

National Crises and their Effects on Political Polarization in the United States

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ABSTRACT

It continually seems that the American political system is growing more fragile by the day. In the early 20th century, the U.S.'s involvement in the two World Wars saw people disregard things like political preferences and bind together to fight for a common cause. Today, this behavior has been replaced by shouting matches between legislators of different parties and an electorate sharply divided on the most straightforward of matters. When did we become so polarized? Additionally, what caused us to become this way? One factor in particular that appeals to me is a national crisis. These are times when the whole of America is faced with a nationwide challenge or threat to overcome. They are the perfect scenario to test the true measure of teamwork and resiliency. In this thesis, I explore these types of crises and look to see what effects they have on our political systems. These phenomena are wildly important to our well-beings and the forward progress of our society and I hope to draw attention to these issues in an attempt to highlight the imbalances that have long contributed to the decline of American prominence on the global stage.

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Introduction

Over the past five decades, U.S. political ideologies have skewed beyond recognition from 20th century liberalism and conservatism. Since the 1970s, America's fixation with partisanship has grown into an environment where identity politics have shaped the bounds that we as a society operate within. Undoubtedly, evolution of American politics has been influenced by innovations in technology and interpersonal communications, but the negative effects of such advancements have ironically divided Americans as much as they have united them. Research on links between politics and digital communication is extensive, with explanations ranging from social media influence and how it helps elites connect with their constituencies to the ability for instant communication to allow for political change to occur at rapid speeds. In spite of digital politics, however, the fact that different people will continue to express their unique virtues, combined with the luxuries of remote communication, has led many Americans to factionalize themselves on bases such as religion or political partisanship. This has shown to increase homogeneity as people have proven the tendency to arrange into groups of like-minded individuals that confirm their beliefs. In context of political elites, the result is often stalemate in policy and frequent conflict between the parties on a range of talking points. Politics in the digital age have become increasingly defined on the basis of identity—whether it be physical traits such as race, sex, or gender, or other non-material facets such as religious faith and political party—and as a result the nation has slowly entered into a division between liberal Democrats and conservative Republicans.

This particular phenomenon, one that has long intrigued many scientists but often goes unmentioned, is called **political polarization**. Simply put, political

polarization is just as it sounds...polarized politics. It is typically characterized in the U.S. by the two major political parties pulling apart in ideological preference until they reach the 'poles' of the political spectrum. This occurs when the mean ideology of a party becomes more homogeneous and results in groups of Americans with similar beliefs and minimal dissent towards other views or biases.¹

Over time, the words "liberal" and "conservative" have become near synonymous with "Democrat" and "Republican" respectively. These compositional changes have removed the presence of the moderate from American politics and ultimately reorganized the Democratic party to house the liberals while the Republicans harbor the conservatives. The question is then begged: How are we so polarized? What has caused us to end up this way? As mentioned, changes in interpersonal communication have been found to have strong correlation, but the focus of this paper is to determine the how political polarization increases or decreases during a time of nationwide chaos. It is worthwhile to study why the U.S. has become polarized in order to make corrections to our behavior and restore a sense of unity amongst Americans. A common ground for all members of a nation to walk on is crucial to the survival of any nation and is essential to the safety and security of Americans during a widespread crisis, when cooperation is paramount.

The start of the 2020s have been overshadowed by the coronavirus pandemic that has reshaped nearly every aspect of our day-to-day lives. Nearly all interpersonal relations were rendered digital throughout this time and the immense degree of radical change to American livelihood will continue to have long-lasting effects on the population. Over the course of the past several months, communities around the

¹ "**Mean ideology**" refers to a party's average ideological position on the DW-NOMINATE scale

country highlighted systemic imbalances in the treatment of the underrepresented, intending to draw attention to the inequity faced by them and to call the attention of political elites to take action. Other communities expressed their frustrations with the liberalization of American society and expressed domestic support for the government in direct contrast. In spite of the central focus of COVID-19, American politics has seen the spotlight increasingly over the past several months, which brought forward the partisan-centric rhetoric and behavior of the Democratic and Republican parties as they have increasingly diverged.

Noting these observations, I expect that a nationwide crisis in the U.S. plays a vital role in the fluctuation of political polarization. The purpose of this paper is then to attempt a connection between the occurrence of a nationwide crisis and the polarization or unification of our politics. It is of interest to every American to know which tendencies of political elites and communities lead to more divisive governance and which increase our ability to unify and thrive as a nation. I begin by defining political polarization in greater detail and giving examples of how it presents itself in practice. I view polarization as a function of a crisis by examining the legislative behaviors of elected officials and the rhetoric used in journalistic reporting during various crises to construct the clearest image of the effects these periods in time have on our systems of governance. Following polarization, I delve into the nature of crises, including defining my parameters and exploring logistical differences between crises, seeking to link the two variables with a theoretical analysis of both existing and newfound knowledge.

To study the effects, I combine the use of data from legislative voters and news editorials. The first method as a test of polarization uses cohesion scores obtained by the roll call votes in Congress. The voting behavior of all members of Congress are

gauged throughout each crisis to determine the likelihood of dissent or cooperation within each chamber. Next, editorials from two major news sources, one left-leaning and one right-leaning, are used to observe the population's reactions and responses to events reported in the news. Editorials provide context to the mindset of the general population and their thoughts regarding various political and societal issues, although they are not a direct representation of changes in ideology within the masses. Finally, I use both of these methods in a small-sample case study that looks to compare other crises of the same type with the two main examples provided in order to draw a broader conclusion on what effect these periods of crisis can have on our government and population. I should add that an underlying reason for this study is to supplement our understanding of political polarization in the U.S. in an area of research that lacks current findings. Countless studies in political science have discovered information on polarization and national crises exclusively, but few so far have connected the two variables or drawn a correlation between polarization and nationwide crisis. It is worth knowing how well we cooperate with one another during these times so that people can react to the situation with a coordinated response and so elected officials know what is expected of them when communities call for help during a crisis, as essential resources often become scarce. The sections to follow will discuss the existing literature on both polarization and national crises from what the scientific community at large has already discovered.

Political Polarization

'Political polarization' describes a group of individuals splitting into opposite extremes on the basis of policy or political partisanship. In the U.S., this can be seen as

Democrats becoming more liberal and Republicans becoming more conservative. Some causes of polarization include disparities in income, shifts in the Republican party's ideology over time, and increases in more extreme viewpoints within the political atmosphere. However, one thing many researchers of polarization agree on is the displacement of moderate politicians and voters. The mean ideologies of each party have grown more extreme in their relative directions; Democrats became slightly more liberal over time and conservatives have shifted noticeably to the right.² This paper will not focus on specific reasons for why this shift occurs, rather it is to observe its implications on the Congress and the American people during a crisis, including what effects that can have in the short- and long-term.

The term "polarization" is formally defined as people or opinions being divided into two opposing groups.³ This definition is particularly useful since it bears much resemblance to the increasingly distinct policy preferences seen from the major parties today. The ideological distinction of both parties has grown to be near absolute as both sides struggle to cooperate on anything. Nolan (McCarty, 2019) says that polarization is when the public and its leaders become increasingly divided over preferences of public policy, ideological orientation, and partisan attachment.⁴ He claims these three major factors all act in the separation of our societal preferences by drawing lines in the sand between groups of people with similar political beliefs.

Polarization can also be defined in a more general sense as the tendency of a group of individuals to become progressively more extreme on their preferences as they deliberate with other individuals like-minded to them. This effect is known as *group*

² McCarty, Poole and Rosenthal, *Polarized America*, 25

³ Cambridge English Dictionary, 12th edition

⁴ McCarty, *Polarization*, 7-8

polarization and it explains how political parties can become ideologically driven to extremes when their elected officials and supporters proliferate policy and political beliefs amongst themselves.⁵ Other explanations of polarization range in context and scope, such as in the 2016 study by Keith Poole, Howard Rosenthal, and Nolan McCarty, where they argue that polarization is the sorting of politics into ideological liberal and conservative “camps” that can be explained by moderate politicians and constituents vacating the political scene as the parties pull further apart.⁶ This explanation cites that the average Democrat is growing increasingly liberal while a typical Republican grows more conservative over time. Furthermore, (Poole; Rosenthal; McCarty, 2016) asserts that the two parties are becoming more homogenous; as extreme conservatives and liberals enter the Republican and Democratic parties respectively, moderates exit, and the diversity of the party composition declines.⁷

Polarization also has more indirect origins that derive from secondary points of perspective. Sources of political information such as cable news networks, social media, and online newspapers have developed a stranglehold on the biases of the people. (Barber and McCarty, 2015) notes that polarization has increased due to the confrontational and partisan reporting used frequently in American journalism since Watergate.⁸ The section of analysis dealing with editorials later on will show some examples of how this is so. Other studies such as (Prior, 2007) which found that the ability for viewers to choose the news networks they subscribe to has led to self-selected communities of viewers watching news that best confirms their biases.⁹

⁵ Sunstein, *Conformity*, 77-99

⁶ McCarty, Poole, and Rosenthal, 6

⁷ McCarty, Poole, and Rosenthal, 25-26

⁸ Barber and McCarty, *Political Negotiation*, 37-39

⁹ Prior, “Post-Broadcast Democracy,” 398-400

Prior's study goes on to suggest that news media has historically been confined to a single network for all to listen in the earlier days of television, whereas people today can choose from a range of networks that span the realm of political opinion.¹⁰ Anyone can simply watch a network that validates their beliefs while disregarding other information and over time this has an effect on the level of heterogeneity found in the mean liberal and conservative ideologies. Many others support this finding as a primary contributor to the increased separation of political opinions of the 21st century. Using the logic of McCarty, Prior, and Barber, political polarization is the act of the American political parties distancing themselves ideologically, widening the gap between them and each party becoming more extremist.

Many researchers agree that polarization exists in two main forms: elite and mass polarization. This paper will focus primarily on elite polarization since data for it can be found largely in congressional voting behavior, whereas mass polarization necessitates polling the opinions of thousands of individuals across the nation. That being said, I will still touch on mass polarization to give proper context. The remainder of this section will deal with these two categorizations as well as how they arise. Distinguishing between these two types is a crucial component of any study on political polarization as they each have profound effects on the cohesiveness of American society.

Elite Polarization

Elite polarization, or divisions between elected officials or party representatives, focuses on the Congress' failure to act in a bipartisan manner for the benefit of society.

¹⁰Prior, "Post-Broadcast Democracy," 398-400

DW-NOMINATE is a common numeric scale that measures elite polarization based on voter records of senators and representatives. Other metrics include party voting rates, cohesion indexes, or the spatial model of voting, all of which use a congressional roll call record to generate models or scores on a numeric spectrum. (McCarty, 2019) argues that elite polarization is rooted in decades of partisanship, increased campaign contributions, increasingly divisive congressional speeches given by major figures in either party, and later on the usage of social media.¹¹ (Marija A. Bekafigo et al., 2019) supplements this argument with similar findings regarding polarized elites, claiming that polarization frequently occurs along party lines because of politicians' inherent desires for reelection, a sign of political success in the United States.¹²

(Poole; Rosenthal; and McCarty, 2016) studied the positions of Democrats and Republicans in Congress to support their hypotheses that the average Democrat and Republican party means have become more widely separated and that moderates have been steadily vanishing from the board. These hypotheses look to prove that elite polarization has been on the rise in the U.S. over the past fifty years. Their research found that the difference in DW-NOMINATE scores in both the House and the Senate grew from 1970 to 2013, as shown in **Figure 1**.

Figure 1. Difference in Party Means (NOMINATE scores), 1970-2013

		Northern			Southern		
		1970	2013	Diff.	1970	2013	Diff.
Senate	Republican	+0.22	+0.55	+0.33	+0.24	+0.61	+0.37
	Democrat	-0.35	-0.40	-0.05	-0.13	-0.30	-0.17

¹¹ McCarty, 58

¹² Bekafigo et al., "Effect of Group Polarization," 1164

House	Republican	+0.20	+0.70	+0.50	+0.21	+0.71	+0.50
	Democrat	-0.31	-0.31	0.0	-0.12	-0.35	-0.23

Figure 1. Difference in DW-NOMINATE scores in Senators and Representatives. Data represents the estimated net change of NOMINATE scores between 1970 and 2013. Data taken from (Poole; Rosenthal, McCarty, 2016). Southern scores are from congressmen from one of the eleven confederacy states, Kentucky, and Oklahoma.

The differences in the DW-NOMINATE scores can depict polarization by measuring whether the gap between the average Democrat and average Republican in Congress is widening or narrowing. These findings from the House show that Republicans began to lean slightly more conservative while Southern Democrats grew starkly more liberal with their voting agendas. In the Senate, Southern Democrats also became more liberal but both Northern and Southern Republicans had also become significantly more conservative. They also examine the dispersion of members of Congress using the standard deviation of their NOMINATE scores and the theory of vanishing moderates, which are labeled **Figure 2** and **Figure 3** respectively.

Figure 2. Standard Deviation of NOMINATE positions, 1970-2013

	House			Senate		
	1970	2013	Diff.	1970	2013	Diff.
Republican	0.17	0.18	+0.01	0.20	0.20	0.0
Democrat	0.20	0.13	-0.07	0.18	0.12	-0.06
Chamber	0.31	0.55	+0.24	0.33	0.50	+0.17

Figure 2. Standard Deviation of NOMINATE positions in Senators and Representatives. Data represents the estimated net change of the number of standard deviations of NOMINATE scores between 1970 and 2013. Data taken from (Poole; Rosenthal, McCarty, 2016).

