The Political Psychology of Electoral Suppression: Institutional Manipulation, Emotion, and Mobilization

by

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DEDICATION

To Teddy and Lou:
You both are smart enough, brave enough, and good enough to follow your dreams. Thank you for sticking with me as I follow mine.
And to my Dan:
Thank you for helping me realize every day that my dreams can be a reality.
I love you three. More than everything.

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I would be remiss if I did not acknowledge my dear 2019 cohort mates who became my immediate friends and lived the highs and lows of grad school life with me. They accepted me (nearly 15 years their senior and super awkward). Specifically, the women who each played a significant role in helping me get this far: Francy Luna-Diaz, Zoe Walker, Charlotte Boucher, and Lacey Slyzeski. We bonded over seemingly insurmountable methods courses and difficulties of the first year. We became even closer through the trauma of the Covid-19 pandemic. All of them helped in some way to develop these ideas and I am so grateful for the intellectual atmosphere we can all create together. These women taught me so much about grit, compassion, justice, hard work, and perseverance. I deeply respect all of them and I look forward to continuing on this academic journey together. I feel so lucky to call them my friends.

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I entered Michigan knowing that I wanted Allen Hicken as the chair of my dissertation committee. He help recruit me and shepherded me through my pre-prospectus years. Allen is an excellent academic who patiently guided me through learning new methods and developing the theory that underlines this research. Allen became a dear friend and support through it all. No matter the crisis, Allen showed up for me. One anecdote that will always stick out: During the first week of Math Camp before the semester started, I was single-parenting as my husband commuted to New York every week. I quickly became overwhelmed and did not know how to attend the first week of classes with two boys who hadn't started daycare and school yet. Allen offered to babysit and for the next four days, I received texts with pictures of my sweet boys at playgrounds having picnics all around Ann Arbor with their new friend, Allen. To this day, my kids still talk about Allen. He was a constant for me in grad school. I always knew his door was open if I needed him. It was clear that Allen cared and did whatever he could to ensure that I was set up for success. Those first semesters would have been so much rougher without his calming presence in my academic life. I am so lucky to call him my mentor but I feel even luckier to call him my friend. Allen also offered unyielding support during the long arduous process of writing this dissertation. He was with me from the beginning, reading drafts and offering scrupulous yet encouraging feedback. He encouraged me to keep pushing myself and taught me so much about the research and the academic writing processes. For the last three years, he kept a weekly spot for me on his calendar and I always look forward to our meetings. He also made sure to support me at conferences and I remember after my first APSA presentation, he gave me a big hug and told me I had made him so proud. That is a moment I will never forget. He also stuck with me through the perils of the academic job market. Many times I called, near tears some days and he walked me through the anxiety I felt and always make sure I was ok before we hung up. This became a pattern and if I am totally honest, I am anxious about the prospects of entering the tenure track without our weekly meetings where I received so much encouragement. I am a better scholar because of Allen but I am also striving to be a better colleague, mentor, and friend because of his example.

I did not know that I wanted an additional dissertation committee chair until I took a behavioral methods class with Nick Valentino. This course uncovered an entirely different kind of political science; one that I fell in love with over the semester. Nick is an excellent teacher. He challenged us to think about empirics in ways that made sense. He made methods seem approachable for the first time and I began designing models that would test questions I had puzzled over for years. On a whim one day, I decided to ask Nick about some research ideas I had. He listened and was not only encouraging but very excited about the potential my project had. Shortly after, I asked him to be my co-chair and from that point on my project took on an entirely different shape and meaning. I learned that political psychology is my home and that I can make an important contribution. Nick is also such a good hype man. When I showed him the results of my first-ever survey experiment, he exclaimed “Holy Shit Hilary! These are amazing findings!" Once he agreed to take me on as an advisee, I felt like I had joined a really distinguished club. Nick invited me to participate in his lab and I made great connections there with other graduate and former graduate students. He taught me so much about what good political science is and patiently helped this project evolve from a passing comment during office hours into a full research agenda. He also made it clear how much he cares about my personal and family’s well-being. When my son Louis crashed meetings asking for donuts or my iPad, he took the time to get to know him and they became good friends. Louis continues to ask if he can chat with Nick. Nick also provided invaluable support at conferences and on the job market. His advice is sage and he always manages to make me laugh a little. He lived many academic highs and lows with me and I was always excited for his exclamations when I got to show him exciting new results. In fact, Nick is such an excellent mentor that he deserves a very nice and very big plaque in his office. Probably at least gold-plated. I am not only so proud to call myself a Valentino student but to also call Nick a dear friend. I look forward to continuing our relationship, especially as this research has spurred new and important questions in political psychology about the emotional effects of democratic backsliding. I hope we will be able to answer some together.

I came to Michigan excited to meet many of my political science heroes. Elisabeth Gerber was at the top of my list. I met with her during my first semester to introduce myself. We had mutual interests in gerrymandering. Even though I was nervous, she was nothing but kind. I continued to reach out to her with professionalization and research questions throughout my first year and she always greeted me with her warm smile and a "Hey you." I mustered the courage to ask her to be a committee member and felt so excited when she agreed. Since then, we got to know each other better and Liz became a valued mentor and friend. She taught me important lessons about research, professionalization, and this career path. She also took the time to guide me as a woman scholar

trying to navigate a harsh field. Her input in my research along with her advice and wisdom about being a woman and mother in this profession have been key to my success thus far. I frequently find myself asking “What would Liz do in this situation?" I will never forget her first comment after I successfully defended my prospectus: “Hilary I am so proud of you." Liz’s support and guidance over this project were so valuable. I am so grateful that she took me on and cared enough to push me but always made sure I knew that I was good enough to keep going. I look forward to continuing our check-ins.

Noah Nathan was one of the first Michigan faculty I met during admit week in the Spring of 2019. He was so kind and welcoming then and over the past four years, he became such an important resource for me. At every step, Noah offered support and encouragement and took the time to make sure that whatever I showed him was better after he was done with it. This dissertation would not be where it is without his feedback and encouragement. I am so lucky that he would take me on while navigating a young family, cross-country moves, new jobs, and a pandemic.

I asked Justine Davis to join my committee a little later in the dissertation writing process. She was a newly hired faculty member who brought with her a trove of methods and professionalization knowledge. Despite a very demanding schedule, Justine always made time for me. She taught me so much about the logistics of writing a grant proposal, structuring a prospectus, and ultimately designing a dissertation. She was incredibly reliable and set a high bar for mentorship as a junior faculty member. I am so thankful she agreed to be a committee member at such a stressful point in her career. Her support and input were key to getting this project successfully over the finish line.

My time as a graduate student came with incredible highs and some of the lowest lows of my life. My sweet husband, Dan rode it all with me. Our marriage and friendship are the greatest blessings in my life. I met Dan during his last year as a graduate student in the Political Science department at Michigan twelve years ago. We dated while I watched him engage in the amazing intellectual atmosphere at Michigan. We got married weeks before he finished and defended his dissertation. Through all of this, I never believed I was good enough to study at a department like Michigan’s. It took Dan nearly a decade to persuade me. Aside from always believing in me, he is also just a really good life partner and dad to our boys. He took the reins of parenting countless times when he had even more work to finish. He commuted from New York to Ann Arbor for months so he could teach his own courses but also live with his family. Dan sacrificed so much for this research and degree. In the spring of 2020, he came to Ann Arbor excited that his long-awaited sabbatical would coincide with my second semester. He had such high hopes and for six weeks he lived his best Michigan life as a visiting scholar at ISR, a frequent participant at AIG, and a finder of free food around the university. Only a few weeks in, Dan became an impromptu second-grade

and pre-K teacher when the world (and schools) shut down as the pandemic set in. Through all of this, he maintained a smile and a positive attitude. We hunkered down in our small on-campus apartment during those crazy months. I prepared for and passed my preliminary exams and our boys both successfully graduated from pre-K and second grade. This was all possible because of Dan. Dan is also my favorite political scientist. He was also such an important source of feedback for this research. The arc of this dissertation stems from countless conversations together about authoritarianism and electoral politics both during my time as a grad student and also well before then. He was in the room standing at the whiteboard when I first settled on the question of emotions and authoritarianism, drawing it out and adding important insights. He taught me so much about theoretical design and empirical strategies and was always available when I got an error in R or Latex. He sat with countless drafts of this work and took time out of his very busy schedule to offer careful and important feedback. Elements from our coauthored paper appear in Chapter Two of this dissertation.

This final version would be incomplete without acknowledging my sons, Teddy and Louie. My time as a graduate student was a formative part of their childhood. Teddy came to Ann Arbor as a newly minted seven-year-old, excited that we lived on a bus route to a dinosaur museum on campus and that he got to sleep on the top bunk in his new (much smaller) room. He conquered second grade and survived Covid third grade by hacking the school's computer and watching Minecraft videos on YouTube. He attended seminars with me on random school holidays. He took notes and even asked really interesting questions. I threw Teddy into a new situation where he had to make new friends and navigate a new school, all while his mom was suddenly busier and much more stressed. Yet he just rolled with it and figured out a way to make it all fun. Louis was barely four and had little memory of his life pre-Ann Arbor. He learned how to ride a bike on North Campus, commuted with me on the bus to Towsley Children's house most mornings, crashed nearly every Zoom meeting I ever had (most of the time shirtless), participated in a labor union strike with me, lost his first teeth, and survived Covid kindergarten on Zoom. He dominated the older kids at Northwood V in hide-and-go-seek and made friends with everyone. We lived in a small apartment that we filled with legos, pillow forts, kid artwork all over the walls, lots of love, and eventually an "unsanctioned" bernedoodle we call Mimi. I watched my boys change from little kids to big kids during my time as a graduate student. Through it all, they taught me to slow down and stop living for the next professional milestone; rather I am learning to enjoy and be grateful for the present moment because it is all so very fleeting. This project relied first and foremost on my sons' willingness to support and love their mom through the last four years.

Finally, a note to my daughter, Clementine who passed away unexpectedly in the months before

I came to Michigan. She held so many hopes for the future in her tiny body and I entered graduate school completely broken and lost without her. My journey with grief became tantamount to my journey as a graduate student. Clementine was with me through all of it, reminding her mom to keep fighting even though it sometimes seemed so impossible. As I struggled to develop this research I also struggled to keep going without her. This dissertation reflects these two concurrent journeys and my Clementine is found within these chapters. I love you Clementine and I hope that in some way, you can be proud of the work you pushed me to keep doing. Beauty for Ashes, my sweet girl.

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ACME Average Causal Mediation Effect

ADE Average Direct Effect

AIT Affective Intelligent Theory

ANES American National Election Survey

ATE Average Treatment Effect

B material benefit from politically participating

BN Barisan Nasional

BOE Board of Election

BVAP Black Voting Age Population

C material cost of politically participating

CAT Cognitive Appraisal Theory

CCM Chama Cha Mapinduzi Party (Tanzania)

COVID Coronavirus Disease 2019

D the feeling of carrying out one's "duty" when politically participating

EC Electoral Commission (Malaysia)

GDP Global Domestic Product

GA Georgia (U.S. state)

GE General Election (Malaysia)

GIS Geographic Information System

GOP Grand Old Party (U.S. Republican)

HH Huntington Hill Method

LDP Liberal Democratic Party (Japan)

MTURK Amazon Mechanical Turk

OLS Ordinary Least Squares Model

p how “pivotal" an individual’s participation will be to an election

PAP People’s Action Party (Singapore)

PID Partisan Identification

PRI Institutional Revolutionary Party (Mexico)

PS Senegalese Socialist Party

REDMAP Redistricting Majority Party

ROS Registrar of Societies (Malaysia)

SMDP Single Member District Plurality

UMNO United Malay National Organization

v electoral participation

VAP Voting Age Population

VEST Voting and Election Science Team

VPN Virtual Private Network

ZANU-PF Zimbabwe African Union Patriotic Front

ABSTRACT

This dissertation centers on a puzzle, arising from the growing number of examples in the U.S. and other countries where the strategic manipulation of electoral institutions aimed at increasing individual burdens and/or decreasing the probability of influencing the outcome (electoral suppression) does not seem to depress turnout as much as the classical models of participation would predict. Existing accounts either treat voters as passive actors, largely unresponsive to manipulation attempts or assume that all targeted voters respond the same way.

I develop a theory that links institutions to voting behavior. I argue that electoral manipulation (specifically gerrymandering and voter restrictions) can drive targeted groups to turn out at higher rates than otherwise predicted. The causal mechanism is the specific *and different* emotional reactions that occur in people who are targeted by the suppression or whose group benefits from the same suppressive institutions.

Specifically, the relative position of voters in relation to manipulation attempts produce disparate emotional responses. Some people, despite participating in a thriving democracy, experience emotions like enthusiasm upon learning that electoral suppression helps their group. On the other hand, individuals aware of how electoral suppression targets their group are more prone to experiencing anger and/or fear.

The core of this work is based on a mixed methods and interdisciplinary approach to three empirical chapters. The first utilizes the case of malapportioned electoral districts in Malaysia. I show that electoral geography can be manipulated to reduce the influence of certain types of voters (ethnic minorities, urbanites, and supporters of the opposition in the case of Malaysia). This chapter, specifically, lays the groundwork for future empirical work.

The next empirical chapters rely on the U.S. context. The underlying theory for these chapters is the same: Voters advantaged by an electoral suppressive institution feel enthusiasm and consequently participate less. Voters who are disadvantaged by the same electoral suppressive institution respond differently based on their emotional response to learning that their group is the target of suppression. Those who feel fear engage less than those who feel anger and mobilize. I test these predictions in four ways. First, I examine how voters respond to information about the effects of gerrymandering via two separate survey experiments. Second, I look at how voters respond to attempts to increase

the costs of voting for some communities by using observational electoral data from the 2020 Georgia Senate and runoff election along with another novel survey experiment. I find that my results are broadly consistent with the theory I pose.

In general, I combine insights from research on electoral institutions, political behavior, and the psychology of emotion to show that electoral suppression does not always have the intended behavioral effects of demobilization. In some instances, increased suppression can become a rallying point among those it targets. Interestingly, increased mobilization among the targeted group is not always neutralized as those who win because of suppression (a.k.a. the incumbents' support base) choose to disengage. My theory can be applied to any political context and across any tool of electoral suppression. By illuminating the heterogeneity of responses within different suppressive contexts, this research helps us understand why elite attempts to restrict some groups' access to the ballot sometimes fail spectacularly, but sometimes work. It also highlights the importance of emotions and human psychology in shaping political participation within electorally suppressive institutions. These findings have implications for both theoretical and practical considerations in the fields of comparative and American politics, urging further exploration of the interplay between institutional manipulation, emotions, and behavior across all political contexts.

CHAPTER 1

Introduction

1.1 Opening the Black Box of Behavior in Electorally Suppressive Institutions

In this dissertation I provide a theory of how the manipulation of electoral institutions conditions behavior and how emotions are key to understanding the complexities of why certain groups engage or not. Important work in comparative politics has shown us how and why electoral suppression occurs (Brownlee 2007; Levitsky and Way 2010; Magaloni 2006). Electoral suppression is fundamentally a struggle for political power. Incumbents rely on a complex web of tactics and strategies to manipulate the democratic process in their favor. The objective is to tilt the electoral playing field in favor of specific interests with the aim of power preservation.

Incumbents across the world have perpetuated power despite regular elections. The Institutional Revolutionary Party (PRI) in Mexico, for instance, maintained its power grip for several decades through a combination of political strategies including the manipulation of electoral institutions. PRI incumbents engaged in voter fraud, gerrymandering, vote-buying, and coercion to skew election results in favor of the party. This enabled the PRI to maintain control over the government and key power positions in the bureaucracy for decades (Magaloni 2006). Likewise, the Senegalese Socialist Party (PS) (Hayward and Grovogui 2019; Riedl 2014), the Chama Cha Mapinduzi Party (CCM) in Tanzania (O'Gorman 2012), the Zimbabwe African National Union Patriotic Front (ZANU-PF) (O'Gorman 2012), the United Malays National Organization (UMNO) (Ostwald 2013; Washida 2018), and Singapore's People's Action Party(PAP) (Tan and Grofman 2018) have all utilized similar electoral suppressive tactics to stay in power despite years of consistent elections.

Even in the United States, scholars have highlighted a trending erosion of democratic values within electoral processes (Levitsky and Ziblatt 2018; Norris 2017). Voter suppression tactics have become increasingly prevalent in recent years, targeting marginalized communities and minority

groups. Strict voter identification laws, reductions in early voting periods, and purging of voter rolls disproportionately affect low-income individuals, racial and ethnic minorities, and the elderly. Likewise, American politics has witnessed the systematic effects of partisan (and racial) gerrymandering in the last several years. Scholars and pundits alike have pointed to the systematic muting of minority voting blocs as a significant feature of legislative elections (Best et al. 2017; Chambers, Miller and Sobel 2017; Chen and Cottrell 2016; Chen and Rodden 2013; Daley 2016; Magleby and Mosesson 2018).

Comparative politics has provided some important insights as to why and how incumbents electorally suppress. First, electoral suppression is a means to neutralize mounting oppositional blocs – "trapping" the opposition into investing in manipulated institutions rather than challenging them (Brownlee 2007; Gandhi 2008; Gandhi and Przeworski 2007; Magaloni 2006). Incumbents strategically co-opt and divide the opposition to prevent a united front to "rebel against the regime" (Magaloni 2006, 10).

Second, despite suppression, elections present citizens with the opportunity to participate in the franchise no matter how autocratic it is. Incumbents give some credence to democratic traditions as a means to create a democratic facade to increase the regime's legitimacy. Citizens thus remain satisfied because they were able to exercise some right to participate (Crespo 2004).

Third, electoral suppression allows the incumbent to exhibit its political power and strength. Continuously winning regular elections by large margins rallies the public under the regime while concurrently dissuading potential challenges from the opposition (Brownlee 2007; Magaloni 2006; Ostwald 2013).

Because it is so widespread, we know a lot already about why and how electoral suppression occurs. Yet we lack a systematic understanding of how electoral suppression affects different types of citizens' electoral behavior. If suppression actually works, is it because citizens are unaware? If so, what would happen if the public became more aware of such suppression? Under what conditions would an individual support suppression and under what conditions might that suppression spur a different pattern of behavior? How do we explain increased electoral participation among groups that are the target of suppression? These are some of the central questions I address in this dissertation.

Much of the theoretical contributions to American and comparative politics on electoral suppression have neglected to explore its effects on individual electoral behavior. That is, we know a lot about how and why incumbents suppress but we assume that in response to such suppression, voter response largely remains a black box. I argue that behavior within suppressive electoral institutions is heterogeneous and understanding human emotions is the key to this opening this black box. Specifically, those who find themselves targeted by electoral suppression behave differently from

those benefitting from the same suppression.

This dissertation provides some explanation of the psychological impact of suppressive institutions. I show that some groups, despite participating in a thriving democracy, experience emotions like enthusiasm and support suppression when they learn that suppression is politically advantaging their group. I also show that those who are aware that they are on the losing side of suppression are more prone to experiencing anger and are thus more likely to increase their participation as a way to gain some sort of control over the threats that suppression poses.

Theoretical predictions about human emotion should be constant across political contexts. Thus as I shift my future work to a country where electoral suppression is more widespread and normalized, I expect to see a more depressed effect of anger and a more pronounced effect of fear in the Malaysian context. Angry Malaysians might take to the streets when a critical mass of other angry citizens present a united front, but I expect few to be willing to participate in activities that present a higher cost and pose an existential threat. Simply, fear should dominate behavior in more electorally autocratic contexts.

1.2 What to Expect Next

In the following chapters, I construct an argument that sheds light on the disparate behavioral effects of manipulated electoral institutions. I begin by showing how institutional manipulation can enable incumbents to strategically target certain groups with suppression. Specifically, I show that electoral manipulation aimed at distorting political geography enabled a hegemonic party in Malaysia to secure large winning margins despite fraying popular support. Through an algorithmically derived counterfactual, I show that electoral suppression in Malaysia deliberately targets urbanite voters and those belonging to minority ethnic groups. This exercise is useful in empirically confirming what many have alleged. For this piece of the research I assume that voter responses are fixed regard of the institutional condition. In the remainder of the dissertation I examine what happens if we relax this assumption and allow those responses to vary.[1]

In Chapter Three I provide a theory that will help us understand what happens when we do not fix the effects of suppressive electoral institutions. I build on well-understood theories of emotions in politics. Instead, I argue that institutions condition behavior by creating two disparate institutional contexts. Those that are politically advantaged by suppression will have a different emotional response compared to those that are disadvantaged by the same suppression and these

[1]Future research needs to empirically test the effects of these institutions and trace how targeted groups behave differently than those benefitting from Malaysian gerrymandering.

emotional responses will shape their response. This theory can be applied to any context where there is institutional manipulation and across multiple tools of electoral suppression.

Chapter Four presents the first empirical test of this theory. I conduct a test of the differential effects of emotion on decisions to participate. This is a first test of how gerrymandering affects behavior in a democratic country, the United States. Future work will consider the differences in emotional reactions to similar suppressive institutions in more authoritarian contexts like Malaysia.

In Chapter Five, I consider other forms of voter suppression, namely the direct burden of waiting in long lines to vote. Generally speaking, we think that long lines discourage participation because it increases the cost of voting. In this chapter, I show that observational patterns of participation in GA contrast with this received wisdom. Voters participate more in places where lines would be longest. I then turn to experimental evidence to show that the emotional response to long lines is that the voters that get angry and are more likely to participate.

Finally, in Chapter Six, I offer some conclusions related to this dissertation. I also discuss plans for further inquiry, data collection, and theory development. Understanding how different individuals emotionally experience suppression allows us to better understand how they might respond, and whether attempts at suppression are likely to succeed or backfire.

CHAPTER 2

Deciphering the Exclusionary Nature of Manipulated Electoral Institutions: The Case of Malaysia and Counterfactual Apportionment

with Daniel B. Magleby

I begin this research with an empirical study of electoral institutions in Malaysia for two reasons. First, Malaysia provides an important example of how electoral institutions can target and exclude specific groups. To this point, political science has focused mostly on how and why these institutions exclude but has explored little about how these institutions affect voter behavior. Second, as this study shows, Malaysia presents an excellent case to test my theory of emotional participation in manipulated electoral institutions. Through the methods outlined in this chapter, I can pinpoint how malapportionment has targeted specific groups. The next step is to engage these groups in an exploration of how emotional reactions to these manipulations might affect their political decisions.

This chapter illustrates an example of how to empirically identify the exclusionary tactics of suppression. With a novel dataset that includes data from the 2013 GE (General Election) and a computer algorithm, I set out to show how malapportionment can be a tool of electoral manipulation by singling out groups to exclude full access to the franchise. I decide to utilize Malaysia for four specific reasons.

First, Malaysia exhibits more intensely suppressive electoral institutions compared to the U.S. that engender even greater political inequality. For example, to preserve the political dominance of the ethnic Malay (*Bumiputera*) minority (and to stave off the mounting political influence of the large urban Chinese), Malaysia's initial constitution formally enshrined Malay political dominance. With such a mandate and legacy, the Malay party coalition, UMNO, was the dominant political force in the government since the country's inception through 2018, when the country experienced its first executive power alternation. UMNO's decades-long reign came at a considerable political cost

for the Chinese and Indian populations who are often the primary targets of suppressive electoral institutions. Because UMNO retained power for so long, it was able to manipulate and create new electoral rules that directly disenfranchised would-be opposition blocs in ways more extreme than in the U.S. context. For example, the BN (*Barisan Nasional*) coalition, dominated by UMNO faced considerable allegations of electoral fraud including ballot tampering, electoral roll tampering, controlling which parties can compete in elections, and judiciary partiality that favors the BN (Lim 2007; Wong, Chin and Othman 2010; Ong 2017; Aun 2017; Ostwald 2013, 2017).

Second, when we compare the state of electoral democracy in Malaysia to the United States, a common theme emerges. Over the last ten years, Malaysian citizens (particularly in large cities) have organized a collective voice against suppressive tactics as barriers to the development and consolidation of Malaysian democracy. This collective voice was key in the first successful power alternation in the country's 70-year electoral history (Chong 2018). The United States, on the other hand, has experienced years of incremental democratic backsliding as electoral norms have eroded to the point that in early 2021 the world witnessed a violent attempt, led by an incumbent, to intervene in the democratic process of formally naming and seating an executive (Boone, Taylor and Gallant 2023; Holtzman et al. 2022).

Third, unlike the United States, Malaysian politics occurs in a setting with important cross-cutting cleavages that do not directly correspond with partisanship. Malaysia is ethnically diverse,[1] but in addition to ethnicity, voters' religious, economic, and urban/rural identities cut across party lines in ways that are absent in the U.S. case. In recent years, politics has amplified these cleavages, making the lead-up to elections, election days, and the days following an election even more contentious.

Finally, gerrymandering has consistently enabled, a "hegemonic" party to undermine its opposition. The purposeful distortion of district boundaries is a key strategy for power consolidation.[2] The manipulation of district boundaries is similar to what happens in American states, but unlike redistricting in the United States, where legislative districts have to be equal in population size, strategic mapmakers are not required to draw districts with equal population. Absent any legal restrictions on district population sizes, BN-drawn maps typically under-populate legislative seats in highly supportive regions (rural and Malay) while drawing over-populated districts in regions with many opposition voters. The result of this gross malapportionment is that the votes of individuals in underpopulated districts will count more than the votes cast in over-populated districts.

The variation I see along these three points makes Malaysia a good test of the theory that I

[1]Malaysia is roughly 55% Malay, 23% Chinese, 7% Indian, and 15% other ethnicities.

[2]In most elections the BN coalition has translated 60% of the vote share into a two-thirds majority (Washida, 155)

lay out in the next chapter. While this chapter only focuses on one tool of electoral suppression, it is well known that Malaysia practices several different tactics of electoral suppression. In the last two decades, there has been mounting protest against governmental policies dealing with electoral suppression; however, unlike the U.S. case the regime has jailed and prosecuted civilians for peacefully demonstrating against these tactics. Consequently, this has led international government watchdog groups like Human Rights Watch to accuse the Malaysian government of cultivating a culture of fear to combat widespread grassroots organizing (Watch 2015). With this history, I expect that the effects of fear will dominate an individual Malaysian's decision to engage politically in activities that pose the greatest existential threat. However, I expect anger will also play a role in less costly activities like voting or demonstrating alongside thousands of others. These general theoretical predictions are the second step in this research. For now, I take the first step of deciphering institutional manipulation in Malaysia.

This chapter proceeds as follows: In the next section, I motivate the comparison between the U.S. and Malaysia as applicable cases to test my theory. Not only do both cases historically exhibit opposing levels of democracy, but each country has also experienced opposing trends of democratization in the last ten years. The United States has experienced what some have called "democratic backsliding" and Malaysia has exhibited a shift (to some extent) towards democratization (Grumbach 2021; Tapsell 2023). Next, I outline how I will pinpoint where institutions are manipulated in an effort to decipher institutionally perpetuated political inequality. I then discuss the mechanics of malapportionment and how it works to distort representation in general.

This is followed by a brief discussion of the method for developing a counterfactual of Malaysia's electoral system that will allow an evaluation of the degree to which Malaysia's system of electoral districts manipulates the representation of Malaysia's diverse population.

The final three sections consist first of a summary of the characteristics of 10,000 randomly drawn maps of Malaysia's 222 parliamentary districts. Second, I offer a description of my findings. Here, I compare the set of randomly drawn maps to the regime-drawn map by which Malaysia conducted the 2013 parliamentary election and find that the enacted map diverges significantly from what we would expect from a fair, neutral process. And finally, I offer some conclusions and outline the next steps in exploring the remaining causal chain to my theory: emotions and variations in political engagement. This chapter is a useful example to show how manipulated institutions work but also motivates specific questions about individual behavior in reaction to these institutions. It is these questions that I explore throughout the remainder of this dissertation.

2.1 Motivation: Why Compare Malaysia to the U.S.?

To show how voter participation hinges on emotion and a person's respective institutional (dis)advantage, I draw on original empirical research in two political contexts on opposing sides of the democratic spectrum. The U.S., while exhibiting some democratic fraying, hits the most important benchmarks for its democratic classification. Malaysia, on the other hand, is continuously classified as an electoral authoritarian regime, with a history of strong party dominance and little political turnover.[3] That both cases come from different democratic classifications is important to test my theory of emotion.

However, democracy (and autocracy) is not guaranteed (Levitsky and Ziblatt 2020). And we cannot examine the role of emotions in a vacuum. While Malaysia has historically been less democratic than the United States, in the last decade the country has been moving in a more democratic direction (Tapsell 2023; Teik 2021). In the United States case, the trend is in the opposite direction. Using data from the "Varieties of Democracy" project, Figure 2.1 illustrates these opposing trends. Notice that all three electoral democratic indicators remain more-or-less uniform until 2018 when the BN was ousted from parliamentary power. After 2018, trends start pointing towards increased (albeit gradual) democratization. This is most likely due to the alternation in legislative power and a general nod to the influence of the Bersih ("clean" in Bahasa) pro-democracy movement, pushing for cleaner elections and government (Teik 2021).

The United States exhibits a different story, however. Although each indicator of electoral democracy is much higher to begin with, they all gradually trend away from democracy. A similar inflection point to the 2018 Malaysian elections exists in the United States as well. The lead-up to and the aftermath of the 2016 General Election in the United States pushes these indicators toward less democratization. Take the "Election government intimidation" indicator as an example of this decreasing trend. This indicator generally measures the involvement of the government in elections as a means to disrupt the fair process of contestation. One contributor to this downward trend is the Supreme Court's dismantling of the Voting Rights Act over the last decade. Notice the gradual downward shift from about 2012 on. This trend marks the same point in time as landmark Supreme Court decisions like textitGill v Whitford and *Shelby v Holder*. Both decisions held significant implications for voting rights and elections in the United States (Baldwin 2014; Feder and Miller 2020; Hardy 2019, Krasno et al. 2018). What is more, these cases (and their aftermaths) hold important implications for all three indicators of electoral democracy in Figure 2.1.

[3]See: Polity IV or VDEM for more specifics about how these classifications are operationalized.

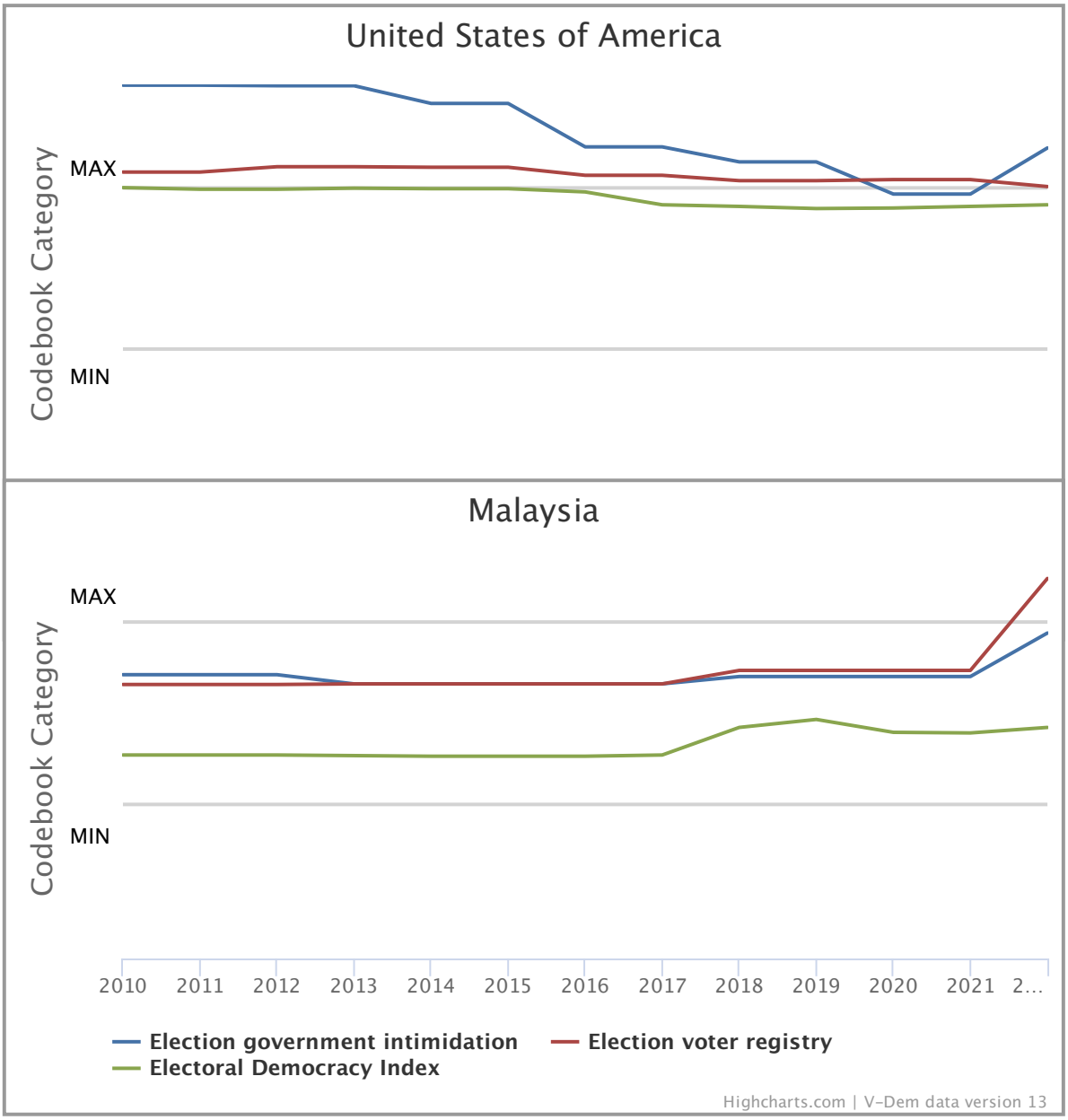


Figure 2.1: Electoral Democracy in the United States and Malaysia. A comparison of the United States and Malaysia along three electoral indicators. Source: VDem (see: Coppedge et al. 2022). For a description of how each of these three indicators was operationalized, please see the appendix.

A common theme in the study of political behavior is that anger mobilizes and fear demobilizes (Brader 2005; Mintz, Valentino and Wayne 2021; Valentino et al. 2008; Valentino and Neuner 2017). I argue that this assumption holds in countries where democratic norms are more stable. For instance, we should see anger as the most potent emotion in mobilizing political participation in countries like the United States. This is something I make more explicit in the next chapter. However, as democratic norms begin to erode, we may see a shift in the roles that certain emotions play in mobilizing political behavior. Here a collective fear in response to the existential threat of democratic backsliding might propel more people to engage than might otherwise be the case.[4]

On the other hand, Malaysia is a place where fear has most likely historically dissuaded some people to engage politically in response to electoral suppression (Watch 2015). However as civil society and pro-democracy movements like Bersih have persisted over the last decade, I expect that anger is an underlying force for mobilization. Testing the role of anger in Malaysian political behavior is something that I do not test in this chapter or dissertation, but it is the underlying motivation for future work.

The bulk of this dissertation focuses on behavioral data from the United States. I expect when I move from the U.S. to Malaysia as a case to test my theory, I will see how more autocratic institutions are more likely to elicit fear and that fear will be a dominant emotion in why a citizen decides to not engage. However, as each country is trending in different directions vis-à-vis democracy, I expect anger and fear to do different things in each country. For example, while the fear of crackdowns has most likely dissuaded Malaysians from participating in the past (before Bersih had such a strong support base), I expect that the success of Bersih along with the increasing role of civil society in Malaysia corresponds with a shift towards increasing anger among the victims of suppressive tactics.

In this chapter, I examine one tool of electoral suppression, malapportionment. Malapportionment is different from gerrymandering in that it skews and entrenches power even further. Specifically in Malaysia, though, malapportionment has enabled the ethnic-Malay minority to form a hegemonic partisan coalition that has been empowered for nearly 80 years and its effects are not unknown to the public. That is, non-ethnic-Malay voters are more aware than say Americans of how manipulated district lines along with other manipulated institutions target them. Because electoral suppression is a more salient issue in the Malaysian context, I expect it to elicit anger and participation in activities like voting or turning out to a protest sanctioned by the regime. However, fear will also be more prevalent in the Malaysia case. When presented with the idea of participating

[4]The 2022 iteration of the American National Election Survey has reported this sort of trend when it comes to policies like Abortion. see: Survey 2022.

in opportunities that present a greater risk, I expect fear to supersede anger and these individuals will decide to not mobilize in these contexts. Simply, autocratic regimes like Malaysia will show that anger-driven participation is a luxury more likely to be found in more democratic settings. This will become clearer in my comparison of these two cases and their respective trajectories. In the United States, I expect that fear about democratic backsliding and the threat that less democracy poses to individuals to mobilize more than it would in a more stable democratic context. In Malaysia, on the other hand, because it is moving towards democratization, I expect that anger will be a more potent force in politically mobilizing than we might otherwise expect in a non-democratic context.

As in the U.S. context, those that benefit from suppression in Malaysia, will not engage to push for better democratic outcomes; authoritarianism is, after all, helping them politically win. If these voters learn that their political advantaged is threatened by increased democratic measures, however, I expect them to experience anger and for anger to be a mobilizing force for increased participation to push for a continuation of electoral suppression that benefits their group. In the next chapter, I lay out a theory that will make these predictions clearer. For now, however, it is important to justify this first study in Malaysia by briefly explaining how this variation in democratic quality (moving from the United States to Malaysia to apply my theory) will moderate the effects of electoral boundary manipulation on emotional reactions and participation.

While more autocratic, Malaysia carries several important similarities to the United States in terms of electoral institutional manipulation. First, both countries exhibit levels of partisan over-representation that disadvantage blocs of voters. Second, and related, partisan over-representation has led to patterns of partisan entrenchment in both places. Third, both countries utilize similar tools of manipulation to skew institutions. And fourth, groups of voters in each country have been especially disadvantaged or what I call “doubly disadvantaged". This classification can similarly be proxied by race, ethnicity, and other disadvantaged minority identities. I briefly explain each of these affinities.

1. Similar Tools of Manipulation

Ethnic cleavages are good starting points for deciphering how institutional manipulation excludes. In Malaysia, for example, at independence, the constitution sought to preserve the political dominance of the indigenous Malay (*Bumiputera*) people who make up a disproportionate portion of the country’s rural population (Ostwald, 523). Ethnic Malays generally align with the Malay party (UMNO) are represented in the legislature by the Malay party dominated coalition (*Barisan Nasional* or BN). Over time, malapportionment in Malaysia has become a tool to amplify Malay representation even further. In turn, parties that represent burgeoning Chinese and Indian populations have become even more systematically disadvantaged.

We see similar trends in many American states. For example, partisan-favoring gerrymanders in the United States can grow out of a natural process of geographic sorting that naturally favors Republicans and in turn largely white voters (Chen and Rodden 2011; Magleby and Mosesson 2018). In simpler terms, white Republicans are more likely to live close to each other. Consequently, they are easily enabled to press the advantage of this "unintentional gerrymander" through deliberately skewing district lines more in their favor (Chen and Cottrell 2016; Best et al. 2017). As a consequence of strategic manipulation, since 2010 gerrymanders in the United States disproportionately disadvantage Democrats and large blocs of Black and other racial minority voters. In many instances, a partisan gerrymander is tantamount to a racial gerrymander.

In both cases we also see instances of widespread voter suppression, typically aimed at ethnic minorities. In Malaysia for example, the BN-controlled Electoral Commission is in charge of preparing and maintaining electoral rolls with the mantra of electoral integrity; which has been subject to criticism from election observers. The commission has been accused of deregistering opposition voters without consent (Lim 2007; Wong, Chin and Othman 2010; Ostwald 2013). Similar voter deregistration has also occurred in the United States, specifically at the state level. In states where Republican majorities control electoral policies, calls for voter roll purges have become commonplace. Proponents of voter registration purges claim they are necessary to ensure electoral integrity. However, many of the current calls have come in states where elections have run smoothly and where purging rolls will disproportionately affect Black voters in particular.[5]

Voter suppression has also included making the process of voting registration more difficult for certain populations. In the United States, this has come through strict voter ID laws that disproportionally affect minority populations. The BN has similar voter registration laws in Malaysia. Just prior to the 2014 election, for example, Native Sabahns (non Muslim, non BN supporting citizens from the Sabah region) generally lack the required documentation to vote while several hundred undocumented immigrants were given identity cards needed to vote in an effort to increase BN support. This "importation of Muslim voters" from Indonesia and the Philippines substantially increased voting blocs for the BN while disenfranchising those supporting the BN's opposition (Ostwald 2017, 11).

2. Partisan Over-Representation

With these tools of manipulation in mind, both ruling parties in Malaysia and the United States have illustrated a systemic effort to over-represent partisan blocs. Both countries utilize a system of single-member districts and gerrymandering has been key to partisan over-representation in both places (albeit to a much greater extent in Malaysia). The Malaysia BN, for example, has

[5]see: https://www.washingtonpost.com/politics/interactive/2021/voting-restrictions-republicans-states/

been over-represented by as little as 12.3 seats in 1964 to as many as 40.4 in 1986 (Wong, Chin and Othman). While not as authoritarian, there are similar patterns of over-representation in the United States.[6] North Carolina's votes-to-seats ratio was initially ruled a partisan gerrymander and a similar trend. In its most recent state assembly elections, North Carolina Republicans were found to be over-represented by as much as 7.5 percent (CAUSE and HALL N.d.).

Unlike the United States, where malapportioned gerrymanders are constitutionally impossible, Malaysia lacks such institutional constraints. For example, in the United States, states are apportioned a certain number of seats in the House of Representatives every ten years to reflect changes in population trends. Whatever number of apportioned seats a state gets will then be reflected in its legislative redistricting process. Each district in the United States must have equal population sizes and be contiguous geographically. Consequently, gerrymandering occurs when partisan incumbents "crack" population blocs over several different districts or "pack" population blocs into only a few districts. In the United States, these blocs oftentimes translate into racial or partisan groups.[7].

However, in Malaysia, redistricting happens when the Electoral Commission deems it necessary and there is no institutional constraint on the population sizes of districts. This allows for partisan over-representation to be amplified even further than we see in the United States because maps can be malapportioned. For instance, consider a mapmaker who must draw five districts with equal population; she can amplify blue representation by drawing lines that would "pack" the green population and result in the minority blue population controlling 3 out of the 5 legislative seats. When we relax the equal population constraint, the minority blue population can increase their representation even more. Through malapportionment, the mapmaker can decrease green representation from 2 seats to just 1 seat and increase blue representation from 3 to 4 seats. In terms of comparison, the United States represents the former scenario while Malaysia represents the latter. This scenario is illustrated through the three stages illustrated in Figure 2.1.

3. Partisan Entrenchment

Partisan over-representation in both cases has enabled party blocs to hold onto power while becoming more and more insulated from changes in the electorate. This is what many refer to as "partisan entrenchment." In Malaysia entrenchment has enabled UMNO to manipulate institutions to continuously reflect the political interests of the Malay minority. One example is the Election

[6]For example, the Brennan Center reports that as of February 16, 2022, there are a total of 50 cases filed that challenge congressional and legislative maps in 19 states as racially or partisan gerrymanders. 30 cases remain pending while Alaska, North Carolina and Ohio are currently being redrawn as a result of judicial judgements. See: https://www.brennancenter.org/our-work/research-reports/redistricting-litigation-roundup-0

[7]Section 2 of the Voting Rights Act of 1965 mandates that these voting blocs cannot be targeted on the basis of race. However, the legality of partisan gerrymandering is still up for debate as Congress and state legislative bodies retain the power to deem what is and is not a gerrymander (Roberts 2017)

Commission (EC) originally a non-partisan independent authority created by the exiting British colonizers to institute free and fair elections. One role of the EC was legislative redistricting. As the ruling UMNO coalition faced mounting competition from non-Malay groups in the early years after independence, UMNO amended the constitution in 1962, placing the role of redistricting in the hands of partisans (Washida, 156). This institutional change would have been impossible if UMNO had not been in control of the legislature at the time. Since 1962, partisan over-representation has increased drastically, insulating UMNO from any sort of electoral opposition.[8]

A similar pattern of over-representation through gerrymandering leading to partisan entrenchment can be detected in certain states in the United States. Unlike Malaysia, the redistricting process is decentralized and states are tasked with drawing electoral maps. Many have argued that most gerrymandering efforts happen in states with Republican-dominated legislatures and/or executive branches and disproportionately affect Democrats (Bishop 2009; Chen and Rodden 2015; Magleby and Mosesson 2018). More recently, of the 19 states that have been accused of partisan gerrymandering, 14 are Republican controlled.[9] Similar to the Malaysia case, gerrymandering has enabled partisan over-representation. However, partisan entrenchment is less in the United States case.

There is also evidence that Republican-dominated state legislatures are trying to entrench themselves. For example, since the 2020 election, at least 250 laws have been enacted in 43 states that would limit voter access to the ballot. These include measures like strict voter ID requirements, narrow absentee qualifications, limited voting hours, and decreases in polling places. While many of these proposals are proclaimed efforts to “ensure electoral integrity" many restrictions are being put in places like Pennsylvania, Arizona, and Georgia where elections reportedly went very “smoothly" (Gardner, Rabinowitz and Stevens 2021, n.p.). Further, some of the most restrictive policies are being proposed in states where the GOP has control of both legislative branches and the governorship.[10] If successful, the Republican party, at least in these states, will become further insulated from shifts in the partisan voting blocs.

In terms of partisan entrenchment, Malaysia is more entrenched than the United States. UMNO has been entrenching itself into politics since 1962 by changing laws to directly amplify their rule. One way this has occurred is by favoring ethnic Malay’s for bureaucratic positions and by instituting bureaucratic policies that do the same thing. In turn, this has made government less responsive

[8]UMNO controls the “redelineation exercises" and calls for legislative redistricting when it sees fit. The process is as non-transparent as possible, opening the process up to public input with very little notice. See (Wong and Ooi, 2018).

[9]Maryland, New Mexico, New York and Illinois are states that have Democratic gerrymanders in their current enacted maps. See: Brennen Center: Redistricting Litigation Roundup and Ballotopedia’s “Composition of State Legislatures".

[10]Namely Arizona, Georgia, South Carolina, Missouri and Florida. See: Washington Post article.

to under-represented minorities. (see: Lim 2007; Washida 2018; Weiss 2020). One example is the Registrar of Societies (ROS), an administrative arm of the Ministry of Home Affairs that employs a disproportionate amount of ethnic Malays and exhibits policies that lean pro-BN. The ROS is tasked with election and political party oversight. It can block new parties from forming and de-register existing parties In fact, when the opposition party held its own central executive committee elections in 2013, ROS immediately declared them illegal, leaving the opposition party to scramble on the eve of the election (Ostwald 2017, 11). The expediency with which ROS manipulated electoral institutions in 2013 was primarily because UMNO was losing a significant portion of its non-ethnic Malay support. As many former coalition supporters were defecting to other parties, UMNO used the 2013 election as a way to shore up its support and manipulate elections with perhaps even more determination.

4. Doubly Disadvantaged Populations. Finally, both states have populations that are not only disadvantaged because of their partisanship but have also been the target of other institutional manipulations based on some aspect of their identity. In other words, both countries have doubly disadvantaged populations.

In the United States, Black voters are more likely to align with the Democratic party.[11] Black support for Democratic candidates has become a crucial factor in winning elections. As such, where we see Republican institutional manipulation in the United States, we will observe the systematic disadvantaging of Black Democrats. Not only has the Black American been systematically disadvantaged historically, certain institutions doubly disadvantage them. For example, consider a Black voter in North Carolina. Not only is she disadvantaged because her vote counts less than her Republican counterparts, but she also faces further disadvantages through voter suppression laws: Her polling place might be inconveniently far, she might not have an acceptable form of identification, her registration may have been purged etc. What is more, this voter has ample experience with laws and regulations aimed at stunting her political and civil rights. While there are of course other doubly disadvantaged groups in the United States, for parsimony, I only consider Black voters for this project.

Such doubly disadvantaged voters also exist in Malaysia. At independence, indigenous Malays worried about a power vacuum as their British benefactors exited. In the midst of widespread protest, Malays created UMNO and instituted such laws that basically codified Malayan supremacy (Brownlee, 2007). Instituting control over politics became expedient for ethnic Malays as Chinese and Indians maintained significant economic power that surpassed their population share. As such,

[11]White and Laird show that Black voters are not monolithic supporters of the Democratic party; rather, Black loyalty to the party stems from social pressure and other influential dynamics (2020).

