COMMUNICATIONS BREAKDOWNS: WHEN AND WHY STATES SHUT DOWN THE INTERNET

by

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(Under the Direction of Daniel Hill, Jr.)

ABSTRACT

Why do some states opt to shut down the internet given circumstances of dissent when others do not? By evaluating the relationships between protest activity, informational communications technologies, and regime type, I argue when protesters coordinate -- which increasingly occurs online -- the resulting dissident activities have mixed impacts on state response. Termed from its mix of features from both democracies and autocracies, hybrid regimes experience differing levels of dissident activity and types of state responses as well as varied degrees of insecurity from perceived threat. In turn, hybrid regimes, compared to autocracies or democracies, are more inclined to shut down the internet to quash coordination among protesters and to stall informational flows of anti-regime sentiments. My hypotheses are tested using a series of negative binomial models and support is found for large event protests eliciting internet shutdowns in hybrid regimes.

INDEX WORDS: internet shutdowns, dissent, repression, protest, grievances, social media, ICTs

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CHAPTER 1

INTRODUCTION

The Arab Spring Uprisings in December of 2010 marked one of the first internationally recognized cases of large-scale coordination of anti-state protesting using social media by citizens. Termed as the ”Facebook Revolution” and the ”Twitter Uprisings”, (Shearlaw 2016), the Arab Spring’s newfound reliance on social media to organize collectively against the government (Bak, Sriyai, and Meserve 2018; Harris and Hearn 2018) and share information online related to government repression (Lim 2012) exposed a massive hole in regional authoritarians perceived grasp on information control. Following these initial pro-democracy pushes by citizens in Tunisia, Egypt, and Libya, and other countries in the Middle East – Lebanon, Syria, Bahrain – joined in for the fight for democracy (Shearlaw 2016). What was crucial to the successful spreading of these pro-democratic movements during this time was the seemingly little involvement the governments had in the control of information online and the instantaneous transmission of information on the conditions of freedoms, both enjoyed or abused. This meant that in non-democratic states, online audiences were able to not only follow the story and messages of protesters fighting for democracy in the Arab Spring states, but they had at their disposal a means to discover within their own contexts what rights and freedoms had been repressed by their own leaders (Weidmann and Rød 2019). As the initial movement spread from Tunisia in December of 2010 to Egypt in January 2011, Egyptian citizens demanded the resignation of President Honsi Mubarak. Such calls were met with the unsurprising autocratic response of censoring social media sites such as Twitter and Facebook, but the more dramatic turn of events came on January 28, 2011 when the Egyptian government resorted to severing internet and mobile services to impede further coordination by protesters demonstrating against

Mubarak and police brutality (Human Rights Watch 2011; Richtel 2011). Syria and Libya eventually took a page out of the Egyptian regime's book and employed this tactic as mass protesting for pro-democracy swelled, but Tunisia and Lebanon avoided using this counter-protest strategy.

Since the Arab Spring, more states have caught on to shutting down the internet as a strategy to diffuse dissent activity. During the time of writing this article, similar circumstances have been on-going around the world with grievances ranging from demanding accountability for government corruption (Lebanon and Chile), alleviating social inequalities (Chile), addressing economic and political dysfunctionality (Iraq, Iran, and Lebanon), countering contentious policy (Hong Kong and Indonesia), and calling for leadership resigna- tion (Haiti, Egypt, and Bolivia) (Serhan 2019; BBC 2019). Of these cases, only four (Iraq, Iran, Egypt, and Indonesia) have experienced mobile and internet service disruptions given large-scale protests and varying degrees of violence by dissidents and pro-regime security forces (Netblocks). Why do some states experience internet and mobile shutdowns given similar circumstances of unrest while others do not?

In this article, I argue that internet shutdowns function as a form of repression as a response to protest activity. Moreover, when states engage in nationwide shutdowns, these can be perceived as a form of indiscriminate repression as the entire populace falls victim to this tactic regardless of participating in political dissent or not. To better understand how states and affected citizens get to this point, I draw from the political violence literature, beginning with the development of grievances as "horizontal inequalities", which leads eventual collective dissent. As protests ramp up, regime members begin to perceive a threat to their positions of power, leading to the state to take action contingent upon their menu of options, in terms of responding

to protest demands, and the costs and benefits associated with their decisions. As grievances and protest coordination grow and persist, in some cases transcending sectarian divides within a particular state's context, ruling elites perceived threat skyrockets, especially when offering concessions to protester demands would result in diminishing of political power. Given the increasing reliance on social media and online communications for protest coordination and airing grievances, the internet has become an enticing avenue for dissidents to express grievances and mobilize. Given this, I propose three primary arguments that I spend the rest of the article testing: one that posits that larger protest events will elicit a repressive response in the form of internet shutdowns by hybrid states; another that asserts that violent dissident activity will too drive starts to respond by employing internet shutdowns; and hybrid states that possess greater informational communications technologies (ICTs) capabilities will witness more cases of internet shutdowns compared to their democratic and authoritarian counterparts.

Consequently, regimes have found that by shutting down the internet, dissident activity (e.g. diffusion of information, coordination of activities, etc.) can quickly be stalled, temporarily eliminating perceived threats against the state. A key feature of this argument centers on regime type and information and communication (ICT) penetration. In terms of regime type, such a form of repression is rarely seen in liberal democracies. Practices of employing internet shutdowns are highly improbable in locations such as in the United States, Hong Kong, or many Western European States as they are deeply entrenched in the global economy. Shutting off the internet in many of these states may lead to economic downfalls and would be felt worldwide yet protest activity has been experienced in these locations without this type of incident.

To evaluate this argument, I constructed a country-year dataset that measures the dependent variable, internet shutdowns, for the years 2016 and 2017 with all other independent

variables are lagged one year. I test two sets of hypotheses, protests with ICT and dimensions of protests, to distinguish whether or not these variables have a statistical impact on shutdowns occurring across regime type. These measures, which are also annual count data, are further disaggregated into subcategories to test whether particular forms of protests lead states to shutting down the internet. I find some support within the protest dimension hypotheses, namely that protests that involve a high number of participants, such as in demonstrations, have a significant relationship with internet shutdowns, echoing similar findings of Carey (2010) in her work on protest types and government responses of violent repression. If protests, ICTs, and regime type do exhibit a relationship with the outcome variable, internet shutdowns, this could mean that citizens who exercise these particular civil and political rights are not only increasing the perceived threat by states who decide to respond repressively, but individuals who are not a part of dissent movements are also negatively affected when the state mandates internet shutdowns. The widespread affects reach beyond disruption of internet connection to infringe on human rights across the spectrum, including but not limited to freedom of expression, right to peaceful assembly, right to education, economic rights, and others.