Taking the standard deviation of a NOMINATE score will tell how far from the average position is each member of Congress is. An increase in standard deviation may indicate that members are beginning to disperse increasingly to the conservative end and a decrease indicates as much but to the liberal end. The standard deviation of scores for Republicans has nearly remained constant while the Democrats have become more homogenous. The dispersion of Democrats across the spectrum is narrower than Republicans, as noted by the decrease in standard deviation since 1970. The entire Senate saw a steep increase in dispersion of its members over the 43-year period, signifying that the chamber has become increasingly polarized.

Figure 3. Average Two-Dimensional Distance, 1970-2013

	House			Senate		
	1970	2013	Diff.	1970	2013	Diff.
Republican	0.22	0.23	+0.01	0.30	0.35	+0.05
Democrat	0.33	0.22	-0.11	0.34	0.23	-0.11
Chamber	0.61	1.10	+0.49	0.81	1.01	+0.30

Figure 3. Average two-dimensional distance between members of each political party. Data looks at the average of the within-party (pairs of members from the same party) and the between-party (pairs of members from different parties) between 1970 and 2013. Data taken from (Poole; Rosenthal, McCarty, 2016).

The average of within-party and between-party distances shows that moderates are becoming a rarity in U.S. politics over time. Individually, there is some change in average two-dimensional distance between members of each respective party, but surveying the entire chamber tells that moderates are leaving Congress relatively rapidly as the distance in DW-NOMINATE scores has increased with time. Observations

as these three can be joined together to formulate an image that suggests political polarization in the U.S. Congress is increasing overall. Evidence suggests that average positions of Congress members have been diverging for decades and that the dispersion of Democrats and Republicans across the ideological thermometer has remained static at best. Furthermore, the theory that the parties are pulling away from one another is supported by the fact that the House and the Senate are boasting a strong increase in distance between members of Congress.

Mass Polarization

Similar to elite polarization, which deals with the polarization of the political parties and elected officials, mass polarization focuses on the electorate and the cohesiveness of the voters. The definition of mass polarization varies in academia, but commonly refers to the division and separation of the citizens on the basis of partisanship or preference. In essence of political science, mass polarization is when individuals gradually become more extreme on either end of the political spectrum. Contextually, this indicates that Democrats and other liberal Americans are becoming more liberal while Republicans and conservatives become more conservative. Studies differ on the degree of polarization that has occurred within the U.S. population, if any, and whether mass causes elite polarization or vice versa. This section deals with the political behavior and attitudes of Americans and looks to draw connections in their preferences and beliefs to their political behavior.

The first argument to consider for mass polarization entails if Americans are even polarized to begin with. Matthew Levendusky claims in his 2009 study that mass

polarization does occur but is a long-term effect of conversions.¹³ Conversions are small individual changes in voter behavior or preference that can shift the aggregate public opinion significantly over time, leading to polarization. On the other hand, (Fiorina; Abrams; and Pope, 2005) found that the distance between sectors of public opinion do not vary by more than a few percentage points on many key issues such as taxes, immigration, and Social Security, regardless of partisanship or affiliation. They discover that the ideological space between voters on several contentious issues is relatively small and polarization represents the increase in ideological and political choices (more political parties, more choices for news outlets, etc.) that the people can make today compared to the past.¹⁴

Then there are studies such as (Layman; Carsey, 2002) and (Leeper, 2014) that assert that the dynamic of mass polarization is more intuitive than a one-dimensional shift in stance. Layman and Carsey challenge the idea of evaluating polarization through a one-dimensional variable and instead report that elites who adopt extreme positions on one issue but moderate positions on others will not generate any significant polarization.¹⁵ However, they determine that elites who adopt consistently liberal or consistently conservative policy agendas across multiple dimensions of policy will shape how the masses form their political opinions.¹⁶ Leeper concludes that mass polarization cannot be assumed at any one point in time, rather through an aggregate of personal and interpersonal dynamics at many different points in time.¹⁷

¹³ Levendusky, "Microfoundations," 174

¹⁴ Fiorina, Abrams, Pope, *Culture War?*

¹⁵ Layman and Carsey, "Party Polarization," 799

¹⁶ Layman and Carsey, "Party Polarization," 799

¹⁷ Leeper, "The informational basis," 25

For my analysis, I am observing to see if a national crisis that potentially significantly alters our fundamental understandings of our daily goings also has the effect of forcing elites and masses to either cooperate or polarize. Using the research conducted before me, I can assume that I will witness one or more of the following:

1. National crises have no effect on mass political polarization.
2. National crises shift the public opinion towards a common ground (reduced polarization).
3. National crises split the public opinion into subgroups and extremes (increased polarization).

This paper does not examine specifically whether mass polarization causes elites to polarize, nor the opposite. For the purposes of my research, I pay attention to whether or not polarization is generated at all after the masses endure a crisis. In my specific case, I will be looking to see if a crisis causes the elites and masses to diverge or converge and will note specific conclusions of each. Following this section, I look into the specifics of a crisis—how they arise, the different types of crises, other variables contributing to the mix—to see how they affect the progression of the polarization of the U.S. Congress and electorate.

National Crisis

A crisis is a pivotal period or event in time that causes significant disruption to daily life, intense fear, and often redefinition of our societal norms or practices. The Institute for Crisis Management defines a crisis as a significant business disruption which stimulates extensive news media coverage.¹⁸ The IGI Global Dictionary classifies

¹⁸ Jordan-Meier, “What is a Crisis?,” 8

a ‘national crisis’ as a situation or time at which a nation faces intense difficulty... or serious threat to people and national systems and requires “non-routine” rules and procedures.¹⁹ Simply put, a crisis can severely impact the many aspects of our daily lives while leaving the public in the midst of confusion and panic as to what is happening. Events in history such as the Civil Rights Movements are sometimes labeled as crises due to American policy being disrupted and disposition regarding Black Americans becoming heavily contentious. The movements in their entirety swarmed the news for months, even years, as millions of underrepresented Americans took to the streets to demand their equal say. The Nazi German blitzkrieg of Poland in 1939 is considered to be the initial starting point of World War II—a prominent period of crisis in world history—as Nazi soldiers invaded and usurped control of the Polish land, sending millions of Poles into terror for their security. Both of these events in time were significant disturbances that stimulated wide media coverage and represent situations which a national population experienced serious threat to its safety. In both of these events were unconventional procedures used to accommodate for the chaos that ensued. The effects of a crisis vary depending on the circumstances of how they came to be and how they unfold with time, but each contain commonalities to properly distinguish them from issues of inferior prominence.

Types of Crises

The extent to which a crisis can vary in context and scope is much like the analogy that no two snowflakes are alike. Crises are grouped based on factors such as their circumstances of onset, logistics, and short- and long-term effects. In order to study

¹⁹ IGI Global Dictionary, 2021

these variables of a national crises on our political systems, I first define a national crisis using three criteria. A national crisis must:

- Be an event or act that instills fear and uncertainty into the minds of the majority of Americans
- Be the primary cause of a major financial deficit (decrease in GDP from the previous fiscal quarter) or mass loss of life (≥ 1000 lives lost) or both
- Initiate a change in public policy and procedure to accommodate as many affected individuals as possible

I propose a two-dimensional classification that categorizes crises based on circumstances of onset and timeliness. This paper will primarily evaluate polarization from crises using the former, but the latter is important to understand that how quickly a crisis unfolds also determines the type of response generated by the population.²⁰ Specifically, I am evaluating them into these broad categories: crises of national security and crises of public health. The UN defines national security as the ability of a state to cater for the protection and defense of its citizenry.²¹ Applying this definition for the purpose of this paper, a national security crisis is characterized by something that meets the three abovementioned criteria and prevents a nation from supplying its population with protection from a foreign actor or entity. Public health crises are classified using the same three criteria but involve the physical, mental, and psychological health of individuals affected. Christopher Nelson et al. (2007), a study into public health emergency preparedness, informs that a public health emergency is a situation where the personal health of the population has consequences that can overwhelm the

²⁰ See **Theory**

²¹ Osisanya, "National Security versus Global Security."

systems designed to handle it.²² In using this logic, I say that a crisis of public health is characterized by something that meets the three criteria mentioned above, poses a threat to the health of individuals, and overwhelms healthcare protocols and systems beyond intended capacity.

The second dimension of measuring a crisis deals with timeliness. More specifically, there are different time categorizations that a crisis can assume based upon how quickly they arise from a situation. The Universal Accreditation Board (UAB), an organization that deals with accreditation of public relations and service, lists three types of crises from their public crisis management study: immediate, emerging, and sustained.²³ Immediate crises, also *sudden* crises, are events that occur with little to no forewarning, most often a natural disaster. These are especially impactful because the lack of prior knowledge means many are unprepared for the ensuing emergency that most often generates mass chaos and panic. Emerging crises begin slowly with minor disruption or little notice but can grow rapidly over time if left untended. The COVID-19 pandemic represents an emerging crisis, in that the initial onset was slow and went noticed only by few, and that despite warnings, the size of the issue surpassed that of the response and eventually unfolded into a worldwide event. Lastly, sustained crises occur when a situation with negative implications on the public remains unnoticed or uncared for and ultimately becomes a serious issue later on. Political issues such as providing universal healthcare in the U.S. have turned into sustained crises with the coronavirus pandemic that has put the health of millions at risk without the infrastructure

²² Nelson et al., "Public Health Emergency."

²³ "Crisis Communication Management"

or resources needed to adequately handle the situation, whereas there would be no need for increased capacity under average circumstances.

Crises and Political Polarization

As a nationwide crisis unfolds, public security and safety wanes as fear grows strong in the minds of the inflicted, which has historically had extraordinary effects on our systems of politics and governance. The Influenza pandemic of 1918 came at a time when the U.S. had been battered from World War I, taking an additional 675,000 lives to those lost in the war. Changes to public health practices and advancements in medical knowledge followed in the decades to come, many of which are still useful in today's medicine. Hospitals filled to capacity were forced to turn down ill patients who were sent to off-site care facilities that did not boast the same standards of accommodation. The 1941 attacks on Pearl Harbor that killed 2,400 people and threatened U.S. national security sparked strong retaliation and anti-Japanese sentiment ultimately drove the U.S. into World War II, from which the nation emerged as a world power. The 2007-08 subprime mortgage crisis in the U.S. was a culmination of low interest rates on loans given to individuals to capitalize on high-value goods such as appliances, cars, and homes. The fallout of the catastrophe created a \$17 billion decline in the net worth of American housing and cost between 7 and 8 million jobs through 2008.²⁴ The resulting disorder was expressed through record disapproval of President George W. Bush, an economy in ruins, and U.S. politics suffering from record levels of polarization.

Crises tend to have an inconsistent effect on the outcome of political polarization. In my research, I have uncovered much the community has had to say regarding both

²⁴ Encyclopedia Britannica, "Financial crisis of 2007-08."

polarization and crises, however there is seemingly no existing literature that ties these two variables together. I presume this is due to the fact that “crisis” is broadly defined and many researchers focus their work on more specific types and examples of crises instead. Nonetheless, I seek to bridge this gap with my study of polarization, its variations, and its implications with the emergence of a general crisis and how the elites and masses react to it.

Context

This paper deals specifically with crises at a national scale. I will not be covering topics such as crisis management or lower-scale emergencies of entities such as corporations or businesses. This distinction is important to note in order to differentiate a crisis from a business venture in dire straits. My end goal is to seek the effects of political disparity that a nationwide event can have on the greater population and the elected government officials. Smaller-scale incidents do not fully encompass the effects of a broader threat since they do not have as much of a widespread impact on the population or the government.

Using my earlier definitions, I examine two major American national crises and their effects on American politics throughout their duration. The first crisis is the September 11 attacks of 2001, where a band of jihadists piloted four planes into World Trade Center and the Pentagon, killing nearly 3,000. September 11, hereinafter “9/11,” is notorious for dismantling the notions of invulnerability Americans had adopted following the Cold War. In addition, thousands of lives were lost, and GDP increase was down by an average of 1.3 percent.²⁵ Massive overhauls of policy like the USA PATRIOT Act

²⁵ Bureau of Economic Analysis, “Gross Domestic Product 2001.”

were overtaken to reform and replace pre-existing national security regulations to increase chances of intercepting future terrorism. The American way of life was drastically impacted by the results of 9/11 and the sudden changes it brought about with the attacks on our soil. The second crisis evaluated is the 2020 Coronavirus pandemic, caused by uncontrolled worldwide infection of the COVID-19 virus and characterized internally by the incredulous shift in daily life and public policy. During the 2020 pandemic, communications have near entirely been rendered virtual, public discourse has become increasingly polarized, and approximately 2.8 million deaths have occurred globally as of March 2021 according to the New York Times.²⁶ Real GDP decreased by 31.4 percent in Q2 of 2020 when the pandemic began and millions of Americans have been put out of work due to the economic fallout generated by the crisis.²⁷ Fear and uncertainty are the popular characteristics of COVID-19 as groups of worried individuals are scatterbrained by the plethora of economic, financial, and public health challenges faced on a daily basis.