UMNO manipulated political institutions, ensuring that Indian and Chinese minorities remained politically disadvantaged. One way they accomplished this is through policies that advantaged rural residents. As Chinese economic power located more and more centrally to larger cities like KL, Malay majorities stayed in rural areas and instituted political policies that advantaged the rural voter at the expense of the Chinese urbanite. With this in mind, consider the experience of a Chinese voter who resides in KL. Not only is her vote underweighted in elections at the local and state levels, she also faces suppression at the polls. It is harder to get proper identification, to register to vote, to express her discontent with certain policies, etc. The rural Malay faces little of these barriers. What is more, Chinese Malays have a history riddled with ethnic suppression. In this sense, the Chinese voter in Malaysia is considered as doubly disadvantaged.

Comparing the United States to Malaysia may seem odd at first. While Malaysia is further entrenched and has harsher suppression tactics, it is important to examine how individual behavior might vary across these cases. Specifically, much of the research about participation in authoritarian regimes argues that fear is a dominant emotion and participation is difficult. After interviewing a few individuals in Malaysia and laying the groundwork for this study, there is much to learn about the differentiating effects of anger and fear in this context. In 2018, Malaysia witnessed its first-ever political turnover in the legislature. UMNO lost and minority parties for the first time were able to form a new ruling coalition, reflecting the interests of non-Malay citizens. Many have argued that the takedown of UMNO would not have occurred without an angry civil society (Chong, 2019) that has been fomenting for several prior election cycles. Future work will gauge the effects of emotions like anger, fear, and enthusiasm on varying levels of political participation among Malaysians. Furthermore, it will consider increasingly costly political activities with the expectation that anger will dominate lower cost activities while fear those activities that pose a real existential threat. If emotion proves to be a potent force in spurring variations in levels of political engagement in a case like Malaysia, then we can conclude that psychological explanations for participation within suppressive electoral institutions transcend political culture and are not solely rooted in the American context.

A good first step in replicating a similar research design to the U.S. case is to pinpoint what, when, and where electoral institutions are being manipulated. Accordingly, such manipulation should create some sort of political inequality among distinct voting blocs. The next step would probe differences between advantaged and disadvantaged groups to inform potential experimental designs. The former step is the goal of this chapter, while the latter is a goal for future work.

2.2 Deciphering Potential Institutional Manipulation with Data Science

Many experts have dismissed gerrymandering as a matter simply based on partisanship(Schuck 1987). In the American context, for example, when Democrats favor certain districts, Republicans are likely to disagree, and vice versa. However, it is undeniable that redistricting (or "redelineation" in the Malaysian context) does impact the outcome of elections, and strategic incumbents frequently manipulate the process to gain an advantage in single-member district elections (Chen and Rodden 2013). The crucial issues to consider are 1) does gerrymandering actually translate reliably into seat advantages and 2) whether such biases lead to political inequality among different voting blocs (Krasno et al. 2018).

First, in order to detect bias in institutions like district lines we need some sort of neutral counterfactual. I am not the first to consider the impact of gerrymandering in Malaysia. Previous studies show an association between malaportionment and skewed electoral outcomes (Brownlee 2007; Wong 2018) or compare Malaysia's electoral system and outcomes to a similar SMDP (Single Member District) system (Gandhi and Ong 2019; Ong 2018; Ostwald 2013; Ufen 2009).

Second, many studies focus primarily on UMNO victories rather than addressing what groups (who might have won in a fair system) were systematically excluded. To draw a causal relationship between district delineation and the electoral distortions that lead to the systematic exclusion of certain groups that we observe in Malaysia (or anywhere else), it is necessary to identify a neutral, non-gerrymandered counterfactual case in which all else is constant but the variable of interest, Malaysia's district boundaries, differs. To the extent that this counterfactual case exhibits less distortion, we may then conclude that the difference is due to the UMNO-drawn districts (Angrist and Pischke 2009; Aronow and Miller 2019; Little 1991). While earlier analyses provide compelling evidence of the effect of malapportionment, causal claims are necessarily limited by the absence of a counterfactual case where *ceteris* is actually *paribus*.

In this chapter, we utilize a valid counterfactual for elections in Malaysia that is free of malapportionment and gerrymandering. I develop this counterfactual using Malaysia's own geography and politics.[12] A computer algorithm draws 10,000 hypothetical, fair, alternative maps of Malaysia's 222 electoral districts under different methods of apportionment. The result of these simulations is a null distribution of possible districting outcomes under neutral (and unbiased) districting criteria. The distribution of hypothetical outcomes represents a valid counterfactual in which all else is

[12]I am particularly grateful to Danesh Prakash Chacko and Tindak Malaysia for providing access to polling place data for the Malaysia 2013 general election.

(by construction) constant. I then compare the randomly derived distribution of neutral outcomes to the UMNO-drawn map. The comparison between the UMNO map and the actual map allows some inference about which groups receive more or less representation than they should be based on the political geography of Malaysia. This comparison allows me to pinpoint which groups are benefitting from malapportioned districts and which groups are being systematically targeted by the same district delineation.

There is a clear connection between the UMNO-drawn districts and electoral distortions in the 2013 general election. We compare the UMNO-drawn map against three counterfactual scenarios; in the first, we assign Malaysian states the same representation as they receive in the UMNO scheme, but we use a neutral algorithm to draw districts within states; in the second, we disregard state boundaries and draw a set maps that have 222 districts with the same population in each district; finally, we assign states representation according to a common, fair apportionment scheme and draw districts using a neutral algorithm. In each scenario, voters in the Malay- majority are overrepresented in the UMNO-drawn map vis-a‘-vis any of the counterfactual alternatives. By contrast, voters in the Chinese minority are *underrepresented* in the UMNO-drawn maps. These findings suggest that manipulation of boundaries at the sub-state level (rather than malapportioned, skewed representation between states) drives disparities in representation in Malaysia. We consider specifically the results of the 2013 General Election in Malaysia. While this election is 10 years old, it provides the most complete data set; future work would be a comparison between different elections and we hope such an opportunity will come to fruition.

2.2.1 The Case of Malaysia's 2013 General Election and Counterfactual Apportionment

From independence in 1957, Malaysia's dominant political coalition, Barisan Nasional (BN), maintained its hold on power for more than six decades. For years the United Malay National Organisation (hereafter UMNO) has co-opted the country's formal democratic institutions and processes, as a way to maintain their political power. Furthermore, they systematically manipulated elections to their advantage. For one, the BN prime minister appointed the Election Commission (EC) and its stewardship involved shaping every electoral institution in the country. In nearly every election since independence, the EC has employed wide-ranging tactics of institutional manipulation. Specific and innate to this study, many experts not only accuse the EC of committing electoral fraud, but also of the systematic exclusion of minority parties through malapportionment and gerrymandering (Wong and Ooi 2018). The 2013 election is a primary example. That the

UMNO-backed EC was rigging elections in their favor was not a public secret. In fact, since 2008, there had been at least five well-organized and massively-attended popular rallies in major urban areas calling for cleaner and fairer elections. With mounting discontent and with a history of destabilizing racial riots, UMNO's government took even more drastic measures and issued perhaps the most malapportioned electoral maps in its history. For many, this was a last-ditch effort to "win a lost election" (Ostwald 2017). I explain the mechanics of how this worked in the next section.

In 2013, the parties that constitute the governing coalition (UMNO) in Malaysia received roughly 40% of the votes cast in the general election. The vote showed an ongoing erosion of popular support for a regime that had enjoyed about 50 years of uninterrupted control. Even so, when votes were tallied in the single-member districts by which Malaysia elects its parliament, the ruling coalition managed to retain about 60% of the newly elected parliament. Analysts almost universally agreed that by leveraging artfully designed districts, the regime was able to "win a lost election" (see Ostwald 2017). In particular, a consensus emerged that malapportionment, districts containing vastly different numbers of voters, swung the election. Prior to the election, UMNO leveraged their control of the government to draw district lines in such a way that their supporters tended to live in relatively smaller districts and opposition voters tended to live in relatively larger districts. The effect of this arrangement was the systematic underweighting of votes cast for the opposition. In short, the effect of malapportionment was that the regime needed fewer than a majority of votes to carry a majority of districts. Thus, UMNO extended its control of the Malaysian government through a nominally democratic process.

Scholars and other observers of Malaysian politics point to malapportionment, districts of unequal size, and gerrymandering, the deliberate delineation of electoral districts to achieve political advantage, as key factors for UMNO's electoral success. (Ostwald 2017, Weiss 2020, Wong and Ooi 2018). To be sure, these two methods of electoral distortion allow politically-motivated mapmakers to frustrate majority rule and inflate wavering support as UMNO did in Malaysia. I focus on an additional consequence of Malaysia's brand of malapportionment: *exclusion* of minority voices and opposition groups. From a more general political science perspective, Malaysia's status as a hybrid regime and its diverse population make it an ideal setting in which to consider the ways that districts of varying sizes and artfully delineated electoral districts mute particular voices in nominally democratic settings. I briefly explain how such exclusionary politics takes place in the following section. Geographic districts can pose a problem for democratic institutions that operate in heterogeneous societies (Lijphart 1981). In practice, representation is *apportioned* to a geographic region. Voters in that region then select a representative to make the interests and preference of those in the region "present again" in a legislative assembly (Pitkin 1967). In a homogeneous society,

it is often presumed that individuals living close proximity generally share similar interests and preferences over policy. In such a setting, the arrangement of districts may not make a difference in the final composition of the legislature or government. On the other hand, in a heterogeneous society, neighbors may not share preferences or interests, and the arrangement of district boundaries may make a significant difference in the ways that groups with different interests or preferences are represented in the legislature or government.

The problem of geographic districts are compounded by the fact that the boundaries of districts are often themselves the product of a political choice. The person or people responsible for districts can manipulate boundaries to her or their advantage. By the same token, they may use their power to delineate districts in order to limit the influence of opponents. The example represented in Figure demonstrates how this might occur in a political system with two opposing groups.

Suppose, a mapmaker had to divide the jurisdiction represented in panel A. of Figure 2.1 into five districts. The jurisdiction contains two groups, one that lives in close proximity in the northern part of the jurisdiction, and another that lives in close proximity towards the south. If the mapmaker was constrained to draw *balanced* districts, that is, districts that contain an equal number of residents, each district would contain five people. If we presume that the mapmaker was motivated to generate a set of districts in which the northern group controlled a majority of seats in the legislature, he or she might produce a map that looks something like panel B of Figure 2.1. Here the northern group controls three districts and the southern group controls just two. This arrangement is commonly referred to as a "packing gerrymander" because the mapmaker has packed one group into a minority of districts limiting their influence in the remaining majority of districts.

Packing gerrymanders pose a particular problem for democratic systems because they serve to frustrate majority rule. Observe that the northern group controls 60% of the seats in spite of the fact that it only makes up just 40% of the population. Once an arrangement like the one represented in panel B is put in place, we might anticipate the minority group to maintain control of government and consequently the process of delineating districts. Absent some exogenous shock, there is no reason to expect the minority group to redraw boundaries in a way that would increase representation for the larger group. This is a common tactic of institutional manipulation in the American case.

Now suppose we relax the constraint that districts are balanced in terms of population (something non-existant in the American SMDP context). That is, allow districts to be *malapportioned*. If we continue to presume that the mapmaker was motivated to generate a set of districts in which the northern group controlled a majority of seats in the legislature, he or she might produce a map that looks something like panel C of Figure NUMBER. In such a scenario, the northern group would receive 80% of the seats despite the fact that they constitute just 40% of the population.

Even so, the mechanics by which malapportionment perverts representation are the same those of a packing gerrymander. The mapmaker mitigates the influence of one group by concentrating them in a minority of districts which allows another group to dominate the remaining districts. In fact, we might say that malapportioned districts are a more general form of a packing gerrymander. That is, they are alike in every way except malapportioned systems do not presume that each district contain the same number of people.

The propensity to entrench a minority group's control of a majority of seats is a well-understood feature of malapportioned districts, but malapportioned districts can also serve to exclude groups to a degree that violates democratic norms. Consider again panel C of Figure 2.2 . The group residing in the southern portion of our hypothetical map makes up 60% of the population, but in the example we have drawn, they receive just 20% of the seats. They receive 40% less representation that we would expect given their underlying distribution in the population of our hypothetical political jurisdiction. Thus the gerrymander is not just contra-majoritarian, it also serves to diminish the voices of those living in the over-populated districts who in our example happen to belong to one ethnic and urbanite group.

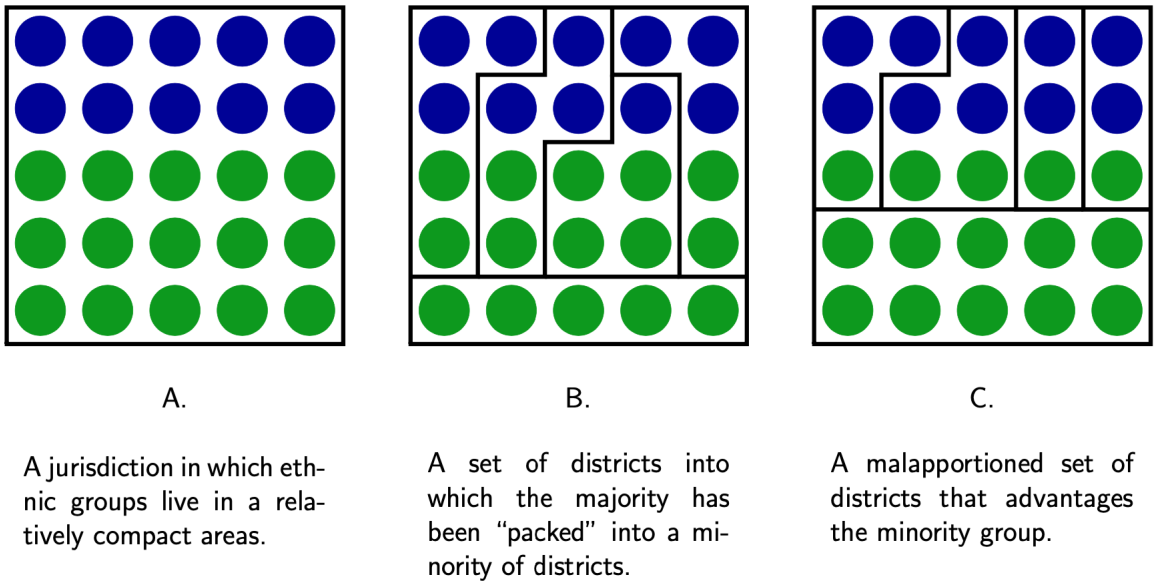


Figure 2.2: Two Kinds of Gerrymanders. Example of how a packing gerrymander can become a malapportioned gerrymander.

Malapportioned districts make it possible for a minority of the population to control a majority of seats and mute the voices of some members of society, but malapportioned districts are by no means sufficient to produce outcomes that frustrate democratic principles when votes are translated into seats. The negative effects of malapportionment have to be considered in the context of the possible set of alternative districts, and the set of possible alternative districts are constrained by the geographic distribution of voters.

2.3 Counterfactual Apportionment: The Malaysia 2013 General Election with Daniel Magleby

Malaysia is an excellent setting in which to consider the effect of malapportionment on the exclusion of minority and opposition groups. Malaysia's population is diverse with a large majority Malay population and several smaller minority groups. In addition, its population is distributed in patterns that allow for variance in district composition. Finally, because Malaysia's highly malapportioned system of districts allows us to consider the distortive effects of districts that contain populations of different sizes.

2.3.1 Analyzing Malapportionment in Malaysia

Malaysia's population is diverse with a large majority Malay population and several smaller minority groups. Malays and Bumiputeras[13] make up a majority of the population throughout the country – roughly 70%. Chinese are the largest minority constituting about 23% of the population. While they are outnumbered by Bumiputera, ethnic Chinese exercised an outsized economic influence and they are, in general, relatively urban and affluent. About 7% of the population is Indian. These groups are afforded citizenship and the right to vote in parliamentary elections.

Ethnic groups in Malaysia are distributed in patterns that allow for variance in district composition. For example, Chinese Malaysians make up a significant minority of Malaysia's population; however, they tend to be disproportionately urban. In fact, several Malaysian cities are majority-Chinese. On the other hand, Malay Malaysians are distributed more evenly across urban and rural areas of the country. The result of these divergent distributions is that the probability of an ethnically Chinese person living next to another ethnically Chinese person is higher than the probability of an ethnically Malay person lives next to a Malay person.[14] Indians, the smallest of the major ethnic groups, primarily live in urban areas of peninsular Malaysia. In some states they make up more than 10% of the population, but they are tiny majority of others. The result of these different patterns of residency is that geographic districts may not serve to represent ethnic populations proportionately. That is, groups might receive share of seats that diverges from the proportion of the population that

[13] *Bumiputera* is a term referring to those of Malay or indigenous descent. The label applies to those who occupy a "special position" under the Constitution of Malaysia. Under the constitution it is the responsibility of the king "to safeguard the special position of the Malays and natives of any of the States of Sabah and Sarawak and the legitimate interests of other communities."

[14] In the United States, a similar pattern exists between blacks who tend to reside in more urban areas and whites who, on average, live in less homogeneous areas. Since the concentration of black residents in urban areas make it possible for neutral processes to generate districts with overwhelmingly black populations, Chen and Rodden (2013) have termed the resulting over-concentration of minority voters in urban legislative districts an "unintentional gerrymander."

belongs to that group.

Malaysia's highly malapportioned system of districts allows us to consider the distortive effects of districts that contain populations of different sizes. District sizes in Malaysia varied significantly in the 2013 map – the largest district has a population of 144,159. Just 15,791 live in the smallest district. It is generally understood that the 2013 UMNO-drawn map was engineered to maximize representation and minimize the representation of other groups (see: Washida 2018; Ostwald 2013; Pepinsky 2015).

2.3.2 Developing a Counterfactual with Computer Automated Redistricting

This study includes a valid counterfactual for parliamentary districts used in Malaysia's 2013 election. We use a computer algorithm to simulate the redistricting process and generate a set of $10,000$ neutral maps of Malaysia's 222 parliamentary districts. Using data compiled by Tindak Malaysia, a government watchdog group in Malaysia, we consider the composition of simulated district maps and compare the characteristics of the districts generated by the computer algorithm to the regime-drawn districts. Given the centrality that this automated redistricting process is to our empirical claims, we next apply it to the context of institutional manipulation in Malaysia.

Policy practitioners and academic observers of legislative redelineation have long asserted that computers could hold the key to developing fair districts from which voters could select representatives (Engstrom and Wildgen 1977, Nagel 1972, Vickrey 1961, Weaver and Hess 1963). In recent years, approaches to automated redistricting have proliferated. While these approaches differ in the particulars, each approaches the problem of redelineation by taking a relatively large set of geographic units and organizes them into a relatively small set of legislative districts. The complexity of the problem increases as either the number of geographic units or the number of districts increases. To generate a meaningful number alternative maps of legislative districts, these approaches required long runtimes (Cirincione, Darling and O'Rourke 2000, Chen and Rodden 2013), or in some instances, access to supercomputers (Tam Cho and Liu 2016). This study implements an approach proposed by Magleby and Mosesson (2018) that is efficient enough to generate a large number of maps of even the largest jurisdictions. A more detailed explanation of the algorithm may be found in the appendix.

The algorithm draws 20,000 maps of Malaysia. Some of the maps drawn by the algorithm exceed the target of population parity of 1%, so I discard all maps that exceed our desired level of parity. From the remaining maps, we then take a random sample of 10 000 maps to use in our analysis.

2.3.3 Geographic and Demographic Data in Malaysia

In order to carry out this analysis, the algorithm requires demographic data organized into geographic units in which citizens reside. Census data are sensitive in Malaysia, so the government has not made them available publicly. As such, this study relies on data provided by Tindak Malaysia, a government watchdog group. These data are organized into GIS shapefiles of voting districts (precincts) that indicated the contiguity of each voting district with neighboring voting districts. The Tindak shapefiles present voting district-level demographic data for every state in Malaysia. In addition to demography, the GIS data also indicates which voting districts are adjacent to each other.

In order to achieve target levels of population parity and to maximize variance in the algorithm-generated maps, we disaggregate the voting district data into smaller geographic units. Figure 2.3 illustrates this process. Panel A shows the 9,163 voting districts (precincts) in which Malaysians cast their votes. These voting districts range in size from thirty-six to $18,640$ residents. Panel B includes the results of a random division of each voting district into between three and ten sub-units. In total the algorithm generates $60,342$ subunits from the voting districts. These sub-units are drawn randomly by a computer and do not correspond to any political jurisdiction. This process of disaggregation is found in detail in the appenix. Panel C represents a randomly selected neutral map. Ultimately I obtain a sample of 10,000 maps where the population deviates from perfectly balanced by 1% or less.

We run the algorithm thousands of times in order to achieve a sample of 10,000 maps in which the population deviate from perfectly balanced by 1% or less.

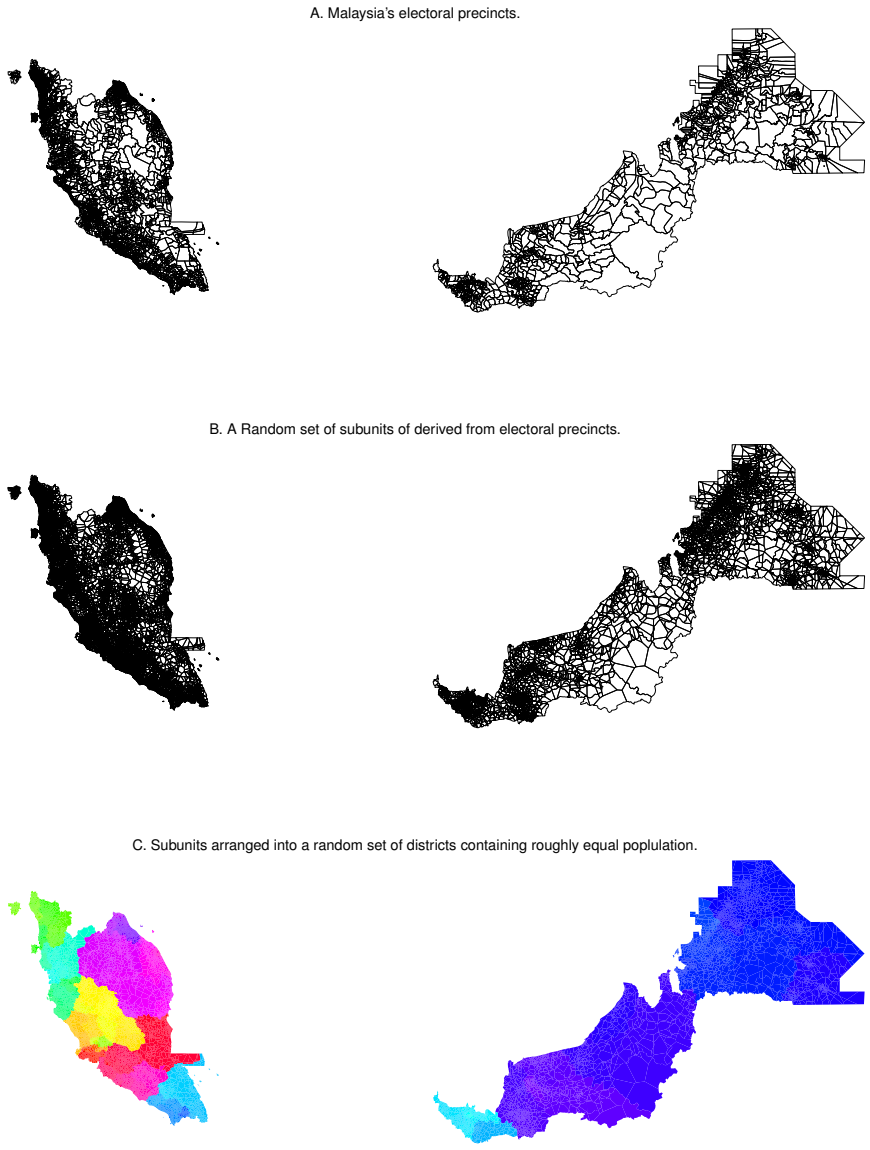


Figure 2.3: The Algorithmic Process of Geographical Disaggregation. The algorithm disaggregates geographic and demographic data from the set 9, 163 electoral precincts into a random set of 60, 342 subunits.

2.4 Identifying the Source of Electoral Distortion

Malapportionment can manipulate representation; however, it is less clear ex-ante whether the malapportionment observed in Malaysia is the product of decisions made to mute the representation of particular ethnic groups (and inflate others) or if malapportionment exists in order to serve some other representational goal. For example, federal systems, like Malaysia, often seek to set a minimum

level of representation for each federal unit. Likewise, it is possible that malapportionment arises because federal systems are designed to cap the maximum amount of representation any single federal unit receives.[15] In Table 2.1 I summarize the “official" level of apportionment to Malaysian states that exists under the 2013 plan of parliamentary districts. We compare the existing level of apportionment to the level of apportionment that would exist under a system that fairly apportions seats to states according to population.

Many systems of apportionment to federal units exist (Balinski and Young 1982), Here, we apply the Huntington-Hill method of apportionment to determine the fair amount of representation each state should receive in Malaysia. The Huntington-Hill method avoids some of the problems that can arise when other methods are employed.[16] Once we establish what a fair baseline of apportionment to states would be, it is possible to compare the expected levels of apportionment under the official levels of apportionment we observe in Malaysia's 2013 parliamentary map. A more detailed summary of the Huntington-Hill method is in this chapter's appendix.

In practice, methods of apportionment only differ in the ways they deal with fractional remainders, so they make a difference in the marginal level of representation that a federal unit receives. That is, changing the method of apportionment from the Huntington-Hill method to some other fair system of apportionment could increase or decrease the number of seats a federal unit receives by at most one seat. Other methods would apportion seats in very nearly the same manner as the Huntington-Hill method in Malaysia. Said another way, applying an alternative to Huntington-Hill method would not account for the patterns of apportionment to states I observe in Malaysia and report in the following table.

[15]The United States Senate is perhaps the quintessential example of malapportionment engineered for these purposes. As part of the so-called "Great Compromise," framers of the U.S. Constitution limited the number of representatives each state receives to in the U.S. Senate, the upper chamber of the national legislature, to two regardless of a state's population. Likewise, every state receives two representatives in the Senate no matter how small the states population. The result is a chamber that over-represents a small state like Wyoming states but under-represents the population of a large state like California.

[16]In particular, the Huntington-Hill method avoids what social choice theorists have come to call the Alabama Paradox. The Alabama paradox arises in a system of apportionment when an increase in the number of seats in a legislature results in a decrease in representation for residents of some geographic unit. The Huntington-Hill method was devised to avoid such a scenario.

State	Population	Expected number of seats	Lower Quotiant	Upper Quotiant	Geometric Mean	Huntington-Hill Method	Official	Difference
Perlis	227,025	1.821	1	2	1.414	2	3	1
Kedah	1,890,098	15.159	15	16	15.492	15	15	0
Kelantan	1,459,994	11.709	11	12	11.489	12	14	2
Terengganu	1,015,776	8.147	8	9	8.485	8	8	0
Penang	1,520,143	12.192	12	13	12.489	12	13	1
Perak	2,258,428	18.113	18	19	18.493	18	24	6
Pahang	1,443,365	11.576	11	12	11.489	12	14	2
Selangor	5,411,324	43.401	43	44	43.497	43	22	-21
FT Kuala Lumpur	1,627,172	13.0501	13	14	13.491	13	11	-2
FT Putrajaya	67,964	0.545	0	1	0	1	1	0
Negeri Sembilan	997,071	7.997	7	8	7.483	8	8	0
Malacca	788,706	6.326	6	7	6.481	6	6	0
Johor	3,348,283	26.854	26	27	26.495	27	26	-1
FT Labuan	86,908	0.697	0	1	0	1	1	0
Sabah	3,117,405	25.003	25	26	25.496	25	25	0
Sarawak	2420009	19.409	19	20	19.494	19	31	12

Table 2.1: Malaysia Under Three Apportionment Methods. A comparison of apportionment to Malaysian states under the official method realized in the 2013 map of parliamentary districts, and a “fair” apportionment to Malaysian states using the Huntington-Hill method. The difference between the number of representatives apportioned to a state under the official and Huntington Hill methods represents the surplus (or deficiency) in representation that a state receives under the 2013 plan of parliamentary districts.

Table 2.1 summarizes the amount of observed representation apportioned to each state and the level of expected representation for each state to receive from a fair apportionment method like Huntington-Hill. The second and third columns report each state's population and the expected number of representatives each state should receive. Without exception, the expected number of seats results in a fractional remainder for each state. We then report the lower quotient, the upper quotient, and the geometric mean of the upper and lower quotients. A comparison of the expected number of seats to the geometric mean of the upper and lower quotients produces the number of seats each state would expect if representation was apportioned according to the Huntington-Hill method. The penultimate column reports the actual number of seats that each state received. The final column reports the excess or deficiency of seats each state received compared to the number of seats it would have received using the Huntington-Hill method.

Based on the calculations reported in Table 2.1, three federal units, Salangor, Kuala Lampur,and Johor, received fewer representatives than they would have received under a fair method of apportionment to states. Johor received one fewer seat and Kuala Lampur received two fewer seats than either state would have received under a fair apportionment method. While receiving one or two fewer representatives than would be fair significantly diminishes representation, Salangor received twenty-one fewer representatives under the official apportionment of seats than it would have received if apportionment had been carried out using the Huntington-Hill method. Under the fair method, Salangor should have received forty-three seats in parliament; however, the government only awarded Salangor twenty-two seats. As a result, the average resident of Salangor receives a little more than half as much representation as he or she would have received under a fair apportionment method.

Our calculations also indicate which states received a surplus of representation. Penang, Kelantan, and Pahang received a one, two, and two-seat surplus respectively. Each state would have received twelve seats under the fair method, so the result of the official apportionment levels is residents in these states receive between roughly 8% to just over 16% more representation than they would expect from a fair system. Perak received six additional seats, increasing its number of representatives from eighteen to twenty-four, a 33% surplus in representation for residents of that state. Perlis state received three seats as opposed to the two seats indicated by the fair method which corresponds to a 50% increase in the level of representation residents of that state would expect under a fair method. Sarawak benefited most from malapportionment of seats to states. Rather than the fair nineteen representatives it would have received under the Huntington-Hill method, it received thirty-one representatives in parliament. The additional twelve representatives indicate that residents of Sarawak receive just over 63% more representation than they would receive from

a fair system.

Clearly, the governing regime in Malaysia manipulated the apportionment process in 2013 to favor some states with more representation while simultaneously limiting the representation of other states. Even so, the difference in apportionment to states cannot explain all of malapportionment observed in Malaysia where the largest district contains nearly ten times the number of people that live in the smallest district. The disparity in district size indicates that malapportionment occurs at the sub-federal-unit level too. In other words, districts drawn at the state level exacerbate the malapportionment and press advantaged for the ethnic Malay vote in Malaysia.

2.5 Findings

In this section, the Magleby-Mosesson algorithm develops three potential counterfactuals. Comparing these counterfactuals to the observed outcomes in the UMNO-drawn map allows us to make inferences about what distorts outcomes in an electoral system. The algorithm generates 10,000 hypothetical maps of Malaysia's 222 electoral districts under three different apportionment methods, for a total of 30,000 maps. First, it considers a scenario in which apportionment is not made to states, rather districts are drawn without reference to state boundaries. Second, next it examines apportionment to states under the Huntington-Hill method. Finally, it considers apportionment under the official level apportionment to states. Importantly, I presume that within each state, each district has an equal number of voters. For the first method of apportionment, I presume that every district has an equal number of voters. For the latter two methods, we make the presumption that within each state, each district has an equal number of voters.

We focus our attention on the ways that the regime-drawn map of parliamentary districts distorts the representation of minority groups in Malaysia's parliament. We compare the composition of parliamentary districts reported by Tindak Malaysia (Chacko 2017) to the racial composition of districts generated by the approach we used to draw 10,000 alternative, neutral maps of Malaysia's legislative districts in which states receive the actual amount of representation.

2.5.1 Characteristics of the Regime-Drawn Electoral Map

Table 2.2, summarizes the demographic characteristics of the regime-drawn map. Malay (Bumiputera) are the largest ethnic group in Malaysia. On average, each district contains $31,509$ Malays. In the country overall, the population is 52.6% Malay, and the ethnic group constitutes a majority of the population in 54.1% (119/220) parliamentary districts. Chinese are the second largest ethnic

group in Malaysia. On average, each parliamentary district contains about 17,769 Chinese residents. The group makes up a majority in thirty (13.64%) parliamentary districts in spite of making up 29.68% of Malaysia's population. Malays originating in the Sabah region are another significant minority group. On average parliamentary districts contain 2,929.97 Sabah residents. The relatively small average number of Sabah Malays belies the group's influence. Malays are concentrated in the Sabah region, and the group makes up a majority in nineteen parliamentary districts. Thus, in spite of making up 9.3% of the population, they control 8.64% of the parliamentary seats. Likewise, Malays originating in the Sarawak region are a significant minority group making up 7.72% of Malaysia's population. Like those Malays in the neighboring Sabah region, the Malays originating in Sarawak make up a majority in nineteen parliamentary districts which corresponds to 8.64% of the parliamentary seats. Finally, Indians also make up a significant proportion (13.9%) of Malaysia's population. Even so, they fail to achieve a majority in any of Malaysia's parliamentary districts.

	Min	Max	Median	Mean	SD	Majority
Malay	152	91375	31326	31509	22506.38	119
Chinese	104	75762	11748	17769	17857.27	30
Sabah	7	47243	52	2929.97	8631.989	20
Sarawak	6	37464	91	2432.5	6368.523	19
Indian	3	31240	1806	4377	5608.467	0
Total Population	15798	144369	56152	59871	25255.75	

Table 2.2: Summary of Demographic Characteristics of Parliamentary Districts in Malaysia's Enacted Map. All data were provided by Tindak Malaysia.

2.5.2 Simulated Electoral Maps

It is tempting to conclude that groups are under or over-represented if the share of seats the group controls is not proportional to the composition of a jurisdiction's population; however, the underlying distribution in the population is the wrong counterfactual against which to compare a plan of legislative districts. In electoral systems with geographically based districts, mapmakers are constrained by the distribution of groups across geographic space. Geographic districts must be contiguous, that is, it must be possible to travel from any location in a district to any other location of the districts without leaving the district. One result of the contiguity requirement inherent to geographic districts is that, all else equal, individuals that reside in close proximity are more likely to reside in the same district than individuals that live far apart. To the extent, if members of an ethnic

group are dispersed across geographic space, they may constitute a considerable proportion of the population, but it may not be possible to draw a reasonable district in which that group constitutes a majority – this may explain the patterns of Indian representation in Malaysia. By contrast, if all members of a particular group live in close proximity to each other, it may be the case that a fair process of district delineation simply concentrates members of that group into relatively few districts – this is one explanation for patterns of Chinese representation in Malaysia. Thus, any inference about the effects of district delineation must account for the geographic dispersion of ethnic groups. Likewise, to evaluate the extent to which a manipulation like severe malapportionment of electoral districts affect group representation, it is necessary to consider a counterfactual in which no malapportionment is present. The algorithm proposed by Magleby and Mosesson (2018) draws districts in a manner that accounts for both the geographic dispersion of ethnic groups and ensures that alternative, hypothetical maps contain districts with equal populations.

In order to establish an appropriate counterfactual, we compare Malaysia's enacted plan to 10,000 randomly generated maps of Malaysia that are contiguous and contain roughly equal numbers of residents under three scheme apportionment schemes – the official level of apportionment each state received, a fair level of apportionment to states under the Huntington-Hill method, and a scheme where districts were drawn without reference to state boundaries. For each map drawn by the algorithm, we count the number of districts in which the number of Malay, Chinese, Sabah, Sarawak or Indian residents exceeds 50% of the voters in that district. For each map, we then calculate each group's *surplus seats*, the number of seats above (or below) the number of seats in the actual map in which the group constituted a majority. Thus, if a group carried fifteen seats in the actual map, but ten seats on one of the hypothetical map, we say that the group received five surplus seats relative to the number of seats it received under the unbiased algorithm. Each hypothetical map is slightly different with the number of surplus seats varying from map to map, so I report the distribution of surplus seats in the hypothetical maps. If the number of surplus seats differs in the neutral maps significantly from zero, we may infer that the actual map represents a perverse representational outcome. We present the results of our 30,000 simulated maps as dot plots in Figure 2.4.

Each line of Figure 2.4 summarizes the distribution of outcomes we observed in the maps generated by the neutral redistricting algorithm. The dot on each line represents the average difference in the number of districts carried in the hypothetical maps drawn by the algorithm and the number of districts carried in the actual map. The dot represents the most likely number of surplus seats the group received when compared to a particular method of apportionment. The darker line extending from each dot summarizes the surplus seats each group carried in the actual

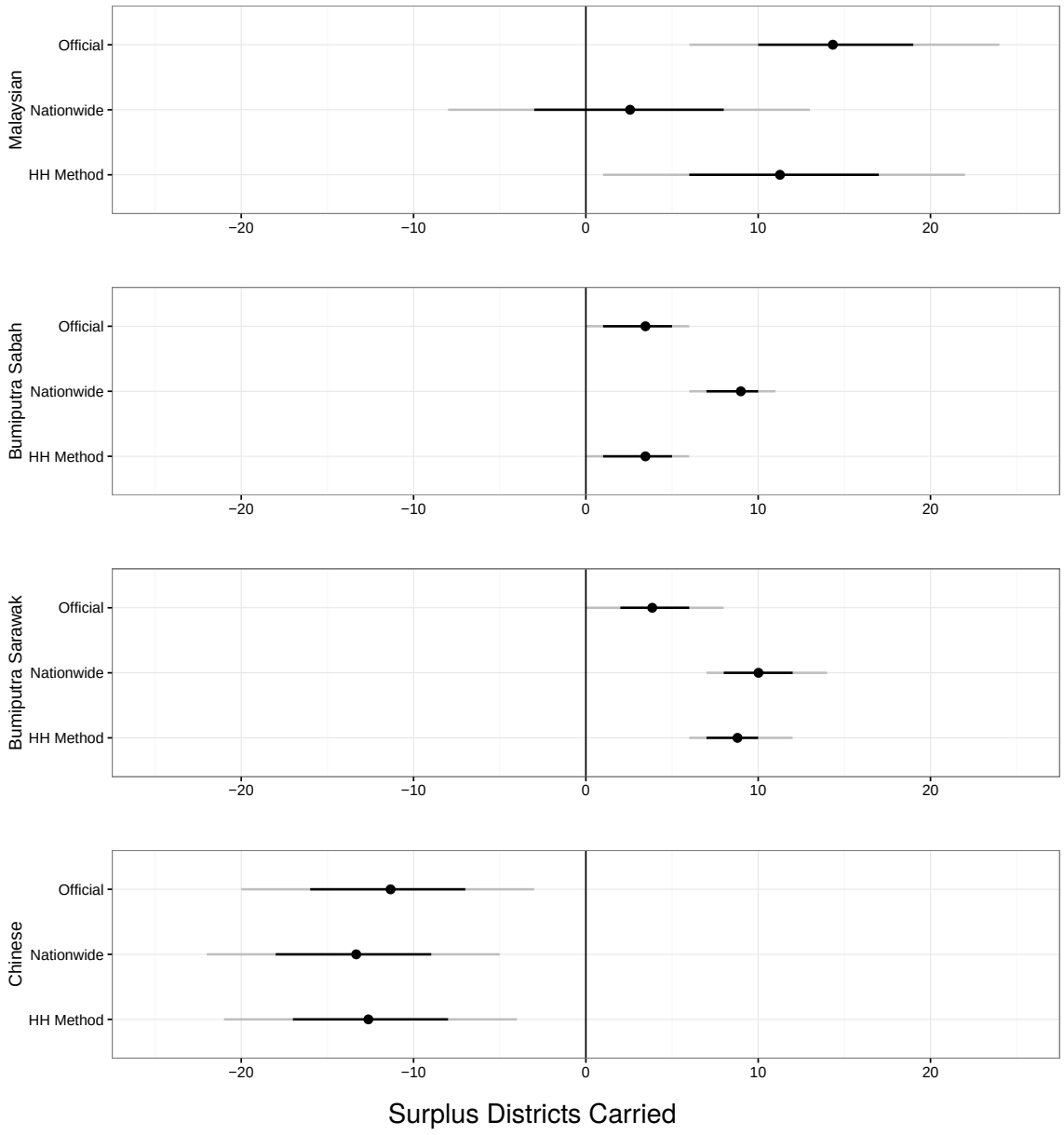


Figure 2.4: Comparison of Three apportionment Methods. The official level of apportionment observed realized in the distribution of parliamentary seats to states in 2013 (“Official"), a redistricting conducted without reference to state boundaries (“Nationwide"), and apportionment carried out by the Huntington-Hill method (“HH Method"). The black dot represents the mean number of districts carried by a particular ethnic group under either the Official, Nationwide, or Huntington Hill method of apportionment in 10,000 hypothetical maps drawn using the Delineate_GP redistricting algorithm proposed by Magleby and Mosesson (2018). Among the hypothetical maps, 95% had the number of surplus districts carried contained in the darker line extending from the point. The lighter line extending from the dot represents the maximum and minimum number of surplus seats observed in the hypothetical map under a particular method of apportionment.

map compared to 9,500/10,000 (95%) most likely outcomes of the hypothetical maps generated by the computer algorithm. The lighter gray line represents the full range of outcomes observed in the hypothetical maps. The extent to which each group's distribution of outcomes falls above (below) zero indicates the degree to which the UMNO-drawn map favored (disfavored) that group relative to the hypothetical, neutral alternative.

Majority-Malay Districts

Consider the distributions of districts in which Malays constituted a majority. The top panel of Figure 2.4 summarizes our findings as they relate to Malay-majority districts. In Malaysia's enacted map, Malays made up more than 50% of the population in 119 districts. For two out of three apportionment schemes we consider (the "Official" and Huntington-Hill method), the number of Malay districts far exceeds what we would expect from a random, neutral process in which districts were constrained to be balanced on the state level and in which boundaries of districts do not cross state boundaries. In the 10,000 maps in which we apportion seats to states under the official method, Malays constitute a majority in as few as ninety-four districts and as many as 113. The algorithm never produced a map in which Malays made up the majority of 119 districts. On average, the algorithm suggests that under the official method Malays should make up a majority in 104.7 districts indicating that Malays receive 14.7 more seats than we would expect had representation been apportioned according to the official method but then ensured seats within states contained an equal number of voters.

Our findings are similar when seats are apportioned to states according to the Huntington-Hill method of apportionment. The range of majority-Malay districts ranges from ninety-seven to 118 in the maps drawn by the algorithm. In the 10,000 maps drawn by the algorithm, none yielded the observed 119 majority-Malay districts in the actual map. On average, the maps generated by the neutral algorithm produced 107.7 majority-Malay districts when seats were apportioned to states using the Huntington-Hill method which indicates the actual map produced a 11.3 more seats than we expected had districts been apportioned to states fairly drawn according to contain equal population.

Our findings are different in our $10,000$ neutral maps drawn without reference to state boundaries, I observe 898 maps with 119 Malay majority districts. While the enacted outcome occurs with a frequency of 8.98% in our simulated maps, the most common outcome was 117 majority Malay districts which occurred in 1451 (14.51%) of the neutral maps. In all, $7,775$ neutral maps produced by the algorithm had fewer than 119 majority Malay districts. Suggesting that the Malay majority may be slightly over-represented, but not to a degree that could rule out random chance.

Majority- Sabah Districts

By contrast, results for living the Sabah and Sarawak (summarized in the middle two panels in Figure 2.4) show that the population in those states receive more representation than expected based on the neutral maps produced by the algorithm using any apportionment method. Sabah state received twenty-five seats in the official apportionment of representatives to states and under the fair Huntington-Hill method of apportionment. The Sabah are so classified because they belong to the ethnic group and reside in the state of Sabah, so our estimates of majority-Sabah seats do not differ for either method of apportionment. When districts are constrained to fall wholly inside a state, the maps produced by the algorithm had 16.55 majority- Sabah districts On average. Overall, compared to the official or Huntington-Hill method of apportionment, the Sabah control about 3.45 more seats than we would expect if districts were drawn in a way that ensured equal numbers of voters lived in each district. If I constrain the algorithm to draw twenty-five seats wholly contained in the Sabah state, the number of majority- Sabah districts ranges from a low of fourteen $(16/10,000)$ districts to a maximum of twenty $(1/10,000)$districts in the maps drawn by the algorithm. Thus, thus it is possible for a neutral process to yield the outcome we observe in Sabah; however, it is extremely unlikely ($p \leq .0001$).

When the algorithm does not consider state boundaries, the Sabah made up a majority in as few as 9 districts (47 maps) and as many as 14 districts (28 maps) in the 10,000 neutral maps drawn without reference to state boundaries. In the most common outcome, observed in 4386 of the neutral maps, the Sabah constituted a majority in 11 districts. In none of the 10,000 maps do we observe the Sabah achieving a majority in 19 districts, the number of districts the group controls in Malaysia's enacted map. This finding suggests that the number of of Majority Sabah disticts is extremely unlikely to emerge from a neutral process ($p < .0001$).

Majority- Sarawak Districts

The Sarawak also receive an unlikely amount of representation for any method of apportion of seats to states. In contrast to Sabah, Sarawak could expect to receive considerably less representation in parliament if the method of apportionment to states was fair. Under the Huntington-Hill method, the state would expect to receive nineteen seats and under the official apportionment, the state received thirty-one seats. This difference translates into a significant difference in the expected number of majority- Sarawak districts we might expect under either method of apportionment. Under Huntington-Hill, the algorithm produced maps with an average of 10.2 majority of Bumiputera districts. None of the 10,000 maps drawn by the algorithm produced the nineteen majority Bumiputera districts I observe in the actual map. Under the official apportionment method, the neutral algorithm produced maps that had 15.15 majority- districts on average, and five maps that had the observed number of majority-Bumiputera seats. Thus, under the methods of apportionment to the

states we consider here, the actual map represents a surplus of between 8.8 for Huntington-Hill apportionment and 3.85 under the official level of apportionment additional Bumiputera seats than we would expect if districts were drawn with equal populations at the state level.

When the algorithm is not constrained by state boundaries, we observe a majority in as few as 5 districts (2 maps) or as many as 12 districts (25 maps). In 3840 maps, the most common outcome in the neutral maps, the Sarawak make up more than 50% of the population in 9 districts.

Majority-Chinese Districts

The bottom panel in Figure 2.4 summarizes our findings related to Chinese representation in the neutral maps. Under any method of apportionment, the expected number of majority-Chinese districts falls far above the actual number of districts in which we observe a Chinese majority in the actual map of Malaysia's parliamentary districts.

When seats are apportioned to states at the levels we observe in the official map, the algorithm produced maps with as few as thirty-three (three maps) and as many as fifty majority-Chinese districts. When seats are apportioned to states according to the Huntington-Hill method, the algorithm produces as few as thirty-four (one map) and as many as fifty-one majority-Chinese districts. When not constrained by state boundaries, the algorithm produced between thirty-five majority-Chinese districts (six maps) and fifty-two majority-Chinese districts (four maps). The average number of majority-Chinese districts produced by the algorithm – 41.33 (Official apportionment), 42.62 (Huntington-Hill apportionment), 44.33 (Nationwide Apportionment) – indicates that the number of actual majority-Chinese seats shorts ethnic Chinese living in Malaysia by between 11.33 and 14.33 seats depending on the method of apportionment to states.

In contrast to Malays, Sarawak, and Sabah groups, the Chinese constitute the majority in far fewer districts in the enacted map than we would expect based on the 10,000 maps produced by the algorithm. Given the outcomes produced by the algorithm, it is extremely unlikely ($p < .0001$) that the observed number of Majority Chinese districts emerged from a neutral process.

Finally, Figure 2.4 does not include estimates for Indian Majority districts. In spite of making up roughly 7% of the population of Malaysia, the Indian majority constitutes a majority in none of the country's 222 parliamentary districts. This stands in contrast to the Sarawak and Sabah groups, both of which are smaller minorities, but make up minorities in 19 districts of the enacted map. Likewise, in contrast to other sizable minority groups in Malaysia, we find no majority Indian districts in 10,000 neutral maps drawn by the computer algorithm for any apportionment methods. Thus I cannot attribute the lack of Indian majority districts to the manipulation of the electoral map in Malaysia. Rather, it seems that the lack of Indian representation is due to the distribution of Indians in geographic space. Since I estimate that even one majority Indian district is extremely

unlikely ($p < .0001$), a mapmaker would have to take extraordinary measures to generate even a district in which a majority of residents are Indian.