CHAPTER 2

GRIEVANCES, COLLECTIVE DISSENT, AND STATE RESPONSE

How do we get from individual level discontent to the point of large-scale, influential protest movements that elicit some sort of government response? Do differing types of protest activities (e.g. non-violent demonstrations, strikes or riots, hunger strikes, etc.) influence how states respond to protest activities, or does regime type play a role in how the states response to dissident activities? Grievances are an appropriate starting point to map out the strategic

relationships between individuals, collective dissent, and the state. Largely discussed in terms of structural inequalities and deprivation, grievances have been hotly contested throughout political violence literature. Drawing from Williams (2003), I employ and build upon his conceptualization of grievances, defining it as follows: grievances go beyond expressed frustrations; they are politicized and rooted in claims of injustices experienced by groups who have been marginalized by society. When the rights of those affected have been consistently violated or deprived, these groups, who may look outward to other groups who enjoy political, economic, or social rights, find justification for moral outrage, which may lead to collecting for the purpose of advancing these demands.

Gurr (1970) takes a psychological stance in explaining the development of grievances via relative deprivation. When individuals experience discrepancies between value expectations and value capabilities (Gurr 1970, p. 39), individual-level grievances against the perpetrator (i.e. the state) are thought to arise. Similarly, Davies (1962) argues that grievances arise when societies or groups experience continual prosperity in terms of political participation, economic gains, or social equality then suddenly are deprived when states intervene and reverse such progress. Other scholars tend to focus on grievances as inequalities rather than the psychological reactions such as anger or resentment to relative deprivation. This distinction is crucial. As Regan and Norton (2005) point out, relative deprivation is more concerned with an individual's comparison of this or her own achievements or expectations in relation to another. Alternatively, inequalities are judged as a comparison across groups within a society. Tilly (1999) put forth a more generalized argument by asserting that inequalities that arise along group lines (e.g. gender or ethnicity) were more likely to lead to increased grievances, particularly when such inequalities were exploited by the more powerful sectors of the society. Narrowing this logic, Stewart (2008,

p. 3) developed the concept of "horizontal inequities", defining it as "inequalities in economic, social or political dimensions or cultural status between culturally defined groups." She attributes horizontal inequalities that result in political exclusion as leading to more collective forms of rebellion. These group level-socioeconomic inequalities, on the other hand, are more inclined to solidify grievances, lending to a greater inclination of groups towards mobilization, a conclusion which Østby (2008) and Buhaug, Cederman, and Gleidtisch (2014) also find support. Cedarman et. al's (2013) *Inequality, Grievances, and Civil War* establishes micro-foundational pathways for linking how these horizontal inequalities can result in civil war, arguing that four processes take place to get from horizontal inequalities to grievances: group identification within a society is categorized rather than developed through cleavages; marginalized groups compare status to other more prosperous groups (particularly in terms of economic development and socials status); inequality is translated into an expressed injustice whereby a demand for redress for victims is made; framing and blaming who is responsible for injustices. Two other points are central to their theoretical development: grievances must be politicized and not all grievances trigger violence. While much of the literature being discussed in this section relates to circumstances of civil war onset, this article is more centered in contentious politics, which may (or may not) fall on the path to civil war.

Moreover, there are plenty of scholars who contend that grievance-based arguments (whether derived from deprivation or inequalities) are lacking in offering strong, causal linkages in getting from the point of individual frustrations to situations of political violence. Skocpal (1979) and Tilly (1979) have made the more general claims that all societies experience varying levels of frustrations, yet not all devolve into widespread violence or civil war, which is not a goal that this article aims to test. Other alternative explanations include greed (Collier and

Hoeffler 2004), opportunity-based mobilization (Collier, Hoeffler, and Rohner 2009; Synder and Tilly 1972) state weakness and terrain (Fearon and Laitin 2003), and resource mobilization (Tilly 1973). Tilly (1978) and Tarrow (1994), more relevantly assert that grievances alone are not enough to spur internal violent action as a response to state behavior – groups must collectively mobilize in order to carry out forms of civil unrest. Drawing from this assumption that grievances are essentially pre-condition to mobilization, the next logical step involves how groups mobilize, specifically under the context of contentious politics.

What motivates individuals to collectively dissent and join movements? Starting with Olsen's (1965) seminal work, *The Logic of Collective Action*, he asserts that when groups mobilize, only "important" members of a larger group have interest in achieving collective goods via leadership roles, while much smaller groups are more exclusive in terms of distribution of collective goods to its members. With larger groups, free riding problems arise when members benefit or exploit on the efforts of leadership in obtaining collective goods without actually contributing themselves. To overcome these issues, Olsen proposed a selective incentives approach: leaders set constraints upon members via incentivization to encourage them to participate rather than free ride, a sentiment that is echoed by Lichbach (1994). However, Tarrow (1994) points out that there may be some limitations in applying Olsen's assertions into the realm of social movements, specifically in terms of motivations of participation. Instead, Tarrow argues that, "people join social movements in response to political opportunities and then, through collective action, create new ones" (Tarrow 1994, p. 17). Relatedly, Gurr (2000) finds that incentives and opportunities are key for the participation of marginalized groups and groups with strength in leadership are thought to have a comparatively easier time with mobilizing for some collective goods.

Through historical anecdotal evidence, Tarrow (1994) also notes that shifts in the patterns in which social movements changed during the late eighteenth century when shocks to communication greatly impacted the local, national, and international flows of information. Evolution of collective action tactics over time shifted to where mobilized groups could gather in such a way that more affected groups could be included by forming coalitions to obtain rights that each group were not enjoying. Further, as these trends shifted, not only was participation opened up to more similarly aggrieved groups, but sustained movements could spread geographically, rather than be contained to a single locale and as more of an episodic event (Tarrow 1994, p. 44-46). When more intricately exploring the impacts of social movement diffusion through revolutions in media and informational transactions, Tarrow cites Chatier (1991), who points to increased ”ownership of books, readership of newspapers, and pamphlets that were spreading to social sectors that had formerly done little reading” (Tarrow, p. 51). Tying print networks with associational life, he claims that these two structural changes propelled social movements to what we tend to think of today (e.g. protesting via demonstrations, sit-ins, hunger strikes, riots, etc.). Formal social networks aid in keeping movements sustained over time, with shared identities, grievances, and understanding contributing as well. In addition to collective action in social movements, a key point here is the emphasis on the shocks from informational innovations tied with structural opportunities whereby individuals or collectives can take advantage of communications to disseminate information. This will be discussed at length in terms of the internet’s impact on instantaneous informational diffusion in the theory section.