The sections of this paper that follow will describe the general theory I propose for why rates of political polarization fluctuate as a crisis emerges and becomes resolved. The premise of my argument claims that national crises, depending on the onset and level of severity, play an important role in the variance of teamwork or lack thereof in the two major American political parties. Democrats and Republicans often clash between policy and directionality of the United States on a regular basis, and this exaggerates greatly when events that require immense coordination between elected officials and communities arise.

²⁶ New York Times

²⁷ Bureau of Economic Analysis, "Gross Domestic Product, Third Quarter 2020."

Theory

A crisis that imposes a severe threat to the U.S. could have significant ramifications on the unity of American politics. If a crisis were to have enough of a widespread effect, it would reinforce people's shared interests in community membership and increase their desire to coalesce for support. I explore the ties between the presence of a nationwide crisis and an increase in political polarization or unification, and why a crisis can cause either to fluctuate. It should not be assumed that the nationwide reaction to an emergency will be consistent each time one occurs; rather that the type of which that the population endures will dictate the overall response to that specific crisis.

The existing literature provides a substantive understanding of how people react to danger, real or perceived, as well as the ways in which they form connections amongst themselves when the need to work together arises. Given my findings on interpersonal behavior, I theorize that individuals will behave in one of two ways during a national crisis. First, people often tend to work together to overcome an enemy or challenge when the opposing force is perceived to be apparent and irrefutable by all who witness it. When a crisis boasts a 'common enemy'—an indisputable cause that cannot be excused or ignored—it generates the awareness needed to unify the population against the threat and restore order. Crises which present this 'common enemy' to assemble against are more likely to solicit a unified response from the individuals who have been affected by it. Second is the belief that following a traumatic event, liberals tend to become more liberal while conservatives tend to become more conservative. This is known as the *ideological intensification hypothesis* and it has been included in many studies like (Huddy, Feldman, 2011) and (Hersh, 2013) to test if

crisis-like events such as terrorist attacks have an impact on the political ideologies of the affected individuals. The hypothesis explores victims and witnesses and looks to find trends in individuals' behavior following these traumatic events and notes changes in political stance, partisanship, or ideology.

The two types of crises I am examining for this study are a crisis of public health and a crisis of national security. A national security crisis regards the safety and defense of the United States and its people from a foreign actor or unforeseen entity. 9/11 was a series of coordinated terrorist attacks from a Muslim extremist group out of the Middle East, and it is widely considered to be one of the most devastating national security crises in American history. The populations' response to the attacks on the Twin Towers was loud and clear. Many people experienced anxiety while others were angry, but the commonalities in attitudes were increases in domestic commitment and worldwide support for all Americans. The attack was so brutal that it made headlines across the U.S., presidential approval and support rose up to record-breaking levels, and global support for the U.S. was extremely prominent in the weeks immediately following the attacks.

The other type of crisis, a public health crisis, is an emergency regarding the physical and mental health of Americans. The SARS-CoV-2 virus has culminated into a pandemic that has upended the means of daily life in the United States since its inception back in December 2019. The virus' high infectivity and death rates have made it unsafe for congregation and people have had to innovate ways of communication and coordination to keep up with the daily rush. Given that the coronavirus affects people of certain geographical locations differently than others, it is worthwhile to note that not everyone shares the same set of opinions on the severity or even existence of the virus.

The spread of the virus is more prevalent in denser urban and suburban areas, where more people reside closer together. Spread to more rural areas, however, while a reality, has not been as prevalent as what we have seen in bigger cities. These disparities have created bias for individuals with less potential exposure to the virus to be less concerned with safety protocol than someone at higher risk of exposure. While there are many Americans who are concerned regarding the pandemic, many instead have underestimated, even outright dismissed the whole thing.

The theory I have proposed focuses on two key factors, the 'collective fate' of the population, or 'common enemy' theory stated earlier, and the disorganization caused by the onset of the crisis. 9/11 was an act of destruction that stoked fear in the American public; everyone was brutally aware of the crippled state of our national security. Fire engines, police officers, and panicking civilians all lined the streets of Manhattan as clouds of smoke billowed from the blazing fires atop the towers. The unfortunate sighting of two fifty-ton airliners plowing through the top floors of the World Trade Center left no doubt in anyone's mind that the attacks of that morning were anything but premeditated. The shocking events that took place were enough to convince anyone who witnessed the tragedy that the common enemy were the group of individuals who carried out the acts of cowardice. However, viral outbreaks are not as outwardly apparent. Examples such as the early confusion by the U.S. Centers for Disease Control and Prevention (CDC) on whether or not the public should wear masks, the government's dismissive actions of the pandemic, and the decreased likelihood to physically witness the virus in effect all reflect how the public views the situation. COVID-19's effects are only experienced if oneself or a someone close to them becomes infected. Due to these perceptive differences, I hypothesize that the type of

crisis is a determining factor in the public's reaction to the crisis, which does alter the degree of polarization that occurs.

To test this theory, first I describe the basic understanding of my analysis. I have devised two hypotheses: one intended to find out if any crisis can cause fluctuations in political polarization and another to see if one type of crisis is more effective than the other at uniting or dividing the population. Both are tested using a methodology meant to show shifts in the degree of political polarization in the U.S. using a set of statistical tests that are compared with each other for similar trends in the data.²⁸ In addition to two alternates, the null hypothesis assumes that there is no connection between a national crisis and a change in rates political polarization:

H₀: There is no relationship between a nationwide crisis and a shift in rates of polarization within the Congress or the national electorate.

H₀ assumes that political polarization is mutually exclusive from a crisis. This argument implies that after the fact, the trends witnessed in political polarization will not match with those of the test variables. Given the strong set of arguments provided by the literature on crises and political polarization, individuals are more prone to seek attention from others during a crisis, and groups of individuals are likely to have their viewpoints intensify when allowed to deliberate with one another. This makes it difficult to believe that there is no relationship between the variables. Nonetheless, I will fail to reject the null if significant trends between changes in polarization and crisis type do not align as hypothesized.

²⁸ See **Research Methods**

The first alternate hypothesis suggests that a national crisis will have a significant effect on the degree of political polarization in the U.S. An event that generates the level of widespread attention, such as a crisis of national security or public health, has historically been followed by states of pandemonium, demonstration, and violence. Pearl Harbor devastated part of the U.S.' Navy and sparked outcry for war with Japan, and later strengthened the anti-Japanese sentiment felt by many Americans. 9/11 caused mass chaos throughout New York and the rest of the United States for weeks following the attacks, with demonstrations of anti-Muslim rhetoric and behavior increasing and a slew of subsequent policies to counteract future terrorist attacks were swiftly implemented. COVID-19 trumps all in these regards however, with the pandemic coming at the highest levels of polarization seen in the U.S. for over a century. Panic for public safety infiltrated communities around the globe, supplies of essentials and medical equipment ran dry within weeks, numerous protests for social class justice occurred throughout, and elected officials behaved in a manner not previously witnessed in the government. All of these factors have undoubtedly contributed to how united the United States of America truly is.

H_{A1}: A nationwide crisis will have an effect on the polarization of the U.S.

Congress or national electorate since the attention it receives leads to a mix of political and social responses that have cornerstone differences.

The other alternative deals with the collective fate of communities and individuals. With a crisis like a terrorist attack, it's common for people to see the act or perpetrator as the primary threat to their safety and disregard their established beliefs,

opting to work together. A mutual understanding of a common enemy then develops in the forms of organized efforts to help the victims and strong support against retaliation. 9/11 created many moments where New Yorkers banded together and fought through the difficulties of recovery from the fallout. COVID-19, in spite of heated disagreement over public health guidelines, saw efforts by willing individuals and groups to help families and victims in need of social, financial, and medical aid. Throughout the pandemic, many embraced their collective fate alongside those in need. The premise behind collective fate is that individuals, regardless of predisposition, will agree to work together when a greater cause warrants it. But not all crises are equal in how many people share in the collective fate. When the target of opposition is something apparent and obvious, such as a terrorist attack, those directly affected are likely to unify further since there is a common opposition between them. With regards to a public health emergency like COVID-19, however, certain communities were harder-hit with the virus than others, which created a disparity in the degree of severity that those communities responded with. There were debates about wearing a mask in public, the legitimacy of treatments, and who was responsible for the initial outbreaks. These types of concerns are less common with a crisis like 9/11 often because any cause can be more easily identified. H_{A2} details how public health crises, due to their uncertainty of origin and context, will generate less share in collective fate and more polarization than national security crises.

H_{A2} : Political polarization during a crisis of public health will increase more than it would during a crisis of national security due to the increased uncertainty attributed to the public health emergencies.

Common discourse is essential to our daily lives, especially when clear and consistent communication is necessary to maintain order. The age of misinformation is upon us in the 21st century as advancements in society have simplified interpersonal communication to the point where anyone with access to the internet can speak their voice. More Americans than ever before are connected to their preferential social media and news platforms and with that comes the heightened chance that misinformation is spread and absorbed. The lack of an immediate party to blame for the sudden changes and uncertainties that a public health crisis brings makes it the favored candidate between the two to experience higher rates of confusion, misinformation, and polarization.

Research Methods

Data

I compile two different types of data for my analysis on political polarization. First, the U.S. Congress database of roll call votes from both chambers of Congress was used in calculations of polarization for each chamber. Roll call sheets from the 107th and 116th U.S. Congresses that display number of votes for and against each bill are plotted to show how cohesive or polarized political elites have become over time.²⁹ The second source of data are editorials from news sources reporting at the time of both crises. Opinions from two major news outlets: The New York Times and Wall Street Journal, both reporting at the time of each events were categorized by keywords and the general messages sent by each. Data were chosen by taking every third editorial in every Monday, Wednesday, and Friday edition of each opinions section (with the exception of the median week, where every third editorial was chosen each day from Monday through Friday) from a twenty-nine-week period surrounding each crisis. The median week for each subset analysis is the week that contains the start date of the crisis and the study extends out fourteen weeks before and after the median week for each.³⁰

Variables

Roll Call Variables

Variables for roll call voting include 'Yea' and 'Nay' votes, indicating a particular legislator voted in favor of or against the piece of legislation respectively. For practical purposes, all 'Aye' votes will be counted as 'Yea' and all 'No' votes will count as 'Nay'.

²⁹ See **Figures 7 and 8**

³⁰ See **Figures 12,13, and 14**

These categorical variables are then put through the Rice Index in **Figure 4** below to determine numerical value of cohesion in that particular chamber for each bill. Political polarization is then found by taking the resulting cohesion score and subtracting it from 1. Using the Rice Index, each set of votes for a particular bill received a score from 0 to 1, with a lower score denoting higher polarization. Votes of 'Present' or 'Not Voting' will be disregarded for the purposes of these calculations. T-Tests will be conducted on the variables of cohesion over time to see if the trends observed align with what is predicted to occur.

Margins of roll call votes are a useful supplement to party divisions as further proof that certain bills and motions will draw different levels of support from each party in Congress. Wide margins indicate that most senators and representatives are voting in agreement with one another, whereas narrower margins signal that the numbers of 'Yeas' and 'Nays' are near equal. In accordance with my theory, if polarization were to be rising, I will see high ratios of narrow margins to wide margins after each crisis compared to before. Likewise if polarization were declining, then roll calls with wide margins would be more prevalent.

Editorial Variables

Editorials and opinions are coded from The New York Times and Wall Street Journal. As noted earlier, these are intended to provide temporal context to legislative behavior (e.g. if cohesion begins to drop rapidly, stories from the news that tell of current events could potentially explain what is causing the behavioral shift. An editorial can be coded to be both in support and criticizing of the same aspect or different aspects. An example would be an article dealing with climate change and all that the

EPA has done to counter the ordeal but also having their relief efforts being thwarted by carbon emissions from a major oil company.

There are six ordinal categorizations that each editorial was sorted into. All of these variables come in the form of numeric scores of either “0” or “1” that denote unfavorable (0) or favorable (1) speech with regards to each category. Not every editorial will have a score for each variable, so the average scores of each variable will reflect only the editorials that received a 0 or 1 in in that category.

- **Executive Branch** – Is the editorial in favor of or against the executive branch or members of it? This variable extends to all members of the executive branch, including the President and members of the President’s cabinet, as well as officials who are the heads of executive branch agencies such as the Department of Homeland Security (DHS) or Department of Justice (DOJ). An editorial criticizing the President for his policy that grants tax cuts to the top 1 percent would receive a “0” for the executive category.
- **Legislative Branch** – Is the editorial in favor of or against the legislative branch or members of Congress specifically? This includes all senators and representatives, including the Senate Majority/Minority Leaders and the Speaker of the House. An editorial commending Senator George Murphy for the passing of a national security bill in the Senate would receive a “1” for the legislative category.
- **Judicial Branch** – Is the editorial in favor of or against the judicial branch or any judge specifically mentioned, including Justices on state High Courts and the U.S. Supreme Court? An editorial that praises a circuit court judge’s ruling on a

man's settlement with his company over damages to his property would receive a "1" for the judicial category.

- **Local Government Official** – Within the editorial, if a local- or state-level politician, legislator, or executive is mentioned, then the local government category will be coded "0" or "1" depending on the authors opinion of them or their work. An editorial denouncing the governor for his refusal to wear a mask in public during the COVID pandemic would receive a "0."
- **Democrats/Democratic Party** – Does the editorial speak about Democrats or the Democratic Party as a whole? Editorials criticizing Democrats or the Democratic Party receive a "0" and those praising them receive a "1."
- **Republicans/Republican Party** – Does the editorial speak about Republicans or the Republican Party as a whole? Editorials criticizing Republicans or the Republican Party receive a "0" and those favoring them receive a "1."