2.6 Conclusion

Our analysis of Malaysia shows that the manipulation of district boundaries may allow for the entrenchment of governing regimes. In doing so, the maps drawn to perpetuate undemocratic outcomes may also systematically exclude particular groups. The exclusion of these groups can be a byproduct of undemocratic actions or in an effort to mute voices that might present a legitimate challenge to autocrats' power. In sum, perverse district delineation may serve to entrench undemocratic regimes in power or exclude viable oppositions. Scholars of comparative politics and electoral authoritarianism have focused attention on the former and neglected the latter. Our examination of malapportionment extends the study of electoral authoritarianism in an effort to better understand the tools of exclusion.

In this analysis of Malaysia, we build on previous approaches by starting from the same observation that malapportionment exists in Malaysian electoral districts. Where others assume less-than-ideal comparison to another country's electoral systems or an imagined, fair alternative, we are able to compare Malaysia essentially to itself. Through the use of a null distribution of hypothetical, computer-drawn electoral maps of Malaysia in which representation is apportioned equally, we can conclude with confidence that Malaysian electoral districts pervert representation through malapportionment. Our findings are consistent with a number of empirical claims made by others about the effects of Malaysia's malapportioned districts, but our findings differ in that our claims of inference are based on a valid counterfactual.

From previous work, we can conclude that malapportionment is a key tool of institutional manipulation in Malaysia. The Bumiputera in Sabah and Sarawak receive over-representation to the exclusion of peninsular Malaysia. While this analysis does not specifically consider an urban/rural split, we can assume that because the majority of Chinese Malaysians are urban dwellers, systematic over-representation of rural areas must also exist. This has been amplified since 2008 when the BN coalition began losing Malay support on the peninsula. My ongoing research in Malaysia will consider both these ethnic and urban/rural divides to implement a plausible set of survey experiments across each. Finally, with the complete 2013 election precinct data analyzed, we establish a baseline to compare election data from either the the 2018 election or the 2008 election (whichever I can find easiest) to implement a difference in difference design.

This study suggests several additional questions that cannot be answered here but to which I

intend to return. First, we have shown that ethnic groups in Malaysia receive representation that differs from what they might receive if parliamentary districts were drawn in a fair manner. However, we cannot quite make direct claims about the translation of ethnic votes into partisan representation in Malaysia's parliament. Given space constraints in this paper, we leave this question for another day. Second, the focus on ethnic representation excluded another important divide in Malaysian politics, that of urban versus rural interests.

Pepinsky has shown that populations in densely populated, urban areas are more likely to oppose the governing regime (2015); however, claims about the effect of creating urban districts with disproportionately large populations cannot be adequately ascertained until the malapportioned map is compared to the counterfactual distribution of maps in which urban and rural districts contain the same number of residents.

Additionally, the method proposed in this chapter allows for a systematic evaluation of representation in other systems. Much of the world still elects representatives through an SMDP process. I hope to expand the analysis we have conducted in Malaysia to those countries in order to evaluate the effects of the district delineation process in places where the governing regime exercises a lighter touch than the leaders of Malaysia.

Despite many expert opinions that the BN power grip was ironclad, it lost control of Malaysia's parliament for the first time in 2018 (Hazis 2018; Kaur 2018; Merdeka 2018; Yeoh 2018). Many pointed to an influx of government corruption and dissatisfaction with an unpopular prime minister (Tay 2018). Others argued that many voters had deserted their UMNO roots and voted more in line with a more progressive urban agenda (Ostwald and Oliver 2020). Still, the role that civil society and grassroots organizing played cannot go overlooked. Bersih, once a partisan platform, rebranded itself in 2005 and in 2008 was a key force in organizing mass public demonstrations explicitly targeting suppressive tactics like gerrymandering. Some have argued that as protests grew, there was a sense of collective empowerment that perpetuated continued advocacy for years to come (Teik 2021; Selvanathan and Lickel 2019). This study has demonstrated how institutional manipulation in the form of malapportionment works in Malaysia. It does not, however, give any insight into how these distortions conditioned behavior on the ground. My theory posits that people engaged in the Bersih protests out of anger. The next step in understanding how emotions mobilize politics in Malaysia is to conduct a similar survey experiment that probes existing tensions between ethnic Malays and urban-dwelling Chinese voters. Additionally, if I can compile a complete dataset from the 2018 election I would be able to conduct a similar difference in difference examination of how increased partisan gerrymandering affected turnout across two election cycles. With geographical and precinct demography and electoral returns, I can leverage the natural experiment that arises

through the (re)delineation of districts. There exist regions that were assigned to underpopulated districts in the 2013 general election and over-populated districts in the 2018 election and vice versa. I can identify those geographic areas using the data I will collect from the electoral commission. Next, I will utilize the demographic and electoral returns from the 2013 and 2018 general elections to trace how behavior might have shifted when lines shift. While I cannot gauge emotional response, I would expect that moving voters from underpopulated districts to overpopulated districts would lead them to participate less. The opposite will be true when voters move from over-populated districts to under-populated districts. Further, I expect the new data to shed new and important light on how diverse political identities that spill over party lines react to increased electoral suppression.

Finally, this chapter is an empirical effort to show how malapportionment can exclude certain groups. We make no claims about intent but we do provide a vast supply of counterfactuals to compare real malapportioned maps to. Furthermore, we do not examine at all how changing district lines might affect the voting behavior of certain groups or individuals. In fact, most studies on gerrymandering solely consider the process of exclusion with little attention to how that exclusion might affect certain populations. The remaining chapters in this dissertation represent a step in that direction. In the next chapter, I lay out a theory that describes how manipulated institutions (like district lines or other electoral institutions) condition human behavior. I argue that manipulated institutions spur disparate emotional reactions and subsequent patterns of behavior among those that benefit from electoral suppression and those that are targeted by electoral suppression. I borrow from long-established principles in political psychology to trace how different emotions engender different patterns in political choices about participation and in the remaining chapters, I test my theory using two different kinds of electoral suppression. It is to the theory that I turn next.

2.7 Appendix

2.7.1 Description VDEM's Operationalization Measures (see:Coppedge et al. 2022)

Election Government Intimidation

Question: In this national election, were opposition candidates/parties/campaign
workers subjected to repression, intimidation, violence, or harassment by the government, the ruling party, or their agents?
Clarification: Other types of clearly distinguishable civil violence, even if politically motivated, during the election period should not be factored in when scoring this indicator (it is dealt with separately).
Responses:
0: Yes. The repression and intimidation by the government or its agents was so strong that the entire period was quiet.
1: Yes, frequent: There was systematic, frequent and violent harassment and intimidation of the opposition by the government or its agents during the election period.
2: Yes, some. There was periodic, not systematic, but possibly centrally coordinated — harassment and intimidation of the opposition by the government or its agents.
3: Restrained. There were sporadic instances of violent harassment and intimidation by the government or its agents, in at least one part of the country, and directed at only one or two local branches of opposition groups.
4: None. There was no harassment or intimidation of opposition by the government or its agents, during the election campaign period and polling day.

Electoral Democracy Index

Question: To what extent is the ideal of electoral democracy in its fullest sense achieved? Clarification: The electoral principle of democracy seeks to embody the core value of making rulers responsive to citizens, achieved through electoral competition for the electorate's approval under circumstances when suffrage is extensive; political and civil society organizations can operate freely; elections are clean and not marred by fraud or systematic irregularities; and elections affect the composition of the chief executive of the country. In between elections, there is freedom of expression and an independent media capable of presenting alternative views on matters of political relevance. In the V-Dem conceptual scheme, electoral democracy is understood as an essential

element of any other conception of representative democracy — liberal, participatory, deliberative, egalitarian, or some other. Scale: Interval, from low to high (0-1). Source(s): $v2x_freexp_altinf$ $v2x_frassoc_thick$ $v2x_suffr$ $v2xel_frefair$ $v2x_elecoff$ Aggregation: The index is formed by taking the average of, on the one hand, the weighted average of the indices measuring freedom of association thick ($v2x_frassoc_thick$), clean elections ($v2xel_frefair$), freedom of expression ($v2x_freexp_altinf$), elected officials ($v2x_elecoff$), and suffrage ($v2x_suffr$) and, on the other, the five-way multiplicative interaction between those indices. This is halfway between a straight average and strict multiplication, meaning the average of the two. It is thus a compromise between the two most well-known aggregation formulas in the literature, both allowing partial "compensation" in one sub-component for lack of polyarchy in the others, but also punishing countries not strong in one sub-component according to the "weakest link" argument. The aggregation is done at the level of Dahl's subcomponents with the one exception of the non-electoral component. The index is aggregated using this formula:

$$
\begin{aligned}
v2x\_polyarchy &= 0.5 \cdot \text{MPI} + 0.5 \cdot \text{API} \\
&= 0.5 \cdot (v2x\_elecoff \cdot v2xel\_frefair \cdot v2x\_frassoc\_thick \\
&\quad \cdot v2x\_suffr \cdot v2x\_freexp\_altinf) \\
&\quad + 0.5 \cdot \left(\frac{1}{8} \cdot v2x\_elecoff + \frac{1}{4} \cdot v2xel\_frefair \right. \\
&\quad \left. + \frac{1}{4} \cdot v2x\_frassoc\_thick + \frac{1}{8} \cdot v2x\_suffr + \frac{1}{4} \cdot v2x\_freexp\_altinf \right)
\end{aligned}
$$

Election Voter Registry

Question: In this national election, was there a reasonably accurate voter registry in place and was it used? Responses: 0: No. There was no registry, or the registry was not used.
1: No. There was a registry but it was fundamentally flawed (meaning 20% or more of eligible voters could have been disenfranchised or the outcome could have been affected significantly by double-voting and impersonation).
2: Uncertain. There was a registry but it is unclear whether potential flaws in the registry had much impact on electoral outcomes.
3: Yes, somewhat. The registry was imperfect but less than 10% of eligible voters may have been disenfranchised, and double-voting and impersonation could not have affected the results significantly.
4: Yes. The voter registry was reasonably accurate (less than 1% of voters were affected by any

flaws) and it was applied in a reasonable fashion.
Scale: Ordinal, converted to interval by the measurement model.
Data release: 1-13.
Cross-coder aggregation: Bayesian item response theory measurement model (see V-Dem Methodology).
Date specific: Election-specific dates (v2eltype).

2.7.2 Technical Description of the Algorithm

The Magleby and Mosesson algorithm is based on a class of weighted graph partitioning algorithms developed by computer scientists. Just like the alternative approaches to automated redistricting, the Magleby and Mosesson approach assigns adjacent geographic units to legislative districts; however, it is efficient enough to handle a redistricting problem as complex as Malaysia's parliamentary districts. Equally important, the Magleby and Mosesson algorithm generates maps of legislative districts "with no indication of bias" (2018). The algorithm proceeds as follows.[17]

1. It reduces a more complex map into a successive series of simpler maps by randomly selecting neighboring geographic units.
2. When the map is simplified sufficiently, it divides the simpler map into legislative districts.
3. It then projects the division back into the most complex map.
4. Finally, it uses another algorithm proposed by Kernigan and Lin (1970) to trade contiguous geographic units between districts in order to achieve population parity between districts.
5. The algorithm repeats until arriving at the desired number of maps.

More technically, we may write the steps of the algorithm as follows.

Step 1 ("Coarsening")

We transform G_0 into a series of smaller graphs $G_1, G_2, G_3, \ldots, G_m$ where $|A_0| > |A_1| > |A_2| > |A_3| > \ldots > |A_m|$. The algorithm selects a vertex $u \in A_i$ with probability $1/n_i$ where $n_i = |A_i|$. If u has not been selected previously, then the algorithm *matches* u with $v \in V_i^u$ with propability $1/|V_i^u|$ where V_i^u is the set of unmatched vertices adjacent to u. If $\exists\ v \in V_i^u$, then the algorithm collapses u and v into a *multinode* $a_j \in A_{i+1}$. In G_{i+1}, the weight of the multinode, $w(a_j) = w(u) + w(v)$, and $E_{a_j} = E_u \cup E_v$. If $V_i^u = \emptyset$, then u remains unmatched. Unmatched vertices are copied over to G_{i+1}.

[17] We provide a more technical discussion of the Magleby-Mosesson algorithm in the appendix 2.7.2.

Step 2 ("Partitioning")

We compute a k-way partition P_m of graph G_m that divides V_m into k parts each containing $|A_m|/k$ vertices. The algorithm chooses a multinode $A_i \in A_m$ with probability $1/|A_m|$. It then chooses another block $u \in V_i^{A_i}$ with probability $1/|V_i^{A_i}|$ and combines the multinode into a district $P_m[v]$. If $w(u)+w(A_i) \geq 1/kW(A_m)$ or $w(u)+w(P_m[v]) \geq 1/kW(A_m)$, the algorithm stops adding multinode to the district. If $w(u) + w(A_i) < 1/2W(A_m)$ or $w(u) + w(P_m[v]) < 1/2W(A_m)$, then the algorithm repeats step 2; however, it chooses $u \in V_i^{P_m[v]}$ in every iteration after the first.

Step 3 ("Uncoarsening")

By going through a the set of intermediate partitions $P_{m-1}, P_{m-2}, \ldots, P_1, P_0$, the algorithm projects P_m of G_m back onto G_0. At every step of the uncoarsening process, the algorithm assigns $P_i[u] = P_{i+1}[v],\ \forall\ v \in V_i^u$.

Step 4 ("Refinement")

Consider a partition that has two parts v and u. For each $P_{m-1}, P_{m-1}, \ldots, P_0$ in the uncoarsening step, let v and u be two parts of P_i. The algorithm selects $v'_{i+1} \subset v_{i+1}$ and $u'_{i+1} \subset u_{i+1}$ where v'_{i+1} is contiguous with u_{i+1} and u'_{i+1} is contiguous with v_{i+1}. If $|w(v_{i+1}) - w(u_{i+1})| > |w(v_{i+1} \setminus v'_{i+1} \cup u'_{i+1}) - w(u_{i+1} \setminus u'_{i+1} \cup v'_{i+1})|$ then it sets $v_i = v_{i+1} \setminus v'_{i+1} \cup u'_{i+1}$ and $u_i = u_{i+1} \setminus u'_{i+1} \cup v'_{i+1}$, otherwise $v_i = v_{i+1}$ and $u_i = u_{i+1}$.

Step 5 ("Repeat")

If the resulting partition is a set of contiguous and balanced districts, we record the partition for later analysis. If not, the flawed partition is discarded and the algorithm restarts.

2.7.3 Disaggregation of Voting Districts

We attribute the demographic characteristics of the voting districts to sub units in the voting district according to the proportion of the area of the voting district covered by the subunit. For example suppose a voting district contained 100 Malay residents, 10 Chinese, 5 Sarawak, and 0 Sabah residents. For a subunit of that voting district that covered 10% of the voting district's area, we assume the subunit contains 10 Malay, 1 Chinese, 0.5 Sarawak, and 0 Sabah residents. We find no meaningful substantive effect of changing how we map demographic information from the government-drawn boundaries into the unofficial boundaries upon which we base our analysis. In order to check that our findings are not conditioned on the method we use to disaggregate demographic information, we conducted multiple versions of the analysis summarized in the next section in which we added random noise to function we used to determine the demography of the units upon which the hypothetical maps are drawn. The conclusions we may draw from these additional analyses line up with what we find when we used the method outlined in this section. These sub-units are the inputs that the algorithm uses to draw the neutral maps Malaysia's districts.

2.7.4 The Huntington-Hill Method

The Huntington-Hill method determines the fair amount of representation that a state should receive as follows. First, it considers the expected amount of representation a state should receive. Expected representation is calculated by multiplying number seats in the legislature by the proportion of the national population that resides in a particular state. Nearly always, the expected representation calculation results in a fractional remainder. As a second step, the Huntington-Hill method finds the next smallest (lower quotient) and the next highest (upper quotient) whole number associated with the expected number of seats. In the third step, the method calculates the geometric mean of the upper and lower quotient. Finally, the method compares the expected number of seats to the geometric mean of the upper and lower quotient. If the expect representation exceeds the the geometric mean, the state receives a number of representatives equal to the upper quotient. If the geometric mean is higher than the expected number of representatives, then the state receives a number of representatives equal to the lower quotient. We represent the calculation of each step of the Huntington-Hill method in Table 2.1, and compare the amount of representation that would result from the Huntington-Hill method to the actual amount of representation apportion to each state in Malaysia under the official method.

Ethnic Group	Method of Apportion-ment	Min.	25%	Median	Mean	75%	Max.
Malaysian	HH	93	101	103	102.7	105	113
Sabah	HH	14	16	16	16.46	17	19
Sarawak	HH	7	10	10	10.16	11	13
Chinese	HH	33	40	41	41.44	43	49

Table 2.3: Expected number of districts in maps derived by the Magleby-Mosesson algorithm with random variation added into the population of geographic units used to constitute the hypothetical maps. We summarize the number of districts controlled by a particular ethnic group when districts are apportioned according to the Huntington-Hill Method.

The table above summarizes the results of simulations when we add noise into the population of each geographic unit. Before running the Magleby-Mosesson algorithm, we use a random number generator in *R* to add or subtract population from each geographic unit randomly. Each geographic unit j is assigned $\pi_j \sim N(0, .01)$ where π_j is the proportion of the population that a unit gains or loses. On average, units of geography neither gain nor lose population, and the standard deviation of the proportion of the population gained or lost is 0.01. Overall, the results of the simulations when using the "noisier" data are not significantly different from what we found when we used the population data provided by Tindak Malaysia.

2.7.5 Summary Statistics for Hypothetical Maps

Ethnic Group	Method of Apportionment	Min.	25%	Median	Mean	75%	Max.
Malaysian	Official	95	103	105	104.7	106	113
	HH	97	106	108	107.7	110	118
	Nationwide	106	115	116	116.4	118	127
Sabah	Official	14	16	16	16.55	17	20
	HH	14	16	16	16.55	17	20
	Nationwide	9	10	11	11.01	12	14
Sarawak	Official	11	14	15	15.15	16	19
	HH	7	10	10	10.2	11	13
	Nationwide	5	8	9	8.983	10	12
Chinese	Official	33	40	41	41.33	43	50
	HH	34	41	43	42.62	44	51
	Nationwide	35	42	43	43.33	45	52

Table 2.4: Expected number of districts in maps derived by the Magleby Mosesson algorithm in which a particular ethnic group constitutes a majority under the Official Malaysian and Huntington Hill methods of apportionment to states. We also summarize the number of districts controlled by a particular ethnic group when the Magleby-Mosesson algorithm does not account for the state boundaries (Nationwide).

CHAPTER 3

A Theory of Institutional Manipulation, Emotion, and Mobilization

3.1 Motivation

In the days following the 2016 presidential election, many voters in the United States were engulfed in a collective fury in response to the election of Donald Trump. Disgruntled voters, like Katy Fahey in Michigan, turned to social media to express their confusion and discontent. Scrolling through her Facebook feed, Katy noticed a general distrust in the political system and collective disgruntlement that voters had little say in how politics really played out. Fahey, a political novice, posted a plea on her Facebook page, spotlighting gerrymandering as one of her primary frustrations and invited others to join her in trying to change the ways Michigan redistricted. While Trump's election was not the direct result of gerrymandered district maps, Fahey argued that his election was a symptom of the larger problem of partisan divisiveness and election rigging. Her plea went viral and in the days and months that followed, Fahey founded the advocacy group, "Voters not Politicians" and collected over 400,000 signatures for a ballot initiative that would put redistricting in the hands of Michiganders (Fahey N.d.; Kramer 2020). Four years later, Michigan's own Independent Citizens Redistricting Commission certified legislative maps that were, for the first time in the state's history, not drawn by politicians.

Continents away and nearly a decade prior, Malaysian voters engaged in a similar collective fury over government and electoral corruption. In 2007 nearly 40,000 participants from all ethnic groups and religious affiliations gathered in protest across Kuala Lumpur. Supporters wore yellow t-shirts and called for cleaner ("bersih" in Bahasa) elections and an end to political corruption. When similar charges of electoral fraud were made in the Sarawak state three years later, 50,0000 people took to the streets in what organizers called "The Walk for Democracy". The movement now called Bersih, gained momentum in the lead-up to the 2013 general election, with mass rallies and

protests pushing for cleaner (freer and fairer) elections. This citizen's movement helped galvanize opposition parties and increase voter turnout across the country. By 2013, many Malaysian voters blamed electoral manipulation, including gerrymandering, for the ruling coalition's nearly 80 years in power. Bersih has become one of the most influential advocacy groups for cleaner government in Malaysia and is responsible for much of the disintegration of the ruling coalition over the last decade which culminated in the country's first real power alternation in 2018 (Hooi 2020; Teik 2021).

When speaking to those who participated in Michigan's Voters not Politician's campaign and the Bersih protests in Malaysia, one common theme emerges. Protestors from both movements assert that their efforts were not in response to their group losing elections; rather they view their efforts as part of a wider movement to save their respective democracies from an authoritarian takeover. There is a general sense among Michigander and Malaysian activists alike that they were at the frontlines of the fight for stronger democracies. A typical greeting for Katie Fahey during her advocacy campaign was: Are you "ready to save democracy?" (Beggin 2018, n.p.) while many of the Bersih protests organized under a common theme of "Save Malaysia: Restore our Rights" (Hooi 2020, 83).

Worries about the ways in which strategic incumbents can manipulate the system to their advantage are not unique to Malaysia and Michigan. This is a common theme in studies of a possible authoritarian turn across the globe. Even in places like the United States and Western Europe, long considered stable democracies, worries about democratic backsliding have increased in recent years.[1] Many worry that when strategic leaders or blocs (in any political context) want to stay in power they can choose from a well-studied "menu of manipulation" and design or redesign electoral institutions that will ensure large winning margins (Schedler 2002). The focus of this collective anxiety has been primarily on electoral politics where even stable democracies have witnessed an influx of authoritarian tactics in their elections (Levitsky and Ziblatt 2018).

A frequent goal of institutional manipulation is to reduce levels of political participation among opposition supporters. A large body of research shows how institutional manipulation can decrease turnout for some groups (Brownlee 2007; i Coma and Morgenbesser 2020; Jackman and Miller 1995; Linz et al. 1996; Schedler 2002). However, there is evidence that institutional manipulation does not always depress engagement. Some groups remain unmoved (Citrin, Green and Levy 2014), while there is also evidence that manipulation can spur voters to engage even more (Bellin 2012). These debates, particularly in the United States, are ongoing and often singularly focused on one tool of manipulation with disagreement about its real effect on participation (see Hajnal, Lajevardi

[1] see: Levitsky and Ziblatt 2018; Norris 2017

and Nielson 2017; Grimmer et al. 2018; Hajnal, Kuk and Lajevardi 2018).[2]

While there is collective anxiety about global democratic backsliding in general, to this point, political science has offered only idiosyncratic explanations for its effects on political behavior. Generally, the focus has been on single periods of time and single institutions. This dissertation is an effort to expand the domain of applicability to include different tactics of institutional manipulation as well as different political contexts. In other words, I develop a theory that applies to the broader concept of democratic backsliding's effects on behavior rather than just one tactic at one time and place. Furthermore, I look at complex and abstract threats to participation that can exist in electoral autocracies as well as democracies and anything in between.

Human emotions are a central factor in understanding a citizen's decision to engage politically regardless of context or time. Voter participation in instances where institutions are manipulated to suppress is heterogeneous and conditioned on what emotions voters experience when learning about the suppression; that is some people will react with anger, others will react with fear or other emotions, and some will even experience enthusiasm. These differences in emotions lead to distinct patterns of behavior. If enough individuals experience certain emotions concurrently, then the possibility of widespread discontent and collective action increases. I do not assume that emotions are simply downstream reactions to external stimuli. Rather I argue that emotions are a central component of how a person experiences suppression and disparate emotions underline the decision to participate or not.

I test my theoretical claims through a series of experiments and an examination of electoral returns and find, a) individuals vary in the emotions they experience in response to suppression attempts, and b) different emotional responses shape differences in participation. Anger, for instance, is a primary motivator in an individual's decision to turn out sometimes even in contexts where their participation is a direct target of electoral suppression or institutional manipulation. When people who are suppressed engage it is typically a product of an angry response to learning that their group is on the losing side of political suppression. By contrast, decisions not to engage often stem either from a paralyzing sense of fear or even a sense of satisfaction for individuals in winning groups. Human psychology is complex and dynamic and my dissertation is an effort to better understand how a person emotionally reacts to electoral suppression and how that experience informs their decision to politically engage. To better understand this psychological component, I test my theory against two tools of institutional manipulation, with two different methodological tools, and in two different political contexts.

[2]Note that Hajnal, Lajevardi and Nielson's initial findings were challenged by Grimmer et al., followed by a response from Hajnal, Kuk and Lajevardi.

I utilize gerrymandering and poll burden (ratio of polling places to population size) as examples of manipulated institutions that perpetuate political inequality. Through gerrymandering, strategic incumbents can manipulate electoral geography in ways that amplify support and mute opposition. Likewise, these same incumbents can utilize poll burden as a way to increase the barriers to voting at some locations while decreasing these challenges at others. Through three survey experiments, I find that political inequality determines which emotions a person experiences when learning about how these tactics affect them directly; furthermore, certain emotions mobilize voters while others have little effect. I also utilize a difference in difference design with observational data from Georgia to show how institutional suppression affects these groups' participation rates. Finally, I test these claims in two different political settings. While each survey includes national samples and I observationally consider one American state (Georgia), I laid the foundation in the previous chapter for future survey and experimental work in Malaysia. In both the American and Malaysian contexts, institutional manipulation has resulted in political inequality that advantages some groups of citizens over others. In the U.S. case this demarcation exists primarily between the Democratic and Republican parties; in Malaysia, political inequality divides voters across ethnic, religious, and urban/rural lines. In both cases, however, we see citizens being advantaged and disadvantaged by the same types of manipulated institutions.

3.2 Theory

Participation rates are a crucial factor that not only shapes immediate electoral outcomes but also informs policies and politics for years to come. Turnout among Democratic voters in states like Michigan and Pennsylvania in 2020, for example, was crucial in ending the Trump presidency. Likewise, if everyday Egyptians would have stayed home in 2011 instead of mass mobilizing in cities across the country, Muhammad Mubarak's thirty-year dictatorship might have extended into another decade of rule. Similarly, turnout among urban Chinese, Indian, and Malay voters in Malaysia's 2018 election was key to defeating its hegemonic party, ending nearly 80 years of political control. These examples, among many others, show that variations in levels of political participation can yield consequences far greater than just one election or point in time.

Why a person decides to engage politically is a question that has preoccupied political scientists for decades. Some common assumptions in this literature include: actors are rational and utility maximizing; only rational people turnout; people consider the importance of an election when they decide to participate or not: participation rates will be higher in closer races; people engage when they feel a patriotic or normative duty to do so; and perhaps most prevalent, increasing the

material costs of turnout should decrease rates of participation. In this chapter, I review some of this literature. I begin with a basic description of economic models of turnout (rational choice) and then show how social-psychological models provide an even deeper understanding of political participation. This is primarily because rationality cannot be viewed in a vacuum, rather it is a product of human psychology, specifically emotions. Furthermore, psychology enables us to explain increased or unchanged participation rates when there are similarly high costs, something initially unexpected in the rational choice paradigm.

3.2.1 Economic Models of Participation

Early work in political behavior emphasized people's willingness to politically engage as a product of an underlying cost-benefit analysis. Akin to economic takes on behavior, these scholars assumed that actors are rational and utility-maximizing and engage in politics when the instrumental benefits exceed the instrumental costs. This rational calculus of participation is represented in the oft-cited and oft-ridiculed equation (Downs et al. 1957).

$$v = pB - C \tag{3.1}$$

In Equation 1, we typically assume that an individual only participates when the instrumental utility of their participation is greater than 0, $v \geq 0$. Equation 1 presumes that v is a function of the probability of being pivotal in the outcome, p, multiplied by the instrumental utility of the citizen's desired outcome, B, less the cost of participating, C. In this parsimonious theory, actors are assumed to be both utility-maximizing and procedurally rational. That is, rational individuals bother to expend the resources required to participate only when the material benefits of that participation exceed these material costs. In order to understand how emotions ultimately affect each of these terms, a brief description of each helps.

A person's desired material outcome (B) can be an important factor in their decision to participate or not. The benefit or net utility is conceptualized as the net value that one places on their preferred electoral or political outcome. In general, B implies that when people view the outcome of the election as more important than costs, then they will turn out more. Thus, B is positively correlated with engagement. Benefits in this light can be measured in the material surplus that a voter will gain in the context of their preferred political outcome. This includes incentives based on partisan agendas or policies that affect the entire electorate (Gerber et al. 2009, Rosenstone and Hansen 1993) or even clientelist offers from incumbents who exchange political or materialistic goods for

voter support (Aspinall et al. 2022; Christensen and Utas 2008; Ichino and Nathan 2013*b*; Lindberg and Morrison 2008; Magaloni 2006; Wantchekon 2003).

In these contexts, incumbents can, in essence, purchase support from voters by offering goods that increase the perceptions of B in exchange for their participation. In other contexts B matters when income distribution and national G.D.P. are at the forefront of politics. For example, wealthy voters in poor countries turn out *less* because the material benefit, as well as their perceived stake in the election, are low (Kasara and Suryanarayan 2015).

In many cases, however, it is difficult to decipher if a person votes because the benefit is greater than the cost or if they perceive their own participation as important to the electoral outcome. This is why Riker and Ordeshook (1968) multiplied B by how much a person thinks their participation actually matters. Thus, in order to understand B we must also understand p.

The importance of p has been a source of significant debate in political science. The problem is straightforward: the expected benefit calculation involves the voter's probability that he or she will be pivotal to the election outcome. As in large electorates, where this probability is very small, rational citizens should not vote. Yet, this contradicts the observed behavior of citizens. For one, treating p as fixed disallows the consideration of cascade effects of mass participation (Ledyard 1984; Sierra 2018). To account for this, p can be recast as endogenous and the result of strategic thinking of the voter or the candidates' decision or a mixture of both (Ledyard 1984; Austen-Smith 1984 (1984); Palfrey and Rosenthal 1984). However, when there is high turnout, it is more difficult to trace why p would matter. So others diverge from this calculus and argue that the perceived importance of elections creates a more important "paradox of not voting" where voters perceive a consumption benefit to voting that can, in some instances, outweigh materialistic costs (Ferejohn and Fiorina 1974). Other scholars emphasize the subjectivity of p and show that the majority of voters consider the possibility of one vote breaking a tie to be remote and as a result p does not have much effect on one's decision to turn out (Aytaç and Stokes 2019, 31; Blais 2000; Blais, Young and Lapp 2000; Jackman 1987; Schwartz 1987; Thalheimer and Ali 1995). Whatever the solution, rational choice theorists argue that no matter the effect of p, when material costs are high, there should be little if any participation.

The perceived cost of voting includes the time and effort required to vote, as well as the economic costs associated with doing so. When C is large enough, it trumps every other term in the voting calculus. Downs explains: a "rational man" decides to politically engage the same way he decides most things: "if the return outweighs the cost, he votes; if not, he abstains" (1957, 260). In other words, the costs of participation are inversely related to turnout and perhaps the most significant component of the calculus. Costs, in purely rational choice terms, include any material burden that

the individual bears upon deciding to politically engage. This includes both the literal economic burden and the economic opportunity cost of engaging: does the voter need a cab or bus fare to get to their polling place? Do they forego income because they miss work in order to vote? Does our voter require additional money to pay for childcare while they politically engage? Because participation is economically costly it is often positively associated with the level of individual resources a voter has (Brady, Verba and Schlozman 1995; Verba, Schlozman and Brady 1995). Social privileges like education and social status are independent variables in this sense (Wolfinger and Rosenstone 1980). This "resource" perspective emphasizes the costs of participation and the resource differences among voters that leads to disparate outcomes in participation (Verba, Schlozman and Brady 1995). The individual's decision to participate or not is influenced by a budget constraint that is established by their resource pool, much like the decision to consume any commodity (Solt 2008).

Costs can also include real barriers to participation. Because costs are not always distributed evenly across a voting population and in many contexts, demographic characteristics such as age, education, income, race, and gender are important factors in explaining the differences in participation rates (Wolfinger and Rosenstone 1980). Additionally, structural factors, such as barriers to voter registration and mobilization efforts by political parties and interest groups, can increase the costs of voting for some demographic groups, leading to lower participation rates among these groups. As a result, individuals who actually vote in elections may not necessarily be representative of the larger population of eligible voters. In this same vein, turnout in less-developed countries is an even greater function of costs because a voter's income status is a direct effect of existing structural inadequacies in the country so turning out is much more costly (Isaksson 2014).

That increased costs depress turnout can also benefit strategic powerholders. Autocratic or would-be autocratic incumbents, for example, manipulate barriers to participation as a means to ensure that certain groups will not participate (or publicly display their discontent). In some places, this includes election violence where the cost of participating is physically dangerous. Incumbents commit violence or threaten to commit violence as a way to influence the process and outcome of elections in their favor (Hafner-Burton, Hyde and Jablonski 2018; Höglund 2009). Sometimes incumbents might allow or even perpetuate violence strategically because violence can benefit politicians at the ballot box (Blattman 2009; Kalmoe and Mason 2022; Trejo and Ley 2020; Wilkinson 2006).

In other contexts, manipulating costs involves the strategic design or redesign of rules and institutions that deliberately increases the costs for certain voting bases. Here incumbents can target specific groups to ensure participation is more costly for them. This can include tactics like voter suppression in the form of voter i.d. laws, closing polling places so some areas experience longer

lines, poll taxes, and grandfather clauses (Daniels 2020; Hardy 2019). The list is long but the idea is simple: electoral manipulation can depress turnout among certain groups because the costs of participating disproportionately fall on them.

It is not always the case, however, that higher costs lead to lower turnout. For one, because the cost of participation nearly always outweighs the benefit, nobody should participate politically. Yet, people still turn out. This has led some to re-estimate how costly turnout really is (Aldrich 1993). Additionally, increasing the costs of participation should observationally decrease the likelihood of participation. However, even in light of increased costs, participation rates can stay the same (Citrin, Green and Levy 2014) or increase (Bellin 2012) and even become a rallying point for mobilization. Focusing on the sole interaction between economic costs and benefits might be oversimplifying reasons for participation. What if, for example, the expected utility of a person is not just about material concerns? Is it possible that an individual participates because they are worried about what not voting might look like to their friends? Perhaps signaling to peers trumps material costs in some circumstances. Additionally, might individuals choose to stay home because they feel like they lack the political prowess necessary to politically engage? Maybe a person participates because they participated in past elections and have established some sort of voting habit. Rational choice would have us believe that despite any of these variables, if high enough, costs should depress turnout; yet Egyptians turned out en masse to Tahrir Square despite evidence of authoritarian violence and ethnic-Chinese Malaysians voted even when their votes were met with outright electoral suppression. I argue that we can better understand these participation patterns left unexplained by rational choice through a deeper and more contextual story of how a person emotionally perceives the costs and benefits of their participation. I borrow this primary assumption that emotions shape rationality from well-established assumptions in political psychology. I briefly analyze a portion below.

3.2.2 Emotions and Rational Choice

Rational choice theorists recognized early on that there was something missing in the model. Such speculation led Riker and Ordeshook (1968) to add an additional term (D) to account for, to some extent, the significance of some other value separate from material benefits. This modified calculus is represented below.

$$v = pB - C + D \tag{3.2}$$

"Duty" can include any normative intrinsic value that a person places on their participation, including patriotism, civic duty, or an underlying sense of ethics. This non-material value can outweigh any other component in the calculus. Campbell et al. describe duty as a result of an innate sense of patriotism despite high costs (1960). As long as a voter maintains a higher sense of duty, they will turn out when instrumental costs are also high. While this solution has been less than satisfying for many[3] in the least of terms it represents an initial acknowledgment that there are other dimensions of utility unincorporated in the original material cost/benefit calculation; and in the best of terms, it shows that we should examine rationality and psychology dovetailed as part of the same calculus.

One way to emphasize the significance that psychology plays in the calculus to particiate is to examine the role of nonmaterial benefits and nonmaterial costs. For example, some people may see nonmaterial value in their participation because it is a way to establish an expressed political identity typically founded on normative ideas of what is right and wrong (Bond et al. 2012; Gerber, Green and Larimer 2008; Schuessler 2000). Such voters participate because of an altruistic attachment to achieving the greatest good for society (Becker 1976; Evren 2012; Feddersen and Sandroni 2006; and Monroe 1994). When costs are high, people may still participate because doing so provides immaterial benefits confirming an over-arching normative value system. In other words, political participation makes people feel good about themselves and they want others to know about it.

Relatedly, participation can act as a signal to peers. Individuals may internalize the norms or duty of engagement even when costs are excessive and "the more strongly a person feels a sense of obligation to discharge his civic duties, the more likely he is to be politically active" (Campbell, Gurin and Miller 1954, 199). Social pressure from peers can amplify an attachment to civic norms. Individuals tend to observe others' actions and quickly adopt social norms, particularly when those in their surroundings give explicit indications of acceptable behavior (Gerber, Green and Larimer 2008; Scheff 2000). In these cases, emotional attachment to duty leads people to engage even when the costs of doing so are materially (economically) high.

In some contexts, however, nonmaterial costs translate into how a person psychologically feels when confronted with the idea of not participating (Aytaç and Stokes 2019). Some individuals consider the instrumental costs of participation (e.g. time, money, or physical discomfort) in addition to the psychological costs of not participating (e.g. feelings of shame, worry, or anxiety). In this sense, voters engage in political actions when the costs of doing so are lower than the psychological costs of abstention. That is even when instrumental costs are high, a person might still engage

[3]Aldrich (1993), for example argues that voting is actually not as costly as originally assumed; Morton (1991) shows that voting is an effort to signal group identity and solidarity; Fraga (2018) echoes this in his findings about the role racial identity plays in turnout, etc.

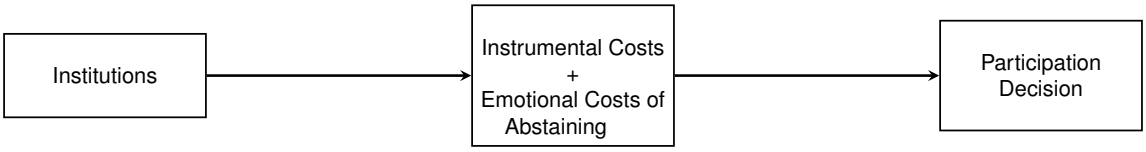


Figure 3.1: Modified Version of the Participation Calculus. The emotional costs of not engaging as represented in a modified version of the participation calculus (Aytaç and Stokes 2019)

because they feel shame or guilt to such an extent that the nonmaterial cost of abstaining outweighs the material costs associated with participating. This relationship is illustrated in the Figure 3.1.

Voters might also engage not because of material or nonmaterial costs or benefits but out of habit. Habits are learned behaviors that are automatic and relatively effortless, developed through repeated actions in response to particular cues or stimuli (Dinas 2012; Wood and Neal 2007). When it comes to political participation, individuals who have developed a habit of participating may be more likely to continue doing so, even in the face of high costs. For example, research has found that individuals who grew up in households with families that discussed politics and voting was common were more likely to continue participating in politics as adults (Brady, Schlozman and Verba 2015; Putnam 2000). In some cases, internal political efficacy (a person's belief that they understand politics enough to participate in politics) plays a unique role in the formation of habitual political participation by activating anger in response to threatening policies. Because participation can sometimes boost an individual's sense of internal efficacy, efficacy can also perpetuate habitual political engagement in the long term (Valentino, Gregorowicz and Groenendyk 2009). Thus, it is clear that people who vote in one election are more likely to vote in the next election because voting one time lays the foundation for a consuetude to keep voting in the future (Coppock and Green 2016; Gerber, Green and Shachar 2003; Green and Shachar 2000). Importantly, this can persist despite fluctuations in material costs or benefits.

In addition to considering other dimensions of utility (e.g. nonmaterial costs and benefits), we can understand why people participate from an even deeper perspective when we examine the connection between emotions and human rational thinking. Findings in neuroscience show that rationality is not opposed to psychological processes like emotions, rather it is structured by them (Adolphs et al. 1995; Bechara et al. 1997; Damasio 1994; Gray 1987; LeDoux 1993). Emotions, specifically, play a crucial role in shaping human cognition often pre-consciously, streamlining a person's decision-making ability (Damasio 1994). Positive emotions like joy and enthusiasm encourage reward-seeking (approach) behavior and negative emotions like fear and shame encourage risk-aversion (avoidance) behavior (Gray 1990). So the decision to politically engage rests on how

a person emotionally evaluates the risks or benefits of participating. The relationship between emotions and political participation has long been recognized by scholars of political behavior (Eagly and Chaiken 1993) but two schools of thought are particularly important to this research.

First, “Affective Intelligence Theory" (AIT) is the idea that certain emotional states trigger distinct cognitive strategies of behavior (Marcus, Neuman and MacKuen 2000). AIT provides a nuanced view of how emotions can influence political behavior. Grounded in findings in neuroscience, AIT emphasizes the crucial role that emotions play in shaping cognitive strategies for dealing with the political environment. For instance, AIT suggests that understanding the difference between the effects of positive and negative emotions is key to better understanding variations in individual political behavior. Positive emotions (e.g. enthusiasm) reinforce existing behaviors and attitudes, while negative emotions (e.g. anxiety) disrupt reliance on well-rehearsed patterns of behavior and trigger attention to the environment. AIT focuses on two neuro systems: the “dispositional" system which includes positive emotions and the “surveillance" system which includes negative emotions. Marcus and his coauthors show that both systems can engender increased participation (albeit for different reasons). That emotions are key to understanding human rationality and cognition is critical to understanding human political behavior. AIT sheds important light on how emotions (rather than material benefit or cost) influence a person’s decision to participate (or not). My theory assumes that emotions and rationality are synonymous in understanding participation. I postulate that we must look to specific emotions to predict specific patterns in behavior. I argue that examining the role of positive and negative affect helps understand how people perceive threats and opportunities. However, what they choose to do as a next step, requires understanding the differentiating effects of emotions of the same affect.

Second, “Cognitive Appraisal Theories" (CATs), postulate that specific emotions link differently to a person’s respective understanding of an event (Frijda et al. 1986; Lazarus 1991). In response to an event or stimuli, humans experience different levels of affective categorization, each new level building on the previous. First, they engage in labeling it as good or bad. This process oftentimes happens automatically and as a precursor to secondary appraisals that condition which emotions are ever-present in the decision-making process and consequent behavior. This is where individuals decipher between emotions that fit into the same affective category (e.g. anxiety and shame). Important to this research, a brief examination of the differences between anger and fear specifically is helpful. A person experiences fear when they are threatened and when they have little control over circumstances and cannot address the threat head-on. In this case, fear can lead to increased information seeking and attentiveness to circumstances (Brader 2005; Valentino et al. 2008) Fear can also cause more pessimistic risk perceptions (Johnson and Tversky 1983; Lerner

et al. 2003; Lerner and Keltner 2001) leading to a general sense of risk aversion (Cohn et al. 2015; Druckman and McDermott 2008). Anger, on the other hand, is induced when a person senses some sort of injustice from an outside individual or group. Unlike an afraid person, an angry person feels empowered to face the situation head-on (Mintz, Valentino and Wayne 2021, 117-18). Anger can lead people to rely on heuristics (rather than information-seek) (Bodenhausen, Sheppard and Kramer 1994) when assessing options and they can become more risk-accepting (Lerner and Keltner 2000) and more risk-seeking (Lerner and Keltner 2001). This is because, unlike the pessimism that is stoked by fear, anger engenders optimism as a result of a more optimistic view of the future.

Determining which emotions cause which behavior can be really complicated; especially because the human brain is dynamic and can register concurrent emotions that can be tied to other explanatory variables like predispositions, beliefs, and socialization. Simply put, it is hard to disentangle the independent effects of emotions (Mintz, Valentino and Wayne 2021, 110). Fear and anger are two emotions that can occur simultaneously and both independently can lead to some sort of behavioral change. Fear (as described above) can lead to action, albeit low-cost action; while anger enables people to take on risks. In this vein when experienced concurrently, anger should be more potent. Political psychology has shed some light on this question already. Valentino, Wayne and Oceno (2018) experimentally show which emotions were more associated with support for Donald Trump. Through an emotion induction task, the authors were able to isolate which emotions mobilized sexist voters specifically, finding that anger catalyzed support for Trump and fear actually demobilized support. Similar studies examine fear and anger together, echoing Valentino and his coauthors: fear demobilizes while anger mobilizes (Vasilopoulos 2018 and Marcus et al. 2019). I similarly expect to find that people who are disadvantaged by suppressive institutions will experience both fear and anger; however, I expect anger to be more potent and the primary emotion that perpetuates increased participation.

To this point, it is clear that emotions are intrinsically linked to rational human behavior. Yet I argue that emotions are not the only piece in the causal story of political participation. My theory rests on two complementary assumptions: First, understanding the effects of specific emotions is key to understanding why a person participates in suppressive institutional contexts. Second, institutional context determines which emotions will be most prevalent. I assume that institutions (instrumental costs) matter and are an exogenous factor in a person's decision to politically engage. In other words, I argue that institutions matter because they condition emotions. The individual decision to participate is the result of institutional and psychological factors; an individual's emotional considerations do not occur independently of institutional ones. Rather, a person's emotional response is endogenous to their institutional setting and emotions will mediate

their decision to politically participate or abstain. Specifically, I argue that *manipulated institutions affect groups differently: Those that win because of the suppression will experience different emotions than those who lose and will also behave differently*.

Before I delve further into these two theoretical claims, it helps to first understand the types of institutional manipulation and the political inequality that follows. It is to this point that I turn next.

3.2.3 The Menu of Electoral Institutional Manipulation

While Riker and Ordeshook (1968) and many others explain reasons for participation from the point of view of a single citizen or societal group, comparative scholars have shifted the focus to a top-down perspective. In this vein, scholarship explains how incumbents can manipulate parts of the calculus in efforts to consolidate power. This manipulation typically targets electoral institutions as a means to undermine turnout among certain groups and rarely considers the psychological effects of suppression.

An important line of inquiry in political science deals with the ways that electoral institutions serve as tools for maintaining political power (Gandhi 2008; Brownlee 2007; Magaloni 2006). Elections are not unique to democracies and have become increasingly common in all types of regimes. In fact, in the postwar period, only Brunei, China, Eritrea, Qatar, and Saudia Arabia failed to hold some sort of election (Golder 2005). One reason for the prevalence of elections across the world is that elections and electoral institutions not only perpetuate democracy but can also benefit authoritarian incumbents in democracies as well as autocracies. I outline how this works in this section.

Elections can be used to control opposition groups by co-opting or dividing them. Allowing the opposition to participate in elections can also weaken their influence (Lust-Okar 2005). That is, if an opposition runs and loses, the incumbent can be made to look stronger than they really are. Thus, incumbents focus on ways to skew electoral outcomes in their favor by manipulating certain electoral institutions.

Elections also provide valuable information to incumbents by revealing their support and opposition bases (Brownlee 2007; Magaloni 2006). One benefit of elections is that they help an incumbent to know how much dissent exists among the public. This knowledge then aids incumbents in deciding which tactics of manipulation or suppression they must use to stay in power and where such tools should be deployed. Electoral violence is another type of voter suppression that incumbents can utilize. Scholars have described the role of coercive violence as a tool to depress political dissent and it is common for such violence to be directed toward elections. Following elections aimed at illuminating an incumbent's bases of dissent, incumbents can utilize electoral violence

in ways to sow fear among dissenters. Such efforts by the Zimbabwean government, for instance, sought to brutalize its opposition and have led to a widespread fear of the regime, holding important implications for political participation, especially among regime opponents (Young 2019).

Likewise, through elections incumbents can identify challengers, adopt strategies, and manipulate rules that will dissuade contestation from any opposition group or candidate. This tactic was commonplace during Mbarak's reign in Egypt from the 1980s to the 2000s. In many elections when Mbarak's primary opposition (The Muslim Brotherhood) gained enough support to threaten the regime, Mbarak would clamp down with increased government interference. In several elections, he jailed much of the Muslim Brotherhood's leadership, among them candidates and former legislators. Mbarak also deployed government agents to threaten candidates and block opposition electoral monitors (Brownlee 2007, 125-27).