When grievances are solidified and affected groups have collected to make demands of the state to improve political, social, or economic conditions, the state must decide how to respond to dissident demands. In starting with non-violent demands, where dissidents make

requests within available institutional channels, states are thought to have three options at their disposal: do nothing, accommodate, or repress. If states opt to do nothing, then grievances have neither gotten worse or improved. When protesters continue to demand without any costs from the state, they are still inclined to continue making demands. Mason (2004) details the latter two options of state response in the following way: If states choose to accommodate, the best case scenario would be that at least some grievances have been addressed and subsided, but as other groups see how the state gives into the original demands, more requests may arise. This shows that making demands leads to results. However, in states with weaker capacity, accommodation is often costly – and when the states are faced with balancing distribution of resources to accommodate grievances against maintaining power, the outcome is that little change is likely to occur as to prevent diminishing of regime power. Alternatively, states may opt for co-optation, in which case the regime may align itself with a particular group that is seen to be strategically advantageous by accommodating at the expense of disadvantaging other groups, likely inciting further resentments of dissidents. The final, and often least costly to weakened- capacity or lesser democratic states is repression. Repression encompasses any threat or coercive action carried out by the state with the intention to thwart or control any kind of domestic challenges to ruling elites or the status quo (Conrad and Ritter 2019; Davenport 2007a; Poe and Tate 1994; Ritter 2014). In this scenario, two type of repression are possible: indiscriminate and targeted. The former, reduces demands of the government made by dissidents in the short run but over time, grievances are more likely to continue increasing as the entire population suffers from this type of repression and demands are ignored by the state. Targeted repression, on the other hand, affects particular individuals or groups are the recipients of rights violations (non-violent, violent, or both). Because of the nature of this type of repression, which inherently involves

intelligence gathering on targets, recruitment, principle-agent issues, the costs are enormous. From the government side of the equation, each of these components requires some degree of infrastructural and technological capabilities for surveillance as well as compensation for trained and trusted agents who carry out the orders of the regimes that do not go rouge. On the flip side, when targeting leaders of dissident organizations, taking out these individuals may incite a sense of martyrdom, aggravating the targeted group(s). The paradox here is that states that have the capabilities to engage in targeted repression are the ones who are least likely to do so while states that are the least unlikely to engage in targeted repression are more inclined to engage in indiscriminate repression. Moreover, employing repression in certain regime types (i.e. democracies) comes with a much higher cost. In these states, accommodation is more likely to be on the table, as well as having institutional features at the disposal of aggrieved populations. In states where economic levels are lower, accommodation is likely to be unavailable due to its requirement of flexible spending. This results in weaker, less democratic states being less capable of being able to constructively and consistently respond to dissident demands. Poe's (2004) strength-threat ratio theory can be nicely tied with the theoretical contributions of Mason (2004) to offer further explanation on why states may elect to repress. Poe argues that as states or leaders perceive a threat to their power, they are inclined to increase their perceived or actual strength, which influence the decision calculus of accommodation, repression, or doing nothing while taking into consideration other structural limitations.

The Repression Dissent Nexus

The relationship between repression and dissent has been studied extensively over several decades, historically resulting in conflicting findings in terms of the interaction between dissent

and repressive state response. Consensus does exist in that dissent does lead to repression (Carey 2006, 2010; Conrad and Ritter 2019; Davenport 1997, 2007; Earl, Soule, and McCarthy 2003; Moore 2000; Nordås and Davenport 2013; Ritter and Conrad 2016), and such a relation- ship holds within this study. Going back to Poe's (2004) argument, other similar theoretical contributions, such as the Law of Coercive Response (Davenport 2007a) and the similar Threat-Response Theory (Earl, Soule, McCarthy 2013) assert that dissent leads to repression. While others don't disagree with this, they acknowledge that repression and dissent are more intertwined, and often cases of preventative repression exist where regimes may react to an impending challenge or to simply signal that engaging in dissent activities will be met with negative sanctions by the regime, leading to issues of endogeneity (Carey 2006; Conrad and Ritter 2016; Moore 1995; Poe 2000; Ritter 2014). When states repress, these actions may constitute negative sanctions, such as limiting civil and political liberties, targeted violence (often very costly), and in the most severe of cases, widespread, indiscriminate violence against the population (Carey 2006).

Again, such reactions are often contingent upon the government's perception of threat. This perceived threat is multidimensional. States are inclined to respond with more aggressive repression when protests increase in size and violence (Carey 2010; Gupta et al. 1993; Gurr and Lichbach 1986; Regan and Henderson 2002), protest activity is frequent and employs varied tactics (Davenport 1995), and when organizational capacity of dissident groups is high (Carey 2006). Witnessing impunity despite the commission of violence by the state against citizens often exists for other reasons: when lack of accountability, capacity, and institutional accommodation mechanisms exist (Mason 2004); lack of domestic obligation via non-ratification status of international treaties by the state leading to higher stakes when leaders face losing

power (Conrad and Ritter 2019); and lack of particular institutional features of liberal democratic systems (Conrad and Moore 2010; Davenport 1999, 2007a; Keith, Tate, and Poe 2009; Mitchell, Ring and Spellman 2013; Powell and Stanton 2009; Richards and Gelleny 2007).

The Internet and State Repression

While several studies acknowledge internet shutdowns, few have empirically addressed the issue. Anita Gohdes' (2015) work on internet shutdowns during the Syria Civil War points to internet shutdowns being utilized alongside comparatively higher rates of widespread violent repression. Such atrocities, specifically in the Syria case, were carried out under military orders to target cases of governmental opposition during civil war. In another vein, Krcmaric (2019) conducted a study on ICT penetration levels within a state and their effect on a state's propensity to sever communications to hide violence, specifically cases of state-sponsored mass killing. His claim is that higher ICT penetration levels raise the audience cost, both domestically and internationally, by offering quick means to spread information on government abuses. In states where penetration is low, there are at a higher risk for mass killings to be hidden from audiences; but where ICT penetration is high, the risk diminishes as states must factor in domestic opposition and international backlash in the form of naming and shaming campaigns, economic sanctions, or even intervention (Krcmaric, 324).

Military conflict isn't the only purported reason for internet shutdowns. Howard, Argwal and Hussain (2011) offer two primary arguments explaining why states claim to disrupt internet and telecom services: protecting authority and

preserving the public good (Howard, Argwal and Hussain, 229).[1] The caveat here is twofold: they do not disaggregate between cases of censorship and internet shutdowns and their regime typologies likely do not capture the spectrum of regime type that this study attempts to detail. However, their contribution pushes the justifications of shutdowns offered by states beyond military crises. Within their findings, disrupted network activity most frequently occurs in cases of "protecting authority" (ibid). This categorization covers reasonings such as, "protecting political leaders and state institutions", "election crisis", "eliminating propaganda" and "mitigating dissidence" as well as national security related issues. Also covering similar topics, Freyburg and Garbe (2018) find that internet service provider (ISP) ownership, regime type, and timing of elections are all associated with internet shutdowns in sub-Saharan Africa.

CHAPTER 3

THEORETICAL FRAMEWORK

The major claim I put forth is that states are most likely to shut down the internet when facing mobilized dissent perceived as threatening to the state, primarily under a hybrid regime. In cases of collective dissent where groups are largely reliant on the internet as a means for mobilization, recruitment, and organizing events as well as diffusion of goals, grievances, and other associated rhetoric, access to the internet is most likely to be the logical primary target for the government to swiftly diminish operational capacity of dissidents. To begin laying the foundation of my argument, I with two particular dimensions of protesting that are thought to play a major role in how states vary in repressive response: size of participation and propensity for violence.