Editorials may receive a coding for more than one ordinal category, but no editorial can have both a "0" and a "1" for the same category. For tiebreaking purposes, the ratio of positive to negative opinions will determine if an editorial receives a "0" or a "1" for that category. An editorial that mentions how Democrats are underperforming in sixteen different states and criticizes their policy decisions from the past three months, but also mentions how they passed a bill to fund housing developments for lower-income families would still receive a "0" since it contains one positive thought and two negative thoughts.

Modelling Data

Polarization will be determined using two different score indexes that both generate numeric results. Roll call votes will use the Rice Index, which takes the absolute value of the number of 'Yea' votes minus the number of 'Nay' votes and puts it over the total number of votes cast to determine the level of cohesion between voters for that bill.³¹ The formula to be used is presented in **Figure 4**.

³¹ Stuart A. Rice, "Quantitative Methods," 1938

Figure 4. Rice Index

$$C = \frac{|Y-N|}{Y+N}$$

Figure 4. represents the Rice Cohesion Score used for determining a numerical value between 0 and 1 that measures how cohesive politicians are on legislative decision-making. When extrapolated across an entire session of Congress, one can determine the likelihood that the Congress is willing to agree with one another on policy. Polarization is found by subtracting the resulting cohesion score from 1.

The process for editorials is much the same, although instead of the Rice Index, the process uses variance and standard deviation to depict the distance from the median score of each editorial over time. Each model uses the variable p which is the proportion of editorials that have “1” codes to “0” codes. These scores are calculated for each of the six numeric variables used to sort the editorials. The variance and standard deviation functions are modeled in **Figure 5**.

Figure 5. Variance (P_1) and St. Deviation (P_2) of Editorial Favorability Formula

$$P_1 = p * (1 - p)$$

$$P_2 = \sqrt{p * (1 - p)}$$

Figure 5 represents the variance and standard deviation functions of 0/1 variables, used to find the variance and standard deviation in the proportions of editorials that are favorable to those that are unfavorable. By taking the percentage of “1” votes multiplied by the percentage of “0” votes, the resulting score is one way to measure for polarization in the masses during a given crisis.

To test H_{A1} , I will expect to see two things. First is a significant change in the mean cohesion after each crisis from before. If cohesion improves to a certain degree, it follows that the parties in Congress have grown closer in ideological position and that polarization is on the decline. Likewise, if cohesion significantly drops then the opposite is true and polarization is rising. The second thing is a decrease in mean editorial

scores from before to after each crisis. The mean score is found by the average value of zeroes and ones for each category. If this number drops significantly then public support for that particular group of officials waned over time and a significant rise implies growing public support. The formulas in **Figure 5** calculate the variances (P_1) and standard deviations (P_2) of these scores. Higher variances and standard deviations mean that the average scores are widely distributed from the mean score and that may indicate that opinions found in the editorials range widely in stance. I expect lower variances to denote lower polarization, as it would mean the individual editorials were clustered by opinion in their reporting and I expect higher variances to mean higher polarization since the individual scores likely stray far from the average opinion.

Testing Hypothesis H_{A2} builds off of the changes observed for H_{A1} and would imply that COVID-19 led to declines in cohesion and mean editorial score while 9/11 resulted in increases for both of these.

It should be ultimately noted that all trends discovered throughout this analysis were based solely on the observations and calculations that I personally made with the data. Presumptively, there are external factors beyond the scope of this thesis that are likely to influence the levels of polarization aside from those studied here. Further analysis of political behavior and media presence, as well as many other factors, is encouraged in continuation of this study to further specify what is observed here.

Analysis

Roll Calls

Roll call votes from the 107th and 116th U.S. Congresses were compiled for information on voting habits of representatives and senators. Three comparison

methods using these roll call votes were employed to show how congressional voting is reflective of political polarization over time. I performed these three different tests of the data: A T-Test used to show differences in the average votes, vote margins that show the difference between the number of yeas and nays for each bill, and a cohesion analysis using the Rice Index that outputs cohesion scores interpreted to be how similar or different voting behaviors of legislators are.

T-Test

The T-Test is commonly used to show the difference between the averages of two different groups. Specifically, this test is designed to show the averages in cohesion scores before and after each crisis. If the 'After' mean is greater than the 'Before' mean, this indicates that specific chamber became more cohesive, or less polarized, as the crisis moved along. The opposite indicates lower cohesion, or more polarization. **Figure 6** reports on the results of these T-Tests for both the House and the Senate in the 107th and 116th Congresses.

Figure 6. Roll Call T-Test Results

Roll Call T-Test Results				
Chamber	House		Senate	
Period	Before	After	Before	After
9/11	0.537	0.574	0.404	0.568
	p-val: 0.1598		p-val: 7.412e-08	

COVID-19	0.378	0.273	0.443	0.402
	p-val: 0.000639		p-val: 0.1669	

Figure 6 shows the results from the T-Tests conducted on the roll call votes from the 107th and 116th Congresses. T-Tests measure the distance of the anticipated mean from the true mean and are intended to compare the average values of both groups to see how they change over time. A value of $\alpha=0.05$ will be used to determine statistical significance, therefore a p-value less than 0.05 will indicate significant results.

For 9/11, the House and the Senate increased in cohesion following the attacks, but only the Senate results are statistically significant. These data suggest that polarization decreased in the Senate following 9/11 however the House results are inconclusive through this test alone since the House p-value is greater than 0.05. This is not to say that House polarization did not decrease after 9/11, rather that this particular test cannot confirm statistical significance of the data and further analysis is required. COVID presents markedly different results from that of 9/11 as both chambers decreased in cohesion, or increased in polarization, as the pandemic went into full swing. The House became noticeably more polarized after March 12, 2020, with a change of -0.105 to the t-statistic and a very low p-value to indicate significant results. The Senate, while polarization likely increased as well, cannot be confirmed by the data as the p-value is high.

These results alone are the first step in determining if we as a nation have become more or less polarized over time. Important to note, these T-tests do not account for the cohesion of either chamber before or after each respective

congressional term. Polarization may have already been increasing or declining before either of these sessions began, but these considerations are unnecessary for the purposes of this thesis. I am not as concerned with which direction polarization was trending prior to the start of either term (although it might be useful to note for other studies involving this topic) because there are several other factors that have an effect on the polarization of Congress that are not considered in this paper. I am simply looking to see if a crisis itself has any effect on polarization from before its onset to after.

To complement these results, I next look at the cohesion indexes of roll call votes. This dataset is presented as points on a plot that show actual trends in the data, which will be best matched up with the results from the T-Tests above to find similar conclusions.

Cohesion Indexes

The Rice Index, developed by Stuart A. Rice in *Quantitative Methods in Politics* (1938), assigns a cohesion score to each legislator across their term in Congress. The score is found by taking the absolute value of the difference in 'Yea' votes to 'Nay' votes over the total number of votes. A of 0 indicates that a bill's decision was perfectly divided (maximal polarization), whereas a score of 1 indicates that a bill was perfectly unified in its decision (maximal cohesion). A score of 0.5 implies that 75 percent of the legislators voted one way while the other 25 percent voted the other. **Figure 7** shows the cohesion scores of the House and Senate before and after 9/11 along with how they trend. These results were presented with a 95 percent confidence interval for statistical significance.

Figure 7. Cohesion Scores of 107th Congress

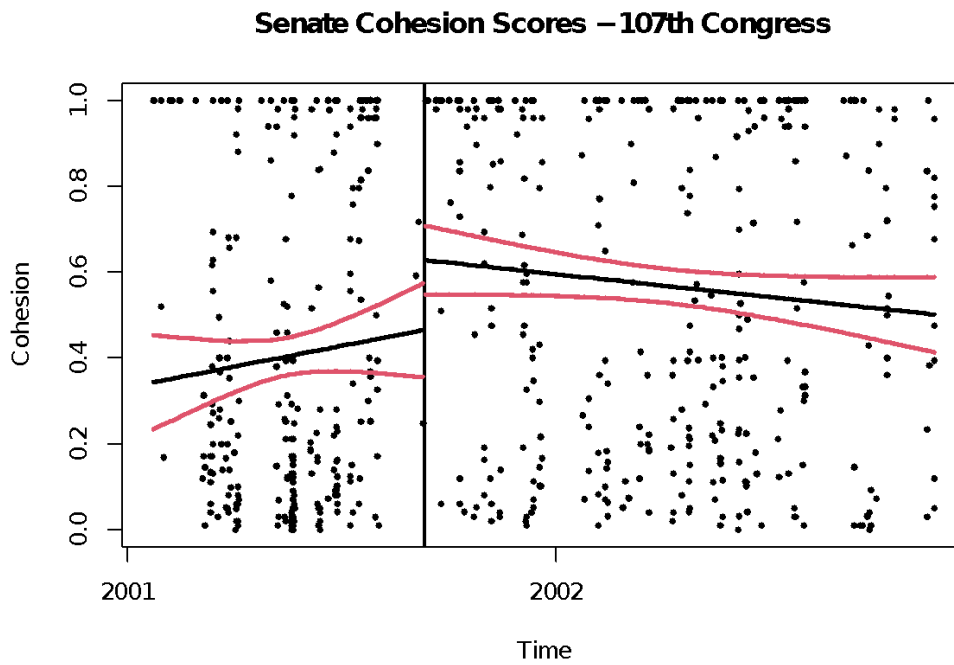
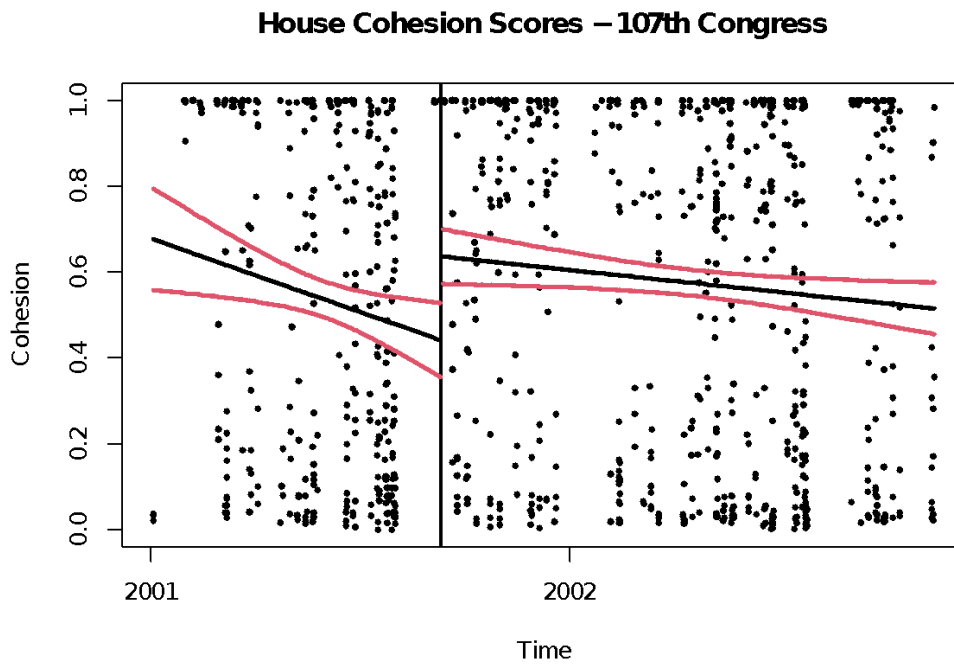


Figure 7 depicts two scatter plots of every bill's cohesion score in the 107th House and Senate (2001-2002). The vertical divider marks September 11, 2001. The black line indicates a trend in the data and the red curves show the range of trends with 95% confidence.

Beginning with the House, the T-Test reads that the average cohesion score rose by approximately 0.04. In the plot above, average cohesion in the House declined steadily both before and after the attacks and the chamber overall ended 2002 with a score lower than that of their starting point in 2001 by a significant amount. Despite this, the average cohesion in the House was higher following 9/11 compared to before. This would suggest that even though the average scores dropped with time, the 9/11 attacks did generate immediate cohesion amongst the representatives, which is also indicated by the rise in the House's t-statistic seen in **Figure 6**. Regarding the Senate, the T-Test says average cohesion rose by 0.164 with significance. The plot in **Figure 7** confirms this trend as average cohesion in the Senate was overall greater after 9/11 than before, even though it too was decreasing following the crisis. The Senate finished 2002 with a higher score than it began with in 2001 which further validates the T-Test results. These results are substantial and suggest that 9/11 decreased polarization in the short-term, however given the downward trends seen in both the House and the Senate following the crisis, more study is required to see what the long-term effects held.

The 116th Congress' cohesion index, modeled by **Figure 8** below, paints a different picture regarding how unified the chambers were throughout the coronavirus pandemic. It is commonly argued that "our politics"—a term to describe the cohesiveness of U.S. politicians in lawmaking—are more increasingly divided now than ever before, however this is a hasty generalization. The data in **Figure 8** assert a different notion.

