Three Essays on Repression, Concessions and Collective Political Action

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This dissertation analyzes when repression effectively deters dissent, and under what mechanisms do acts of repression and other regime responses vary by individuals in risky environments. Drawing insights from the literature on social movements and social psychological research on collective action, I argue that repression's effect is conditioned by the differing dissent strategy (nonviolent versus violent). I also examine how repression, in conjunction with concessions, impacts the mobilization of dissent. The findings are robust to potential endogeneity between government responses and mobilization. To probe the causal mechanism at the micro-level, I fielded an online survey experiment in Thailand during the 2019-20 pro-democracy demonstrations. The findings suggest that group efficacy may be an important mechanism linking exposure to repression and subsequent mobilization.

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Preface

I thank Dr. Steven E. Finkel, Aníbal Pérez-Liñán, Daniela Donno, Jude Hayes, and Luke Condra for serving as the chairs and members of my committee. I especially would like to thank Dr. Steven E. Finkel and Aníbal Pérez-Liñán for co-chairing my dissertation committee, and Daniela Donno for their feedback and support for my work throughout my years as a Ph.D. student. I thank my parents for all the love and support while writing this dissertation. Finally, I dedicate this work to my beloved grandparents, who are no longer here with us.

1.0 Introduction

"Remember, in a non-violent struggle, the only weapon that you're going to have is numbers (Popovic and Miller 2015:52)."

The last decade saw one of the largest simultaneous protests in history (Barrie 2021). A series of street demonstrations followed the wave of Arab Spring across the Middle East and North Africa. From 2019 until recently, major protest episodes broke out in Algeria, Bolivia, Chile, Colombia, Hong Kong, Iran, Iraq, Sudan, Thailand, Myanmar, and many more. Even amid the global pandemic of 2020-2021, civil unrest did not abate. Contentious events against state-imposed repression such as censorship and lockdown measures continue to dominate the political scenes in many countries lately.

My interest in understanding civil unrest and collective action in risky political environments developed precisely during this background. Questions like what contributes to the increase in protest activities and mobilization and under what conditions government responses can effectively resolve the confrontation and de-mobilizing the demonstrations to maintain regime stability seem particularly relevant across geographical locations and regime types.

Theories on social movements and repression-dissent nexus have traditionally found a mixed impact of repression and other government responses on protest mobilization. Some studies found that repression deters subsequent mobilization, while others found that repression intensifies it. Yet despite these contributions, existing literature typically tends to treat repression in broad terms, without distinguishing between different forms, types, or magnitudes of repression and dissent strategies (violence vs. non-violence). Consequently, essential questions about how dissent can effectively navigate multidimensional repressive contexts remain under-addressed.

Moreover, because repression is not random and should be seen as part of the regime's strategic calculations, dissent responds accordingly in the same strategic manner (Pierskalla 2010; Ritter and Conrad 2016). Existing studies that focus primarily on comparisons of repression across cases or periods are thus likely to be confounded by unobserved factors. Similarly, the research that emphasizes repression but not how dissent responds discounts the strategic dynamics between the two actors, hence resting on erroneous assumptions.

This dissertation, which consists of the three essays, attempts to address some of the shortcomings in the literature and contribute to the growing attention to the causes and consequences of regime responses on collective action mobilization. Moreover, collective action has long been recognized as a powerful way to promote and implement change in societies. Regime change as a "bottom-up" phenomenon becomes more common. The mobilization of the whole community, including opposition parties, labor unions, civil rights groups, and other social organizations, puts enormous pressure on regime elites to concede power. Such actions require individual participation and cross-sector mobilizations, so how do contentious events frequently develop and attract individual participation under harsh political climates? Individuals engaging in collective action face uncertain outcomes and considerable personal risks, especially in repressive contexts. This research dives into what motivates people to participate in collective action under such conditions by investigating the individual differences when exposed to various government actions. The findings have significant implications for policymakers as well as movement activists.

The three papers essentially connect all together to answer the two main questions: when is repression effective in deterring dissent, and under what mechanisms do the effects of repression or concessions influence the subsequent mobilization of dissent. While deciding how to tackle popular dissent, states face a strategic choice between resorting to repression or making policy concessions. The former is a prominent feature of dictatorships (Davenport and Armstrong 2004; Davenport 2007b; Almeida 2009), yet its effectiveness in quelling dissent and ensuring its stability remains unclear. At the same time, for potential dissent, the decision to rebel against the government is equally strategic as a function of an individ-

ual's beliefs about the effectiveness of their participation and others' turnout. Due to the relatively higher participation costs, it is difficult to overstate what's at stake in popular collective action participation in popular uprisings or protests, especially in repressive settings.

This dissertation has two primary aims. First, I hope to contribute to broader theoretical discussions about collective action and regime survival in authoritarian settings. Second, by proposing a mechanism that may link repression or concessions with the mobilization of dissent, I aspire to bridge the gap in the literature between political repression and social psychological studies on collective action to develop a more comprehensive understanding of collective action intentions.

1.1 The Arguments in Brief

1.1.1 Disaggregating Repression and Dissent

It is widely acknowledged that repression can encourage or deter mobilization or protest activities. Yet, there has been no consensus on how to specify the relationship between repression and mobilization correctly. Further progress has been stalled by three challenges: 1) difficulties in isolating the causal effect of repression and dissent, 2) failure to account for the strategic interactions between the state and opposition and 3) insufficient attention to how different actors within a population respond to repression. The three essays in this dissertation use different strategies to address these challenges by presenting alternative explanations to the theories of the consequences of repression.

To investigate the question of when repression can effectively deter dissent, the first chapter looks closely at the impact of repression by disaggregating both repression and dissent. The latter captures the relative use of violent or nonviolent tactics in dissent behavior.

Focusing on the monthly variations, I find that repression, specifically physical repression

of nonviolent groups, reduces participation size. Non-physical repression, on the other hand, has less of a deterrence effect on nonviolent dissident mobilization. The divergent impacts of repression on subsequent dissident mobilization between violent and nonviolent dissent suggest the need to look closely at the strategic interactions between the government and the opposition to understand how repression influences subsequent mobilization of dissent .

1.1.2 Concessions Work When Used in Conjunction with Repression

In many real-world cases, states rarely respond to dissent with one single strategy. Repression is only one of the many strategies available in leaders' toolkit to silence dissent, maintain stability, and secure survival. More likely than not, the government employs a mix of repression and concessions (Lichbach 1987; Rasler 1996; Moore 1998) to address challengers. If we want to fully account for repression's effect, it is vital to assess how other regime strategies such as concessions influence repression's influence on dissent.

My second chapter addresses this problem by examining the impact of government concessions and show how the level of repression conditions concessions' effects. Contrary to conventional wisdom, I find mixed evidence regarding the effect of concessions on the mobilization of dissent. When used in conjunction with repression, however, the encouragement effect of concessions is significant and positive. Specifically, the encouragement effect of concessions decreases as the parallel level of repression increases. In other words, concessions do work, especially when used in conjunction with repression.

1.1.3 The Role of Group Efficacy

Understanding what motivates individuals to participate in collective action facilitates understanding the causal mechanisms linking repression and mobilization. In the first two papers, macro consequences of repression and concessions on mobilization are established empirically. However, the consequences of either repression or concessions may vary across

individuals living in the same country, driving some to join in opposition and intimidating others into submission. For instance, social movement activists are likely to respond to repression differently than those non-activists. Research investigating the overall response to repression may risk arriving at erroneous conclusions about repression's consequences if no individual-level variations have been accounted for. It is also imperative to investigate the causal mechanisms underpinning the relationship between regime responses and the mobilization of dissent.

Attracting individual participation becomes significantly crucial and sometimes decisive as ordinary citizens may be the key to large-scale mobilization as the significant mobilization potentials (Klandermans 1997). The third and the final chapter probes the causal mechanisms under which a variety of regime responses may have an effect on the propensity to dissent among individuals.

My research is not the first to inquire about repression's effect at the individual level. In understanding the consequence of repression, emotional reactions have been regarded as the link connecting repression and backlash mobilization. While the emotional pathway to collective action sheds light on the mechanism under which repression affects individuals' willingness to dissent (Young 2017, 2020; Aytac et al. 2017; Dal and Nisbet 2020; Miller and Krosnick, 2004; Ryan, 2012; Weber, 2013; Pearlman 2013), it remains inadequate as it does not explain the circumstances under which individuals all feel the same emotion in the aftermath of repression, and why some people decide to take actions and decide to protest, while others remain inactive?

I argue that a sense of "whether my actions will make a difference" plays an essential role in the divergent individual reactions to repression and other regime responses. Consequently, I explore the role of group efficacy in predicting collective action and whether this relationship persists when individuals are exposed to various government responses. Group efficacy is often referred to as "one's collective belief that group-related problems can be solved by collective effort" (Bandura, 1995, 1997). Sometimes even when individuals may

feel anger when they perceive the government's use of repression and other responses as unfair or unjust, this feeling of anger does not always translate into direct actions. More often than not, individuals may become angry for a particular situation yet do little or nothing (Klandermans 1997), especially when they perceive their actions as having little or no efficacy to bring about change (Folger 1987; Mummendey et al. 1999).

Other regime responses can likewise influence potential individual participation in either positive or negative ways. Concession, for instance, is found to increase individual involvement because it increases personal expectations about the likelihood of success hence the willingness to dissent (Belgioioso et al. 2018; Rasler 1996; Carey 2010).

I test the group efficacy mechanism experimentally in Thailand during the 2019-20 pro-democracy demonstrations. Contrary to intuitive assumptions, the experimental findings do not support the argument that government responses affect group efficacy differently. This could be attributed to the lack of intensity in the treatment design. However, the relationship between group efficacy and collective action intentions are positive and significant when individuals are exposed to repression. This finding is robust to the potential endogeneity, indicating that group efficacy may be an important mechanism linking exposure to repression and individuals' subsequent collective action intentions in risky political environments.

1.2 Theoretical Contributions

There is an ongoing debate in political science about whether nonviolent resistance is more successful in achieving goals than violent counterparts. The book *Why Nonviolent Resistance Work* by Erica Chenoweth and Maria Stephan argue that nonviolent means tend to backfire on the government, yet such claim has not been properly tested in the book. Moreover, the book uses country-year as the unit of analysis, which has been criticized for being too aggregated to account for a more short-term impact of government responses and dissent.

In the first chapter of the dissertation, I utilize the more disaggregated event data on contentious events from the Nonviolent and Violent Campaigns and Outcomes (NAVCO v.3.0) to investigate the more immediate impact of repression on the mobilization of dissent. My findings challenge the claim that nonviolent protests tend to backfire by offering an alternative way to rethink the effectiveness of nonviolent demonstrations, particularly in the face of government repression.

Moreover, in investigating the effect of concessions, my work here challenges the "inconsistency hypothesis" in the literature that inconsistent use of repression and concessions will backfire (Rasler 1996; Belgioioso et al. 2018). Specifically, the findings suggest that concessions used alongside repression can effectively deter the mobilization of dissent rather than backfire. Moreover, I also found mixed evidence regarding concession's encouragement effect. This finding calls into question the conventional wisdom that concessions tend to increase dissent. Future research can look into whether concessions have a potential nonlinear impact such that there is a threshold of accommodations. Concessions that passed this threshold are less likely to encourage more mobilization.

Once again, my analyses so far reinforce the nature of repression, concessions, and their consequences on mobilization. The results contribute to the literature on regime survival and authoritarian resilience. Earlier work on this topic tends to focus on institutional cooptation, such as the use of parties or legislatures (Gandhi 2004; Gandhi and Przeworski 2006; Reuter and Robertson 2015; Frantz and Kendall-Taylor 2014) in maintaining a power base. My work here looks at the role of repression or concessions in ensuring political survival.

Finally, understanding how individual differences can shape reactions to various regime responses may help explain why acts of repression or concessions tend to have such unpredictable impacts on the subsequent mobilization of dissent. The findings bridge the gap in the two lines of literature from the social psychological literature on group efficacy and collective action and political science literature on repression, which have been developed

somewhat separately. Social psychological literature suggests that group efficacy is a strong predictor for collective action (Bandura 1997; van Zomeren et al. 2004, 2008; Tausch et al. 2011). The experimental evidence from Thailand provides support that group efficacy can be a powerful mechanism linking repression or concessions with subsequent mobilization of dissent even in risky political environments.

Finally, my work speaks to the literature on how protests may influence public opinion. The group efficacy belief that group actions can make a difference would raise awareness about the pressing grievances shared by protesters, which would attract media attention and support for the protest movement nationally and internationally. It could also spark the potential formation of new alliances or dampen support for the opposition (Trejo 2014; Tertytchnaya and Lankina 2019).

1.3 Implications and Conclusions

1.3.1 Make Repression Backfire

Social scientists offer various explanations as to why people join in the backlash movement (Young 2017, 2020; Aytac et al. 2017; Hess and Martin 2006). When repression backfires, it has the potential to prompt regime change. Such bottom-up revolution and democratization have become more common these days. More importantly, one crucial consequence when repression backfires is that it helps generate support (and numbers) for the movement, which is the key to achieving political goals.

The finding that harsh and physical repression tends to deter the mobilization of nonviolent dissent may seem discouraging for movement activists and protesters. However, social movements should aim at inspiring group efficacy beliefs - the belief that collective actions could make a difference - in the face of repression. I argue that this may facilitate dampening support for the protesters. Engineering group efficacy beliefs in risky political environments

where the possibility for change is not high could be even more crucial.

The trick for activists looking to make repression backfire in a repressive environment lies in identifying situations where government authorities are using their power beyond reasonable limits. This should be particularly effective in raising awareness among the general public about the pressing grievances and providing proof of the illegitimate use of violence or other abuses on the government's end. For instance, in Ukraine in late November 2013, government harassment of protesters with water cannons, stun grenades and rubber bullets, and other abuses contributed to a dramatic increase in protest participation. The broad perception fueled government authorities' unlawful treatment of protesters that the government 'violates human rights, abuses power, and widespread corruption.' Public opinion polls showed that the support for the protest movements increased significantly during the period that led to the final downfall of the regime of President Yanukovych.

Similarly, the Egyptian military's harsh crackdown on the Muslim Brotherhood in 2013 attracted significant middle-class support (Lachapelle 2019). In 2007 during the Saffron Revolution, the government's acts of violence perpetrated against the monks - the highest moral authority in the nation - who were protesting against the military junta's government mishandling triggered a significant backlash in the hopes of effecting change. The general lesson here is that there are strategies that would allow for a movement to generate support even in the face of brutal acts of repression.

Implications also follow for the literature on authoritarian resilience and survival. Successful anti-regime movement may be challenging to achieve when the opposition and activists fail to convey the right message and convince the masses that they can credibly expose the cracks in the ruling regime by offering a better alternative. More broadly, as we try to better understand the underpinnings consequences of government actions, we need to pay greater attention to the lessons movement activists or bystanders learn or can adapt as protesters occupy the streets, when they leave them, and how they improvise to sustain the movement.

2.0 Violence, Non-violence and the Conditional Effect of Repression on Subsequent Dissident Mobilization

Is repression an effective strategy to deter subsequent participation in non-violent resistance? This question has gained new currency as recent studies on civil resistance and social movements emphasize that non-violent resistance is twice more successful in achieving campaign goals than violent resistance (Chenoweth and Stephan 2011, 2013). Non-violent resistance is "a method of struggle in which unarmed people confront an adversary by using collective action—including protests, demonstrations, strikes, and noncooperation—to build power and achieve political goals (Chenoweth 2020)." Consequently, non-violence dominates the majority of the protests around the globe, which varied in size, scale, goals.

Protesters, in Latin America, Africa, East and South Asia, and the Middle East, have brought deep-rooted political, economic, and social concerns to public and government attention. While some of these protests immediately demobilized, others escalated into larger-scale conflicts with the state that lasted longer than expected. The 2019–2020 Iranian protests initially caused by an increase in fuel prices, leading to an outcry against the government, and calls for the overthrow of the government. Government crackdowns resulted in around $1,500$ Iranians in a November 2019 crackdown on protests [1]. The protests gradually dispersed and none of the protesters' demands were met. During the 2019-20 pro-democracy movements in Hong Kong, however, the harsh repression did not seem to deter mass mobilizations, but escalated them, with some protesters turned to violence. Likewise, in Chile as in other parts of Latin America during the year of 2019, frustrations with economic policies boiled over into protests and were met with intense government crackdown.

The existing literature on social movements and state repression have produced mixed and often contradictory evidence when it comes to repression's effect on mobilization: some

[1] "Special Report: Iran's leader ordered crackdown on unrest - 'Do whatever it takes to end it'." *Reuters*. Reuters report

found that repression deters subsequent mobilization, while others found that repression intensifies it. Studies of "repression-dissent nexus" typically analyzed how harsh repression affects the subsequent protest size and frequency, with variations across time and place as well as through U-shaped model specifications (Lichbach 1987; Rasler 1996; Hibbs 1973; Mason and Krane 1989; Muller and Opp 1996; Almeida 2003; Lyall 2009; Sullivan, Loyle, and Davenport 2012). Yet despite these contributions, studies of civil resistance tend to treat repression's effect in very broad terms —not distinguishing between differing forms of repression and opposition tactics (violence versus non-violence)- leaving important questions about how dissent can effectively navigate multidimensional repressive contexts underaddressed. Chenoweth and Stephan's (2011)'s well-known study contended that non-violent resistance can overcome government repression by maintaining high levels of participation. However, the relative effectiveness of non-violent opposition tactics in resisting repression has been hinted at, but not properly tested empirically.

We still do not have a clear understanding of when governments can successfully deter subsequent dissident mobilization, when repression of non-violent opposition can be effective, and under which conditions escalating violence breaks out. Particularly puzzling is how the impact of government repression on subsequent participation varies by differing opposition tactics? Are non-violent resistance that experience repression more likely to continue and mobilize further (*the backlash effect*), or do they quickly demobilize and acquiesce to the state to avoid further conflict (*the deterrence effect*)? In this paper, I present and test these two competing arguments, reflecting opposite theories regarding repression's effect on mobilizations.

These questions have important implications for evaluating the effectiveness of non-violent resistance relative to its growth and organizational capacity to attract participation. To answer these questions and to contribute empirically to the scholarly debate on this "punishment puzzle" - a term coined by Davenport (2007) in referring to repression's mixed effects on mobilizations, I investigate how repression's effect on mobilization can vary by differing opposition tactics (i.e. primarily violent or non-violent). I test the two competing

hypotheses, reflecting opposite theories on dissident mobilization by utilizing the Non-violent and Violent Campaigns and Outcomes (NAVCO 3.0) dataset from 26 countries between 1990 and 2012. With event-level data on non-violent /violent events, NAVCO 3.0 allows me to 1) assess how repression's effect on subsequent dissident participation varies by differing opposition tactics and; 2) to further disaggregate non-violent events relative to their variety of tactics, categories, and goals in order to better understand the dynamics of repression's effects on subsequent dissident mobilizations.

The statistical results show that repression of non-violent opposition reduces subsequent participation. Repression of violent dissent, on the contrary, leads to an increase in subsequent participation. The divergent impacts of repression on subsequent dissident mobilization between violent and non-violent dissent suggest the need to look closely at the strategic interactions between the government and the opposition in order to fully understand how repression influences subsequent dissident mobilization. The findings challenge an extensive literature on the backlash arguments (e.g. Francisco 2004; Chenoweth and Stephan 2011; Sullivan and Davenport 2017; Edwards and Arnon 2019), and contributes to a wider discussions in the field of repression and social mobilization regarding the "punishment puzzle" and the effectiveness of repression. The results are consistent after controlling for the potential endogeneity between repression and dissent with two-stage residual inclusion (2SRI) models.

2.1 Theoretical Arguments and Hypotheses

2.1.1 Previous Research on Repression and Dissent

I start the discussion with the definition of repression and dissent respectively. Repression[2] is defined as the negative sanctions imposed by state actors and agents against dissidents (Davenport 1997; Carey 2006). While repression can take various forms (legal or

[2]I use repression, state repression/violence, state abuses, government crackdown interchangeably in this paper.

illegal, physical or non-physical)[3], any repressive act is taken to "prevent dissidents from participating in their own governance" (Ritter and Conrad 2016). I consider *all* types of repression directly imposed by the governments on dissenters, including both non-physical and physical repression. All types of repression can impose costs of collective on dissent at varying degrees. I then estimate the effect of physical and non-physical repression respectively on subsequent dissident mobilization. Repression here is defined as the actions that increase the costs of mass mobilization (Tilly 1978).

Following Ritter and Conrad (2016), dissent refers to non-state actors within political regimes mobilizing collectively with an aim to threaten or impose costs on the ruling elites by expressing disagreement, incentivizing states to take actions to change a status quo policy, redistributing resources, or allocating power (p.86). Central to the theory in this article is that dissent has to overcome the collective action problem and take organized action against the state. Likewise, to prevent costs and retain the stability of the regime, states can choose to do nothing, accommodate, repress, or both. Based on government responses, dissidents can then decide whether to give up or increase mobilization to achieve their intended policy goals, or vice versa.

Dissident activities are disruptive in nature and can vary from boycotts, sit-ins, riots, protests, and strikes to larger-scale rebellions and movements, all of which can result in property damage and deaths. Dissident activities can also vary in terms of goals and sources of grievances. While some grievances are political, and others are economic and social, all grievances are likely to involve demands aimed at policy change, institutional reform, territorial secession, autonomy, or regime change. Non-violent resistance[4] is a form of dissent, which also refers to "a method of struggle in which unarmed people confront an adversary

[3]Physical/violent repression includes those acts aiming at violating a person's physical integrity by means of torture, extrajudicial killing, imprisonment, or disappearances. The most common form of non-physical/violent repression, on the other hand, includes presence of security forces, intimidation, restrictions on speech, freedom of association, freedom of movement, a ban on opposition parties, curfews, and other acts aimed at restricting political and civil liberties to intimidate, coerce, and suppress potential and realized dissenters.

[4]Non-violent resistance, non-violent opposition/groups, non-violent dissidents are used interchangeably in this paper.

by using collective action" (Chenoweth 2020; Chenoweth and Stephan 2011; Schock 2005), as previously defined.

2.1.1.1 Repression-Dissent Nexus

Tarrow (2018) has often referred to the varying impacts of repression as 'one of the biggest puzzles in the social movement literature.' Studies of state repression and civil resistance have evolved somewhat separately (Chenoweth et al. 2017); while the repression literature tends to apply rational-choice assumptions (Moore 1998; Luchbach 1987; Pierskalla 2010; Shadmehr 2014), the civil resistance literature has a tendency to have underspecified repression, in particularly how/whether civil resistance can navigate state repression.

Past research on repression shows contradictory findings regarding repression's effects (for a detailed review of this debate, see Earl 2011). The empirical evidence shows that repression can deter participation and lead to the demobilization of protests (Hibbs 1973; Tilly 1978; Opp and Roehl 1990), while others argue that repression "backfires," emboldening the opposition and generating more participation (Lichbach and Gurr 1981; Francisco 1995, 1996; Mason and Krane 1989; Muller and Opp 1996; Almeida 2008)[5]. Some others suggest that repression can have both effects, increasing dissent at intermediate levels of repression, but reducing it at extremes - an inverted U-shape (Muller 1985; DeNardo 1985, 2014; Zhukov et al. 2019), or a U-shaped relationship (Lichbach and Gurr 1981). Meanwhile, repression may be conditional on structural factors such as regime type, inequality, and economic growth (Muller and Seligson 1987; Muller and Weede 1990)[6].

Moreover, efforts to understand the mixed impacts of repression have varied depend-

[5]'Backfiring effect' or 'backlash' refers to a situation where attempted repression has serious, undesirable, and unanticipated side-effects (Martin 2007).

[6]For instance, several studies find evidence for the so-called "democratic peace" hypothesis (Davenport 2007b), which posits that democratic countries rarely engage in repression (Henderson 1991; Regan and Henderson 2002; Fein 1995; Davenport and Armstrong 2004). Some variations exist in this line of research, for instance, semi-democracies are found to be more likely to engage in violence (Regan and Henderson 2002), while Carey (2006) contends that democracies are just as likely to use repression as non-democratic regimes, while at the same time more likely to accommodate the opposition as well.

ing on whether repression's effects are investigated at the macro level, the meso level (e.g. movement organizations and tactics, and the micro level(e.g. how repression influences individual behavior). Likewise, focuses are varied in terms of how consistent repression is as well as its relation to other types of government responses such as concessions (Carey 2006; Moore 1998; Rasler 1996), the degree of repression (Francisco 1995,1996; Zhukov 2017), the existence of social networks in which state repression is embedded within the society (Siegel 2011). Yet, 'dissidents' in this line of research have generally been treated as uniform - unchanging in its tactics or types. Very few efforts have been made to fully address how and whether repression's mixed effects can be attributed to the differing opposition tactics, and the possibility of tactic-switching [7]. My work contributes to this line of research by disaggregating both repression and types of opposition tactic to investigate the conditional impacts of repression on subsequent dissident mobilization.

2.1.1.2 Strategic Dynamics and the Endogeneity between Repression and Dissent

Another prominent line of research studies the endogenous relationship between repression and dissent: how governments and dissidents act in expectation of each other's subsequent behavior (Davenport 2007; Ritter 2014; Pierskalla 2010; Danneman and Ritter 2014; Ritter and Conrad 2016; Carey 2006). For instance, the government tends to maintain strategies they previously adopted. Therefore, repression at time $t-1$ is expected to be followed by repression at time t, hence raising concerns over reverse causality between repression and dissent. Dissident movements, similarly, tend to maintain themselves as well. More individuals are likely to join in when they feel encouraged by the dissident activity at time $t-1$ and its likelihood of success when certain movement is going well (Rasler 1996; Muller and Opp 1986). I acknowledge this potential endogeneity between repression and

[7] With some exceptions such as Lichbach (1987) as he argued that repression of one type of dissent is likely to lead to a tactic change from dissent, and some more recent scholarships on examining how differing opposition tactics affects public opinion and support for repression (see Condra and Shapiro 2012; McAdam and Su 2002; Lupu and Wallace 2019 for instance).

dissent [8].

