussain, 2011; Kathuria, 2018). Alternatively, censorship can take the form of banning websites, jailing bloggers, and flagging provocative keywords (Deibert et al, 2011; Goldsmith and Wu, 2006).

The digital media literature has also discussed the effects of the internet on activism.

Internet connectivity has consequences for the populations involved in protests, the ways protest occurs, and even the targets of protest. The internet's global character means new populations can be more informed about and more heavily invested in the affairs of far-away places.

Cyberprotest has been lauded for enabling loosely knit organizations learn from each other across oceans and borders, mounting opposition against global trends, without having to organize themselves hierarchically and risk nullifying their individual aims (Aelst, 2009). Cyberactivists, however, have had mixed success in challenging authoritarians, given the latter's capacity to filter and censor the former's efforts. Scholarship analyzing the outcomes of the Arab Spring has

reached contradictory conclusions regarding whether information repression tools have increased or decreased the possibility for dissenters to mobilize. Stein (2014) and Breuer et al (2015), analyzing the "Twitter Revolution" in the Arab Spring, concluded that the potential for social media to "democratize dictatorships" remains uncertain (Stein, 1). There are many confounding variables, such as precisely how individuals use the internet under different conditions, that introduce challenges into such research. Steinert-Threlkeld (2017) has used machine-coded datasets of social media activity to draw a strong, positive, correlation between individual social media activity and offline protest levels the next day during the Egyptian Revolution.

Repressive conditions may increase the costs of collective action because individuals have less autonomy to associate and cultivate trust. Furthermore, their knowledge of past instances of repression increases perceived costs. Finding oneself recipient to a visit by secret police may invoke the feeling that one has enemies and is constantly being observed by them. Being temporarily placed behind bars, or hearing of someone who has been, may reinforce perceived risks of losing one's self-control, determination, and freedom. Moreover, mere suspicion of association with dissenting personalities may become grounds for intervention into one's life. Autocratic supporters may cultivate a culture of loyalty to the regime that places chilling effects on contentious activity, making political confrontation antinormative and therefore less successful at changing the status quo, even without intentional repressive efforts by a state interested in self-preservation and unbound by adequate checks and balances on their power, (Stoycheff, 2018). Understanding that criticism can lead to these consequences, citizens may learn to avoid criticizing their governments. Repression may generate asymmetries of information by inclining dissidents to falsify their preferences for fear of retaliation, thereby challenging government supporters who would report levels of dissident upset (Wintrobe, 1990).

Pushed to the sidelines, dissident activity may become harder for the regime to anticipate.

Alternatively, repression itself might invigorate further criticism and opposition, leading individuals to feeling justified in their views and sufficiently bold to challenge their state.

The social movement and collective action literature address the effects of repressive environments. Stable and unstable political contexts condition contentious politics, and different political systems will process the same movements differently. Generally, weaker state apparatuses create more mobilization potential. Kriesi argues that the more centralized a state, the more the oppositional movement will seek to enact change at the highest level of politics (1995). To varying degrees, autocrats fear criticism, which, if propagated widely, can materialize into anti-regime protests and cascade across the state's cities (Howard and Hussain, 2013). In authoritarian states, according to Wickham, "when a regime's control over society weakens, the structural potential for mobilization perforce expands" (2005:6). When protests successfully occur, but the regime maintains strong domestic support, "a movement's very success can lead to instances of counter-mobilization by its opponents, altering the environment in which the movement arose" (12). Generally, dictators must contend both with potentially rebellious populaces and other threatening factions (Boye, 2016).

Finally, the mobilization literature analyzes the various inputs that increase or decrease mobilization levels in repressive environments, and discuss methods for measuring mobilization. Several early scholarly works examined mobilization through game-theory models focusing on varied inputs: Lichbach (1987) mapped the incentives of autocrats and dissidents, arguing that the latter substitute nonviolent and violent protest depending upon the state reaction; if protesters find their results lackluster, they change tactics. Gupta, Singh, and Sprague (1993) contextualized these incentives by claiming that repressive action increases mobilization in

democracies and decreases it in autocracies. More readily available and greater accountability procedures, they argue, intensify claims against repression. Rassler (1996) discussed the effect of timing; repression decreases dissent in the short run by massively increasing costs of continued action, but increases it in the long run by generating feelings of resentment.

Moore (2000) aggregated these dynamics by examining the state responses to dissidents in sequential form. The state can either continue to repress, or grant the dissidents concessions; the two parties learn expectations over time. Shellman (2006a) investigated causal factors leading to government repression and cooperation, claiming that governments prefer cooperation when possible given lower short-run and long-run opponent, action, and audience costs. Opponents to the regime still want the support of a winning coalition, creating a dampening effect on violent interactions. The context of the decision-making matters because different levels of hostility and cooperativity for each group impacts the future distribution of disposition among the parties involved in the conflict. In another article, Shellman (2006b) argues that the quality of political institutions, economic status, and degree of ethnic fragmentation can intensify conflict; sequentially different state responses depend upon the relationships between the parties. The final corollary to these sequential inputs is that governments can enforce political order by anticipating challenger development. If authorities can identify specific mobilizational activities and systematically undermine them, they reduce repression costs. Mobilization, as an act, informs the future beliefs authorities create about the threats they make (Sullivan, 2015). Prior experience guides present expectations.

But before we can even assess the independent variables affecting mobilization, we have to first be able to measure mobilization itself. Challenges in measuring mobilizational levels render further specification and analysis difficult. A general index for mobilization has not been

created, and discussions regarding what "mobilization" includes remains inconclusive.

Intuitively, the number of protest participants offers an indicator for the degree of mobilization, but counting crowd numbers is famously difficult (Wang, 2017). Moreover, even if they were accurately counted, data collection by newspaper review suffers from descriptive and selection biases (Mueller,1997; Earl et al, 2004). Computerized media aggregators have somewhat mitigated these biases by drawing from the perspectives of multiple media sources simultaneously (Ruijgrok, 2017; Dollbaum, 2018). Other scholars measure the number of protest events in a given period. Widespread variation in attendance numbers between events implies a need to measure both, with a focus on accurately recording larger demonstrations (Biggs, 2018). Other scholars examine provincial level cross-sections to identify differences in mobilizational capacity. Escriba-Folch et al (2018), for example, demonstrate that worker remittances increase the resources available to potential political opponents in authoritarian regimes, but only in proopposition provinces.

Other scholars have applied modern technologies as mobilization proxies. Manacorda and Tesei (2016) empirically demonstrate that individuals are more responsive to degrading economic conditions and neighbor participation in protest actions when they have a cellphone. Furthermore, Shapiro and Weidman (2015) demonstrate that increased mobile communications reduce insurgent violence by lowering the costs of reporting dissident activity to security forces. The authors point to a sequential logic to explain the tradeoff reporters face between gaining rewards from the government for reporting action versus looking the other way and allowing the protests to intensify.

I propose the following clarification: An event has a mobilizational potential relative to all possible protest events *and* relative to similar events (vandalizing a police cruiser occurs at a

different level than hundreds of demonstrators in a street). Actual mobilization serves as a function of the potential within this specific event relative to those like it. I argue that mobilization events that share a specific grievance or employ the same contentious political methods can be analyzed similarly (they share a specific grievance or make use of the same contentious political methods), but different models are necessary for assessing events of differing scale and context.