[1] The authors further divide these categories into sub-components covering more specific justifications provided by governments for internet shutdowns and censorship.

Previous studies have found that states are inclined to respond with more aggressive forms of repression when protests increase in size and violence (Carey 2010; Gupta et al. 1993; Gurr and Lichbach 1986; Regan and Henderson 2002), is frequent and employs varied tactics (Davenport 1995), and when organizational capacity of dissident groups is high (Carey 2006). Focusing on size and organizational capacity, these features of a protest matter for three reasons. First, the greater the number of participants within a protest event, the greater the threat the state perceives. Having a larger turnout for an event particularly in a state without legal protections for dissidents, is a key factor in how states respond to dissident threats. For example, one of the largest demonstrations in recent U.S. history was the Women's March in January 2017. Because of the greater individual protections afforded by the United States (e.g. freedom of expression, right to peaceful assembly, etc.), and therefore its status as a democracy, the event did not elicit a harsh state response. Conversely, in August of 2019, citizens in Moscow who demonstrated against governmental crackdowns on political expression and controversy surrounding local elections were met with the internet being shut down by the state as a response ("Evidence of Internet Disruptions"). A second point, which relates to the first, is the ability for imagery of large-scale protest events to be disseminated online. Domestically, regimes faced with highly attended protest events experience a perceived and/or real threat to their grasp of power, but when images or videos of the events are shared instantaneously and globally, international perceptions of regime strength may be further diminished. When international or non-participating domestic audiences are able to see how many people are aggrieved by the state that participation in large-scale dissent activities, this perception factors into the calculus of response by the targeted regime. By shutting off the internet, distant audiences are deprived of real-time information of the events, leaving room for potentially hiding repressive responses carried out by

the state in retaliation for dissident behavior. Finally, when mobilization for dissent is high, the government also perceives a threat when the group highly organized. Large, organized groups often have better coordination capabilities, resources for carrying out various dissent tactics, and participation among members, all of which further impose a threat on the targeted regime. In such circumstances, as a group gets larger and demands get wider, it becomes more difficult for the state to co-opt the entire organization. Instead, to meet the needs, the state would have to accommodate the demands being made by the dissident group. This becomes even more costly when public demands require meeting needs surrounding public goods (compared to private goods). This leads me to propose the following:

Hypothesis I: When protest events in hybrid regimes have higher attendance, the state is more likely to shut down the internet in response to dissent.

The second dimension to examine is levels of violence involved in dissent activity. Like large events, violence is particularly threatening to the power of the regime. First, when widespread violence takes hold, it can be assumed that contention between dissidents and the state has been on-going. For individuals to be willing to engage in violent dissent, several scenarios may be playing out: state capacity has dwindled; the state has previously responded with violence indicating a cycle of violence; violence dissidents may be offering protection against repressive state agents; or the state has ignored initial grievances leading to a ramping of up demands made by dissidents. Moreover, when circumstances get to the point where dissident tactics involve violence, regime members perceive threats to their physical safety, leading to demands made within government to react harshly to growing concerns. This leads to a kind of reinforcing effect where violence begets violence.

Nonviolence, on the other hand, is typically considered less threatening by the state. As a natural starting point to dissident activity in communicating grievances, non-violent protest activities generally pose no immediate, physical danger to regime members. However, as Chenoweth and Stephan (2012) argue, a participation advantage in non-violent movements exist (compared to violent). Because participants won't experience moral barriers, taking up arms, or higher-level commitment problems in terms of legal or political violations, non-violent movements can draw in higher participation compared to violent dissent. The other side of this argument involves commitment issues or collective action problems. Whereas violent dissent often involves movement leaders or rebels inducing participations through material or political compensation, nonviolent movements do not involve higher level incentive structures. In both scenarios of dissident activities involving violence or nonviolence, the same logic applies when tying in the role of ICTs – when imagery of these events is distributed digitally or other information is shared online, outside audiences become more aware and informed of the contention going on in the affected area. Shutting off the internet disrupts what participants and audiences, depriving them of information, which in turn may strengthen the regime in the short term. Given the discussion on the levels of violence involved in protest, I assert the following:

Hypothesis II: When protest events in hybrid regimes are violent in nature, the state is more likely to shut down the internet in response to dissent.

Dissent and Hybrid Regimes

The argument of this paper becomes particularly evident in hybrid regimes. Diamond (2002, p. 24) defines hybrid regimes as being pseudo-democratic in that any democratic institutions, such as multi-party competitive elections, exist to mask actual authoritarian rule. Because these

regimes are at their core non-democratic yet rely on the illusion of democracy and necessitate the incorporation of democratic features into institutional makeup of the state, these regimes theoretically have more democratic spaces compared to their full-authoritarian counterparts and less than democracies. Moreover, maintaining appearances of democracy may mean permitting some degree of challenge to the state but within the bounds set by the regime. Again, compared to a closed autocracy, this amount of space – whether real or contrived – is greater within a hybrid regime, meaning that there is room for growth among opposition. Given that autocratic states leave little to no space for political rivals and democracies are built with institutional features that permit regime opposition, this middle category of hybrid regimes is characterized by the combination of maintaining the appearance of permitting political rivalries and other opposition while simultaneously repressing those who impose the greatest threat to the regime. When thinking about this in terms of a safety-valve type argument, permitting dissent to a degree may legitimate the democratic tendencies to outside observers. However, another key feature of these regimes to take note of is the degree of uncertainty that exists between the regime and how both the state and opposition. Given the literature addressing how dissidents adapt in the face of coercive state response (Hoover and Kowaleski 1992; Lichbach 1987; Sullivan and Davenport 2018), Fransisco (1995) finds that as dissidents are able to adapt to state coercion, a feedback loop may persist, resulting in repeated rounds of protest and state response that drives uncertainty, especially on the state side. As this uncertainty continues to increase, the state will feel more threatened, leading to gradually harsher responses against protesters.

When accounting for how regime type factors into states' decisions to repress, the literature has covered the topic extensively. Drawing specifically from the "more murder in the middle" arguments (Davenport and Armstrong 2003; Fein 1995), regime type continues to

majorly factor into the dissent-repression equation. In an overarching sense, earlier studies have found that democracies tend to have a negative relationship with repression (Davenport 1995; Davenport and Armstrong 2004; Henderson 1991; Poe and Tate 1994) with many more suggesting a non-linear relationship when taking into considering regime type into repression calculus (Conrad and Ritter 2016; Fein 1995; Gartner and Regan 1996; Regan and Henderson 2002). More recently, attention has been given to particular features of democracies that constrain repressive behavior carried out by the executive (Mason 2004; Ritter and Conrad 2016; Conrad and Moore 2010; Conrad and Ritter 2019; Hill and Jones 2014; Mitchell, Ring and Spellman 2013; Powell and Stanton 2009). In many of these cases, constraining features often lie in independent judiciaries or constitutional makeups of liberal democratic regimes.