Ritter and Conrad (2016) argued that dissidents are likely to engage in strategic *self-censoring* when they expect a repressive response from the government, opting not to mobilize if the costs of such action outweigh the benefits of it. State authorities, likewise, engage in such strategic calculations, as they are likely to use repression in order to thwart the mobilized challenges (i.e. most likely to be the less resolved groups). Following this line of research, I argue that, repressing non-violent and violent groups are essentially two different interactive sequences between the state and the opposition. Consequently, repression's effect should diverge by differing opposition tactics being employed. In other words, repression's effect is conditioned by whether the opposition uses violent and non-violent tactics and their associated costs. I discuss this more in detail later on.

2.1.1.3 Opposition Tactics: Violence versus Non-violence

The focus on differing opposition tactics appears to be the center of literature on civil resistance. The expansion of research on non-violent resistance can be attributed to the rise of new data sources on civil resistance. In particular, Chenoweth and Stephan's (2011) finding that non-violent resistance campaigns are more successful than violent resistance challenged conventional wisdom and stimulated new insights about how mass non-violent movements have the potential in achieving political goals and potential social change.

Following Chenoweth, Lewis, and Pinckney (2017), I focus on the general distinction between whether the opposition adopts primarily violent or non-violent tactics. The difficulties with labeling campaigns as admittedly in many cases, dissident movements are likely to adopt both non-violent and violet methods simultaneously, or switch between tactics. Similarly, I adopted the same approach as in NAVCO 3.0 by assuming that a dissident activity

[8] I employ two-stage residual inclusion (2SRI) models (Cai, Small, and Ten Have 2011; Terza, Basu, and Rathouz 2008) as an attempt to address this concern empirically. Due to space limits, the results are presented in Table 3 in the Appendix.

is 'primarily' non-violent or violent while recognizing that in many cases non-violent groups have some violent elements, and violent groups have non-violent fractions within. In this paper, non-violent tactics are conceptualized as 'strategic' as dissenters do not randomly choose tactics, on the contrary, non-violent tactic is employed with the logic that the benefits (i.e. achieving particular protest goals) outweigh the costs of such tactic. Such strategic calculations, likewise, apply to rulers in power as well, as state authorities can choose not only *whether* to repress, but *how* to repress. States do not just rely on the most violent form of repression as the only effective tool in deterring mobilization but make strategic calculations which hinge upon the interaction with the opposition. Even brutal dictators do not always kill or imprison the most powerful opponents. In other words, they select their repressive methods strategically based on the anticipated likelihood of responsive dissent.

The ultimate goal of any dissident movements, however, is to achieve policy goals. With this in mind, many people have come to believe that they can achieve so using non-violent means of resistance, which have had twice the success rate of violent movements in achieving their objectives since 1900 (Chenoweth and Stephan 2011; Nepstad 2011). As such, any forms of resistance must develop and sustain legitimacy within the population. In this regard, non-violence is more likely to be considered as a just and more legitimate means for dissent.

Moreover, non-violence has the advantage of attracting larger-scale mobilization and in a non-violent struggle, numbers do matter. State authorities are more willing to negotiate with non-violent oppositions, who are more likely to be regarded by the government as 'credible negotiating partners' and hence increasing the chance of winning concessions (Chenoweth and Stephan 2011, Cunningham 2016). Cunningham (2016), for instance, found that non-violent resistance over self-determination is more effective than violent in obtaining concessions.

While these advantages are why and how non-violent resistance leverages with the government, it remains unclear whether these advantages are effective when non-violence resistance confronts state repression. For instance, what are the impacts of state violence on mobi-

lization between non-violent and violent resistance? Are they equally effective in resisting repression? These questions received relatively little attention as literature on civil resistance tends to treat repression in broad terms, without unpacking how various types of repression can affect the development of civil resistance campaigns. Prevailing views on this topic seem to indicate that non-violent resistance is more likely than violent insurgency to withstand government crackdowns because they are more likely to attract larger participation rates and can facilitate in encouraging security-force defections (Sharp 1973; Chenoweth and Stephan 2011; Nepstad 2011). Yet, the question of whether or not non-violent resistance can withstand repression while maintaining these advantages remains and calls for proper theorizing and empirical testing.

To sum up, the literature that investigates 1) repression's effects, and 2) civil resistance appears to be developed somewhat separately. The first line of research indicates that repression has mixed effects on dissent, yet somewhat overlooking how repression's effect can vary by differing opposition tactics. Meanwhile, the literature on civil resistance affirms the relative success of non-violent resistance in generating large-scale mobilization and achieving policy goals, while the issue of whether repression is effective in deterring mobilization is left underaddressed.

In the following, I explore these arguments and integrate the two lines of literature and perspectives to present two competing hypotheses (Backlash versus Deterrence Arguments), reflecting opposite theories on the impacts and consequences of repression on subsequent dissident mobilization.

2.1.2 The Divergent Effects of Repression on Dissident Mobilization

To remedy the shortcomings and properly investigate repression's effect on subsequent dissident mobilization, I disaggregate both repression and dissent to examine the conditional effect of repression on subsequent mobilization regarding the punishment puzzle and effec-

tiveness of repression (Backlash versus Deterrence Arguments). I explore the possibility that broader population's tolerance of state violence and the decision to mobilize vary by differing opposition tactics. To do so, I introduce the interaction between *differing forms of repression* and *opposition tactic (violent or non-violent)* in the equation in order to understand the interacted effects on subsequent mass mobilization.

2.1.2.1 Why Repression *Increases* Subsequent Dissident Mobilization

Chenoweth and Stephan (2011)'s book on *Why Civil Resistance Works* outline the reasons why non-violent movements are more successful in achieving goals and objectives than violent resistance. In particular, the authors argue that "repression is more likely to backfire when used against non-violent campaigns" (p. 68). I refer to this proposition as the *Backlash Argument*.

Chenoweth and Stephan (2011) contend that repression of non-violent oppositions is more likely to be regarded by the general population as an 'unjust act.' In particular, violent repression of non-violent opposition could lead to power shifts (e.g. security forces defections) by increasing both internal and external support for the non-violent movement. The costs of repressing a popular non-violent movement, as they contend, may be significantly higher, as state authorities could not engage in self-defense and justify their crackdowns on non-violent protesters convincingly, resulting in backlash. They tested this argument statistically by including repression variable in the equation where movement success is a dependent variable, instead of movement participation. As such, the question of whether and how repression increases or discourages violent and non-violent mobilization was left largely unresolved.

H_1 (Backlash Argument): Repression of non-violent opposition is likely to lead to an increase in subsequent dissident participation.

Other studies focus on the particular conditions under which 'backlash' happens (e.g. Hess and Martin 2006; Francisco 2004; Sutton et al. 2014; Aytac et al. 2017), yet without

disaggregating the effects of differing government tactics and differing opposition tactics. For instance, Fransciso (2004), in examining 31 cases of most violent repression, concludes that harsh repression does enable subsequent backlash mobilization. Sutton et al. (2014), although focusing on non-violent protests, looks at the effect of the most violent form of repression only.

More recent public opinion literature on repression and dissent provides some support for the backlash argument as well. Repression of non-violent protests increases public support while repression of violent protest decreases it (Lupu and Wallance 2019; McAdam and Su 2002). Specifically, framing a protest as 'threatening harm' appears to increase public perceptions of the event as violent and increase support for repression (Edwards and Arnon 2019) and for social control (Wason 2020). This line of research provides the micro-level foundation as to how individuals view repression and dissent. Yet, it remains relatively unclear whether support for repression directly translates into more or less participation in opposition dissident participation.

2.1.2.2 Why Repression *Decreases* Subsequent Dissident Mobilization

Because repression and dissent are outcomes of interactions between strategic players - state authorities and the opposition challengers (Moore 1998; Luchbach 1987; Pierskalla 2010), it makes sense that repression's effect on subsequent mobilization is conditioned by differing opposition tactics. The repressive measures are the result of the leader's strategic calculations and the anticipated likelihood of responsive dissent. Failing to resolve conflict can lead to the possibility of escalation, even ending in regime collapse. Under incomplete information, governments face uncertainty about the strength and the type of dissent (Pierskalla 2010), and more importantly, whether repressive action can succeed in deterring dissent and prevent future challenges. Sometimes, a show of force or the presence of police forces is sufficient to deter dissent, while at times violent crackdown is needed in order to successfully deter future mobilization.

Likewise, dissenters adopt and switch tactics, weighing the benefits and the costs of such decision. In expectation of state repression, dissent only mobilizes when the benefits of such action outweigh the costs of it. Dissenters select the level of mobilization strategically (whether to protest or not), while anticipating the costs imposed by the state. As such, repressing non-violent versus violent groups should involve varied strategic calculations on both sides and should be seen as essentially the two different interactive sequences between the state and the opposition.

Basing off of these assumptions, I argue that repression of non-violent groups is more likely to be associated with *decreased* participation. I refer to this deterrence effect of repression on non-violent protest mobilization as the *Deterrence Argument*.

H_2 (Deterrence Argument): Repression against non-violent opposition deters subsequent dissident mobilization.

Although non-violent resistance can attract larger-scale mobilization due to having lower moral, physical, informational, and commitment barriers to participation (Chenoweth and Stephan 2011, p.11), where individuals can come and go easily, the associated costs of continued mobilization are usually too great for the non-violent opposition in the face of repression.

Moreover, repression is likely to increase the emotion of fear that reduces individual's incentive to continue to mobilize as they are more pessimistic in their perceptions of the costs of repression, which makes them more risk averse in mobilizing further. Fear makes citizens less accepting of risk precisely due to lower barriers and commitments to participation. This is especially true for non-violent movements that are larger in size. Because the costs of participation are relatively low for non-violent groups, participants are more likely to be less committed and less willing to endure repression than those engaging in armed rebellion. Members(e.g. mostly moderates) are more likely to drop out due to emotion of fear(Young 2018). Except, however, for a fraction of movement hardliners and radicals that

believes that continuing to mobilize is the only way to go, regardless of the associated costs.

This is not to say that non-violence does not have the organizational capacity to weather repression shocks. In fact, non-violent resistance has the advantage over violent means in attracting mass participation that has broader societal bases and is larger in size. However, repression makes continued mobilization more costly and non-violence a less effective means to achieve their objectives. It is therefore a strategic decision, often not an easy one, for the opposition to re-evaluate, adapt, and at times switch tactics in response to state violence.

I argue that non-violent resistance tends to have exit options (besides giving up and demobilizing) that are available when non-violence does not seem to be effective when confronted with repression. Three tactics non-violent oppositions are likely to adopt: negotiation, moving from strategies of concentration to strategies of dispersion, and escalation to violence.

As mentioned previously, non-violent resistance has the advantage of promoting itself as a just and more legitimate means. Moreover, state authorities tend to be more willing to negotiate with non-violent oppositions that develop and sustain such legitimacy, hence increasing the chance of winning concessions (Chenoweth and Stephan 2011, Cunningham 2016). Concessions also increase individuals' willingness to join, which can help the movement with its causes.

Non-violent opposition can also move from strategies of concentration to strategies of dispersion. Non-violent movements that are larger in size can attract more attention and support from supporters. However, this could also make it easier for state to repress as individuals are concentrated physically in one or two prominent locations. The Egyptian revolution of 2011, for instance, started out with over $50,000$ protesters and quickly attracted more than $250,000$ protesters in total concentrated in the Tahrir Square. In response, Egyptian governments responded with harsh crackdowns and violence quickly erupted.

Another option is to escalate to violence. In many instances, some of the non-violent

movements gradually turned to violent action. In fact, "violence ordinarily grows out of collective actions which are not intrinsically violent" (Tilly, 1978, p.74). As such, I also see both violence and non-violence as being two extremes of one continuum, with one side indicates primarily violent activities where the other side suggests primarily violent activities. Repression of non-violent activities will likely reduce the non-violent activities of an opposition group yet increase its violent activities (Lichbach, 1987).

However, switching from primarily non-violence to violence has its downsides, as it does not help the movement to justify its legitimacy anymore, which can undermine its capacity to attracting new members to participate and endorsing movement goals. That said, escalation to violence is particularly likely when non-violent resistance fails to make significant progress (Ryckman 2020). For instance, In Syria, non-violent uprisings in early 2011 turned into an armed struggle by July 2011, followed by a full-fledged civil war.

Quite to the contrary, however, violent resistance requires not only high moral commitments to the underlying cause of the movement, but physical barriers (e.g. individuals need to be physically fit, likely young, or battle-ready) to join violent resistance. Those participating in violent means are less likely to be deterred by state violence as they already anticipate repression before mobilizing. Moreover, violent groups tend to have no exit option because they are less likely to be granted concessions by the governments and have a lower success rate in achieving movement goals (Schock and Chenoweth 2012).

The higher barriers to participation (due to its likely requirement to engage in violence) makes it less likely for violent opposition to attract larger-scale or broader base participation that is crucial in facilitating goals-reaching. Negotiation is often off the table or turns out to be futile between the state and armed groups. The only rational strategy, unfortunately, may be to continue to mobilize against the state. As such, repressing violent groups is more likely to lead to backlash. The literature provides some supporting evidence for my argument. For instance, Bell and Murdie (2016) found that violent dissenters in states with a history of civil war tend to be more resilient in the face of government repression because they

usually have pre-existing "collective action reportoires (Tilly 1989) or collective memories that make continued mobilization in the face of repression more likely (p.2). This is because violent dissenters in states with a history of violence are primed to see repression not as a deterrent but as a catalyst to respond with further violence in their struggle against the state.

In sum, repression of primarily non-violent groups can deter subsequent mobilization. Repression of primarily non-violent oppositions during 2009 Green Movement in Iran led to a de-mobilization of the campaign. In Bahrain during the Arab Spring, non-violent protests were confronted by large-scale state violence, which led to de-mobilization shortly after, and ended with some concessions from the state authority. Repression of primarily violent groups, on the other hand, is more likely to lead to backlash. While lower barriers to participation make non-violent resistance more likely to attract larger-scale participation, most individuals are more likely to drop out in the face of state violence. This is because the participating costs of continued mobilization are too high, and there are other viable options for non-violent opposition to consider. As previously mentioned, because non-violent movements tend to be larger in size, the "marginal" participant is less committed and less willing to endure repression than the "marginal" participant of a smaller armed group.

2.2 Methods and Data

This section discusses in more detail the data I am using, the measurements and key variables, as well as the empirical strategy for the identification of a causal effect between repression and participation.

2.2.1 Measures

Identifying the causal impact of repression on subsequent participation is challenging as the relationship between repression and dissent is endogeneous (Ritter and Conrad 2016).

It is, nevertheless, important to use the unit of analysis with which temporal dynamics can be accounted for in order to draw valid causal inferences between repression and subsequent participation. The existing literature examining the relationship between repression and dissent tends to focus on country-year units of analysis. Yearly level research however, is not appropriate for this research as I am interested in capturing the more immediate and shorter-term action-reaction dynamics of repression on subsequent participation. Opposition's reaction to government repression often happens at a faster rate than a year, usually within weeks or months (Lee et al. 2000). For this reason, I opt for the event data from Nonviolent and Violent Campaigns and Outcomes database (NAVCO 3.0) and key variables are aggregated to month, while leaving the remaining covariates at the event level as they are.

I chose to examine *monthly* short-term dynamics of repression for two major reasons: there may not be sufficient variations between repression and participation if using weeks or days. Second, it provides me with flexibility in examining immediate and short-term consequences of repression. There are some conventions in doing so (Bell and Murdie 2016; Rasler 1996; Inclan, 2009). In particular, there could be some time delay in responding and calculating the best next moves in response to government repression (Davenport 2014), so I use one-month lag of repression to predict mobilization in the subsequent month. I believe using month as the temporal unit is appropriate since individuals are more likely to be responding to the repression that occurred that occurred last month or week or even daily rather than repression in last year.

The NAVCO 3.0 data project covers 26 countries from every region of the world from 1991 to 2012 (See Table 1)[9] and contains information on actions and responses by both government actors, oppositions, domestic non-aligned actors, and international actors. These countries covered in NAVCO v.3.0 are not globally representative . Although the sample has cases across all of the five regions, the Middle East and North Africa are clearly overrepresented, particularly during the Arab Spring.

[9]Note that only partial years are collected in the following countries: 1991-92, 2010-12 (China); 1991-96, 2012 (South Korea); 1991, 2011-12 (India); 1990-2000, 2009-2012 (Iraq); 2012 (South Sudan); and 2007-11 (The United States)

Asia	Africa	Americas	Europe	Middle East & North Africa
China	Kenya	Mexico	Estonia	Algeria
India	Madagascar	United States	Ukraine	Bahrain
Pakistan	Sierra Leone			Egypt
South Korea	South Sudan			Iraq
Uzbekistan	Sudan			Jordan
	Tanzania			Libya
				Morocco
				Syria
				Tunisia
				Turkey
				Yemen

Table 1: Countries (Locations) Covered in NAVCO v3.0, 1991-2012

It is worth noting that the countries included in NAVCO v.3.0 cover a wide range of political systems and economic conditions. For instance, among all of the 15,170 observations, the electoral democracy index (Vdem) ranges from low to the highest level of electoral democracy. Using the polity measure, about 42 % has a polity score above 4, 22% has a polity score below -5. Above half of the observations have GDP per capita above and below the mean. Despite the geographical overrepresentation in the Middle East and North Africa, the findings here can be used to compare and cross-validate with other event level data such as Social Conflict Analysis Database (SCAD), which has a geographical focus in Africa and Latin America and Mass Mobilization in Autocracies Database (MMAD), which has a focus on autocracies only.

Most importantly, NAVCO 3.0 has the advantage of including the concentrated information on opposition tactics used by various opposition actors, which further distinguishes between violent and non-violent tactics. On the other hand, nonviolent events are further categorized by specific types (social, political, or economic noncooperation); categories (persuasion, protest, noncooperation, or intervention); non-violent action goals (relating to policy change, regime change, institutional reforms, secession, or autonomy); how physically concentrated non-violent events are, and among others (see more from Chenoweth et al. 2018). The data set also contains rich information on government responses including both repressions concessions. The data set allows me to evaluate the sequences of government-dissent

interactions as well as repression's effects on subsequent participation. Among the 15,170 events included in the data set, about 90% are categorized as non-violent.

NAVCO 3.0 has a variable *number of participants per event*, which includes information on estimated range of the number of participants taking part in each event. Based on this variable, I create a new variable - *participation size* to to measure the outcome of interest - mass participation. *Participation size* is the sum of total number of individual participants per month in a given country in a given year. This captures the level of societal mobilization and is an indicator of whether an activity attracts more participation subsequently and over time. Importantly, *participation size* indicates "the number of individual decisions to participate" (Biggs, 2018, p. 375).[10] I expect that *participation size* can capture whether there is an increase or a decrease in mobilization given protests' exposure to government violence, and more importantly shows the variations repression's effect has on individual participants.

For the main explanatory variable *repression*, I create an ordinal variable of *any repression* that ranges from 0 to 3. Higher values indicates higher degree of repression (0=no repression, 1=non-material and non-physical repression, 2=material and/or physical repression short of killing, and 3=material and/or physical repression intended to result in death). Verbal debates between the security forces and protesters, warning shots fired but no direct physical confrontation are the examples of non-material and physical repression. Physical or material repression such as clashes with the police, detain, arrests, injury, and trails are more common than other forms of repression. This variable is recoded from *st_posture* in NAVCO 3.0 which indicates the degree of conciliation or repression embedded in the regime's actions

[10]A slightly distinct concept of how participation is measured as opposed to *event frequency*. I use *event frequency* as an alternative measure of mobilization. The results are substantively similar to *participation size*. Results are presented in Table 4 in the Appendix. Both measures of *participation size*and *event frequency* are related yet slightly distinct concepts (Biggs 2018). Following Biggs (2018)'s conceptualization, event frequency measures dissenter's 'organizational capacity' to organize events and gives a good indication of the country-wide diffusion of opposition activity. On the other hand, participation size is an indicator of individual's decisions to participate, which also reflects overall level of societal mobilization. For instance, an increase in mobilization could mean that protest events are increasing and spread country-side, not just concentrated on one single location (such as the capital city). It could also indicate that protests attract more participants in some of the key events, while then they would disperse to different places to perform separate demonstrations at different times. I expect that repression's effect can vary on both event frequency and participation size.

in reaction to campaign activity.

Among all of the protest events used in this analyses, about 81% actually experienced no repression, and only around 3% experienced violent repression, the majority of these are non-violent activities. The variable *repression* is aggregated at the monthly level, as the value indicates the monthly average of repression in a given country and year.

To further unpack repression's divergent effects on participation and to assess further the conditions under which repression is effective in deterring subsequent mobilization, I distinguish the types of repression between non-physical and physical ones, with the former includes non-material and non-physical repression and material and/or physical repression that are short of killing, while the latter includes material and physical repression intended to result in death. Both variables *physical* and *non-physical repression* are subsequently recoded as dichotomous. The choice to disaggregate the types of repression is to eliminate the concern for bias over case selection, for which there is a tendency of focusing solely on highest level of repression in the literature. By unpacking different types of repression - physical versus non-physical, I am more confident in making more generalized conclusions about the impacts of repression on mobilization.

One main emphasis and contribution of this study is to assess the interaction effect between *repression* and *non-violence*, which represents the interactive relationship and dynamics between the state and the opposition that are essential in evaluating repression's impacts. The variable *non-violence* is an indicator for opposition tactics. Since I see violence and non-violence as a part of the same continuum, *non-violence* is a continuous variable, which represents monthly average of non-violent or violent events occurring all together. It can also been seen as the proportion of non-violent events occurring in a given month in a given country/year. The value can range between 0(primarily violent) and 1(primarily -nonviolent). This variable I construct this variable from the *tactic_choice* variable derived from NAVCO 3.0, which categorizes whether an event is 'primarily' violent (=0) or non-violent (=1).

Additionally, I include measures in the data set that capture the internal dynamics of non-violent and violent movements as well as structural factors such as those affecting participation at the state level, all of which are controlled for in order to evaluate the causal effect of repression on participation. Specifically, I include a measure of concessions, which is believed to be positively correlated with protest participation as it increases the perception that states may be willing to negotiate (Rasler 1996; Lichbach 1987; Belgioioso, Gleditsch and Vidovic 2018). As Lichbach (1987) noted, governments usually employ a wide range of strategies in response to challengers. Moreover, research has shown that nonviolent protests are usually more likely to gain concessions from the state (Chenoweth and Stephan 2011; Cunningham 2016; Chenoweth et al. 2018). Ryckman (2019), on the other hand, shows that the lack of progress and concessions gained by non-violent opposition often drives the opposition to switch tactics to violent means in the quests to continuing their efforts against the state. It is therefore important to control for concessions in order to correctly evaluate the causal effect between repression and subsequent mobilization. The variable *concessions* is a monthly average, consistent with how the main explanatory variable *repression* is constructed.

Other controls variables include *level of democracy*, which I used *Electoral democracy index* as well as an indicator measuring the overall*mobilization* among citizens. The latter indicates citizens' mobilization ability in the society overall. Measures of economic development - *GDP per capita* - and population are included as well. All variables are taken from the Variety of Democracy (VDem).

2.2.2 Estimation Strategy

Because my dependent variable *participation size* is a monthly count measure and it shows the likelihood of overdispersion (likely because events and participation frequently cluster in time and within units). Throughout the statistical analyses in this paper, I there-

fore opt for negative binomial models (Venables Ripley, 2002) to assess the impact of repression on subsequent mobilization[11].

In addition, I take the panel structure of the event data and the dependence of observations within countries and over time into account. I opt for negative binomial models with fixed effects for two reasons: first is to account for correlated observations within countries and over time; and second because I am particularly interested in exploring repression's effect and its variation within units (in this case, within different countries) and less about variation between countries. As such, per suggested by Allison and Waterman (2002), I use negative binomial models with fixed effects for all of the models to control for common time trends and dependence within countries. The main results are displayed in Table **??**.

Next, to utilize the NAVCO 3.0 data with information on the specific features with non-violent action, I examine whether repression's general effect holds under various goals, categories (i.e. whether it's intervention, noncooperation, protest, or persuasion), and how concentrated/dispersed these protests are.

2.2.3 Results

2.2.3.1 Main Analyses

Turning to the main analyses, Table 2. shows the results of the effect of repression on subsequent participation conditional on the opposition tactics being primarily non-violent or violent. Model 2.1-2.2 show repression's general effect on mobilization, while Model 2.3-2.4 focus on physical repression and Model 2.5-2.6 on non-physical repression. Of all the models, both unconditional effect of repression and interactive terms between repression and opposition tactic are reported. The dependent variable across all models is *participation size* at the monthly level.

Looking at Model 2.1, 2.3, and 2.5, it is clear that, respectively, repression appears to

[11]Results are identical with OLS regression and with multilevel specifications.

have a negative impact on *participation size*, while non-violence has a positive and significant impact on mobilization. When interacting repression with non-violence, however, Model 2.2 shows that repression alone has a general backlash effect on mobilization.

Since it is not possible to evaluate the substantive impacts of the interaction terms solely based on the statistical significance of the coefficients in the models, substantive effects of the interaction terms is presented in Figure 1 and Figure 2.

	Any Repression		Physical Repression		Non-Physical Repression	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	No interaction	With interaction	No interaction	With interaction	No interaction	With interaction
Repression(lag)	−0.13***	0.26**				
	(0.03)	(0.08)				
Physical Repression(lag)			−0.29***	0.64**		
			(0.07)	(0.21)		
Non-Physical Repression(lag)					−0.64***	−2.22***
					(0.14)	(0.52)
Non-violence(lag)	2.67***	2.85***	2.68***	2.85***	2.71***	2.66***
	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)	(0.05)
Repression(lag)*Non-violence(lag)		−0.54***				
		(0.11)				
Physical Repression(lag)*Non-violence(lag)				−1.29***		
				(0.26)		
Non-Physical Repression(lag)*Non-violence(lag)						2.01**
						(0.64)
Concession(lag)	−0.00	0.00	0.00	0.01	0.02	0.02
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Electoral democracy index	0.57***	0.52***	0.59***	0.59***	0.70***	0.72***
	(0.15)	(0.15)	(0.15)	(0.15)	(0.14)	(0.14)
Other mass mobilization events	0.30***	0.31***	0.30***	0.31***	0.30***	0.30***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
GDP per capita(lag,log)	−0.81***	−0.83***	−0.81***	−0.82***	−0.79***	−0.77***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Population(log)	2.67***	2.67***	2.65***	2.65***	2.59***	2.57***
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
(Intercept)	−39.44***	−39.46***	−39.25***	−39.15***	−38.36***	−38.21***
	(2.23)	(2.23)	(2.23)	(2.23)	(2.22)	(2.22)
AIC	113923.60	113903.76	113924.70	113907.15	113920.09	113912.19
BIC	114214.47	114201.90	114215.57	114205.29	114210.96	114210.33
Log Likelihood	-56921.80	-56910.88	-56922.35	-56912.57	-56920.04	-56915.09
Deviance	11850.64	11850.45	11850.47	11850.53	11849.94	11848.15
Num. obs.	10634	10634	10634	10634	10634	10634
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 2: Conditional Effect of Repression

The marginal effect of repression on subsequent mobilization is presented in Figure 1. A quick glance of the figure shows that repression's effect is subject to change, conditional on whether or not the opposition consists of primarily violent or non-violent elements. A clear indication why it is important to look at how the impact of repression varies by the differing opposition tactics.