III: CONTRIBUTIONS AND HYPOTHESES

Theoretical contributions:

From the literature, we have learned that autocrats and activists can apply the same ICT tools towards polar political ends. The precise distribution of inputs and outputs partially explains technology's effect for lowering or raising costs of all types. In the aggregate, we do not know who wins the strategic and tactical game over the effective deployment of these tools, nor can this paper conclusively determine outcomes. Every time a technological breakthrough surfaces, a new series of calculations must be undertaken to examine changes in the distribution of power, and each party faces incentives to innovate around the other. These cybernetic advances change not only the pieces on the board, but the rules of the board and the nature of the board itself. For that reason, a comprehensive theory-building exercise would be best suited to chronicling changes to the game over time and analyzing patterns therein.

Moreover, the literature identifies a widely debated relationship between cyber-regulation and mobilization. Following from Diamond (2010), as well as Manacorda and Tesei (2016)'s work, do new communication tools revise political outcomes, or are they merely options for the same sequential repression and negotiation processes described by Moore (2000), Shellman (2006), Pierskalla (2013), and Sullivan (2015)? New digital tools and data collection practices facilitate novel contributions to these debates. Investigating the trajectory of increasingly repressive regime and its experience with protesters could yield insights into the role internet usage played over time. If that regime were to constrain cyberactivity and protest mobilization changed in the aftermath, causal claims regarding the effectiveness of that repressive effort could be addressed. To study Egypt's experience under Abdel Fattah el-Sisi, the next section contributes to mobilization measurement discussions.

Egypt is an intrinsically important case (Gerring, 2006:41), insofar as the country's experience with and since the 2011 Arab Uprisings, and the continual efforts by leaders Hosni Mubarak, Mohammed Morsi, and el-Sisi to regulate the country's cyberspace, have been widely analyzed by academics and commented upon by civil society and media groups (Khalil, 2012; Ben-Hassine, 2018). For the same reasons, this case is data-rich; I review executive and legislative changes and media announcements, specifying and addressing tools Egypt applied to monitor and respond to domestic unrest. Egypt's cyber-regulatory regime has become increasingly complex and constraining of user rights since 2010. More importantly, the case passes intuitive robustness checks. It is the consensus of civil society groups that el-Sisi has consolidated power over time. Surveys of thousands of Egyptians by Afrobarometer reveal a perception of narrowed opposition political space in the country (Afrobarometer, 2016).

Protest mobilization can proxy for power consolidation. A dictator has many power consolidation methods at their disposal. Erdogan might pack the courts and Putin might bribe and blackmail the bureaucracy to personalize his control. We would expect mobilization levels to strongly correlate with this consolidation. Intuitively, autocrats aiming to increase the stability of their regime and extend their control over a country will take steps to undermine oppositional consciousness and foreclose protest opportunities. Repression suppresses mobilization levels, consolidating power. Given Egypt as a case, a study of *how* this power consolidation transpired is not mired by *whether* this power consolidation has transpired. Below, I describe the paper's methodological study and the hypotheses it employs. Following, the paper's methodology section describes my province-level mobilization coding, which charts protests under el-Sisi's regime from 2014-2018.

Methodological contributions:

Should mobilizational potential condition our measurement of mobilization? Scholars often measure mobilization by the number of events and the number of protesters, but that assumes that every issue and event can draw similar numbers of protesters (Biggs, 2018). The specific context of a space, among other variables, affects mobilizational capacity; more densely populated spaces can better support protesters; a packed city square can motivate passersby, and there are fewer transportation costs associated with urban environments relative to rural land, which might only attract those intensely interested in the issue at hand. Given that mobilization stems from other conditions, like the grievance and repertoire of contention discussed in the literature review, including mobilizational potential in our models would make our measurements more precise and explanatory. Following, the paper presents two hypotheses and a methodology that event-grades protest episodes.

Hypotheses:

This paper investigates two hypotheses.

Hypothesis 1 (H1): Enhanced cyber-regulation decreases future mobilization.

• el-Sisi passed several laws aiming at reducing government criticism online. One would expect, assuming the laws were effective at pursuing their intentions, that mobilization would decline proportionate to the amount that dissidents relied on those online tools to organize their offline demonstrations. If this hypothesis is supported, el-Sisi's cyber-regulations might have also aided his power consolidation, and the government's efforts to control the internet may have a dampening effect on protest mobilization.

Hypothesis 2 (H2): Police pressure at protest events decreases future mobilization.

• By "pressure" I mean repressive acts such as violence against protesters, verbal threats, or the deployment of barricades. If this hypothesis is supported, the data inform the

conditions under which police effectively reduce dissent. Police presence could then be viewed, empirically, as a dampening effect on protest.

Collected together, these hypotheses contribute to the literature by investigating and assessing plausible mechanisms by which autocrats could curtail protest mobilization and consolidate their rule. Following, I review the case studied to framework insights and pattern identification. I attach a bulleted event timeline at the end of the paper.

IV: CASE PROCESS TRACING

Egypt's cyber-regulatory regime has become increasingly complex and depriving of user rights since 2010. Internet kill-switches led to more resistance and were thus less effective compared to censors and regulatory revisions. These latter tools may have created chilling effects and increased the government's ability to identify dissidents.

Mubarak assumed the presidency in 1981 and established the National Telecommunications Regulatory Authority (NTRA) in 2003. Regulating the internet telecommunication industry enables governments to invest in their citizenries' internet connectivity, reaping the financial benefits of ecommerce, foreign direct investment, and digital scales of efficiency (Ministry of Communications and Information Technology, 2009). The NTRA succeeded in connecting many Egyptians to mobile telephony and substantially increased online activity throughout the country; Egypt's early internet architecture developed similarly to that of Western powers, if not as quickly (International Telecommunications Union, 2018; Live Internet Stats, 2018). According to Freedom House, "the Egyptian government showed a relaxed attitude towards access to ICTs and did not censor websites or use high-end technologies to block online discussions" until 2010, although social media surveillance was not uncommon beforehand (2018a). Mubarak's government had previously raided satellite television offices in Cairo and proposed formal digital censorship under Egyptian emergency law but was rebuffed by domestic civil society groups condemning the vague language he had suggested. Mubarak had sought to regulate any internet activity that "damaged national unity," which critics claimed could implicate any critical message (Al Jazeera, 2008).

The acuteness of the uprisings in 2010 and 2011, however, appear to have justified the NTRA's encroachment upon internet rights in the minds of the governing bureaucracy. Egypt

witnessed an uptick in jailed bloggers and banned websites, many of which were affiliated with the Muslim Brotherhood (Freedom House, 2018b). Increasingly specific and widespread threats against the regime appeared to erode public opposition to digital repression. Anti-government hostilities perpetuated during the Arab Uprisings increased visible violence. While one could argue that street demonstrations across the Middle East distracted the public's attention, and therefore opened the floodgates to *any* array of additional repressive methods, the data show increases in *online* crackdowns during the run-up to the Arab Uprisings later in 2010 (Howard and Hussain, 2011).

As the unrest culminated in massive demonstrations in Tahrir Square on 25 January 2011, Mubarak infamously ordered the NTRA to disable the border gateway protocol routes connecting Egyptians to the wider internet, and to stall operations by domestic internet and mobile service providers (Richtell, 2011). In effect, Mubarak flipped the internet "kill-switch," leaving protesters without internet access for three days.