Finally, elections serve as a platform for patronage (Aspinall et al. 2022; Hicken 2007), allowing incumbents to co-opt elites (Boix and Svolik 2013), party members (Magaloni 2006), and broader groups (Gandhi and Przeworski 2007; Gandhi 2008; Fung and Wright 2001). Patronage is an incumbent's distribution of materialistic goods or services in an effort to shore up political support. Recipients of patronage can be anything from voters to campaign workers to party elites or actual politicians. Sometimes this can take the form of actual cash gifts (Hicken 2007), food (Magaloni 2006), patronage jobs (Oliveros 2021), or other economic benefits.

Magaloni (2006) for example, describes the hegemonic PRI party in Mexico that would send party operatives to deliver rice and other necessities to important rural support bases, with a concerted effort before elections. This practice was also common among the LDP in Japan (Scheiner 2006). A more recent example is from the United States. During the COVID pandemic in the United States, President Trump signed COVID relief checks distributed by the Treasury Department. Even though the president does not have the authority to sign legal disbursements from the U.S. Treasury, Trump insisted that his name appear directly below the words "Economic Impact Payment. Eligible Americans received checks only six months prior to the election and when his campaign was temporarily stopped because of the virus his administration turned to a this strategy of patronage to mobilize his base and connect with voters (Rein 2020).

To summarize, elections offer a unique opportunity for strategic incumbents to manipulate the political game in their favor. Such manipulation can occur in any type of regime, from a full-fledged democracy to a completely-closed autocratic state. The idea is simple: incumbents (democratically elected or autocratically selected) only want one thing, and that is to stay in power.[4] As such,

[4]see: Bueno De Mesquita et al. 2005 show that political context does not matter, rather the institutional makeup of respective incumbent leaders defines what tools are at their disposal for consolidating their power.

they work within their own respective political contexts and choose from a “menu" of institutional manipulation in an effort to stay in power (Schedler 2002). Below, I briefly outline a few of the items on this menu. I focus specifically on how incumbents can manipulate the “C" and “p" terms in systematic efforts to undercut participation.

3.2.4 Manipulating the “C" term

When considering the role that costs play in a person’s decision to politically engage, incumbents assume that as costs rise they can expect depressed turnout; so they focus on manipulating the *C* term to make participation more costly, mitigating widespread participation, particularly among opposition groups. Manipulating costs manifests in several different types of institutional manipulation.

Incumbents can manipulate elections through direct means like voter suppression; particularly in places where there are opposition strongholds. These manipulation tactics are usually blatantly direct and detectable because the incumbent must signal to opposition voters that their participation is costly. This includes making voting and participation much more challenging on election day. Affected voters are met with anything from confusing voting processes (Claassen et al. 2013) to intimidation at the polls (Frye, Reuter and Szakonyi 2019) and outright violence if they cast a ballot (Hafner-Burton, Hyde and Jablonski 2014).

One modern-day example is the systematic effort to undermine and further disenfranchise Black participation in American Georgia. During her campaign for Georgia’s governorship in 2018, for example, Stacy Abrams managed to register over 800,000 new voters, most of whom were Black. Even though Abrams lost, this new stream of Black participation in Georgia’s elections helped Joe Biden secure Georgia in his presidential bid two years later. Following Biden’s victory, thousands of voters’ (particularly new voters) eligibility was disputed by Republican-led election integrity policies. This culminated in the successful passage of, what many have coined, “Georgia’s anti-voter law". The new law undermines absentee voting, legally punishes Georgians who offer water and other aid to those waiting in line, gives the state control over county elections, and weakened the role of an elected Secretary of State by appointing a State Board of Elections Chair selected by the legislature (Fawaz, Mize and Vu 2022).

3.2.5 Manipulating the “p" term

Manipulating “p" is a lot less straightforward than manipulating costs. One reason is that the perceived decisiveness of one’s vote is really difficult to measure. Another is that manipulated costs

are much easier to detect. Targeted populations can easily decipher electoral suppression when it is in the form of tangible costs: An expensive bus ride across town, a babysitter fee, a long line at a poll, the requirement to present a hard-to-get voter i.d. card, difficulties in the registration process, inaccessible hours of polling stations, and even voter intimidation at the polls. The ambiguity of “p" however, makes manipulating this attractive for strategic incumbents. If successful, they can win elections even when opposition blocs are allowed to participate freely.

One example is in the drawing of electoral geography. Geographically based districts that elect a single representative (single-member district or SMDP) can tempt incumbents to manipulate the boundaries of districts to their electoral advantage. In its most pernicious form, the perverse delineation of districts, commonly called gerrymandering, serves to frustrate majority rule, inflate wavering support for incumbents, and mute potentially problematic opposition groups. (Chen and Rodden 2013; Magleby and Mosesson 2018; Oliver and Ostwald 2018; Wong, Chin and Othman 2010). Remarkably, these institutions (manipulated electoral districts) exclude certain groups from the process of governance and policy-making without suppression of the group’s participation in otherwise democratic institutions. Gerrymandering occurs in liberal democracies, illiberal regimes, and full-out authoritarian states.

In recent elections held in Hungary, for example, many have pointed to gerrymandering as one way that Victor Orbán has managed to stay in power despite fraying political support for the last 23 years. In the 2010 election, Orbán gained the power to alter the constitution at his discretion, which he exercised by making twelve changes in his first year as the leader. One of these changes was the elimination of the requirement for a four-fifths majority to revise the constitution. Within a year of being in office, Orbán presented a new constitution, which was drafted in secret, had limited parliamentary debate for only 9 days, and was approved through a partisan vote. The new constitution was accompanied by numerous laws, several of which impacted elections. Specifically, Orbán left out requirements for district delineation and made sure the redistricting process the next year was as non-transparent as possible. It was clear to everyone that Orbán’s party had manipulated the electoral district boundaries for their own advantage. This bias continued in 2022, when election observers observed that "there is a significant discrepancy in the distribution of registered voters among constituencies, with deviations as high as 33%, contravening the principle of equal voting rights" (Scheppele 2022).

Institutional manipulation can result in changed electoral rules that manipulate “p" or more observable forms of voter suppression that increase “ C". As shown above, this can include like voter and candidate intimidation(Chaturvedi 2005; Collier and Vicente 2012; Brownlee 2007; Gonzalez-Ocantos et al. 2020; Robinson and Torvik 2009), ballot manipulation (Lehoucq 2007),

vote buying (Hicken et al. 2015; Schaffer et al. 2007; Magaloni 2006; Nichter 2008), and outright election fraud (Mebane 2006; Hicken and Mebane Jr 2015). While many of these items on our menu of manipulation differ in terms of tactics, each tool of manipulation is an effort to create political inequality. That is, *institutional manipulation creates two distinct institutional contexts* and citizens can reside in either of them depending on the specific manipulation. I argue that citizens first respond to the institutional context that they exist in and second, they experience different types of emotions that determine their level of political engagement. In the next section, I focus on these two ideas specifically.

3.3 Two New Theoretical Assumptions: Political Advantage and Emotions

3.3.1 Manipulated institutions, political inequality, and emotions.

Political institutions aggregate participation into social and political outcomes and because they are often the product of political choice, represent some sort of bias (Dahl 2005; Cox 1997). Institutions also create costs and manipulated institutions distribute those costs unevenly. Take an electoral rule for example. While initially democratic (equal cost distribution) in nature, electoral rules can be used deliberately to limit the ability or *disadvantage* certain groups of voters from participating. This same rule can simultaneously enhance or politically *advantage* another group. So it is often the case when strategic leaders (or autocrats) manipulate institutions, they do so with the assumption that some groups will be helped while others hurt, perpetuating political inequality (Schedler 2002; Helmke and Levitsky 2004; Cheibub, Gandhi and Vreeland 2010).

An example can be found in American politics. Once Black citizens in the US gained the hard-fought right to vote, Southern leaders rushed to create new institutions to mitigate a politically powerful Black voting bloc.[5] While the federal government was attempting to institute greater electoral equality, southern state leaders entrenched inequalities by creating new laws that indirectly consolidated their power despite a mounting Black opposition. These inequalities evolved into institutional legacies and American southern politics, even to this day is riddled with historical legacies of slavery reflected in their institutions (Key 1949; Sen, Blackwell and Acharya 2018). For example, similar to Jim Crow laws in the pre-Civil Rights Era South, many Southern states have

[5]Mickey shows that directly following institutional changes like desegregating schools through landmark decisions like *Brown v. Board of Education*, anti-segregationist policymakers endorsed policies to counter-act the black vote (2015, 174-76).

laws that disenfranchise people with previous felony convictions. Similar to grandfather clauses decades prior, felony disenfranchisement laws specifically target Black and other minority voters. In Alabama, Florida, Kentucky, Mississippi, Tennessee, and Virginia one in ten Black residents is disenfranchised because of these laws.[6] We see a similar ethnic asymmetry in current-day Malaysia. As ethnic Malays were a minority at decolonization, those in power created institutions that overweighted Malay influence in politics. Over time, the Malay vote has become the primary ethnic component of Malaysia's ruling hegemonic party and much of Malaysian electoral politics and institutions reflect this asymmetry.

Manipulated institutions create two disparate political spaces: one for the politically disadvantaged and one for the politically advantaged. Consider, for instance, voter identification laws that many U.S. states employ in elections. While such laws require all voters to present state-issued identification at the ballot box, they indirectly disadvantage those populations who have less access to the services necessary to retain such an identification. Thus, those who carry the proper identification to vote are "politically advantaged" while those who do not are "politically disadvantaged." I call this the "institutional space" in which an individual resides.

Typically, certain characteristics that an individual possesses determine if they reside in the advantaged or disadvantaged space.[7] Continuing with the voter identification example, while laws do not target any specific group, typically those who do not have the proper identification are of racial minorities (Hajnal, Kuk and Lajevardi 2018). When institutions reflect this type of asymmetry continuously over time it becomes embedded in politics and creates the narrative under which all politics operates.[8]

A voters' behavior depends on which space they find themselves in vis-à-vis the institution. Simply put, manipulated institutions condition political behavior because they create asymmetrical threats and opportunities. When a voter learns that they are disadvantaged by a particular institution, for example, their behavior may change from what it would have been if they were left unaware of the institution's effects on their group. In other words, their calculus of participation changes. My research builds on this idea. Individuals who learn that their group is targeted by institutional manipulation perceive a threat and their behavior in this context is based on the implications

[6]For more information on felony disenfranchisement and its effects on the Black voting population specifically, see: Uggen et al. 2022.

[7]Political disadvantage in some cases can also be associated with political cleavages, see: Duverger 1952; Lipset, Rokkan et al. 1967; Kitschelt 1988; Chandra 2007, 2006; Chandra and Boulet 2012; Posner 2004, 2005; Van Cott 2005.

[8]One way to perceive this demarcation is by identifying certain "cleavages" that already exist (Lipset, Rokkan et al. 1967) and looking at policies that treat different sides of each cleavage differently. Although my analysis will be focused primarily on partisan identities, this research also carries interesting and important implications for racial, ethnic, religious, and gender identities as well.

of that threat. On the other hand, those who learn that their group is benefitting from the same institutional manipulation perceive opportunities, rather than threats, and their behavior stems from these perceptions. As I will show next, emotions are key in determining behavior; but emotions in this context are conditioned by institutional space.

To summarize: Institutions matter because they create advantaged and disadvantaged political spaces. Where a person resides is one determinant of their choice to politically engage. If a person is disadvantaged by a manipulated institution and is privy to this information, their behavior will be different than those that are advantaged by that same institution. This difference in behavioral outcomes rests on the disparate emotions people experience vis-à-vis their respective institutional spaces.

3.3.2 Emotion matters in the decision to participate.

Where a person resides institutionally is not the sole reason for their choice to politically engage. This is because threats and opportunities from manipulated institutions impact citizens differently and how a person emotionally experiences threats or opportunities matters. In particular, threats and opportunities do not cause the same emotional reactions among citizens affected by the same institution (Valentino and Neuner 2017). For those who exist in the disadvantaged space, differences in participation can rely on whether or not the person realizes that they are a target of electoral suppression. I argue that specific emotions and their outcomes in response to institutional manipulation vary depending on two important factors. First, whether or not suppressive institutions cause a person to win or lose conditions which emotions they will experience. Those disadvantaged by the institution who know they are being disadvantaged will experience upticks in fear and anger while those advantaged and know about their institutional advantage will become more enthusiastic or content. Second, many who are institutionally disadvantaged will perceive a threat to their group while the advantaged perceive opportunities in place of threats to their group. My theory assumes that emotions are not downstream epiphenomenal effects of cost; rather emotions shape and condition decisions about political engagement. As such, different emotions can lead to different political outcomes.

Suppressive institutions pose a threat to those for whom the institution creates a disadvantage and in the disadvantaged space, people experience suppression differently. For some, fear might be the dominant emotion they experience. Fear should cause an initial reaction of disengagement and for some, the threat might be so big that abstaining from engagement altogether is a person's only plausible option (Marcus, Neuman and MacKuen 2000). However, there are those that will process the nature of the threat and look for ways to control it. In the case of political engagement,

this person can exercise control over the threat by participating even more. A sense of internal control over threat can cause a branching from fear to anger (Brader 2006; Valentino, Gregorowicz and Groenendyk 2009). Thus when the institutional cost of participating is high and a person is disadvantaged by institutional manipulation, anger, not fear is a key factor in a person's decision to still participate. Simply, anger is more potent than fear in the decision to participate.

I also argue that those advantaged by the institution will experience emotions opposite of fear and anger. These folks are not threatened by suppressive institutions and do not become angry or afraid as a response to learning about their advantage. I empirically show that individuals in the advantaged context are less likely to experience either of these negative emotions. Rather than being threatened by suppression, people in the advantaged space are presented with the opportunity to stay in their advantaged state and react with positive emotions like enthusiasm or joy and will not mobilize nor take on the costs of increasing their participation.

That emotions like enthusiasm do not inspire mobilization stands at odds with well-established ideas in political psychology (Brader 2006; Marcus, Neuman and MacKuen 2000). I argue that this is the case primarily when institutional manipulation is skewing the political playing field: If manipulation helps your group win, then taking on the costs of political engagement seems unnecessary in this context. I argue that depressed turnout in the advantaged space is a byproduct of feeling happy that one's group is winning (or being advantaged) because of suppression. As we will see in later chapters, those individuals who learn that they are politically advantaged by suppressive institutions are more likely to experience enthusiasm or joy but less likely to increase participation. This is because, unlike in previous studies, politically advantaged individuals exist in an unequal political reality and possess a fait accompli where they have already won.

To summarize my theory in its entirety: A citizen's propensity to engage politically is a unique cocktail of not only who they are and where they come from but also what emotions they experience when learning about how unfair institutional outcomes affect them individually. This is all predicated on whether or not an individual is advantaged or disadvantaged by the manipulated institution. Disadvantaged citizens will experience anger and fear but only those experiencing higher levels of anger than fear will participate more. This research is an attempt to show not only the differentiating effects of positive and negative emotions but also the mobilizing effects of anger. I argue that emotions are *shaped* by institutional context and *mediate* the likelihood of participation. My theory is illustrated in Figure 3.2.

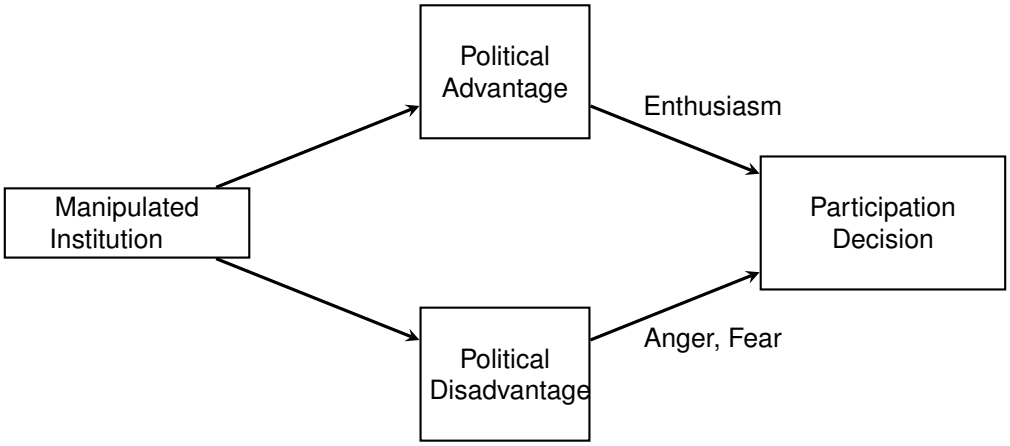


Figure 3.2: The Mediating Effect of Emotions in the Participation Calculation. In this iteration of the participation calculus, emotions are shaped by institutional context and condition a person's decision to participate or not. If a person is politically advantaged they will be more likely to experience enthusiasm and abstain from participating. Those in the disadvantaged space are more likely to experience fear and/or anger, with those who experience anger more likely to increase their participation.

3.4 Theoretical Hypotheses

People in the disadvantaged political space who learn about their disadvantage will be more prone to experiencing anger and/or fear. These effects should be clear when compared to the advantaged space. Because institutional suppression oftentimes targets groups, those within the targeted group that learn about the manipulation should feel threatened. Because the threat is group-based, the new information triggers either a fearful or an angry response. For those who feel anger and fear concurrently, anger will be more potent and the threat can become a powerful tool for mobilization for some in the disadvantaged group. To be clear, for a person to feel anger or fear about suppression, they must first learn that their group is being targeted by a manipulated institution. Not all disadvantaged people will feel anger; this emotion is the byproduct of learning that there is a threat to the group. This same trigger is non-existent in the advantaged space.

In the advantaged space, people are less likely to experience fear or anger. Rather, among those that learn that they are benefitting from electoral suppression, some will experience emotions like joy, satisfaction, or enthusiasm but will not increase their participation. This stems primarily from the fact that they know their advantage comes at an undemocratic zero-sum cost and are thus able to get their preferred outcome without paying. These assumptions lead to a clear, testable predictions:

In the first two hypotheses, I consider the direct effect that higher institutional costs might have

on voters in general. Namely, the direct relationship between higher costs and turnout. In both of these hypotheses, I hold everything but emotions constant.

> **Hypothesis 3.1** Ceteris paribus, if an individual is disadvantaged by manipulated institutions and they are aware of the disadvantage, then they will be more inclined to participate compared to those in the same disadvantaged space who are not privy to the effects that institutional manipulation has on their group.

> **Hypothesis 3.2** Ceteris paribus, if an individual is advantaged by manipulated institutions and they are aware of the advantage, then they will be less inclined to participate compared to those in the same advantaged space who are not privy to the effects that institutional manipulation has on their group.

The next set of hypotheses incorporates the differentiating effects of emotions. Namely that emotions are conditioned on the respective institutional advantage or disadvantage that a voter learns about. Here, I predict the differing outcomes I expect from distinct emotions.

> **Hypothesis 3.3** If an individual is disadvantaged by manipulated institutions and they are aware of the disadvantage, then they will be more likely to experience anger and/or fear.

> **Hypothesis 3.4** If an individual is advantaged by manipulated institutions and is aware of the advantage, then they will be more likely to experience enthusiasm compared to those in the same group who are not privy to the effects of institutional manipulation; ultimately they will not increase their participation.

> **Hypothesis 3.5** If a person experiences anger in response to becoming aware of the ways that institutions disadvantage their group, then they will be more likely to participate compared to those who experienced no anger in the disadvantaged space.

> **Hypothesis 3.6** If a person experiences fear in response to becoming aware of the ways that institutions disadvantage their group, then they will be less likely to participate compared to those who experienced no fear in the disadvantaged space.

In general, I predict that emotions are conditional on whether or not a person benefits from institutional manipulation. This is a step in a new theoretical direction. I illustrate how emotions need to be considered as a central *mediating* component of the participation calculus. Furthermore,

unlike many theories before, I show that these theoretical predictions that combine institutions and emotions to predict participation apply to any item on the menu of institutional manipulation and to any political context. Simply put, I can explain, at least to some extent, the effects of democratic backsliding on turnout in most political and cultural contexts.

With this in mind, this dissertation explores two disparate items on our manipulation menu. Gerrymandering, the manipulation of “p" and polling burden, the manipulation of “C". Furthermore, I explore the role that manipulated institutions play in creating political inequality and perpetuating different emotional reactions in two different political contexts: the United States and Malaysia. I now turn to the emotional effects of gerrymandering on political participation.

CHAPTER 4

Gerrymandering and the Manipulation of p: Two Empirical Tests

4.1 Introduction

The idea of legislative redistricting is an innately democratic idea. Largely an effort for the government to reflect and remain as responsive as possible to an ever-changing population, the redistricting process occurs at the state level every ten years following the census. Geographically defined district lines, however, are themselves the product of a political choice and redistricting affords the party in power an opportunity to frustrate majority rule by drawing lines that amplify some voting blocs over others. Although democratic in nature, the process of redistricting has become a forum for partisans to press advantages and ensure winning margins.

An example from U.S. electoral politics illustrates this idea. In 2010, Republicans mounted an effort, coined “REDMAP", to win legislative majorities in as many states as possible. Pennsylvania, a traditional battleground state, was in REDMAP’s crosshairs. While Obama won Pennsylvania that November, its Democratic majority in the state legislature was growing thin with several Democratic members up for re-election. REDMAP narrowed in on these re-election campaigns and flooded voters with negative campaign ads and out-of-state mailers, eventually flipping the legislature to red (Daley 2016). REDMAP’s next phase involved redistricting in each of the states where Republicans had won a majority of state legislative seats. The new legislative maps combined to be some of the most extreme gerrymanders in history. Pennsylvania, for instance, now had a “virtual lock" on 13 of 18 congressional districts (Kirschenbaum and Li 2021*a*). REDMAP’s plan was sold to Republican stakeholders across the country as a battleplan in response to a crisis wherein the GOP was risking the potential of being the House minority for several decades; as it did from 1954-1994 (Hofeller 2010). In other words, the process of redistricting as far as REDMAP was concerned was a political battle and Republicans needed to win at all costs. Ultimately, REDMAP ensured GOP control of

the U.S. House and many state legislatures for years to come. So when Democrats in 2012 fell to a Republican 33-seat majority stronghold in the following midterm elections, Democratic operatives pointed to REDMAP's overwhelming success as one of the most "audacious heist(s) in modern politics" (Daley 2017).

In 2011, Democrats were frustrated by REDMAP's victories and the implications for continued GOP electoral gains. In Maryland specifically, the goal of Democrats (who controlled the redistricting process) was clear: Flip the sixth congressional district, a seat that had been red for twenty years, blue. The redistricting cycle presented a perfect opportunity for Maryland Democrats to increase the likelihood of adding another Democrat to the legislature. After several different iterations, the governor's appointed redistricting committee successfully gerrymandered Maryland's electoral map, creating a new district and toppling a 10-term Republican incumbency in another district. Ultimately, Maryland Democrats won a 7-1 majority in the legislature in 2012. Those involved in the process have since admitted that they believed they were participating in a sort of game of redistricting against a Republican onslaught. Furthermore, they believed they were acting in accordance with what Democratic voters would have wanted (Daley 2017).

In the years following the 2012 election, political elites began to take on partisan gerrymandering as a key issue. One tactic was to file lawsuits in places where gerrymandering was blatant. In *Gill V. Whitford* for example, Wisconsin Democrats empirically showed how gerrymandering enabled Republicans to gain a majority in the state legislature. While the case was ultimately struck down and the empirics shrugged off as "sociological gobbledygook" the issue of gerrymandering continued to foment elite interest in combatting it (Reinhard 2020, first paragraph). They expanded from just courtroom battles to grassroots organizing. One example is Eric Holder, the former Attorney General of the United States, who founded the organization All on the Line in 2019 with the goal of increasing public awareness about the challenges partisan gerrymandering created for American democracy. Holder and his associates connected gerrymandering to other more salient issues like gun control or health care, sparking growing interest among citizens. Such efforts bolstered a broader trend of citizen activism against gerrymandering, leading to the emergence of several citizen redistricting committees and a growing recognition of the need to foster greater transparency and inclusivity in the redistricting process.

While there has been an influx of citizen interest in gerrymandering and redistricting practices, there is little known about how this issue actually affects political participation on the ground. This chapter explores how manipulated electoral districts affect a person's decision to politically engage. In the example above, strategic mapmakers assume that regardless of how gerrymandering affects disparate voting groups, electoral participation should remain unchanged by such electoral

manipulation. This is primarily because the process of gerrymandering is complicated and assigning blame or intent is challenging. Indeed a recent Pew survey found that most people have little or no idea about how redistricting affects them specifically (Jones 2022*a*), begging the question: How would voters respond if they knew that gerrymandering was manipulating the weight of their individual votes? Would people who benefit from gerrymandering behave differently than those whose votes are being devalued? From the example above, would Maryland Republicans behave differently if they knew their votes were being targeted by manipulated district lines? How might they feel upon learning that their group was being threatened by electoral suppression? I attempt to shed some light on these questions in this chapter.

Recall that my theory is a story about how manipulated institutions condition behavior by evoking different emotions in different groups. When manipulated institutions electorally suppress, they create two disparate contexts: one where some groups are advantaged because of the suppression and one where people are disadvantaged. My theory differentiates between which groups will feel positive and negative emotions: A person will experience certain emotions based on where they reside institutionally. For example, a person whose vote is overweighted by gerrymandered district lines will experience feelings of joy or enthusiasm when learning about their newfound political advantage. On the other hand, those whose votes are devalued will experience emotions like fear and anger when learning about their disadvantage. In the former scenario, an individual will be more likely to disengage compared to those in the same space who are not privy to gerrymandering's effects. This is because they see no threat to their political position and there is little point to taking on the cost of engaging when they are already winning. These individuals experience a sort of fait accompli and in this case, enthusiasm does not mobilize. In the latter scenario, people who are disadvantaged by gerrymandering and know about it will sense a threat to their positions. This threat might be so overwhelming that fear will take hold and these people will not increase their participation. However, some will experience anger and engage more as a means to feel some sense of control over the threat. Increases in participation in the disadvantaged group are compared to a baseline of not knowing about gerrymandering's suppressive effects.

This theory also differentiates between negative emotions that mobilize and negative emotions that demobilize. Specifically, anger or fear do not have the same downstream behavioral consequences. I argue that anger mobilizes while fear should demobilize. Fear in response to learning about gerrymandering's effects should cause an initial reaction of disengagement and for some whose group is targeted, the threat might be so big that abstaining from engagement altogether is a person's only plausible option (Marcus, Neuman and MacKuen 2000). For others, however, this information about gerrymandering will spur anger and motivate an increase in their participation.

This is primarily because they feel that through participating, they can claim at least some control over the threat gerrymandering poses to their group. In this study, I do not conduct tests to differentiate between anger and fear for those who feel both emotions concurrently. Instead, I predict that increases in anger will lead to larger mediating effects on participation. Conversely, fear will not exhibit the same mediation effects because fear should be demobilizing. Before I conduct these tests, however, I describe in more detail why gerrymandering is a good example of an institutional manipulation in which to test my theory.

4.2 Manipulating *p* through Gerrymandering

Legislative redistricting provides an interesting context in which to consider my theory for four specific reasons. First, it is a primary example of how the *p* term can be manipulated. Recall that *p* refers to the probability that an individual's vote will be decisive in an election; put differently, how pivotal a person's participation will be to the election's outcome. Gerrymandering manipulates the *p* term by altering the composition of electoral districts in a way that dilutes or concentrates the voting power of certain groups of people. When electoral districts are redrawn in a way that isolates a particular group of voters and groups them together in a single district, their voting power is effectively diluted. Conversely, when electoral districts are redrawn to concentrate the voting power of a particular group of voters, their voting power is effectively amplified. Unlike tangible costs, manipulating "p" is a lot less straightforward. The ambiguity of "p" however, makes manipulating this attractive for strategic incumbents. If successful, they can win elections even when opposition blocs are allowed to participate freely.

Second, following a long tradition of analyzing single-member districts, I presume that boundaries serve to advantage (overweight) votes cast by some and disadvantage (underweight) votes cast by others. (Butler 1947; Gudgin and Taylor 1979). Third and related, district lines are discernible and it is possible to observe when lines shift. In addition, there are ways to empirically assess the advantages and disadvantages that district lines create. Finally, districts are exogenously given. Citizens have no control over how district lines will treat them or their group.

Fourth, systems of geographically-based districts can generate advantages (and disadvantages) for certain groups. Geographic districts can pose a problem for democratic institutions that operate in heterogeneous societies (Lijphart 1981). In practice, representation is apportioned to a geographic region. Voters in that region then select a representative to make the interests and preferences of those in the region "present again" in a legislative assembly (Pitkin 1967). In a homogeneous society, it is often presumed that individuals living in close proximity generally share similar interests and

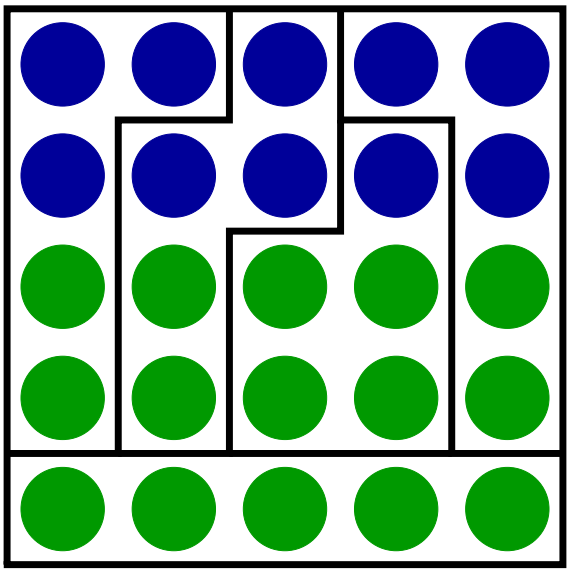
preferences over policy. In such a setting, the arrangement of districts may not make a difference in the final composition of the legislature or government. On the other hand, in a heterogeneous society, neighbors may not share preferences or interests, and the arrangement of district boundaries may make a significant difference in the ways that groups with different interests or preferences are represented in the legislature or government.

The problem of geographic districts are compounded by the fact that the boundaries of districts are often themselves the product of a political choice. The person or people responsible for districts can manipulate boundaries to their advantage. By the same token, they may use their power to delineate districts in order to mute the influence of opponents. Figure 4.1 presents an example that demonstrates how this might occur in a political system with two opposing groups.[1] For the purposes of this study, those whose vote power is muted are considered as politically disadvantaged while those whose vote power is over amplified are considered politically advantaged.

In Figure 4.1, the jurisdiction contains two groups, one that lives in close proximity in the northern part of the jurisdiction, and another that lives in close proximity towards the south. If the mapmaker was constrained to draw five balanced districts, that is, districts that contain an equal number of residents, each district would contain five people. In this case, we can assume that the mapmaker was motivated to generate a set of districts in which the northern group, a minority, controlled a majority of seats. The northern group controls three districts and the southern group controls just two. This arrangement is commonly referred to as a "packing gerrymander" because the mapmaker has packed one group into a minority of districts, limiting their influence in the remaining majority of districts.

Gerrymanders distort vote weights and establish one group as advantaged and another as disadvantaged. The ways that distortions introduced by gerrymanders may be seen in two ways. First, they frustrate majority rule as seats awarded are not reflected in votes won. Second, they underrepresented certain groups. In the example represented in Figure 4.1, the northern group makes up a minority (40% of the population), but because of the way the districts are drawn, the northern group manages to win a majority of seats (60% in the gerrymandered map). Observe that the effects of a gerrymander are the result of the fact that votes of one group are weighted differently than votes of the other group. It is only possible for a group to win a majority of seats in an assembly with a minority of votes in the electorate if the electoral minority's votes were weighted more heavily than the electoral majority.

[1]Recall this same figure from Chapter 2. Because the United States has legal restrictions regarding equal district population sizes, malapportioned gerrymanders as shown in the Malaysia case are impossible. This is primarily because the U.S. is less autocratic and has consistent alternations in power, meaning that the same party has not been enabled to change the laws to further entrench power as we see in Malaysia.



Packing Gerrymander

Figure 4.1: Packing Gerrymander and Politically Advantaged and Disadvantaged Contexts. A hypothetical jurisdiction with a set of districts into which the majority has been "packed" into a minority of districts. Note that the population size of each district is exactly the same. In this hypothetical scenario, the blue group who is by nature a minority has an over-amplified vote share while the green group's vote influence is being muted. Thus the blue are politically advantaged through gerrymandering and the green are politically disadvantaged.

Second, district lines are discernible, an analyst can observe when they shift. In countries with single-member districts, the timing of district delineation varies. In the United States, the focus of this study, districts are redrawn every 10 years. While the transparency of the district-drawing process varies from jurisdiction to jurisdiction in the U.S., the results are always public because politicians have to campaign and voters need to know for whom they are voting. The public nature of the institution makes it possible for analysts to evaluate the effects of districts. Measures of bias arising from district lines are abundant (Katz, King and Rosenblatt 2021), thus there are reliable ways to assess the advantages and disadvantages created by district lines. Even so, the effects of district lines are not always immediately apparent, so by and large, the effect of lines as an institution remains latent for most citizens.

Finally, districts are exogenously given. Citizens have no control over how district lines will treat them and people like them.[2] From an individual point of view, there is very little that a particular citizen might do to change district lines. Citizens living in single-member-district systems would have to move jurisdictions to change their circumstances, but I am aware of no evidence that this occurs on a systematic level. Moreover, the nature of gerrymanders is that they mute the effects of collective action in elections. The point of drawing gerrymanders is that it makes an electoral system unresponsive to changes in voters' behavior effectively entrenching the advantages enjoyed by one group and the disadvantages suffered by the other.

This study tests how voters respond when they are informed about how gerrymandering affects them and their group specifically. I make the following set of hypotheses:

Theoretical Hypotheses

In the first two hypotheses, I consider the direct effect that higher institutional costs might have on voters in general. Namely, the direct relationship between higher costs and turnout. In both of these hypotheses, I hold everything but emotions constant. These first two hypotheses represent general statements about the conditioning effects of manipulated institutions on individual participation, without regard to emotions. Simply, those in the (dis)advantaged group will exhibit different behavior when they learn about gerrymandering's effect on their group compared to those in their group who are not privy to this information.

Hypothesis 4.1 Ceteris paribus, if an individual is disadvantaged by gerrymandering

[2]Recent efforts to create apolitical, nonpartisan processes for drawing maps have gained traction in many states in the United States with the adoption of citizen-led redistricting commissions. In some instances, these commissions have failed to avoid gerrymandering (see: Best et al. 2021), and in others, politicians in legislatures have short-circuited commission-led efforts to draw fair maps that provide little or no advantage to particular groups.

and they are aware of the disadvantage, then they will be more likely to participate compared to those in the same disadvantaged space who are not privy to the effects that gerrymandering has on their group.

Hypothesis 4.2 Ceteris paribus, if an individual is advantaged by gerrymandering and they are aware of the advantage, then they will be less likely to participate compared to those in the same advantaged space who are not privy to the effects that gerrymandering has on their group.

Recall that my theory incorporates the differentiating effects of institutions on emotions. Those who are advantaged should not experience fear or anger, rather those who are privy to gerrymandering's advantageous effects on their group should experience emotions like enthusiasm or joy. These emotions will not mediate to mobilize in this context because this group is already winning and senses no threat to their advantaged position. On the other hand, those that are disadvantaged and know it are more likely to experience fear and/or anger. This is primarily due to the perceived threat of being disadvantaged.

Likewise, I theoretically distinguish between the mobilizing effects of the negative emotions of anger and fear. I predict that fear will not mediate increased participation. Anger is the dominating variable that should mediate participation. That is as I observe changes in anger, I should also observe changes in the mediating effect on participation. This should not be the case when I observe changes in fear.

Hypothesis 4.3 If an individual is disadvantaged by gerrymandering and they are aware of the disadvantage, then they will be more likely to experience anger and/or fear.

Hypothesis 4.4 If an individual is advantaged by gerrymandering and they are aware of the advantage, then they will be less likely to experience anger or fear and more likely to experience enthusiasm; ultimately they will not increase their participation. .

Hypothesis 4.5 If a person experiences anger in response to becoming aware of the ways that gerrymandering disadvantage their group, then they will be more likely to participate compared to those who experienced no anger in the disadvantaged space.

Hypothesis 4.6 If a person experiences fear in response to becoming aware of the ways that gerrymandering disadvantage their group, then they will be less likely to participate compared to those who experienced no fear in the disadvantaged space.

4.3 Emotion, Mobilization and Institutional Manipulation: A First Test.

I present a first test of my theory which is an online survey experiment conducted in October of 2021. Through a 2X2 factorial design, l test the effects of institutional suppression conditioned solely on partisanship. I recruited participants through the Cloud Research platform that screens for an optimized Amazon Mechanical Turk (MTurk) sample. Although this is not a representative sample, MTurk's base of workers is commonly considered diverse enough for at least some inference about the US population (Berinsky, Huber and Lenz 2012). I checked for sample quality with Winter et al.'s "Simplified Protocol" measures in Qualtrics that verifies respondent geographical location by screening-out non-US VPN addresses (2019). The protocol also enabled a tool to prevent repeated completions as well as computerized (bot) responses. All survey respondents were incentivized with a $1 MTurk reward. To ensure partisan balance across respondent groups, I block randomize on party identification. These party identification questions were taken from the 2020 iteration of the American National Election Survey and include follow-up "leaner" questions to gain a more partisan-authentic sample (American National Election Survey 2022). Table 4.1 includes descriptive statistics for this study.

Respondents	Total	Passed Screening	Failed Screening		
	1200	1129	71		
Party ID	Democrat	Republican	Pure Independent	Other	
	57%	31%	10%	2%	
Sex	Female	Male			
	51%	48%			
Education	<B.A.	≥ B.A.			
	56%	44%			
Age	Youngest	Mean	Oldest		
	18 yrs	41 yrs	89 yrs		
Race	White	Black	Hispanic	Asian	Other
	77%	9%	7%	5%	2%

Table 4.1: Study One Sample Descriptive Statistics

4.3.1 Stages, Treatment, Control, and Outcome Variables

Once respondents have provided informed consent and are screened for location and authenticity, the experiment proceeds in three stages. In the first stage, I present a party identification battery to respondents. This battery allows me to determine if respondents identify with the Democratic Party, the Republican Party, or neither major party. I exclude those that do not identify with a major party from the remainder of my analysis. In the second stage, respondents are assigned to either a control or treatment. I block randomize treatment by party identification. In the treatment, respondents read a vignette that describes Republican efforts to gerrymander. In the control, respondents read a vignette that briefly describes the redistricting process without reference to gerrymandering or parties. In the third stage, respondents are asked to indicate how they feel about the treatment/control through

a slider question, and finally, in stage 4, respondents are presented with additional opportunities to engage in politics. Figure 4.2 summarizes the four stages of my survey.

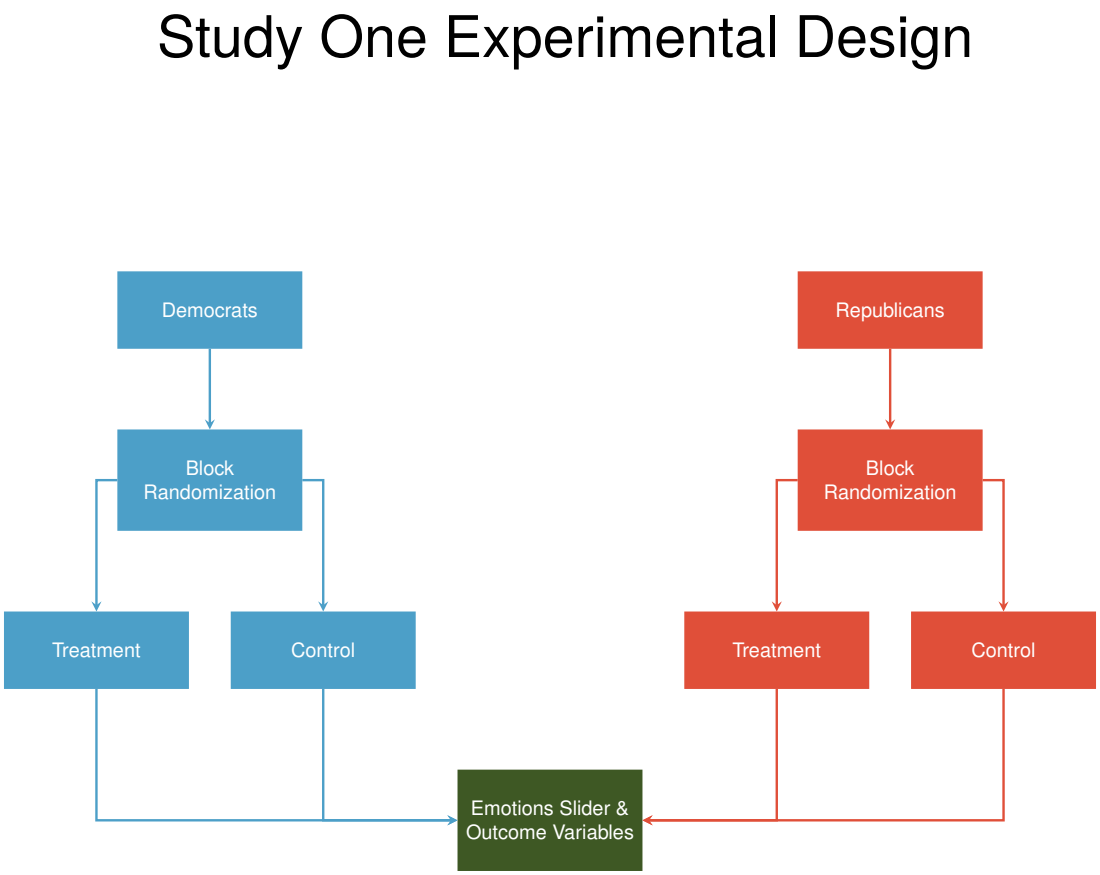


Figure 4.2: Experimental Design for Test One

Stage One

For the institutional advantage/disadvantage moderator, I present respondents with 9 total questions, asking for party identification. To account for respondents claiming independence from either party, I employ the ANES battery, accounting for partisan "leaning." In my analysis, I treat partisan "leaners" as partisans. I exclude respondents that identified as neither partisans nor independents with a partisan preference from my analysis. Among the 1129 respondents, 358 (32%) identified

as Republican, 543 (48%) identified as Democrat, and 117 (10%) identified as “non-leaning" independents.

Stage Two

In the second stage, I measure the primary explanatory variable: political advantage or disadvantage. Here, I proxy the concept of political (dis)advantage simply through a respondents' self-identified partisanship. This test is also a test of external validity since Republicans are much more likely to benefit from gerrymandering than Democrats in the real world (Chen and Rodden 2013; Chen and Cottrell 2016). Respondents are randomly assigned to a treatment or control and for those assigned to the treatment, they are presented with the following information vignette:

> **Study One Treatment** *In the last 10 years, legislative maps have been drawn unfairly in several states and votes for Republican candidates have counted significantly more than votes for Democratic candidates. As a result, Republican voters are over-represented in many states and Democratic voters are under-represented. This means that, at least in some of these states, Republicans are more likely to get their policies put into law.*

Finally, the randomly assigned control information vignette is partisan-benign and only provides general information about how redistricting works in the United States.

> **Study One Control** *Legislative maps in the United States are drawn every 10 years in a process called “redistricting.”*

The vignette focuses on the ways that gerrymandering has favored Republicans in recent history. Republican-favoring gerrymanders arise both out of the the natural process of geographic sorting that favors Republicans (Chen and Rodden 2013; Magleby and Mosesson 2018), and from intentional efforts on the part of Republican map-makers to press existing advantages (Chen and Cottrell 2016; Best et al. 2017). By and large, following the 2010 census, gerrymanders favored Republicans more than Democrats. Recall that the nature of gerrymanders means that in Republican-favoring maps Republican votes will be weighted more than votes cast by Democratic voters (Butler 1947). Thus the vignette is consistent with the reality of U.S. politics and allows me to avoid deception.

Stage Three Immediately after viewing the treatment or control condition, participants are asked via six sliders to register levels of emotions on 3 dimensions (fear, anger, and enthusiasm). Standard measures of emotions have shown that it is good practice to have two indicators on each three emotional dimensions (fear, anger, and enthusiasm). As such, I operationalize fear by asking how afraid the respondent was as well as how anxious they were. I operationalize anger similarly by gauging levels of anger and then separate levels of outrage. Likewise, I measure enthusiasm

similarly through asking for separate levels of gladness and pride. I code each emotion on a $0-10$ scale, where 0 is a required click to measure no emotion present,[3] $1-3$ "a little emotion", $4-6$ "a moderate amount of emotion", $7-9$ "very much emotion", and 10 "extreme emotion".

Stage Four In this final stage, I measure participation three different ways: an intention to vote, engaging with online content related to redistricting, and inviting respondents to donate their MTurk reward to a nonpartisan organization intent on ending partisan gerrymandering. In the survey, I first ask respondents about their intention to vote, then I ask them about their willingness to donate, and last, I provide opportunities to engage with online content.

First, I ask about respondents' intention to vote (in a hypothetical US Congressional election). The question reads: *If the next U.S. Congressional election were held today, would you vote?* Respondents simply select "yes" or "no". This question is not drawn from the ANES, but is common in batteries of questions linking emotion to participation (Valentino and Neuner 2017).

Second, I asked participants if they would be willing to donate their $1 MTurk reward to a non-profit that supports anti-gerrymandering efforts. If respondents respond, "yes", then they are directed to a screen that informs them that they will be able to keep their reward but able to click a link to donate to Common Cause. I consider this variable as "intention to donate" and do not measure if they actually click on the link and make an actual donation.

Finally, I include five separately presented options for in-survey participation through clickable internet links. These opportunities can be divided into three non-partisan engagement and two partisan engagement links, all focused in some way on gerrymandering. I code participation in terms of actual clicks on each link. Because following a link requires time away from completing other MTurk tasks for which respondents are paid, this variable imposes a cost beyond simply answering one survey question. Clicking on a link means that a participant is giving up valuable MTurk time. An example of how these opportunities appear in the survey can be found in this chapter's appendix.

4.3.2 Findings

In this section, I present the results of my experiment. I begin by summarizing responses to the three ways I measured engagement. I then present the unconditioned, average treatment effect of being randomly assigned to the treatment on my three measures of participation. Since I expect that partisanship and institutions interact to create advantage, I report estimates of the average treatment effect of my treatment conditioned on party. I then turn to the mediating effects of emotion and report

[3]Rather than reminding respondents to answer the question, I required them to click on the specific number, including zero. This served as a way to decipher between actual no emotion and a non-response.

the association of my treatment and discuss the emotional response spurred by the treatment among Democrats and Republicans. Finally, I present the results of the mediation analysis and discuss the average causal mediation effect of anger and fear on respondents' propensity to participate.

As noted previously, I measure my outcome variable, participation, dichotomously three different ways. The following gives contextual summary statistics for each, without conditioning on party or any other moderating variable. I start with the intention to vote question. Specifically, the question reads "If the US Congressional elections were held today, would you vote?" Of the 996 respondents that answered this question, 819 indicated that they would vote while 177 answered "no". Next, the donation question reads: "Would you be willing to donate your Mechanical Turk reward to a nonprofit organization that is working on drawing fairer maps?" Here, nearly 20 percent (199 total) of respondents agreed to donate their MTurk reward while the rest (797) answered "no". Finally, I offer respondents five total opportunities to participate by clicking on a link that directs them to an external website. In total, 795 people did not click on any links, 74 clicked on one link, 26 on two links, 23 on three links, 13 on four links, and 63 on five links. I aggregate this variable to be "at least one click" and find that 20 percent of all respondents click on at least one link. All of these results are displayed in Table 4.2.

Intention to Vote	Yes	No
	819	895
	82.2%	17.7%
Number of Clicks	>0	0
	199	795
	20%	80%
Willing to Donate	yes	no
	199	795
	20%	80%

Note that these data include independents.

Table 4.2: Summary of Participation Variables in Test One.