Turning to the results, Figure 1 shows that repression of primarily non-violent opposition *reduces* subsequent participation. The deterrence effect diminishes as the proportion of non-violent activities decreases in the previous month (i.e. proportion of violent activities increases). This result is particularly driven by the effect of *physical* repression. The marginal effect of non-physical repression, on the contrary, appears to have less of a deterrence effect on primarily non-violent opposition, as such effect does not reach the statistical significance[12].

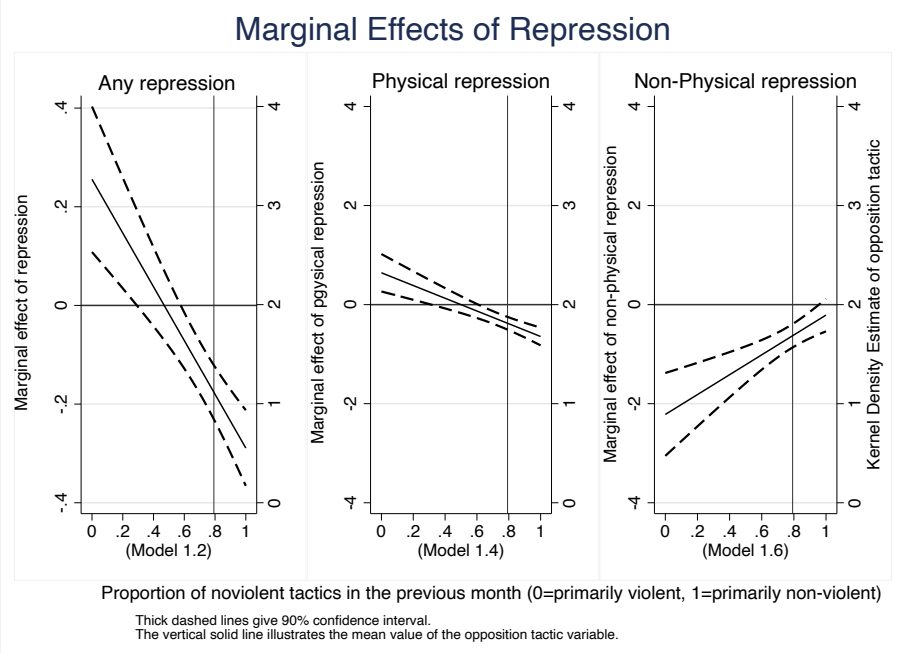

Figure 1: Marginal Effects of Repression

In general, Figure 1 provides support for my H_2 *Deterrence Argument*: repression of primarily non-violent opposition is likely to deter subsequent participation. The deterrence effect of physical repression, in particular, suggests that repression intended to result in

[12]The effect of non-physical repression on primarily non-violent opposition is not significantly different from zero.

deaths, unfortunately, would deter subsequent non-violent mobilization. This is consistent with my theory that when exposed to most violent forms of repression, the costs of continued mobilization are simply too high for non-violent opposition to bear. Many individuals are more likely to drop out due to the fear of being the target of state violence.

This finding, however, does not apply to non-physical repression - material and/or physical repression that are short of killing. Non-physical repression, however, has less of a deterrence effect on dissent mobilization that are primarily non-violent.

Turning to Figure 2, which I report the predicted values of mobilization given repression's effect conditional on the opposition tactic. When there are primarily non-violent activities, repression's effect decreases, consistent with the H_2 - *Deterrence Argument*. The rate of mobilization decreases even more as the level of repression increases. The pattern is identical even when we separate between physical and non-physical repression. The magnitude of the deterrence effect of physical repression is particularly salient as the red line gets steeper as the level of repression increases. Non-physical repression effect, on the other hand, has less of a deterrence effect on predicted non-violent activities.

Repression's effect on primarily violent opposition, however, varies substantially by the types of repression. Generally speaking, repression of primarily violent opposition is likely to lead to backlash, consistent with backlash argument in the literature (Franscisco 1995, 1996; Sullivan and Davenport 2017). I suspect that this is what drives the findings in the literature on backlash argument, which did not differentiate repression's effect by the differing opposition tactics.

Overall, the findings here support H_2 *Deterrence Argument* such that repression of primarily non-violent opposition can deter subsequent mobilization, but not H_1 *Backlash Argument*. I would note that, however, even if repression deters subsequent non-violent mobilization, the overall level of mobilization in Figure 2 is still higher with non-violence. Chenoweth and Stephan (2011) are correct in that non-violent resistance tends to have a participation

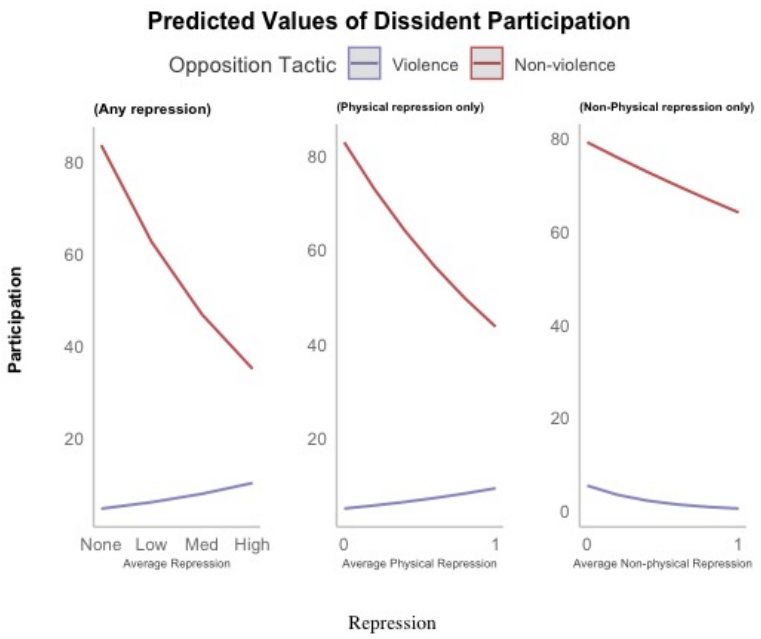

Figure 2: Predicted Values of Dissident Participation

advantage over violent armed group. I discuss the implications of the findings in the conclusions.

2.2.3.2 Robustness Checks

In the following, I shift the focus and look at non-violent action's 1) specific goals, 2) categories, and 3) how dispersed/concentrated a non-violent action typically is. My goal is to see whether the findings from Table **??** hold. I focus on repression's general effects here, for illustration purpose. These analyses reveal some interesting variations in the impact of the relationship between repression and subsequent mobilization.

Non-violent resistance can vary substantially over their primary goals as well as particular methods employed. I am particularly interested in whether non-violent actions that have 'maximalist' goals (Chenoweth and Lewis 2013) of overthrowing the existing regime, achieving autonomy or secession at some point during the movement would be less likely to be deterred by government repression and are more prone to backlash, at least in the

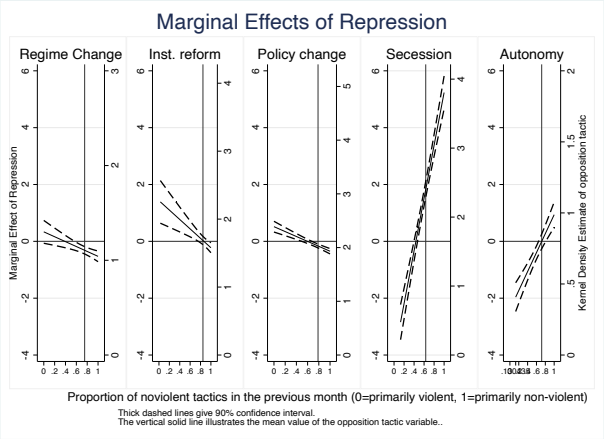

Figure 3: Marginal Effects of Repression, By NV Goal

immediate aftermath of state abuses. The statistical results are shown in the Appendix (Table 6, Table 7, Table 8). Here I show the visualizations of the marginal effect of repression conditioned by the differing opposition tactics respectively (Figure 3 and Figure 4).

Figure 3 shows that repression of non-violent oppositions is generally associated with a decrease in subsequent mobilization, further supporting the H_2 *Deterrence Argument*. Interestingly however, backlash is observed with non-violent actions involving secession or greater autonomy, which are likely to require higher commitments to the goals. As such, movements with goals of secession and greater autonomy might be able to more effectively mobilize individuals who share a more salient group affiliation (in-group status). When repressed, individuals within these movements can be easily triggered by a sense of shared grievances and solidarity (Edwards and Arnon 2019), which makes it more likely to backlash.

Moreover, non-violent activities come in various different forms. Protest is in fact only one of the many non-violent categories. NAVCO v.3.0 distinguishes non-violent actions into five categories: *persuasion, protest, noncooperation, political engagement*, and *intervention*.[13] The results are shown in Figure 4.

[13]In particular, intervention is defined as physical and direct interference and often the most militant nonviolent actions. See more from Lewis, Chenoweth, and Pinckney (2017). "Non-violent and Violent Campaigns and Outcomes 3.0: Effects of Tactical Choices on Strategic Outcomes Codebook" Note that results of political engagement are not included due to insufficient observations in the data set.

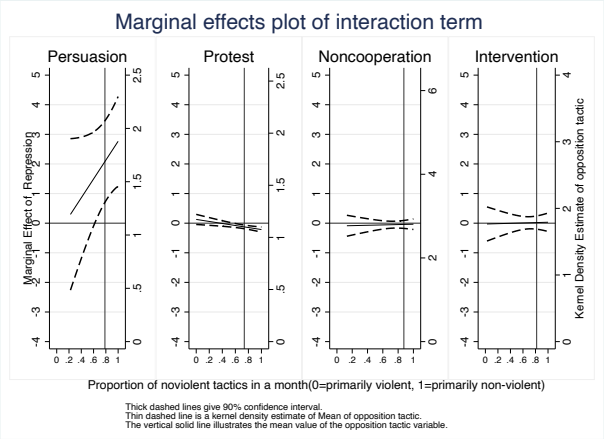

Figure 4: Marginal Effects of Repression, By NV Category

The most common categories in the data set are *protests*, *noncooperation* and *intervention*. *Persuasion* are a type of non-violent action involving the expression of objection of disapproval, but by *words* only[14]. Posting photos or comments expressing disapproval, condemning certain action by the authorities or agencies via social media, giving a speech, and distributing anti-government fliers are some examples of *persuasion*. *Noncooperation*, on the other hand, is the most commonly used non-violent action in the dataset. Examples of *noncooperation* are those that involve deliberate restriction or withholding such as labor strike. *Intervention* includes activities such as sit-ins, but by non-violent means only.

Specifically, repressing non-violent *protests* is associated with a decrease in subsequent mobilization, consistent with the main findings. Interestingly, repression of *persuasion*, to the contrary, is associated with increased mobilization, which goes against the anticipated results. However, repression might be less likely to have an impact on *persuasion* because the participation costs of engaging in such activity are relatively low, as opposed to the costs associated with engaging in a protest that requires physical presence. This is consistent with my overall argument in the paper. Similarly, Pan and Siegel (2020) found that repression of online social media comments such as Twitter - a type of *persuasion* - may silence speaker,

[14]As opposed to protests, which are a type of non-violent activity involving expression of objection or disapproval by *actions*.

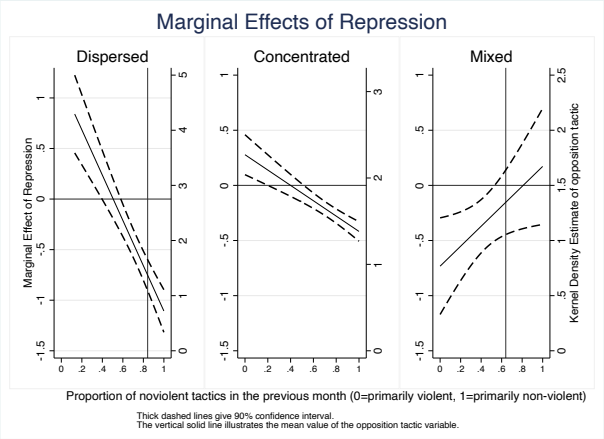

Figure 5: Marginal Effects of Repression, By Dispersion/Concentration

but prompt many others to condemn it even further.

Another plausible explanation could be that states rarely engage in most violent repression when confronted with those engaged in *persuasion*. Among all the observations in the NAVCO 3.0, the majority of non-violent action categorized as *persuasion* do not encounter repression. The remaining 15% of events engaging in *persuasion* experienced mostly non-physical, non-material, or physical repression short of killing.

Another notable finding comes from Figure 5. Repression appears to be effective in deterring non-violent actions in general, regardless of whether or not opposition is physically dispersed or concentrated. When non-violent opposition employs mixed strategies - that is, both physically dispersed and concentrated, repression appears to increase subsequent mobilization, although this result does not reach the statistical significance when opposition is primarily non-violent. All results are summarized in Table 3.

Repression undoubtedly impacts dissent, whereas dissent impacts whether the government represses or not. The interactions between the government and dissent are inherently endogenous. To understand this better, consider that an opposition challenges the incumbent dictator by staging a protest in a given time, the dictator responds by violently cracking down the society, imposing a state of emergency, while restricting all civil liberties of all of

the citizens. All of these government actions simultaneously instigate subsequent protests. We know that repression can backfire or it can deter subsequent mobilization, but it remains clear whether it is the repression that causes the protests, or the protests in the previous time that cause repression, or both. This raises the issue of potential endogeneity. If not properly addressed, the estimates in the fixed effect models are likely to be biased. In an attempt to alleviate this concern about the potential endogeneity, I employed the two-stage residual inclusion (2SRI) models as a way for robustness checks. The results are presented in Table 4 in the Appendix. The results from the 2SRI models are identical to the main findings in Table 2.

Goals	Deterrence	Backlash	Not significant
Regime change			
Institutional reform			
Policy change			
Secession			
Autonomy			
Categories			
Persuasion			
Protest			
Noncooperation			
Intervention			
Physical activity			
Dispersed			
Concentrated			
Mixed			

Table 3: Repression's Effect by Non-violent Action Type on Mobilization

2.3 Conclusions

This paper shows that repression's effect is conditional by the differing opposition tactics. The findings suggest that repression of primarily non-violent opposition is likely to

deter subsequent dissident mobilization, providing support for the *(Deterrence Argument.* I would emphasize that non-violent resistance still has the advantage of attracting higher levels of participation, as posited by Chenoweth and Stephan (2011). Yet such participation advantage diminishes when exposed to repression. In other words, non-violence is still a better resistance strategy over violence after all, but it can be counterproductive when exposure to repression substantially raises associated costs of participation to the extent that outweigh the benefits of such strategy.

The literature on repression-dissent nexus and non-violent resistance has made important progress in understanding the effects of repression on dissent. Yet the existing research often ignores how repression's effect can vary by the differing tactics used by the opposition, who are the likely targets of repression. Few studies have empirically tested the ensuring strategic interactions between repression and participation that ultimately produce various patterns regarding repression's effects. By disaggregating both repression and dissent, we get a clearer picture of how repression affects subsequent dissident mobilization.

As a wide selection of research has focused on the efficacy of non-violent movements in achieving goals and demands, I contribute to this line of literature in examining the question of whether state violence is effective in deterring subsequent mobilization. I argue that such effect is conditional on the nature of the opposition. I subsequently identify the conditions under which repression is effective in deterring non-violent mobilization. The findings suggest that the deterrence effect of repression on non-violent mobilization is consistent, with a few exceptions (i.e. those with goals pertaining territorial secession and greater autonomy and those employing tactic that expresses objection or disapproval by persuasion only, and not physical gatherings) that go against the anticipated results.

Future research can look into the specific mechanisms under which repression of non-violent actions generates backlash. I suspect that repression of non-violent and unarmed protesters can lead to public outrage when the state authorities fail to cover up their acts. In other words, there are instances in which backlash could happen when certain conditions

are met, but is rare (see more of this argument from Hess and Martin, 2006).

Importantly, I would like to emphasize that both the state authorities and the opposition make interrelated strategic decisions and operate under incomplete/imperfect information (Pierskalla 2010). Leaders select their repressive methods based on the anticipated likelihood of responsive dissent. Uncertainty about whether their chosen tactics will be successful in deterring challengers is always there. In most cases, a government will have a relative solid understanding of its own capacities, yet its understanding of the opposition's capabilities can be less than perfect/complete. Repression of non-violent groups is likely to reduce the non-violent activities of an opposition but increase its violent activities (Lichbach 1987). This is likely to result in escalation of violence even further. Although physical repression is found to be effective in deterring non-violent activities, states do not solely rely on most violent forms of repression as the only effective tools in deterring challengers. They make strategic calculations which hinge upon the interaction with the responsive opposition.

My research here focuses primarily on the dynamics between state authorities and the opposition as a unified actor. Yet the findings have important implications for how individuals' attitudes and behaviors can change under different circumstances. Because non-violent movements tend to be large in size, the "marginal" participant is less committed and less willing to endure repression than the "marginal" participant of a smaller armed group. This indicates that type of individual participants can vary substantially by differing opposition tactics employed. The willingness to mobilize certainly varies across individuals. As such, repression may have mixed effects on individuals given their different backgrounds. For instance, those who directly experienced state abuses may behave differently from individuals who did not experience repression personally (Lawrence 2016; Sullivan and Davenport 2017). The takeaway here is that repression is likely to filter out some individuals (due to fear), as suggested in my findings, while encouraging some others (likely due to anger).

Existing literature also provides some reasoning to this. Franklin (2015) finds that repression tends to filter out members in the group that are less committed, and hence those

that remain tend to be more persistent. Future research can further investigate whether members that join in the subsequent mobilization in the aftermath of repression are significantly different from those who joined prior to repression. There could be some interesting dynamics worth exploring.

The findings here can encourage more research into the internal dynamics of opposition recognizing that repression's effect on mobilization is conditional by the differing opposition tactics. Non-violent resistance can be a powerful tool for ordinary civilians to transform their governments (Chenoweth and Stephan 2011); however, not all non-violent movements end in success and many ultimately escalate into violent conflicts (Rykman 2019). When non-violent resistance has violence-wielding groups among their factions, these groups can strategically make the decision to engage in violence as needed. As such, another interesting area of research would be to identify the patterns and conditions under which repression increases or decreases violent dissent.

The results also point to other important implications for the study of social movements and the applications. The findings show that the effects of repression are likely to be as intricate as we take into account many other factors interacting with repression, In this paper, I examine the interactions between repression and differing opposition tactics. Yet there are other contextual factors that are likely to moderate the effect of repression on mobilization. For instance, factors linking the variety of political systems such as the level of institutional access, the effectiveness of political competition are likely to affect political contentions and the government's ability to use repression.

Lastly, since we now know the dynamic interactions between the state and the opposition, future research can move towards distinguishing various intensity of repression, the targets of repression, and their impacts on mass mobilization. Repression's effect may diverge depending on different sub groups of the opposition (Rozenas 2020). For instance, Pan and Siegel (2020) investigated how repressing online dissent impacts the likelihood of opposition tactics and subsequent success. Another interesting direction would be to inves-

tigate the impact of court orders and judicial sanctions are used by the regime as a form of non-physical repression and how this affects the existing political opportunity structure in a given political dynamic.

2.4 Additional Analyses

2.4.1 Robustness Checks, Addressing Endogeneity - 2SRI Models

	Any Repression		Physical Repression		Non-Physical Repression	
	Model 1 baseline	Model 2 2SRI	Model 3 baseline	Model 4 2SRI	Model 5 baseline	Model 6 2SRI
Repression(lag)	0.256**	2.305***				
	(0.004)	(0.000)				
Physical Repression(lag)			0.643**	5.296***		
			(0.005)	(0.000)		
Non-Physical Repression(lag)					-2.217***	2.077
					(0.000)	(0.053)
Non-violence(lag)	2.853***	2.780***	2.852***	2.790***	2.663***	2.656***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Repression(lag)*Non-violence(lag)	-0.545***	-0.485***				
	(0.000)	(0.000)				
Physical Repression(lag)*Non-violence(lag)			-1.286***	-1.099***		
			(0.000)	(0.000)		
Non-Physical Repression(lag)*Non-violence(lag)					2.006**	1.145
					(0.001)	(0.088)
Concession(lag)	0.004	0.352***	0.011	0.288***	0.022	0.054
	(0.935)	(0.000)	(0.839)	(0.000)	(0.680)	(0.304)
Electoral democracy inde	0.522***	1.144***	0.587***	1.177***	0.719***	0.864***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Other mass mobilization events	0.310***	0.183***	0.308***	0.224***	0.295***	0.306***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDP per capita(lag,log)	-0.827***	-0.821***	-0.822***	-0.872***	-0.767***	-0.837***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Population(log)	2.668***	2.700***	2.646***	2.696***	2.572***	2.558***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Control function		-2.116***		-4.830***		-3.764***
		(0.000)		(0.000)		(0.000)
(Intercept)	-36.304***	-37.724***	-36.012***	-37.176***	-35.128***	-34.419***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Num. obs.	10634	10634	10634	10634	10634	10634
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 4: Endogeneity-corrected (2SRI) Models

2.4.2 Alternative Measure of Mobilization

	Any Repression		Physical Repression		Non-Physical Repression	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	No interaction	With interaction	No interaction	With interaction	No interaction	With interaction
Repression(lag)	-0.11^{***}	0.16^{***}				
	(0.02)	(0.05)				
Physical Repression(lag)			-0.37^{***}	0.17		
			(0.04)	(0.12)		
Non-Physical Repression(lag)					-0.46^{***}	-0.24
					(0.09)	(0.31)
Non-violence(lag)	0.09^{**}	0.22^{***}	0.09^{**}	0.18^{***}	0.13^{***}	0.14^{***}
	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.03)
Repression(lag)*Non-violence(lag)		-0.39^{***}				
		(0.06)				
Physical Repression(lag)*Non-violence(lag)				-0.74^{***}		
				(0.15)		
Non-Physical Repression(lag)*Non-violence(lag)						-0.28
						(0.38)
Concession(lag)	0.08^{*}	0.09^{**}	0.08^{*}	0.08^{**}	0.09^{**}	0.09^{**}
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Electoral democracy index	-0.07	-0.08	-0.08	-0.08	0.04	0.04
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Other mass mobilization events	0.40^{***}	0.41^{***}	0.40^{***}	0.40^{***}	0.40^{***}	0.40^{***}
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
GDP per capita(lag,log)	-0.49^{***}	-0.51^{***}	-0.50^{***}	-0.51^{***}	-0.48^{***}	-0.48^{***}
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Population(log)	1.16^{***}	1.17^{***}	1.18^{***}	1.18^{***}	1.09^{***}	1.09^{***}
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
(Intercept)	-13.29^{***}	-13.45^{***}	-13.53^{***}	-13.61^{***}	-12.13^{***}	-12.17^{***}
	(1.16)	(1.16)	(1.16)	(1.16)	(1.15)	(1.15)
AIC	122572.95	122546.13	122544.13	122529.77	122584.02	122585.58
BIC	122869.15	122849.74	122840.33	122833.37	122880.22	122889.18
Log Likelihood	-61246.48	-61232.07	-61232.07	-61223.88	-61252.01	-61251.79
Deviance	12841.70	12841.57	12840.94	12841.16	12840.59	12840.38
Num. obs.	12149	12149	12149	12149	12149	12149
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 5: Alternative Measure of Mobilization - Event Frequency

2.4.3 Non-violent Action Goals

	Model 1 Regime Change	Model 2 Institutional Reform	Model 3 Policy Change	Model 4 Territorial Secession	Model 5 Greater Autonomy
Repression(lag)	0.33	1.43***	0.51***	−4.05***	−2.40***
	(0.22)	(0.41)	(0.10)	(0.41)	(0.37)
Non-violence(lag)	2.62***	2.48***	3.15***	−1.30***	0.89**
	(0.21)	(0.24)	(0.08)	(0.39)	(0.34)
Repression(lag)*Non-violence(lag)	−0.86**	−1.66***	−0.86***	9.29***	3.34***
	(0.29)	(0.47)	(0.13)	(0.64)	(0.52)
Concession(lag)	0.22*	−0.08	−0.37***	4.04***	−1.90***
	(0.09)	(0.16)	(0.10)	(1.01)	(0.44)
Electoral democracy index	−3.76***	−0.23	3.65***	7.88***	10.55***
	(0.38)	(0.32)	(0.24)	(1.77)	(1.34)
Other mass mobilization events	0.11**	0.38***	0.21***	0.72***	0.72***
	(0.03)	(0.04)	(0.02)	(0.04)	(0.20)
GDP per capita(lag,log)	1.30***	−0.59***	−0.69***	1.04**	1.87***
	(0.18)	(0.17)	(0.08)	(0.32)	(0.50)
Population(log)	1.16**	1.44***	2.98***	−1.68†	−7.16***
	(0.39)	(0.30)	(0.20)	(0.90)	(1.76)
(Intercept)	−29.31***	−18.24***	−49.07***	20.32	110.47***
	(6.55)	(4.83)	(3.29)	(13.30)	(27.99)
AIC	14889.51	9834.21	69474.07	4384.67	3047.36
BIC	15083.37	10028.21	69751.78	4501.94	3162.66
Log Likelihood	-7407.76	-4877.10	-34696.03	-2164.33	-1493.68
Deviance	1487.03	1017.17	7193.57	548.02	352.85
Num. obs.	1393	944	6460	487	345
Controls	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1."