Figure 8. Cohesion Scores of 116th Congress

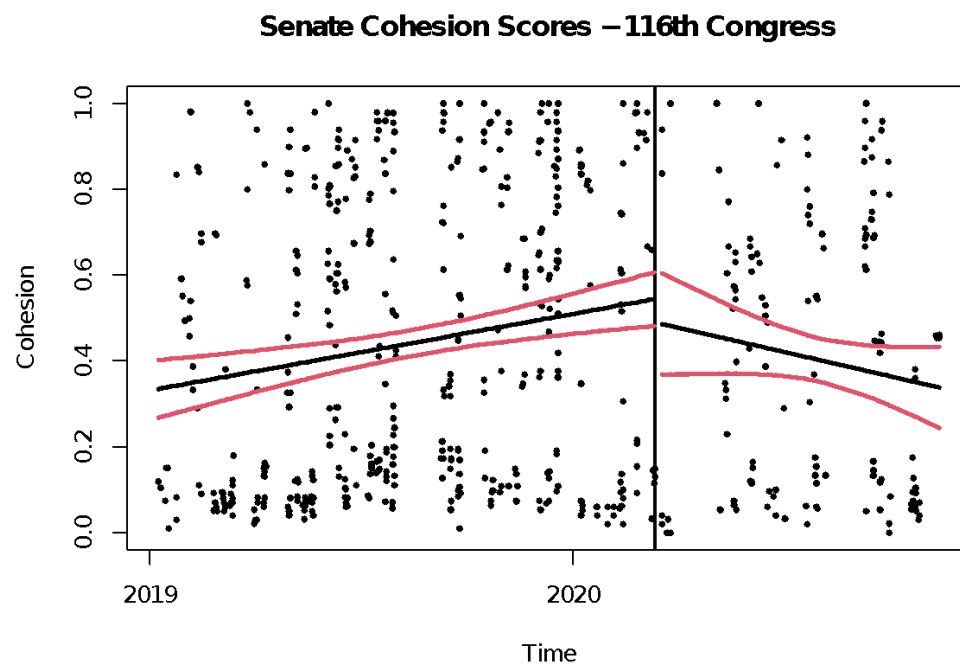
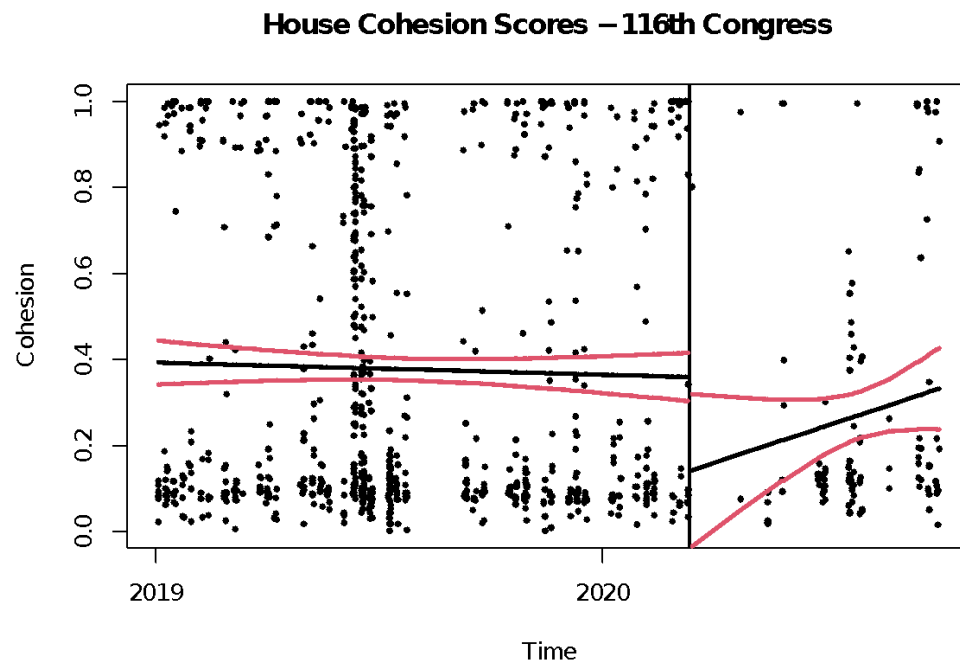


Figure 8 depicts two scatter plots of every bill's cohesion score in the 116th House and Senate (2019-2020). The vertical divider marks March 12, 2020. The black line indicates a trend in the data and the red curves show the range of trends with 95% confidence.

The plots in **Figure 8** appear starkly different to the ones in **Figure 7** at a glance. Paying close attention to the individual points on the plots, one can see that in both chambers there are far more points at the bottom of the plots than at the top. This means that there were more low scores than high ones overall, offering the possibility that polarization was generally greater in the 116th Congress than in the 107th. This observation is reflected in the trends which were overall lesser here than those seen in the 107th Congress. House cohesion declined slightly overall and the gap between the trendlines before and after March 12, 2020 shows that cohesion immediately plummeted following the announcement of COVID-19. The Senate hardly made any net progress across the congressional term as well, but the trendlines converge to form a hill that suggests the COVID announcement also created political polarization in that chamber. One thing I will remind the reader of here is that I do not account for how polarized the Congress was before or after these congressional terms. Although the data suggests COVID-19 caused greater polarization in Congress, there are likely to be other reasons in addition to this that this study does not take into consideration. The final complement for the roll call data will focus on margins of votes in bills. Margins are useful for showing how spread out the legislators are in voting for a bill and are presented below.

Margins

Margins lay a one-dimensional framework for polarization by expressing the general appearance of division in legislative voting on a simple 'yes/no' basis. The House of Representatives and the Senate were both surveyed to determine how cohesive each chamber of Congress is relative to the time before and after each crisis. House roll call margins are plotted below in **Figure 9**. A low margin means that there were roughly as many 'Yea' votes as 'Nay' votes which correlates to low cohesion and high polarization. High margins are the opposite, characterized by one option or the other receiving the majority of the votes from all legislators and indicative of high cohesion and low polarization.

Figure 9. Roll Call Margins of 107th Congress – House

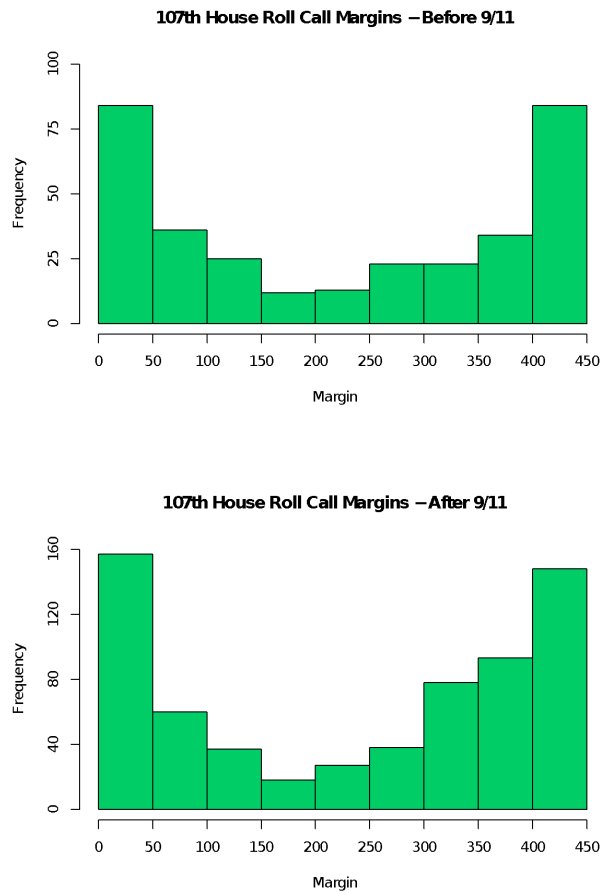


Figure 9 represents margins of roll call votes in the House of Representatives for the 107th Congress (2001-2002) before and after 9/11. The margin, plotted on the x-axis, is found by the formula $m = |\text{yea} - \text{nay}|$ and the frequency of bills that end with a margin inside a specific bin are plotted along the y-axis.

When broken down, **Figure 9** appears relatively symmetric between ‘yeas’ and ‘nays’ at first glance. The histograms above suggest that representatives are about as likely to vote with near unanimity as they are almost strictly divided. These two bars on the ends should be compared to the House plot in **Figure 7** where one can see many dots at the very top and bottom of the graph. The interesting thing of note here, however, is that while the number of bills rose by about 50% of the total number of the entire term following 9/11, the rates of wide margins to narrow remain approximately the

same. There is a slight decrease in wide margin results (bills decided between 400 and 435 votes) across the gap that points to more divisiveness following 9/11 in House roll call votes, which is also confirmed by the downward trend on the scatter plot after 9/11. Looking at the coronavirus pandemic, **Figure 10** represents the same idea but for the 116th House.

Figure 10. Roll Call Margins of 116th Congress – House

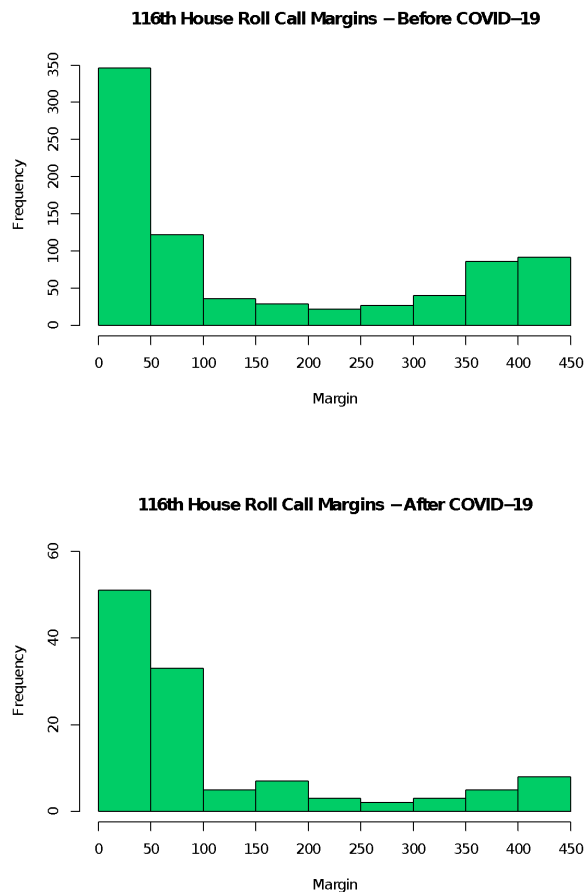
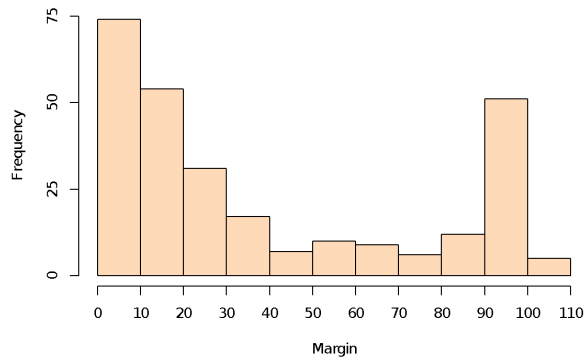
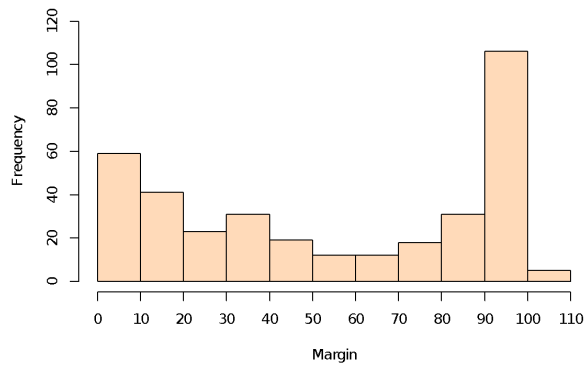


Figure 10. represents margins of roll call votes in the House of Representatives for the 116th Congress (2019-2020) before and after the declaration of the COVID-19 pandemic by the World Health Organization on March 12, 2020.

These data tell a much different tale. Starting off, the cohesion of the House drops significantly from 2002. The majority of bills that passed through the House in 2019-20 were decided by just 50 votes or fewer. It's likely that the House had been polarized for some time beforehand given that just under 40 percent of all bills ended with a margin of 100 or fewer in the 116th term. Before COVID-19 was declared a pandemic on March 12, 1298 bills had been seen by the House since the beginning of the term in 2019. Of those, approximately 500 of them were decided by fewer than 100 votes. Following March 12, there were just an additional 117 bills that went before the House, about 80 of which were margins of 100 votes or fewer. Being mindful to the fact that narrow margins are historically prevalent in the 116th House, it is important to consider that while COVID-19 increased House polarization slightly, the chamber was already divided heavily.

Figure 11 shows the Senate. Votes in the Senate may have more of an effect on the visual results since the Senate has less than 25 percent of the voting members that the House does and each vote will induce a weightier shift.