4.3.3 A Purely Institutional Explanation for Mobilization?

My theory predicts that participation will be conditioned on respondents' advantaged or disadvantaged type and their emotional response to learning about their status. Before proceeding to a test of the mediating effects of emotion on individuals' responses to learning about the effects of manipulated institutions, I briefly explore the sole effects of institutions without conditioning responses on emotion. In this first test, partisan identification proxies electoral advantage or disadvantage. Hypothesis 4.1 predicts that the treatment will spur treated disadvantaged voters to increase participation while 4.2 predicts the opposite for treated advantaged voters. I find evidence for both of these hypotheses as treated Democrats in this study increase their voting likelihood and treated Republicans do not.

Model 1 in Figure 4.3 (below) treats Democrats as the baseline category. I find that 0.84 of untreated Democrats indicated that they would vote. That proportion increased to 0.91 among treated Democrats. The standard error suggests a p = 0.025 that there is actually no difference between treated and untreated Democrats. The model indicates that 0.81 of untreated Republicans said that they would vote. Finally, the model indicates that treated Republicans are roughly 4% less likely to vote compared to their untreated Republican counterparts and about 7.1% less likely to vote compared to untreated. These results are also presented in Figure 4.4. In addition to confirming my first two hypotheses, I find evidence of Aytaç and Stokes's prediction that there should be a direct effect of increased institutional costs on participation, at least in terms of voting (2019). In this case, higher costs lead to increased turnout.

	Model 1 Vote	Model 2 Click	Model 3 Donate
(Intercept)	0.84^{***}	0.17^{***}	0.25^{***}
	(0.02)	(0.02)	(0.03)
Treatment	0.07^{*}	0.04	-0.00
	(0.03)	(0.03)	(0.04)
Republican	-0.03	0.08	-0.10^{**}
	(0.04)	(0.04)	(0.04)
Treatment×Republican	-0.04	-0.09	-0.03
	(0.05)	(0.06)	(0.05)
R^2	0.01	0.00	0.02
Adj. R^2	0.01	0.00	0.02
N	879	877	879

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

Figure 4.3: OLS Results of Treatment Effect and Partisanship. The three outcome variables are represented in three different models. First, estimates of the relationship between treatment and partisanship, and frequency of participation measured in intention to vote in the next congressional election (Model 1). Second, clicks on links to information about the redistricting process (Model 2). And third, stated willingness to donate MTurk reward to non-partsan anti-gerrymandering campaigns (Model 3). I exclude independents and take Democratic respondents as the baseline partisan category. I provide standard errors in parentheses.

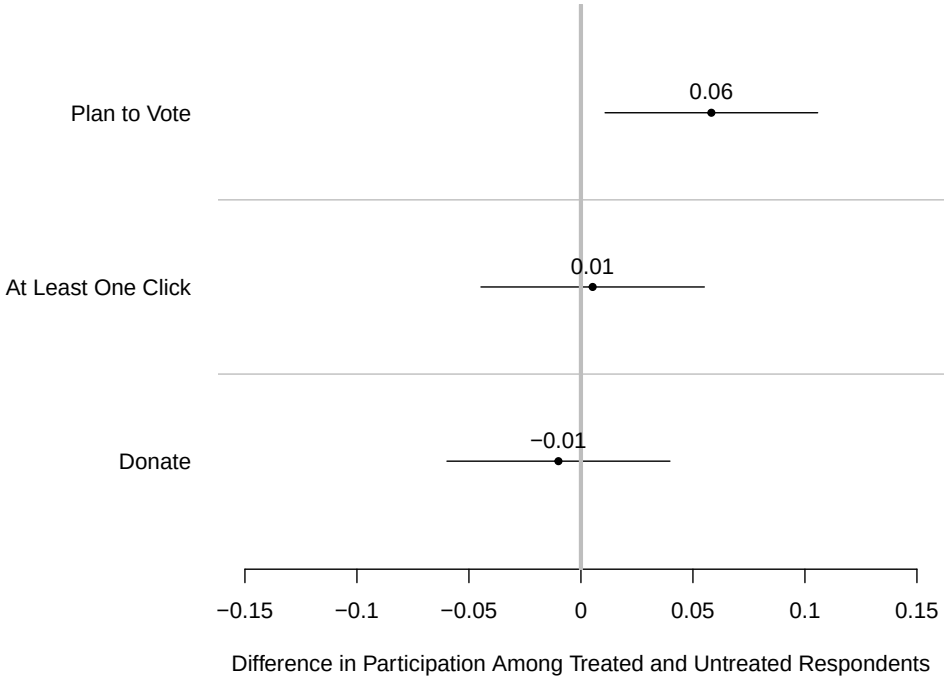


Figure 4.4: Linear Probability Models of Treatment Effect and Partisanship on all Three Outcome Variables. Whiskers extending from estimates correspond to 95% confidence intervals.

4.3.4 Emotional Response to Institutional Advantage

A central claim in my theory is that differences in behavior among treated and untreated respondents in the disadvantaged and treated and untreated respondents in the advantaged groups can be explained by different emotional reactions. I begin by presenting the treatment's effect on emotional reactions. In Figure 4.5, each dot in the plot corresponds to the average difference between treated and untreated respondents for a particular emotion. The whiskers extending from a dot correspond to a 95% confidence interval. Thus, I can be confident that treated and untreated respondents experienced a statistically different emotional response if the interval covered by the dot and whiskers does not include 0.0.

Observe that I calculate the difference in emotional response by subtracting the average response

among treated respondents from the average response among untreated respondents. Therefore, a positive number is associated with an increase in a particular emotion in the presence of my treatment. Conversely, a negative number is associated with a decrease in a particular emotion as a reaction to my treatment. A difference of 0 corresponds to no difference in response to my treatment.

Recall that I operationalize institutional advantage through a respondent's party identification. In this case, treated members of the disadvantaged group (Democrats) experienced "outrage" about .95 points more than those that did not see the treatment. At the same time, treated members of the advantaged group (Republicans) experienced this same emotion only .18 points more than untreated members of the advantaged group. I see a very similar finding when I consider anger. Treated Democrats felt 1.16 points more "angry" when compared to untreated Democrats. Likewise, Republicans (both treated and untreated) experienced much less anger. The inverse emotions for anger reflect similar findings. For example, treated Democrats decrease in both enthusiasm emotions while their Republican counterparts increase in these emotions when treated.

These findings are consistent with the pattern predicted in the first half of Hypotheses 4.3 and all of Hypothesis 4.4. In the case of Hypotheses 4.4, I can reject the null hypothesis that the treatment had no effect on the emotional response among the disadvantaged group. Disadvantaged respondents felt more anger than they did fear when they viewed the treatment. On the other hand, the advantaged group felt much less anger and registered negative levels of fear in response to the treatment for the same emotions (first half of Hypothesis 4.3).

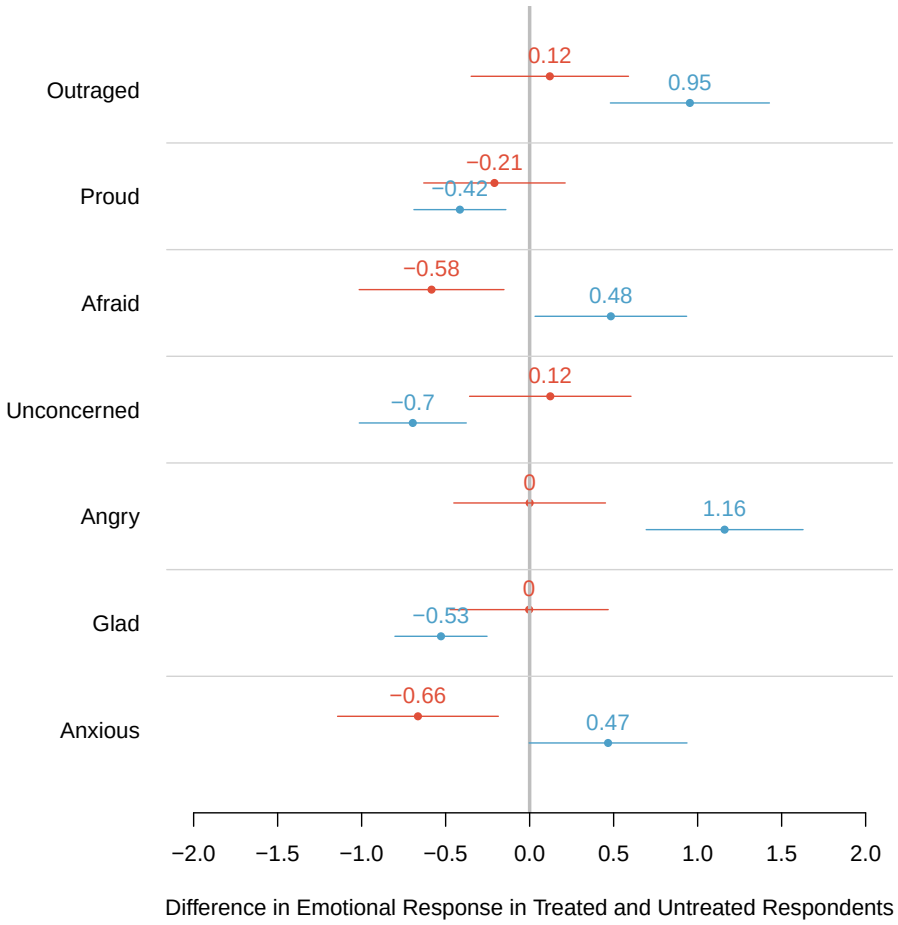


Figure 4.5: Average Treatment Effect on Emotional Reactions. The ATE on emotional response among treated Democrat (disadvantaged) and treated Republican (advantaged) respondents. Note that Republican respondents are represented in red, while Democrats are represented in blue.

4.3.5 Measuring the Mediating Effects of Fear and Anger on Participation

It is clear that the treatment triggered an emotional response. I now estimate the effects of anger and fear on the disadvantaged respondent. To clarify, I expect that anger will mediate the effect of learning about institutional disadvantage on treated disadvantaged respondents' likelihood to engage. Fear should have little if any such mediating effects. I analyze the mediation effect of anger and fear by using Tingley et al.'s proposed bootstrap estimation method (2017).[4]

Tingey et al. suggest a two-pronged estimation process that allows for non-parametric identification through an algorithm that produces a large set of counterfactuals. In the case of the analysis that follows, I generate 1,000 iterations of their process to estimate the average direct effect (ADE) and the average causal mediation effect (ACME) (773). I apply this process to my data using their

[4]A justification for this method is located in the appendix material.

software package mediation package in the R statistical programming language (Tingley et al. 2014).

First, I fit regression models for anger and participation. Anger is modeled as a function of the treatment vignettes. Participation is modeled as a function of anger and whether or not a respondent is randomly assigned to the advantaged or disadvantaged type. Next, the process uses these estimates to generate separate predicted rates of participation for each level of anger of those exposed to the gerrymandering vignettes and those exposed to the control vignette. The process yields three sets of estimates. The ACME, the average direct effect (ADE), and the total effect. Confidence levels are estimated through a nonparametric bootstrap consisting of 1,000 Monte Carlo simulations that rely on the separate regression models of participation on anger, participation on fear, the treatment, and pretreatment covariates. In what follows, I examine the mediating effect of anger and then the mediating effect of fear.

Anger: In Figure 4.6, I summarize the mediation effect of anger, the direct effect of my treatment, and the total effect of both anger and the treatment on respondents' expressed intention to vote in this first test. I present two figures, one for the advantaged group (Republicans) and one for the disadvantaged group (Democrats). Since these estimates are based on the linear probability model, the x-axis is the change in proportion of respondents who intend to vote conditional on a one unit increase in the independent variable. Among the advantaged group (Republicans), neither the treatment (ADE) nor anger (ACME) appear to have a significant effect on the participants inclination to express an intention to vote. In strong contrast, among the disadvantaged group (Democrats), there is a clear, positive, and statistically significant total effect and ACME associated with anger.

These findings show that threats from gerrymandering trigger anger and that anger seems to be mobilizing treated disadvantaged people to increase engagement (Hypothesis 4.5). If I were only to look at emotion as part of fluctuating institutional costs, I would miss the role that anger plays in mobilizing those who are the typical targets of institutional manipulation. To this point, I have shown that a variety of emotional reactions to learning about manipulated institutions are possible. However, when treated individuals experience other emotions in reaction to gerrymandering, they do not get mobilized. Simply put, anger in response to manipulating p is a mobilizing force. Specifically, learning about gerrymandering perpetuates enough anger to mobilize disadvantaged individuals that I can observe a total effect potentially undermining gerrymandering's unfair outcomes in this case.

Furthermore, I do not find any evidence of Republicans getting angry and participating more. This confirms both Hypotheses 4.2 and 4.4 that treated advantaged individuals will not increase participation and will likewise not experience anger. Simply put, advantaged respondents did not

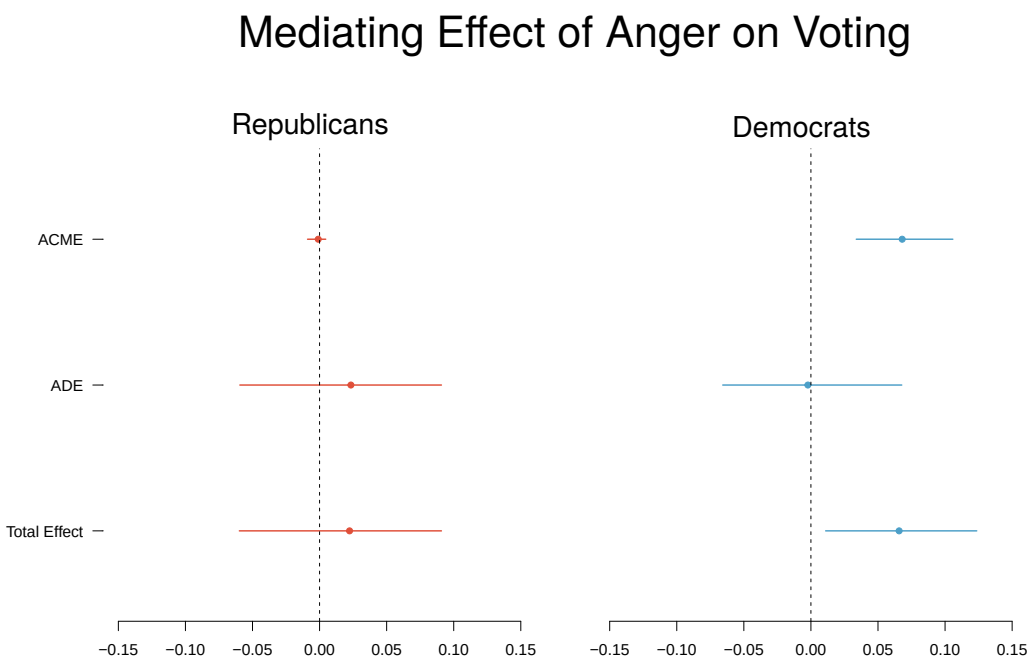


Figure 4.6: Mediating Effect of Anger on Intention to Vote. When considering the intention to vote outcome variable, reported at the 95% confidence level. The X-axis represents the change in the proportion of respondents who intend to vote conditioned on a one-unit increase in the independent variable. Recall that respondents were asked if they would vote in an upcoming hypothetical Congressional election, indicating their intention from a “yes" or “no" option. When the treatment is mediated by emotion there is a total effect that is statistically significant while the average direct effect is negligible. The average causal mediation effect (ACME) shows the strongest findings, indicating that emotion was an important mediating variable to the causal story.

feel angry and anger did not propel them to engage more.

Fear: With regard to fear, and something theoretically unexpected, I find a small mobilizing effect among the disadvantaged group. As illustrated in Figure 4.7, I observe only a very small mediation effect of fear. While my theory states that fear should only demobilize, when comparing the ACME across both emotions, I find a much bigger mediating effect from anger compared to fear. That is, while fear does mobilize some, participation is mediated much more by anger than fear.

This is not the case for Republicans. Note in Figure 4.7 that there is no average causal mediation, direct, or total effects of fear. These findings are not surprising considering that Republicans experienced on average a $-.62$ level of fear when I only consider the treatment effect on emotional responses (see figure 4.5 above).

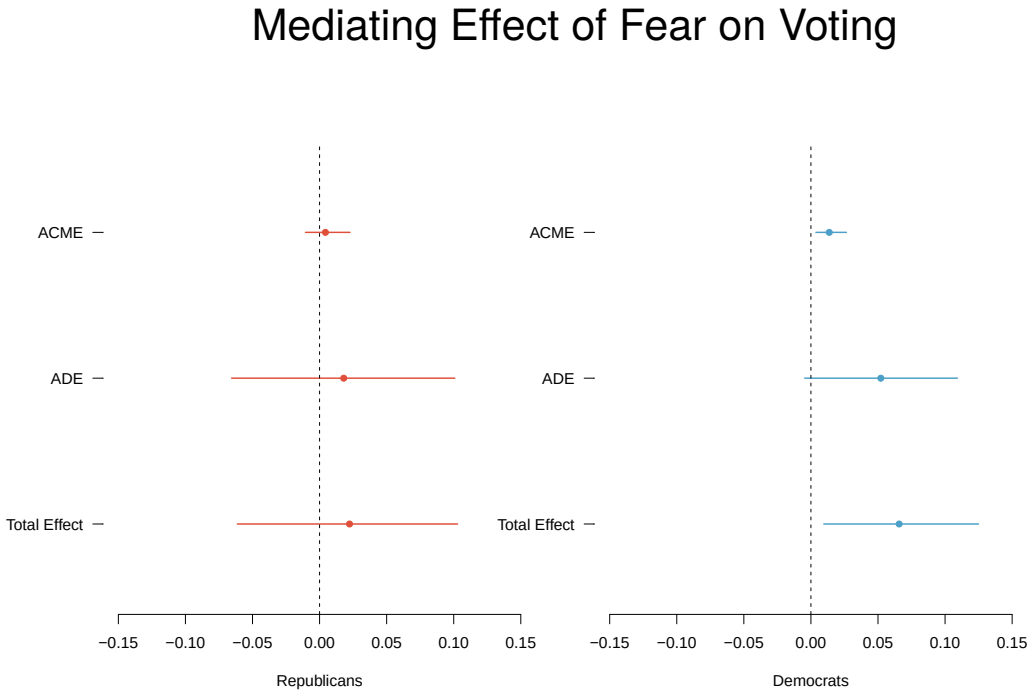


Figure 4.7: Mediating Effect of Fear on Intention to Vote. Mediation analysis of fear when considering the intention to vote outcome variable is reported at the 95% confidence level. The X-axis represents the change in the proportion of respondents who intend to vote conditioned on a one-unit increase in the independent variable. Recall that “Advantage" and “Disadvantaged" refer to both Republican and Democratic respondents based on which treatment condition they were randomly assigned to.

4.3.6 Some Thoughts on this First Test

By examining the effects of fear and anger, I find evidence that people who are disadvantaged will participate more when experiencing these emotions. Even though some studies have shown that fear can branch into anger as a person feels more efficacious in controlling the threat (Valentino, Gregorowicz and Groenendyk 2009), I do not specifically test if this is what is happening in this context.

In general, this first test shows that anger mediates much more than fear when a politically disadvantaged person learns that gerrymandering is targeting them and decides to increase their likelihood of voting. While I cannot confirm that fear only demobilizes (Hypothesis 4.6) I can say that anger, more than fear, was a dominant factor in mediating a person's decision to vote. Here, I can only speculate that fear and anger are positively correlated; that is people are feeling them both at the same time and perhaps misjudging fear when it is actually anger that they are feeling. Another explanation might be that because gerrymandering poses no real existential threat to a person or group, anger is doing most of the work even though respondents are also saying they are afraid. In this sense, fear in response to gerrymandering might be in response to a general concern that scholars, pundits, and voters alike have about democratic backsliding in the United States. Emotions in this sense might register as fear but actually manifest as anger as many were mobilized to increase their likelihood of voting. At present this is speculation, though. Future studies might include a more specific test by subtracting fear from anger, and comparing respondents with a positive versus negative value on that measure. I do not do this and thus cannot claim to confirm my last hypothesis in this context.

In addition, it is worth noting here that my most significant findings were on the voting outcome variable. Considering the experimental stimuli, this is an interesting finding because even though I am telling people that their vote is not being weighed equally, many still choose to vote regardless. As such, in this case anger was a primary motivator in reducing the Downsian effects of the p term. That is, even though people learned that their participation would be much less pivotal to the outcome, many said they would vote despite this new knowledge. In this sense, the influence of p in the calculus was diluted.

Perhaps the most notable takeaway at this point is the role that anger plays in a politically disadvantaged person's likelihood of voting. If I was to only consider the treatment effects on participation, I would observe significant changes in participation rates, specifically along the intention to vote outcome variable. However, I learn that the primary motivating factor is not just political disadvantage, rather it is an angry reaction to that disadvantage. In this study's context, we can assume that if enough people became angry we might see a potential neutralization of

the undemocratic effects of gerrymandering. That is, even when learning that their vote is being undermined, if enough people were to get angry then we would see electoral outcomes that favored the disadvantaged rather than the advantaged.

This test is a first attempt at understanding the mediating role of anger, however. In the next section, I employ a method that randomizes (dis)advantage as a way to examine how Democrats might behave if they learned that suppression advantages them; this method also allows me to examine how Republicans might behave in the disadvantaged institutional space.

4.4 Emotion, Mobilization and Institutional Manipulation: A Second Test.

In the second, I randomly assign participants to one of two conditions where they are either advantaged or disadvantaged by gerrymandering in the United States. This second study allows me to isolate the effects that partisanship might have on how a respondent perceives the treatment conditions.

Following the distinct experimental manipulations, both studies unfold virtually identically.[5] First, I measure for specific emotional responses among respondents after viewing the treatments. I then measure participation by asking respondents to engage in three political tasks: expressing their intention to vote or volunteer and then inviting them to engage with online content about the redistricting process. I also ask them if they would like to donate their MTurk reward to a nonpartisan organization focused on making redistricting fairer. The following outlines the basic mechanics of both experiments.

Similar to the first test, I recruited participants through the Cloud Research platform that screens for an optimized MTurk sample. I also performed a quality check with Winter et al.'s "Simplified Protocol" measures in Qualtrics that verifies respondent geographical location by screening-out non-US VPN addresses (2019). To ensure balance across respondent groups, I again block randomize on party identification. Table 4.3 includes descriptive statistics for the sample recruited for Test 2. Because this test is a 2x3 design rather than a 2x2, I doubled the sample size.[6]

[5] In the second study I measured for intent to volunteer as an outcome variable. I did not do this in the first study.
[6] I also paid MTurk workers in this test .50 more cents for a total of $1.50.

Respondents	Total	Passed Screening	Failed Screening		
	2142	1800	342		
Party ID	Democrat	Republican	Pure Independent	Other	
	55.16%	33.18%	7.91%	3.75%	
Sex	Female	Male			
	59%	40.5%			
Education	<B.A.	≥ B.A.			
	44.86%	55.14%			
Age	Youngest	Mean	Oldest		
	20 yrs	38 yrs	85 yrs		
Race	White	Black	Hispanic	Asian	Other
	64%	10.39%	8.95%	6.67%	6.44%

Table 4.3: Test Two Sample Descriptive Statistics

4.4.1 Stages, Treatment, Control, and Outcome Variables

In this second test, I block randomize solely for the reason that it is an online, typically left-leaning sample. Following the experimental interventions, respondents are similarly asked to indicate emotional responses to the treatment/control conditions and then asked about their intended participation and given the opportunity to learn more about gerrymandering in general. Study Two's design is represented in Figure 4.8 below.

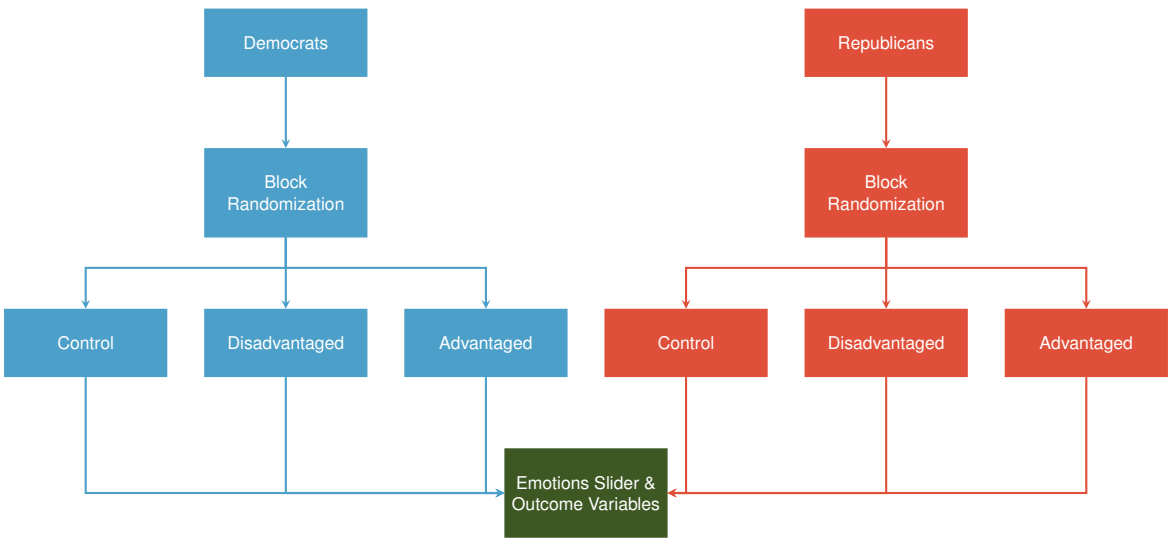


Figure 4.8: Experimental Design for Test Two. Note that this is a 2x3 design, with 3 conditions (2 treatments and 1 control) for Republicans or Democratic respondents.

As noted earlier, the biggest difference between each study is the randomization of political (dis)advantage in the second study. Test 2 controls for the effect that partisanship might have on a respondent's perception of the treatments. I randomly assign respondents in this study to one of two information treatment vignettes or a control.

> **Two Treatment Conditions** *In the last 10 years, legislative maps have been drawn unfairly in several states and votes for* ***Republican*** *candidates have counted significantly more than votes for* ***Democratic*** *candidates. As a result,* ***Republican*** *voters are over-represented in many states and* ***Democratic*** *voters are under-represented. This means that, at least in some of these states,* ***Republicans*** *are more likely to get their policies put into law.*[7]

I code participants as disadvantaged if they receive an information treatment that describes a situation where the party opposite theirs is systematically gerrymandering. Participants are considered "advantaged" if they receive a treatment in which their same party is described as systematically gerrymandering. This conceptualization is represented in the following Table 4.4.

[7]the bolded words in this treatment are the places where I switch to the opposite party but keep the same language for the second treatment condition.

Gerrymandered in favor of	Respondent party: Democrat	Respondent party: Republican
Democrats	Advantaged	Disadvantaged
Republicans	Disadvantaged	Advantaged

Table 4.4: Randomization of Advantage. Respondents are randomly assigned to treatment that says Republicans (Democrats) are responsible for gerrymandering. Respondents are (dis)advantaged depending on whether their party or the other party uses districting to distort electoral outcomes.

Finally, the randomly assigned control information vignette is partisan-benign and only provides general information about how redistricting works in the United States. This vignette was identical across both studies.

> *Legislative maps in the United States are drawn every 10 years in a process called "redistricting."*

Similar to the first study, after randomly viewing one of the three experimental conditions, participants immediately respond to a series of questions about their emotional reactions to the information they just read. Participants are asked via six sliders to register levels of emotions on 3 dimensions (fear, anger, and enthusiasm). Standard measures of emotions have shown that it is good practice to have two indicators on each emotional dimension. As such, I operationalize fear by asking how afraid the respondent was as well as how anxious they were and then taking the average of these two emotions. I operationalize anger similarly by gauging levels of anger and then separate levels of outrage and again taking the average. Likewise, I measure enthusiasm similarly by asking for separate levels of gladness and pride and then averaging the two. In the previous test I present these findings as six unpooled emotions. In this case, I present them along the three emotional dimensions.

I further operationalize emotion, as a mediator through an emotional response index. I code each emotion on a $0-10$ scale, where 0 is a required click to measure no emotion present, $1-3$ "a little emotion", $4-6$ "a moderate amount of emotion", $7-9$ "very much emotion", and 10 "extreme emotion". I later pool like emotions into three total emotions: anger, fear, and enthusiasm.

My outcome variable is similar across studies. However, in this study I measure participation in four different ways: an intention to vote, an intention to volunteer in anti-gerrymandering activities,

engaging with online content related to redistricting, and inviting respondents to donate their MTurk reward to a nonpartisan organization intent on ending partisan gerrymandering. In the survey, I first ask respondents about their intention to vote and volunteer. Unlike the dichotomous yes/no question utilized in the first study, in this study I use a Likert scale ranging from “Not at all likely" to “Extremely likely." I code this variable as dichotomous: Those who answered from “Not at all likely" to “Very likely" are considered to not be participating. Whereas, only those who answered “Extremely likely" are considered to be participating. The logic for this dichotomous cutoff stems from several studies that demonstrated the problem with respondents over-reporting voting intentions (Holbrook and Krosnick 2010). Second, I asked participants if they would be willing to donate their MTurk reward to a non-profit that supports anti-gerrymandering efforts. I code this variable dichotomously. Finally, I include four separately presented options for in-survey participation through clickable internet links. I code participation in terms of actual clicks on each link.[8]

4.4.2 Findings

Of all respondents who answered this question in this study, 46% indicated that they would vote while 53% responded “no". Next, I ask a very similar question about a respondent’s likelihood of volunteering for advocacy opportunities aimed at mitigating the effects of gerrymandering. Only 2.4% said they were extremely likely while 97% were coded as “no." The remaining outcome variables are measured identically to those in the first test outlined above. Table 4.5 represents the summary statistics of Test 2.

[8]See the chapter’s appendix for an example.

Summary Statistics of Test 2

Likelihood to Vote	Extremely	<Extremely
	779	895
	46.54%	53.46%
Number of Clicks	>0	0
	470	1202
	28.11%	71.89%
Likelihood to Volunteer	Extremely	<Extremely
	41	1633
	2.45%	97.55%
Willing to Donate	yes	no
	267	1405
	15.97%	84.03%

Table 4.5: Summary of Participation Variables in Test Two. Note that these data include independents.

4.4.3 A Purely Institutional Explanation for Mobilization?

My theory predicts that participation will be conditioned on respondents' advantaged or disadvantaged type and their emotional response to learning about their status. In this section, I briefly explore the sole effects of institutions without conditioning responses on emotion.

Unlike the first test where I found an ATE on the intention to vote outcome variable, this second test indicates no treatment effect in all 4 participation outcomes. Interestingly though, when we focus on the voting outcome variable alone, I find that treated advantaged respondents are significantly less likely to turn out compared to treated advantaged respondents in the first study. In other words, when I randomize advantage, there is a demobilizing effect on voting among those who know they are benefitting from gerrymandering. These findings are presented in Figure 4.9. In this case, I can confirm Hypothesis 4.2 that treated advantaged individuals will be less likely to vote than those who are untreated in the same advantaged context. I cannot, however, confirm Hypothesis 4.1 as there is little difference between treated and untreated disadvantaged respondents along all outcome variables.

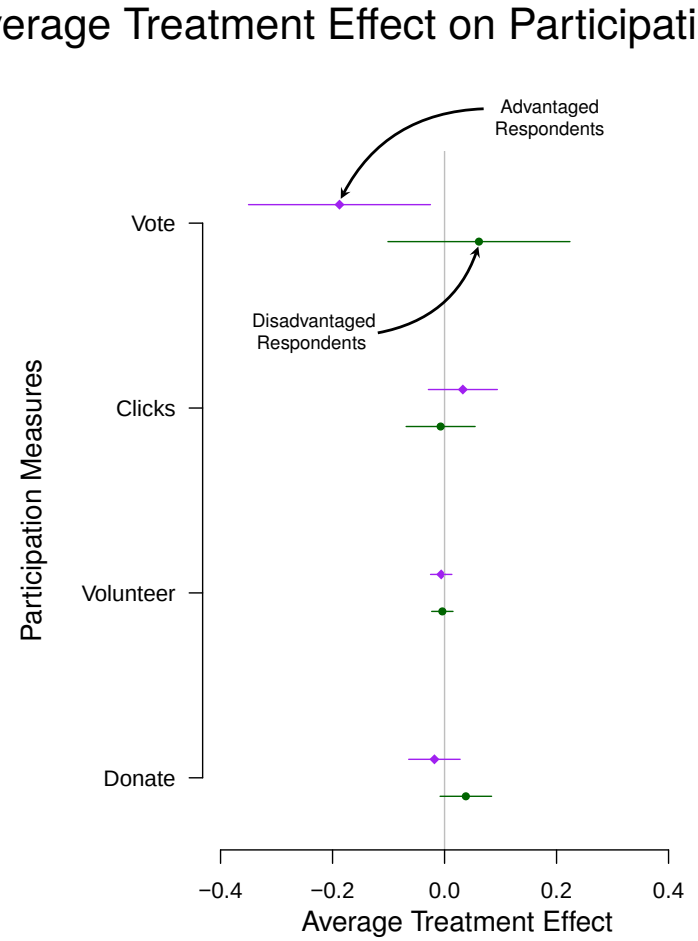


Figure 4.9: Average Treatment Effect on Participation Outcome Variables. Estimates of ATE for the four measures of participation estimated as linear probability models. Purple diamond shapes represent the estimated effect of being advantaged, green circles represent the estimated effect of being disadvantaged. Whiskers extending from estimates correspond to 95% confidence intervals.

4.4.4 Emotional Response to Institutional Advantage

When I consider simply the treatment effects on participation in this second test, I find that institutional costs matter. However, it is not immediately clear why an advantaged group would behave differently than a disadvantaged group. A central claim in my theory is that this difference can be explained by the level of anger a person experiences when learning about their respective political (dis)advantage.

Figure 4.10 summarizes the emotional reaction among respondents to the treatment in Test

2. On the x-axis, I provide the difference in the average emotional reaction among respondents (measured on a 10-point scale) among treated and untreated respondents. On the y-axis, I list the three emotional dimensions.[9] Here I also show the role that emotion plays when I randomize institutional advantage. Recall that Hypothesis 4.3 predicts that those treated in the disadvantaged group will respond differently emotionally than those untreated to learning about the effects of suppressive institutions. Specifically, treated members of the disadvantaged group experienced “anger" nearly 4 points more than those that did not see the treatment. At the same time, treated members of the advantaged group experienced this same emotion a little less than 1 point more than untreated members of the advantaged group. The inverse emotions for anger reflect similar findings. With regard to fear, I observe a significant decrease among advantaged respondents and a significant increase among the disadvantaged. Finally, for those who are treated in the disadvantaged space, I observe a decrease in enthusiasm while their treated advantaged counterparts significantly increased these emotions when treated (Hypothesis 4.4).

[9]Anger is measured through averaging “Angry" and “Outraged", I measure Fear through averaging“Afraid" and “Anxious" and Enthusiasm represents averaging "Happy and Joyful". In the first test “unconcerned" is a baseline to measure no emotion.

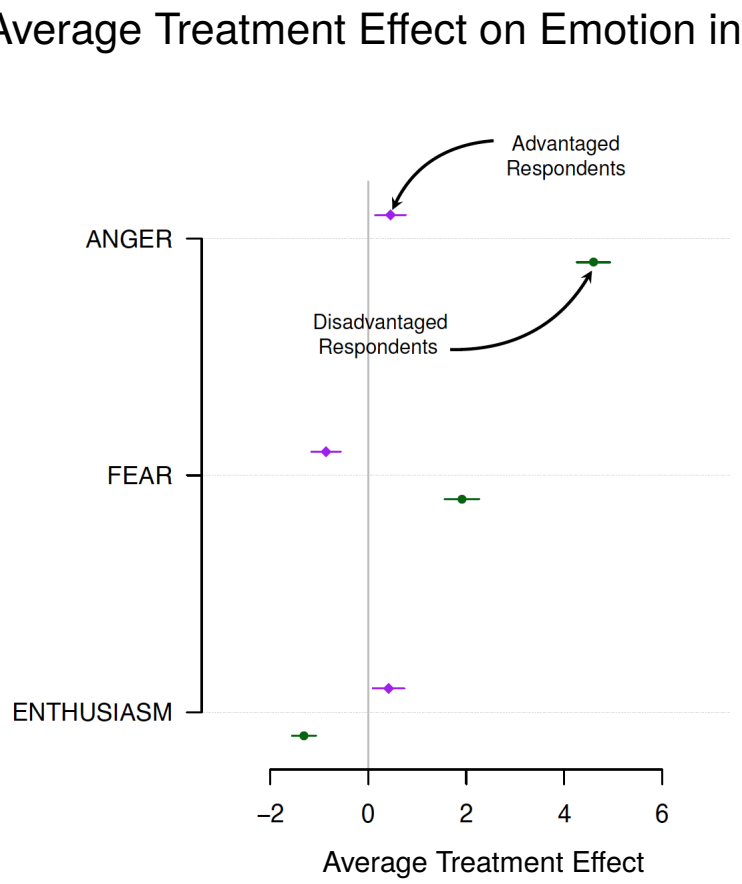


Figure 4.10: Difference in Emotions Between Treated and Untreated Respondents. Note that advantaged respondents are represented in purple while disadvantaged respondents are represented in green. Diamond shapes correspond to the advantaged while circle shapes correspond to the disadvantaged.

These findings are consistent with the pattern predicted by my Hypotheses 4.3 and 4.4. In the case of Hypotheses 4.3, I can reject the null hypothesis that the treatment had no effect on the emotional response among the disadvantaged group. Disadvantaged respondents felt more anger and *LESS* fear when they viewed the treatment.

On the other hand, the advantaged group exhibited a small and statistically insignificant response to the treatment for the same emotions (Hypothesis 4.4). That is, treated advantaged respondents are statistically more likely to experience emotions of enthusiasm.

4.4.5 The Mediating Effect of Anger and Fear on Participation

In both tests, I can confirm Hypotheses 4.3 and 4.4 that there should be a treatment effect on emotional responses. The next step is to employ the mediation analysis described earlier using the Tingley et al.'s proposed bootstrap estimation method (2017).[10]

Anger: In this test, I randomize advantage and find that anger is still a significant mediating force, as shown in Figure 4.11. However, anger does not propel enough participation to undermine the unfair outcomes of gerrymandering as I observed in the previous test. In other words, there is no neutralizing effect because people are both mobilized and demobilized significantly. In this vein, this second test confirms both a direct effect of institutional costs and a mediated effect of anger. In this case, changes in anger correspond to changes in the mediation effect of anger (Hypothesis 4.5). Unlike the findings in the first test, I see an initial demobilizing direct effect. This means that while treated disadvantaged respondents initially demobilized, those that felt anger were more likely to engage. There is not enough engagement in this case, however, to directly neutralize the adverse effects of gerrymandering.

[10]See appendix.

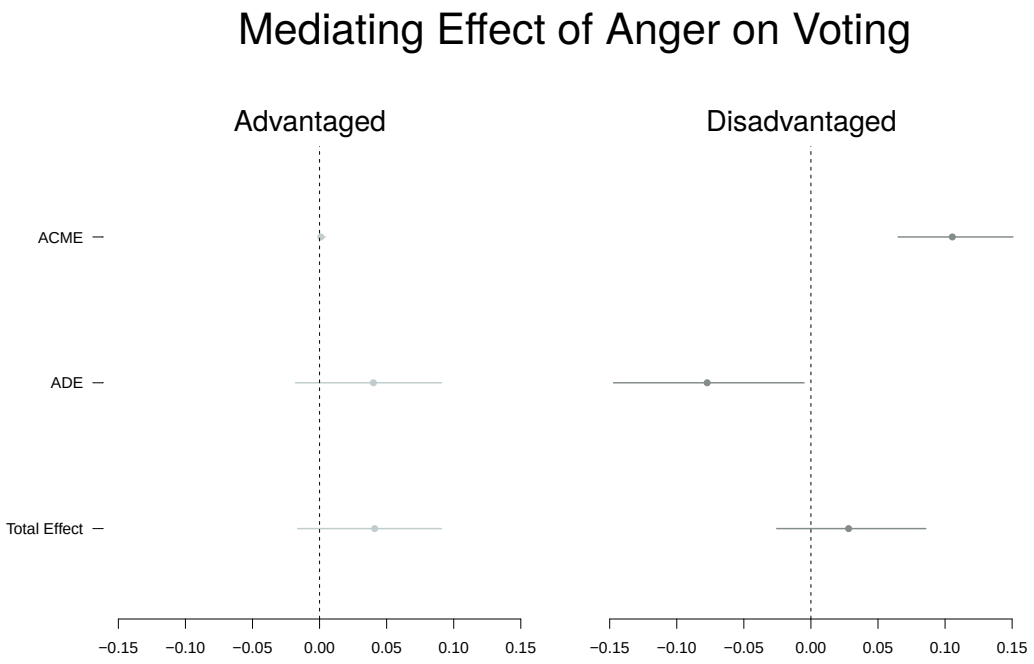


Figure 4.11: Mediating Effect of Anger on Intention to Vote. The mediating effect of anger on voting in Test Two. These values are reported at the 95% confidence level. The x-axis represents the change in the proportion of respondents who intend to vote conditioned on a one-unit increase in the independent variable.

Fear: With regard to fear, I observe a similar pattern in mediation in both studies. I find a small and significant level of fear among the treated disadvantaged group. Figure 4.12 indicates a clear, positive, and statistically significant ACME associated with fear. Similar to the previous test, fear is mobilizing and this is something theoretically unexpected. However, I only observe a very small mediation effect of fear and a larger mediation effect of anger. As in the first case, I cannot confirm Hypothesis 4.6 because fear is not demobilizing. However, it is worth noting that while fear does mobilize to some extent, participation is mediated much more by anger. The comparative mediation results between anger and fear are presented in figure 4.13.

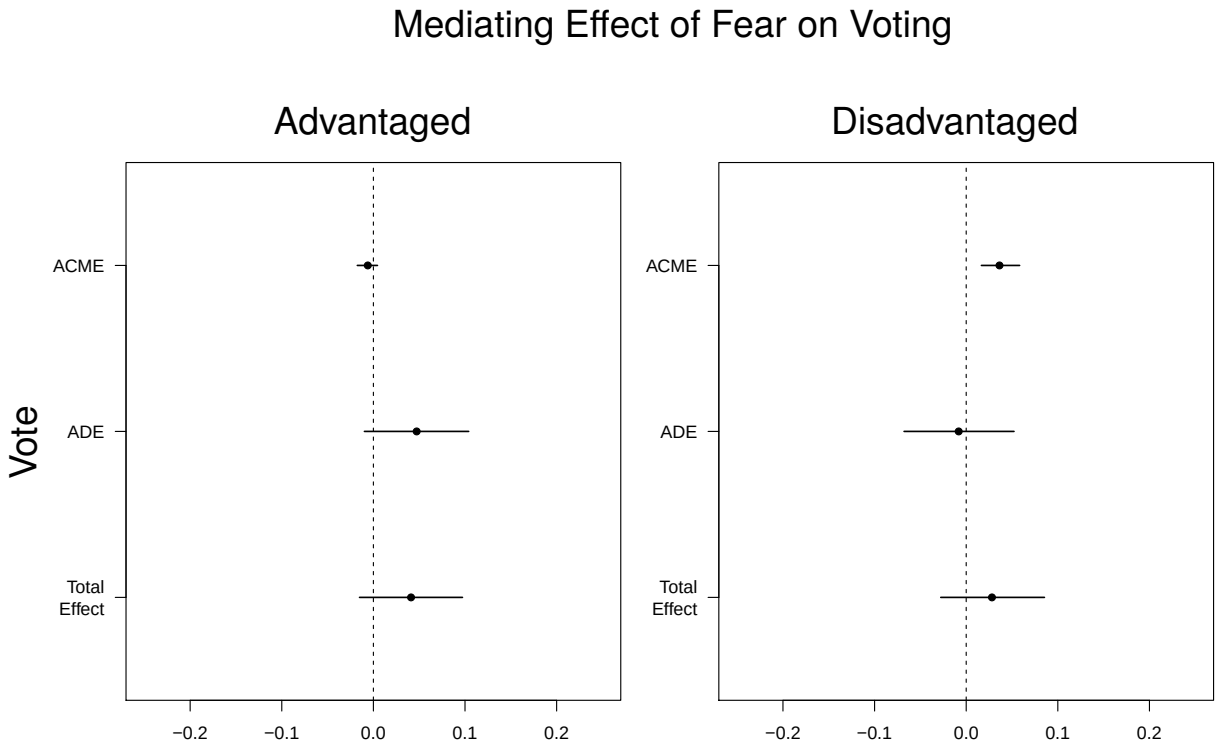


Figure 4.12: Mediating Effect of Fear on Intention to Vote. The mediating effect of fear in reaction to gerrymandering on intention to vote in the second test. These values are reported at the 95% confidence level. The X-axis represents the change in the proportion of respondents who intend to vote conditioned on a one-unit increase in the independent variable.

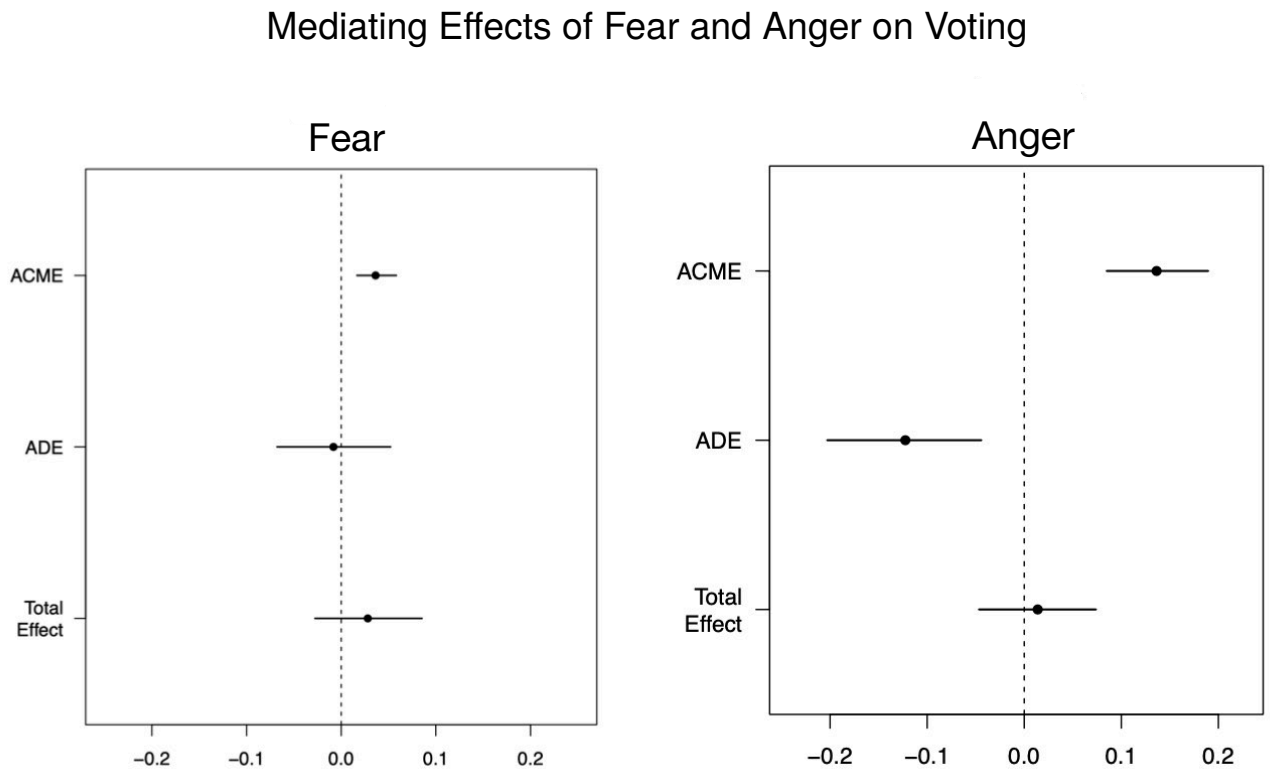


Figure 4.13: Mediating Effect of Anger and Fear on Intention to Vote Among Disadvantaged Respondents. Mediation effects of fear and anger in Test 2 on voting in the disadvantaged group. Note that anger is mediating much more than fear.

By examining the effects of fear and anger, I find evidence that people who are disadvantaged in both studies will participate more when experiencing both of these emotions. One key difference between these two studies, however, is the net effect that emotion plays on actually undermining the unfair outcomes of gerrymandering. When I proxy disadvantage on party identification, I can observe a clear mediating and total effect; however, when advantage is randomized it becomes more complicated.