Table 6: Model of Repression on Subsequent Mobilization, by Non-violent Action Goals

2.4.4 Non-violent Action Categories

	Model 1 Persuasion	Model 2 Protest	Model 3 Noncooperation	Model 4 Intervention
Repression(lag)	-0.416	0.127	-0.095	-0.028
	(0.828)	(0.221)	(0.712)	(0.938)
Non-violence(lag)	1.734	2.144***	2.944***	3.344***
	(0.321)	(0.000)	(0.000)	(0.000)
Repression(lag)*Non-violence(lag)	3.181	-0.342*	0.060	0.060
	(0.132)	(0.011)	(0.855)	(0.902)
Concession(lag)	-2.370	0.253***	-2.176***	-0.358*
	(0.187)	(0.000)	(0.000)	(0.043)
Electoral democracy index	-5.848	-0.619**	0.647*	4.908***
	(0.573)	(0.002)	(0.030)	(0.000)
Other mass mobilization events	-1.026**	0.393***	0.051	0.438***
	(0.010)	(0.000)	(0.089)	(0.000)
GDP per capita(lag,log)	5.289	-0.496***	-0.673***	-1.462***
	(0.092)	(0.000)	(0.000)	(0.000)
Population(log)	1.519	1.920***	3.062***	4.164***
	(0.611)	(0.000)	(0.000)	(0.000)
(Intercept)	-71.898*	-25.722***	-44.375***	-58.522***
	(0.032)	(0.000)	(0.000)	(0.000)
Num. obs.	58 ***	4405 ***	3866***	1536 ***
Controls	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Political engagement is dropped due to insufficient observations.

Table 7: Model of Repression on Subsequent Mobilization, by Non-violent Action Categories

2.4.5 Non-violent Action (Dispersion/Concentration)

	Model 1 Dispersion	Model 2 Concentration	Model 3 Mixed
Repression(lag)	1.133***	0.278*	-0.733**
	(0.000)	(0.012)	(0.006)
Non-violence(lag)	3.445***	2.746***	0.889*
	(0.000)	(0.000)	(0.025)
Repression(lag)*Non-violence(lag)	-2.239***	-0.696***	0.905
	(0.000)	(0.000)	(0.074)
Concession(lag)	-1.357***	-0.010	1.467
	(0.000)	(0.892)	(0.188)
Electoral democracy index	2.279***	0.453*	3.225*
	(0.000)	(0.018)	(0.043)
Other mass mobilization events	0.124**	0.426***	0.775***
	(0.002)	(0.000)	(0.000)
GDP per capita(lag,log)	-0.264	-0.820***	3.215*
	(0.088)	(0.000)	(0.013)
Population(log)	2.430***	2.202***	-5.643**
	(0.000)	(0.000)	(0.003)
(Intercept)	-37.507***	-28.543***	70.274*
	(0.000)	(0.000)	(0.013)
Num. obs.	1904	5718	236
Controls	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 8: Model of Repression on Subsequent Mobilization, by Non-violent Action (Dispersion/Concentration)

3.0 Do Concessions Work? An Incentive to Demobilize? Regime Responses, Inconsistency, and Subsequent Mobilization of Dissent

Regimes of all kinds repress dissent. However, states rarely respond to dissent with one single tactic. More often than not, state authorities use mixed responses with a combination of repression and concessions. So what are the impacts on dissident mobilization when regimes adopt various tactical responses to address popular dissent and defend against potential challengers? In studying regime responses, existing literature has generally focused on the 'repression-dissent nexus' (Lichbach 1987), such as how repression affects dissent activity or how dissent influences the likelihood of repression (Tilly 1978; Frankilin 2009; Pierskalla 2010; Lawrence 2006; Ritter and Conrad 2016). On the other hand, concessions can increase subsequent collective actions because they are likely to increase individual expectations about the efficacy of collective action and thus the willingness to participate in dissent (Belgioioso et al., 2018; Rasler 1996; Carey 2010).

But what happens when regimes use repressive measures in conjunction with concessions? What are their joint impacts on the mobilization of dissent? Existing literature suggests that a mix of repression and accommodation increases dissent (Lichbach 1987; Belgioioso et al. 2018; Rasler 1996). For instance, the Moroccan protests, which occurred on 20 February 2011, appear to follow what the "inconsistency hypothesis" proposes, as mild repression was accompanied by significant concessions made by the government in response to protest demands. Accommodations given include a Constitutional Commission appointed by King Mohammed VI to draft a new constitution, a referendum, and new parliamentary elections, which subsequently increased overall protest activities until the referendum in July 2011.

However, contrary to the literature, there are instances where coercion in conjunction with accommodation does not inflame further mobilization of dissent. Inclan (2009) finds that combined repressive threats and procedural concessions did not significantly positively impact Zapatista's protest activity in Mexico during 1994-2003. During the 2020-21 pro-

democracy movement in Thailand, on the other hand, a mix of repressive measures along with minor concessions initially increased protest activities but eventually came to a stall and was demobilized without significant demands achieved. In Chile, a series of mass demonstrations broke out in 2019. The events were initially in response to a rise in the country's Metro's subway fare. Still, they later turned into massive demonstrations against the inequality prevalent in the country while gaining its momentum in October 2019. Over 1,2 million people were reported to take to the streets to demand President Piñera's resignation. In many instances, protesters were confronted with excessive use of force by the police and security forces. However, after some partial concessions were promised by President Piñera, which includes significant reforms, cabinet reshuffle, and a plebiscite referendum, protest activities became more dispersed and smaller in scale and gradually disseminated.

These are instances where dissent does not increase as a result of mixed repression and concessions. No previous studies on this topic have explained why we observe such contradictory findings thus far. The conditions under which the mobilization of dissent decreases but not increases due to a mix of repression and concessions deserve attention. Another relevant question to this is how much coercion in conjunction with accommodations is sufficient to deter dissent? Different combinations of coercion in conjunction with concessions could have divergent impacts on the development of dissident mobilization. It is the purpose of this research to identify the conditions under which concessions in conjunction with repression have over the subsequent mobilization of dissent.

The first section shows that research on repression and policy concessions has advanced some answers about how government responses affect dissident mobilization. Repression appears to have divergent impacts on the mobilization of dissent, while accommodations are believed to encourage mobilization. These findings facilitate understanding of repression or concessions' isolated impacts, yet none provide direct insights into how repression in conjunction with concessions influences mobilization simultaneously? If regimes aim to discourage dissent, how do they combine the efficiencies of each strategy while moderating their disadvantages?

Integrating insights from both lines of literature, I argue that the impact of government accommodations will depend heavily on parallel repression. Conventional wisdom states that concessions often increase mobilization. I show that, however, such encouragement effect of concessions gradually wanes as the parallel repression increases. The findings provide insights into government strategies at regime leader's disposal to divide and conquer dissent. The analysis and application of hypotheses facilitate understanding the effects of repressive and concessions in various similar political environments.

3.1 A Theory of Government Mixed Strategies: Repression, Concessions, and Mass Mobilization

When citizens protest in several ways - sit-ins, petitions, strikes, demonstrations, and sometimes riots, states compare costs and benefits and make decisions across available tactics. These tactics include repression, concessions, and a mix of both. Both the state and dissent decide on their responses based on relative costs and benefits of associated strategies. Following Lichbach (1987), I assume that the balance of effects, that is, whether repression increases or decreases the opposition group's total dissident activities, hinges on the government's relative concessions to the opposition group as well. For dissidents, state repression imposes a cost on dissent, while benefits, likewise, can be gained from the state in the form of concessions. I believe government concessions are an essential consideration for the opposition when determining whether to mobilize or not. Repression, concessions, and their impacts on dissent may not always be mutually exclusive.

State authorities confront a similar choice when considering the appropriate responses to dissent. The goal is to deter dissent, avoid further mobilization, and maintain the status quo for the state. States decide how much repression in conjunction with concessions to employ in response to challenges, which could be violent or nonviolent. However, I assume that the state typically would like to minimize dissent, particularly violent dissent, because violent

dissent poses a more severe threat to the state and is more costly than nonviolent dissent. Although regimes usually vary in their willingness to employ repression, states tend to use repression more readily in response to violent dissent. Similar calculations are done by the states when deciding how many concessions to give the opposition. Regimes are generally more willing to grant concessions to nonviolent dissent, as the latter is considered a more credible partner to negotiate with (Chenoweth and Stephan 2011). Both repression and accommodations entail a cost to the state to a certain extent. States may perceive some benefit from repression or concessions when limiting the extent to which the opposition's mobilization capacities. To sum up, I assume that, in general, states are more likely to use repression against violent dissent (i.e., radicals) while considering concessions in response to nonviolent groups (i.e., moderates).

With this in mind, in the following, I first review the existing research on the impact of repression or concessions, respectively. I then combine the two perspectives to elaborate on two hypotheses about the consequences of repression with concessions. I argue that concessions often condition repression's effect on subsequent mobilization. A combination of high repression in conjunction with high accommodation is most effective in deterring dissident mobilization. I show how different configurations of repression with concessions could have divergent impacts on the development of dissident mobilization

3.1.1 Repression and Mobilization

Scholars have long recognized the close relationship between repression and dissent (Tilly 1978; Opp and Roehl 1990; Davenport 2007; Rasler 1996; Moore 1998; Ritter 2014; Ritter and Conrad 2016). Groups seeking to challenge the state can choose from among different forms of collective action and opposition tactics. In turn, there are few strategies a government can take in response to dissent.

As Tilly (1978) pointed out, "Governments respond selectively to different sorts of groups

and different sorts of actions (p.106)." States choose between coercive repression and accommodations in response to the demands of the dissidents. Likewise, in the face of government responses, dissident groups adopt the best possible strategy they believe is likely to induce their needs and policy goals accordingly, considering the costs and benefits of its various tactics. As rational choice theory (Olson 1965; Hardin 1982) posits, government sanctions are likely to impede the ability of dissident groups to mobilize resources (i.e., money, ideas, people, etc.) by raising the costs of collective action. Individuals who expect government repression are far less likely to join protests or other forms of collective action. In other words, individual incentives often undermine mobilization as individuals will generally prefer to free-ride on the everyday goods/benefits generated by precisely such efforts rather than actually to participate in dissent and contribute.

The purpose of repression is to prevail in the contest by showing determination and resolve (Danilovic and Clare, 2021). Repression imposes negative sanctions on the opposition (Tarrow 1998) by raising the costs of collective action for dissenters. Individuals are less prone to joining in a mobilization when faced with repression, either because the costs of joining outweigh the benefits (Tilly 1978; Rasler 1996; Opp and Ruehl 1990) or fear of repercussions from the state actors (Young 2017). I hereby present my first hypothesis:

H_1: Repression deters the mobilization of dissent.

Based on this logic, I expect that the higher the repressive measures imposed on the opposition, the higher the participation costs for the dissenters. My other research shows that, in general, higher levels of repression (i.e., physical repression that could result in deaths) can more effectively deter the mobilization of dissent, mainly when used against nonviolent dissent. Non-physical repression, those non-physical repressions such as arrests, detention, and other types of state coercion short of killing, has less deterrence effect on mobilization (Chiang 2021).

To minimize the threat of dissent, however, states do not necessarily need to impose the

most violent forms of repression under all circumstances. Repression can, in many instances, be a sign of weakness because it shows that the state is slowly losing its grip on power and control. Otherwise, harsh repression would not be necessary. By choosing to employ the most brutal crackdowns on dissent, the government risks the drawback of this strategy, which is the likelihood of backlash. Existing literature suggests that state-sponsored violence can potentially backfire and increase anti-government mobilization (Francisco, 1995; Davenport, 2007; Rasler, 1996; Hess and Martin, 2006; Sullivan and Davenport, 2017).

However, not all repression leads to backlash. Repression can backfire on the government when repression is perceived as unjust (Hess and Martin, 2006) by the protesters, when repression triggers the micromobilization process (Muller and Opp 1986; Opp and Roehl 1990), or when the use of repression triggers the emotion of anger among protesters (Aytaç, Schiumerini, and Stokes 2017; Young 2019). Moreover, in some instances, excessive coercion by the state could inadvertently drive more moderate protesters into endorsing or even engaging in radical or violent means when the current tactic appears to be severely deterred by state repression. As Lichbach (1987) points out with his alternative rational actor (RA) model, an increase in a government's repression of nonviolence will reduce opposition activities but will likely increase its violent activities. When failing to make any significant progress, nonviolent resistance could ultimately escalate and radicalize.

When certain conditions are met, harsh repression can successfully diminish the mobilization of dissent because it raises the costs of participation for dissenters and projects the state's resolve to deter challengers. To achieve this goal, the government needs positive inducements to persuade the opponents that there are gains by complying with the state and avert further crises. I argue that this is where concessions can be used as an inducement for compliance.

3.1.2 Concessions and Mobilization

Repression, although a prominent feature of dictatorships (Davenport and Armstrong 2004; Davenport 2007b), is not the only strategy a state employs in response to domestic challenges. Alternatively, political leaders can grant policy concessions to co-opt regime adherents to buy off their continuing support, thereby reducing the ruling elite's incentive to challenge the government (Geddes 2005; Gandhi and Przeworski 2006; Gandhi 2008; Magaloni 2008). Nevertheless, the dissidents' decisions about contentious actions hinge upon the costs of collective action and how much concessions the state is willing to offer.

Concessions can be understood as positive inducements to persuade the opponents to comply (Danilovic and Clare 2021). This paper defines concessions as ' any rights, prerogatives, or benefits gained from the state by collective action efforts' (Almeida 2007). They can range from efforts to negotiate with the opposition about particular policy demands concerning political corruption, election frauds, political and economic grievances, inequality issues, and so on, the release of political prisoners, granting amnesties, granting provisional powers to certain political groups, granting elections as a way to co-opt the opposition by bringing them into the current political system.

In this research, concessions refer to 'procedural concessions,' as Inclan (2009) defines. Procedural concessions often may 'entail low-level accommodations that the state grants to signal its willingness to negotiate (p.799) (Gamson 1990).

In a detailed study of Iran's protest activities and the Shah's government policies before the 1979 Revolution, Rasler (1996) found that concessions generally expand the protests by raising expectations that more people will join (Belgioios et al., 2018). The logic behind this encouragement effect of accommodations is derived from value-expectancy models, which posit that individuals are likely to participate in collective action if they believe that dissent will achieve the collective goods (Klandermans 1984; Muller and Opp 1986).

According to Muller and Opp (1986), two perceived influence variables are closely related: 1) an individual's perception about his/her influence on the provision of public goods, and 2) an individual's perception of the group, which is a function of the group's success or failure of the past. If an individual perceives the group as successful in securing collective goods (i.e., concessions from the government), the perceived efficacy of the group is likely to be high, which prompts more individuals to join in the collective efforts (p.484). This leads to my second hypothesis:

H_2: Concessions encourage the mobilization of dissent.

However, it is possible that not all concessions have identical impacts on protest mobilization. Concessions may have to be substantial enough to address the opposition's needs to dampen protest participation (Inclan 2009); otherwise, concessions tend to generate more protest activity, as protesters get encouraged to accomplish further concessions by protesting more (Goldstone and Tilly 2001; Rasler 1996). Conversely, when a government grants no compromises, it almost certainly will encourage protest mobilization because it shows that the government is unwilling to accommodate dissent to any extent. A lower concession level signals the state's willingness to negotiate (Gamson 1990) but may not be a sufficient incentive for dissidents to demobilize.

Consequently, minor concessions may cause an initial expectation that more people will pressure the government to achieve the full demands of the protesters, as Rasler (1996) and Belgioioso et al. (2018) found in protests that occurred in Iran and Bosnia, respectively. To sum up, granting concessions alone may not be an optimal strategy for the state because insufficient concessions almost always increase protest actions, which go against the state's intention in quelling dissent.

Moreover, states use concessions not only to resolve conflicts but also as part of the bargaining process (Cunningham 2011). As such, regimes are likely to have preferences over which subset of the opposition actors gets the concessions. In general, governments prefer

negotiating with nonviolent groups over violent counterparts (Chenoweth and Stephan 2011). States are also more likely to grant concessions to internally divided movements over unitary movements (Cunningham 2011) to divide and conquer the opposition.

3.1.3 Government Mixed Strategies and the Mobilization of Dissent

Conventional wisdom indicates that repression tends to deter mobilization while concessions encourage it. However, repression and concessions are never employed separately from one another. It is more common for state actors to introduce positive incentives with concessions into a fundamentally coercive strategy. Coercion alone has to be overpowering to prevent the mobilization of dissent, whereas concessions almost always encourage it. The mixing force with accommodation is the approach that the state actors often practice. That said, what happens when states combine the mixed strategy of both repression and policy concessions? What are their joint impacts on political mobilization?

Lichbach (1987) proposed to study repression while looking at the effect of concessions simultaneously. He argues that repression's impact on dissent depends upon the government's use of accommodations simultaneously. Specifically, a consistent strategy of repression or concessions should reduce dissent while inconsistency increases it. Subsequent studies on testing the impact of inconsistent government policies found mixed evidence. Both Rasler (1996) and Belgioioso et al. (2018) argue that inconsistent policies of repression and concessions increase dissent in Iran and Bosnia. However, in a similar within-country study of the Zapatista Protests in Mexico, Inclan (2009) found no evidence that the combined use of repression and concessions increases subsequent dissent.

Although these studies provide important insights into how inconsistent government strategies of repression and concessions impacts mobilization. Yet, all three studies focused on a single country, and the generalizability of such findings to other cases remains limited. Moreover, as mentioned before, there are instances where popular uprisings did not follow the suggested patterns. Some social movements do not develop further or succeed, followed

by an inconsistent response from government authorities. This article aims to understand why the use of concessions and coercion may have a different effect on the development of protest mobilization than the "inconsistency hypothesis" predicted with the existing arguments in the literature.

I argue that the positive impact of concessions is conditioned by the parallel repression used in conjunction by the state. With no repression, concessions encourage the mobilization of dissent. However, as the level of repression increases, the encouragement effect of accommodations wanes.

Because repression raises the costs of collective action while concessions increase the expectation of success for the dissidents, we can assume that both the government and the opposition would want to minimize costs while maximizing benefits. It makes sense to think that as repression increases, the costs of participation for the dissenters also increase. Consequently, the encouragement impact of concessions is offset by the parallel repression, as repression increases the participation costs, making it less ideal for individuals to join in mobilization.

I argue that the dampening participation size can be attributed to two reasons: 1) more concessions indicate more demands are met, and some people may deem it unnecessary to keep protesting, especially with the presence of repression; and 2) the use of coercion makes people more pessimistic about the government's willingness to fulfill the promises for demands, and also about the likelihood of the state reneging later on. After all, a government that is committed to satisfying its accommodations to the protesters need not resort to the use of force. Both reasons make further mobilization of dissent unlikely. Based on this argument, I present the third and final hypothesis:

H_3: The encouragement effect of concessions on the mobilization of dissent decreases as the parallel repression increases.

With this in mind, I expect that a more favorable political opportunity environment for the dissidents, according to McAdam (1998), is when the government restrains the use of repression and grants concessions. Whereas, for state authorities, the goal would be to deter violent or radical dissent, which can be accomplished by using repression while at the same time co-opting moderate opposition with parallel concessions. This government strategy is the typical "carrot-and-stick" approach.

Recall that severe repression, when used in isolation, should deter dissent, while concessions alone should encourage mobilization. From the government's perspective, the worst-case scenario would be to grant concessions in the absence of repression, which almost certainly always increases the mobilization of dissent due to concession's encouragement effect.

However, the use of repression in isolation appears to deter mobilization more effectively. Yet, in many instances (i.e., Syria in 2011), harsh repression may push the potential dissenters to adopt a more radical approach. For instance, Ryckman (2020) found that escalation to violence is particularly likely when non-violent resistance fails to secure significant progress or accommodations.

When a government gradually increases repression in conjunction with concessions, it would prevent future dissent more effectively. On the one hand, when a government grants significant concessions, it provides positive incentives for the opposition, particularly the moderates, to demobilize since their demands have been met. On the other hand, repression, as negative sanctions, can more effectively deter violent dissent. It shows the government's resolve to crack down on the radical elements of the opposition and maintain the status quo.

3.2 Data and Empirical Strategies

I test my three hypotheses empirically on event data from a set of 26 [1] global cases between 1990 and 2012 from the Nonviolent and Violent Campaigns and Outcomes database version 3.0 dataset, which are coded at the event-day. [2] The units of analysis are event-days (N=15170), yet I aggregated the main variables - explanatory variables *repression* and *concessions*, and the dependent variable *participation* - at the level of event-month. This decision is made to capture the aggregated shorter-term action-reaction dynamics between the state and dissent.

I expect that contentious events around the same month are interconnected, and the government does not decide which strategy to employ based on a single event. Aggregating main variables at the level of event-month makes it easier to capture these state-dissent interactions. I also include several control variables at both event and country-year levels.

My main explanatory variables, government repression, and concessions are both derived from the ordinal variable *state posture* in the NAVCO 3.0. This variable *state posture* denotes the level of repression or concessions any event experiences from the government. I then recoded the variable *state posture* into two separate indicators *repression* and *concessions*. Both variables are ordinal, ranging from 0 to 3.

For the measure of *repression*, the value of 0 indicates no repression, with one equals to non-material and non-physical repression, two equals to material and/or physical repression short of killing, and three means material and/or physical repression intended to result in deaths.

[1] Note that only partial years are collected in the following countries: 1991-92, 2010-12 (China); 1991-96, 2012 (South Korea); 1991, 2011-12 (India); 1990-2000, 2009-2012 (Iraq); 2012 (South Sudan); and 2007-11 (The United States) and contains information on actions and responses by both government actors, oppositions, non-aligned domestic actors, and international actors. These countries covered in NAVCO v.3.0 are not globally representative. Although the sample has cases across all of the five regions, the Middle East and North Africa are overrepresented, particularly during the Arab Spring.

[2] Chenoweth, Erica, Jonathan Pinckney, and Orion A. Lewis. 2018. "Days of rage: Introducing the NAVCO 3.0 dataset." *Journal of Peace Research* 55 (4): 524-34.

The variable *concessions* is constructed in a way similar to how *repression* is coded. It is an ordinal measure, ranging from 0 to 3, where the value of 0 means no concessions; the value of 1 indicates non-material concessions; the value of 2 indicates material concessions. Lastly, the value of 3 suggests full accommodation from the government.

For this study, I assume that government strategies of both repression and concessions are connected in a given month. However, each contention event may experience varying levels of repression or concessions. To capture the short-term changes in government responses, The variables are recoded in the following steps.

First, I took the average of *repression* or *concessions* by month, respectively. Next, because contention events in NAVCO3 rarely get a higher level of repression or concessions[3], I recoded the averaged *repression* or *concessions* again into ordinal measures based on the mean values of each variable respectively with a scale ranging from 0 to 2, with 0 indicates no *repression* or *concessions*, 1 means average *repression* or *concessions* below the means, and 2 indicates average *repression* or *concessions* above the mean in a given month and a given country. Finally, lagged variables were created: t-1, assuming that the effects of *repression* or *concessions* are observed a month respectively after they were employed.

The primary outcome variable is *mass participation*. The variable is derived from the variable *num_partic_event_mean* in the NAVCO 3.0., which shows the estimated range of the number of participants taking part in the event. Following Chenoweth et al. (2018), I then take the log of this variable. I consider contentious events happening in the same month as inter-connected. I subsequently retake the sum of this variable by month, indicating the sum of the number of participants in a month across all events.

Therefore, I measure mass participation as the estimated sum of individual participants

[3]Of all the 14,703 contention events included in this analysis, about 82% experience no repression, while approximately 97% receive no concessions.

per month in a given country. It is a count measure, capturing the logged sum of the estimated participants in a given month. Because this variable shows the likelihood of overdispersion, due to that events and protest participation frequently cluster in time and within units, I opt for negative binomial models (Venables Ripley, 2002) with both country and year fixed effects and robust standard errors.

Control Variables. Because both protests and other contentious events occurred in a changing environment and political systems varied substantially, this paper takes these conditions into account as a series of control variables. At the event level, *Campaign goals* is included, which accounts for the stated goals of each contentious event, including those concerning regime change, institutional reform, policy change, territorial secession, autonomy, anti-occupation.

Although many studies focus on the binary distinction between nonviolent and violent opposition tactics, this dichotomous characterization does not capture the theoretical arguments outlined in this research. Specifically, I see dissidents tend to employ some level of nonviolent tactics in conjunction with violent tactics. To capture these strategic tactics, I designed a variable that measures the proportion of relative use of violence or nonviolence in a given month called *dissent strategy.* This variable is continuous, ranging from 0, totally violent, to 1, totally nonviolent.

In this case, a group that primarily employs nonviolent tactics in a given month will have a score greater than 0.5. Showing the relative use of violent/nonviolent tactics in a given month allows me to assess how the combined effects of repression and concessions last month affect how the opposition adapts and switches between tactics in the current month. Both variables are taken and derived from the NAVCO 3.0 data project.

At the country level, *level of democracy* is taken from *Electoral democracy index.* Adding this variable means considering the nature of governments and that certain types of regimes are more likely to use repressive and accommodative strategies in response to anti-government

movements than others. There are also systemic differences like anti-government uprisings between dictatorships and democracies (Lehoucq 2016, Trejo 2014). An indicator measuring the overall*mobilization* among citizens is also included. The latter indicates citizens' mobilization ability in the society overall. Measures of economic development - *GDP per capita* - and population are included as well. All variables are from the Variety of Democracy (VDem). These control variables measure the characteristics of the target country. Descriptive statistics are shown in Table 9.

The biggest challenge to the empirical analyses is the endogenous nature of repression and dissent. To address these concerns, I employ what is known as the two-stage residual inclusion (2SRI) estimator (Cai, Small, and Ten Have 2011; Hausman 1978; Petrin and Train 2010; Terza 2017). This method has outperformed standard instrumental variable strategies under various conditions (Terza, Basu, and Rathouz 2008).

In particular, in my case, the endogenous predictor (*repression*) is expected to interact with the variable *concessions* to assess "conditional effects" in the second stage. Conventional treatments, such as two-stage least squares (2SLS) and Arellano-Bond (GMM) models, are challenging to implement because it is inappropriate to interact the predicted value in the first stage with the moderator later on in the models. I discuss this method in full detail in the section 3.3.2.