The motivations and ramifications of the act were mixed. Chiefly, Mubarak aimed to quell the uprisings by limiting protesters' ability to organize and appear in unmanageable numbers simultaneously. Leaders of the April 6 Youth Movement and the Facebook page "We Are All Khalid Said" planned well-attended joint-demonstrations online (Wolman, 2011). Moreover, Mubarak sought to aggressively clamp down on the dissemination of critical viewpoints (Farrel, 2012; Shearlaw, 2016). Compared to the previous censorship regime, blocking internet traffic muzzled far more voices. Tufekci and Wilson (2012) have demonstrated that there were more protesters on the streets during the blackout than during the days before it. The authors suggested that fewer outlets for protest online, combined with the frustration of internet disruption, drew more citizens to the streets. Cyber-regulations, in this case, did not

dampen mobilization, it enflamed unrest. Meanwhile, many government officials were also left without internet connectivity (Glanz and Markoff, 2011). Normally, authorities monitored social media channels to identify and preempt protests. The rebels and authorities' temporary reliance on traditional organizational methods left the latter unable to manage and preempt the former.

After Mubarak's 2011 resignation, the Supreme Council of the Armed Forces (SCAF) maintained the president's surveillance and opposition intimidation measures, citing persistent riots (Shearlaw, 2016). During and after the subsequent election, Egyptians regularly criticized Morsi's Freedom and Justice Party for manipulating public opinion by elevating Muslim Brotherhood communications associates into state media companies, thereby offering them access to the tools used against them by the preceding regime two years prior (Aysha, 2012). Morsi met with Iranian officials to discuss exporting the latter's repressive technologies to amplify the former's "security and intelligence apparatus" (Tomlinson, 2013). While the meeting was high-profile, little came from it. Morsi's presidency lasted only a year and was mired in election crises, ending in the coup d'état that brought el-Sisi to power (Bowen, 2014). Sustained domestic unrest and concern for the wider political landscape partially explain Morsi's lack of innovation in Egypt's repressive ICT regime, and the inability to apply the 2012 constitution to those ends. el-Sisi, having had more time, resources, and military support to control the population, has more effectively curtailed Egyptian internet rights, evidenced by the country's continually declining "freedom of expression terms" from 3 to 6 over Freedom House's "Freedom on the Net" index (Freedom House, 2018b).

Despite international delegitimization amid widespread voter intimidation and boycotting by the military's political opposition, the SCAF installed the 2014 constitution by national referendum and subsequently saw el-Sisi elected president. The new constitution provided a

fresh foundation upon which el-Sisi enhanced Egypt's digital repression regime (El-Dabh, 2013; Bowen, 2014). Some scholars characterized the new constitution as less Islamist than its 2012 counterpart and more authoritarian than the 1971 document (Grote, 2014; Carnegie Endowment, 2014). Moreover, the new constitution referenced the internet in several ways pertinent to el-Sisi's agenda. It positions cyberspace as intrinsic to national security, justifying additional intervention even where normal anti-censorship provisions would take precedent. The document empowered the Egyptian parliament to require approval for online media companies to operate, and Article 211 facilitated the creation of the Supreme Council for the Administration of the Media (SCAM), endowed with sweeping regulatory powers (Constitute Project, 2014). Since the constitution's ratification, el-Sisi has signed into law new bills threatening incarceration for *visiting* websites deemed libelous and permitting the screening of celebrity social media posts (DW, 2018; British Broadcasting Corporation, 2018).

On 1 August 2015, el-Sisi signed into law a counterterrorism bill that, among other restrictions, "grants the prosecution authority in the investigation of a terrorist crime to monitor, record, and film conversations and acts in private spaces, online, and via telephone" (el-Sadany, 2015). The Egyptian Constitution's broad and vague definition of terrorism enables prosecutors to designate suspects and thereby study them without much bureaucratic resistance. Coupled with revelations a month earlier that the Egyptian government had invested heavily in a Western cybersecurity partner to import spyware technologies for domestic surveillance, the potential for government actors to study oppositional forces increased (Currier and Marquis-Boire, 2015)

On 26 December 2016, these regulatory revisions culminated in an official review process for new companies and the regular examination of current ones. Instead of simply banning websites, which had incited domestic condemnation and protest, SCAM's permissions

and sophistication have resulted in a censorship regime that moderates online conversation (Saliba, 2017). A punitive system of fines and imprisonment terms encourages journalists to self-censor, creating chilling effects that limit the spread of oppositional viewpoints. Most recently, el-Sisi has weaponized the government's internet disruption capacities to block communications in the Sinai Peninsula, aiming to thwart the tactical organization of Islamist militants in the region (Khattab, 2018.

Over time, the government has reduced the degree of information asymmetry between its political and domestic opposition and itself. Internet kill-switches were less effective, compared to regulatory revisions and censors. While the former amplified resistance and decreased the government's knowledge of its opponents, the latter has made it easier for the regime to identify and deter dissident activity. By these latter methods, and the framework the 2014 constitution provides, el-Sisi's regime appears to have increasingly curtailed domestic threats without inciting equal amounts of resistance.

V: METHODOLOGY AND DATA COLLECTION

The paper process traces an independent case study and conducts time-series analyses of its findings. Past researchers have studied mobilization and have contributed facts about how and why people mobilize. Recently, scholars have taken to sequential logic to identify precisely how a dissident or government actor would immediately respond to an action by the other. I have found little academic work relating actual to potential mobilization. The paper contributes to the literature by addressing the relationship between these two concepts.

I draw from several different ways of measuring collective action processes to assess potential and actual mobilization over time within Egypt. First, I create an ordinal variable and apply it by scoring protest incidences listed in the Armed Conflict Location & Event Data Project (ACLED) dataset for Egypt from 1 January 2015 to 31 December 2018 inclusive (Raleigh et al, 2011). The ACLED dataset has been widely used by researchers of conflict in Africa, and South Asia to analyze day-to-day violence patterns (Sangnier and Zylberberg, 2016). Applying my variable to ACLED's dataset, it compares how much mobilization occurred in one instance to the level of mobilization in other instances that share fundamental characteristics.

ACLED collects timestamped and spatially coordinated datasets on dozens of countries over the past decade. Critically, ACLED substantiates its event codes with newswire sources that often assess the number of protesters and their reasons for protesting. As discussed in the literature review, this is the best-case methodology for studying protests day-to-day (short of fieldwork) because it aggregates the information of multiple media sources to mediate selection and content biases. I contribute to this dataset by triangulating additional evidence for the protest in question before scoring the event in terms of its mobilization level. Specifically, I examine each of 535 individual protest events through these dates. ACLED describes each event collected

via newswire from various agencies. I ran each event through Factiva, a newspaper aggregator run by Dow Jones, to further research each protest in search of information that would assist event coding, as described in the thesis's codebook.

Afterwards, to determine cyber-regulation's effect on protest mobilization, the paper charts the evolution of el-Sisi's power consolidation and Egypt's cyber-regulatory regime (including the passage of legislative bills, creation, revision, and empowerment of regulatory agencies, and executive orders), starting with Mubarak's regime in 2010. To perform this task, the paper identifies and evaluates patterns in the cyber-regulatory timeline by reviewing relevant cyberlaws passed by the Parliament of Egypt, increased perceived digital repression as reported by Freedom House's "Freedom on the Net" indicators, and performs a statistical impact assessment of these regulations for protest mobilization.

The paper creates an ordinal measure that assesses 1) the potential mobilization for a protest event and 2) the actual witnessed mobilization level, serving as a function of its potential. I assigned each of 535 events both a potential and an actual score, evaluated as "low," "medium," or "high." This spectrum comprises the paper's dependent variable. To a degree, these functions are intuitive. A protest that maximized its potential could be indicated by its aftermath: the paper would refer to the toppling of a regime, with thousands of protesters in the streets of multiple cities. Tunisia's experience with the Arab Spring is "high." At the other end of the spectrum, some protested online act might not have merited any significant offline action. ACLED does not capture these small-scale events, and they are excluded from my dataset. For these reasons, the paper considers mobilizational output measured both in the scale of the mobilizational potential, and in the scale of the actual mobilization experienced.