When taking into consideration the theoretical contributions from democratization literature, these institutions are deemed crucial to a healthily functioning liberal democracy, specifically in terms of protecting the rights of individuals, minorities, and marginalized populations (Plattner 1998; Diamond 2003; Zakaria 1997). However, Levitsky and Way (2010) argue that with the end of the Cold War, democratization of formerly authoritarian regimes did not always result in democratic states. Even with a perceived global trend towards democracy in the 1990s, the path to democracy is not always linear and often leads to states being stuck in a place somewhere between authoritarian and democratic. This uneven process has resulted in cases hybrid regimes developing across the globe, whether from stalling while on the path to democratizing or backsliding or eroding once achieving some degree of democracy.

Given the weak constraints on the executive, inattention to individual rights protections, and lack of horizontal accountability across governmental institutions, the potential for repressive responses towards political opposition, dissidents, and citizens in hybrid regimes is

theoretically much higher in hybrid regimes than full autocracies as well (Fein 1995; Hegre et. al 2001; Regan and Henderson 2002). When comparing to fully autocratic regimes, where contestation at all governmental levels is effectively nonexistent, this means room for political opposition and dissent is effectively closed off. Because hybrid regimes offer varying degrees of political contestation compared to their fully autocratic counterparts, this leaves relatively more space for oppositional activities and political dissent against ruling elites. Providing these openings to challenge ruling powers, however unfair they may be, offer a means for political opposition and dissent to exist (Tilly 1978). Given tactics by hybrid regimes to establish uneven contestation (Levitsky and Way 2010), those opposing the regime have increasingly adapted to newer innovations to more quickly and effectively coordinate against those in power – the internet and social media.

Hybrid Regimes and Internet Shutdowns

To integrate the previous discussions on repression, dissent, and hybrid regimes with the ways in which internet shutdowns fit into this strategic interaction, I turn next to some of the more recent theoretical debates found at the intersection of these topics: liberation technologies and repression technologies. The former, championed by Larry Diamond (2010) argues more the more optimistic view that informational communications technologies (ICTs) aid in the empowerment of citizens to coordinate for pro-democratic purposes and bolster civil society (Diamond, 70). In a more pessimistic vein, authors Rød and Weidmann (2015) argue that the internet has become a repressive tool used against civilians by the state. While cases such as the Arab Spring hoped to exemplify the theories of Diamond (2010), and for a period some did, the increasing use of internet shutdowns to counter dissent activities points to another means by

which states can repress and target those who challenge ruling elites. More recently, Rød and Weidmann (2019) evaluated how ICT penetration within a state effects sustainment and diffusion of protest activity in autocratic states. Specifically, they find that protest movements are more readily sustained through internet reliance, which also drastically increases the diffusion of dissident messaging (grievances) beyond urban areas. Further, they also find that internet and social media not only aid in the increased mobilization of protest activity but also assists in quicker spread of information – including information on governmental abuses. A final key contribution from their book is that in states where digital repression serves as a substitute for more typical forms of repression, these states generally tend to perceive more of a threat from dissent and protest mobilization that has sustained over a period of time compared to more fully autocratic states (Rød and Weidmann, 145-47).

When thinking about the argument from an infrastructural perspective, regime type also plays a factor. Milner (2006) finds that the spread of ICTs is not purely driven by technological or capacity issues (i.e. economic factors) alone but also political tendencies of regimes as well. Similar to the space for dissent across regime types, internet access across regime types is uneven in that the more autocratic states have a stronger control of internet access while democracies offer more open access to the internet. Again, this leaves the hybrid regimes as having varying degrees of internet access for citizens contingent upon institutional makeup, repressive tendencies, and whether or not they trend more in the direction of being more authoritarian or democratic. Further, given that the internet has the ability to instantaneously diffuse ideas, this concerns the state as the spread of anti-regime ideals poses may pose a threat to those in power who deal with more uncertainty. In states where a space exists for dissent, the internet not only offers a means to communicate among those who oppose a regime, but it

greatly reduces several hurdles of the collective action problem. As grievances arise, individuals collect digitally over a larger geographic space than before, and movements propel forward to make demands of the state where the internet undoubtedly poses a greater threat to coercive states than ever before. On the flip side, as mobilization increasingly relies on ICTs for effective coordination, recruitment, and dissemination of information, states may act to quickly shut down this lifeline for dissidents. This isn't to say that all dissident organizations heavily rely on ICTs, but in states where this infrastructure is more developed and access is more widespread, it can be assumed that mobilization efforts can be eased with the use of the internet. This leads to the final hypothesis:

Hypothesis III: When internet connectivity is higher, the government is more likely to shut off the internet given dissident activity.

CHAPTER 4

DATA

The dependent variable, *shutdowns*, are instances in which internet/telecommunications systems were mandated to be shut down by the government at the local, regional, or national levels. Also included are cases in which state capacity may cause issues of unintentional power outages and natural disasters that lead to shutdowns. However, these cases are rare. The data used in the analysis were derived from Access Now's Shutdown Tracker Optimization Project (STOP) and is measured at the country-year level for the years 2016-2017. Within the data, STOP provides daily information on confirmed instances of internet shutdowns within a state, duration of shutdowns, affected locations and service types. In some cases, government justification was provided as well as suspected causes with new articles to back up these suspicions by the

creators of the dataset. An event was coded if the shutdown or service disruption lasted an hour or a series of shutdowns or disruptions repeated as a series related to a particular event (e.g. protests, elections exams) (STOP 2019). To collect each case, the authors of the STOP Dataset relied on local, national, and international news reports to verify each of the cases included in the data. In some instances, cases were coded as "Grey Area" or "Unconfirmed", and these were not included in this analysis. All confirmed cases were included and those cases which lasted longer than one day were treated as singular events. For example, Cameroon experienced full network shutdowns in certain Anglophone regions starting January 1, 2017 and ending on April 20, 2017. This event is only counted once in my data as the shutdown stemmed from protests in those regions. Further, I include all each confirmed event regardless of government justification.