Figure 11. Roll Call Margins of the 107th and 116th Congress – Senate

107th Senate Roll Call Margins – Before 9/11**107th Senate Roll Call Margins – After 9/11**

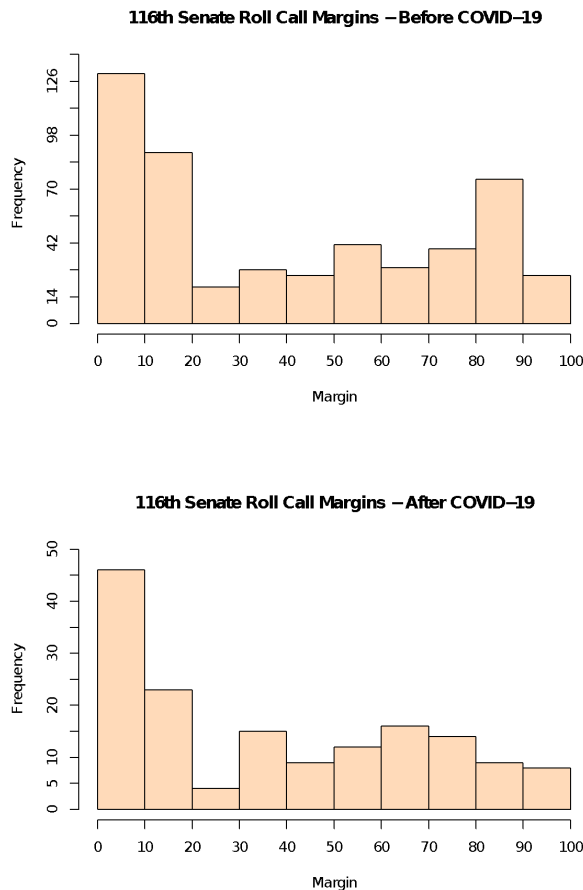


Figure 11 represents margins of roll call votes in the Senate for the 107th and 116th Congresses respectively before and after 9/11 and COVID-19, read top-left to bottom-right.

These trends are not as surprising but nonetheless interesting to observe. Before 9/11, the percentage of bills decided by a narrow margin (10 or fewer votes) was 27 percent. This number fell to just under 17 percent following September 11 and stayed there for the remainder of the term. The Senate had seen just 276 bills come before them prior to 9/11 but just over 900 by the time the term was up, with most of them in the waning months of 2001 following the attacks. Wide margins (decisions of 80 votes or more) increased from 75 before 9/11 to over 160 after. For COVID, the Senate saw 498 bills prior to March 12 with around 26 percent of those being narrow margins and 24 percent

wide margins. Following March 12, there were just 158 additional bills introduced to the Senate with 46 of them, or 29 percent, categorized as narrow margin and only about 25 wide margin or approximately 16 percent.

Results collected from margin data act as further verification for what the T-Test and Cohesion indexes show. The 107th House became less polarized after 9/11 as shown by the increase in ratio of wide to narrow margins. The number of narrow margins increased in the 116th House as it became more polarized throughout the COVID pandemic. For the Senate, the number of wide margins increased as narrow decreased in the 107th, confirming that they became more unified throughout their term. The inverse is true for the 116th Senate as there were more narrow margins after the pandemic began compared to before, which is mirrored in the cohesion plot and the T-Test and confirms that the 116th Senate did become slightly more polarized. The following section reports on editorial data. This data is meant to supplement the roll call data by providing some background for why these trends in the roll call data might be observed.

Editorials

Roll call data is used frequently by researchers to evaluate legislative cohesiveness, but it lacks descriptiveness. To this, I've provided some explanation to the roll call data in the form of news editorials that are helpful for insight to what caused the legislators to alter their voting behaviors. Editorials are an excellent source of non-statistical public opinion since they report directly on current events relative to their times and these events can give an idea of the basis for Congress' decisions.

Editorials were collected from two different major news outlets: The New York Times and Wall Street Journal. These outlets were chosen in particular due to their widespread recognition and long-standing history dating back over a century, as well as being about equidistant from the ideological median (NYT leans about as left as WSJ leans right). This is to ensure that partisan bias is minimized in the study since opinions will come from both sides. One logistical limitation on the editorials however is that there were not an equal number collected from both sources due to The New York Times having a more expansive opinions section than the Wall Street Journal. Even though more editorials were taken from The New York Times than Wall Street Journal, the main purpose of this component is to bolster the findings of the roll call analysis with context. Another minor reason for these editorials is to provide some insight into mass polarization. Although accurately gauging mass polarization generally requires direct survey of the target population, the news is the primary source of political information for millions of Americans, with many of them forming and/or confirming their political views based upon the news networks they subscribe to. Editorials provide a glimpse into opinions of the masses and are excellent sources of information about current events. Combined with their ease of use, they are a favorable candidate to use for this study.

Editorials were scrutinized for keywords or overall messages regarding one or more of six different groups. The three branches of the U.S. Federal Government: Executive, Legislative, and Judicial, alongside any keywords or sentences involving local or state governments, Democrats, and Republicans comprise these six categories. Each editorial received one of three marks—a null, a zero, or a one—for each category depending on the rhetoric used in the editorial. A null mark is the most common and

indicates that particular editorial had no remark on that group. A zero (0) denotes low favorability towards that group while a one (1) is high favorability.

An example of a coding goes as such: An editorial from June 29, 2001 titled “Microsoft’s Core Illegalities” was centered around Microsoft’s business practices their monopolization of the market. The editorial mentions the Bush Administration, members of Congress, and Federal Court rulings for the company with positivity but criticizes Republicans for supporting the illegal practices out of corporate interests.³² This editorial received a code of EXE 1, LEG 1, JED 1, LGOV -, DEM -, and REP 0. Three methods of testing were used to show how the messaging of the news changed over time. The T-Test, variance and standard deviation, and average scores over time of the editorials follow below.

T-Test

The editorial T-Test monitors the mean editorial scores from before and after both crises. If the score decreases after a crisis, it means that news coverage of that group became more critical than supportive. Alternatively, an increasing score means that coverage began to favor that group more so after the crisis. The values shown in **Figure 12** below represent the average scores of every editorial recorded before and after 9/11 and COVID-19.

Figure 12. Editorial T-Test Results

³² NYT Editorial Board, “Microsoft’s Core Illegalities”

Editorial T-Test Results						
Group	Executive Branch		Legislative Branch		Judicial Branch	
Period	Before	After	Before	After	Before	After
9/11	0.336	0.518	0.382	0.441	0.409	0.667
	p-val: 0.002382		p-val: 0.4825		p-val: 0.3087	
COVID-19	0.208	0.218	0.484	0.360	0.438	0.333
	p-val: 0.8729		p-val: 0.2954		p-val: 0.6828	

Editorial T-Test Results						
Group	Local/State Govt		Democrats		Republicans	
Period	Before	After	Before	After	Before	After
9/11	0.212	0.722	0.417	0.379	0.250	0.308
	p-val: 7.035e-06		p-val: 0.7641		p-val: 0.6264	
COVID-19	0.417	0.217	0.513	0.513	0.286	0.313
	p-val: 0.263		p-val: 0.9973		p-val: 0.8575	

Figure 12 shows the T-Test results from editorials taken between June 3, 2001 and December 21, 2001 for 9/11, and between December 2, 2019 and June 19, 2020 for COVID-19. T-Tests measure the distance of the anticipated mean from the true mean and are intended to compare the average values of both groups to see how they change over time. A value of $\alpha=0.05$ will be used to determine statistical significance, therefore a p-value less than 0.05 will indicate significant results.

Before commenting on the numbers, I will mention that the only results that have p-values of <0.05 were in the 2001 Executive Branch and the 2001 Local/State Government. Beginning with the Executive Branch, news support for both President Bush and President Trump increased after 9/11 and COVID-19, however the gap between gained support is apparent. Bush's approval jumped nearly 20 percent in the news while Trump got about a 1 percent increase in support. Both the Legislature and Judiciary of 2001 saw increased support from the news after the attacks as well, but the same cannot be said about their 2020 counterparts, as they experienced significant drops in favorability. These trends mirror the cohesion plots in **Figure 7.1** and **Figure 8.1** in that they represent the same type of declines seen in the cohesion scores around the same points in time.³³ Moving down in ranks to the local and state level, politicians often received backlash for their individual coronavirus responses. Many governors were criticized harshly for failing to adhere to proper COVID protocols set forth by the CDC and several mayors were ridiculed for relaxing restrictions during the summer's peak of 2020 COVID cases, such as Las Vegas Mayor Carolyn Goodman with her supposed premature relaxation of restrictions on casinos that led to uproar.³⁴ Others such as Florida's Ron DeSantis and Arizona's Doug Ducey were on the receiving end of their own backlash that several news sources carried segments on. It is then explained why such a drop-off is present in the data.

The opposite can be said for Rudy Giuliani after 9/11, who received nationwide support and praise from New Yorkers for his response to the attacks and how his organization and rebuilding efforts were tough to match by soon-incoming mayor Mike

³³ See **Appendix**

³⁴ Komenda, "Las Vegas mayor"

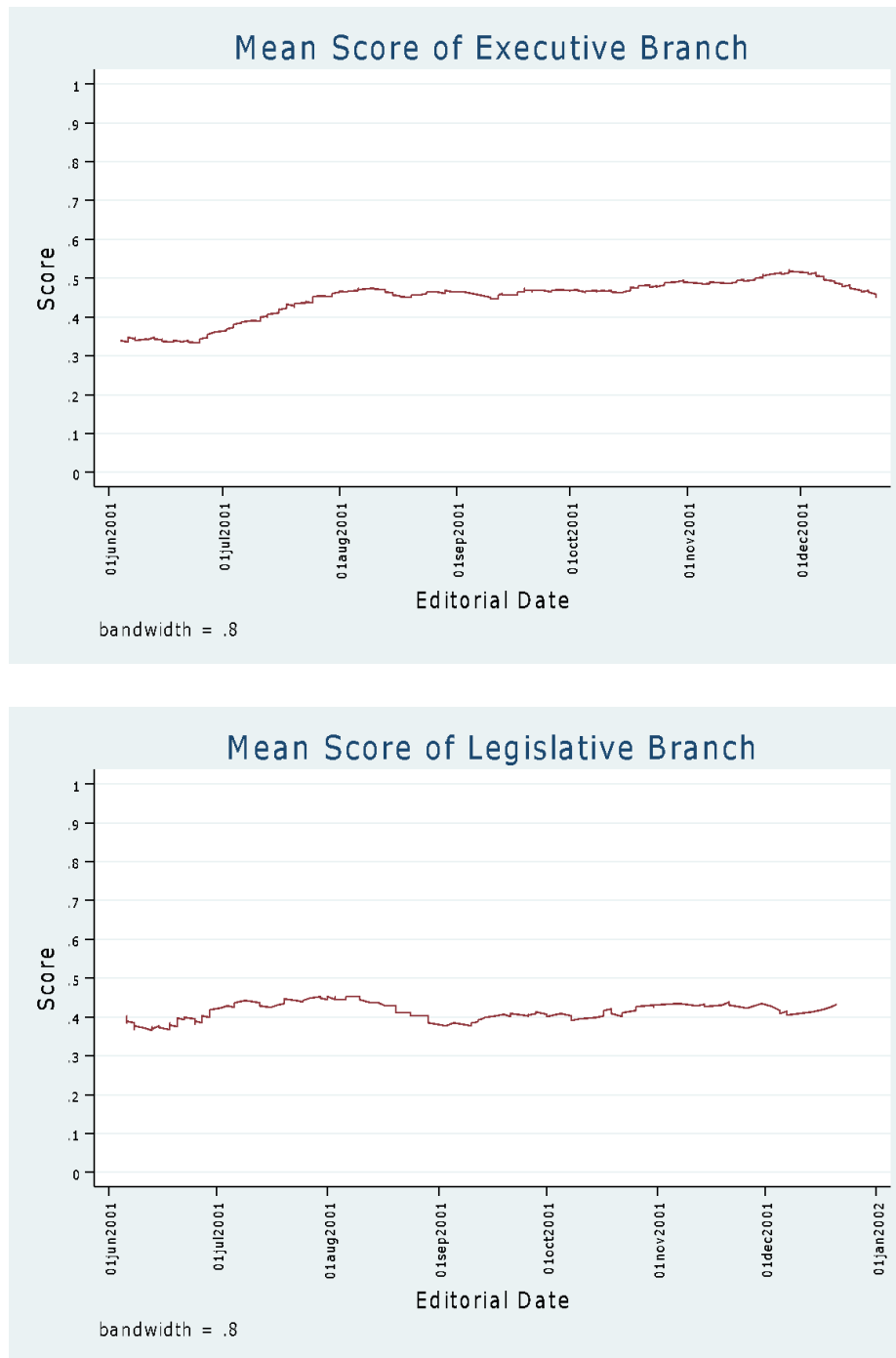
Bloomberg.³⁵ Positive news coverage of local and state governments skyrocketed 51 percent, largely due to the massive amount of support Giuliani was receiving for his restoration efforts. Lastly, the Democratic and Republican parties, who were often a primary topic of conversation in many editorials, seemingly went their own directions on this scale. Republicans became slightly more favorable overall in the news and Democrats more or less stayed level with where they were before both crises. This can be attributed to the sample size including more editorials from the New York Times than the Wall Street Journal, but despite this, neither party received a major bump or dip in favorability.

Mean Scores

The mean scores of editorials were charted over time to provide an accurate depiction of the directionality of the news. In the graphs below, positive trends imply the news spoke of that group in higher regard over time and negative trends point to that group receiving criticism. **Figure 13** shows the mean editorial scores of the Executive, Legislative, and Judicial Branches of government in 2001. I am choosing to compare only the former three categories since those can be matched with the trends in the roll call votes. **Figures 13.1, 13.2, and 13.3** represent the same for the latter three groups and are found in the appendix. **Figure 14** will show the same plots but for 2020 with the latter three also appearing in the appendix.