The justifications, goals, and repertoire of contention protesters employ depend upon the circumstances they face; qualitatively different issues are difficult to compare. How could one relate the effectiveness of a protest calling for equal rights for LGBT+ populations in Uganda with anti-censorship protests in China? For this reason, the paper analyzes only protests geared towards opposition to the regime (that is to say, the removal of the regime OR merely in opposition to the regime's stated policies). Anti-regime protesters may oppose the regime and seek to revise the domestic sphere for a variety of reasons, making this protest type the most widely accessible, and therefore the most qualitatively useful to the study at hand. Demanding a democratic government is a key, common example of an anti-regime protest studied by this paper, but other anti-regime protests, such as those launched against specific policies like the concession of the Sanafir and Tiran islands to Saudi Arabia or those in direct support of Morsi, were also included. Protests and riots not anti-regime in character were excluded from the dataset.

The above methodology, properly employed, enables the paper to chart a changing level of mobilization over time within a country. As the paper studies repressive conditions, a scope condition is that the states to be studied were "not free" by Freedom House's designation.

Furthermore, Freedom House's "Freedom on the Net" indicators deliver an indexed evaluation of a country's internet conditions relative to other states. These states employ the generally expected repressive internet features, like censorship, filtering, and surveillance technologies. I did not select China as a case. The relative opacity and sophistication of China's regulatory regime requires far more extensive analysis than can be conducted here.

Data Collection Procedures:

ACLED collects protest data for the cases studied but does not measure protest mobilization. Protest mobilization is a necessary variable for assessing the efficacy of different cyberregulatory regimes and the conditions under which activists may overcome them. I examine anti-regime protests between January 1, 2014 and December 31, 2017. ACLED has full data for these dates for all cases. Expanding the selection further would require more coding time than I could allocate. Therefore, I exclude data points not meeting these parameters from the study. The remaining ACLED protest data points are graded into ordinal mobilizational categories. A "low-level" mobilization event is less mobilized than a "medium-level" or "high-level" event. Each measure is a function of the mobilizational potential for protests of a similar size and grievance. At the end of the paper, I detail data categories in a codebook.

Often, ACLED reports a number specific to the protest. Alternatively, ACLED or the media will characterize the event as "minor clashes," evidencing a small turnout relative to the reporter's intuition. Moreover, ACLED measures the scale of the media source (local, national, international) that reported the protest. Mobilization assessment must also consider the number of protesters in relation to the municipality in which the protest took place. A demonstration featuring a dozen denizens of Dhaka is far less significant than one of the same size in a remote Siberian village that barely sustains 2000 annual inhabitants. Moreover, the potential for protest mobilization within countries differs due to country-specific factors, including legal atmosphere, population demographics, and history. This fact challenges comparative analysis and justifies deeper process tracing in a single case to overcome potential exogeneity problems in the research design. Narrowing the focus to Egypt, the paper aims to mitigate socio-cultural specific factors that, discussed in the literature review, might confound results.

mobilization?" Answering this question is a significant contribution to the measurement methodology of mobilization, as discussed in earlier sections. I consider the population of the municipality that hosted the protest, and measure all events at the district level. Egypt is divided into 27 governorates, which are further subdivided into districts. ACLED codes each secondary-level district in which a protest took place. Egypt codes these districts by population density. A markaz (هركز), "center" is more rural, wider in land area, and less populated than an urban, narrow, and densely populated kism (هركز), "department" (Egypt Census, 2016). As ACLED does not code this distinction, nor population numbers per district, I assign a population and density score to each district to more accurately code mobilization. I was unable to more concretely determine what specific feature Egyptian census-takers use to determine how and where these designations and demarcations are made, but each geographic space boasts historical significance.

ACLED tracks the actors associated with each event and designates them an "interaction" based upon their incentives. The project assigns "Governments and State Security Services" a "1," "Rebels" a "2," "Political Militia" a "3," "Ethnic Militia" a "4," "Rioters" a "5," and "Protesters" a "6." ACLED then tracks "interactions." When an event comprises two actors, ACLED concatenates the individual codes for the event based on the actors involved, marking a zero if the event only comprised one actor. An event pitting police and rioters nets a 1,5. A 6,0 designates protesters who do not interact with police forces or any other party. This paper is concerned with evaluating events designated as 1,5; 1,6; 5,0; and 6,0. ACLED also records data on political militia and organized dissident groups. While these entities are of great interest to future study, they fall outside of the scope of this paper insofar as they rarely rely upon activists

to mobilize, and instead upon hierarchic leadership. I further detail this coding decision in the paper's discussion section.

Finally, ACLED independently scores the level of media source scored from "local" to "international." Intuitively, one would think that events receiving more coverage from further away indicate the relatively higher degree of salience to public conversation, and thus hold a higher mobilizational potential compared to events only covered locally. Reports the regime considers more threatening to its legitimacy are more likely to be censored locally. The paper identifies key media companies from each case and searches through their websites, counting the number of times that the protest appeared over 240 hours following the event to assess the degree that the event might have inspired or created contingent conditions for later protests.

VI: DATA ANALYSIS

Data Analysis Procedures:

I use Stata's statistics software tools to analyze the coded data. First, I generated a shaded line graph to visualize changing a) actual mobilization and b) potential mobilization for all events over the four years studied, with time (days) plotted on the x-axis and both potential and actual mobilization, the ordinal dependent variable, on the y-axis. As discussed, the downward trend of both lines over time reflects el-Sisi's consolidation of power. Moreover, I identify varying rates of change (slopes) over the time-series to examine outlier dates or periods in which mobilization sharply decreased or increased relative to general trends. One may also break the data down to the grievance-specific level, per interaction type, or exclude small-scale protests for separate visualizations, further analysis, and the assessment of the below hypotheses mentioned previously.

I conduct an impact assessment to determine how effectively el-Sisi's cyberregulatory regime has suppressed Egyptian protest mobilization levels. Multiple Interrupted Time Series (MITS) analysis enables effective study of these data because it tests the descriptive data comparatively given date inputs: the period following a cyber-regulation can be compared, for the significance of any variable, with a period before the regulation (Wood, 1988). Using linear regressions, I can assess how well these policies and grievance specifications (independent variables) predict changes in the six different mobilization metrics the paper has proposed, and, moreover, which variables have the most significant effect (positive or negative) for that change.

I sort the events by date and run count-if functions to aggregate data by day. Journalists normally report protest events on a day-by-day basis, particularly in this case. Days are therefore the smallest unit of data suitable for analysis, offering the most granular approach for studying

changes in mobilization values over time. To that end, I run six different ordinary least squares regression models (potential and actual; low, medium, and high), to assess the levels of mobilization at different periods in which the Parliament of Egypt codified new legislation.

Given ACLED protest data ranging from 1 January 2015 to 31 December 2018, the timeline events most significant for impact assessment are (1) the 1 August 2015 Antiterrorism Bill and (2) the 26 December 2016 establishment of the new media regulation agency, each in terms of the press coverage and the sophistication of the repressive measures they permit relative to other legislation.

Hypothesis 1 (H1): Enhanced cyber-regulation decreases mobilization.

<u>Falsification</u>: If el-Sisi's cyberregulatory regime cannot be shown to decrease mobilization.

<u>Test</u>: Is there a statistically significant rate of change of mobilizational decline following the implementation of key cyberlaws compared to the standard decline? Does controlling for

grievance yield different results? I create a lag variable to determine if mobilization count in one

day affects mobilization the next.