Covariates

The main independent variables of interest are *protest type*, *percentage of internet users* and *regime type*. Protests constitute the specific activities/actions of civilian dissidents that involve opposing individuals, policies, or actions taken by the state. The protest variables were collected from the Integrated Crisis Early Warning Systems (ICEWS) and are machine coded events, derived from CAMEO code data. This variable, along with all other controls, are lagged one year (2015-2016) in order to better determine the political or social environment leading into the years in which the internet was shutdown. The *protest type* variables from ICEWS was further disaggregated into the following categories: general political dissent, demonstrate or rally, conduct hunger strike, conduct strike or boycott, obstruct passage, and protest violently. All of these are events counts in which civilian dissented against the government or their policies. Due to the low counts of strikes and boycotts and blockades, these categories of protests were

dropped from the analysis. Further, strikes and boycotts are not necessarily defined as exclusively political, as these types of events may center on workplace or other economic grievances. Because there was a comparatively high number of counts recorded for demonstrations, I logged this value across all models. In terms of my hypotheses, I used the definitions provided by the ICEWS codebook to categories the remaining protest types into the relevant dissident activity types I evaluate: demonstrations are large events, hunger strikes are small events, violent protests are violent events, and general dissent is non-violent.

While the theoretical argument focuses on ICTs, I opted for using *percentage of internet users* in my analysis. This variable comes from the International Telecommunication Union's (ITU) dataset on percentage of individuals who use the internet. This measure reflects the percentage of internet users for each country in the dataset. Because the theoretical argument pushes dissident reliance on the internet as a primary driver for recruitment, event organization, and communication, using this specific measure to capture how much internet access is available to citizens across the globe should be sufficient for the analysis.

Finally, to measure *regime type*, I used Version 9 of V-Dem's liberal democracy indicator. This is a holistic score that accounts for, "the protection of minority rights against the state, limitations placed on the government via constitutionally protected civil liberties, strong rule of law, independent judiciary, and effective checks and balances that limits the executive branch" and also accounts for levels of electoral democracy (Coppedge, Gerring, Knutsen, et al. 2019). This is measured as an interval score, from 0-1, where zero indicates full autocracy and one liberal democracy. I also created categories using the V-Dem liberal democracy indicator to more cleanly parse out autocracies, hybrid regimes, and liberal democracies. I used the cut points of 0.2 or less for autocracies, scores of 0.21 to 0.68 for hybrid regimes, and 0.68 or greater for

liberal democracies. These cut points were based on rough close approximations of the first and third quartiles of the data visualized through a histogram.[2]

Within this analysis, I only controlled for two variables that likely have a relationship to the dependent and independent variables. Like the independent variables, these measures are also lagged one year. From the World Bank Indicators (WBI) database, I use a measure for *population*. I also included a measure for *GDP per capita* from WBI, as this may help link state capacity and infrastructural levels necessitated for higher levels of internet usage among citizens.

CHAPTER 5

METHODOLOGY AND ANALYSIS

To test my hypotheses, I used a series of negative binomial regression models due to the dependent variable being measure as count data.[3] First, I evaluated the relationship between ICT levels and protest types on instances of internet shutdowns but did not include an interaction between the two independent variables of interest. During this first round, I ran five models, one for each protest type as well as a full model which included all protest types. In each model, all controls were present as well as the liberal democracy indicator and internet usage. Based on the incident rate ratios (IRRs), Table 1 demonstrates that the percentage of internet users did not exhibit a statistically significant effect on internet shutdowns across the different types of protest activity.

[2] See Appendix II

[3] The negative binomial model is preferential to test my hypotheses on two fronts. First, with the large number of zeroes in the data on the dependent variable, having a more flexible model compared to the Poisson regression model (PRM) allows the restrictions of necessitating equal conditional variance and mean to be loosened. Second, as the number of zeroes is large in the data, a zero-inflated negative binomial model may sound more appropriate. However, I assume that each of the zeroes and other counts in the data to be independent of one another and do not rely on additional processes to generate different types of zeroes.

Table 1: IRRs of Protest Type + ICT on Internet Shutdowns

	(1)	(2)	(3)	(4)	(5)
Logged Demonstration	2.066***				1.596*
	(0.420)				(0.351)
Hunger Strike		5.150**			0.969
		(2.984)			(0.900)
Violent Protest			1.006***		1.004
			(0.002)		(0.003)
General Dissent				2.199*	0.719
				(0.715)	(0.325)
Liberal Democracy	0.036*	0.100	0.084*	0.104	0.042*
	(0.048)	(0.124)	(0.105)	(0.134)	(0.055)
Internet Usage	1.020	1.011	1.014	1.012	1.017
	(0.020)	(0.018)	(0.018)	(0.020)	(0.019)
Logged GDP per Capita	0.600	0.797	0.738	0.777	0.667
	(0.263)	(0.299)	(0.273)	(0.315)	(0.266)
Logged Population	1.452*	1.619**	1.457*	1.777***	1.344
	(0.249)	(0.254)	(0.225)	(0.298)	(0.218)
Num. obs.	160	160	160	160	160
Log Likelihood	−97.725	−101.910	−98.866	−104.542	−95.731
Deviance	74.777	79.998	81.068	76.125	78.728
AIC	209.451	217.821	211.732	223.085	211.463
BIC	230.977	239.347	233.258	244.611	242.215

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 1: IRRs of Protest Type + ICT on Internet Shutdowns

Taking into consideration how my hypotheses were constructed, I then ran a second series of models with the same variables, but this time I interacted internet usage with each protest type. From these results, I did find minimal significance with *violent protest*internet usage* and *general dissent*internet usage*. However, in both cases the estimates were very close to zero, indicating a practically non-existent relationship. Once again, the internet usage variable on its own did not demonstrate a statistically significant relationship with the outcome variable. Based on these results, I decided that internet usage is not a sufficient explanatory mechanism for internet shutdowns in hybrid regimes given cases of dissent.[4] Therefore, ICT levels measured via percentage of internet users does not demonstrate a strong relationship between protest activity

[4] The interaction models can be found in Appendix I.

and internet shutdowns. This could be explained in a few ways. States that possess a higher level of internet users could arguably have higher financial capacity, which is necessary for the infrastructural requirements to provide widespread internet access to citizens throughout an entire country. Moreover, financial capacity is more frequently associated with more democratic governance. And in these cases, citizens of democratic states often have institutional pathways for addressing grievances. Conversely, states with lower rates of internet usage among the populace likely experience internet access primarily in urban areas. Even in these cases, recruitment efforts, event planning, and dissident communications are likely to rely on more widely available means to carry out these tasks. Because of the results and these potential theoretical arguments of support, I can reject *Hypothesis III* and drop the internet user measure from further analysis.

After dropping percentage of internet users as an independent variable of interest, I move to evaluating how the different dimensions of protest may affect the number of shutdowns across various regime types. For these sets of hypotheses, I created a set of cut points for the variable liberal democracy, which is an ordinal measure from V-dem of a state's degree of liberal democracy, where zero indicates full autocracy and one liberal democracy (Coppedge, Gerring, Knutsen, et al. 2019). Upon running a histogram to visualize the distribution of regime types across the countries within the data, the cut points selected were 0.2 and 0.68.[5] For states that received measures between zero and 0.2, these cases were categorized as autocracies; cases that received scores of 0.21-0.68 were categorized as hybrid regimes, and cases receiving values of 0.69-1 were categorized as democracies.