³⁵ Gehring, "Man of the Hour"

Figure 13. Mean Editorial Scores for 2001 Executive, Legislative, and Judicial Branches



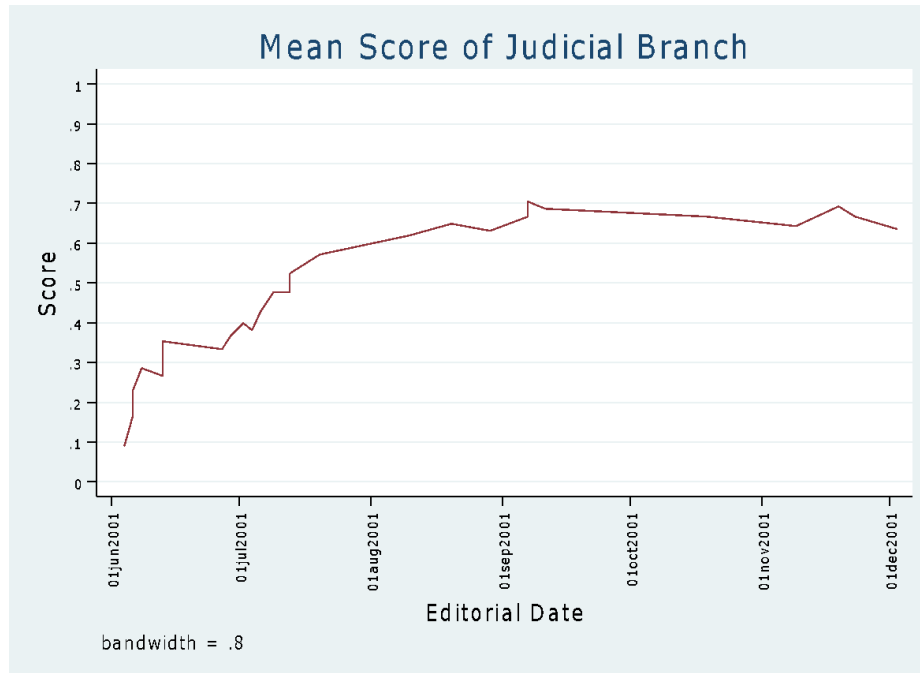


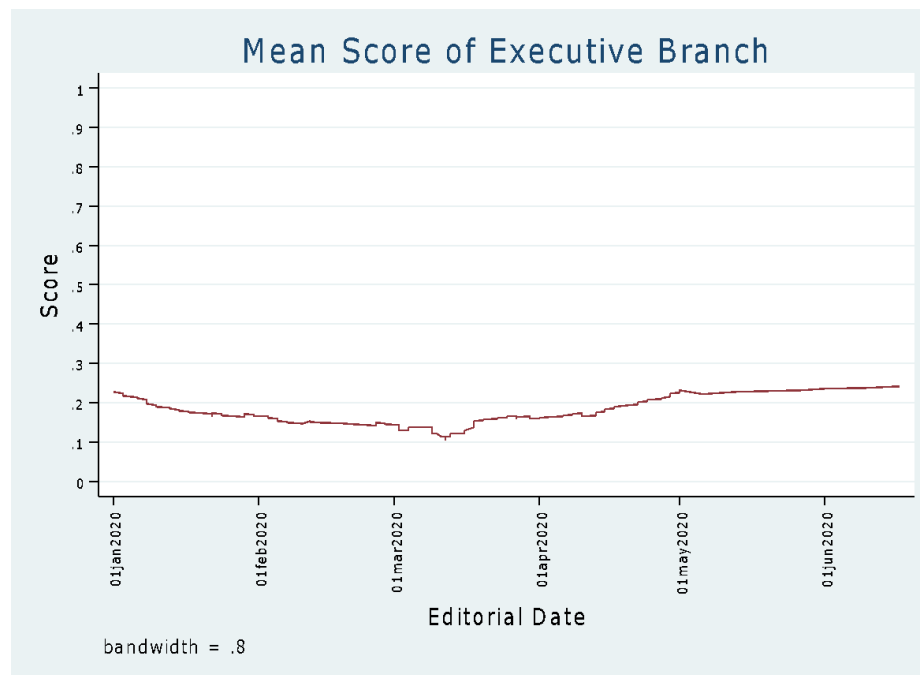
Figure 13 shows the mean editorial scores of the three branches of government in 2001. Trends show the average score at that point in time from 0 to 1. Closer to 0 means more critical while closer to 1 means more supportive.

In the Executive graph, editorial scores rose by about 10 percent throughout although it is noteworthy that no significant jump occurred immediately following 9/11. Instead, most of Bush's support was received between July and August, slowly climbed from there, and began to wane by December. The news was often critical of Bush where actual individuals were not. In my research, I found that while the public often gave Bush the benefit of the doubt right after the attacks, the New York Times in particular still found means to criticize his response, often saying that he should have been doing more to support the victims and counteract future terrorist attacks.

The Legislature remained relatively static throughout the crisis, unlike its other two sister branches. This was an interesting find given that cohesion in both the House and the Senate increased but it can also be explained by the fact that the news, often

when talking about Congress, would refer to specific representatives and senators rather than the Congress as a whole. It is likely that even though polarization in Congress decreased after 9/11, news coverage of individual congresspeople may still have been critical for some reason. The Judicial Branch's ascend is primarily attributed to the fact that there were fewer than 30 editorials directly referencing them. Regardless, they did grow in support with time after the 2000 election debacle that explains their low scores on the left of the chart.

Figure 14. Mean Editorial Scores for 2020 Executive, Legislative, and Judicial Branches



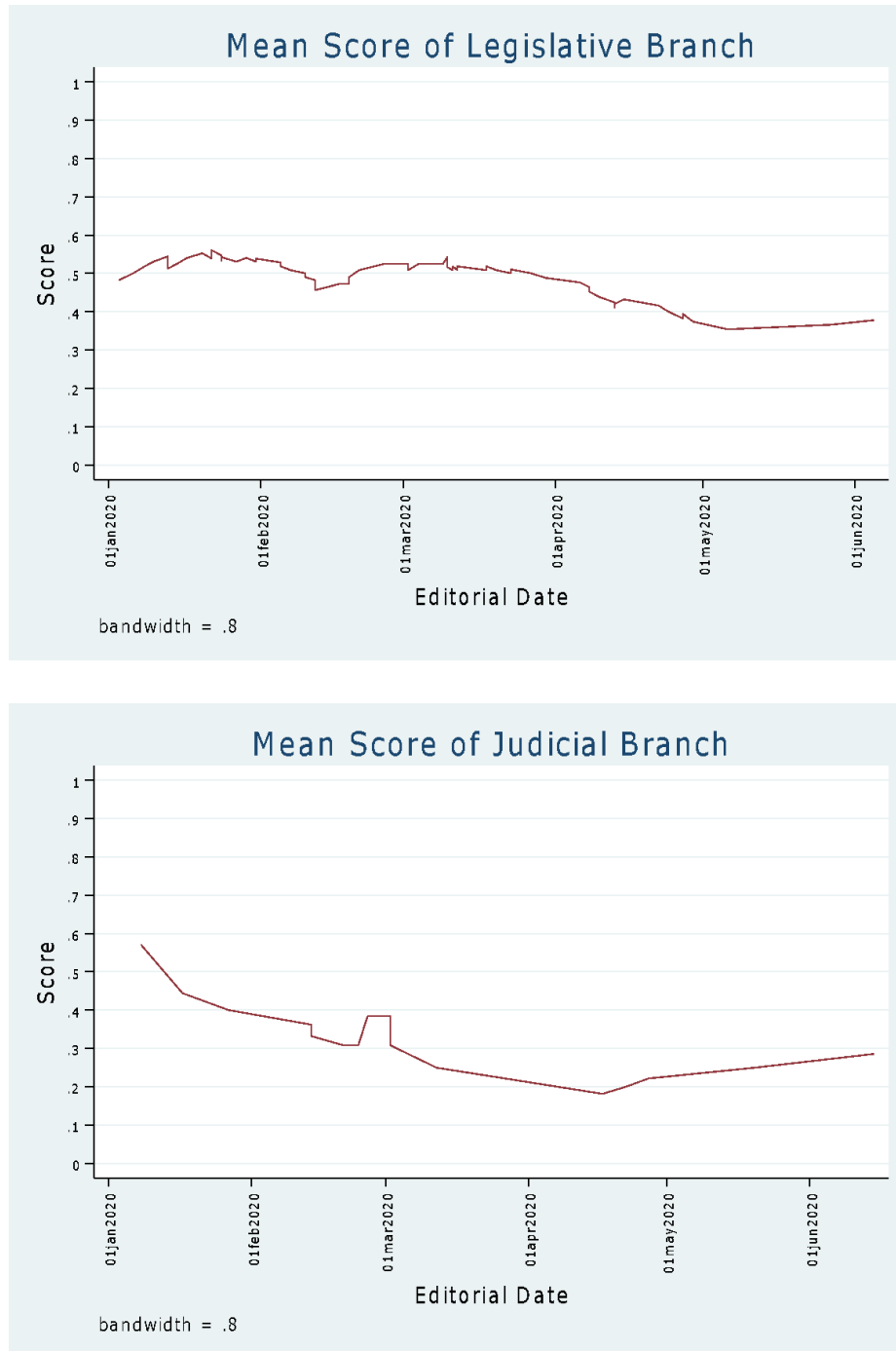


Figure 14 shows the mean editorial scores of the three branches of government in 2020. Trends show the average score at that point in time from 0 to 1. Closer to 0 means more critical while closer to 1 means more supportive.

The 2020 government fared differently from that of 2001 in two of the three groups. President Trump's overall approval rating was consistently lower than that of President Bush and so was his news coverage. Events like Trump's first impeachment are modeled in the graph as his news favorability declines at the start of 2020 and dips again immediately following the beginning of the pandemic, before resurfacing just under 30 percent. The vast majority of editorials from both sources were critical in one way or another of Trump, more so The New York Times, creating a sharp divide in partisan talking points with Democrats often denouncing the President at every turn and Republicans praising him. Legislative opinions, particularly those of individual senators and representatives fluctuated back and forth throughout 2020 and ultimately declined around 10 percent overall. The Judicial Branch was represented by just 22 directly referenced editorials this time and support for them fell nearly 30 percent with increased criticism in the news regarding the dealings of the federal high courts.

The inclusion of these mean scores is intended to show which direction the public opinion of each group was going at certain points in time. Although they are not perfect metrics of polarization, they do provide context to the roll call votes in the form of events that may have caused the legislators to vote one way or the other. Similarly, news coverage has become a factor that many politicians take seriously now that social media has become the most common place that many people under a certain age receive their news. Understanding the news' opinions of these groups can shed light on what beliefs the masses form on certain issues, which can influence the direction of legislation and polarization of the masses. These mean scores however can be complemented further with the variance and standard deviation of all editorials included

in this study. These metrics are particularly useful to show the spread of opinions and how widely they vary. If variance and standard deviations are high, it means that news coverage of the government and political parties varies widely in favorability on a day-to-day basis. This could potentially mean that the news opinions are more polarized and has potential to influence the opinions of the masses in different directions. **Figure 15** displays this data below.

Figure 15. Variance and Standard Deviation of All Editorials

Variance and Standard Deviation of Editorials						
Year	2001			2020		
Group	ρ	<u>variance</u>	<u>std. deviation</u>	ρ	<u>variance</u>	<u>std. deviation</u>
Executive	0.4296	0.2450	0.4950	0.2121	0.1671	0.4088
Legislative	0.4054	0.2411	0.4910	0.4483	0.2473	0.4973
Judicial	0.4643	0.2487	0.4987	0.4091	0.2417	0.4917
Local/State	0.4783	0.2495	0.4995	0.2857	0.2041	0.4517
Democrat	0.4000	0.2400	0.4899	0.5619	0.2462	0.4962
Republican	0.2742	0.1990	0.4461	0.2955	0.2082	0.4563

Figure 15 shows the variance and standard deviations of each group of editorials per the formula presented in **Figure 5**. High results in the data indicate a wide spread of opinions, and potentially more polarization, and low results indicate more consolidated opinions.

In 2001, the distribution of opinions was similar in every category, say for Republicans who were less divergent. This is surely explained by the fact that The New York Times often mentioned Republicans negatively throughout these times, yet both the variances and standard deviations are relatively low and approximately equal. This is to say that the news reported on these groups using a similar message every day. For the NYT, it was typical that Republicans were often a target of the editors as this explains the lower p scores. In 2020, the Executive Branch has a much lower p than the others due to the constant negative reporting of Donald Trump seen in many of the editorials, but every group again has a similar dispersion of opinions throughout each crisis.

In context of political polarization, it is not entirely reasonable to conclude that the news increased polarization during each of these crises. More study in this area is needed to accurately say if these networks directly contributed to the problem. It is apparent, however, that they did amplify the issue at the very least. News is a direct channel of political information into millions of households across the U.S. and it is reasonable to assume that many of these viewers take the messages sent by the networks seriously. I can conclude on this matter that the news has more than likely been used to confirm predisposed beliefs that people have already held about politics, but I cannot say that the networks themselves have led to any significant polarization of our politics.