Variable	Obs	Mean	Std. Dev.	Min	Max
Participation	13,123	102.3445	118.913	0.69	720
Repression	15,170	1.080686	.8737739	0	2
Concessions	15,170	.5911009	.8949208	0	2
Dissent strategy	14,996	.9419073	.1514566	0	1
Campaign goals	14,903	2.053211	1.392957	0	6
Level of democracy	15,170	.4285647	.2048194	.05	.909
Other mass mobilization	13,013	.4530227	1.146301	-2.959	3.467
GDP per capita	15,159	8.740382	.8538081	6.733	10.838
Population	15,170	17.8126	1.452382	13.21692	21.02389

Table 9: Descriptive Statistics

3.3 Results

3.3.1 Main Analyses

The analyses conducted in this study offer some different results from the previous literature. I present the results in the following order: To evaluate the first two hypotheses, I show the impact of repression and concessions respectively.

To assess the third hypothesis about the joint impacts of repression and concessions, I introduce the two-way interaction between repression and concessions and how they influence subsequent dissident mobilization in Table 10. This assesses how a mix of government responses on subsequent mobilization is conditioned by how the opposition responds. Next, to alleviate concerns over the endogenous relationship between repression and dissent, in Table 11, I present two-stage residual inclusions (2SRI), endogeneity-correction models as a way for robustness checks.

In Table 10, I present results for two-way interaction between repression and concessions on subsequent mobilization. When considering the effects of repression in the absence of ac-

commodation, one can observe that repression suppresses subsequent mobilization (Model 1). This finding provides support to my first hypothesis about the deterrence effect of repression.

Moreover, when concessions are used in isolation in the absence of repression, I found mixed impacts on mobilization (Model 2 and 3). Model 4 shows that when repression is used in conjunction with concessions, repression continues to negatively impact mobilization, while the encouragement effect of accommodation becomes significant. Based on Model 2 and 3, I do not find support for Hypothesis 2, which posits that concessions alone encourage the mobilization of dissent. However, this paves the way to my argument about the joint effectiveness of accommodations in conjunction with repression.

Moving on to evaluating Hypothesis 3, we need to look at the interactive term between repression and concessions to understand their combined effects on subsequent mobilization, as shown in Models 5 and 6.

The results show that repression continues to have a significant and negative impact on subsequent mobilization, while the encouragement effect of concessions becomes stronger in conjunction with repression.

To substantively evaluate the two-way interaction term between repression and concessions, Figure 6 presents the predicted values of participation with a variety of configurations between repression and accommodation. The graphs in Figure 6 are plotted based on Model 5 and Model 6, respectively.

The encouragement effect of concessions appears to be conditioned by the level of repression. In particular, concessions significantly increase mobilization when no repression is combined alongside. Whereas the encouragement impact of accommodations gradually declines as the parallel repression increases, lending support for Hypothesis 3. I interpret this as if a government grants major concessions without accompanying it with similar repression; unfortunately, accommodations in isolation would not be sufficient to appease the opposition.

The finding supports my theory that a high level of repression allows the government to deter radical groups more effectively. At the same time, only increased concessions are sufficient enough to induce the moderate elements in opposition to demobilize.

	DV: Mass Participation					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Repression(lag)	−0.11***			−0.12***	−0.04**	−0.10***
	(0.01)			(0.01)	(0.01)	(0.01)
Concessions(lag)		−0.10***	0.02	0.05***	0.12***	0.12***
		(0.01)	(0.01)	(0.01)	(0.02)	(0.02)
Repression(lag):Concessions(lag)					−0.13***	−0.05***
					(0.01)	(0.02)
Dissent strategy	1.74***		1.84***	1.73***		1.73***
	(0.07)		(0.07)	(0.07)		(0.07)
Campaign goals	−0.09***		−0.09***	−0.09***		−0.09***
	(0.01)		(0.01)	(0.01)		(0.01)
Level of democracy	0.92***		1.03***	0.92***		0.95***
	(0.14)		(0.14)	(0.14)		(0.14)
Other mass mobilization events	0.33***		0.32***	0.34***		0.34***
	(0.01)		(0.01)	(0.01)		(0.01)
GDP per capita(log,lag)	−0.54***		−0.48***	−0.54***		−0.55***
	(0.05)		(0.05)	(0.05)		(0.05)
Population(log)	1.47***		1.47***	1.53***		1.48***
	(0.13)		(0.14)	(0.14)		(0.14)
(Intercept)	−19.21***	4.73***	−19.96***	−20.30***	4.85***	−19.28***
	(2.19)	(0.06)	(2.20)	(2.19)	(0.06)	(2.20)
AIC	120219.34	143921.86	120277.02	120206.50	143803.53	120197.04
BIC	120512.03	144206.18	120569.72	120506.51	144102.82	120504.36
Log Likelihood	−60069.67	−71922.93	−60098.51	−60062.25	−71861.77	−60056.52
Deviance	12563.92	14967.51	12571.07	12562.36	14955.32	12561.49
Num. obs.	11129	13123	11129	11129	13123	11129
Controls	Yes	No	Yes	Yes	No	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 10: Conditional Effect of Repression and Concessions on Subsequent Mass Participation

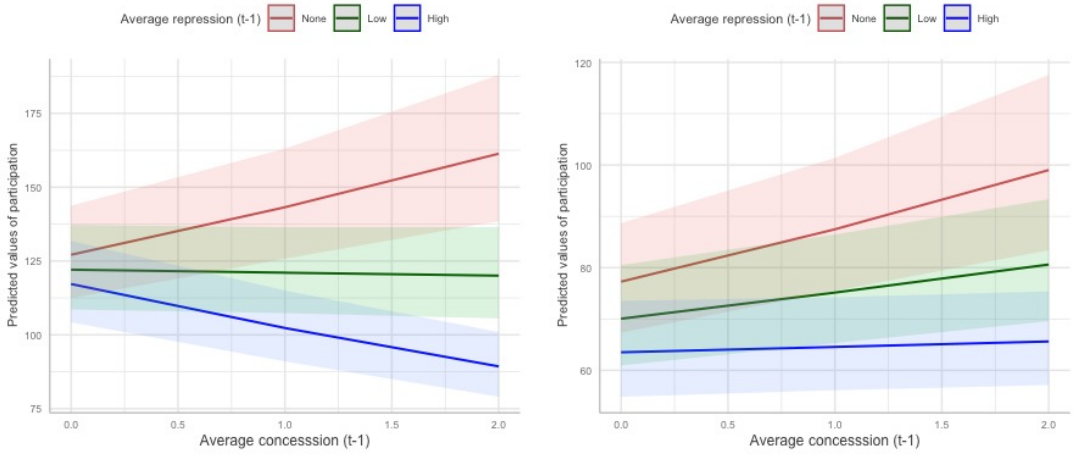

Figure 6: Predicted Values of Participation (No Controls v.s. With Controls)

3.3.2 On Endogeneity through Model-Based Instruments and Two-Stage Residual Inclusion (2SRI) Models

The interpretation of the results in Table 10 suggests a potential endogeneity problem: The association between repression and mobilization is likely the result of reverse causality. To understand this problem, consider that dissenters choose their targets and goals strategically while governments decide how to respond to dissent similarly. In this case, the use of repression may be caused by high mobilization previously, so governments resort to increased repression to contain further mass mobilization.

Governments do not randomly decide to repress since repression entails costs; they only suppress in anticipation that such action will deter dissent. Just as dissenters do not exogenously mobilize, they do so in expectation of repression. Dissenters' decision to protest is also based on prior experience with repression, that is, whether governments have previously employed harsh repressive tactics in response to mobilized dissent. [4].

The effects of repression on dissent are a function of strategic interactions between gov-

[4]The government tends to maintain strategies once they have been adopted. Many studies have shown that the past level of repression is positively correlated with the current level of repression. See Carey 2006; Poe and Tate 1994; Poe et al. 1999; Rasler 1996 and others.

ernment and dissenters and the relative effectiveness of their actions (Pierskella2010). In this sense, potential dissent may be discouraged in anticipation of a repressive response. Those dissenters who are not thwarted by repression tend to be the most determined and resolved.

To address this issue, my empirical strategy here is two-fold. First, because the external instrument is hard to find, I include an "internal" model-based instrument to identify the endogenous regressor through the first-stage heteroskedasticity following Lewbel (1997, 2012). Lewbel's approach exploits the fact that covariances between the first-stage errors and the exogenous variables are not necessarily zero but instead are likely to be heteroskedastic.

Since such heteroskedasticity that arises in the first-stage equation (i.e., the equation predicting repression) does not threaten inference in the second stage equation that predicts the outcome variables (i.e., mass participation), I can construct "internal" instruments by taking advantage of the variance in the first stage in the following steps: (1) in the preliminary stage, I regress the endogenous variable (repression) on all exogenous predictors (X_s) and calculate the residual, we call it ϵ_{it}; (2) calculate the in-sample deviation from the mean for each one of the independent variables from the previous equation ($X_{it} - \mu_x$); and finally (3) multiply the two: $(X_{it} - \mu_x) \times \epsilon_{it}$.

The mean-deviated exogenous variables here are constructed by maximizing the explanatory power of the equation in the preliminary stage. Still, we can assess whether the "Lewbel" instruments here are valid using standard diagnostic tests, and we can choose the one(s) most appropriate to include as a good instrument here.

Next, since the endogenous predictor, in my case, is *repression*, conventional treatments, such as two-stage least squares (2SLS) and Arellano-Bond (GMM) models are difficult to implement as *repression* is expected to interact the other explanatory variable - in this case *concessions*. It is inappropriate to interact the predicted value in the first stage with other explanatory variables later in the model.

Consequently, I employ what is known as the two-stage residual inclusion (2SRI) estimator (Cai, Small, and Ten Have 2011; Hausman 1978; Petrin and Train 2010; Terza 2018) to assess this "conditional effect" of concessions in the second stage. The two-stage residual inclusion (2SRI) estimator has outperformed standard instrumental variable strategies under various conditions (Terza, Basu, and Rathouz 2008).

On the other hand, with two-stage residual inclusion (2SRI), the endogenous predictor - repression - is estimated as a function of a set of potential"instruments" - in the models assumed to be correlated with repression and indirectly related to the outcome variable - mobilization. As such, in this first equation (*auxiliary equation*) - the equation predicting the endogenous variable *repression* - would resemble the equation predicting *repression*, with the addition of the Lewbel instrument. This procedure is done so that the correlation between *repression* and any potential unobserved factors that may influence *repression* at any given time is formalized and augmented as one component of the residual of this first-stage *auxiliary equation*.

Next, in the second stage - the equation predicting the outcome *mobilization* - the residual (from the auxiliary equation) is included as a control function (Wooldridge 2010) while keeping the original measure of repression in this second stage. The procedures provide unbiased estimates of the effects of repression and concessions on mobilization while considering the potential impacts of the unobservables.

All of the 2SRI models included the "internal" instrument created using the Lewbel approach. Using the Lewbel approach, several Lewbel instruments (Z) are available. I use the one that has the most explanatory power in the first stage, based on the variable *campaign goals*, which is one of the control variables included in the models[5]. This variable captures the different stated goals of the contentious event and is positively associated with repression, the endogenous variable. It is at the event level, which also correctly captures the potential endogeneity between repression and mobilization that is likely present *within*

[5]Note that this is the lewbel instrument of campaign goals, not the actual control variable *campaign goals*.

countries across events and months. The results are presented in Table 11.

Table 11 shows the two-stage residual inclusion models (2SRI) predicting mass participation. I show the baseline models from Table 10 in Model 1 and Model 3 for comparison purposes, with Model 2 and Model 4 containing the endogeneity-corrected models, respectively.

The results confirm the findings presented in Table 10 and Figure 6. That is, even when we rule out possible effects of reverse causality, high repression has a more significant deterrence effect on mobilization when the parallel concession is high as well.

Across all four models, the magnitude and direction of variables, including between the baseline and the two-stage residual inclusion (2SRI), are very similar. As can be seen, the endogeneity-corrected impact of repression is statistically significant in both Model 2 and Model 4, with values somewhat greater than in the uncorrected Model 1 and Model 3, respectively.

The "control function" in corrected models is positive and significant, demonstrating that the unobservables factors influencing repression are, on balance, positively correlated with subsequent mobilization of dissent. Once this process is accounted for, the estimate of the causal impact of repression is slightly smaller, suggesting that the causal effect in Table 10 is *underestimated*. Lastly, in Figure 7, I plotted the predicted values of mobilization to show that the results of the conditional effects of repression and concessions are substantively identical to those in Figure 1.

	Model 1 (Baseline) 1	Model 2 (2SRI)	Model 3 (Baseline) 2	Model 4 (2SRI)
Repression(lag)	-0.04^{**}	-0.12^{***}	-0.10^{***}	-0.16^{***}
	(0.01)	(0.02)	(0.01)	(0.02)
Concessions(lag)	0.12^{***}	0.17^{***}	0.12^{***}	0.13^{***}
	(0.02)	(0.03)	(0.02)	(0.02)
Repression(lag):Concessions(lag)	-0.13^{***}	-0.14^{***}	-0.05^{***}	-0.05^{**}
	(0.01)	(0.02)	(0.02)	(0.02)
Dissent strategy			1.73^{***}	1.72^{***}
			(0.07)	(0.07)
Campaign goals			-0.09^{***}	-0.08^{***}
			(0.01)	(0.01)
Level of democracy			0.95^{***}	0.88^{***}
			(0.14)	(0.14)
Other mass mobilization events			0.34^{***}	0.34^{***}
			(0.01)	(0.01)
GDP per capita(log,lag)			-0.55^{***}	-0.55^{***}
			(0.05)	(0.05)
Population(log)			1.48^{***}	1.35^{***}
			(0.14)	(0.14)
Control function		0.16^{***}		0.10^{***}
		(0.02)		(0.02)
(Intercept)	4.85^{***}	5.52^{***}	-19.28^{***}	-16.79^{***}
	(0.06)	(0.05)	(2.20)	(2.21)
AIC	143803.53	124041.40	120197.04	120158.86
BIC	144102.82	124312.90	120504.36	120473.50
Log Likelihood	−71861.77	−61983.70	−60056.52	−60036.43
Deviance	14955.32	12972.94	12561.49	12557.56
Num. obs.	13123	11360	11129	11129
Controls	No	No	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 11: Endogeneity-Corrected (2SRI) Models

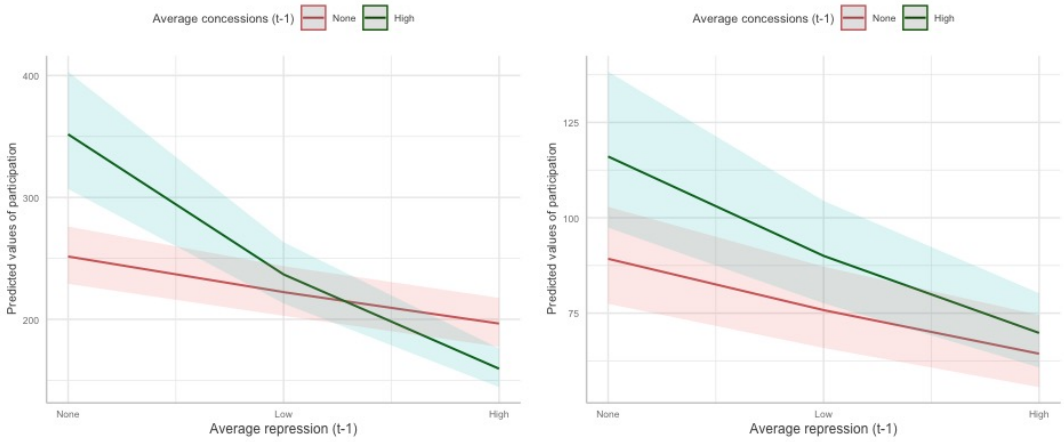

Figure 7: Predicted Values of Participation for 2SRI Models (No Controls v.s. With Controls)

3.4 Conclusions

The analyses conducted in this study offer interesting results to consider in the theory of government responses to dissent. Specifically, the results suggest that repression's deterrence effect on mobilization is contingent upon the impact of concessions. This finding is in line with Lichbach (1987), in which he contends that repression's effect depends upon the government's accommodative policy (i.e., concessions) to the dissident group. More importantly, the results show that high repression has a more significant deterrence effect on mobilization when the parallel accommodation is high. The encouragement effect of concession appears to be contained only when repression is sufficiently high. The findings here are different from what the literature on repression and concessions has predicted. However, the literature has either not considered the interaction effect between repression and concession simultaneously or focused solely on a single country. The limitations might be responsible for the somewhat different results of this research from the existing literature.

The findings force us to reassess the dynamics between states and the mobilization of dissent. More research is needed in understanding the consequences of repression even long after the dissident movement is demobilized (Demirel-Pegg, 2017). Suppose Lichbach (1987)

is correct in his prediction. In that case, regime repression will reduce one group's total activity but likely increase other groups' activity as dissidents adapt strategies one way or the other. Moreover, this research investigates the magnitude of impacts of repression and concessions; future research could look into various types of concessions and how they affect subsequent mobilization differently. Different concessions, either partial or significant, could also vary depending on opposition goals. For instance, Cunningham (2011) found that internally divided self-determination movements tend to receive concessions much higher than unitary ones. Yet, the latter usually tends to work better in settling disputes. Does such a pattern work on movements that have different goals? They are much internal structure within the opposition that could potentially affect the likelihood of receiving concessions, which would be good revenue for future research.

3.5 Additional Analyses

3.5.1 Considering the Nonlinear Effect of Concessions

In this section, I take into account that the impact of Concessions may be nonlinear: concessions encourage the mobilization of dissent, up to the threshold that concessions are sufficient enough to satisfy the protesters. Under this circumstance, further mobilization may not be necessary anymore.

	Model 1	Model 2	Model 3	Model 4	Model 5
Repression(lag)			-0.12^{***}	-0.06^{***}	-0.12^{***}
			(0.01)	(0.01)	(0.01)
Concessions(lag)	0.02	1.16^{***}	1.19^{***}	$-0.29^{\dagger}$	-0.44^{**}
	(0.01)	(0.11)	(0.11)	(0.16)	(0.15)
Concessions(lag)^2		-0.58^{***}	-0.57^{***}	0.17^{*}	0.26^{***}
		(0.05)	(0.05)	(0.08)	(0.08)
Repression(lag):Concessions(lag)				1.95^{***}	2.14^{***}
				(0.16)	(0.16)
Repression(lag):Concessions(lag)^2				-1.02^{***}	-1.08^{***}
				(0.08)	(0.08)
Dissent strategy	1.84^{***}	1.81^{***}	1.70^{***}		1.68^{***}
	(0.07)	(0.07)	(0.07)		(0.07)
Campaign goals	-0.09^{***}	-0.09^{***}	-0.09^{***}		-0.09^{***}
	(0.01)	(0.01)	(0.01)		(0.01)
Level of democracy	1.03^{***}	0.98^{***}	0.88^{***}		0.88^{***}
	(0.14)	(0.14)	(0.14)		(0.14)
Other mass mobilization events	0.32^{***}	0.31^{***}	0.34^{***}		0.34^{***}
	(0.01)	(0.01)	(0.01)		(0.01)
GDP per capita(log,lag)	-0.48^{***}	-0.52^{***}	-0.58^{***}		-0.61^{***}
	(0.05)	(0.05)	(0.05)		(0.05)
Population(log)	1.47^{***}	1.48^{***}	1.54^{***}		1.56^{***}
	(0.14)	(0.13)	(0.13)		(0.13)
(Intercept)	-19.96^{***}	-19.92^{***}	-20.24^{***}	4.91^{***}	-20.40^{***}
	(2.20)	(2.19)	(2.18)	(0.06)	(2.18)
AIC	120277.02	120153.59	120086.32	143560.64	119978.95
BIC	120569.72	120453.60	120393.65	143874.89	120300.91
Log Likelihood	−60098.51	−60035.79	−60001.16	−71738.32	−59945.47
Deviance	12571.07	12559.04	12550.70	14930.24	12539.36
Num. obs.	11129	11129	11129	13123	11129
Controls	No	Yes	Yes	No	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 12: Nonlinear Effect of Concessions

The results from Model 2 and Model 3 in Table 12 and Figure (a) in Figure 8 provide support for this argument. Additionally, Model 4 and Model 5 in Table 12 and Figure (b) in Figure 8 consider how the nonlinearity of concessions vary depending on different levels

of repression used in conjunction with.

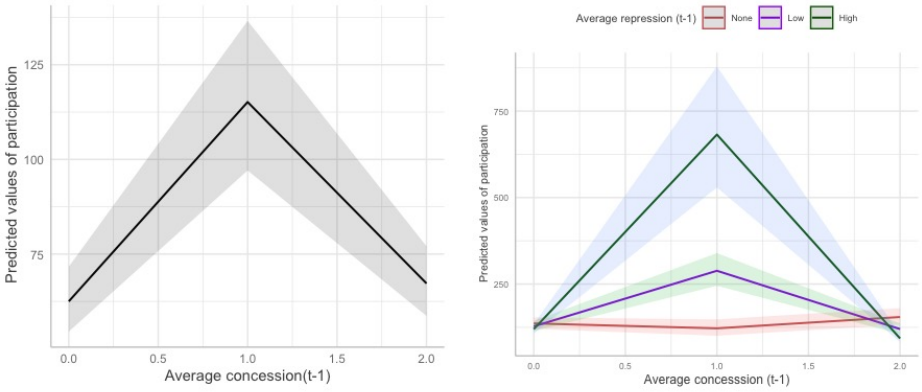

Figure 8: Predicted Values of Participation

3.5.2 How Government Responses Vary by Differing Opposition Types

In this section, I investigate how the main findings may vary depending on the differing opposition tactics. Because repression is not random, we can assume that the relationship between the state and the opposition is strategic interactions (Pierskella 2010; Ritter and Conrad 2016). To consider the dynamics of such interactions between the state and dissent, I consider how government strategies influence dissent and how the opposition reacts in response to various government strategies.

Opposition actors always articulate specific policy demands, which are likely to impact how governments respond accordingly. The states must consider the opponents' abilities and strategic tactics by adapting their strategies accordingly. There are potential systematic differences in the way regimes respond to dissent depending on whether or not there is violence. Generally speaking, governments are likely to respond to nonviolent dissent differently than to violent insurgency.

Existing research suggests that nonviolent resistance can be a powerful tool for ordinary citizens to achieve policy goals and change. Indeed, nonviolent campaigns are often more

likely to gain government policy concessions and succeed than their violent counterparts. The reason is that nonviolent groups are considered to be more credible negotiating partners by the state actors. On the contrary, regimes are more reluctant to deal with violent and radical opposition. Moreover, Cunningham (2011) found that nonviolent self-determination movements (particularly internally divided) are likely to receive concessions. Figure 10 shows the relationship between types of dissent and the likelihood of accommodation within the countries contained in the sample. Nonviolent dissent does appear to be significantly more likely than mixed or violent dissent to receive concessions than violent groups.

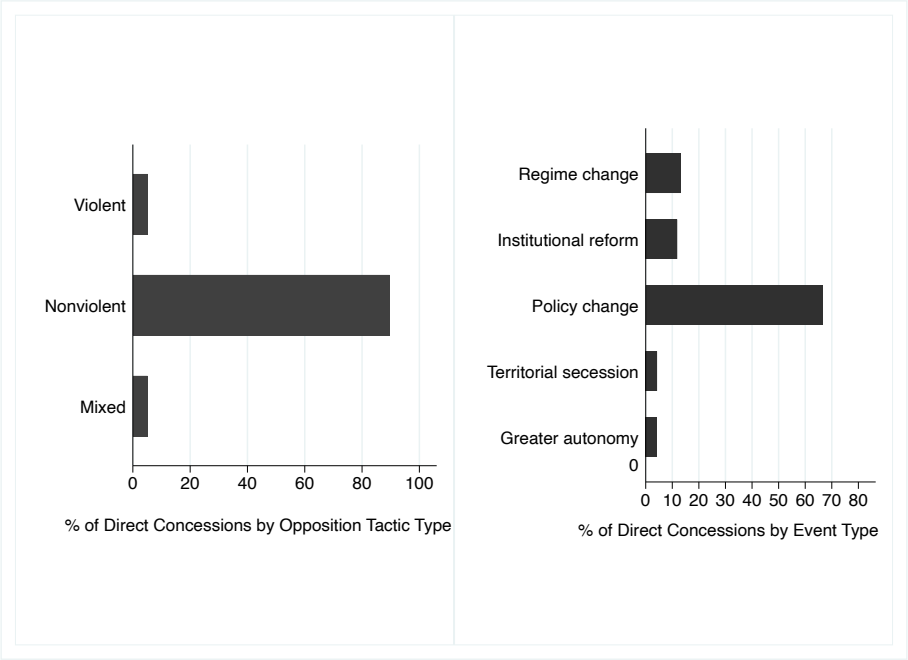

Figure 9: Concessions by Tactic Type and Event Type

I present the results in Table 13. The variable *dissent strategy* is a continuous measure of opposition tactics by month. It ranges between 0 and 1, with 1 indicating primarily nonviolent tactics and 0 suggesting violent tactics principally. With this in mind, Model 1 shows that repression alone has the expected deterrence effect on mobilization, whereas nonviolent opposition tactic appears to have a substantial and positive impact on participation. This finding is consistent with the literature in that nonviolent resistance tends to have a participation advantage, crediting its ability to attract the involvement in a larger size and often broader societal or political bases (Chenoweth and Stephan 2011).

It is worth noting that the effect of *dissent strategy* continues to be positive and strong in its magnitude throughout the models in Table 13. Model 2 shows the effect of concessions alone appears to impact subsequent mobilization in a negative way, contrary to what the "inconsistency hypothesis' in the literature posits. The negative impact of concessions does not change when we consider it alone with repression and *dissent strategy* independently in the model (Model 3).

However, my primary interest is in the three-way interaction term between repression, concessions, and *dissent strategy*. The results are shown in Model 4 and Model 5. Interestingly, when we consider the three-way interaction term, repression does not seem to impact subsequent mobilization significantly. In contrast, the effect of concessions on subsequent mobilization becomes consistently negative.