To understand why I find such different mediation effects among disadvantaged groups in this second test is something I turn to in the next section. I explore some plausible reasons for the lack of a significant total effect by conditioning these findings on party identification.

4.4.6 The Role of Party ID in Institutional Manipulation and Suppression

In the first test I find clear results that confirm my theory. However, this test presents only half of the story because it does not consider how Republicans would respond to being targeted by suppression or how Democrats would respond when suppression benefits them. As such, I instituted a way to randomize advantage for a more conservative test of my theory in this second test. In Figure 4.14 I present these findings. Note that the off-diagonal represents the context in the first test and the primary diagonal represents the context laid out in the second test.

As illustrated above, simply randomizing advantage is not enough to understand all of the effects of electoral manipulation in the United States specifically. In the disadvantaged case, I see a clear causal mediation effect but less of a total effect. This implies that only those who experienced increased levels of anger in the treated disadvantaged group engage more. While this confirms Hypothesis 4.3 and 4.5; mediation analysis also shows the extent to which I miss out when I only examine direct effects. Put simply, if we only consider the direct effect (e.g. disregard the mediating effect of emotions), then I see a pattern of demobilization that has no bearing on neutralizing the effects of suppressive institutions. So in order to explore why mediation and my new theoretical framework are important, I break up the advantaged and disadvantaged groups to look for heterogeneous treatment effects among Republicans and Democrats.

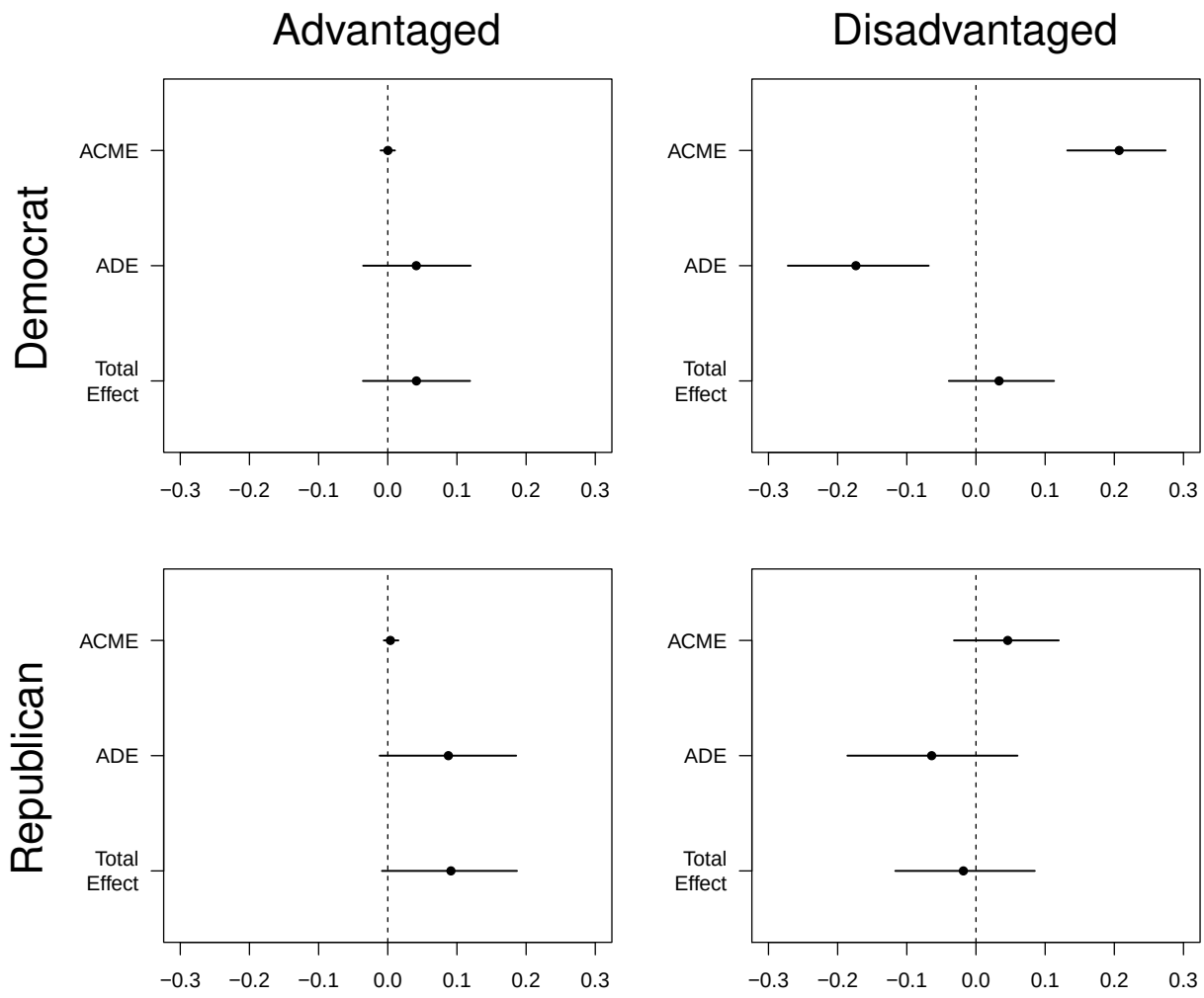


Figure 4.14: Mediation Effects of Anger Conditioned on Party and Institutional Advantage

I find that disadvantaged Democrats mirror the disadvantaged group above: there is a significant and strong causal mediation that is offset by a direct effect, indicating that increased costs to participation generally demobilize Democrats but those who exhibit increased anger also increase their participation. Likewise, advantaged Republicans mirror the advantaged group above. I see that emotion is doing little to increase disadvantaged Republican participation. In fact, enthusiasm seems to be demobilizing any partisan who is in the advantaged space. This is something unexpected in the political psychology literature and something I test for below.

That treated disadvantaged Republicans behave differently from treated disadvantaged Democrats stems from at least two reasons. First, gerrymandering is an issue that is much more salient among Democrats. In the current political climate, Democratic respondents might be more likely to engage because they know that, in reality, gerrymandering is more of a threat to their party. For example, whereas at least 6 other states have called into question Republican gerrymandering

in the last redistricting effort, only in New York are Democrats found to be receiving any significant advantage (Politico N.d.). This means that, at least in several states where gerrymandering seems to be more salient, Democrats are more likely to hear about contested maps.

Second and related, even though both parties participate in gerrymandering, the effects of manipulated lines have historically disproportionately disadvantaged Democrats more than Republicans (Kirschenbaum and Li 2021*b*). Republican-favoring gerrymanders arise both out of the natural process of geographic sorting that favors Republicans (Chen and Rodden 2013) from intentional efforts on the part of Republican map-makers to press existing advantages (Chen and Cottrell 2016).

While heterogeneous treatment effects among Republicans yield no pertinent differences, these same effects among Democrats are profound and confirm Hypothesis 4.2: When treated Democrats are advantaged, they behave very similarly to advantaged Republicans (see Figure 4.14). This implies that *anger motivates participation only when a voter is disadvantaged*. However, when members of that same group find newfound advantage through gerrymandering they do not participate more.

A logical next test is to examine the mediating effects on advantaged respondents' propensity to disengage. I present these results below in Figure 4.15. Note that among disadvantaged respondents, enthusiasm did not mediate increased participation. This is not surprising given the results on anger in this study. It is clear that anger is mobilizing this group. However, among the advantaged group, I find a different story. Among advantaged respondents, those treated were more likely to experience enthusiasm and enthusiasm is key in demobilizing this group. In the context of voting, these people see no point in assuming the cost of engaging; rather they are happy to stay home. That enthusiasm is not mediating increased participation is something largely unexpected in political psychology and a point for future inquiry.

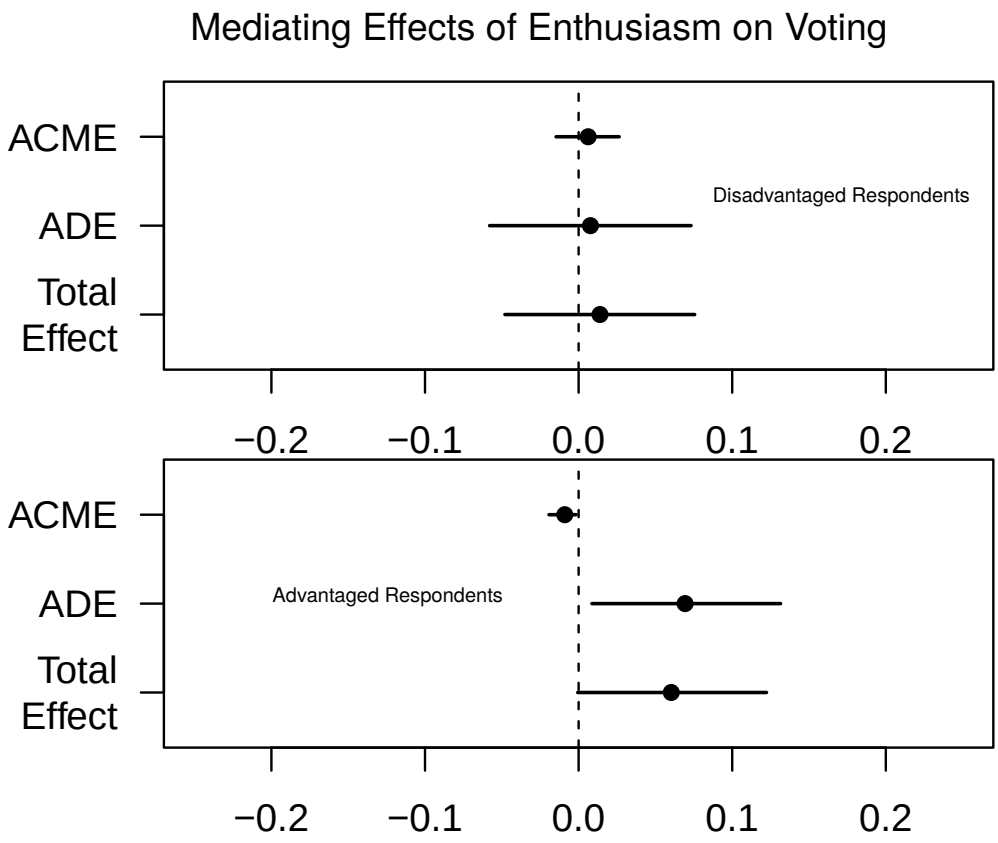


Figure 4.15: Mediating Effect of Enthusiasm on Intention to Vote Among Advantaged and Disadvantaged Respondents. Mediation effects of enthusiasm on voting. Note that advantaged respondents are on the bottom while disadvantaged respondents are on the top.

Test 2 sheds more light on my initial findings. Recall, that anger linearly boosts engagement among those who are treated and disadvantaged. In the case of gerrymandering, however, this counter-mobilization is not enough to neutralize the electoral suppression (e.g. have a total effect). These new findings indicate that any chance at potentially neutralizing the effects of suppression in the gerrymandering case relies on the advantaged respondent. As illustrated in Figures 4.14 and 4.15, advantaged respondents are happy to stay home.

4.5 Conclusion: Manipulation, Winning, and Implications for Future Research

While institutions matter, they do not tell the entire story of citizen engagement with manipulated institutions. I find that increasing the costs of voting, (or reducing p), does not have the expected effect of reducing turnout that Downs initially predicts. One reason is that learning of the policy that caused these changes in p is itself mobilizing. In both tests, treated individuals in the disadvantaged space were more prone to an angry reaction, and that anger mediated an increase in the likelihood of them voting.

Anger in particular is a key factor in mobilizing disadvantaged voters. This finding is important for two reasons. First, it adds additional evidence to what some political psychologists have already shown: that anger mobilizes (Vasilopoulos et al. 2019; Vasilopoulos 2018; Valentino and Neuner 2017). In this particular study, I compare across institutional contexts and find that only certain individuals experience these emotions and choose to engage. In both contexts, advantaged populations experienced no anger and participated less. Second, increasing costs (or in this case manipulating p) does not always work the way incumbents might intend. This is particularly the case when people find out the manipulation was an effort to demobilize them.

Considering gerrymandering as a tool for manipulation emphasizes the importance of emotions. I illustrate that emotions are endogenous to institutional context and spur action or inaction in response to suppressive institutions. Those who are being suppressed are more likely to engage when they experience anger as a response to learning about manipulated institutions. Notably, those who experience emotions opposite of anger (e.g. enthusiasm) do not participate more. Perhaps the biggest takeaway from this set of studies is the silence and inaction of the politically advantaged. This group learns that they are politically advantaged at the expense of others being suppressed. They exhibit enthusiasm, to some extent, and actually demobilize. In other words, if manipulation helps your group win, then increasing political engagement seems unnecessary. This is something unexpected in much of the political psychology literature on emotions. Gerrymandering illustrates that winning matters even at the expense of representative democracy; and if you're on the winning side, you need not take on the extra cost of mobilizing. In the REDMAP and Maryland stories told at the beginning of this chapter, strategic mapmakers justified manipulating institutions to make them less democratic if it meant that their respective parties won. In this chapter, I have tested if voters who bear the direct burden of gerrymandering might feel the same way. My two experiments illustrate that indeed they do. Democrats were mobilized out of anger when gerrymandering was directly targeting and diluting their voting power; however, anger became enthusiasm when Democratic

respondents learned that gerrymandering was helping their group to win more. In the former context, democratic respondents mobilized; while in the latter, they demobilized. A key takeaway from this study is that partisanship coupled with the persistent need for winning seem to be driving forces in an American democratic fray. In other words: "There are no redistricting angels. The structure changes—or nothing does (Daley 2017, last paragraph)."

Regardless this study has shed new light on how undemocratic contexts shift which groups feel which emotions and which groups choose to participate or not. However, there is still much to be learned about how and why different groups engage (or abstain from engaging) with suppressive institutions. I outline a few below.

First, understanding the motivating effect of anger is important to better understand how to engage more groups in politics. These findings indicate that the angriest voters engage; however, if the manipulation is strong enough, anger is not enough to remedy undemocratic effects. Future studies must consider the effects of anger and also delve deeper into emotions like fear and shame. In this study, I do not consider the heterogeneity within the disadvantaged group. For example, those within the disadvantaged group vary in key variables like race, ethnicity, and economic status; where many have been disadvantaged by more than just gerrymandering. Future inquiry should consider the role that different emotions play in this group's variation in participation. Important variables like external and internal efficacy might also be telling indicators of why certain individuals abstain while others engage. This is particularly pertinent in times when advantaged and disadvantaged groups become more and more polarized and institutions become better at suppressing.

Second, in both tests, I see a small mediation effect of fear. This is counter-theoretical to the hypotheses I preregistered and present in this dissertation. However, these findings might be an important point of departure from existing narratives of fear. A new line of inquire might turn to an examination of fear's mobilizing power in countries experiencing democratic backsliding. I probe this potential research avenue in my next chapter where I employ a very similar survey design but this time I ask respondents to write a few sentences detailing why they feel certain emotions. In the case of the next survey experiment, I find that most people who are fearful described being fearful and angry or fearful about the future of democracy and elections in America. Future studies about behavior and gerrymandering should thus delve into this notion that fear mobilizes when democratic norms begin to fray.

Additionally, strategic attempts to amplify some groups over others are not novel nor uniquely American. Manipulated institutions as well as citizen mobilization against these institutions exist in democratic and autocratic regimes and everything in between. While many compelling and fruitful works have explored citizen mobilization and more often demobilization in these contexts, few

have considered the mediating effect that emotions play in countries other than the United States. Anger in particular is an unexplored emotion in explaining why some people turn out where they otherwise might not have in countries where autocracy is more institutionalized.

Fourth and finally, gerrymandering offers a unique setting to test variance in engagement among advantaged and disadvantaged groups. However, as comparative politics has shown, the toolkit for institutional manipulation is deeper than just strategic mapmaking. Future inquiries should focus on other tools of manipulation. Examples might include specific laws that have appeared on the books in many state legislatures as a response to Trump's loss in 2020. For example, many have increased barriers to voter registration; there have been widespread decreases in polling places that result in long lines; there is a resurgence of voter i.d. laws in many states; there was an increase in mail-in ballots in 2020 that resulted in a response by many states to outlaw them. The list is long. I turn to one example in the next chapter.

4.6 Appendix

4.6.1 Ethical Statement on Working with Human Subjects

This study, HUM00200586, was deemed exempt approved by my university's Institutional Review Board in October 2021. The survey instruments that I use in this project are designed to minimize any negative outcomes for subjects. While it may be disturbing for some to learn about unfair and undemocratic institutions or outcomes, I make sure that I describe institutional manipulations in ways that have been scientifically confirmed. This is an effort to combat any misconceptions surrounding election malfeasance. All participants in the surveys offered expressed consent to be studied, were over the age of 18 and were debriefed at the end of the survey. The only portion of the project that directly involves human subjects was approved by my university's Institutional Review Board.

4.6.2 Pre-registration

This study was pre-registered at Open Science Framework as: Angry mobilization and institutional manipulation: Political behavior and gerrymandering in the United States on June 3, 2022.

4.6.3 OLS results of ATE conditioned on party

The models in Figure 1 (below) treats Democrats as the baseline category. I Model 1 find that 0.84 of untreated Democrats indicated that they would vote. That proportion increased to 0.91 among treated Democrats. The standard error suggests a p = 0.025 that there is actually no difference between treated and untreated Democrats. The model indicates that 0.81 of untreated Republicans said that they would vote. The standard error associated with that estimate indicates there is a p = 0.45 probability that the difference betwen untreated Democrats and untreated Republicans is statistically significant. Finally, the model indicates that treated Republicans are roughly 4% less likely to vote compared to their untreated Republican counterparts and about 7.1% less likely to vote compared to untreated. These results are also presented in Figure 6. In addition to confirming my first two hypotheses, I find evidence of Aytac and Stokes' prediction that there should be a direct effect of increased institutional costs on participation, at least in terms of voting. In this case, higher costs leads to increased turnout.

	Model 1 Vote	Model 2 Click	Model 3 Donate
(Intercept)	0.84^{***}	0.17^{***}	0.25^{***}
	(0.02)	(0.02)	(0.03)
Treatment	0.07^{*}	0.04	-0.00
	(0.03)	(0.03)	(0.04)
Republican	-0.03	0.08	-0.10^{**}
	(0.04)	(0.04)	(0.04)
Treatment×Republican	-0.04	-0.09	-0.03
	(0.05)	(0.06)	(0.05)
R^2	0.01	0.00	0.02
Adj. R^2	0.01	0.00	0.02
N	879	877	879

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

Table 4.6: OLS estimates of the relationship between treatment and partisanship, and frequency of participation outcome variables "Vote", "Donate" and "Click". I take Democratic respondents as the baseline partisan category. I provide standard errors in parentheses.

4.6.4 Mediating Effects of Anger on Institutions

	Advantaged			Disadvantaged		
	ACME (p-value)	ADE (p-value)	Total Effect (p-value)	ACME (p-value)	ADE (p-value)	Total Effect (p-value)
Vote	0.003 (0.274)	0.057 (0.068)	0.060 (0.052)	0.136 (0.000)	-0.122 (0.003)	0.014 (0.662)
Clicks	0.003 (0.279)	-0.036 (0.256)	-0.033 (0.301)	-0.002 (0.949)	-0.005 (0.905)	-0.007 (0.829)
Donate	-0.005 (0.019)	0.023 (0.305)	0.018 (0.425)	0.032 (0.115)	0.006 (0.843)	0.038 (0.118)
Volunteer	-0.002 (0.089)	0.008 (0.433)	0.006 (0.553)	0.014 (0.116)	-0.018 (0.141)	-0.004 (0.680)

Table 4.7: Average causal mediation effects (ACME) of anger, average direct effects (ADE) institutions, and total effects on various modes of political participation.

4.6.5 Mediating Effects of Anger on Institutions Conditioned on Party

	Advantaged			Disadvantaged		
	ACME (p-value)	ADE (p-value)	Total Effect (p-value)	ACME (p-value)	ADE (p-value)	Total Effect (p-value)
Democrat	0.000 (0.988)	0.041 (0.316)	0.041 (0.312)	0.207 (0.000)	-0.174 (0.002)	0.033 (0.426)
Republican	0.004 (0.476)	0.088 (0.086)	0.091 (0.080)	0.004 (0.476)	0.088 (0.086)	0.091 (0.080)

Table 4.8: Partisan differences in average causal mediation effects (ACME) of anger, average direct effects (ADE) institutions, and total effects on expressed intention to vote.

4.6.6 Example of one of four in-survey participation opportunities

Figure 4.16: Example of one of five in-survey participation opportunities, as presented in the survey

4.6.7 Justification for the Bootstrap Mediation Method

Tingey and his co-authors emphasize the importance of “decomposing" average treatment effects into direct and indirect “mediation" effects to better understand the role of a causal mechanism (2017, 768-77). Specifically, they call for a potential outcomes framework that makes no specific reference to a statistical model. Here I review their method and describe how it works in the context of my theory, design, and data.

Let T represent one of the two treatments (Republican or Democrat gerrymandering vignette) or control (party-benign statement about redistricting) and (t) represent the treatment/control status of an individual respondent where 1 corresponds with a treated individual and 0 corresponds with an untreated (control) individual. So $Yi(1)$ corresponds to a potential outcome from a participant that has been shown one of the treatment vignettes and outcome $Y_i(0)$ indicates that participant was exposed to the control vignette. The causal effect of the treatments (or average treatment effect) is simply the difference between these two potential outcomes and because the treatment and control Ire randomized, the difference in means can be considered an unbiased estimator for the average treatment effect. Equation 2 below represents this causal relationship. I reported these findings in Figure 7.

$$ATE = Y_i(1) - Y_i(0) \tag{4.1}$$

However, when I consider the role of emotion, I must look further than the treatment effects and consider a potential mediating variable. Denote this mediation variable as M. Recall that I hypothesize that anger is an important component of the causal story between the explained treatment (T) (Republican or Democrat gerrymandering vignette) and outcome (Y) (level of individual participation. When I observe $M_i(1)$ I observe the potential value of anger for a participant that has been treated; and Mi(0)represents the potential value of anger of a participant who was untreated (presented with the control vignette). So Y_i now a function of T_i and $M_i(Ti)$. The total unit treatment effect is represented in Equation 3 which is a difference in means between the treated and untreated groups including the mediating mechanism.

$$Y_i(1, M_i(1)) - Y_i(0, M_i(0)) \tag{4.2}$$

Here, if the goal is causal inference involving a mediating variable, then it is also necessary to rule out other possible mediating mechanisms. For example, while emotion might be driving a lot

of these results, how do I know that other mechanisms like beliefs or attitudes about democracy are not having some effect? To preempt this potential criticism, Tingy et. al. call for a process that allows us to observe a counterfactual possibility by fixing the effects of the treatment and changing only the effect of the mediator (2017, 768). Specifically, it is necessary to fix the effects of whether or not a respondent was exposed to the treatments(control) vignette then I can look at the indirect role that anger plays in respondent participation. To calculate the indirect effects of a mediating variable I take a difference in means between the treated and untreated groups. Equation 5 represents the average causal mediating effects of the treatment on the outcome variable funneled through the mediating variable (770).

$$Y_i(t, M(1)) - Y_i(t, M_i(0)) \tag{4.3}$$

The first term in Equation 4 represents the observed participation if a respondent sees the Republican or Democrat gerrymandering vignettes while the second term represents a counterfactual where a respondent views the same vignette but their level of anger is fixed at the level I would observe under the treatment condition. Simply put, this equation holds the direct effect of viewing the Republican or Democrat gerrymandering vignettes constant and allows us to observe the change in anger that would otherwise be induced by the treatment.

4.6.8 Mediation analysis of anger on all outcome variables in Study One

		Republicans		Democrats	
		Coefficient	p-value	Coefficient	p-value
Plan to Vote	ACME	0.00	0.73	0.07	<0.001
	ADE	0.02	0.55	0.00	1.00
	Total Effect	0.02	0.55	0.07	0.03
	N	358		521	
At Least One Click	ACME	0.00	0.47	0.03	0.09
	ADE	-0.05	0.23	0.00	0.97
	Total Effect	-0.06	0.20	0.04	0.31
	N	358		519	
Donate	ACME	0.00	0.45	0.08	0.002
	ADE	-0.03	0.38	-0.08	0.07
	Total Effect	-0.03	0.43	0.00	0.99
	N	358		521	

Table 4.9: Estimates of the average causal mediation effect of anger, average direct effect of the treatment, and total effect of both anger and the treatment on respondents plan to vote, engagement with online resources focused on redistricting, and willingness to donate their MTurk reward to a nonpartisan organization focused on ending gerrymandering. Estimates are based on OLS estimates of a linear probability model.

4.6.9 Anger Mediation on all outcome variables in Study Two

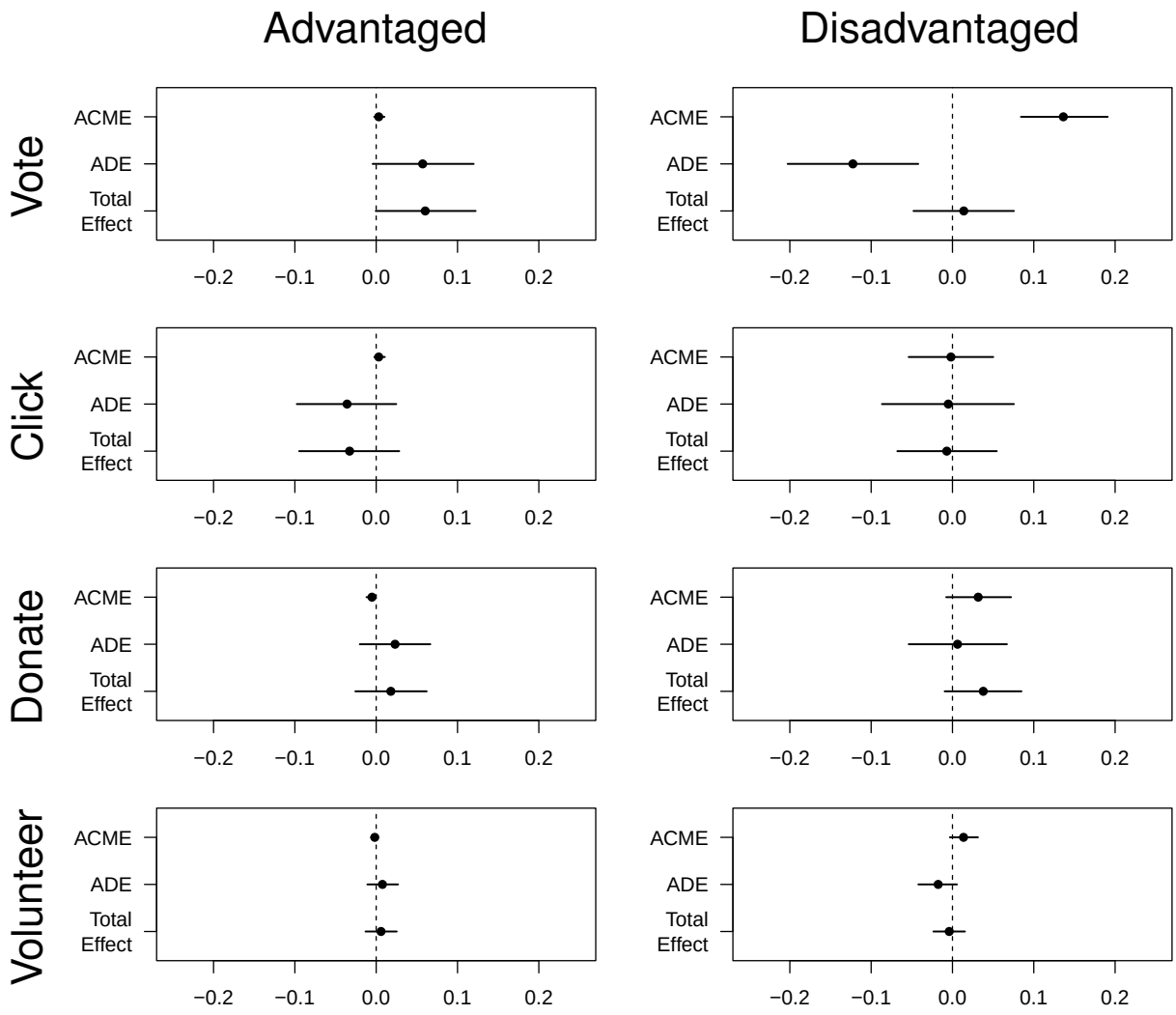


Figure 4.17: Study Two: Mediation of anger on participation measured 4 ways

4.6.10 Sensitivity Checks for Anger Mediation on Vote Outcome Variable in Test One

Interpreting rho is difficult so we must consider unobserved confounders. Aside from my information treatment I cannot think of a variable that effects both an individual's propensity to participate and the level of anger they experience. Comparatively, this study shows relatively modest treatment effects. If I were to induce higher levels of anger, I would expect the S curve to shift up and increase in robustness.

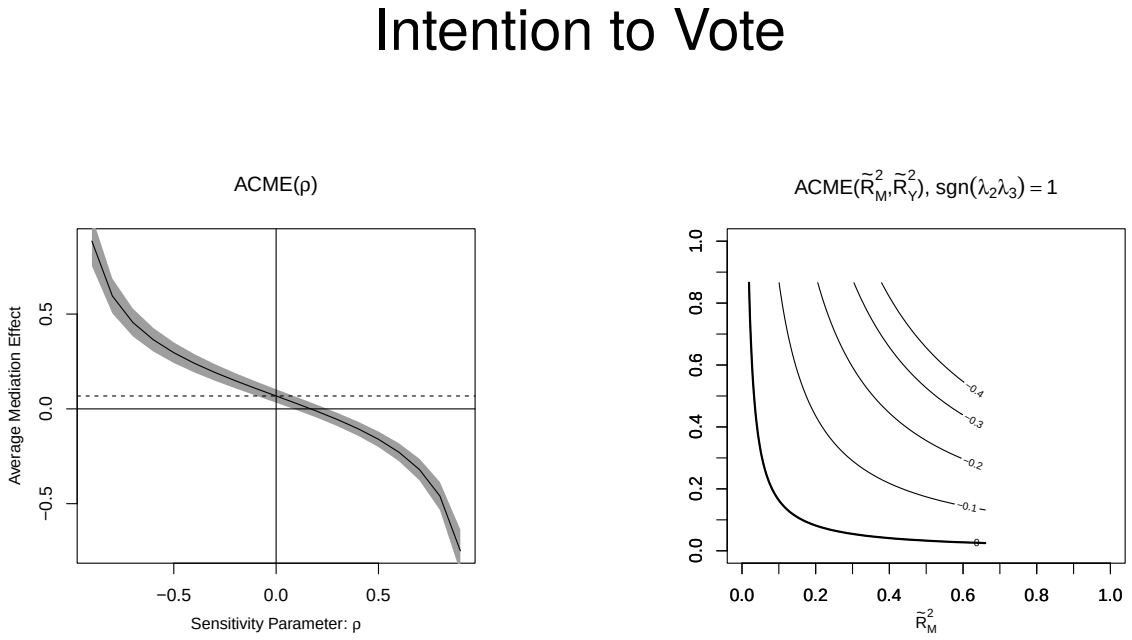


Figure 4.18: Two alternative formulations of Imai et al.'s proposed sensitivity analysis (2011). The outcome for both visualizations is whether respondents clicked "yes" on the intention to vote question. On the left we see the true ACME plotted against the sensitivity parameter ρ, which measures the correlation between the error terms in the mediator (anger) and outcome regression models. The dashed line represents the estimated ACME when we make the sequential ignorability assumption. The shaded areas are 95% confidence intervals for the mediation effects of anger at each value or ρ. On the right, the curves represent the true ACME plotted as a function of the proportion of the total mediator variance (horizontal axis) and the total outcome variance (vertical axis) that are explained by an unobserved confounder (Imai et all, 2011. 777).

CHAPTER 5

Poll Burden and the Manipulation of C: Two Additional Empirical Tests

5.1 Introduction

In 2018, voters in Georgia went to the polls to choose a new governor in a hotly contested election with no clear frontrunner. As the nation watched, Georgians grappled with a decision that would have repercussions for their state's and the country's electoral politics for years to come. When Brian Kemp the Republican candidate (and former Secretary of State who was then in charge of Georgia's elections) won, Stacey Abrams, the Democratic candidate hesitantly accepted defeat while simultaneously accusing Kemp's side of electoral suppression: "I will not concede because the erosion of our democracy is not right" (Galloway 2018). Following the election, Abrams took her case to court in what would become the marquee case testing federal oversight of elections since the Supreme Court had gutted the Voting Rights Act in 2013 (Greenbaum, Martinson and Gill 2013; Hardy 2019). The suit cited multiple alleged efforts to suppress turnout including voter roll purging in addition to insufficient ballot boxes and polling places specifically in majority Black districts. While the majority of allegations were thrown out, the intensity of Georgia's 2018 gubernatorial election set the tone for the 2020 U.S. Senate race.

In the lead-up to the 2020 election, Democrats alleged that Republicans had engaged in actions to centralize or reduce the number of polling locations in predominantly Democratic areas. Under the Voting Rights Act, efforts to change the location or number of polling places was subject to *preclearance*, the requirement for certain jurisdictions with a history of discriminatory voting practices to obtain approval from the federal government before making any changes to their voting laws or procedures. Since the *Shelby* decision in 2013 declared preclearance unconstitutional, the number of polling locations in Georgia has declined by at least 10%, with many of the closures happening in Black-dominated districts (Fowler 2020).

During her run in 2018, Abrams and her allies registered nearly 800,000 new voters, complementing a larger trend of increased voter registrations in the state since 2013. Younger, nonwhite voters, from Atlanta's nine metro counties made up a large part of this new voter population.[1] As a result, many of Georgia's newly registered voters experienced long wait times to cast a ballot extending, in some areas, beyond 3 hours in 2013 and even longer in 2020. So when the 2020 Senate race resulted in a runoff that December, some voters were again faced with the probability of having to wait in long lines to vote.

Similar to the gerrymandering in the previous chapter, polling place reductions can be another tactic to politically disadvantage some populations. Whereas gerrymandering is an example of strategically manipulating the p term, electoral manipulators can also focus on manipulating the overall costs of participation by making voting more burdensome for certain populations. Unlike gerrymandering, closing a polling place is a simple bureaucratic matter. And since the *Shelby* decision, decisions about polling place consolidation occur with little transparency or oversight. In this case, the manipulator assumes that longer lines are a tangible deterrent to participation because it increases the actual opportunity cost of casting a ballot. In Downsian terms, the higher the price, the less likely the person will be to engage (Downs 1957). This study presents a puzzle that even though C has been raised by increased poll burden, this hasn't always corresponded to lower turnout in Georgia. This chapter provides an explanation to this puzzle.

In what follows, I apply my theory of institutional manipulation and emotional participation to the 2020 Georgia Senate election and runoff. I first explain further the story of how decreased polling places can be a tool for electoral manipulation. I follow this with a discussion of my theoretical expectations. Similar to the gerrymandering case, I expect anger to be a driving force for the disadvantaged to engage. I then present two complementary empirical tests. The first is a difference-in-difference design based on observational voting returns and polling place data from the 2020 Senatorial election and runoff. With this case, I specifically test if disadvantaged voters engage more than advantaged voters when they learn that their participation is more costly. Second, I present a novel survey experiment based on a 2×3 factorial design. I randomly assign participants to one of three conditions: a treatment where Democrats are passing legislation to make lines longer for Republicans at the polls, a treatment where Republicans are passing legislation to make lines longer for Democrats at the polls, and a politically-benign control. I find that those who faced long lines in the first election were more likely to turnout in the runoff election just weeks later. That is, individuals who faced real increases in material costs of turning out in the general election in

[1]It is reported that in these counties four out of five new voters were nonwhite, according to the Georgia secretary of state's office (See: Fowler 2020).

November, were more likely to turnout again despite these real costs. I also find through a survey experiment that one plausible reason for this increase in turnout despite higher costs is because of an emotional reaction to the electoral suppression that increased poll burden poses.

5.2 Polling Places and Long Lines as Tools of Manipulation

Electoral manipulation is the intentional act of preventing eligible citizens from voting or skewing the results of their participation in ways that affect the election's outcome. In the gerrymandering case, strategic leaders manipulated institutions in ways that often go unnoticed by the public. Indeed, scholarship and the courts alike still disagree on how to detect a gerrymander (Best et al. 2018; Bernstein and Duchin 2017; Chen and Rodden 2015; Grofman 2019; Woodson and Parker 2021). Similar to gerrymandering, voter suppression is an item on the "menu of manipulation" (Schedler 2002). However, typical voter suppression is usually easier to spot and define than gerrymandering. In the lead-up to election day, voter suppression may occur through new or changed laws and bureaucratic measures that make voting more burdensome. This takes the form of voter ID laws (Hajnal, Lajevardi and Nielson 2017), misinformation campaigns (Broockman and Kalla 2022; Green et al. 2022), challenges to voter registration processes (Rosenstone and Wolfinger 1978), roll purges, intimidation, harassment or even violence against voters on election day (Frantz 2018; Young 2016), and the focus of this chapter, poll closures or the reduction in polling places (Cantoni 2020; Shepherd et al. 2021). On election day, voter suppression can manifest in long lines at polling places, malfunctioning voting machines, intimidated voters, and confusion over a state's respective registration and voter ID requirements. Because these laws increase the time or resources it takes to vote, they can be used as tools of manipulation to target and undermine a certain group's participation in the election.

One way to suppress turnout is through what Schedler calls "practical suffrage restrictions" that are "universal in form but systematically discriminatory in practice" (2002, 39). In the United States, there has been a recent increase in state-level legislation aimed at the process of voting and the administration of elections. In particular, Republican-led state legislatures justify increased restrictions in the name of electoral integrity and this trend has grown in recent years. For example, since the 2020 presidential election, at least 23 states passed laws that make access to voting more difficult for certain minority voting blocs (Harte and Trainor N.d.). Included in this "tidal wave of restrictive voting legislation" is the overall reduction of polling places despite a growing number of new voter registrations (Brennan 2022).

The decision of how to draw polling precincts and where to locate a polling place is the result

of political choices. Just like gerrymandering, these decisions open up opportunities for strategic institutional manipulation. There is an evolving literature that focuses on election-day discrimination in the form of manipulating the ratio of polling places to registered voters (see e.g. Alvarez, Hall and Llewellyn 2008; Ledyard 1984; Stewart III and Ansolabehere 2013; Amos, Smith and Ste. Claire 2017; Brady and McNulty 2011; Chen et al. 2022; Clinton et al. 2021; Cottrell, Herron and Smith 2021; Yoder 2018). One theme of this research focuses on the limits of voting infrastructure and its effects on voting turnout. Voting infrastructure refers to the efficiency of voters' experiences on election day including some of the following: How big is the polling place? Is it hard to find? Is it big enough to accommodate voters? How prepared and helpful are the poll workers? Is the ballot machine confusing? How accessible is the polling place to disabled voters? While infrastructure directly affects the cost voters bear on election day, increasing the number of voters assigned to a particular polling place (also known as poll burden) will directly decrease efficiency even in the most well-equipped voting infrastructure. In the analysis that follows, I consider the implications of polling place composition. I am particularly concerned with the effects of increasing the number of voters assigned to specific precincts.

Poll burden is directly related to the opportunity cost of political participation. Closures can affect a person's decision to turn out in three distinct ways. First, when there are fewer places to vote, certain groups must travel further than others to participate. In fact, increases in distance to polling places can oftentimes lead to a reduction in overall turnout (Brady and McNulty 2011; Cantoni 2020).

Second, closing polls between elections can engender confusion on election day. For instance, changes or consolidations in polling places have been shown to cause voter confusion, compelling many to scrap the idea of voting altogether (Alvarez et al. 2004; Curiel and Clark 2021).

Third, fewer polling places translate directly into an increase in the time a voter must wait in line to cast their ballot. This time might be just a matter of seconds or it could be a more burdensome matter of hours. For the latter, increased wait times might have downstream effects on turnout in subsequent elections: the longer the wait in one election, the less likely that voters will turn out again in the next (Pettigrew 2021).

In sum, reducing the number of polling locations (an increasing poll burden) represents a sort of voting tax that can be unequally distributed across the voting population (Cottrell, Herron and Smith 2021, 110). In this sense, manipulating poll burden can be a tactic of voter suppression if it systematically targets groups or blocs of voters. A 2016 nationwide study of polling place dynamics found that nonwhite voters were more likely to face longer wait times compared to their white counterparts (Stein et al. 2020). This echoes a growing consensus that voting wait

times disproportionately affect minority voters.[2] Thus, understanding the impact of poll burden on historically disenfranchised groups sheds light on why this form of electoral manipulation may be appealing to a strategic incumbent.

5.2.1 The Effects of Poll Burden on the Disenfranchised

It has long been understood that voter turnout in the United States is asymmetrical and oftentimes determined by race or economic status (Wolfinger and Rosenstone 1980; Leighley and Nagler 1992). Political inequality stemming from the gap between who actually participates and who can participate is part of a broad literature in American politics (Downs et al. 1957; Campbell et al. 1960; Gerber, Green and Larimer 2008; Fraga 2018) as well as comparative politics (Acemoglu et al. 2007; Ichino and Nathan 2013*a*; Kasara and Suryanarayan 2015). Political inequality manifested through a turnout gap makes it difficult for representative democracy to function. According to Schattschneider (1960), the exclusion of a large portion of citizens from political involvement is detrimental to the democratic process. This turnout gap distorts politics and presents an opportunity for authoritarian policies to press extant political asymmetries. In other words, would-be autocrats have an interest in widening the turnout gap by increasing the costs of turnout for groups that already face challenges to political participation. One way to do this is by manipulating poll burden on election day. Poll burden affects historically disenfranchised groups in three specific ways.

First, poll burden can perpetuate distrust in the democratic system. Longer lines affect different groups differently. For one, long lines can discourage certain individuals from voting (Stewart III and Ansolabehere 2013). This is particularly true among groups who typically rank low in rates of political efficacy and lack a general trust in the political system. For example, studies have found that minority voters who possess lower rates of efficacy are less likely to turn out in an election (Barreto et al. 2018). Black voters, for example, will be less likely to engage in places where suppressive electoral tactics are historically commonplace.[3] This “turnout gap" between Black and non-Black voters is the product of the legacy of Jim Crow laws that specifically targeted Black political participation (Fraga 2018; Sen, Blackwell and Acharya 2018). Suppressive institutions like grandfather clauses and poll taxes as well as a complete lack of legal accountability in response to electoral violence pockmarked Southern politics for decades following reconstruction. Even when

[2]The Cooperative Congressional Election Study (CCES) finds that Black voters report facing significantly longer lines than white voters, 2016-2020: https://cces.gov.harvard.edu/ Additionally, according to a report by the Leadership Conference on Civil and Human Rights, a total of 1,688 polling sites were shut down between 2012 and 2018 in the 13 states previously subject to the VRA’s pre-clearance rule (Jones 2022*b*).

[3]For example, Baretto et. al. found that Black voters in Georgia, Pennsylvania, and Nevada (all states who have increased voting restrictions in the last decade) are less likely to vote if they exhibit low rates of political efficacy perceptions.

Selma's "Bloody Sunday" increased national attention to the plight of Black voters and forced executive action, many Black citizens remained resigned and skeptical. Reverend Martin Luther King Jr expressed this collective resignation: "I must confess that that dream that I had that day has in many points turned into a nightmare..." (Savali 2017).

Second, long lines can perpetuate a person's perception of political efficacy, especially among voters who have experienced additional forms of political suppression. The logic is simple. If Voter A is a Black voter in Georgia and ranks low in efficacy perceptions but still manages to turn out on election day to very long lines at their polling place, they might feel further discouraged from voting because their distrust is now matched by an unexpected increase in real economic burden of participating.[4] For example, voters who rank high in external efficacy (trusting that the system works for your group) were more likely to trust that their individual votes counted and that the system works (Bowler et al. 2015). Longer lines can skew this relationship between external efficacy and trust in the system by dissuading votes from turning out altogether. For those that do participate despite long lines, they are more likely to experience skepticism that their votes are being counted fairly (Stewart III and Ansolabehere 2013).[5]

Third and finally, long lines represent a real and disproportionate economic cost on low-income and minority groups (Barreto, Nuno and Sanchez 2009). In 2012, one study reported that the monetary cost of voting in the United States $544.4 million with minority and women voters bearing higher than average monetary costs (Stewart III and Ansolabehere 2013, 4-5). Stacey Abrams calls long lines an actual "poll tax" because "someone has to risk an entire day's wage in order to cast a ballot when others can go in and out in 15 minutes...".[6] Simply put, longer lines make it harder for poorer voters to participate because it is more expensive for them. Ironically, in many cases, shorter lines are more likely to exist in places where voters can actually financially afford to wait longer.

With these three adverse effects of poll burden in mind, studies have shown that long lines in one election can lead to a decrease in turnout in the next election. For every additional hour, a voter waits in line, their likelihood of turning out in the next election decreases by at least one percentage point (Pettigrew 2021). So if we observe long lines among marginalized voters in certain districts in one election, we can assume that at least some of those voters will be less likely to turn

[4]The McCourtney Institute for Democracy "Mood of the Nation" 2021 poll found that long lines discourage minority and women voters at higher rates. see: https://democracy.psu.edu/wp-content/uploads/sites/14/2021/06/MOTN-APM-WaitingToVotefinal.pdf

[5]"68% of those who waited ten minutes or less to vote stated they were very confident their vote was counted as intended, compared to 47% of voters who waited over an hour" (page 3)

[6]see: https://www.msnbc.com/msnbc/watch/stacey-abrams-on-long-lines-to-vote-it-s-a-poll-tax-when-someone-has-to-risk-an-entire-day-s-wage-86941253741

out in the next election. In this respect, closing polling places not only suppresses turnout in one election but carries lasting consequences for turnout in the long term, especially among historically disenfranchised groups.

In sum, increased wait times at polling places result in higher implicit costs (greater distrust, efficacy, and despondency) and higher tangible costs (economic and otherwise) to minority and historically disenfranchised voters. With this in mind, strategic incumbents can target these groups and change electoral institutions (polling place locations) as a means to increase the cost of casting a ballot and undermine the collective participation of targeted groups. This, among other suppressive tactics, can insulate the incumbent from oppositional contestation and the threat of losing power. In the next section, I explain how poll burden, in this sense, is an appropriate test to apply to my theory.

5.2.2 Theoretical Predictions

Poll burden as a tool of electoral manipulation represents a good opportunity to test my theory for four primary reasons. First, poll burden creates advantaged and disadvantaged institutional spaces. Similar to district lines in the previous chapter, I argue that the poll burden can advantage some voters over others. In this context then, we can divide voters into two groups: those that are advantaged by poll burden (face shorter lines on election day) and those that are disadvantaged by poll burden (face longer lines on election day). Increasing the length of lines entering into a polling place imposes real costs, disadvantaging voters in that precinct. On the flip side, decreasing wait times also decreases costs, advantaging voters in other precincts. Stewart and Ansolabehere show that in 2012, less than 4 percent of voters bore nearly 40 percent of the total logged wait time to vote. Since then, and especially in Georgia, we can assume that disparity has increased. In this context, I assume that politically disadvantaged voters are those who wait in line longer than 30 minutes; while those who are advantaged waited less than 30 minutes.[7]

Second, poll burden is discernible and changes over time are observable. Georgia represents a state where the closure of polling places has been widespread. Since the 2013 *Shelby V. Holder* Supreme Court decision that put a stop to federal election preclearance, states like Georgia have seen a systematic decrease in polling locations. For example, despite record-setting voter registrations in the last 10 years, polling places in Georgia have decreased by ten percent, with the brunt of the closures happening in places like metro Atlanta, where there is a large Black and Democratic voting

[7]This figure is derived from a 2014 presidential commission that recommended 30 minutes as the maximum length of time that a voter should wait in line to vote. See: https://www.propublica.org/article/the-good-and-very-bad-reasons-for-long-lines-on-election-day

base. Consequently, the amount of voters assigned to each location in metro Atlanta specifically has increased by at least forty percent. A ProPublica investigation found that average wait times at polls are asymmetrically distributed across race: the average wait time for a voter in the 2020 Georgia election after 7 p.m. was 51 minutes in precincts that were predominantly Black, but only 6 minutes in precincts that were predominantly white (Fowler 2020).