Table 1. Protest Mobilization Assessed, Egypt: 2015 - 2018							
	Low Potential	Low Actual	Medium Potential	Medium Actual	High Potential	High Actual	Total Protesters
Policy 1	0.045**	0.069	0.700	0.568	0.309	0.440	0.612
	(-0.109)	(-0.129)	(0.010)	(0.215)	(-0.026)	(-0.012)	(6.294)
Policy 2	0.027**	0.097	0.331	0.790	0.104	0.108	0.185
	(-0.106)	(-0.098)	(0.021)	(0.008)	(-0.026)	(-0.022)	(19.574)
Pro- Islamism	0.0***	0.0***	0.013*	0.130	0.334	0.360	0.005***
	(0.803)	(0.954)	(0.287)	(0.154)	(0.043)	(0.031)	(107.953)
Pro- Morsi	0.0***	0.734	0.469	0.033	0.763	0.340	0.010**
	(0.826)	(0.055)	(0.136_	(0.695)	(0.015)	(0.220)	(149.466)
Anti- Military	0.0***	0.018**	0.0***	0.001***	0.047*	0.403	0.0***
	0.520	(0.384)	(0.366)	(0.579)	(0.093)	(0.013)	(146.184)
Anti-	0.0***	0.0***	0.034*	0.062	0.343	0.031*	0.0***
Policy	(0.876)	(0.875)	(0.114)	(0.245)	(0.013)	(0.027)	(135.378)
Lag	0.294	0.313	0.376	0.836	0.057	0.071	
	(0.0345)	(0.067)	(0.079)	(0.005)	(-0.022)	(-0.035)	
Constant	0.006***	0.041*	0.070	0.295	0.192	0.061	0.492
	(0.126)	(0.116)	(-0.042)	(0.005)	(0.021)	(0.026)	(-7.016)
\mathbb{R}^2	0.8333	0.669	0.4573	0.519	0.138	0.180	0.276
N	1,460	1,460	1,460	1,460	1,460	1,460	1,461

This table reports p-values and coefficients (in parentheses). Significant at ***99% level, **95% level, and * 90% level.

Low-Mobilizational Output:

I group the results for potential and actual models for low mobilization separately from the other four models.

Both low-mobilizational results are statistically significant at the 95% confidence level for rejecting the null. My model explains nearly 67% of the variation in the data studied, including specific grievances. Given the high p-value for the lag variable, it seems unlikely that, for both models, mobilization yesterday affects mobilization today. Compared to the potential model, the variables have less explanatory power for the actual mobilization model. Moreover, we cannot reject the null for the pro-Morsi and policy indicators in the actual low-mobilization model.

I then run a correlation between the per-day anticipated counts for each mobilizational model and the results of the regression.

Table 2. Correlated per-day anticipated counts for low mobilizational models and regression output.

	Low Potential (predicted)	Low Actual (predicted)
Correlated dependent variable	.0.912	0.818
N	1,460	1,460

I find a strong, positive relationship between the predicted values from the regressions and my models' actual values. These results imply that the policies had effect for low-mobilization protest activity, and that overtime the measurement sustains little residue from the trendline: few results do not conform to the modeled mobilizational decline. Exceptions remain: we cannot reject the null that the policies have no effect on actual low levels. I interpret these findings to mean that the policies seem to limit the prevalence of small-scale events but have no

discernable impact on the numbers of individuals who protest or the resources they expend in doing so: over time on a given day, we are relatively less likely to see two dozen people demonstrating outside of a government office, but neither more nor less likely to see those two dozen take part in a riot comprising hundreds. The pro-Morsi grievance indicator becomes statistically insignificant. This result may stem from the declining prevalence of pro-Morsi protests (as time between Morsi's deposition and the data expands) before the policies were enacted. Finally, the two policies have nearly identical (and negative) coefficients relative to the constant. This finding appears to indicate that policies had roughly similar effects for mobilizational decline: The number of low-potential mobilization observations drops by 10%, on average, compared to when the first policy was not in effect, and by another 10% when policy 2 came into effect.

Impact Assessment Robustness:

A statistical error is the amount by which an observation differs from its expected value. In time series analysis, one might fear a strong correlation between the errors for each data point. Such serial correlation in the error terms reduce the degree of accuracy in a regression's estimations of the actual description of the phenomenon under study (Pindyck and Rubinfeld, 1991). P-values would appear lower than they are in reality, and researchers would reject nulls when they should not. Given the difficult of calculating precise outcomes in the social sciences, my model can be improved by testing for correlations in the seemingly random variations affecting measurements of each event (namely, unit roots). In this case, it is particularly important for identifying unanticipated patterns given the wide literature on individual motivations and resources necessary to protest in different environments. By running a Dickey-

Fuller test, one can determine if data display such a pattern (Dickey and Fuller, 1976). The results of the test were "clean" insofar as I can reject the null hypothesis (that a unit root exists in the data) with a p-value below .05.

Medium and High-Mobilizational Output:

The medium and high-mobilization models, however, do not share the significance of the low-mobilization models.

How should we interpret the policy effects' statistical insignificance for higher mobilization-event levels? The policies appear to curtail low-level potential mobilization to a high degree, but do not affect other event-types. Investigating the nuances of the polices could explain these disproportionate impacts. Further qualitative analysis follows in the paper's discussion section.

Measurement Robustness:

Departing from testing the above hypothesis, I also examine the effectiveness of my models themselves compared to the literature's method for measuring mobilization. Given data available, scholars aim to assess the total number of protesters per day, granularly by region or throughout the country (see Dollbaum, 2016; or Rosenfeld, 2006 for examples). How could I evaluate the explanatory power of my measure versus that of other measures? Given the same dataset, one can compare different models for their capacity to best-fit the data. The higher the R² value, the better the model explains the variance in the sample. I compare the R² value of my models versus the traditional measure. If my models are as explanatory or less than the

literature's, I interpret that the models do not offer substantive contribution on their own. If the models are more explanatory, they might lead to more descriptive analyses of protest patterns.

According to the above data, using the number of protesters to understand the impact of these policies is not very effective. Because protest numbers can change dramatically from day to day, they make an ineffective proxy for mobilization on their own (Biggs, 2018). If the regression controls for grievance, the model becomes more explanatory.

Switching the totalprotester variable for the mobilization score and keeping all else equal, the low and medium potential and actual models boast superior R² values and stronger correlations with expected results. The high potential and actual offer less explanatory power than the above regression for this dataset. As mobilization scores increase, more protesters line the streets. There are far fewer high-level than low-level events for this dataset and generally, given that compared to the efforts of small-scale events, mobilizing large numbers of individuals is logistically challenging and resource-intensive. For these reasons, one would expect measuring the total number of protesters to have the greatest explanatory power when measuring high-mobilization events. Likewise, according to these results, this paper's metric delivers the greatest contribution to the literature in terms of its explanatory power for small and medium-level mobilization-types.

Hypothesis 2 (H2): Police pressure decreases future mobilization.

<u>Falsification</u>: No significant correlation between police interaction and mobilizational decline.

<u>Test</u>: Identify the proportionate concentration of ACLED-coded interactions on a per-week basis.