Like the main analyses, relying on coefficients to determine statistical significance is insufficient for models with interaction terms. To evaluate the interaction term and its effect more substantively, Figure 10 presents the predicted values of participation with a variety of configurations between repression, concessions, and opposition type. Because the variable *dissent strategy* shows the opposition tactic types, which can be seen as the proportion of nonviolence in a given month. From left to right, Figure 10 shows variations in participation when *dissent strategy* takes a value of 0 (violence only), 0.5 (mixed), and 1 (nonviolence only).

The axis is the level of repression ranging from none to high. In each panel, two lines represent either no concessions or a high level of concessions achieved as a comparison. Nonviolence appears to attract the highest participation than violence and mixed counterparts. As the repression of nonviolent groups increases, the effect of concessions seems to decrease participation significantly. The impact rate is substantively higher than when repression combines with no significant concessions, supporting Hypothesis 2.

The findings show how repression becomes even more effective in deterring mobilization

when the government offers parallel concessions. In this case, concessions are used as a bargain and positive incentives to de-escalate and even potentially demobilize for nonviolent dissent. The findings here thus provide further evidence about the deterrence effects of both repression and accommodation.

	Model 1	Model 2	Model 3	Model 4	Model 5
Repression(lag)	-0.07^{***}		-0.05^{***}	0.05	0.08
	(0.01)		(0.01)	(0.09)	(0.09)
Concessions(lag)		-0.08^{***}	-0.06^{***}	-0.82^{***}	-0.84^{***}
		(0.01)	(0.01)	(0.23)	(0.23)
Dissent strategy(lag)	2.06^{***}	2.10^{***}	2.05^{***}	2.42^{***}	2.17^{***}
	(0.07)	(0.07)	(0.07)	(0.14)	(0.15)
Repression(lag):Concessions(lag)				0.55^{***}	0.55^{***}
				(0.12)	(0.12)
Repression(lag):Dissent strategy(lag)				-0.04	$-0.19^{\dagger}$
				(0.09)	(0.10)
Concessions(lag):Dissent strategy(lag)				0.93^{***}	0.98^{***}
				(0.24)	(0.24)
Repression(lag):Concessions(lag):Dissent strategy(lag)				-0.70^{***}	-0.62^{***}
				(0.13)	(0.13)
Campaign goals					-0.08^{***}
					(0.01)
Level of democracy					0.95^{***}
					(0.14)
Other mass mobilization events					0.33^{***}
					(0.01)
GDP per capital (log,lag)					-0.54^{***}
					(0.05)
Population(log)					1.52^{***}
					(0.14)
(Intercept)	2.78^{***}	2.64^{***}	2.76^{***}	2.38^{***}	-20.73^{***}
	(0.09)	(0.09)	(0.09)	(0.15)	(2.21)
AIC	142662.81	142644.69	142635.01	142532.39	120158.25
BIC	142954.41	142936.29	142934.09	142861.37	120487.53
Log Likelihood	−71292.40	−71283.34	−71277.51	−71222.19	−60034.13
Deviance	14815.91	14814.61	14813.21	14802.08	12557.21
Num. obs.	13056	13056	13056	13056	11129
Controls	No	No	No	No	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 13: Conditional Effect of Repression, Concessions, and Dissent Strategy on Subsequent Mass Participation

However, government inconsistency - a combination of both repression and concessions - increases mixed or violent dissent. In fact, as the proportion of nonviolence decreases, repression alone, albeit overpowering, does not seem to have much of a deterrence effect on opposition mobilization. When repression is used with concessions, it appears to fuel more participation for violent or mixed dissident groups.

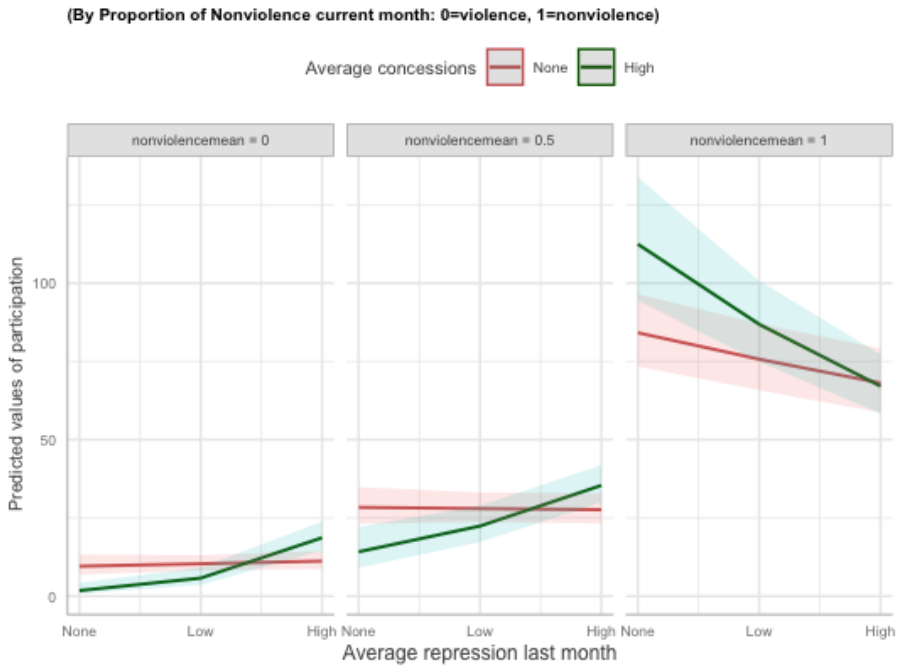

Figure 10: Predicted Participation by Dissent Strategy

I argue that this is because, for violent dissent, accommodations do not provide a positive incentive for opposition to demobilize for two reasons. For one thing, regimes rarely grant significant concessions to violent dissent because they do not see violent groups as credible negotiating partners. Likewise, radical opposition groups are also afraid that governments, who promise accommodations, will likely renege later.

For another, the costs to demobilize for violent oppositions tend to be much higher than those for peaceful protesters, who can leave without repercussions. Radical dissent, particularly those who challenged repressive regimes, rarely drop out without being severely punished or retaliated by the states. Worrying about repercussions while not securing substantial concessions makes it far less likely for radical oppositions to consider demobilization.

Consequently, such a dilemma drives violent dissent, who has no exit option, to continue mobilizing.

3.5.3 Endogeneity-Corrected Models for Concessions

	DV: Participation					
	Model 1 (Baseline) 1	Model 2 (2SRI)	Model 3 (Baseline) 2	Model 4 (2SRI)	Model 5 (Baseline) 2	Model 6 (2SRI)
Repression(lag)			−0.12***	−0.12***	−0.10***	−0.09***
			(0.01)	(0.01)	(0.01)	(0.01)
Concessions(lag)	0.02	0.26*	0.05***	0.28*	0.12***	0.46***
	(0.01)	(0.12)	(0.01)	(0.12)	(0.02)	(0.13)
Repression(lag):Concessions(lag)					−0.05***	−0.06***
					(0.02)	(0.02)
Campaign goals	−0.09***	−0.10***	−0.09***	−0.09***	−0.09***	−0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Dissent strategy	1.84***	1.92***	1.73***	1.80***	1.73***	1.83***
	(0.07)	(0.08)	(0.07)	(0.08)	(0.07)	(0.08)
Level of democracy	1.03***	1.12***	0.92***	1.01***	0.95***	1.08***
	(0.14)	(0.15)	(0.14)	(0.15)	(0.14)	(0.15)
Other mass mobilization events	0.32***	0.34***	0.34***	0.37***	0.34***	0.38***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
GDP per capital(log,lag)	−0.48***	−0.47***	−0.54***	−0.53***	−0.55***	−0.54***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Population(log)	1.47***	1.49***	1.53***	1.55***	1.48***	1.50***
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
Control function		−0.24*		−0.24*		−0.33**
		(0.12)		(0.12)		(0.12)
(Intercept)	−19.96***	−20.76***	−20.30***	−21.05***	−19.28***	−20.19***
	(2.20)	(2.21)	(2.19)	(2.21)	(2.20)	(2.21)
AIC	120277.02	120275.53	120206.50	120205.18	120197.04	120192.84
BIC	120569.72	120575.54	120506.51	120512.50	120504.36	120507.48
Log Likelihood	−60098.51	−60096.77	−60062.25	−60060.59	−60056.52	−60053.42
Deviance	12571.07	12569.90	12562.36	12561.14	12561.49	12559.74
Num. obs.	11129	11129	11129	11129	11129	11129

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 14: 2SRI Models for Concessions

4.0 Government Responses and Group Efficacy Pathway to Collective Action : Evidence from Thailand

Since the military coup in 2014, Thailand has plunged deeper into an army junta dictatorship that employs a wide range of repressive tactics to repress domestic dissent. These regime tactics include a host of draconian laws that allow the government to deter potential challengers by detaining dissidents or activists and charging them with harsh crimes. The repressive tactic also extends to ordinary Thai citizens, whose everyday online activities such as posting on social media sites could put them in severe penalties. Several laws were allowing the Thai government to have such extensive authority. For instance, the regime's martial law previously put in place right after the 2014 coup made it easy for the state to limit citizens' freedom of expression and movement. The internet security law that was passed in 2019 gave sweeping powers to the state's cyber agencies over judicial oversight and potential abuse of power. The Lèse-majesté law prohibits any insults, defamation of the Thai monarchy. And most recently, the emergency decree is used to prevent domestic or international movements in the name of measures that aim to prevent a resurgence in COVID-19 infections. Under the current political climate, it is essential to keep in mind that even a low-profile dissent activity such as sharing information about politics puts ordinary citizens at significant risk of potential penalties from the state.

However, growing public disapproval of Thai Prime Minister Prayuth Chan-Ocha's performance also fueled the anti-government protests. The tipping point was the dissolution of the opposition party Future Forward Party in early February of 2020. Both the pandemic and anti-government sentiments pose a challenge for Thailand's pro-democracy movement. Thailand is just a few examples of activists engaging in collective action in repressive contexts with uncertain outcomes and considerable personal risks along with many other countries globally. How do the pro-democracy movements develop and attract participation under such a harsh political climate? Collective action has long been recognized as a potentially powerful way to promote and implement change in societies. What motivates people to

participate in collective action under such risky environments? What are the individual differences that correlate with perceived risks and collective action intentions? This research addresses these questions.

What drives some citizens to take part in collective action while others avoid such action at all cost has attracted social science research for decades. (Olson 1965; Klandermans 1997; Aytac et al. 2017; Young 2019). Sometimes individuals feel the need to rush to the streets and protest for change. However, more often, group members may share similar anti-government sentiments yet decide to do little or nothing (Klandermans 1997). The reactions of ordinary citizens to the same contention events are highly diverse. The article explores what separates social movement participants from non-participants after observing repression or other government responses.

Existing literature has explored the role of emotion and information in explaining why individuals have heterogeneity in reactions to government repression (Young 2017, 2019; Aytac, Schiumerini, and Stokes 2017; Pop-Eleches and Way 2020). But what other alternative mechanisms could be at play in linking government responses and collective action intentions? This article explores the role of group efficacy in shaping individuals' reactions to government responses. Group efficacy is a strong predictor for collective action (van Zomeren et al., 2008). A stronger belief in group efficacy indicates that individuals are more focused on the group's capacity in achieving group goals through a joint effort of collective action (Bandura 1995, 1997). Sometimes, when members of the group perceive themselves as having little efficacy to bring about change, collective action intentions may be limited as the perceived risks of participation are too high despite strong feelings of anger (Folger, 1987; Martin, Brickman, Murray, 1984; Mummendey, Kessler, Klink, Mielke, 1999). According to the theory of collective action (Olson 1965; Hardin 1982), individuals may refrain from participating in collective action activities when they expect repression, which is a negative selective incentive (Opp and Roehl 1990). However, individuals are inclined to participate in social movement activities even when perceived repression risks are high (White, 1989; Opp and Roehl, 1990). The divergent individual reactions suggest there may be multiple

pathways that explain varied collective action tendencies among individuals. Drawing insights from social psychology and the case in Thailand, I focus on the alternative mechanism through which government responses can influence individuals' collective action intentions: group efficacy.

Existing literature from social psychology and state responses has somewhat developed separately. Social psychological literature focuses on how group efficacy predicts collective action intentions (Bandura 1997; van Zomeren et al. 2004, 2008; Tausch et al. 2011), overlooking collective action in repressive contexts, where individuals face substantial risks associated with participation and government responses.

Micro-level political science research emphasizes how and why individuals react differently to acts of repression (Young 2017, 2019; Aytac, Schiumerini, and Stokes 2017; Pop-Eleches and Way 2020). Yet repression is only one of many tools regime leaders have in response to domestic challenges. Individuals may react to various government actions such as repression, concessions, and a mix of both differently. For instance, conventional wisdom suggests that government concessions increase the efficacy beliefs that more people will join in protests (Rasler 1996; Belgioioso et al. 2018). Yet, such a notion has not been empirically tested at the individual level. Individuals may react to government concessions differently because each person has different perceptions about how much accommodations are sufficient and how much more can be achieved through group actions.

To test my hypotheses about how group efficacy beliefs mediate the relationship between government responses and collective action intentions, I design a survey experiment that I administered on a sample of 583 respondents conducted online in March 2011 in Thailand. The experimental vignette included a description of regime responses along with images that cued either (a) repression or (b) concessions or (c) a compound of both repression and concessions. These are the three treatments in my design, which I then compare with a generic control condition. I also conducted an encouragement design to induce group efficacy beliefs, which is the mediator in this design. I assess whether exposure to the treatments correlates

with collective action intentions among individuals. Therefore, my experiment is designed to evaluate the mechanism - group efficacy beliefs - through which each treatment may influence subsequent collective action intentions.

Contrary to my theoretical predictions, the finding suggests that exposure to repression may increase (rather than decrease) group efficacy beliefs. Whereas exposure to concession may decrease group efficacy beliefs. Although the findings do not reach statistical significance, the experimental evidence in this paper, overall, provides support to the theoretical expectation that incentives for participation could vary significantly across individuals, potentially through the mediating impact of group efficacy.

The inquiry makes at least two contributions to our understanding of collective action at the individual level. First, I join a growing body of research on repression and dissent in repressive settings that uses experimental methods to uncover the mechanism under which repression influences protest behavior at the individual level. I add to this body of research on how individuals react to concessions and other government responses differently. Second, the evidence provides an alternative explanation of why individuals sometimes decide to participate in backlash mobilization and sometimes do not (Young 2019; Aytac et al. 2017). In sum, the experimental evidence provides insights into how and why citizens mobilize against threatening regimes despite the risk of high personal costs and how the particular regime dynamic influences the dissent-repression relationship substantially.

4.1 Literature and Theory

The section proceeds as follows. First, I present literature on how repression and concessions, respectively, may impact subsequent collective action overall and how such relationships should play out when exposed to different government responses with testable hypotheses. Next, I introduce the concept of group efficacy, its impact on collective action

intentions, and how group efficacy can be a mechanism linking government strategies and mobilization. Finally, I propose a theory relating repression and concessions to group efficacy beliefs with a set of testable hypotheses.

4.1.1 Repression, Concessions, and Dissent

There are few strategies a government can use to confront domestic dissent. The literature suggests that, in general, repression should have a direct negative impact on subsequent mobilization because repression, as negative sanctions, raises the costs of collective action for potential dissenters. State authorities that repressively respond to dissent tend to expect that repressive action would effectively deter the mobilization of dissent and protect the status quo. Repression is believed to prevent mobilization by raising the associated participation costs (Tilly 1978; Lyall 2009). However, in certain instances, repression could backfire and increase anti-government mobilization even more (Davenport 2007; Sullivan and Davenport 2012; Hess and Martin 2006). Both the backlash and the deterrence effects of repression have been well documented in the literature. Such contradictory findings regarding repression's impact have been referred to as the "punishment puzzle" in the literature (Davenport 2007c).

Existing studies tend to focus on how individuals have different reactions to acts of repression. Very few investigates how people respond to other regime strategies. Other regime responses such as concessions can likewise influence potential individual participation positively or negatively.

For instance, governments can grant concessions to the opposition. Accommodations can be understood as positive inducements to persuade the opponents to comply (Danilovic and Clare 2021). Common wisdom suggests that concessions can encourage mobilization because they increase personal expectations about the likelihood of success as protesters get encouraged to accomplish further concessions by protesting more (Goldstone and Tilly 2001; Belgioioso et al. 2018; Rasler 1996; Carey 2010). However, Inclan (2009) argues that accommodations will have to be substantial enough to address the opposition's needs to dampen

protest participation.

Moreover, in many instances, governments do not resort to a single tactic to respond to dissent. They are more likely to use a combination of repression and concessions. Existing studies found that inconsistent government responses (i.e., a mix of repression and concessions) tend to fuel dissent significantly (Lichbach, 1987; Rasler, 1996; Belgioioso et al., 2018).

Yet, such a notion that a mix of repression and concessions may encourage dissent has not been empirically tested at the individual level. Individuals may likely react differently to concessions on all accounts, given their different perceptions about the thresholds of accommodations. That is, how many accommodations are sufficient to satisfy the demands? In other words, the level of concessions also matters as it can vary substantially. A key motivation of this paper is that regimes are frequently reluctant to grant concessions because they fear that concessions may encourage individuals to participate in protests to demand more.

The effect of repression, concessions or a mix of government responses can also vary mainly by the targets of the said response. As Popovic and Miller (2015) eloquently put it, numbers tend to be the weapon you have leverage on in popular uprisings. Therefore, attracting individual participation becomes significantly crucial and sometimes decisive as ordinary citizens may be the key to large-scale mobilization as the significant mobilization potentials (Klandermans 1997).

Drawing insights from prior research, I present the hypotheses regarding repression or concessions' impact on mobilization respectively:

H_1a(Repression treatment): Individuals in the repression treatment are less likely to express dissent.

H_1b (Concessions treatment): Individuals in the concessions treatment are more likely to

express dissent.

I expect that individuals' propensity to dissent, when exposed to the compound treatment (both repression and concessions), would revert to pretreatment attitudes also captured by the control group.

Yet, what potential mechanisms could explain such backlash impact of repression and the discouraging effect of concessions on mobilization? In understanding the links connecting repression with dissent, many studies have attempted to explore the mechanisms under which repression increases individuals' willingness to dissent at the individual level. Emotional reactions have been regarded as the link connecting repression and backlash mobilization (Young 2017, 2020; Aytac et al. 2017; Dal and Nisbet 2020). In particular, anger appears to increase an individual's willingness to dissent (Miller and Krosnick, 2004; Ryan, 2012; Weber, 2013; Pearlman, 2012). When individuals observe protesters being violently attacked by police and other unjust treatments, this tends to trigger emotional responses that prompt individuals to react and take actions with empathetic anger and outrage. The emotion of fear, to the contrary, is found to reduce willingness to dissent (Young 2019) significantly. Group-based anger's pathway to collective action has been well documented in the social psychology literature (Tausch et al., 2011; van Zomeren et al., 2008).

While the emotional pathway to collective action sheds light on the mechanism under which repression affects individuals' willingness to dissent, it does not explain why group members are angry yet decide to do little or nothing under many circumstances (Klandermans 1997). What are alternative mechanisms under which repression influences individuals' willingness to dissent? Could an alternative mechanism help explain why, under some conditions, concessions do not encourage mobilization but instead discourage it? The following section, which is the focus of this paper, explores such a potential mechanism - group efficacy.

4.1.2 Group Efficacy Pathway To Collective Action

It has been well-documented that group efficacy increases collective action intentions. Group efficacy is often referred to as "one's collective belief that group-related problems can be solved by collective effort (Bandura, 1995, 1997)." The key is the highlighted "need for members of disadvantaged groups to believe that their group's position is changeable (Gamson 1992; Klanderman 1997; Tausch et al. 2011). In this line of thought, individual decisions to engage in collective action are based on their choices to maximize gains and minimize losses (Olson 1968). Klanderman (1984) and Finkel and Muller (1998) found that if people believe that their efforts will make it more likely for the relevant goals to be achieved, they are more likely to engage in such activities.

A considerable body of research in social psychology suggests that group efficacy beliefs are a strong predictor of individuals motivation to engage in collective action, presumably reflecting a sense of beliefs in their capacity to reach collective goals together with other people (Bandura 1997; van Zomeren et al. 2004, 2008; Tausch et al. 2011;). For instance, in experimentally manipulating students' group efficacy beliefs, van Zomeren et al. (2010) found that it significantly increases students' collective action intentions against raising tuition fees. Like van Zomeren et al. (2010), most research focuses on how group efficacy beliefs facilitate normative collective action intentions (i.e., actions that conform to the existing social system such as protest or voting). While other similar work, in the meanwhile, shows that low efficacy belief is associated with radical and non-normative (i.e., actions that violate existing social system such as violence or terrorism, as distinguished by Wright et al. 1990b) collective action intentions. This happens when individuals feel that the group they belong in is powerless to effect change or influence relevant political decisions (Tausch et al. 2011; Bandura 2000; Wright 2001).

The role of efficacy has also been widely emphasized in its effect on political participation (Wolfsfeld 1986; Niemi et al. 1991; Lee 2005). Yet, the impact of group efficacy beliefs on collective political action has not been widely integrated into the study of state re-

pression and social movement in political science. Seligson (1980) found that group efficacy was positively related to Costa Rican peasants' participation in land invasions and other institutionalized political activities, while low group efficacy produces mobilized participation such as protests. More recent work by Young (2020) examines how self-efficacy affects the perception of repression by increasing the emotion of anger. Although closely related, self-efficacy is essentially a concept distinct from group efficacy. The former focuses on an individual's self-perception of their abilities. At the same time, the latter emphasizes the belief about political institutions and the group's potential in achieving goals, rather than perception about individuals' abilities (See more from Niemi et al. 1991; Bandura 2000).

One of the reasons why group efficacy has not been widely explored in the study of repression and its effect, I suspect, may be because there is still limited agreement on how group efficacy should be measured (Whiteoak et al. 2004; Bandura 1997). There are currently two approaches to measuring group efficacy, as proposed by Bandura (1997, 2000). One involves aggregating individuals' assessments of their efficacy when performing group tasks, and the other aggregates individuals' estimates of their group's capacities as a whole[1]. Another reason may be that group efficacy is also closely related to self-efficacy and political efficacy, with which the measurements often somehow overlap with each concept (Niemi et al., 1991). Moreover, the notion of group efficacy, just as psychological reactions, is difficult to be manipulated experimentally (Imai et al. 2013; van Zomeren et al. 2010) but is also necessary to make valid causal inference, see more discussion on this empirically in section 4.3.3.

To sum up, it has been widely established in the social psychology literature that group efficacy gives individuals a sense of collective strength and power based on which they believe in transforming the group's situation or destiny (Drury and Reicher 2005). Consequently, the stronger one's sense of the group's efficacy, the more likely individuals are to engage in collective actions to effect change (Hornsey et al., 2006).

[1]For a review on the existing approaches to measuring group efficacy, see Whiteoak et al. 2004 for a more detailed discussion.

How does this well-established notion that group efficacy beliefs facilitate collective action intentions apply when encountered with government actions aiming at thwarting the group's efforts to effect changes? Social psychological research on group efficacy tends to overlook collective action in highly risky or repressive environments, where collective actions involve personal risks. While group efficacy has been a strong predictor in collective actions, how does this relationship apply when individuals pondering whether to engage in collective action face substantial personal risks associated with government sanctions such as repression? It is the purpose of this research to investigate this question. Specifically, drawing insights from social psychology literature and direct observation in Thailand, I argue that the role of group efficacy may condition individual reactions to the varying government responses.

4.1.3 Government Responses as Perceived Risks and Impacts on Group Efficacy

4.1.3.1 Linking Government Responses with Group Efficacy

In line with theories from relative deprivation theory (Gurr, 1970) and Ayanian and Taucsch (2016), I consider that risk perceptions due to repression or other regime responses are correlated with group efficacy beliefs in either positive or negative ways. A stronger sense of group efficacy beliefs indicates that individuals are more focused on achieving group goals through joint effort or collective action (Bandura 1995, 1997). Based on the intuitive assumption, we would expect that perceived risks due to repression may negatively predict group efficacy. The rational choice model of collective action (e.g., Olson 1965; Hardin 1982) views risks (i.e., repression) faced through participation as disincentives that should reduce activism. Subsequent work on social movements examining the impact of government repression also views perceived risks due to repression as raising the costs of collective action deemed to deter subsequent mobilization (McAdam 1986). For instance, protesters are likely to perceive repression as the government authorities' resolve and determination to resist the opposition (Muller 1985). One of the primary advantages of state coercion is often to prevail by projecting greater resolution (Schelling 1966; Danilovic and Clare 2021).

Although repression deters mobilization has been well-studied, the work investigating the mechanism under which repression affects mobilization negatively has been relatively scant. This paper fills this gap by examining how exposure to repression affects collective action behaviors differently via the varying group efficacy beliefs.

I argue that when the perceived risks due to participation are high, as when exposed to state repression, individual's beliefs that their efforts through group actions can contribute to action success or produce any desired change diminish significantly. The anticipated sanctions imposed by the state authorities can signal their resolve and capabilities to resist protesters' demands. Consequently, repression deters any subsequent mobilization due to the decreased group efficacy beliefs.

Since concessions are considered benefits, such positive inducements may persuade the protesters that the gains from the state authorities from compliance may be more significant than from noncompliance. Consequently, concessions are more likely to increase group efficacy beliefs. For instance, concessions raise the expectation that more people will join, increasing group efficacy beliefs (Belgiosolo et al., 2018). Likewise, government concessions to highly visible opposition groups enhance their perceived influence and increase the perception that more individuals will join them and have a higher likelihood of movement success (Muller and Opp 1986). Both arguments are derived from the value-expectancy models (Klandermans 1984; Muller and Opp 1986; Finkel, Muller and Opp 1989) that incentives for individual participation often come from the expectation of receiving benefits of the collective good (i.e., achieving the movement goals).

Based on the discussions, I first present the hypotheses linking government responses and group efficacy:

H_2a: Individuals in the repression treatment are more likely to experience a *decrease* in group efficacy beliefs.

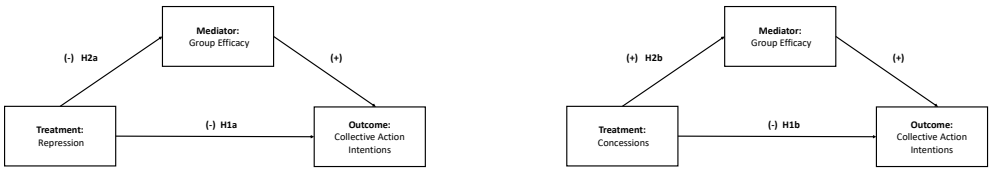

Figure 11: Diagrams Illustrating the Proposed Hypotheses

H_2b: Individuals in the concessions treatment are more likely to experience an *increase* in group efficacy beliefs.