Third, the poll burden in any district is exogenously given. That is, there is very little that a particular citizen might do (especially on election day) to change this ratio. Reducing the number of polls is typically a bureaucratic matter with little transparency and increasing poll burden in one place means that certain populations will experience increased challenges to participation on election day. Citizens have virtually no say in poll burden at their respective polling paces. Thus, I assume that a person's decision to vote is endogenous (or conditioned on) the respective poll burden in their respective precinct.

Finally, I argue that the longer a person waits in line, the more likely they are to experience emotions of agitation, frustration, and anger. Scholarly research on consumer services has shown that waiting in line negatively affects satisfaction and elicits emotions like anger (Bielen and Demoulin 2007; Hui, Thakor and Gill 1998; Pruyn and Smidts 1998). Additionally, some studies emphasize that when waiting time (or the perception of waiting time) is reduced, servicers receive positive evaluations (Buffa and Sarin N.d.; Voorhees et al. 2009). While voting is not a consumer service, it still tracks that when a person arrives to vote and confronts a long wait time, they are less likely to experience feelings of satisfaction. Moreover, for those who choose to stay and wait to vote, we can assume that the longer the wait the angrier (or at least more dissatisfied) they felt. With this in mind, we can assume that in precincts with heavy poll burdens, most voters who turned out in the Senate run-off did so despite facing long lines at the same polling place just three weeks prior.

According to my theory, and as exhibited in the gerrymandering example, emotions like anger can mobilize the disadvantaged. In the first two hypotheses, I consider the direct effect that higher institutional costs might have on voters in general. Namely, the direct relationship between higher costs and turnout.

I expect that even when faced with long lines at the polling place, those who are disadvantaged will participate more while those who are advantaged will participate less. With this in mind, Georgia's 2020 Senatorial election presents a unique opportunity in which to test these predictions empirically with election data through a difference-in-difference design. Because poll burden in Georgia at that time was greater in precincts with majority Black and Hispanic populations, voters in these precincts waited in longer lines than in white majority precincts in the first election. When

the election resulted in an additional runoff election three weeks later, voters in these precincts were faced with the decision to turn out despite a high likelihood of having to wait in line again. With this in mind, I present my first two hypotheses:

In the first two hypotheses, I consider the direct effect that higher institutional costs might have on voters in general. Namely, the direct relationship between higher costs and turnout. In both of these hypotheses, I hold everything but emotions constant. These first two hypotheses represent general statements about the conditioning effects of manipulated institutions on individual participation, without regard to emotions. Simply, those in the (dis)advantaged group will exhibit different behavior when they learn about the effect of poll burden on their group compared to those in their group who are not privy to this information.

> **Hypothesis 5.1** Ceteris paribus, if an individual is disadvantaged by poll burden, then they will be more likely to participate.

> **Hypothesis 5.2** Ceteris paribus, if an individual is advantaged by poll burden, then they will be less likely to participate.

It is important to note at this point that in the first two hypotheses I assume that when people turn out in the first election to long lines, they will realize that the costs of voting are high for them. This is not to say that they will automatically realize they are the targets of electoral suppression; rather they will realize that people in their polling place group are being compelled to spend a lot of time voting. Some may have points of comparison to other polling places, but all of these voters will recognize that voting is costly. Longer lines constitute a way to empirically test the effects of suppression on participation in this context.

The next set of hypotheses incorporates a treatment that poll burden is a tool of electoral suppression targeting specific groups. Here I explore the potential mediating effects of emotions. Namely that emotions are conditioned on the respective institutional advantage or disadvantage that a voter learns about. I aim to show that emotions are not simply a consequence of political (dis)advantage; rather some people will react with anger to threats that long lines pose to their political participation, and those who react with anger will be the ones who turn out at higher rates.

I observationally test the first two hypotheses with data from Georgia. However, because emotions must be measured in real-time and not through a post hoc observational study, I conduct a survey experiment to test how emotions interact with variations in institutional advantage resulting from manipulated poll burdens. The following hypotheses represent the empirical tests I present in the next section and my respective predictions.

Hypothesis 5.3 If an individual is disadvantaged by poll burden and they are aware of the disadvantage, then they will be more likely to feel anger and/or fear.

Hypothesis 5.4 If an individual is advantaged by poll burden and they are aware of the advantage, then they will be less likely to experience anger or fear and more likely to experience enthusiasm; ultimately they will not increase their participation.

Hypothesis 5.5 If a person experiences anger in response to becoming aware of the ways that poll burden disadvantages their group, then they will be more likely to participate compared to those who experienced no anger in the disadvantaged space.

Hypothesis 5.6 If a person experiences fear in response to becoming aware of the ways that poll burden disadvantages their group, then they will be less likely to participate compared to those who experienced no fear in the disadvantaged space.

In general, I predict that institutional advantage conditions what emotions a person will experience when told that they are being suppressed by institutional manipulation. Similar to the tests in the arguments made in the previous chapter, I argue that emotions need to be considered as a central *mediating* component of the participation calculus. In the next section, I implement an observational quasi-experimental design as a direct test of my first two hypotheses. I test the remaining hypotheses through a novel survey experiment, probing for emotions in the context of general poll burden. While the survey experiment includes a national sample and probably only includes a few Georgians who voted in the 2020 runoff, this test aims to shine some light on the emotions that can be elicited when voters are faced with this certain form of suppression.

5.3 Observed Suppression in Georgia: Testing Hypotheses 5.1 and 5.2

As an initial step in my analysis, I consider the effects of suppressive institutions on voter behavior in Georgia during the 2020 contest for two US Senate seats. Here, I exploit a feature of Georgia's election law. Rather than determine winners of congressional elections by plurality as in much of the United States, Georgia uses a runoff system. When no candidate receives 50% of the popular vote in the General election, a runoff election is held 4 weeks later. Thus, voters who experience different levels of suppression in the first round of voting must determine if they are willing to return to the polls a short period later.

The unit of analysis in the section will be the geographic area in which Georgia voters cast their votes. Some jurisdictions call my unit of interest a ward, and electoral district, and the Census Bureau calls them voter tabulation districts (VTD). In Georgia, like many states, they are called *precincts*. The delineation of precinct boundaries is a policy choice made by state and local authorities, and it carries significant political implications. The decision on how to divide areas into precincts can impact voter access, representation, and the overall electoral process. It is subject to debate, as different jurisdictions may adopt different criteria, such as population size, geographical features, or political considerations, to determine precinct boundaries. Consequently, this can lead to variations in the number of registered voters per precinct and potential differences in voter demographics across precincts, which in turn may have consequences for political representation and election outcomes.

In this section, I will estimate the effect of increased costs associated with voting on how many people decide to turn out. In what follows, I briefly describe the political context for the data I collected. I then explain how I code variables related to my analysis including turnout, poll burden, precinct racial composition, underlying partisan composition of precincts, and population density. Next, I describe my strategy for estimating the effect of poll burden on differences in turnout between the first round of voting in the November 2020 general election and the second round of voting in the January 2021 runoff. Finally, I present my findings and show that changes in poll burden are associated with changes in turnout with precincts that experience higher levels of poll burden showing higher changes in turnout when compared to precincts with lower levels of poll burden. I conclude the section with a discussion of the implications of my findings.

5.3.1 Background

In the 2020 elections, Georgia held two highly significant Senate races, one regular and one special election. Even in the middle of a competitive presidential election that made Georgia a battleground state, the Senate elections attracted national attention. In the build-up to the November vote, it was clear that races for the Georgia Senate seats would be crucial in determining the balance of power in the United States Senate. And both parties funneled massive amounts of resources into the race.

In the regular Senate election, Republican incumbent David Perdue sought reelection against Democratic challenger Jon Ossof. The special election was a “jungle primary" where candidates from all parties, including multiple candidates from the Democratic and Republican parties, competed on the same ballot. In the regular election, support for third-party candidates meant that neither Ossof (48%) nor Perdue (49.4%) garnered the majority necessary to claim victory in the initial round of voting. Likewise, in the special election, no candidate received a majority of the

votes, resulting in a runoff between the top two candidates, Democrat Raphael Warnock who received 32.9%, and Republican Kelly Loeffler who received 25.91% in the initial voting.

The heated election generated allegations of voter suppression, focused on tactics that targeted minority communities. In the run-up to the election, concerns were raised about the closure of polling locations, especially in predominantly minority communities (Fowler 2020). Critics argued that reducing the number of polling places could lead to longer travel distances, increased wait times, and potential voter disenfranchisement. On Election Day, reports emerged of long wait times at some polling locations in Georgia, particularly in densely populated areas. Critics contended that this disproportionately affected minority voters, who may face more significant challenges in taking time off work or arranging transportation to access polling places (Fowler 2020).

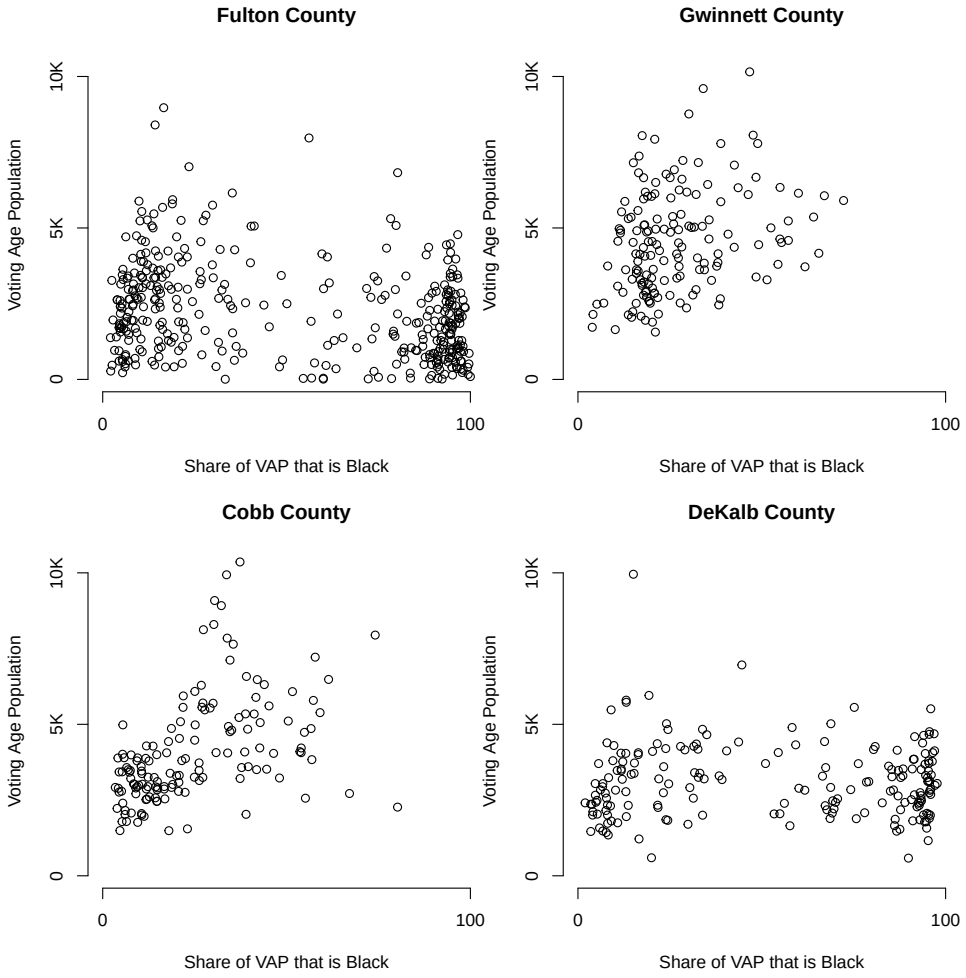


Figure 5.1: Comparison of Racial composition of Precincts and VAP in 3 Most Populous GA Counties

While it is not the focus of this chapter, it is notable that data seem to be consistent with anecdotal claims about precinct consolidation in the lead-up to the 2020 election. Figure 5.1 represents the relationship between the share of the voting age population that is Black (x-axis) and the size of the voting age population (y-axis) for precincts used in the 2020 general election and runoffs. Here, I focus on the four most populous counties in Georgia. Observe that patterns in the relationship between racial composition and precinct size vary considerably from county-to-county. The largest and fourth most populous counties, Fulton and DeKalb, show no easily discernible pattern between the relative size of the Black voting age population (BVAP) and the number of voters assigned to

a particular precinct. On the other hand, Gwinnett and Cobb County, the second and third most populous counties, show a positive relationship between the racial composition of a precinct's population and the number of voters that reside within the boundaries of a precinct.

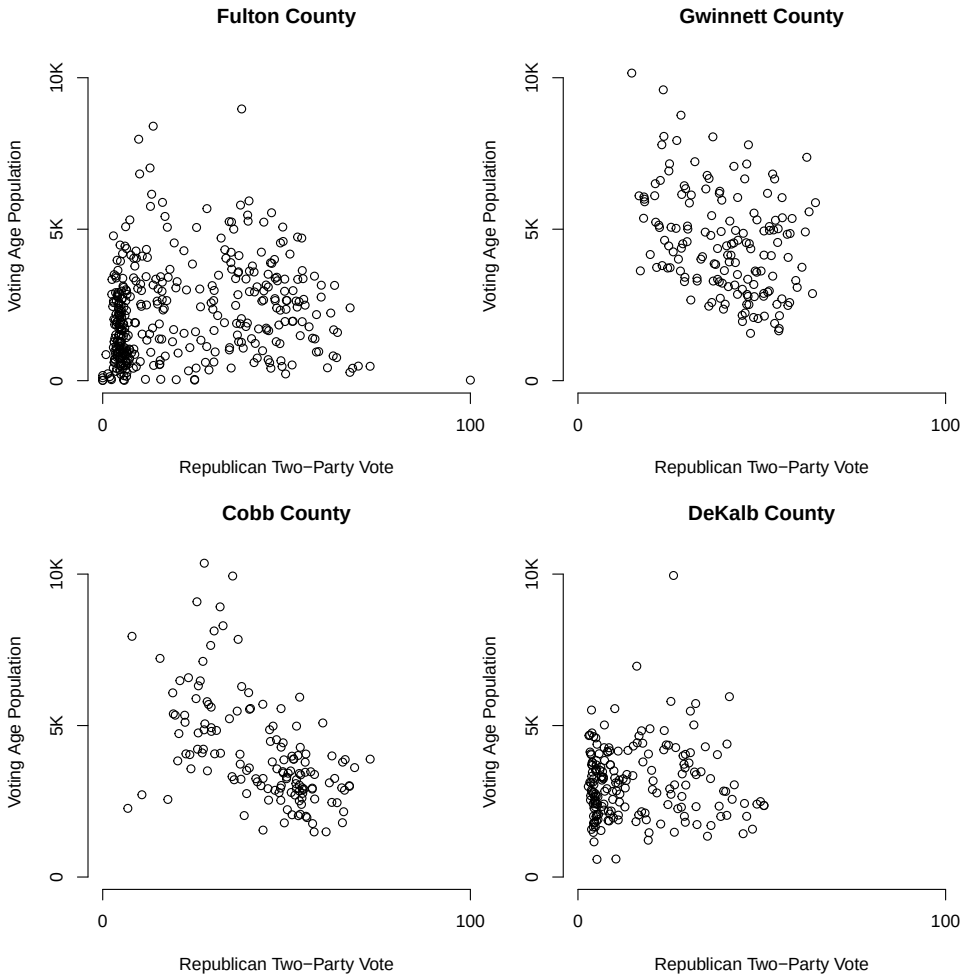


Figure 5.2: Comparison of Partisan Vote within Precincts and VAP in 3 most Populous GA Counties

Given the high but not perfect correlation between race and partisanship in Georgia, it is not surprising that patterns like those in Figure 5.1 are present when we replace race with partisanship (measured as Republican share of the two-party vote) on the x-axis. I present these patterns in Figure 5.2.

In the runoff Ossoff defeated Perdue and Warnock prevailed over Loeffler. Democrats prevailed in

both contests in spite of the alleged chicanery in precinct consolidation that critics of the Republican state leadership claimed was aimed at suppressing Democratic votes. The dual Democratic victory had major implications for national politics. The 2020 Senate races in Georgia played a pivotal role in shaping the political landscape and had significant implications for national politics, policy-making, and the balance of power in the United States Senate well past 2020.

5.3.2 Data and Model

I seek to understand whether differences in poll burden experienced by voters in the general election conditioned voters' decision to participate in the runoff a month later. Here, I do not observe individual voters' behavior, but I can observe how these variables relate at the precinct level. These data come in a time series, so I opt to estimate the difference-in-differences between initial turnout by precinct in the first period (general election) and turnout in the second period (runoff) conditional on poll burden, a set of important control variables, and the subject of county-level fixed effects.

5.3.3 Data

My analysis relies on data from two sources, the Voting and Election Science Team (VEST) and the US Census Bureau. VEST provides the precinct boundaries and a tabulation of votes cast in each precinct in the general and runoff elections; however, I must rely on data provided by the US Census Bureau to measure the demographic characteristics of the populations that reside within the boundaries of each precinct. Conveniently, the federal census occurred in the months prior to the 2020 election, so those data provide an accurate snapshot of the characteristics of voters that reside within a precinct. Inconveniently, precinct boundaries do not necessarily align with the boundaries of the regions for which the census provides data. I now describe how I aligned these two sets of data and then I will describe how I coded the variables included in my analysis.

In order to measure poll burden and estimate its effect on turnout, I need to align the geographic units for which the US Census provides data with the precincts provided by VEST. I do this by executing a spatial overlay. A spatial overlay is a common operation in Geographic Information System (GIS) software that involves overlaying two or more layers of geographic data to analyze their spatial relationships and derive meaningful insights. The smallest publicly-available unit of geography for which the Census Bureau provides data is a *census block*. Census blocks roughly correspond to a city block, but they can be smaller or larger. In Georgia, 3029 people lived in the largest block, and the smallest block at 0 residents. Three-quarters of blocks had fewer than 42 people in them. By contrast, some precincts in Georgia had roughly 10,000 residents. In short, we

may think of a precinct as being a collection of many blocks and the aggregated characteristics of the blocks that fall within a precinct boundary are characteristics of the precinct.

To execute the spatial overlay I follow the following steps.

1. I assess the shapes of each of the 232,684 census blocks in Georgia.

2. I identify the centroid of each block. Finding the centroid of a block in GIS involves calculating the geometric center point of the block's shape. The centroid represents the average position of all the points within the block. In some instances, the average of all points within a block falls outside of a block's boundaries. In those relatively rare instances, I assign the point within the block's boundary that is closest to the average of all points.

3. I identify the precinct in which each of Georgia's census blocks' centroids fall. I then index each point with the attributes of the precinct. In other words, I label each point as belonging to a particular precinct.

4. I aggregate (sum) the demographic characteristics provided by the census for each block to the precinct to which the block is indexed.

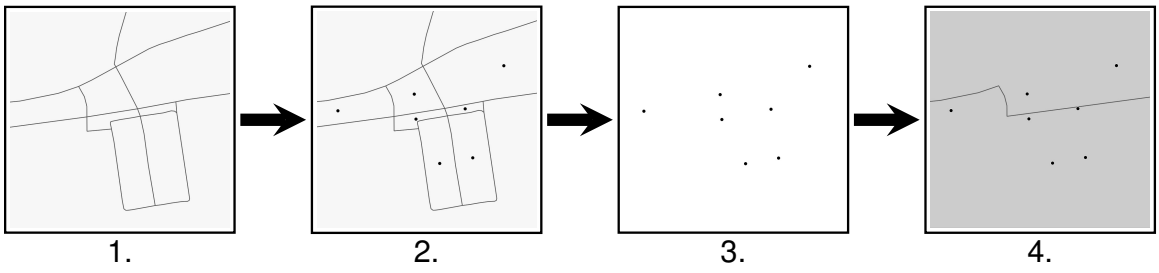


Figure 5.3: Four Steps of Spatial Overlay

I represent this process of a spatial overlay in Figure 5.3. In panel 1, I show the boundaries of several census blocks in a region of Georgia. In panel 2, I find the centroid for each block. That centroid corresponds to the average location of all points that fall within the boundaries of the blocks. In panel 3, I reduce each block to the centroid associated with that block. Finally, in panel 4, I consider the location of the precinct boundaries. In this example all the points to the north (above) of the line are associated with the northern precinct and all points to the south (below) of the line are associated with the southern precinct. I can determine the demographic characteristics

of the southern and northern precincts in this example by aggregating the demographic (in this case summing) the characteristics of the blocks/centroids that fall inside the precinct boundaries. For example, suppose the two blocks assigned to the northern district had populations of 35 and 25, then those blocks would contribute 60 to the population of that precinct. Likewise, if there were 7 and 5 residents that the census identifies as Black that were also over the age of 18, then these blocks contribute 12 residents that are considered to be part of the Black voting age population (BVAP) to the precinct.

In all, there were 2679 precincts in Georgia in 2020. The census collected data in 232,684 blocks in 2020. Using the spatial overlay method outlined here, the number of blocks per precinct ranges from 1 to 1284. Fifty percent of blocks had fewer than 60 blocks assigned to them. When combined with the election returns compiled by VEST, these data give us a picture of the demographic and political composition of precincts in Georgia.

	min	25%	median	mean	75%	max
Total Population	11	1887.5	3455	4037.75	5303	33438
Voting Age Population	6	1489.5	2676	3099.08	4068.5	27655
BVAP Proportion	0	0.09	0.22	0.33	0.51	1
Republican Vote Share	0	0.25	0.53	0.49	0.74	1

Table 5.1: Summary Statistics of Georgia's Precincts

I summarize important characteristics of Georgia's precincts in Table 5.1. On average, precincts have a population of roughly 4,037, but the total precinct population ranges from 11 to 33,438. The median precinct has a population of 3,455. However, not all residents are eligible to vote. In particular, Georgia, like the rest of the United States limits the franchise to adults over the age of 18. This population is particularly important when considering the stress placed on voting infrastructure. In Georgia, the precinct-level voting age population (VAP) ranges from 6 at the smallest to 27,655 at the largest. The average precinct has a VAP of roughly 3099, and 50% of precincts have a population of 2676 or fewer.

Given the state's history of racial discrimination and the allegations leveled by Democrats in the lead-up to the 2020 election, it is important to consider the way that Black and partisan voters are distributed across precincts. In line 3 of Table 5.1, I summarize the proportion of the VAP that the

census identifies as Black (BVAP). The proportion of BVAP ranges from 0 to 1, that is there exists at least one precinct with no Black residents over the age of 18, and there exists at least one precinct in which all of the residents over the age of 18 are Black. On average, about $1/3$ of a precinct's population is Black, but about half of the precincts have a BVAP of 0.22 or less. In line 4 of Table 5.1 I report the two-party Republican share of the presidential vote in 2022. Note that there are precincts in which no votes were cast for Donald Trump, the Republican candidate for president in 2020. Likewise, there exist precincts in which every vote was cast for the Republican candidate. Given the competitive nature of the presidential contest in Georgia in 2020, it is not surprising that the average precinct cast 0.49 of its votes for Trump and 50% of precincts cast 0.53 or fewer of their votes for the Republican standard bearer for president.

	min	25%	median	mean	75%	max
Δ_i	-1.0	-0.12	-0.1	-0.1	-0.07	0.88
Poll Burden (o_{i1})	0.03	0.54	0.64	0.63	0.73	1.89

Table 5.2: Summary of Changes in Turnout and Poll Burden

To consider the ways that voters' experience in the General Election (t_1) affected their behavior in the runoff election (t_2), I focus on changes in turnout across precincts. I want to know how the number of votes cast in the Senate runoffs differed from the votes cast in the general election. My theory predicts that some groups of voters that experience adverse, suppressive institutions in the general election will react by being more motivated to turn out in the runoff. It is important to point out here that suppression (poll burden) might not be the sole reason for increases in turnout between the two elections. It is plausible that Stacy Abrams and other Democratic mobilizers focused increased attention on these precincts. It is true, however, that these mobilizers did mention poll burden and connected it to suppression. Stacy Abrams, for instance, was clear in calling long lines a "poll" tax during the lead-up to the general election (Abrams 2020). This shows that even though Abrams might be targeting certain areas in her mobilizing, she was doing it to some extent by making voters aware of electoral suppression.

I summarize the changes in turnout in Table 5.2. The VEST data do not report the total number of voters, rather their data present the votes cast for each office in each precinct. Because voters are not required to cast a vote in every contest, the total number of votes cast for president, senate, or

other offices may differ. Here, we consider the votes cast in the contest that received the most votes. This value represents our best guess for the total number of voters that visited the polling location in a precinct on election day. In the general election, that may be votes cast for president, senate, or some other office. As in the general election, voters need not vote in both contests for Senate in the runoff. In some precincts, more votes were cast in the Ossof-Perdue contest, in others more votes were cast in the Warnock-Loeffler contest. As with the general, I take the total votes cast in the contest for which the greatest number of votes were recorded in each precinct as the count of voters that cast votes in that particular precinct on election day. I calculate Δ_i, the proportional change in votes cast in precinct i as follows:

$$\Delta_i = (v_{i1} - v_{i2})/v_{i1}. \tag{5.1}$$

In equation 5.1, v_{ti} corresponds to the total votes cast in the contest in precinct i in period t. Thus, Δ_i is the proportional change in turnout between period $t = 1$ and period $t = 2$ in precinct i. I summarize the values that Δ_i takes for Georgia's precincts in Table 5.2. Observe that in some precincts, no votes were cast in the runoff, and in others, the number of votes cast in the runoff exceeded the number of votes cast in the general election. In fact, in roughly 12% of precincts, more votes showed up for the runoff than showed up for the general election. In the complementary set (88%) of precincts, turnout remained the same or declined between the general election and the runoff. On average, precinct-level turnout dropped by about 10%, and 75% of precincts saw declines in turnout of 7.12% or more.

I am also interested in capturing the degree to which those responsible for setting election rules apply suppressive tactics on voters. In particular, I want to observe how differences in applications of suppressive institutions condition voter behavior. One important suppressive tactic that was allegedly applied in Georgia is the length of a line in which votes were required to stand before they voted. Anecdotal evidence suggests that some voters waited for hours in order to cast votes in the general election. Ideally, I would know the length of the line (or average wait time) for each precinct, and then I could estimate Δ_i conditional on wait time. I would expect that longer wait times would lead to higher levels of Δ_i.

Unfortunately, no systematic measure of wait time was collected for Georgia in the 2020 cycle; however, if I make two assumptions about election administration, I can approximate wait time in Georgia's precincts. First, I assume that the allocation of voting infrastructure to precincts is a county-level decision. In Georgia, elections are administered by county Boards of Election (BOEs). While different BOEs may make different decisions about how to allocate election infrastructure (polling place capacity, voting machines, poll workers), within a county the same criteria would apply to all precincts. I call this decision about the allocation of resources and poll capacity. I

assume that within county decisions about polling capacity is a function of the population that resides within the boundaries of a precinct. In other words, I assume that BOEs will allocate more capacity to precincts with larger voting-age populations. These two assumptions allow me to asses *poll burden*, the degree to which a population utilizes the polling capacity allocated by the BOE. For example, consider two precincts with identical VAP, I presume that a BOE will allocate the same resources to polling places in both precincts and if more voters show up to one of these hypothetical precincts, then I say that the precincts at which more voters show up experiences higher poll burden. Thus for each precinct, I calculate poll burden using the following equation:

$$o_{i1} = v_{i1}/n_i, \tag{5.2}$$

where o_{i1} is the poll burden for precinct i in period 1 (the general election), v_{i1} is measured as before, and n_i is the VAP for precinct i. I summarize this value for all of Georgia's precincts in Table 5.2. Across all precincts, poll burden ranges between a low of 0.03 to a high of 1.89.[8] On average, I find poll burden of about 0.63, but the interquartile range shows considerable variance, ranging from 0.53 in the 25th percentile to 0.72 in the 75th percentile.

If my assumptions hold, Georgia voters experienced very different circumstances when they went to the polls. Depending on where they lived, they would have shown up on election day to polling places where the infrastructure could comfortably handle the number of voters who came to the polls (low o_{i1}). Others may have encountered election infrastructure, poll works, and spaces that were put under considerable pressure by the number of voters that decided to show up (high o_{i1}). This latter group would wait in relatively long lines and gone through a more costly experience to cast their vote.

5.3.4 Model

Here, I estimate the effect of poll burden using a difference-in-difference design with county fixed effects. My intention is to identify the effect of poll burden while also accounting for the possibility of heterogeneity in the decisions made about allocation of polling infrastructure that may vary from county-to-county. Let i index Georgia's precincts and calculate Δ_i in 5.1. Let o_{i1} represent the level

[8] In the latter case, poll burden may exceed 1. This may seem curious given that the census counts provides a count of the VAP, all persons over the age of 18. It turns out that the number of voters may exceed VAP instances where people decide to vote in precincts where they were not counted in the census. For example, this may happen in university towns where students are counted as living with their families but vote where they attend school. Another scenario where this is common is in communities with many vacation homes. In those precincts voters may choose to vote where they own valuable property as a second residence even though the Census counted them as residing elsewhere. In any event, only 0.6% of precincts had more votes than VAP.

of poll burden in precinct i at in the general election as defined in equation 5.2. Set μ_i as the county fixed effects. Thus, to assess the conditional effect of poll burden on the change in turnout, while controlling for county-level fixed effects I estimate the following models

$$\Delta_i = \alpha_i + \beta_2 o_{i1} + \mu_i + \varepsilon_i \tag{5.3}$$

To account for possible omitted variable bias, I estimate an additional set of models that include considerations like the underlying partisanship of precincts, the racial composition of precincts, and the absolute size (population) of precincts in Georgia. To that end, I estimate a second set of models that take the following functional form where X_i is a matrix of precinct-level characteristics.

$$\Delta_i = \alpha_i + \beta_2 o_{i1} + \mu_i + \theta X_i + \varepsilon_i \tag{5.4}$$

5.3.5 Findings: The Institutional Effect on Participation in Georgia

Both Equations 5.3 and 5.4 model precinct-level difference turnout between period 1 (the general election) and period 2 (the Senate runnoff), Δ_i, as a linear function of precinct-level poll burden in the general election, o_{i1}. The estimates summarized in Table 5.3 are based on these models.

	Dependent variable: Change in Turnout (Δ_i)					
	(1)	(2)	(3)	(4)	(5)	(6)
Poll Burden (o_{i1})	0.092***	0.086***	0.085**	0.090***	0.090***	0.084***
	(0.007)	(0.031)	(0.034)	(0.032)	(0.033)	(0.031)
BVAP			−0.001		−0.021	−0.025
			(0.008)		(0.017)	(0.018)
Partisanship				−0.011**	−0.035*	−0.043**
				(0.005)	(0.020)	(0.021)
Total Population/1000						−0.002***
						(0.0005)
Constant	−0.149***					
	(0.004)					
County F.E. (μ_i)	no	yes	yes	yes	yes	yes
Observations	2,651	2,651	2,651	2,651	2,651	2,651
R^2	0.063	0.056	0.056	0.057	0.059	0.065
Adjusted R^2	0.062	−0.004	−0.005	−0.004	−0.001	0.004
Residual Std. Error	0.057 (df = 2649)					
F Statistic	177.638***	147.707***	73.873***	75.169***	52.435***	43.070***
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 5.3: Effect of Poll Burden on Changes in Turnout from General Election to Runoff Election

My theory suggests that as the experience becomes more onerous (as poll burden increases), voters will respond by participating at higher rates. Table 5.3 and 5.4 present the estimated relationship between poll burden and the change in turnout. Model 1 in Table 5.3 estimates the relationship as a bivariate relationship with no statistical controls. Models 2-6 fix effect of poll burden by each of Georgia's counties and models 3-6 condition the effect of poll burden on a set of additional variables.

Observe that in every model summarized in Table 5.3, poll burden has a positive and statistically significant ($p < 0.01$) effect on Δ_i. The positive effect persists when I fix the effect of poll burden on county-level characteristics to account for the possibility of unobserved country-level heterogeneity. Likewise, the effect is more or less constant when I condition my estimates of the racial composition

of precincts (BVAP), the level of Republican support (Partisanship), and the absolute size of the population within the precinct (Total Population).

Consider the estimates summarized in model 6 of Table 5.3. Here, poll burden has a positive relationship on the change in turnout between the two elections with a one unit change in poll burden corresponding to a 0.084 change in turnout (Δ_i); however, suppression (o_{i1}) is measured on a unit scale. Perhaps a more realistic comparison would be to consider the difference between a precinct in the 25th percentile of poll burden (0.54) and a precinct in the 75th percentile (0.73), a difference of roughly 0.2 in poll burden. Model 6 suggests that such a shift would result in a 0.017 in turnout (Δ_i), *ceteris paribus*. In more direct terms, districts in the 25th percentile of poll burden showed about 1.7% *more* drop-off in participation compared to precincts with a poll burden score in the 75th percentile. While that may seem like a modest substantive effect in absolute terms, both runoffs were decided by extremely small margins – 0.6% in the Ossof-Perdue contest and 1.0% in the Warnock-Loeffler contest. The effect of voters' response to poll burden may play a part in contests as closely contested as those two contests.

As compelling as the effect of poll burden, it is interesting that other factors seem to play an inconsistent role in determining Δ_i. It is particularly interesting that the racial composition of precincts does not have a discernible statistical effect on the drop-off in participation. As is evident in Figure 5.1, race seems to be related to the ways that precincts are composed in some counties, but in the presence of county-level fixed effects, the proportion of the voting age population that is Black does not seem to have an effect on changes in the rates of participation in the general and runoff elections in Georgia's 2020 Senate contests.

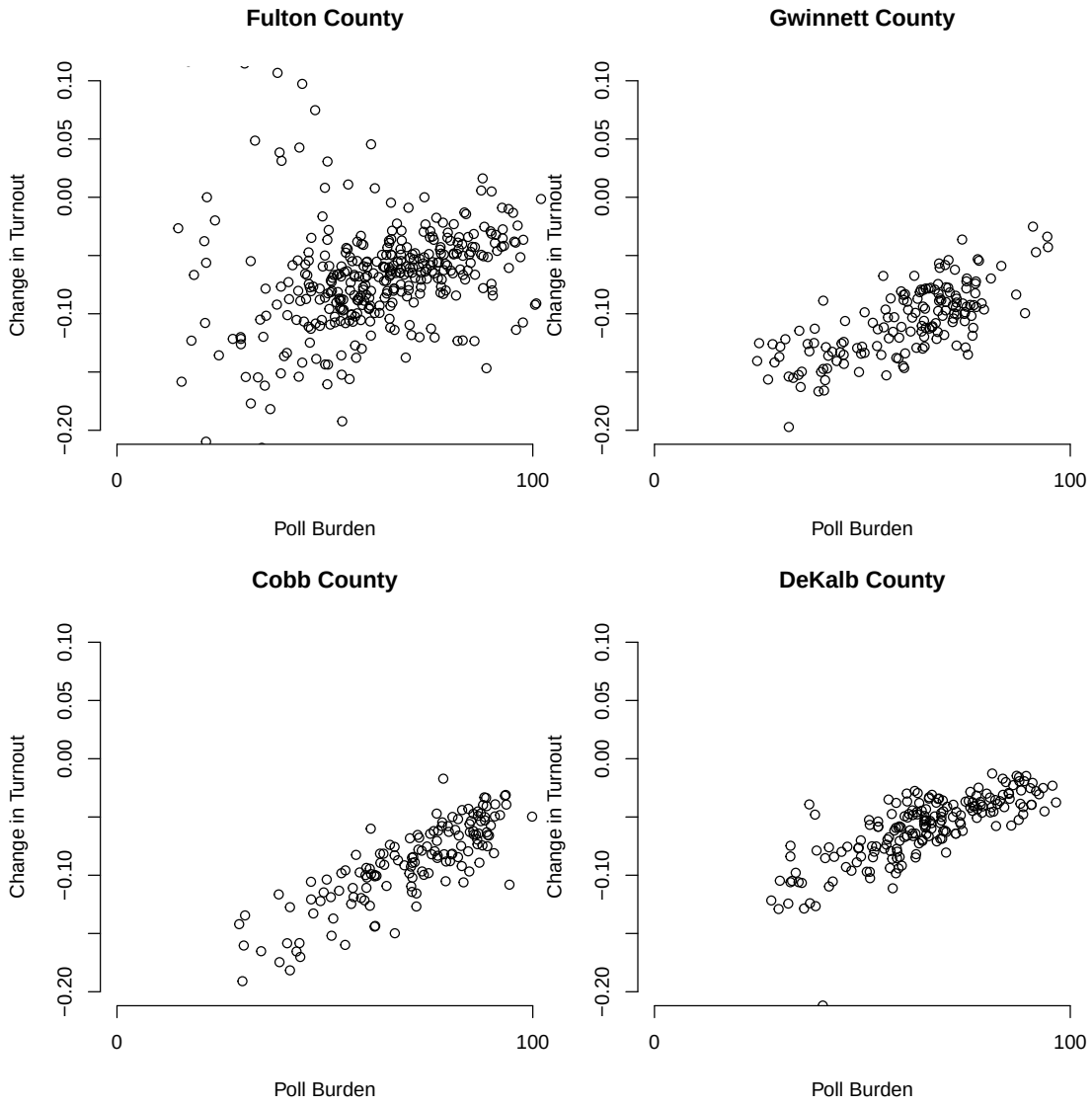


Table 5.4: Effect of Poll Burden on Changes in Turnout as a Scatterplot

In contrast, the partisanship of vote (measured as Republican share of the two-party vote for president) cast in the general election does have a statistically significant effect. Focusing again on model 6 in 5.3, there was a 4% difference in participation between the least and most Republican precincts holding other factors constant. There is a 0.49 difference in the partisanship of the 25th percentile (0.25 Republican) and 75th percentile (0.74 Republican) precincts. Holding all other factors constant, Model 6 suggests such a difference would result in a 0.021 decline in participation. Again, this represents a small substantive change that would have major implications in closely contested elections. Finally, precincts with larger populations had larger declines in participation, but the difference is substantively insignificant – an increase of 1000 in the population of the district

corresponds to a decline of about 0.2% in participation.

In summary, higher levels of o_{it}, precinct-level poll burden, in the general election, is associated with larger levels of turnout (Δ_i), lower rates of drop-off in participation in the run-off. That pattern persists once I account for county-level heterogeneity in election administration through county-fixed effects. The positive effect of poll burden is present even when I condition my estimates drop-off on race, partisanship, and the absolute population of a precinct. This finding runs counter to standard theoretical expectations which would lead us to expect that as the voting experience becomes more onerous, fewer people should participate. The results in Tables 5.3 and 5.4 seem to show a different pattern, one that is consistent with my theoretical expectation that voters who waited in long lines and experienced higher costs associated with voting in the general election experienced an angry emotional response to their circumstances. By contrast, those that experienced shorter lines did not experience anger as a response to their circumstances. The findings summarized in Table 5.3 are consistent with my theory. Unfortunately, the cost of voting in Georgia in the 2020 election was not randomly assigned, nor can I discern the emotional state of voters as they cast their votes. I now turn to a research design that will allow me to test my theory directly and make causal claims about the effects of increased costs, emotions, and participation.

5.4 Emotions and Poll Burden: Testing Hypotheses 5.3-5.6

As I illustrate above, districts in Georgia with less polling places experienced an increase in participation from the November election to the December runoff a few weeks later. Voters who waited in long lines in one district were more likely to turn out during the runoff than voters that waited in shorter lines. Thus, advantaged voters were less likely to engage even when voting was less costly for them.

However, as it is nearly impossible to adequately measure emotion in aggregate voting studies, so I test my theory through an online survey experiment in February 2023. I randomly assign participants to one of three experimental conditions: a vignette describing Republican legislation perpetuating longer lines for Democrats, a vignette describing Democratic legislation perpetuating longer lines for Republicans, and a politically-benign statement about polling places. I then measure for an emotional response before examining a variety of participation outcomes. These outcomes consist of four political tasks: expressing their intention to vote, expressing their intention to volunteer at polling places to make it better for those in line, expressing their intent to donate to causes for fairer poll burdens across the country, and finally yes or no question asking respondents if they are willing to donate their $1.50 MTurk to making sure every voter has equal access to voting. The following outlines my sample along with the basic mechanics of this final survey.

5.4.1 Sample

I recruited participants through CloudResearch which screens for an optimized Amazon Mechanical Turk pool of workers. Although this is not a representative sample, CloudResearch performs quality checks to verify respondents' geographical location and screens out bot respondents. I incentivized respondents with a $1.50 Mechanical Turk reward and to ensure partisan balance I block randomize on party identification. Questions about political efficacy and political partisan identification were taken from the 2020 iteration of the American National Election Survey (Survey 2022). After answering the typical "leaner" questions, if a respondent still identifies as an independent, I drop them from the sample.[9] The following table includes some descriptive statistics of my initial pilot sample.

[9]In this survey 254 people did not identify as a leaner partisan; rather they identified as a pure independent or "other".

Respondents	Total	Consent/Commit	No Consent/No Commit		
	2,393	2,132	261		
Party ID	Democrat	Republican	Pure Independent	Other	
	54.95%	33.3%	7.6%	4.4%	
Sex	Female	Male	Non-Binary	No Answer	
	49.5%	35%	2%	13.7%	
Education	<B.A.	$\geq$ B.A.			
	52%	47%			
Age	Youngest	Mean	Oldest		
	21 yrs	40 yrs	89 yrs		
Race	White	Black and non-Hispanic Black	Hispanic	Asian	Other
	65.7%	19.8%	8.4%	6.01%	2.6%

Table 5.5: Study Three Sample Descriptive Statistics. Descriptive statistics for the MTurk sample. Note that respondents self-reported their race category and could choose from more than one so some respondents, in regard to race, are accounted for more than once.

5.4.2 Stages in Study Three

In Study Three, I block randomize because this is an online, typically left-leaning sample. Following the experimental interventions (outlined below), I ask respondents indicate emotional responses to the treatment/control conditions. Directly following the emotions battery, respondents are presented with 4 participation questions. The figure below illustrates this design.

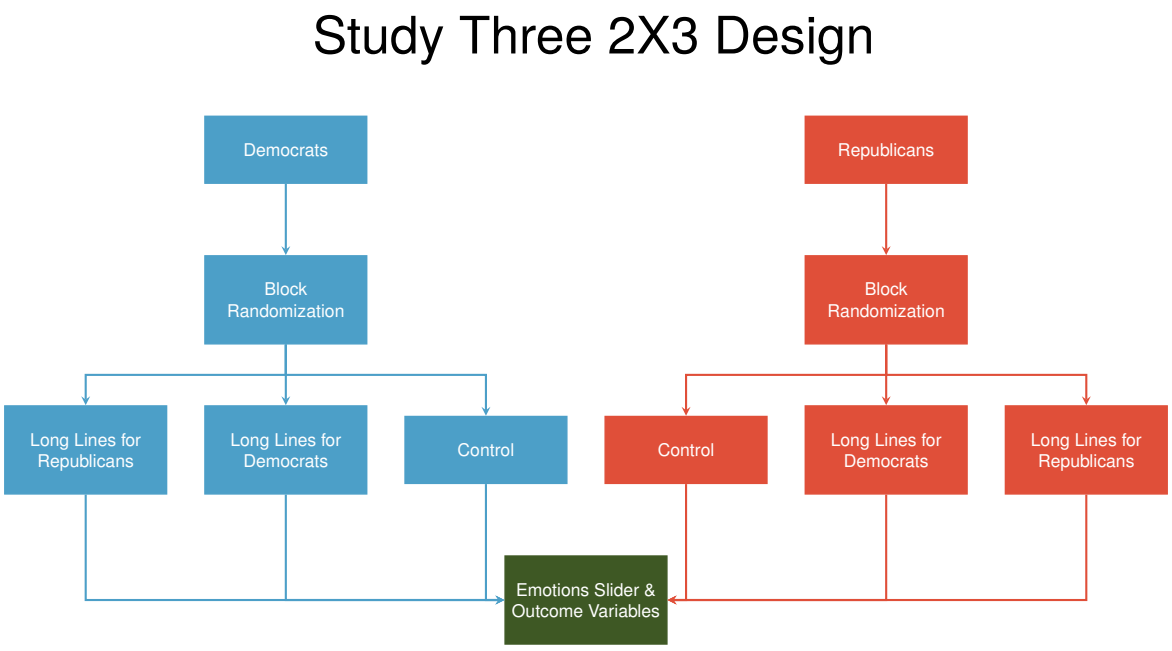


Figure 5.4: Experimental Design of Test Three. Note that this is a 2x3 design, with 3 conditions (2 treatments and 1 control).

I randomly assign respondents in this study to one of three conditions (see below). Here I randomize the political disadvantage that long lines at polling stations create. I code respondents as disadvantaged if they receive the information treatment that describes a situation where the party opposite of theirs is systematically passing laws that creates long lines for voters from the respondent's respective party. This conceptualization is represented in the following Figure 5.

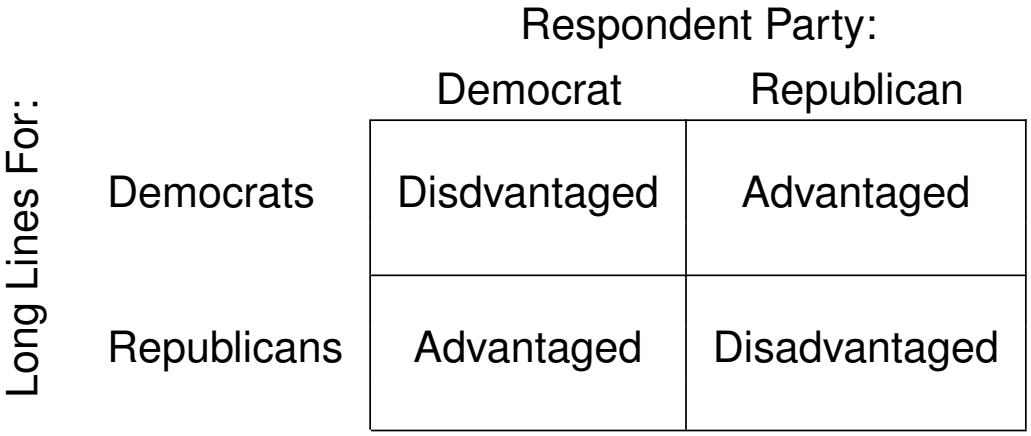


Figure 5.5: Operationalization of Advantage and Disadvantage. Respondents were randomly assigned based on self-reported party ID

Treatment Condition

Republican lawmakers in many states passed laws that increase the time that Democrats must wait in line to vote. Because it is more difficult for Democrats to vote, Republicans are more likely to win elections and get the policies they want put into law.

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Democratic lawmakers in many states passed laws that increase the time that Republicans must wait in line to vote. Because it is more difficult for Republicans to vote, Democrats are more likely to win elections and get the policies they want put into law.

Finally, the randomly assigned control is an information vignette that is partisan-benign and only provides general information about what a polling place is. This is expected to elicit little to no emotion although I do expect some voters will see this as a positive thing for democracy so the emotions that it does elicit should be generally positive.

Control

A polling place is a physical address where a person can cast a vote on election day.

After randomly viewing one of the three experimental conditions, participants respond to a series of questions about their emotional reactions to the information they just read. I operational-

ize emotion, as a mediator through an emotional response index that includes three emotional dimensions.[10]

Directly following the emotions measure, I include a text-entry box for respondents to describe, in their own words, how the conditions made them feel. I do this for two reasons. First, it is a good manipulation check. For example, where respondents registered high anger or fear on the slider, I observe words and phrases like “it makes me angry" or “I am afraid". Second, text entry provides more data for me to test my hypotheses of the role of institutional (dis) advantage on emotion. For those respondents who are coded as disadvantaged, for instance, I should see an increase in the use of words or synonyms to words in the text entry like “angry", “outraged", “anxious", and “afraid".

My outcome variable is also similar to those in the previous chapter. In this case, I measure participation four different ways: an intention to vote which is measured dichotomously through a yes/no multiple choice question; an intention to volunteer for organizations advocating for fairer elections which is measured via a 5 point Likert scale; an intention to donate money in the future to organizations advocating for fairer elections; and finally asking respondents if they would like to their MTurk reward to a nonpartisan organization working towards giving every voter equal access to the ballot in elections which I measure through a simple yes/no multiple choice question.[11] For the intention to vote variable, I simply ask if there was a hypothetical election tomorrow, would you vote? I code this dichotomously as yes = 1 and no = 0. For the volunteer question, I use a Likert scale ranging from “Not at all likely" to “Extremely likely." I code this variable as dichotomous: Those who answered from “Not at all likely" to “Moderately likely" are coded as 0.[12] Whereas, those who answered “Very Likely" and “Extremely likely" are coded as 1.