1,5 (police and rioters) and 1,6 interactions (police and protesters) versus 5,0 (rioters only) and

6,0 (protesters only). I refer to this calculation as the "repression rate" because it captures the

percentage of events in which police engaged protesters. I expect increased repression results in less mobilization in following weeks (I lag the indicator by one week, given the expectation that it will take at least this long for dampening effects to appear). I then determine whether that decline or uptick in active repression (the repression rate) correlates with the decrease in mobilization over time, as measured by the previous six mobilization functions. I add pro-Islamism as a variable because it presents an "easy-case." One would expect the Egyptian government most-likely to clamp down on Muslim Brotherhood members compared to other dissident groups. If the findings are not determinable for this group, it would seem unlikely that clear results would be found more broadly or with other group variables inputted into the regression.

From the first hypothesis's findings, we could not determine a clear effect of repression one day for a decline in mobilization in the next. Given a week, we might expect more time for word-of-mouth of a repression event to reach others and raise their knowledge of the costs of contentious action, thereby deterring protest. Given a more precise dataset on specific instances of police pressure, we might clear a more statistically significant relationship. From the displayed data, however, it appears that even with the week-lag, there is no statistically significant relationship between this repression measurement and low-level mobilization to analyze. To little surprise, there is a statistically significant relationship between pro-Islamic grievance-type and repressive action. These trends remain consistent for each model.

VII: DISCUSSION

Findings:

Hypothesis 1 (H1): Enhanced cyber-regulation decreases mobilization.

The policies appear to curtail low-level potential mobilization to some degree, but do not affect other event-types. What intervening causal mechanisms could explain these results? Investigating the specific contributions of the policies assists in describing their effects. The first policy studied in the impact assessment includes monitoring and censoring of individuals. The second policy established and executed a sophisticated regulatory framework for Egyptian media companies.

Chilling effects, as described in the literature review, support both of these policy advancements. Fear of observation would deter individuals from seeking out dissident information or organizing forums online, or for media groups to disseminate such information in the first place without layering it in coded messaging. Moreover, news publications discussing the polices may have aided in a chilling effect: if the polices were not actually implemented, but Egyptians thought the policies were implemented, there may have still been a decline in small-scale protest due to increases in the perceived risk of action. It stands to reason that real chilling effects would transpire over small-scale, digital actions like tweeting negatively about the regime. Recent empirical work by Stoycheff et al. (2018) used surveys to document a statistically significant effect for likelihood to perform illegal activities like pirating movies after learning about mass surveillance practices, but it does not consider the staying effect of such policies. Further research that considers similar cyberregulatory polices in other environments, particularly where there is a delay in actual policy rollout, would support studies of the chilling effect's magnitude.

Second, the implementation of each policy had real regulatory effects for Egyptian cyberspace, both in terms of restraints to the internet architecture and in the content one can find on its websites. It is likely that the policies had real effects for low-level potential mobilization. These policies facilitate direct action by law enforcement officers to restrain activists hoping to launch small-scale demonstrations. They ease IP address tracing and circumvention of proxy services. This mechanism is consistent with the increasing number of jailed bloggers throughout Egypt (Freedom House, 2018). The accelerating rate of website-banning for failures to comply with new regulations further limits information that might motivate action or serve to organize actors (Access Now, 2018).

The policies, however, appear to have no effect for the other models. In other words, the cyberregulations' effects, however marginal, are concentrated in low-level mobilization events to the exclusion of higher-scale protests. These results seem consistent with the above understanding of the regulations' effect on Egyptian cyberspace. When activists or other leaders pursue more ambitious political actions, like organizing industrial strikes or protest-parades across multiple cities, much more effort and energy must be expended. Such events certainly took place before the internet became mainstream in the 1990s. I argue that the higher investment costs for orchestrating high-scale mobilization require significant offline action, which could be accomplished with or without social media. The utility of the internet for lowering the costs of collective action, according to these results, rests in facilitating "cheap" protest demonstrations. Organizers who could have planned protests offline more easily manage them online, and "flash" events absent organizers can find spontaneous excitement that nudges small performances, like vandalism, in reaction to messages critical of the government. The marginal benefit for using these tools seem increasingly insignificant as mobilization costs

increase. Once the mobilization costs (in terms of monetary and material resources, as well as recruits) reaches a threshold, digital tools may begin to pale in their significance comparative to other mechanisms for explaining collective action like word-of-mouth or printed fliers. The dimensions of this threshold require further process tracing to analyze, but likely include the intensity of feeling protesters feel about an issue (such as per the grievance justifying action), which increases their risk tolerance (Ciorciari and Weiss, 2016; Heath and O'Hair, 2010). The effect of curtailing the digital tools of regime opponents, via chilling effects and regulations, would reduce the potential for small-scale events but decrease in its salience as those tools become less pertinent given the increased intensity of other variables.

Hypothesis 2 (H2): Police pressure decreases future mobilization.

The regression failed to identify a statistically significant relationship between this repression measurement and mobilization levels. Data where police were not present was excluded from this test, lowering the number of observations significantly, which may reduce the paper's ability to assess the claim. Evidence suggests, however, that repression does not correlate with mobilization in this way, given the statistical insignificance of the lag variables for both this hypothesis and H1. The data studied by this regression was not aggregated at the location-level. From the results, it seems unlikely that a police-protester interaction in Cairo affects future interactions in Alexandria or Aswan. The number of observations per region is too small to determine if proximity changes the result. Further research seeking to clarify the effects of police pressure on protest mobilization would need to deeply analyze individual locations over long time-horizons.

Additional Observations:

This section reviews findings not directly related to the hypotheses that were uncovered during case research.

In the Egyptian case, dissidents shifted the focus of their protests to narrower policy problems over time. The precise reasons for this trend remain unclear. First, it may be that Egyptians grow exhausted, recognizing that broad-based goals like sweeping regime removal of the military executive are impracticable. Second, it may be that the regime, becoming more consolidated over time, develops a disproportionate capacity to quell broad-based protests. Both may also work in combination. If the latter is true, dissidents face incentive to work through official channels to deliver critical feedback on the regime's activities and to press narrower claims when they do protest. Plausibly, authoritarian regimes better constrain low-mobilizational activities once it has a greater capacity to police areas where small-scale dissident activity is common. Authorities would find it easier to deter low-level acts premised on wide-reaching ideological claims. More specific and formally designed claims, by contrast, may lead to protest events of a higher mobilizational capacity because of a self-selection effect among dissident activists. Protesters in these settings may have greater knowledge of the policy they are proposing, and therefore feel more confident in their pursuit of the policy, and achieve a higher level of mobilization despite the government's consolidation of power. A larger dataset of protest events more narrowly coded by grievance would lead more conclusive insights into this hypothetical. Certainly, protest is exhausting of energy and material resources. Protesters may simply have, in the Egyptian case, found the fight no longer worth it.

Alternatively, protests becoming more focused policy issues might indicate increasing acceptance of the regime, or at least increased resignation on the part of dissidents that more

could be accomplished. If these narrower issues are not as capable of mobilizing support as wider frustrations, then the overall potential for protest would decline, indicating a consolidation of power. These mechanisms may work in tandem. Increased regime consolidation incentivizes activists to narrow their goals, which in turn reduces broad-based activity, thereby reducing the resource-pressures on local police units and enabling authorities to expend their energies consolidating power by addressing other crimes.