[5] These were based on approximate measure of the first and third quartiles after histogram of this variable, which were 0.18 and 0.63, respectively. The histogram is included in Appendix II.

I repeat the same process as I did for the internet usage variable – I create two sets of models, one with and one without an interaction term – but this time I used the categorized regime types and protest types. Since I use dummy variables for the regime measures, I selected autocracies to be the reference category. Further, I include models for each protest type and controls, and in the final model, I include all of the protest variables as well as the controls. Before delving into the results, I want to reiterate how I am treating the protest type variables across each model in relation to my hypotheses. Because I am evaluating the relationship between large events, which I define as protest events with a large number of attendance, and violent events, which are events involving violence against other individuals or other physically harmful activities, I use the different protest types coded within ICEWS to measure the various protest types: demonstrations for large events, hunger strikes for small events, violent protests for violent events, and general dissent for non-violent events.[6]

When evaluating the non-interaction term models for protest events across regime types, the incident rate ratios (see Appendix III) indicate that each type of protest activity is statistically significant within autocracies. For example, given a one unit increase in logged demonstrations, the expected count of internet shutdowns increases by a factor of 1.881. While this doesn't exactly get at the relationship at hand, this is a decent place to start to see whether or not protest activity does have a relationship or not with internet shutdowns, and I find that it does.

When moving forward to the interaction model (see Appendix IV), the relationships between variables become far more difficult to interpret, even when providing a table of coefficients and standard errors. Even when taking these results into account, no significance is found for the violent or non-violent protest events, leading me to reject hypothesis II. In regard to

[6] See ICEWS Codebook for more information on these definitions.

the violent protest category, if dissent turns violent, the state will likely respond with violence given that the state is autocratic or a hybrid regime that trends more towards autocracy. This violent response goes back to the perceived threat facing the regime and its members, and in order to halt violence as immediately as possible, the state would likely go directly to the source of the violence rather than shutdown the internet. Conversely, the state could still opt to shut down the internet to thwart the spread of information on state violence in response to dissent. More work should be done on the subject.

In terms of hunger strikes, the small events variable, so few cases were coded within the data that when it was interacted with the various regime type categories, no effect was found and essentially dropped out of the model. Finding significance here is counterintuitive in that hunger strikes are not only small scale, non-violent events, but often they take place in prisons and receive relatively less media attention than a large-scale demonstration or even violent protest would. As is the case with violent protest, more research should be done on hunger strikes and their relationship to internet shutdowns or state response.

This leaves the demonstrations variable. Without relying too heavily on the interaction models for analysis, I do find that hybrid regimes on its own does show some weak statistical significance, and I investigate this relationship further. Using the same model for demonstrations from the interactions table, I generated predicted counts of internet shutdowns across the three regime types given an increase in the amount of demonstration events that occur. Figure 1 suggests that demonstrations have an insignificant effect across all autocracies and democracies, but not hybrid regimes. Another finding of note is the coefficient estimates for the democracy variable are significantly larger compared to the hybrid regime and autocracy categories.[7]

[7] See Appendix III.

Because internet shutdowns don't happen in the states that fall into the democracy category, the estimates and standard errors drastically inflated. What these results suggest is that autocracies have a wider variation in the number of shutdowns, but the relationship is insignificant. Hybrid regimes, however, do possess a statistically significant relationship between an increase in the number of demonstrations and the number of cases where states shut down the internet. Therefore, I accept *Hypothesis I.*

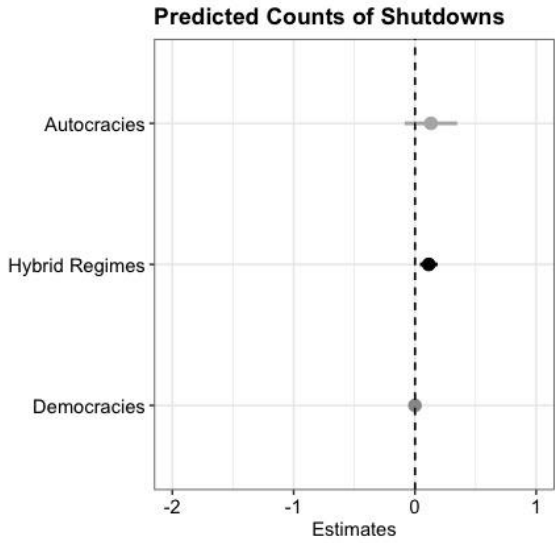


FIGURE 1: Predicted Counts of Shutdowns

CHAPTER 5

CONCLUSION

The aim of this article was to begin evaluating on a country-year level how dissent factors into the state's choice to shut down the internet. Initially, I proposed the theoretical argument that effective collective dissent relies heavily on internet usage, which could in turn lead states to retaliate against protest activity in the form of internet shutdowns. This method seemed logical as cutting off the primary means of dissident communication, recruitment, organization, and event

coordination would greatly diminish the capacity of anti-regime organizations. Also key to this argument was the role of regime type – autocracies would likely see less dissent as these states permit minimal to no space for political dissent; democracies tend to have more institutional pathways for addressing grievances; and hybrid regimes would have a mix of the two, leading to more potential variation in terms of state response, particularly in terms of internet shutdowns. Another key level of this argument included the dimensions of protest: size and violence. What I proposed in this regard was that large events and violent events would be more likely to elicit states to shut down the internet given dissent in hybrid regimes. Upon conducting my analysis, I found that the percentage of internet users (by country) demonstrated no relationship with the dependent variable, leading me to drop this variable from further analysis. When breaking down regimes into three different categories – autocracies, hybrid regimes, and democracies – and interacting them across the different protest types, ultimately the strongest relationship observed is between hybrid regimes and demonstrations. This relationship is arguably backed by the theoretical arguments of Poe's (2004) Strength-Threat Ratio in the sense that states may perceive a threat from highly attended anti-regime events. Further, it could be suggested that large events without the inclusion of violent tactics may incur a larger audience cost, both domestically and internationally, if the state were to respond to non-violent events with violence. To punish dissidents while simultaneously diminishing their capacity, states can respond by cutting off the internet.

Further studies should continue to be done on this subject. As several recent studies have evaluated the potential new wave of autocratization, states that may have once enjoyed more democratic features of governance may be at risk of transitioning towards autocracy or simply backsliding into a hybrid state (Bermeo 2016; Coppedge 2017; Diamond 2015; Levitsky and

Ziblatt 2018; Luhrmann and Lindberg 2019). Since there appears to be some evidence of a relationship between hybrid regimes and the utilization of internet shutdowns during cases of large event dissent, these types of instances may continue to increase. Moreover, these tactics carried out by the state would not only increase in number, but citizens may gradually be more at risk over time, especially in circumstances where internet shutdowns are mixed with state violence, which is often the case (Gohdes 2015, 2018; Kcrmaric 2018). Building off of Kcrmaric (2018), where he investigates whether states employ shutdowns to hide mass killings, studies should be carried out that explore other rights violations that may occur or be intentionally hidden during internet shutdowns. Such studies could even explore more particularized forms of violence such as increased violence against women during shutdowns. Outside of the context state violence, regimes that employ internet shutdowns pose other threats to other human rights violations and abuse, particularly economic rights and rights to education. Future studies should evaluate shorter- and longer-term impacts of how internet shutdowns influence affected economies and how shutdowns may signal internal instability, potentially leadings to changes in investment towards ICTs. Finally, future work in the realm of the relationship between empowerments rights and internet shutdowns should continue to move forward as reliance on ICTs are likely only trending upwards.