In what follows I present the results of this experiment. I begin by examining the summary statistics of my outcome variables. Then I look for an average treatment effect of being informed of voter suppression at polling places on my measures of participation. Here I also look for a treatment effect on eight different emotions. While I do present significant treatment effects in both cases, these findings are enhanced when I consider the role that emotion played in getting respondents to politically engage. Thus, I turn to the mediating effects of anger and fear and report how these emotions conditioned my outcome variables.

[10]These emotions are identical to those used in Chapter 4 but coded on a 1-7 scale rather than a 1-10 scale. I code each emotion on a $0-7$ scale, where 0 is a required click to measure no emotion present, anything between $0-1$ “not at all”, anything between $2-3$ is “a little”, anything between $3-4$ is “a moderate amount”, anything between $4-6$ is "very much" and anything between $6-7$ “extremely”

[11]Note that respondents who answered “yes" are immediately directed to a scree where they are informed that will not have to donate their reward that day.

[12]The logic for this dichotomous cutoff stems from several studies that demonstrated the problem with respondents over-reporting voting intentions. See for example: Holbrook and Krosnick 2010.

Likelihood to Vote	No	Yes
	326	1747
	13.7%	73.7%
Likelihood to Donate Later	Extremely	<Extremely
	299	1774
	14%	86%
Likelihood to Volunteer	Extremely	<Extremely
	290	1784
	14%	86%
Willing to Donate MTurk	yes	no
	571	1503
	28%	72%

Table 5.6: Summary Statistics of 4 Outcome Variables

5.4.3 Summary Statistics of Participation Outcome Variables

I measure my outcome variable, participation, in four different ways and the results of each are presented in Table 5.6. I first test the likelihood that a person will vote in a hypothetical election the next day. I code this dichotomously through a yes/no multiple-choice question. Of the 2,074 respondents that answered this question, 1,747 indicated that they would vote while 326 answered no. Following the voting outcome variable, I ask “How likely are you to volunteer with a non-partisan organization that fights for fairer elections?" I measure this with a Likert scale ranging from “not at all likely" to “extremely likely". Respondents who chose “very likely" and “extremely likely" were coded as a 1 and those who picked anything else as 0. 290 respondents indicated that they were more extremely more likely to volunteer than the 1784 respondents who were less likely to volunteer. Next, I ask respondents if they would be willing to donate their Mechanical Turk reward. Surprisingly, nearly 28% percent of respondents agreed to donate their MTurk reward while the rest answered no.

5.4.4 Poll Burden as the only Explanation?

In my theory, I anticipate that individuals' status as politically advantaged or disadvantaged will influence their decision to participate. This happens primarily because institutions condition emotional reactions and emotions are the driving force in mobilizing or demobilizing participation. So a good first test of my theory is to examine an average treatment effect on my outcome variable. In other words, I first look at the conditioning effects of institutional advantage on participation without accounting for emotion. This is a similar test to the previous observational experiment in Georgia in that I am empirically testing my first two hypotheses.

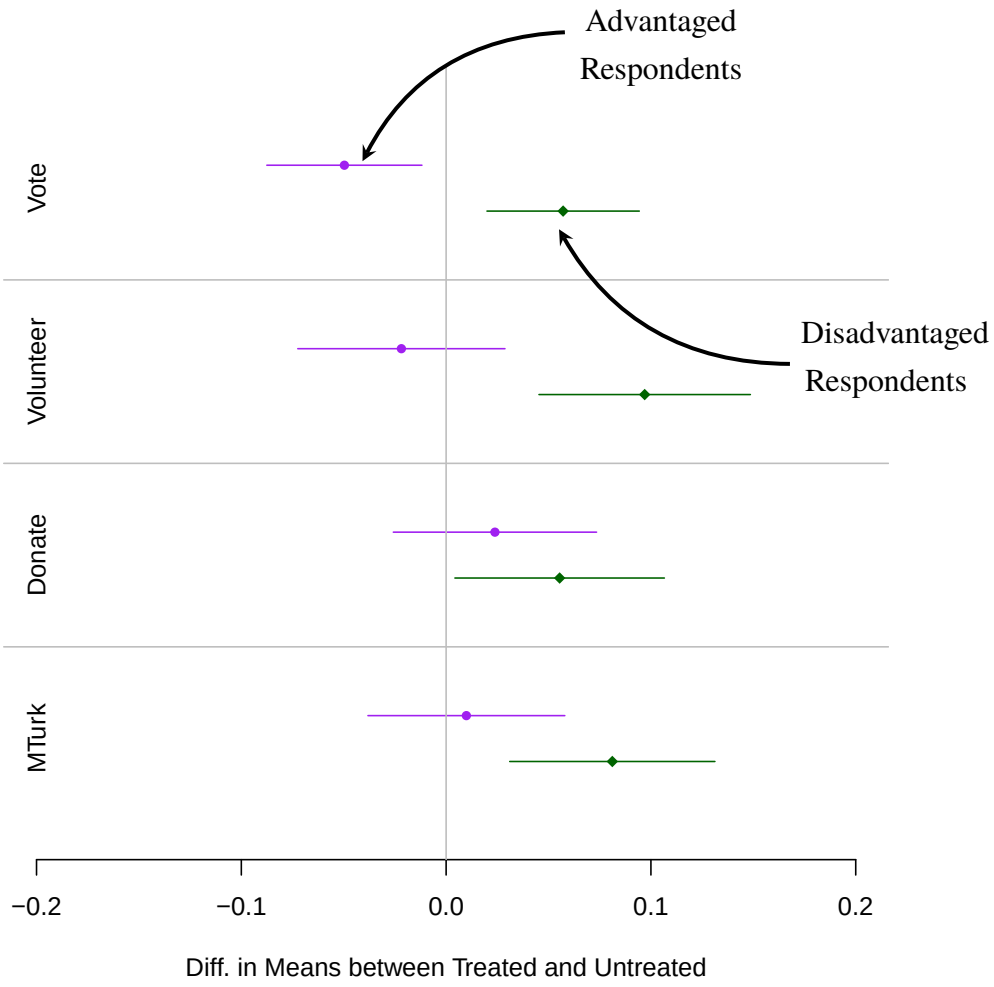

Figure 5.6: Average Treatment Effect on 4 Outcome Variables

As illustrated in Figure 5.6, there is a statistically significant finding on all four of my four participation outcome variables for people in the disadvantaged space. Interestingly, voting is negatively significant in the advantaged space, indicating that long lines demobilize those who are already advantaged and winning. This is something recurrent to my findings in Chapter Four and confirms my second hypothesis that suppression against another group will not necessarily mobilize those within the group that the suppression benefits. Disadvantaged respondents, on the other hand, signaled an increase in their likelihood of voting. Furthermore, this also supports my findings in the observational study in Georgia.

However, measuring the intention to vote or my other intention to participate questions accurately presents significant challenges (Van der Meer, Hakhverdian and Aaldering 2016). Inherent uncertainty lies in whether respondents will actually translate their stated intentions into concrete actions in the real world. The complexity of human behavior makes it difficult to ascertain the authenticity of respondents' claims. While respondents may genuinely believe they will vote at the time of the survey, their circumstances, motivations, or external factors could change, influencing their ultimate decision on Election Day. Additionally, respondents may feel social pressure to provide socially desirable responses, such as expressing their intention to vote, even if they do not have a genuine intention to do so. Consequently, relying solely on self-reported intentions to vote may not provide a reliable measure of actual voter turnout. To overcome these challenges specifically, I include the donate MTurk reward question as an additional indicator to enhance the accuracy of my predictions.

There is also a significant amount of people were willing to donate their MTurk rewards to the fight for everyone to have equal access to the ballot box. I consider this the highest cost outcome variable: respondents agree to take a survey for compensation. So when they agree to give that compensation to a political cause they are literally taking on the burden of politically engaging while taking the survey. Unlike the intention to vote, volunteer, or donate in the future this question demands an assumption of cost from respondents. That the treatment affected the disadvantaged donate money on the spot, provides compelling evidence that respondents were not just answering in a socially normative way; something that we cannot be sure of in the other outcome variables which are much lower cost.

5.4.5 The Role of Emotions in the Decision to Politically Engage

Before conducting mediation analysis as a way to test my remaining hypotheses, I first look at a treatment effect on emotion. Simply, did my treatments induce variation in emotional responses? Figure 5.7 summarizes the emotional reaction among respondents to the treatment. On the x-axis, I

provide the difference in the average emotional reaction among respondents (measured on a 7-point scale) among treated and untreated respondents. On the y-axis, I list four emotional dimensions. In this case fear is a composite of afraid and anxious, anger is a composite of angry and outraged, shame is the composite of embarrassed and ashamed, and enthusiasm is the composite of enthusiastic and glad.

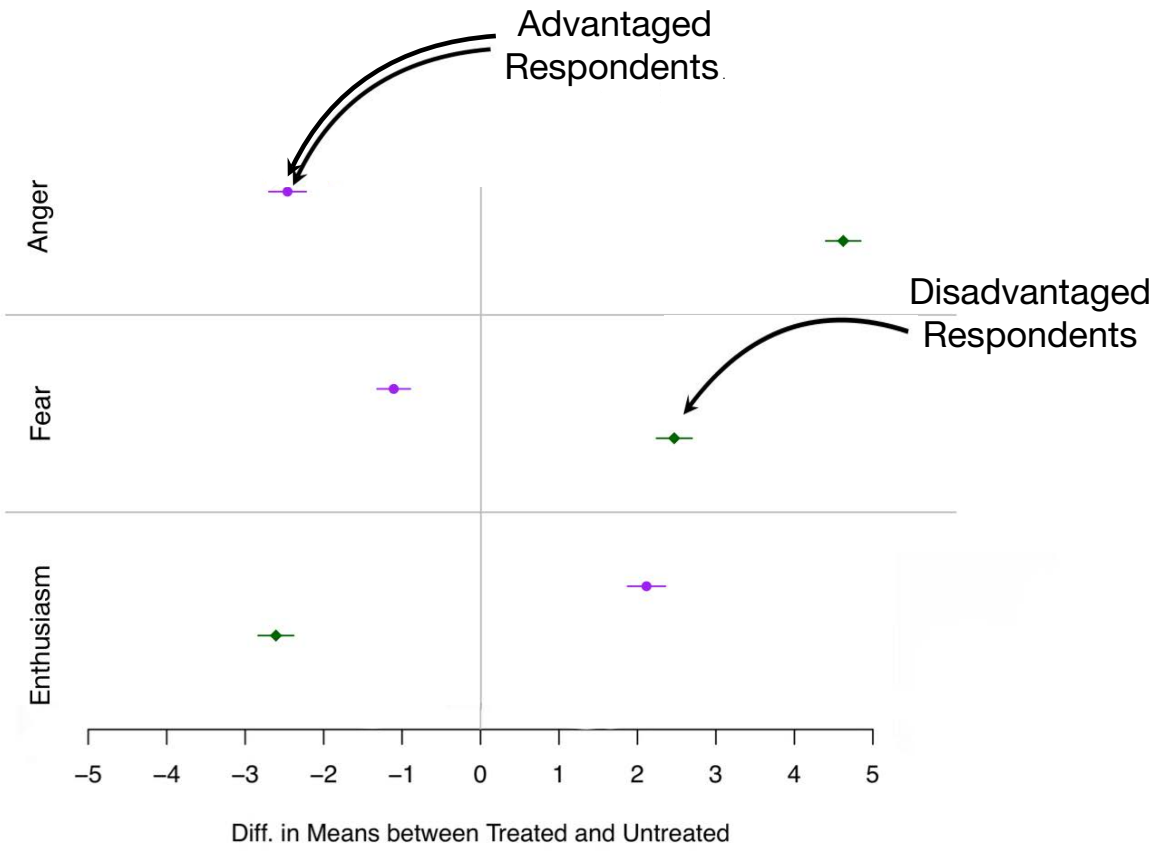

Figure 5.7: Average Treatment Effect on 4 Composite Emotions

Starting with anger, I observe a positive and significant treatment effect. Simply put, I made treated disadvantaged people mad compared to their untreated disadvantaged counterparts. Treated advantaged respondents became less angry compared to their untreated advantaged counterparts

when learning of their position vis-a-vis this type of institutional manipulation. I observe a similar pattern with fear, although people were on average less fearful in their reactions to the vignette than they were angry. Similar to the gerrymandering case, people reacted with both fear and anger, but anger moved more, and mediated the effect on participation more (as I show next). When considering enthusiasm there is a flip in the direction of who experiences this emotion after viewing the same treatment. Those treated in the advantaged group became more enthusiastic while those disadvantaged by the same treatment became less enthusiastic.

From these findings, it is clear that there is a great deal of variation in emotion. What is more, I can begin to confirm some of my hypotheses: First, disadvantaged people were more likely to experience anger and fear (Hypothesis 5.3). Second, advantaged respondents were less likely to experience anger and more likely to be enthusiastic (Hypothesis 5.4). In addition, these results indicate a similar pattern that I predicted in Chapter 3 and empirically showed in Chapter 4. Next, I explore what if any effect these emotions have on political participation.

5.4.6 The Mediating Effects of Emotions on Participation

I now estimate the ways that anger mediates the effect of learning about institutional (dis)advantage on a person's decision to participate or not. In this section, I analyze the mediation effect of anger and fear in this section again using Tingley et al.'s proposed bootstrap estimation method (2017).

Recall that Tingey et al. suggest a two-pronged estimation process that allows for non-parametric identification through an algorithm that produces a large set of counterfactuals. In the case of the analysis that follows, I generate 1,000 iterations of their process to estimate the average direct effect (ADE) and the average causal mediation effect (ACME) (773). I apply this process to my data using their software package mediation package in the R statistical programming language (Tingley et al. 2014). First, I fit regression models for anger and participation. Anger is modeled as a function of the treatment vignettes. Participation is modeled as a function of anger and whether or not a respondent is randomly assigned to the advantaged or disadvantaged type. Next, the process uses these estimates to generate separate predicted rates of participation for each level of anger of those exposed to the gerrymandering vignettes and those exposed to the control vignette. The process yields three sets of estimates. The ACME, the average direct effect (ADE), and the total effect. Confidence levels are estimated through a nonparametric bootstrap consisting of 1,000 Monte Carlo simulations that rely on the separate regression models of participation on anger, and participation on anger, the treatment, and pretreatment covariates. I present the findings of the voting and Mturk variables in Figure 9. For the reasons stated above, I specifically examine the voting and MTurk reward outcome variables.

First, I find that there is a mediation effect of fear and anger on a respondent's intention to vote. These findings look very similar. One possible reason is that people experienced anger and fear concurrently and both emotions evoked some sort of participation. I can thus confirm hypotheses 5.3 and 5.5 but not 5.6. However, there is no total effect of either emotion. Similar to the findings in Chapter 4, we can assume that people were initially demobilized by institutional manipulation but of those some experienced anger and turned out despite the suppression. Thus, we can, at least partially confirm Hypothesis 5.1 and 5.4.

We can assume a similar pattern in the MTurk donation context; both mobilized and as people felt more anger, they were more likely to donate their MTurk reward. Unlike the voting variable, however, there is a total mediating effect of both of these emotions, indicating that there is no negative direct effect, offsetting the average mediation effect. This confirms Hypothesis 5.5. However because I find very similar findings for fear mediating MTurk donations, I cannot confirm Hypothesis 5.6 or say that anger is doing most of the work in this context. Unlike the gerrymandering case, fear looks to be mediating the likelihood of donating an MTurk reward as much as anger. This is something unexpected and unexplained by my theory.

I can, however, present some notion of what I think is occurring here. In this test I specifically asked respondents to write a few sentences about how the treatment made them feel. For those who were randomly assigned disadvantage, I noticed some interesting patterns. For example, among those who used words like "anger", they described feelings of great frustration and being "very upset". In one instance, a respondent proclaimed that this type of voter treatment "should be illegal."

Interestingly, there were many respondents who used words like "anger" but also words like "fear". We can assume that these people felt both emotions concurrently. In this context, some respondents denoted why they felt both: "I am angry and also afraid. It makes me feel like it is an attack on our democracy." and "I am angry and afraid that it will destroy our democracy." These concurrent feelings of anger and fear are exhibited empirically in the results I present here. For those respondents who said they only felt fear, they made sure to qualify this as a fear "for the future of this country" or the "state of the United States." This fear about democracy is an important difference in the fear that I hypothesized will demobilize. From what I can tell, many might have experienced fear but it wasn't just about being disadvantaged, it was a fear resulting from the current state of American electoral democracy.

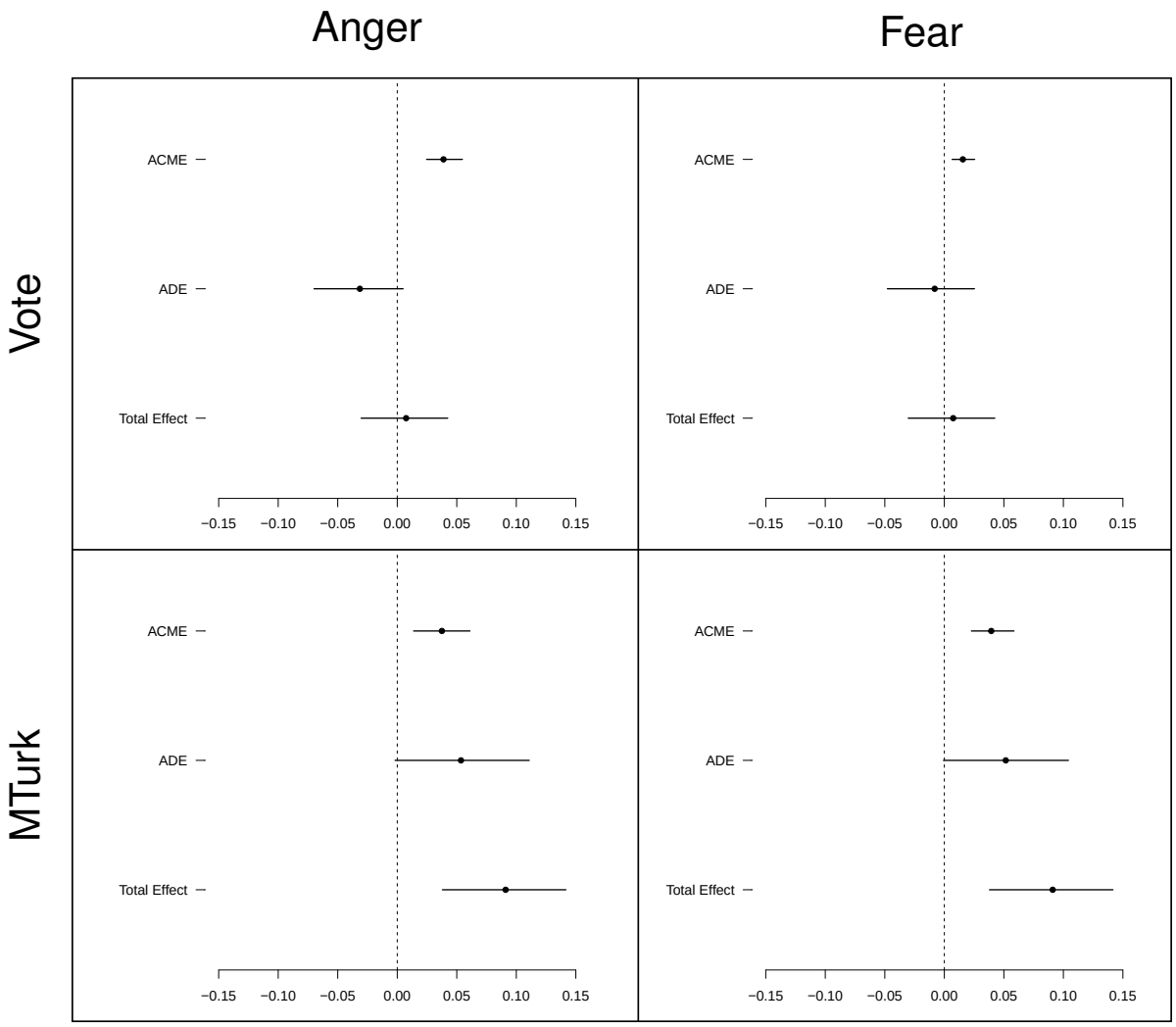

Figure 5.8: Mediation of Anger and Fear on Intent to Vote and Donate MTurk Reward Outcome Variables . Note that advantage responses are measured as the baseline.

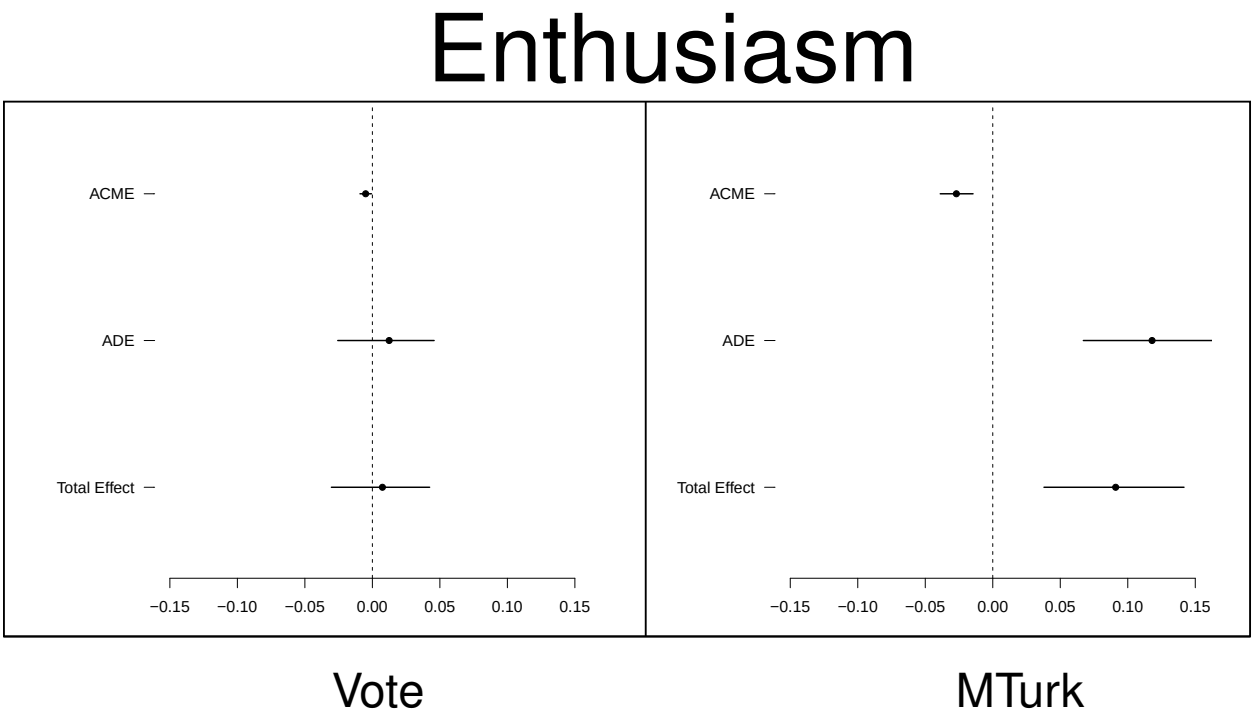

Figure 5.9: Mediation of Enthusiasm on Intent to Vote and Donate MTurk Reward Outcome Variables. Note that advantage responses are measured as the baseline.

A potential confounder to the previous observational study is the role that collective enthusiasm to get out the vote, particularly among marginalized communities, might play. While this is not a perfect comparison, we see that enthusiasm did little to mobilize respondents in the survey. This is particularly true when we compare the mediating effects of anger to enthusiasm and across both outcome variables (vote and donate MTurk). Interestingly, enthusiasm decreased people's propensity to donate their MTurk rewards. This is not surprising if we consider the pattern of emotional reactions above. Advantaged treated respondents were more likely to experience significant levels of enthusiasm when they learned about electoral suppression benefitting their group. So it follows that when these same people were asked to donate their reward, they declined. This finding confirms Hypothesis 5.4 specifically.

5.5 Conclusion

In the first test, I show that long lines do not, for the most part, dissuade the politically disadvantaged from voting. Where I observed heavy poll burden in the initial Senate election I also observe an increase in participation in the runoff election. This pattern is nonexistent where lines were shorter; lighter poll burdens did little if anything to generate increased participation. These findings confirm my first two hypotheses that disadvantaged voters will mobilize in the face of increased suppression on election day while advantaged voters do not take on additional costs to participate even though voting lines were shorter at their respective precincts. Because we cannot be certain from observational data that emotions are doing anything, I set out to test via a survey experiment how people respond to the suppressive tactic of long lines. I learned a few things.

First, long lines do make the treated disadvantaged voter angry. Respondents were asked to write a few words about their feelings after viewing the treatment. Common among these comments were words like “frustrated", “angry", and “outraged" at learning that their group was being targeted.

Second and similar to what we observe in the Georgia case, disadvantaged voters did not let long lines dissuade them from voting or politically participating in this context. There was a significant finding on nearly every outcome variable. This is something that stands in stark contrast to my findings in Chapter Four. Perhaps the most interesting finding is that respondents, who rely on survey taking as a source of income, were willing to sacrifice a tangible cost by donating their MTurk reward. A potential reason for this is that voting day suppression is a much more salient issue than gerrymandering. Whatever the reason is, however, future inquiry must include additional tools of electoral suppression to test how these manipulated institutions condition emotion and potential variations in turnout.

Finally, enthusiasm should increase a person’s likelihood of politically engaging. Akin to the gerrymandering study, I find that enthusiasm in this case does the opposite. While disadvantaged voters were less likely to feel enthusiastic about long lines, advantaged voters exhibited significant and positive feelings of enthusiasm upon learning how poll burden benefits their group. A key takeaway from this finding is that there needs to be more research, specifically in the American context, that explores how enthusiasm over undemocratic outcomes affects behavior. I have found that this emotion does not mobilize as enthusiastic and advantaged individuals who see no need to take on the extra cost of participating. I believe that this is because advantaged people see their group as already winning and because there is no threat, there is no reason to participate. In the case of donating MTurk rewards, politically advantaged participants witnessed an undemocratic institution and take no significant action to mitigate its effects.

Stacey Abrams was able to mobilize and turnout voters who had very little experience, if any,

of participating in the franchise. Many have pointed to a keen balance of hope and pragmatism in the American ideal rallying her base (McClain 2021). This study shows that anger is a potent force in mobilizing among the electorally suppressed. One line of future inquiry would include an examination of the language and tactics that leaders in politically disadvantaged areas evoke in their political campaigns. My theory would predict that if narratives of pragmatism are at the forefront of such campaigns, then narratives of anger are not far behind.

5.6 Appendix

5.6.1 Ethical Statement on Working with Human Subjects

This study, HUM00229156, was deemed exempt approved by my university's Institutional Review Board on January 10, 2023. The survey instruments that I use in this project are designed to minimize any negative outcomes for subjects. While it may be disturbing for some to learn about unfair and undemocratic institutions or outcomes, I make sure that I describe institutional manipulations in ways that have been scientifically confirmed. This is an effort to combat any misconceptions surrounding election malfeasance. All participants in the surveys offered expressed consent to be studied, were over the age of 18 and were e debriefed at the end of the survey. The only portion of the project that directly involves human subjects was approved by my university's Institutional Review Board.

5.6.2 Pre-registration

This study was pre-registered at Open Science Framework as: The Emotional Effects of Voter Suppression in the United States on February 27, 2023.

5.6.3 Results of Mediation of Enthusiasm and Shame

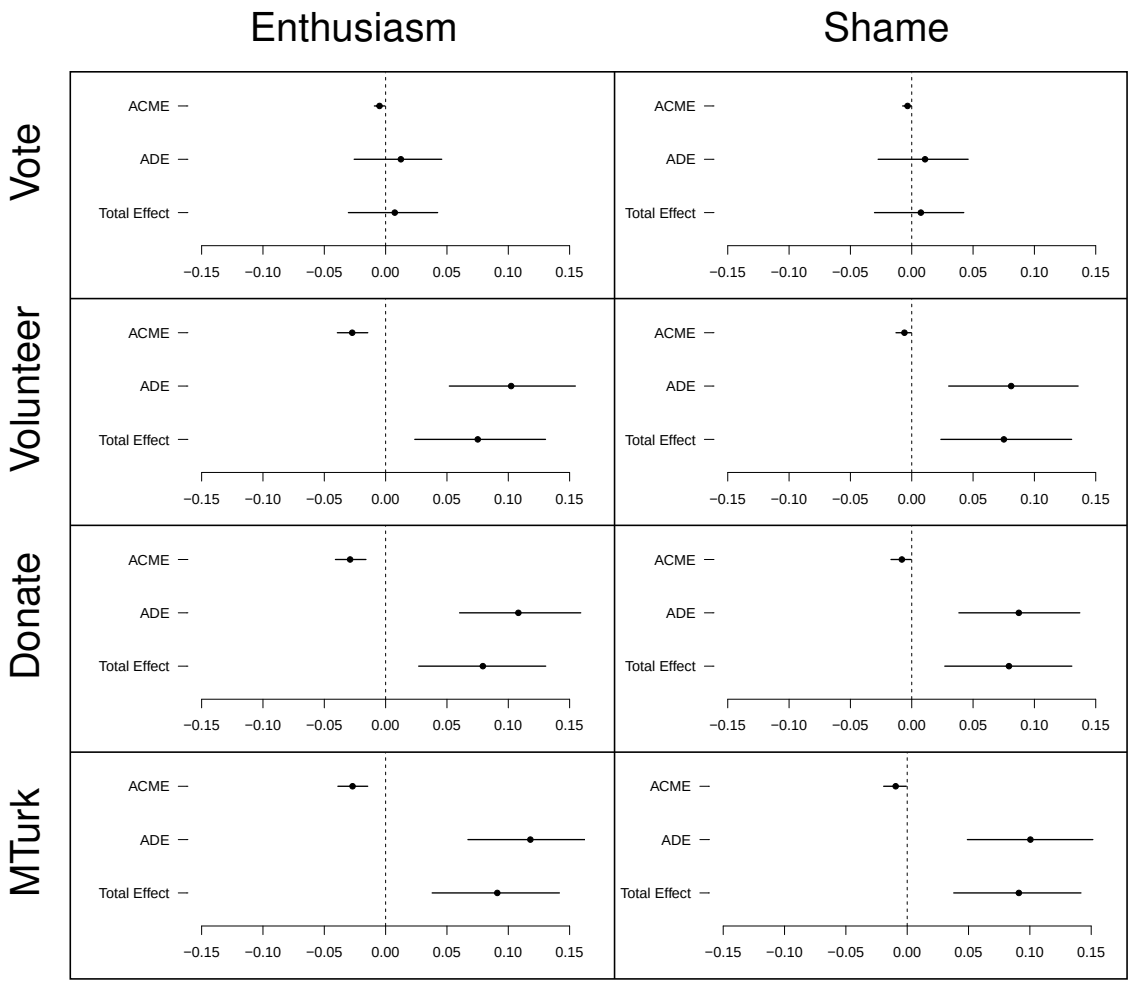

Figure 5.10: Mediation of Enthusiasm and Shame on all Intent to Volunteer and Vote Outcome Variables (Advantage Responses as Baseline)

5.6.4 Results of Mediation of Anger and Fear

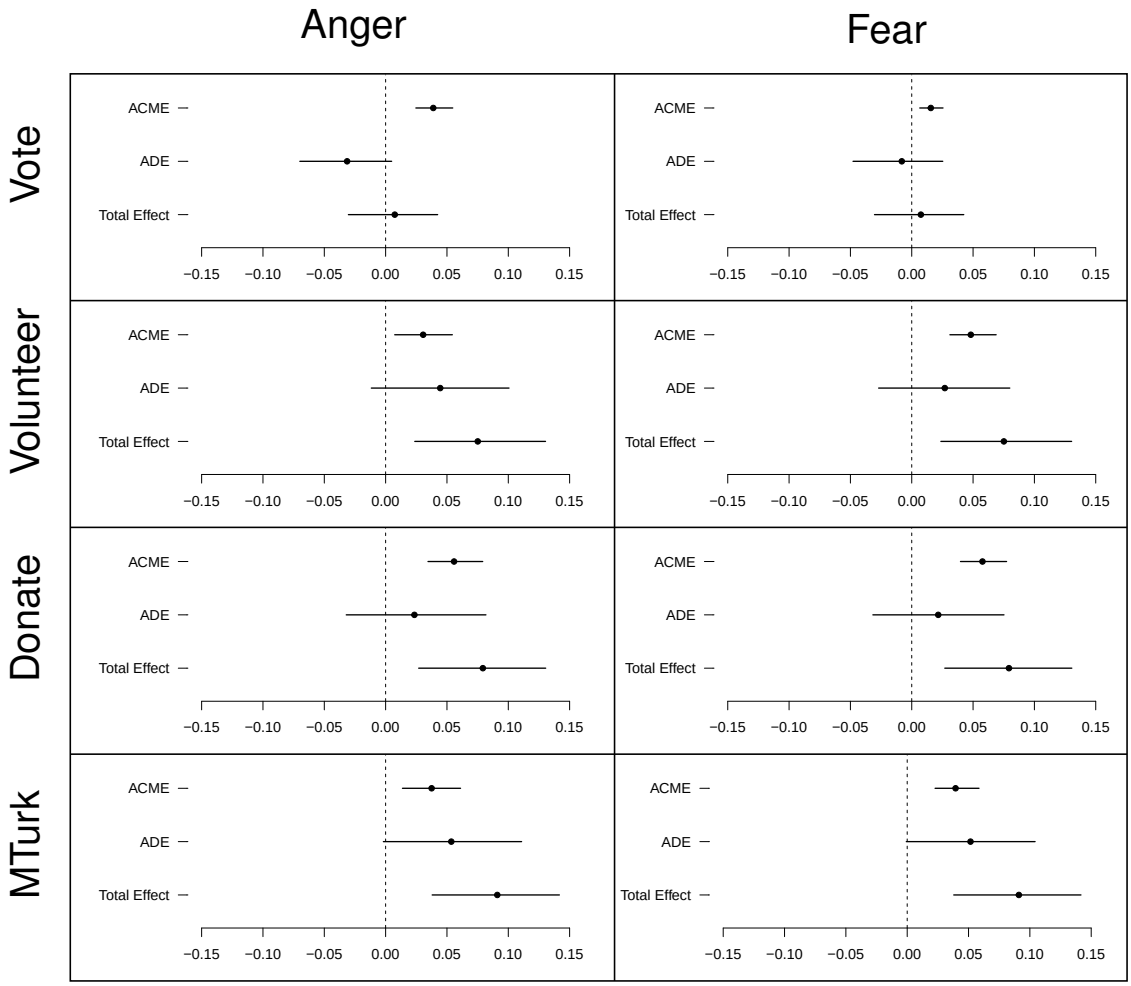

Figure 5.11: Mediation of Anger and Fear on all Intent to Volunteer and Vote Outcome Variables (Advantage Responses as Baseline)

CHAPTER 6

Conclusion

6.1 Manipulated Institutions, Emotions, and Participation

While it is common to lament that democracy is fraying worldwide, political science has primarily focused solely on specific periods of time and/or individual institutions. To address this gap, my research broadens the scope of analysis by encompassing various tactics of institutional manipulation and different political contexts. The objective is to develop a comprehensive theory that applies to the broader concept of democratic backsliding and explains how manipulating democracy's institutions affects individual behavior in electoral autocracies, democracies, as well as hybrid systems.

Because electoral institutions are often the product of political choice they can be co-opted to strategically impose costs, that are unevenly distributed. Even the most democratic institutions can be manipulated by strategic leaders or would-be autocrats who focus on muting or undermining the participation of certain populations. When leaders manipulate institutions, they often do so with the expectation that certain groups will be favored while others will suffer, thereby perpetuating political inequality. Thus, when electoral institutions are manipulated to suppress, it divides citizens into one of two institutional contexts: one where they are politically advantaged by the suppression and one where they are politically disadvantaged by the same suppression. I argue that political behavior amidst electoral suppression is conditioned by these institutional contexts.

For one, I have shown that human emotions play a pivotal role in understanding an individual's decision to engage politically, regardless of the contextual factors or time frame. The heterogeneity of voter participation in instances where institutions are manipulated to suppress is contingent upon the emotions experienced by voters when they become aware of suppression tactics. Different individuals react with various emotions, such as anger, fear, enthusiasm, or others, which ultimately shape their patterns of behavior. If a significant number of individuals concurrently experience certain emotions, the potential for widespread discontent and collective action increases. Importantly,

I do not assume that emotions are solely reactive responses to external stimuli. Instead, I contend that emotions are integral to understanding how individuals perceive and experience suppression, with disparate emotional responses influencing their decision to participate or abstain.

To test my theoretical claims, I employed a series of experiments and analyze electoral returns. The findings reveal two key insights: 1) individuals exhibit variations in the emotions they experience in response to suppression attempts, and 2) distinct emotional responses correlate with differences in participation. For instance, anger emerges as a primary motivator for individuals to turn out in contexts where their participation is directly targeted by electoral suppression or institutional manipulation. Conversely, I find that decisions to refrain from engagement often stem from a sense of satisfaction among individuals belonging to winning groups. Given the complexity and dynamism of human psychology, this research seeks to enhance understanding of how individuals emotionally respond to electoral suppression and how these experiences inform their decisions to engage politically. To delve deeper into this psychological aspect, I tested my theory using two different tools of institutional manipulation, employing a diverse set of methodological approaches, and examining distinct political contexts.

6.1.1 Gerrymandering and Poll Burden

The first, gerrymandering, is a way for incumbents to manipulate the p term in Downs et al.'s (1957) original participation calculus. Gerrymandering perpetuates political inequality by essentially creating two distinct voting groups: one where votes are overweighted (advantaged) and one where votes are underweighted (disadvantaged). In the case of Malaysia, this translates into the minority ethnic Malays ruling government for nearly 80 years. Malapportionment in Malaysia has become a systematic tactic of exclusion. Future work will test how this exclusion elicits emotions to mediate particular patterns of political behavior.

However, this tactic of suppression is not unique to Malaysia. With data from the United States, Chapter 4 gives more understanding of why citizens engage when they learn about the suppressive effects of gerrymandering. My findings challenge the conventional notion that manipulating p leads to reduced voter turnout. I empirically show that learning about how gerrymandering manipulates the pivotalness of a person's vote can actually serve as a mobilizing force among those whose votes are being underweighted. Individuals residing in the disadvantaged space who become aware of the effects of gerrymandering were more likely to react with anger. While I do find some mobilizing effects of fear, anger mediates a disadvantaged person's likelihood of voting at a much higher level in the gerrymandering case. My research reveals that individuals in disadvantaged spaces, upon becoming aware of these policies, are more prone to anger than their unaware disadvantaged

counterparts. This in turn increases the likelihood of informed disadvantaged people participating in the electoral process. The gerrymandering case illustrates that institutions evoke variation in emotions and increases in anger lead to increases in turnout. With this in mind, I test another tool of manipulation, one that manipulates the *C* term.

The second, poll burden offers incumbents the opportunity to specifically raise the materialistic costs of voting for certain groups. In this case, a greater poll burden is a direct way to manipulate *C*. Unlike gerrymandering, poll burden is a tangible cost readily detectable by the voters who turn out to vote. Incumbents can manipulate the lengths of voting lines for certain constituencies by increasing poll burden; they can target certain groups by assuming that longer lines will dissuade at least some voters from casting a ballot in the present and even future elections. Because polling places are typically exogenous to the voting process, similar to gerrymandering, we can observe how changes in poll burden at these places affect behavior.

In the poll burden case, I directly test the Downsian notion that increased material costs should decrease turnout. I find evidence that material costs do not have as big of an impact as Downs might have predicted in this case. In precincts where I observed a significant poll burden during the initial Senate election, there was a noticeable rise in voter participation during the subsequent runoff election. However, this trend was absent in precincts with shorter lines, indicating that lighter poll burdens had minimal impact on generating increased turnout. These findings suggest that disadvantaged voters are more likely to mobilize when faced with heightened suppression on election day, while advantaged voters do not incur additional costs to participate, even when the costs of engaging are lower. I explored why suppression might in fact cause at least some increase in turnout through a survey experiment directly testing the effects that emotional reactions to poll burden played in a citizen's calculus of participating. In general, I find similar but even more significant effects compared to the gerrymandering case. People who learned they were disadvantaged were more likely to experience anger and those who were angry were more likely to engage politically. In short, suppression, in this case, did not depress turnout. In Georgia, specifically, suppression did not dissuade disadvantaged voters from participating; rather it seemed to encourage it.

6.1.2 Anger vs. Fear

Although institutions play a crucial role, they alone cannot fully explain citizen engagement within manipulated systems. The chapters in this dissertation examine the impact of information treatments on participation, taking into account the mediating variable of emotion to provide a more comprehensive understanding. Notably, anger emerges as an important factor in mobilizing voters that are

aware that they are being suppressed. This finding contributes to existing knowledge in political psychology, reinforcing the notion that anger is a powerful motivator. Furthermore, by comparing different institutional contexts, it becomes evident that only aware disadvantaged individuals experience these emotions and choose to engage, while advantaged populations remain unaffected by anger and participate less. Importantly, this study challenges the notion that emotions are mere byproducts of rational cost-benefit calculations in political engagement. Instead, it highlights the central role of emotion in determining participation or non-participation.

Similar to what I observed across all cases, disadvantaged voters were not discouraged by electoral suppression. Notably, in the poll burden case, the results yielded significant findings across nearly every outcome variable, which stands in sharp contrast to those same outcome variables in the gerrymandering case. Of particular interest is that respondents who rely on survey participation as a source of income were willing to forgo a tangible cost by donating their MTurk reward. This finding suggests that the issue of voter suppression on election day holds greater salience than gerrymandering. In the end, I find that anger as well as fear mediate these individuals' decisions to engage. In this case and something theoretically unexpected, fear mediated nearly as much as anger. This is even stronger than in the gerrymandering case.

I do not specifically test the differences between the mediating effects of anger and fear. At first glance, my findings stand counter to established findings in political psychology: that anger mobilizes and fear demobilizes. I can offer a few speculations if I were to explore this finding further.

First, It is plausible that because the threats posed by both gerrymandering and poll burden are not existential, those who felt fear might in fact mobilize. Likewise, those who felt fear might be confusing this emotion for actual anger. Finally, the fear that people experienced might be about something other than being disadvantaged. Respondents in both studies could be exhibiting a fear that is in congruence with a larger collective anxiety about the fraying of American democracy.

As discussed in the previous chapter, respondents in the poll burden survey were asked to write a few sentences about how the treatment made them feel. These explanations provided valuable context to consider a potential distinction between anger and fear. First, anger is a strong motivator in suppressive contexts like poll burden and even gerrymandering. The most common word used in these sentences was “anger". Second, people do experience fear and anger at the same time when they learn that electoral suppression exists in the United States. Third and finally, for those that only said they were afraid, a large part of them qualified their fear as being in response to the state of democracy in the United States. Future work must distinguish between the fear of being disadvantaged by electoral suppression and the fear that is associated with living in a country that

is democratically backsliding.

I hope to address this with my future work in Malaysia. Unlike in the American case, gerrymandering is a much more salient issue. That district lines have been malapportioned to skew the electoral and political influence of the minority ethnic Malay population is common knowledge. As such, I will need to develop a new treatment that takes into consideration the fact that the vast majority of Malaysians know that electoral suppression exists and many still are aware that this suppression directly targets them.

Given its more authoritarian nature historically I expect that fear will be more prominent compared to the United States. But I only expect fear to be a significant mediator in political activities that pose a high and even existential risk to the individual. It will not be news that suppression exists, but emotions will still mediate turnout: Anger will dominate less risky political behavior and in this case when I see fear I expect to see a more pronounced demobilization in Malaysia than I observed in the United States.

However, as I show in Chapter 2, Malaysia seems to be trending towards democratization (at least for now) while the United States is trending towards democratic backsliding. This distinction provides an interesting parameter to test my theory of emotional mobilization even further. I would expect that fear might be evolving to be an important motivator in countries where long-established democratic norms are actively fraying and individuals are experiencing a newfound existential threat. In the case of poll burden, anger over annoying suppressive tactics (like longer lines) elicit anger and mobilize. However, as those tactics become greater and an existential threat, fear might take on a mobilizing role. A current event provides an interesting example for this point. Consider the 2022 *Dobbs* decision that is actively dismantling reproductive rights in the United States. This case has been an inflection point for many to increase their engagement in politics out of fear of what rights might be curtailed next. For example, the *New York Times* reported that following *Dobbs* the United States experienced an influx in the number of women voter registrations (Paris and Cohn 2022). One activist described her theory as to why: “We know that what motivates voters is usually their pocketbook, the economic issue, but will it be the thing that gets them to turn out? What gets them to the polls could be the abortion issue. It could be that fear” (Paris and Cohn 2022, third-to-last paragraph).

On the other hand, in countries that are experiencing recent shifts towards democratization anger might evolve to be a motivator for increased political engagement. In Malaysia, for instance, the Bersih movement has been a crucial force for this shift. In recent years, however, the movement has grown even larger to incorporate other disadvantaged populations. Namely, urban Chinese voters have joined Bersih reflecting “the anger of the largest urban professional and middle-classes" (Teik

2021, no page).

6.2 Concluding Remarks: Enthusiasm and Winning in Democracy

Across all studies, I find that treated advantaged individuals are more likely to experience enthusiasm when learning that suppression benefits their group. What is more, treated advantaged respondents who experienced enthusiasm when seeing the treatment, are less likely to engage politically. This finding is made even more clear when I randomize advantage in the gerrymandering case and then consider the heterogenous treatment effects across each party. Democrats in the first test were very angry when they learned about suppression and anger had a total mediating effect on their propensity to vote. This was not the case, however when this same group was told that it was being advantaged by electoral suppression. Instead, both Democrats and Republicans experienced enthusiasm and did not engage more.

In the larger literature, the presence of enthusiasm is expected to increase an individual's propensity to engage in political activities. However, my findings in Chapters 4 and 5 reveal a common pattern. Disadvantaged voters demonstrated lower levels of enthusiasm when faced with long voting lines, while advantaged voters exhibited significant and positive levels of enthusiasm upon discovering that gerrymandering and poll burden favors their group. This particular finding highlights the necessity for further research, particularly within the American context, to explore how enthusiasm regarding undemocratic outcomes influences political behavior. It specifically shows that this emotion, when experienced by enthusiastic and advantaged individuals, does not mobilize political engagement, as they perceive no need to incur additional costs associated with participation. This is primarily because advantaged individuals perceive their group as already being in a winning position, and in the absence of any perceived threat, they see no reason to actively engage. In the case of donating MTurk rewards, politically advantaged participants, despite witnessing the presence of an undemocratic institution, do not take significant action to mitigate its effects because it is helping them.

The role that enthusiasm plays in this research has important implications for the study of democratic backsliding in the United States. Typically research has focused on manipulated electoral institutions and fraying political norms. It is common to point the finger at incumbents and elites who seek to win at all costs by manipulating institutions. However, this research shows that elites (particularly in democratic contexts) are only as successful as voters allow them to be. Anger can motivate disadvantaged voters to turn out more. We see that fear might be doing this as well.

Sometimes increased mobilization among those that are disadvantaged by electoral suppression can neutralize suppression and even result in elites politically losing. We see this in the Georgia case: people were likely angry and annoyed at long lines, but they chose to stay and vote anyways. In the end, Democrats regained control of the United States Senate. Sometimes, however, anger does not mobilize enough to offset the effects of suppression. This can be a result of the success of the suppressive tactics, but it can also be because only the disadvantaged are participating more. Absent are the voters who witness suppression, learn that they benefit from suppression, and then choose to stay home and not act to mitigate the effects of suppression.

This research sheds light on the supporting role that voters play in their country's democratic backsliding when they benefit (or politically win) because of electoral suppression. Every test in this dissertation reflects a similar trend: advantaged voters are more likely to be enthusiastic and are more likely to disengage when suppression helps them politically. I intend to explore the role that enthusiasm plays in democratic backsliding by disentangling what is more important to voters in democratic contexts like the United States: politically winning or upholding democracy.

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