Per the dozen media agency newswire collections I reviewed, few protest events listed more than one organization acting in the protest. Only eight of 535 protests, or 1.5%, appear to have been reported as including multiple anti-governmental groups, and of them, the total number of groups never exceeded 3. What explains this finding? At first glance, this outcome seems consistent with the collective action literature. More parties and interests create greater logistical challenges. If el-Sisi's repression regime has had a chilling effect on small-scale mobilization, then it might have also succeeded in dissuading groups from working together by increasing communication costs. Given the relatively small sample size this paper studies, and the few such events it identified, I could not statistically evaluate this potential chilling effect. Separately, this finding might reflect little actual collusion between different anti-governmental groups. Having different goals in mind, leaders might determine that their political aims are zerosum. They would then seek to avoid including potential rivals, who might attempt to effect governmental change in ways contrary to the leaders' and movement's aspirations. This finding might also reflect that many rebellious political goals are incompatible: secularism and Islamism, for example, begin with conflicting assumptions about how governance ought to function. Moreover, narrower policy goals probably do not facilitate broader-based groups working together. Individual supporters of these movements are less likely to find common-meaning if

together, all of the groups were pro-Islamist. The Muslim Brotherhood leads the Anti-Coup Alliance, whose member list has declined steadily since 2014 in the wake of government outlaw (Muslim Brotherhood, 2016). Finally, this finding might result from poor data capture by newswires. If none of the newswires listed colluding protest groups, one might claim that the newswires were not an effective information source for this data. That sometimes the newswires did illustrate the presence of secondary groups, however, indicates that were likely few events in which reporters saw the presence and impact of other protest groups significant.

I do not have data on the individuals involved in each protest. Were certain types of people more likely to be energetic and enthusiastic for certain grievance areas, and how does that person's geographic origin matter for these effects? While my methodology goes to great lengths to minimize and categorize the different criteria people use to justify their political action, protesting has an indisputably individualistic component that is difficult to quantitatively assess without invested field work. There is not, for example, an easily identifiable relationship between the groups protesting and the evolution of policy goals. The Muslim Brotherhood always protests events pertaining to the Muslim Brotherhood's goals. In-person interviews of members of specific groups would deliver insights into how the group's policy demands have changed on a granular level not captured by this methodology's macro-level approach.

Moreover, it is likely that in many cases individuals protested atomistically, rather than as part of a larger group, which would challenge efforts to report or code the activity and prevalence of larger groups. Scholars require another measurement to determine to what degree protesters associate themselves with specific groups and dedicate great time to a cause, or merely engage the protesting process passively. It is difficult to determine if someone protesting with

Greenpeace believes in the organization's most extreme positions, or merely views a discrete protest event as an opportunity to support environmental reform. Conventional wisdom views mobilization efforts as contingent: past repression impacts the next iteration of protests. Given the above conditions and the failed results of this paper's second hypothesis, it would seem that protesters cite critical events from the past repeatedly rather than respond directly to recent events. Rarely during data collection did I observe protest justifications that described an event from the week before; most justifications referred to significant happenings, like Morsi's ousting or the cession of Sanafir Island to Saudi Arabia.

Aiming to address potential atomization, I noted the number of arrests newswires reported during data collection. Professional police forces normally register exactly how many protesters they arrest and process. While police document these facts to inform judges and attorneys later in criminal justice procedure, this data, reported by journalists, is a much more precise measure than crowd estimates. Seeking to determine if arrests might proxy for protest numbers, I ran a separate correlation between the two values for each event. If we could assume that the more arrested, the more protested, we could arrive at a better approximation of protest numbers, and therefore better conduct more accurate statistical assessments.

While there appears to be a strong, statistically significant relationship in the results, many events were excluded from the data because no arrests were cited, leading to a potential false negative error. Other variables, such as the order and significance of events and violence at the protest likely explain arrests more than protester turnout, given police's incentive to keep the peace. Deeper process tracing of a few events selected at random would enable a more robust assessment of arrests as a proxy for protest numbers.

Dollbaum and other researchers have sought to make protester number measurements more effective by controlling for the number of protest attendees *per political group* (2016:3), but aggregation of this type does not permit r² comparisons because it does not assess discrete events. Further research to assess the relative explanatory power of this paper's models would apply the metric to the same dataset over the same groups to enable more effective comparisons. Additionally, there are many other Egyptian cyber-regulation policies this paper did not assess. Investigating them would have complicated the paper's mobilization models, but would have added more explanatory power because then we could process trace what aspects of each policies have the highest significance for mobilizational change.

Limitations and Future Research Direction:

These findings suffer from several weaknesses. Critically, the laws studied here regulated many polices not directly related to ICTs: the impact assessment studies the policy as a proxy for internet control, rather than internet control directly. Policies that improve legal protections for police officers might embolden repressive acts, but do not directly contribute to internet effects. Further process tracing that uncovered precise regulatory changes would make the analysis more accurate, but internet outcomes for politics can hardly be studied in a vacuum.

Mobilization, as discussed in the literature review, could be modeled in many ways. This paper's methodological contribution limits mobilization to protests and riots. It does not discuss militia groups or other organizations with mobilizational capacity. Close-knit, hierarchical organizations draw on their members, rather than on the masses, to act. Different measurement criteria may be necessary for accurately reviewing these groups with the same methodology. Various resources, for example, might be more or less useful to certain groups. It may be that

militia are relatively more reliant than protesters upon firearms for achieving high mobilization levels. These considerations would be reflected in a more broadly reaching codebook.

Moreover, much of my analysis rests under the claim that consolidation of power and mobilization are strongly correlated. Without a clear metric for the former, my findings remain speculative. How could scholars create a clearer metric for power consolidation? Certainly, the capacity for opposition to mobilize should play a part in reflecting how effectively a regime has consolidated their position. The World Bank's political stability index could serve as another proxy (World Bank, 2019). This index covers a wide range of social science indicators on a country's economic conditions, ethno-political relationships, and bureaucratic independence. Integrating this metric into wider measures of "social unrest" might increase the measurement's applicability outside of the case discussed here. Finally, the paper only studied anti-regime protests; other, non-government grievances likely mobilize less than government ones given fewer potential stakeholders, but these events are nonetheless important to study.

RIPE's Network Coordination Centre maintains data on internet activity across countries over the past twenty years, which could test for spuriousness in the paper's statistical results.

RIPE is the Regional Internet Registry (RIR) for Eurasia. It is also the data repository for all RIRs (including Africa's, namely, AFRINC). It measures the number of website prefixes registered to a country and its number of Autonomous Systems (ASNs), the domestic "networks" that comprise the internet. Having fewer networks would imply a less sophisticated national network. Both measures generally increase steadily over time as the internet develops. Given that RIPE maintains data for the same time series, proper application could determine if protests occurred in spite of localized internet outages, improving the accuracy of similar cyber-policy analysis.

Finally, this paper's research remains limited to a single country. When theory-building, one aims to generalize as much as possible without losing accuracy. If the mobilizational models maintain explanatory power across other datasets, their perceived robustness would improve. A cross-country comparative analysis that integrates Polity IV and Freedom House scores would yield new insights. Perhaps countries more authoritarian than Egypt more quickly narrow protest mobilization and broad-based grievances into policy proposals.

VIII: CONCLUSION

This paper provided empirical evidence supporting the claim that the space for unfettered digital communication has noticeably narrowed in Egypt over the course of time studied. It process-traces a case study using media reports and made this claim robust by citing the similar conclusions of non-governmental organizations utilizing independent methodologies. Moreover, it demonstrated that anti-regime protest in Egypt has declined over the course of time studied, as analyzed via a coding of ACLED's dataset via an extensive methodology, a multiple-interrupted time series impact assessment and external scholarly studies of regional power consolidation in the wake of the Arab Uprisings.