This research evaluated one of the many dimensions of internet shutdowns, and several other aspects remain to be tested. More detailed studies are needed on how nationwide shutdowns vary compared to region-specific internet shutdowns. For example, the recent case of Jammu-Kashmir in India has experienced inconsistent access to the internet, with little information flowing in and out of the region. Similarly, English-speaking regions of Cameroon endure more internet shutdowns than non-English speaking areas. Such a cases could be argued

as targeted repression. While this study evaluated how protest and grievances draw the attention of the state leaving the state feeling threatened – the classic dissent leading to repression relationship – there is clearly much more work to be done.

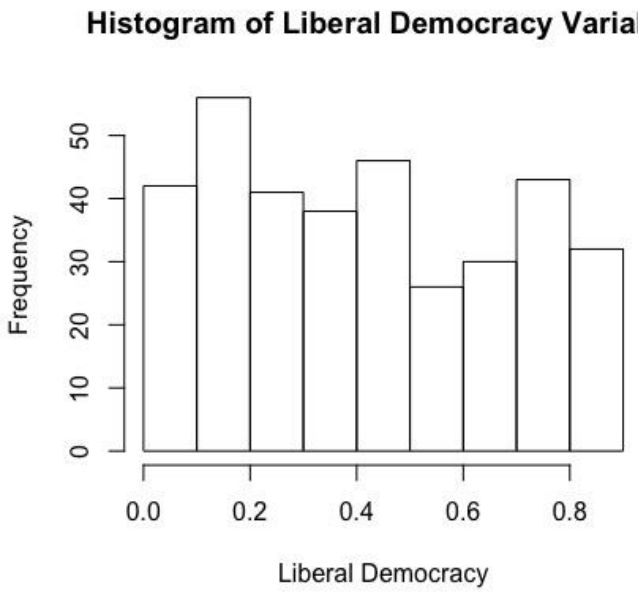
Appendix I. Negative Binomial Models for Interaction Effect #1)

(Protest Types and Percentage of Internet Users on Internet Shutdowns)

	(1)	(2)	(3)	(4)
Logged Demonstrations	0.735*			
	(0.319)			
Logged Demonstration * Internet Usage	−0.000			
	(0.008)			
Hunger Strike		8.937		
		(7.479)		
Hunger Strike * Internet Usage		−0.346		
		(0.343)		
Violent Protest			−0.001	
			(0.003)	
Violent Protest * Internet Usage			0.000*	
			(0.000)	
General Dissent				2.492**
				(0.856)
General Dissent * Internet Usage				−0.053*
				(0.024)
Liberal Democracy	−3.307*	−2.420*	−2.555*	−2.442
	(1.327)	(1.234)	(1.245)	(1.282)
Internet Usage	0.021	0.012	0.009	0.014
	(0.041)	(0.018)	(0.019)	(0.018)
Logged GDP per Capita	−0.510	−0.247	−0.370	−0.254
	(0.438)	(0.368)	(0.388)	(0.383)
Logged Population	0.370*	0.436**	0.450**	0.492**
	(0.172)	(0.155)	(0.158)	(0.161)
(Intercept)	−6.924*	−6.737*	−6.188	−7.698*
	(3.476)	(3.333)	(3.276)	(3.487)
AIC	211.450	218.527	210.752	220.331
BIC	236.051	243.129	235.354	244.933
Log Likelihood	−97.725	−101.264	−97.376	−102.166
Deviance	74.835	81.831	78.076	78.569
N	160	160	160	160

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Appendix II. Histogram of Liberal Democracy Variable



Appendix III. IRRs of Protest Activity by Regime Type

	(1)	(2)	(3)	(4)
Logged Demonstration	1.889***			
	(0.329)			
Hybrid	0.500	0.680	0.544	0.727
	(0.203)	(0.285)	(0.212)	(0.305)
Democracy	0.109*	0.110*	0.127*	0.104*
	(0.109)	(0.107)	(0.114)	(0.102)
Logged GDP per Capita	0.897	0.985	0.855	0.961
	(0.278)	(0.307)	(0.251)	(0.302)
Logged Population	1.209	1.624***	1.391**	1.642***
	(0.189)	(0.205)	(0.172)	(0.217)
Internet Usage	0.993	0.998	1.004	0.999
	(0.015)	(0.015)	(0.014)	(0.015)
Hunger Strike		2.288***		
		(0.574)		
Violent Protest			1.006***	
			(0.002)	
General Dissent				1.982*
				(0.660)
N	376	376	376	376
AIC	275.181	287.337	276.559	288.496
BIC	306.617	318.774	307.996	319.932

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Appendix IV. Negative Binomial Models for Interaction Effect #2

(Protest Activity by Regime Type)

	(1)	(2)	(3)	(4)
Logged Demonstration	0.319			
	(0.210)			
Logged Demonstrations*Hybrid	0.462			
	(0.266)			
Logged Demonstrations*Democracy	15.079			
	(17.626)			
Hunger Strike		0.828***		
		(0.251)		
Violent Protest			0.005	
			(0.006)	
Violent Protest*Hybrid			0.001	
			(0.006)	
Violent Protest*Democracy			−0.005	
			(0.025)	
General Dissent				0.072
				(0.673)
General Dissent*Hybrid				0.923
				(0.769)
General Dissent*Democracy				−29.139
				(6604505.195)
Hybrid	−2.713*	−0.386	−0.639	−0.441
	(1.258)	(0.420)	(0.422)	(0.424)
Democracy	−94.195	−2.208*	−1.982*	−2.104*
	(110.204)	(0.970)	(0.985)	(0.965)
Logged GDP per Capita	−0.136	−0.015	−0.155	−0.044
	(0.300)	(0.311)	(0.294)	(0.310)
Logged Population	0.143	0.485***	0.333**	0.461***
	(0.150)	(0.126)	(0.124)	(0.128)
Internet Usage	−0.005	−0.002	0.004	0.000
	(0.014)	(0.015)	(0.014)	(0.015)
(Intercept)	−3.762	−9.380**	−6.016*	−8.819**
	(2.955)	(2.929)	(2.797)	(2.961)
AIC	272.133	287.337	280.455	290.351
BIC	311.429	318.774	319.751	329.647
N	376	376	376	376

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

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