In sum, I argue that repression decreases group efficacy by increasing the perceived risks related to participation. Conversely, concessions encourage group efficacy. Policy concessions granted by the state could signal to the protesters that the likelihood of collective action success is high; hence, more people are willing to join in subsequent mobilization as they are more optimistic about their actions to change. I summarized the proposed two sets of hypotheses in Figure 11.

4.2 Thailand Context

This study is carried out in Thailand, a country with a long history of political unrest and protest. The most recent pro-democracy demonstrations began in early 2020 with protests against Prime Minister Prayut Chan-o-cha and turned into a pro-democracy movement that is currently still ongoing. Since the military staged a coup and took over in 2014, Thailand's scores on the Electoral Democracy Index from the Variety of Democracy data project (VDem) has steadily declined every since (Figure 12). In 2020, Thailand has a score of 0.19 on the Electoral Democracy Index from the VDem and was considered 'partly free,' which has relatively low political and civil liberty scoring, Freedom House's Freedom in the World index. Given the military coup in 2014, which is the 12th since the country's first coup in

1932, several restrictions on political and civil liberties have been imposed by the military government, increasing the level of political repression in the country. This change in the political context in Thailand, together with the ongoing pro-democracy movement since 2020, creates an opportunity to study how ordinary citizens make decisions about dissent.

The current prime minister Prayut Chan-o-cha was the National Council for Peace and Order (NCPO). This military junta was responsible for staging a coup against the caretaker government of Yingluck Shinawatra on 22 May 2014. Since then, he served as the Prime Minister of Thailand and other essential government positions while being re-elected again as the Prime Minister in 2019. The military established a junta named the National Council for Peace and Order (NCPO) to govern the country.

Since the military took over the government in 2014, the military junta went over several measures which severely damaged the democratic practices in Thailand to secure power. In 2014, the military junta dissolved the democratic government and the Parliament while ordering the judicial branch to operate under its directives. It also repealed the 2007 constitution, which allows the junta to impose restrictions such as declaring martial law, banning political parties, organizations, and gatherings, arresting or detaining anti-government dissidents, limiting media and internet access, and others. This power granted to the military junta severely undermined the political and civil liberties in Thailand.

The protests were initially triggered by the government's decision to dissolve the opposition party, Future Forward Party (FFP), in late February 2020, which was often critical of the government and the political party in power, Palang Pracharat Party. The initial protests have three significant demands: the dissolution of Parliament, ending intimidation of the people, and drafting a new constitution. The Thai government initially responded to the mass protests by declaring a state of emergency in Bangkok, increasing its emergency power to arrest and intimidate protesters. Later in October 2020, prime minister Prayut Chan-o-cha appeared on the television, appealing the government's willingness to lift the state of emergency as a show of good faith. While at the same time, he repeatedly urged

the protesters, instead of protesting, to seek out institutional channels for their grievances[2]. In November, the Parliament also passed two constitutional amendment bills as a signal to appease the protesters. Yet significant demands are in no way being met, which resulted in more protest activities and confrontations with the government authorities and police forces.

In the face of a growing pro-democracy movement since 2020 demanding both political and monarchy reforms, the Thai government stepped up with a series of repressive measures to the protesters. Using various government-imposed restrictions, the Thai government cracked down on politicians, protesters, and most notably, their leaders. Many were subsequently charged and arrested due to illegal assembly, insult of the monarchy, and sedition. In many instances, peaceful protesters were confronted by the riot police forcibly with repressive measures such as the use of water cannons, rubber bullets, as well as teargas grenades. Unfair treatments of the peaceful protesters and harsh forces used by the police are frequently reported and have been one of the reasons that drove protesters on the street [3].

In the survey experiment conducted in this study, respondents are asked a question of their perception of police tactics used by the police, specifically on protesters; the results are shown in Figure 13. The perception that police tactics are 'unjustified' or 'somewhat unjustified' is shared across party lines. Nearly 58% of the respondents affiliated with the incumbent Palang Pracharat Party reported that police tactics are 'unjustified' against unarmed protesters. In contrast, 80% of the respondents who voted for the main opposition Future Forward party reported the same. Peaceful protesters were frequently reported injured, arrested, harassed, or threatened by the police force in confrontations. For instance, in one of the most intense confrontations in November, unnecessary use of water cannons and tear gas by the police to forcibly disperse a peaceful demonstration, leaving 55 Reported Injured. The United Nations Secretary-General António Guterres condemned the incident for the Thai government's use of excessive force against peaceful protesters[4]. Peaceful protesters

[2]Link here

[3]Thailand: Rights Crisis Rapidly Worsens. *Human Rights Watch.* `https://www.hrw.org/news/2021/01/13/thailand-rights-crisis-rapidly-worsens#`

[4]Thailand: Rights Crisis Rapidly Worsens. *Human Rights Watch.* `https://www.hrw.org/news/2021/01/13/thailand-rights-crisis-rapidly-worsens`

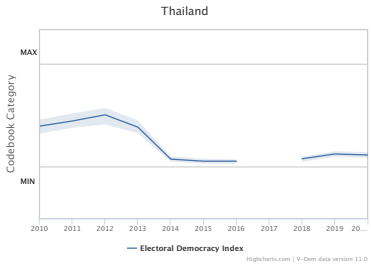

Figure 12: Thailand's Electoral Democracy Index Scores (Vdem), 2010-2020

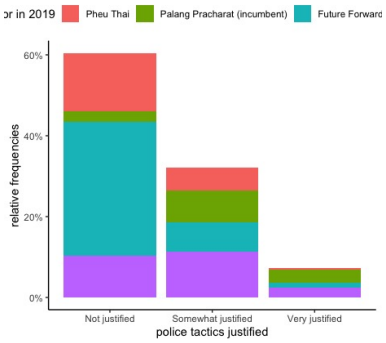

Figure 13: Do Police Tactics on Protesters Justified? By Party Voted in 2019

and activists were also charged with alleged crimes concerning the ramping up of protests, some of whom were denied bail for several weeks, and some are faced with a lifetime in jail.

The government also tightened up its censorship efforts by limiting multiple social media platforms and political expression. Protesters were frequently arrested and charged with violating the Emergency Decree and Lèse-majesté law. Even the royal Army is restricted with their political expression [5]. On social media sites such as Facebook and Twitter, there is no room for freedom of expression. Individuals could easily get charged under vague laws or be harassed by government authorities. Generally speaking, the Thai authorities' repressive measures are extensive and strict, especially restricting citizens' political and civil liberties. Activists in Thailand are at risk as authorities escalate their crackdown on peaceful protests. Reports of arrests, harassment, and injury are common for those who came in direct contact with the riot police forces, yet no excessive forces intended to result in deaths or casualties have been observed. At the same time, Thai's pro-democracy movement has been

[5] Army underlines restrictions on soldiers' political expression *Prachatai Englisgh*. `https://prachatai.com/english/node/9170`

relatively consistent in its commitment to nonviolence resistance. No major violence aiming at purposely inciting riots, damaging properties, using deadly weapons instances from the protesters' side has been reported.

A couple of important developments in Thailand contributes to this particular political climate. First, Thailand has the so-called Lèse-majesté (a French term meaning "to do wrong to majesty") law, which considers it illegal to insult, defame or threaten the royal family [6]. During the pro-democracy movement, the Thai government has frequently cited the violation of the lèse-majesté as a reason to arrest protesters[7]

Second, the new Cybersecurity Act, which came into full effect in 2019, severely restricts the freedom of speech in Thailand. The law was frequently used as one of the tools by the government to infringe on citizens' political rights and freedom. For instance, it permits the government authorities to track, monitor legally, and digital access data if it deems that 'cyber threats' - broadly defined - are damaging to the critical digital infrastructure of the country [8].

Both the Lèse-majesté law recently put in full force and the New Cybersecurity Act of 2019 allow the Thai government to impose internet censorship, take control of the media, and freely arrest and harass the protesters. These encroachments on civilians' freedoms and rights make it easier for state authorities to target and sanction movement activists and leaders as they are constantly being arrested, citing violations of the two laws. The pro-democracy movement has recently come to a stall as significant leaders have been silenced and falsely accused detained then due to various charges [9].

Given these developments, I would argue that indiscriminate repression is unnecessary as the government has the capacity and tools to target critical leaders and activists directly.

[6]See more from `https://news.un.org/en/story/2021/02/1084112`
[7]Thailand Uses Controversial Lèse-Majesté Law Against Pro-Democracy Protesters.
[8]Thailand's Creeping Digital Authoritarianism.
[9]Thailand protests: What's next for the stalled pro-democracy movement?

As noted earlier, because pro-democracy protesters have been relatively disciplined in committing to the principle of nonviolent resistance, no major violence from the protesters' side is reported. This fact likely poses a direct contrast with how riot police treated the peaceful protesters. The police's unfair and harsh treatment of protesters was being highlighted and caused a backlash among the public to push for better treatment and the release of jailed leaders and activists[10]. At its peak, the pro-democracy demonstrations attracted nearly 100,000 participants whose demands targeted Thailand's most sacred institution: the monarchy (Sombatpoonsiri 2021).

Third, similarly, the Thai government uses coronavirus (COVID-19) shutdown policies as an opportunity to suppress the political opposition and to clamp down on free speech. Given these developments, I expect that unfairness and injustice observed during government authorities' multiple repressive measures to discourage or deter protesters are particularly likely to anger the movement sympathizers. The unfair treatment of protesters by the state forces calls into question whether or not such government responses are legitimate or just, which often is central in motivating individuals to collective action, as my theory proposes. The repression that is considered illegitimate, especially those that direct at legal protest activities and against unarmed protesters, is often perceived as illegitimate (Opp and Roehl 1990) and is likely to lead to more people participating in subsequent collective actions. I argue that the higher perception of risks associated with repression increases group efficacy beliefs as individuals develop a shared perception of shared fate and shared identity as those in the same group.

The government's relative effectiveness in curbing dissent also contributes to its unwillingness to grant substantial concessions to the protesters, which is likely to cause a sense of pessimism regarding the movement's likelihood of achieving final goals. This, in turn, makes it even more unlikely for those who are sympathetic to the pro-democracy movement to join in mobilizing. As mentioned previously, since the government granted some concessions to the opposition back in October 2020, no other visible benefits were offered to the protesters

[10]Hundreds of Thai Protesters Rally to Demand Leaders' Release.

ever since. Although this may anger many committed activists, it is unlikely to draw more participation from bystanders. This is because engaging in more collective action does not necessarily guarantee more opposition demands will be met. The government continues strengthening its tight censorship on the population. It is in this political context of relative effective censorship and repression, low protesters violence that this study was carried out.

4.3 Experimental Design

4.3.1 Evidence from a Survey Experiment

To test the individual-level implications of how repression and other government responses affect subsequent collective action intentions and how such a relationship is mediated by the change of group efficacy beliefs among individuals, I turn to a survey experiment. I fielded the survey experiment online in Thailand during the period when pro-democracy demonstrations are still currently ongoing. It was conducted online in Thailand with a sample of 583 respondents from both urban and rural Thailand in March 2021.

By randomly assigning respondents to treatments and control, experiments make treatments exogenous to observed outcomes. They, therefore, allow me to identify causal relationships in situations where endogeneity concerns are present without having to make modeling assumptions that could not be tested (Gerber and Green 2012). Moreover, the survey experiment allows me to directly test the mechanisms through which repression and other government responses affect subsequent collective action intentions instead of simply showing the correlation between repression and collective action. One specific causal mechanism being tested here is how the effects of repression and other government responses operate through the change in the perceived group efficacy beliefs, which show how citizens make decisions about subsequent collective action and political attitudes that are tailored to specific kind of regime characteristics and particular structures of public opinion in Thailand.

To make sure that the causal inferences about the variation on outcomes observed (collective action intentions) are valid , I need first to establish that variation on outcomes observed is due to a mediating effect of group efficacy beliefs rather than some unobserved factor that affects both outcomes and group efficacy (i.e., spuriousness). To do so, I experimentally manipulate individuals' group efficacy beliefs by instructing respondents to describe a group event or activity they participated in from experiences related to group efficacy, which may or may not end in succeeding group goals, through an encouragement design. I simultaneously randomize both the treatments and the mediator, followed by the measurement of the outcome variable. After priming the respondents to reflect on their personal experiences with group efficacy, I randomly assign respondents to each of the three treatment groups (Repression, Concessions, Repression+Concessions(compound)) and then observe outcomes.

4.3.2 Treatment: Government Responses

The treatment here is government responses, which I distinguished between repression (treatment 1), concessions (treatment 2), and Compound (repression+concessions) (treatment 3). Although repression is highly likely to influence individuals' collective action intentions through the mediating effect of group efficacy, other regime responses can likewise affect potential outcomes in either positive or negative ways. In reality, it is prevalent for regimes to employ a mix of repression and concessions in response to dissent, although the degree of the mixture varies substantially. For instance, the Thai government has used consistent repressive strategies such as arrests, water cannons, rubber bullets against unarmed protesters, and minor concession efforts to appease the protesters. Regimes also responded similarly in many countries during the Arab Spring, such as Morocco, Tunisia, Egypt, and more recent Hong Kong cases.

Respondents are randomly assigned to one of the three treatment groups or a control group. The experimental design is as follows: all respondents read the initial control statement, then individuals randomly assigned to the treatment groups read a piece of additional

information. At the same time, those in the control group receive no further information. Such design ensures that any difference between the treatments and the control is due to the other information received in the treatments. Respondents exposed to one of three treatments then received both images and a factorial vignette describing the event—a vignette describing actual contentious events in Thailand in which this survey is taken. The Control group gets no image. The images used in the treatment groups could be found in the Appendix 4.5.3.

Control: Last year, protests were initially triggered by the dissolution of the Future Forward Party (FFP) in February and later turned into unprecedented demands for reform of the Thai monarchy and against the government of Prime Minister Prayut chan-o-cha.

One-fourth of respondents read the control condition here and nothing else. Those randomly assigned to one of the three treatments read one of the followings:

Repression treatment (treatment 1): Many observers highlighted the very harsh police action towards the protesters. For instance, on February 28, 2021, protesters gathering near the headquarters of the 1st Infantry Regiment, the King's Guard in Bangkok, were met with tear gas and rubber bullets during a clash with riot control police, leaving many peaceful protesters wounded or arrested and some badly injured.

Concessions treatment (treatment 2): At the same time, the government contributed to a more accommodative tone/approach towards the protesters' demands. Thai Prime Minister Prayut Chan-o-cha said, withdrawing the state of emergency, saying "I hear you" to protesters. Thailand's King also hints at compromise with protesters during a rare public interview. Moreover, Thai legislators on November 18 approved legislation on the constitutional amendments in response to one of the protesters' demands for a new constitution and reform.

Compound (treatment 3): Both statements and images from the repression and the

concessions treatments.

4.3.3 Inducing Group Efficacy via an Encouragement Design

The mechanism underlying the causal effect between regime responses and individuals' collective action intentions is theorized to be the perceived group efficacy beliefs among individuals. The standard strategy for identification is to randomly assign individuals to treatments, observe the levels of group efficacy, then the outcome followed. Yet, such a strategy poses challenges to causal identification because we can not ascertain that the observed group efficacy effect is independent of its treatment. First, we need to rule out that the observed effect of group efficacy is only through the treatment but not other unobserved pretreatment covariates. For instance, activists who have experience with movement success may report firmer group efficacy beliefs regardless of the treatment exposure.

To rule out this potential issue, I take two additional steps in identifying the actual mediating effect of group efficacy. First, I randomly assign respondents to one of the three treatment conditions so that the treatment is independent of any individual characteristics that may potentially make them more or less likely to feel a certain level of group efficacy.

Second, I use an encouragement design to induce participants to reflect on group efficacy beliefs they already have. This design affirms that the response to the treatment itself does not influence such 'inducement' to group efficacy beliefs. In other words, this is to make sure that the effect of group efficacy is isolated from the impact of new information (in this case, treatment conditions). These two steps ensure that any variation on outcomes observed is due to a mediating effect of differences in group efficacy beliefs.

Under the encouragement design, I experimentally manipulate group efficacy by employing an encouragement design (Duflo et al. 2008; Gertler et al. 2011; Imai et al. 2013; Angrist et al. 1996; Keel and Yamanoto 2011). Encouragement design is advantageous when the

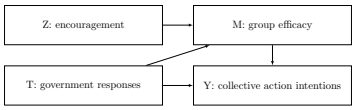

Figure 14: Diagram Illustrating the Encouragement Design.
(NOTE: The randomized encouragement Z induces 'group efficacy', increasing an exogenous variation in the mediator group efficacy beliefs. T: treatment; M: mediator; Z: encouragement; Y: observed outcome.)

mediator can not be perfectly manipulated but can be encouraged (rather than assigned) to take a particular value of the mediator (Imai et al., 2013). This is particularly common in the psychological literature where researchers commonly manipulate emotion indirectly using the method of the "autobiographical emotional memory task," developed by Lerner and Keltner (2001) [11].

Such a design requires a few assumptions. First, we need to assume that the encouragement influences the outcome only through the mediator. Second, it only works under the assumption that the individuals who receive the encouragement must be affected by the encouragement incentive in the same direction depending on whether the encouragement is positive or negative. For instance, let Z represent the encouragement variable where it is equal to 1 or 1 if respondent i is respectively positively or negatively encouraged and is equal to 0 if no such encouragement is given (see more detailed discussion from Imai et al., 2013).A diagram illustrating this relationship is presented in Figure 14.

I do so by first randomly and equally assign participants into two groups: *group efficacy encouragement group* or *placebo group (not encouraged).* Specifically, half of the respondents were encouraged to reflect on experiences related to group efficacy. In contrast, the other half of the respondents were asked to reflect on their experience not related to group efficacy and proceed with the subsequent modules of questions.

This indirect manipulation of group efficacy is done pre-treatment before respondents are exposed to different treatment groups. The different messages received by respondents

[11]The technique is also used to induce emotion in the study of repression from Lauren E. Young (2017, 2019).

	Group Efficacy Treatment	**Control**
	Encouraged	**Not encouraged**
	(N=300) "In 1-2 sentences, please tell me 1-2 events/activities in your personal life that you participated *as a group* to achieve common goals through the joint effort. This could be something you are currently experiencing or something from the past. Examples include signing a petition; organizing/participating in a town hall meeting, community event, or your school basketball team; signing an online petition; joining in a union in your workplace; volunteering in a campaign, etc."	**(N=283)** "Please describe in 1-2 sentences about how you are feeling in the moment." or "Please describe in 1-2 sentences about 1-2 activities in your personal life that makes you feel relaxed. This activity could be anything you are currently experiencing or something from the past. "

Table 15: Encouragement Design: Reflection Treatment for Group Efficacy

in both *group efficacy encouragement group* or *placebo group (not encouraged)* are presented in the following:

If a randomized encouragement is sound, it would mean that the group efficacy encouragement manipulation directly targets group efficacy and nothing else only to affect the outcome through this mediator. Because the observed effect does not directly depend on the value of the encouragement, we can think of the encouragement itself as an outside instrument Z that directly induces an exogenous variation in the mediator M (group efficacy) with the instrumental variables approach.

The instrumental variables method is used, which will allow for the identification of causal effects between government responses and nonviolent collective action intentions. This relationship between group efficacy and collective action intentions could potentially be endogenous. For instance, individuals who have experience with collective action may have a

higher sense of group efficacy regardless of which treatment condition they are exposed to.

4.3.4 Main Outcome: Nonviolent Collective Action Intentions

Following the group efficacy induction and treatment manipulations, respondents were asked a series of questions to measure the outcome - collective action intentions. For the main analyses, I focus on the collective action activities that are typically nonviolent or normative. Five items measured nonviolent collective actions. Respondents were asked to indicate how likely it is that they will participate in five different nonviolent collective actions in the pro-democracy demonstrations: 1) *talking* to friends and family about the protest movements; 2) sign an *online petition* supporting protesters' demands; 3) post a message about the protest movement on *social media* (Facebook, Twitter, etc.); 4) join the protests by going out and attending a *rally*. Principal components analysis yielded one component with eigenvalues greater than one that accounted for 67% of the variance. Loadings after oblique rotation show that five different nonviolent activities loaded primarily on this first component. Each activity is measured with a 7-points scale (1 = Definitely unlikely, 7 = Definitely yes). The outcome is thus the average of the sum of the five items combined.

4.3.5 Alternative Outcome: Attitude toward Protester Violence

Alternatively, I included a measure of attitude toward protester violence as an observed outcome. This is intended to capture individuals' attitudes toward violent collective actions, which may or may not conform with the hypothesized individuals' nonviolent collective action intentions. Because asking about support for violence is sensitive, I indirectly probed individuals' attitudes toward protester violence rather than directly asking questions about actual likelihood of participating in violence. Respondents were asked to indicate how likely it is that they agree with each one of the following statements: 1) "I *understand* some protesters' reasons for the use of violence;" 2) "I have *sympathy* for some protesters' reasons to resort to violent means in general; " 3) I *support* some protesters' decisions to use violence." All three questions were measured with a 5-point scale (1 = Strongly disagree, 5

= Strongly agree) and averaged to yield composites of one's own attitude toward protester violence. The results are in the Appendix 4.5.1

4.3.6 Other Measures

As a manipulation check, I asked respondents a question about the perceived effectiveness of the movement as a measure of their current group efficacy beliefs: The question reads as the following: " Based on what you've just read about protests in Thailand, how do you agree with the following statement? : I think the pro-democracy demonstrations in Thailand are *an effective strategy in bringing the necessary change to the country.*" This measure is called *effective* and is an ordinal variable with a 7-point scale ranging from very disagreed to very agreed.

If my manipulation of group efficacy in the encouragement design is successful, the respondents who are randomly assigned to the encouragement group should have firmer group efficacy beliefs than the group with no such encouragement. A quick t-test in Table 16 shows that those in the encouragement group indicate higher group efficacy beliefs (mean=4.76) than those that are not in the encouragement group (mean=4.38), the differences in means between the two groups are statistically different than zero (p=0.0225).

In addition, I included several pretreatment covariates such as age, gender, education level, living in an urban or rural area, number of times someone reads the news, income level, experience with repression, past level of activism, and voting experience in 2019 election. The descriptive statistics and balance test is shown in Table 17.

Group	N	Mean	95% CI
Encouraged	300	4.76	4.532505 4.987495
Not encouraged	283	4.38	4.156914 4.613404
Total	583	4.578	4.416615 4.739474

Table 16: T-test Results

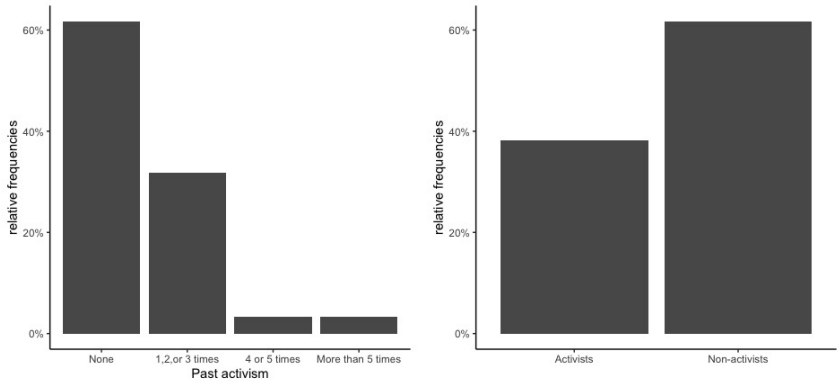

Figure 15: Measures of Past Activism (Ordinal v.s. Binary)

As an important covariate used in the analysis, past level of activism is measured with a question of " Have you participated in a march, demonstration, sit-in, or other types of protest since 2000 (local/regional/national), and how many times?" with a four-point scale where higher value indicates more participation. I then recoded this variable into a binary *nonactivist*, where 1 indicates no experience with activism, and 0 suggests the otherwise. Among all the 583 respondents included in this study, about 62% have no past activist experience, and 32 % have 1, 2, or 3 times activist experience in the past, as shown in Figure 15.

Variable	Obs.	Min-Max	Control	T1 repression	T2 Concessions	T3 Compound	P-value>F
Age	583	1-51	19.65	20.61	20.7	15.92	0.00
Gender	583	1-3	1.48	1.388	1.47	1.47	0.33
Education	583	1-6	2.12	2.08	1.96	2.14	0.24
Urban	583	1-2	1.15	1.1	1.14	1.15	0.4
News reader	583	1-7	6.16	6.11	6.12	5.74	0.06
Income	583	1-5	4.56	4.62	4.55	4.54	0.73
Past repression	583	1-2	1.91	1.85	1.9	1.82	0.15
Activism	583	1-4	1.6	1.42	1.47	1.43	0.12
Voted in 2019	583	1-5	2.95	2.87	3.12	3.11	0.18

Reported p-values correspond to F tests.

Table 17: Descriptive Statistics and Covariate Balance Test

The randomization process was relatively sound, although there are slight imbalances for *age* and *news reader*. However, the substantive differences in these two variables are fairly small, and the subsequent analyses show that the results are robust to the inclusion of these control variables.

4.3.7 Recruitment and Sample

I partnered with Dynata, formerly known as *Research Now and Survey Sampling International*, the online global market research firm, to help recruit all respondents in Thailand and to distribute this online survey. Dynata gave respondents incentives directly to complete the survey. All respondents need to meet the qualifications of 18 of age or older and as a Thailand citizen at the very beginning of the survey modules. Those who did not meet the qualifications were not able to continue the survey in any way. I also included attention check questions to make sure respondents pay attention to the survey modules. Those who did not pass the attention check were dropped out of the sample.

In total, 583 respondents were included in this study. The survey modules and the order could be found in the Appendix 4.5.2. A power analysis confirms that this sample size is appropriate for detecting a modest treatment effect size (=0.5) at a power level of 0.8 and an alpha level of 0.10. Specifically, given the treatment effect size of 0.4, a sample size of 99 is needed to achieve the 0.8 power target, while a sample size of 275 is needed for a targeted treatment effect size of 0.3. My sample size of 583, with 141 respondents assigned to the control group, 146 to repression treatment (Treatment 1), 171 to concessions treatment (Treatment 2), and 125 to compound treatment (Treatment 3) well exceeds the threshold for observing the modest treatment effect. However, I expect my survey experiment to be somehow underpowered to detect very small treatment effects[12].