The insufficiency of measuring mobilization via protester and event counts motivates research into more effective proxies. This paper undertook an event-centric approach that distinguished the potential for an event relative to all events from an event's actual results relative to that of those in the same class. Population density, justified grievance, resource expenditure, and the on-the-ground actions attempted supplement protester-count mobilization models and yield significant stronger explanatory power for this case. The paper's metric contributes *language* by which the social movement discipline can discuss trends in mobilizational capacity. Its distinctions suggest a method for systematically evaluating patterns that are otherwise challenging to assess, although not without the potential for the spuriousness of other conditions, which continue to impact the literature.

el-Sisi's cyberregulations appear to have foreclosed the political opportunity structure for small-scale mobilization events but had no effect at other mobilizational levels. These results are consistent with the literature's assessment of internet repression tools. Police pressure does not appear to share a statistically significant relationship with decreasing mobilization levels, but the

data studied are not aggregated at the location-level. Deeper investigations into specific, protest-prevalent city quarters over time would shed further light into this relationship. Arrests do not, from the results presented here, offer an effective proxy for protest-counting, but more intensive process-tracing is necessary to credit the results.

These findings contribute to discussions regarding the "newness" of the internet for politics. Rød and Weidmann (2015) identify no empirical evidence supportive of Diamond's "Liberation Technology" thesis (2012), and find no internet effect for political institutions or democratic transition in authoritarian states. This paper's results supplement the claim that digital surveillance and censorship have little explanatory power for repression and mobilization by investigating a negative case by which the efficacy of those tools are systematically mitigated. These findings, however, do not shed light on the changed mindsets that might stem in part from these policies. Absent accurate survey data, it is difficult to tell if el-Sisi's power consolidation has increased deep-seated resentment and frustration among Egyptians. Given that the policies studied in this paper are consistent with el-Sisi's repression efforts, it seems plausible that Egyptians would associate these and similar regulations with increasing authoritarianism. The 2011 Arab Uprisings came as a surprise to many scholars who had studied the region for decades (Brown, 2014), even as later analyses have explained the revolutions in terms of historical factors ranging from "deep-seated resentment at the aging Arab dictatorships...anger at the brutality of the security apparatus, unemployment... and the corruption that followed the privatization of state assets" (Manfreda, 2019). From this evidence, one could deduce that these policies, as seen when Mubarak flipped the internet kill-switch, may backfire by contributing to high-scale mobilizational events in the future.

What do these results mean for el-Sisi? On the off-chance that he or his intelligence services stumble upon my thesis, they should know that their digital regulation efforts curtail small-scale actions, but that they cannot rely on modern technological machinery to eventually eliminate domestic unrest. In fact, he may benefit from eliminating these policies and dismantling his cyberregulatory regime. We cannot rule out that foreclosing low-level potential opportunities, even if by perception and not in reality, "pressurizes" the Egyptian public, leaving them more likely to opt into seemingly instantaneous, but gradually fomenting uprisings like those which toppled his predecessors.

IX: CODEBOOK

Each ACLED event of the "protesters" category that was "anti-regime" in character was graded in terms of its potential and actual mobilization, using the below features.

Potential Mobilization:

Independent variables assessed: Grievance, population density, total population of lowest-level administrative area, number of distinct groups involved.

Actual Mobilization:

Independent variables assessed: Potential mobilization of the event, total number of protesters, total number of protesters at events of similar potential mobilization-coded values (i.e., total protester yield relative to events of identical grievance, relative to events of approximately the same population density, number of distinct groups involved).

An Example:

ACLED description of event: "Approximately 150 members of Cairo's lawyers' syndicate demonstrated against the death of a colleague, who is believed to have died at the hands of soldiers in Matariya." Date: 1 March 2015.

- 1) Study Matariya: Matariya is a kism with a population of 80,000. For Egypt, this is a relatively dense space, it is a mid-rise suburb of Cairo. One can expect that many can access this area at low cost.
- Further investigate the event: Factiva search: "Cairo AND lawyer AND syndicate AND police DATE: 03/01/2015. Results: 1. Source: Daily News Egypt.
 - a. Information gleaned from Daily News Egypt newswire:
 - Context for the event, reasons that lawyers are protesting: They are upset with recent military actions and the military's political agenda.

- ii. Only the lawyers were involved, as part of their syndicate, this is one group. It's an attorney syndicate, there are few of this demographic (highly educated, professional, one profession) relative to wider Egyptian social movements.
- iii. Code grievance as "anti-military."
- 3) Potential mobilization code: low: Small organizational capacity given the demographic involved, relative to wider movements. While it takes place in an urban area, this type of protest is not very accessible in terms of the demographic involved and their level of specialization.
- 4) Compare event to other lawyer-syndicate protests (3 in the dataset, each coded as potential-low. 150 protesters are more than average for this category. Compare to syndicated protests generally; among journalist-led protests (closer to 20 in the dataset), 150 protesters are slightly below average.
 - a. Actual mobilization code: medium: This event doesn't demonstrate a clear outlier in either direction relative to similar events.

Descriptive Criteria:

POP_ADMIN2: [#] = Census driven location population, rounded to the nearest thousand.

MARKAZ_OR_KISM: [m, k] = Density-descriptor assigned by Egypt for each subdivision.

POT_MOB_LEVEL: [LOW, MED, HIGH] = The level of mobilization that could have been achieved.

MOB_LEVEL: [LOW, MED, HIGH] = The graded level of mobilization achieved as a function of potential mobilization. Makes use of the population proportion taken from government census.

GRIEVANCE = Precise category of prevailing grievance issued by protesters. All data coded are generally anti-regime. In this dataset, I coded for Pro-Islamism, Anti-Military, Pro-Morsi, Anti-Policy, Anti-Sisi, Pro-Sisi, and Unknown.

MEDIA_MENTIONS: [#] = The number of different articles reporting the event from key media companies from each case and searches through their websites, counting the number of times that the protest appeared over 240 hours following the event.

ORG_ATTENDANCE: [#] = The number of social organizations participating in the protest.

ARRESTS_REPORTED = The number of arrests reported by media sources.

PROTEST_ESTIMATE [#] = Estimate based on media description.

OTHER_NOTES: Other information of significance gathered during data collection.

X: EVENT TIMELINE

Mubarak assumes the presidency – 1981

Mubarak's NTRA Telecommunications Law (bans encryption, foreign VoIP) – 29 Dec 2003

<u>Arab Uprisings</u> – 2010-2012

NTRA pulls initial kill switch – 25-28 January 2011

Mubarak resigns – 11 February 2011

Morsi sworn in – 30 June 2012

Arab Republic Constitution ratified – 22 December 2012

Morsi unseated – 3 July 2013

Protesting without a permit banned – 25 November 2013

SCAF installs new constitution – 18 January 2014

<u>Internet terrorism bill</u> – 31 January 2014

Muslim Brotherhood banned – 15 April 2014

El-Sisi sworn in – 8 June 2014

Revealed that Egypt acquired spyware technology, from two separate sources – 7 July 2015

<u>Punitive Internet Terrorism Bill</u> – 1 August 2015 – <u>another source</u>, <u>bbc</u>

New VoIP restrictions – 1 October 2015

Ban on Facebook Free Basics – 3 January 2016

Qatari websites deemed "mouths of Muslim Brotherhood" blocked – 5 January 2016

Legislation begins for December regulation bill – 10 May 2016

Egypt blocks Signal, which quickly circumvents the block – 12 December 2016

Inst. regulation of the Press and the Media (establishes SCAM), breakdown – 26 Dec 2016

State of emergency declared – 9 April 2017

<u>Terrorism law amendments</u> – 19 April 2017

Uptick in website blocking – 24 May 2017

Significant uptick in website blocking ahead of elections – 14 March 2018

Expanded cybercrime law: jailtime for viewing dissident sites – 24 Aug 2018

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