[12]The calculations are performed using Evidence in Governance and Politics's (EDAP) power calculator accessed from `https://egap.shinyapps.io/power-app/`

4.3.8 Potential Issue with Sensitivity Bias

Concerns over whether or not respondents can be forthright and provide truthful responses for a sensitive topic related to political attitude and participation in a repressive regime are particularly relevant in the political context in Thailand. As previously mentioned, Thailand authorities have recently tightened up their censorship efforts by severely undermining political expression and media platforms. Several laws in place, such as Lèse-majesté law and Cybersecurity Act, allow the Thai government to harass, detain, or arrest potential dissenters. For instance, being accused of violating Lèse-majesté law could potentially result in a prison sentence of 15 years or more. The direct impact of Thai authorities' tight crackdown on political expression is that even slacktivism (Morozov 2011 and Gladwell 2010) - a term used to describe online activism that requires little effort and entails minimum cost - has been significantly declining. Given the tight government censorship of political expression In Thailand, one primary concern for implementing a public opinion survey centers around how we can rely on the assumption that survey respondents provide truthful answers on the survey and are not subject to self-censorship for fear of social sanction from peers and the state authorities (Blair et al. 2021; Robinson and Tannenberg 2018; Shen and Truex 2020).

To mitigate the concerns over sensitivity bias, I employ the following strategies in the design of this survey experiment. First, I am concerned that respondents may feel socially desirable to express interests in dissent when they learn about government repression. In an attempt to elicit truthful answers to the propensity to dissent, I chose to ask respondents about various nonviolent collective action activities that are relatively common in Thailand. I also included nonviolent collective action activities that vary in terms of potential risks and costs to participants. I would expect respondents to be more willing to express genuine intention when the particular activity entails lower risks. As such, I measure nonviolent collective action activities with the following activities: talking to friends, petition, posting on social media, and attending a rally.

Second, following Young (2020), I asked respondents to express the likelihood of each collective action activity intention on a 7-point scale ranging from definitely unlikely to likely. This eases the concerns over the perceived risks and costs associated with actual participation. Respondents express their intentions hypothetically without saying they would attend each activity with absolute certainty.

Third, as an alternative outcome measure - attitude toward protester violence - instead of asking respondents their actual intentions in participating in violent events, I asked respondents to indicate their agreement with three items, which are adopted from Tausch et al. (2011) and Hayes and McAllister (2005): "I understand some protesters' reasons for the use of violence;" "I have sympathy for some protesters' reasons to resort to violent means in general;" and finally "I support some protesters' decisions to use violence" on a five-point scale ranging from strongly disagree to agree strongly.

4.3.9 Results

The results are presented in the following order. I first test the relationship between government responses and the propensity to dissent(Hypothesis $H1_a$ and $H1_b$). I test the predictions on propensity for *nonviolent collective action intentions* in Table 18. The results for the alternative outcome - *attitude toward (protester) violence* - are presented in the appendix 4.5.1.

Next, to test Hypothesis $H2_a$ and $H2_b$, in Table 19, I show how being in the treatment categories impacts the group efficacy. In Table 20, I reported results from the instrumental variables approach to identify the causal effects between group efficacy and nonviolent collective action intentions .

4.3.9.1 The Treatment Effect on Nonviolent Collective Action Intentions

In Table 18, I present the estimated average treatment effect (ATE) on propensity for nonviolent collective actions across all three treatment conditions: repression, concessions, and compound.

	DV: Nonviolent collective action intentions	
	Model 1	Model 2
Repression	0.20	0.31
	(0.20)	(0.19)
Concession	−0.05	0.04
	(0.20)	(0.18)
Compound	0.10	0.23
	(0.21)	(0.20)
Age		−0.02**
		(0.01)
Income		0.05
		(0.10)
Past repression		−0.31
		(0.21)
Gender		−0.06
		(0.13)
Education		−0.12
		(0.08)
Urban		−0.15
		(0.20)
Past activism		0.63***
		(0.10)
News reader		0.26***
		(0.05)
(Intercept)	4.37***	3.00***
	(0.15)	(0.81)
R^2	0.00	0.18
Adj. R^2	−0.00	0.16
Num. obs.	583	583

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 18: Average Treatment Effects on Nonviolent Collective Action Intentions

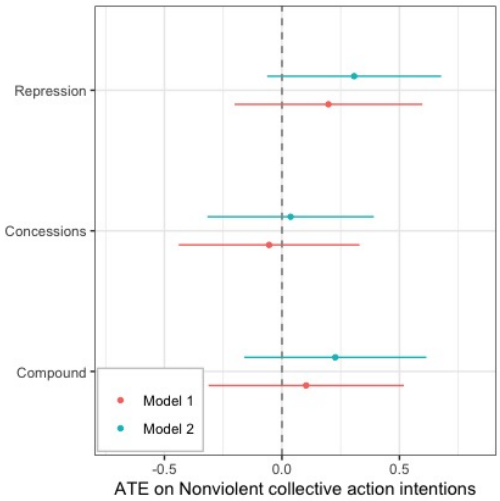

Figure 16: Average Treatment Effects for Nonviolent Collective Action Intentions

Note that higher values indicate stronger propensity for nonviolent collective actions. With this in mind, I find that no treatment groups have a direct, unmediated effect on propensity for dissent, relative to the control condition. The results lend no support for neither $H1_a$ nor $H1_b$ as the coefficients fail to reach statistical significance. The non-effects are consistent across all models, as shown in Figure 16. In fact, the coefficients for each one of the treatment categories also point in the other direction as hypothesized.

However, recall that since the control group in the experiment already receives generic information about the ongoing pro-democracy demonstrations in Thailand, individuals assigned to the control condition may have their own interpretation or perceptions, be it negative or positive, of the pro-democracy demonstrations and their propensity for dissent may have been pre-existing already. As such, this may be why the treatment categories here do not engender a large difference on average relative to the control group.

4.3.9.2 The Treatment Effect on Group Efficacy

In this section, I test whether the treatments affect the variable I posited as the mechanism - namely, that how being in the treatment conditions impact respondents' group efficacy

beliefs. Group efficacy is measure with a question "how do you agree with the following statement: 'I think the pro-democracy demonstrations in Thailand are an effective strategy in bringing necessary change to the country'." It is crucial to establish the relationship between the treatment *government responses* and the mediator *group efficacy* The results are shown in Table 19 as well as in Figure 17.

	DV:Group efficacy	
	Model 1	Model 2
Repression	0.20	0.37
	(0.23)	(0.23)
Concession	−0.25	−0.13
	(0.23)	(0.22)
Compound	−0.07	−0.01
	(0.24)	(0.24)
Age		−0.03***
		(0.01)
Income		0.03
		(0.12)
Past repression		0.26
		(0.26)
Gender		0.08
		(0.16)
Education		0.01
		(0.09)
Urban		0.20
		(0.25)
News reader		0.09
		(0.06)
Activism		0.60***
		(0.12)
(Intercept)	4.62***	2.65**
	(0.17)	(0.99)
R^2	0.01	0.08
Adj. R^2	0.00	0.06
Num. obs.	583	583

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 19: Average Treatment Effects on Group Efficacy

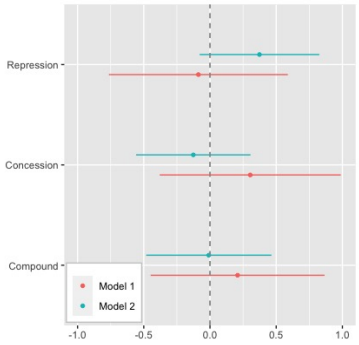

Figure 17: Average Treatment Effects on Group Efficacy

Unfortunately, results demonstrated no statistically significant difference from the control group, lending no support for Hypothesis $H2_a$ and $H2_b$. The coefficients in both models also pint in the other direction as predicted. The non-significant findings could reflect that the intensity of my treatment categories is not significant enough to pick up the intended effects. The confidence intervals for the three treatment categories are also overlapping, indicating that being in each of the three treatment categories is not different. This could mean that the experiment fails to pick up the intended differences across different treatment categories.

4.3.9.3 Instrumental Variables Approach - Group Efficacy on Nonviolent Collective Action Intentions

Imai et al. (2011) suggested that it is a more appropriate way to apply the instrumental variable method in the encouragement design. Under the design, the randomized encouragement, in this case - group efficacy - can be seen as an instrument (Z) for the mediator (M), as shown in Figure 14. Together with the randomized treatment categories, the whole design helps identify causal mechanisms. The results for the instrumental variable analyses are presented in Table 20 (Model 3-4). For easier comparison, I also include results from standard OLS regression (Model 1-2).

	DV: Nonviolent Collective Action Intentions			
	Uncorrected OLS		Corrected 2SLS	
	Model 1	Model 2	Model 3	Model 4
Group efficacy	0.34***	0.28***	1.44*	1.27†
	(0.03)	(0.03)	(0.67)	(0.74)
Repression	0.13	0.20	−0.09	−0.17
	(0.19)	(0.18)	(0.34)	(0.40)
Concession	0.03	0.07	0.30	0.20
	(0.18)	(0.17)	(0.35)	(0.29)
Compound	0.13	0.23	0.21	0.24
	(0.19)	(0.19)	(0.33)	(0.30)
Age		−0.01†		0.02
		(0.01)		(0.02)
Income		0.04		0.02
		(0.10)		(0.16)
Past repression		−0.38†		−0.63†
		(0.20)		(0.37)
Gender		−0.08		−0.16
		(0.13)		(0.21)
Education		−0.12†		−0.13
		(0.07)		(0.12)
Urban		−0.20		−0.40
		(0.19)		(0.34)
News reader		0.23***		0.14
		(0.05)		(0.10)
Past activism		0.47***		−0.13
		(0.10)		(0.47)
(Intercept)	2.79***	2.25**	−2.29	−0.36
	(0.20)	(0.77)	(3.09)	(2.31)
R^2	0.16	0.27	−1.44	−0.91
Adj. R^2	0.15	0.26	−1.46	−0.95
Num. obs.	583	583	583	583

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 20: Main Results between the OLS (Uncorrected) and 2SLS (Corrected) Models

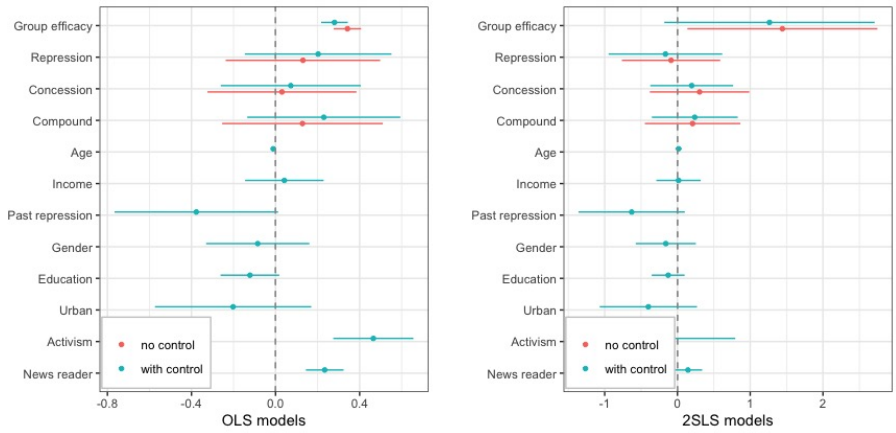

Figure 18: The OLS and 2SLS Models (Uncorrected v.s. Corrected)

The IV estimates for *group efficacy* are larger than the OLS estimates in all models. However, they are barely significant compared to the OLS estimates. For treatment categories, results show no statistical significance from the control group, either.

The diagnostic test for weak instruments (not reported) suggests that the endogenous variable - group efficacy here - is weakly related (Model 3) to the instrument (group efficacy encouragement) while failing to reach statistical significance when other covariates are considered (Model 4). This may suggest that the group efficacy encouragement was not strong enough to really activate group efficacy among respondents.

However, the Wu–Hausman test of endogeneity suggests that endogeneity is present and the OLS estimator is inconsistent. This finding indicates that the relationship between group efficacy and nonviolent collective action is indeed endogenous. Group efficacy is still an essential factor for collective action. Yet, we may risk arriving at erroneous conclusions if we do not address this issue of endogeneity.

4.3.10 Alternative Explanations on Government Responses and Group Efficacy

In this section, I draw on the observations from the Thailand case and provide alternative explanations about how repression and concessions, respectively, may influence group efficacy beliefs different than my theoretical predictions.

Generally speaking, repression can deter mobilization, as Hypothesis H_1a posits. However, drawing from prior research, repression does backfire under certain circumstances. Follwing Opp and Roehl (1990), I argue that repression can have an indirect positive impact on mobilization when it triggers "micromobilization processes." Micromobilizaiton processes refer to 'a small-group setting in which processes of collective attributions are combined with rudimentary forms of organization to produce mobilization for collective action. Examples include preexisting groups such as unions, churches, fraternal/service organizations, and friendship networks (McAdam 1998, 134-35). Specifically, repression is likely to trigger such backlash mobilization when people consider the repression illegitimate, either personally or via social networks (Opp and Roehl 1990). Another possibility of backlash, as my other research suggests, is when non-physical acts of repression are used against nonviolent groups (Chiang 2021).

I argue that both phenomena are observed in Thailand as repression triggers backlash. First, with laws such as Lèse-majesté, and the new Cybersecurity act already in place, protesters can face detentions, arrests, or imprisonments, but no harsh, physical acts of repression that intend to cause deaths (like we observed in Myanmar) have been reported. Repression has to be overpowering to deter mobilization (Chiang 2021). Second, protesters in Thailand follow consistently nonviolent discipline, and most protesters are unarmed and peaceful. The use of repressive measures on nonviolent protesters tends to generate backlash, fueling a surge in peaceful demonstrations across the country.

Next, individuals may respond differently to concessions given their attitude toward the protest movement and its regime. Specifically, when states grant concessions that address

some protesters' demands yet are not significant enough for others, such responses may 1) satisfy some protesters while 2) decrease the likelihood of participation for other individuals. The latter is likely among individuals who share anti-government sentiments yet are relatively more pessimistic about the movement's future because people in this group realize that the state will not grant further concessions. Hence, further mobilization will not guarantee more concessions. Consequently, when the amount of accommodations given does not reach the threshold needed for the encouragement effect of concessions to take place, individuals are less likely to participate in protests.

For another, states, in reality, tend to be reluctant to grant concessions precisely because they fear that concessions may encourage participation and prompt more protests. I argue that this is what happened in Thailand, where government authorities made the first move to de-escalate the situation by pledging the end of crackdowns in the hopes of dampening the anti-government demonstrations. Such actions may appear that the government was conciliatory, which may satisfy some protesters. Yet, it falls short on so many levels of any long-term demands of the protesters, including new elections, a more democratic constitution, and reforms to the monarchy. More committed activists tend to see no end but continue to mobilize unless these long-term demands are met. However, individuals who sympathize with the movement but are not optimistic that more actions would guarantee that more demands are less inclined to participate in collective action activities. Drawing from the survey experiment conducted in Kyrgyzstan, Hummel (2019) argues that governments tend to grant the so-called 'sideways concessions' that can effectively reduce the mobilization potential of individuals who might otherwise join. Sideways concessions are " political responses designed to improve how individuals feel towards the government over issues unrelated to the demands of a protest (Hummel, 2019, p.2)

It is plausible that repression may increase group efficacy while concessions discourage it. Prior research points out that risk perceptions due to repression or concessions can also have indirect and positive impacts on collective action intentions through their links with group efficacy beliefs (Ayanian and Taucsch, 2016). For instance, Opp and Roehl (1990)

found that repression may increase the perceived efficacy of legal collective action intentions among individuals. Similarly, White (1989) contends that government repression may increase group efficacy beliefs since individuals may feel alienated from the current political system and consider collective actions the best alternative to effect political change.

I suspect that repression can adversely trigger a greater sense of group efficacy through the reduced risk importance (Ayanian and Taucsch 2016) under the circumstance when repression is used against nonviolent protesters, although the experimental evidence presented here does not support this. This is because repressing nonviolent and legal collective actions will be considered 1) illegitimate and 2) regime weakness. In these instances, repression likely encourages group efficacy beliefs and subsequent mobilization despite high risks.

First, the repression that is deemed unlawful and unjust can increase the group efficacy beliefs that mobilizing is the only way to demonstrate strength and to improve the group's current situation, reducing individuals' willingness to free-ride (Smyth, Soboleva, Shimek, and Sobolev, 2013; Lykuanova 2016). When acts of repression are regarded as illegitimate, they encourage group efficacy beliefs. Individuals feel they (and their group members) are unfairly treated by the state and consider collective action the best alternative to effect change and improve their group members' situation. Repression is likely to be perceived as illegitimate when it is used against peaceful and nonviolent protesters (Gamson, Fireman, and Rytina 1982), as the case in Thailand demonstrates. This is because repression against nonviolent and legal protest actions sets in motion micromobilization processes that raise the rewards and diminish participation costs (Opp and Roehl 1990). Moreover, as McAdam (1986) demonstrates, individuals will place less importance on the perceived risks associated with repression when they see their family or group members being the targets of state repression. They will want to make good on their firmly held beliefs and identification to the group by participating.

Consequently, people see the size of the protests growing because bystanders are outraged and join in. Therefore, they are more likely to mobilize due to the increased sense of group

efficacy because they see other people, particularly those within the same groups or social networks, mobilize. An increased sense of group efficacy later on warrants that mobilization as the best alternative to effect change and improve their group members' situation or to address the unjust state of affairs in the country.

Second, perceived risks due to repression may increase the expected group efficacy beliefs by raising the expectation that group action will produce desired change (Belgioioso et al. 2018), reducing the perceived risk importance. This is because repression can signal the regime's weakness that the opponent can exploit since governments lose the support and voluntary compliance from the citizen (Sharp 2005; Ayanian and Taucsch 2016). After all, authorities with a firm grip on power do not need to employ excessive force to maintain stability.

There are many instances where repression backfires on the government. The reasons could be attributed to the opposition's successful strategy in garnering more comprehensive support from bystanders who feel the state authorities mistreat their group. Consequently, awareness of the perceived risks attached to participating in the face of repression might increase the group efficacy beliefs that taking action will ultimately strengthen the group's identification and increase the likelihood of achieving the desired change. In Thailand, for instance, government repression of peaceful protesters backfired as it encouraged more groups ranging from the youth, the women's group, and queer people across the country to join in despite the high risks involved with participation. Mobilization widely expanded as people deemed the use of force on peaceful and legal protests as unlawful. Moreover, protesters maintained strict nonviolent discipline that leaves no ground for government authorities to justify the use of violence. [13].

Next, concessions could potentially discourage group efficacy beliefs when the amount of concessions does not reach the intended threshold. Concessions, as positive inducements, are considered as lower risks to participation. In a lower-risk environment, individuals are more

[13] https://wagingnonviolence.org/2020/11/thailand-coup-nonviolence-democracy-movement/

likely to free-ride rather than take on actions. They are also gains to the group. When government authorities grant concessions to the opposition, in most cases, it could satisfy some protesters, especially those that are moderates. For others, concessions that do not address the fundamental demands of the opposition may, in reality, discourage further mobilization potential of these individuals who are less optimistic about the efficacy of collective action efforts. Such diminishing sense of group efficacy comes from realizing that the state will not grant further concessions despite more actions. Since further engagement in collective action does not guarantee more demands will be met by the state. When people do not believe that their efforts will make a difference or the likelihood of success is low, they are less likely to join in protests. As such, I expect that government concessions that do not reach a certain threshold will reduce a sense of group efficacy belief among individuals who may otherwise participate in collective actions.

My argument is similar to Hummel (2019), who found that governments tend to grant the so-called 'sideways concessions' that can effectively reduce the mobilization potential of individuals who might otherwise join. For example, take the case in Thailand; many individuals who initially joined in the demonstrations were motivated to protest against the dissolution of the opposition party - Future Forward Party (FFP) - and over the emergency decree declared by the Prayut government in response to protesters. However, the protests later expanded to include reforms of the Thai Monarchy and the abolition of the military-dominated Senate. Such "anti-government" and "democratization" framing of the protests may resonate less strongly among individuals who show dissatisfaction with the government but are less optimistic about the movement's future in effecting more change.

4.4 Conclusions

The article identifies an alternative pathway for collective action: a group efficacy pathway. Group efficacy belief believes that the in-group can effect change through unified action

(Bandura 2000; Klandermans, 1984, 2004; Van Zomeren, Leach, and Spears, 2012). For a protest movement that aims to effect any policy change, it is imperative to find ways to make sure that the movement attracts ordinary citizens with whom they share similar sentiments and are willing to participate in collective action efforts. Protest movements often are composed of enthusiastic activists and first movers. Yet, the key to mobilization has always been the ability to attract non-activists who could be sympathized with the movement's goals and demands. As Klandermans (1984) puts it, non-activists are the key to mobilization potentials. The group efficacy pathway to collective action is particularly relevant for non-activists because such beliefs have been identified as crucial for motivating engagement in collective action (Cohen-Chen and van Zomeren 2018).

With this in mind, my findings suggest that group efficacy could be the alternative mechanism linking government responses and the mobilization of dissent. However, I do not find any significant difference between the treatment categories and the control on group efficacy. This could be attributed to the weak intensity of the experimental design itself. However, the instrumental variable analyses show that group efficacy is an essential predictor for nonviolent collective action. This finding is consistent with the literature on group efficacy and normative collective action (van Zomeren et al. 2004; Tausch et al. 2011; Cohen-Chen and van Zomeren 2018).

The presence of null effects on treatment categories underscores the need for future research in differentiating various types of government responses and the intensity of such reactions in risky environments, particularly since the existing literature tends to focus on the impact of repression but not other regime responses. Moreover, given that the coefficients for repression and concessions, respectively, exhibit opposing directions. Future research could look further into whether the impact of group efficacy varies across different subgroups. Attention to how groups in different networks or locations respond to various regime responses may be a useful next step.

Several implications from this study are worth noting. First, the findings emphasize the

need to distinguish individuals responses as they exhibit different collective action incentives. This is a promising direction of the research on repression's effect (Lawrence 2016; Pan and Siegel 2020). Second, the impact of repression and other government responses are susceptible to particular political contexts. The survey experiment in Thailand is conducted in an environment where state repression is extensive but effectively targeting key dissidents with the availability of internal and media censorship. As such, the findings may not apply to countries where government censorship is less severe and extensive. However, as the alternative mechanism between government responses and propensity to dissent, group efficacy beliefs shed light on how collective action comes about in repressive contexts. Future work to assess the effectiveness of government repression should consider the potential mediating effect of group efficacy across various population subgroups.

4.5 Additional Analyses

4.5.1 Alternative Outcome: Attitude toward Protester Violence

	DV: Attitude toward protester violence	
	Model 1	Model 2
Repression	0.07	0.11
	(0.11)	(0.11)
Concession	0.02	0.05
	(0.11)	(0.11)
Compound	0.43***	0.39***
	(0.12)	(0.12)
Age		−0.02***
		(0.00)
Income		0.00
		(0.06)
Past repression		−0.07
		(0.12)
Gender		0.09
		(0.08)
Education		0.01
		(0.04)
Urban		−0.17
		(0.12)
Activism		0.17**
		(0.06)
News reader		0.01
		(0.03)
(Intercept)	2.60***	2.76***
	(0.08)	(0.48)
R^2	0.03	0.09
Adj. R^2	0.02	0.07
Num. obs.	583	583

Standard errors in parentheses Significance levels: ***p<0.001; **p<0.01; *p<0.05; † < 0.1.

Table 21: Average Treatment Effects for Attitude toward Protester Violence

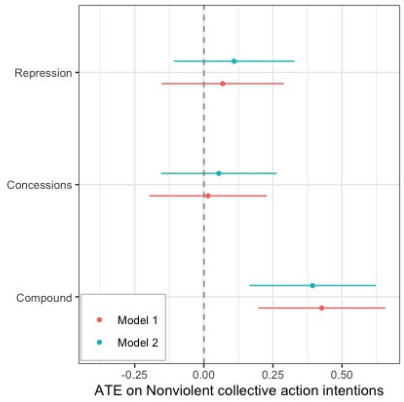

Figure 19: Average Treatment Effects for Attitude toward Protester Violence

4.5.2 Survey Modules

After exposure to one of the treatments or control group, subjects were asked a series of questions to measure outcomes. In particular, group efficacy is manipulated before subjects are exposed to treatment conditions. Survey modules appeared in the following order:

1. Demographics
2. Past experience with repression
3. Group efficacy induction (Encouragement Design)
4. Treatments: Regime Responses
5. Perceived effectiveness of the movement (current group efficacy belief)
6. Nonviolent collective action intentions(order randomized)
7. Attitude toward violence(order randomized)
8. Perceived risk of repression (order randomized)
9. Future voting intentions

4.5.3 Prompt

	Questions
Repression Treatment	(**N=146**) (Control text+images of repression) + Many observers highlighted the very harsh police action towards the protesters, such as tear gas and water cannons laced with irritating chemicals, which ended with a number of peaceful protesters wounded or arrested and some badly injured.
Concessions Treatment	(**N=171**) (Control text+images of concessions)+ The government contributed to a more accommodative tone/approach towards the protesters' demands. Thai Prime Minister Prayut Chan-o-cha said withdrawing the state of emergency, while Thailand's King also hints at compromise with protesters during a rare public interview. Moreover, Thai legislators on Nov 18 approved legislation on the constitutional amendments, in response to one of the protesters' demands for a new constitution and reform.
Compound Treatment	(**N=125**) (Control text+images of both repression and concessions) + plus both repression and concessions texts and images.
Control	(**N=141**) Last year, protests were initially triggered by the dissolution of the Future Forward Party (FFP) in late February 2020 and later turned into the unprecedented demands for reform of the Thai monarchy and against the government of Prime Minister Prayut chan-o-cha.

Table 22: "Experimental Questions"

Figure 20: Images Used for Repression Treatment

Figure 21: Images Used for Concessions Treatment

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