Case Study – Spanish Flu, 1918 and Pearl Harbor, 1941

Studying just two crises has its limitations as to what information the data can provide. To get a better image of how a crisis affects polarization, I have extended the analysis to include a component for the 1918 Spanish Influenza and the 1941 attack on Pearl Harbor. From a data perspective, I report on the cohesion scores from the 65th and 77th Congresses, much like was done for COVID and 9/11, and I take a small sample of randomly selected editorials from The New York Times and Wall Street Journal as support for my findings. The choice of these additional crises derives from the fact that the Spanish Flu is largely the same in nature to COVID-19, a viral pandemic that ran out of control and shut down a large percentage of society worldwide while claiming millions of lives. Likewise, Pearl Harbor is notably similar to 9/11 due to its surprising onset and similar response from the American people following the attacks. One important thing to note here is that editorials from 1918 and 1941 are written differently than those found in the 21st century. These editorials focus primarily on World War I and World War II and don't so much comment on partisanship, government, or even the active crisis in the same way as the ones from 2001 and 2020 do. That being said, they are still helpful for insight to the struggles of the times.

Spanish Flu

The 1918 Spanish Influenza epidemic rocked the nation at a time when several countries, including the United States, were at war in Europe. The virus began to circulate amongst soldiers in battle and was later spread to the general population as they returned home. It is not well-known exactly where the virus originated, but it is believed that it had avian origins and later was transmitted to humans. Similar to COVID-19, the Spanish Flu was not characterized by a single event that interrupted

daily life like 9/11, but a gradual buildup of infections that began in a small, confined wave and later erupted across the world. As soldiers returned home to their countries, viral spread increased rapidly in Europe and the U.S. and the number of infections soared into the hundreds of thousands come September. By November, several million people worldwide had become infected.

Just like with COVID, public health countermeasures were taken to mitigate the spread, such as wearing face coverings and keeping physical distance from others. Unlike the people of today however, those back then did not have the luxuries of digital communication and remote work, and infections were much more prevalent in cities such as New York, where the subway was packed with sick riders on a daily basis. Internationally, public health standards may not have met those of the U.S. or more developed nations at the time and the situation was often worse. Author Kai Khuin Liew recalls in his article *Terribly Severe Though Mercifully Short* how British Malaya was ravaged by the influenza, causing the closures of schools and cinemas and lockdowns of entire villages. He claims the situation was so bad that corpses lined the streets due to lack of proper handling protocol for them.³⁶ Although there has not been a situation during COVID in the U.S. where the dead lie in the streets, the flu boasts eerie similarities to the current pandemic and is frequently referred to by researchers as a guideline for precautions.

The name “Spanish Flu” reportedly came to be since Spain was neutral in World War I and, because they had one of the most reliable presses in Europe at the time, reported on it first in the Summer of 1918.³⁷ Despite this, it was later determined that

³⁶ Liew, “Terribly Severe Though Mercifully Short,” 222

³⁷ Milsten, MD, MS, “1918 Influenza Pandemic: A United States Timeline”

there were earlier reports of cases out of Fort Riley, Kansas in March of that same year.³⁸ As more Europeans fell ill, the virus was found to have traveled on cargo ships to Asia, South America, Africa, and the South Pacific.³⁹ Also similar to COVID was the presence of many miracle cures, such as moth balls, that were touted for show but ultimately ineffective.⁴⁰

Politically, the unfolding of the flu played out much like it did with COVID in the U.S. Experts nationwide agree that the Trump Administration's attempted cover-ups of the coronavirus were detrimental to the possibility of a quick and effective response, but this is not the first time that government officials have downplayed the severity of a pandemic. According to doctor and medical scientist Andrew Milsten, New York City Health Commissioner, Royal Copeland, had assured that the city of New York was "in no danger of an epidemic" on September 13, 1918, just as tens of thousands began to die from it.⁴¹ Two weeks later, San Francisco public health officials also reportedly denounced the virus until a patient named Edward Wagner arrived from Chicago only to fall ill and became one of the first of thousands of cases reported by the city.⁴²

The flu saw an estimated 500 million infected with the virus and the global death toll is conservatively estimated to be about 50 million, including 675,000 Americans.⁴³ In contrast, there have been just 127 million global infections of COVID-19 with about 2.8 million global deaths, about 550,000 of which were Americans (at the time of this writing).⁴⁴

³⁸ Milsten, MD, MS, "1918 Influenza Pandemic: A United States Timeline"

³⁹ Milsten, MD, MS, "1918 Influenza Pandemic: A United States Timeline"

⁴⁰ Milsten, MD, MS, "1918 Influenza Pandemic: A United States Timeline"

⁴¹ Milsten, MD, MS, "1918 Influenza Pandemic: A United States Timeline"

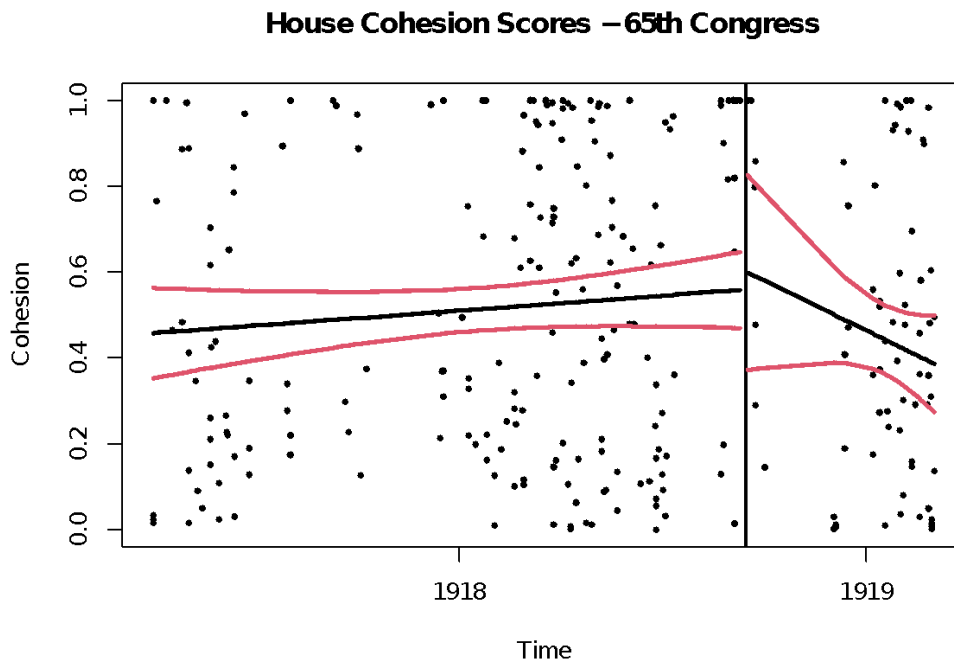
⁴² Milsten, MD, MS, "1918 Influenza Pandemic: A United States Timeline"

⁴³ CDC, "1918 Pandemic (H1N1 virus)"

⁴⁴ New York Times, "Coronavirus in the U.S."

To see how political polarization increased or decreased throughout the flu, I first introduce roll call votes from the 65th U.S. Congress from both chambers. **Figure 16** plots the cohesion scores for each bill throughout the entire 65th term.

Figure 16. Cohesion Scores of 65th Congress



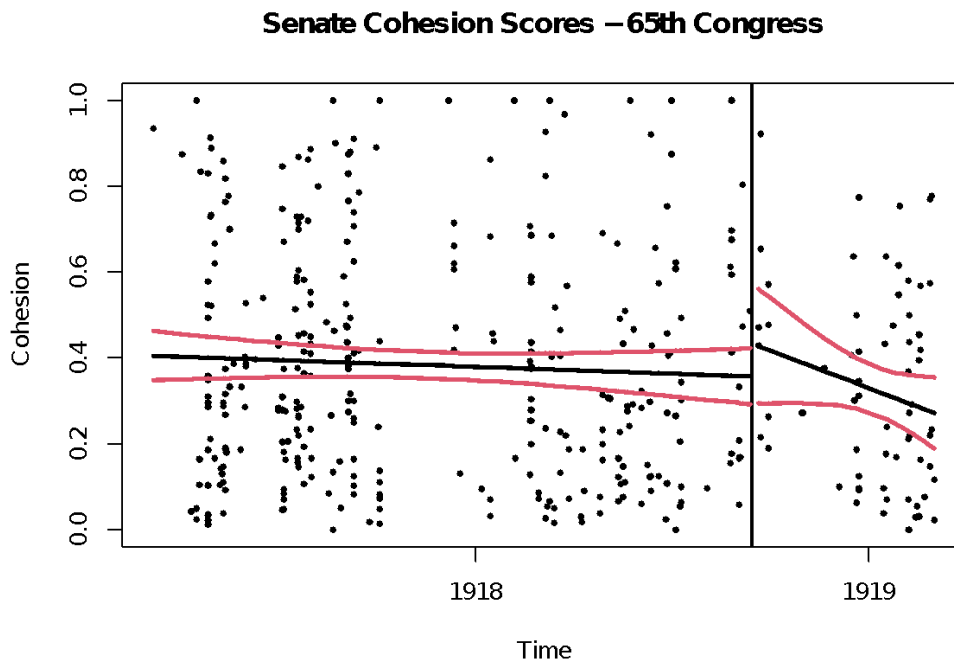


Figure 16 depicts two scatter plots of every bill's cohesion score in the 65th House and Senate (1917-1918). The vertical divider marks September 15, 1918. The black line indicates a trend in the data and the red curves show the range of trends with 95% confidence.

The trends seen above are slighter than what was seen in the 107th and 116th. Cohesion was on the rise in the House prior to September 15 before dropping off. Unlike COVID, the date of September 15 was chosen as a midway point, according to the CDC's timeline that September 1918 was when the virus began heavily circulating the population. With COVID, March 12 was chosen since that is the date the WHO first declared COVID-19 a pandemic. It is for this reason that these results are not as accurate as those from the 21st century results due to the lack of available information such as an exact start date. This is also the case with COVID to an extent since March 12 did not mark the first case, but it is the closest approximation to a start date that I

was able to formulate. With an event such as a pandemic, there is no way to know precisely when things begin to turn sour since there is no one event that shifts the tides.

Another confound is in the fact that the war dominated much of the media and public's attention throughout this time as well. Even though this is the case, the House did begin to polarize as 1919 approached. The Senate is much the same story except that cohesion was already dropping slowly prior to September before heading further south as the new year came in. These plots do closely resemble those from 2020 though; one chamber's cohesion was rising prior to the crisis and began to dip thereafter, while the other chamber's cohesion was already dropping and then fell further.

In addition to the roll call votes, I included a smaller sample of 100 editorials to go with the cohesion scores and provide some context. 50 editorials came from before September 15, 1918 and 50 from after, 25 from New York Times and 25 from Wall Street Journal. These editorials coded for the three branches of government and local/state governments much like the editorials from 2001 and 2020 did, however, instead of Democrats and Republicans, these focused on support for the United States as whole and support for war. This is because the news of the day didn't often reference political parties or its members but was filled with opinions regarding the war and support for American sovereignty. Furthermore, the smaller sample size means that the trends in opinions were less visible overall. For these reasons, no plots will be provided in the text, but I still report the data.

The editorials from this time period focused heavily on the events of World War I and not so much the flu or politics in general. An example headline from before September 15 reads "This 'Rich Man's War'" and shows support for the U.S. and their

presence in Europe during World War I. Another from the middle of September reads “THE AUSTRIAN PEACE OVERTURE” and remarks on the diligence of President Wilson and his meetings with British Prime Minister Winston Churchill and the U.S.’ victories abroad, but not a single mention of the flu. Even months later the news was still fixated on the aftermath of World War I and paid little mind to the virus’ rampage as in “TWO NAVIES ONE SEA” from March. I was unable to discover an affirmative reason for why this is the case. Future expansion on this study could search for potential reasons why the flu was vastly underreported in the news, but my best guess given the context of all information that I collected was that the war was simply more important to the American people than was the virus. Staying home and quarantining was not an option for many of these people, and it is probable that lots went about their daily businesses in spite of rampant infection and were only concerned if they were personally affected.

The overarching message in the news at the time fixated on domestic commitment towards fighting the war and opposition to Germany and their allies. As the flu grew more of an issue in the U.S. support for war dwindled and the government was praised for their victory in Europe. Due to this, the federal government was viewed more favorably after September compared to before. The same, however, could not be said for the Congress and Judiciary, as they both received slightly more criticism after September. General support for the U.S. remained high up through 1919. The editorials from this period are further evidence that pandemics don’t carry the same unifying effect as a national security threat.

Pearl Harbor

Pearl Harbor Remembrance Day was a day much like September 11, 2001. For a start, both of the attacks were unexpected at their respective times and both occurred early in the morning as many across the country were readying for work or school. Both attacks were carried out by foreign powers on American soil, and both claimed the lives of over 2400 people within a few hours. When we as Americans envision a terrorist attack, the two likely candidates that come to everyone's mind are 9/11 and Pearl Harbor because of their massive implications that both had on the future outlook of the United States. While both attacks were different in context and occurred under different sets of circumstances, the immediate aftereffects of both were increased support for Americans as a whole, support for retaliation to the enemy, and unity in mourning the losses suffered in the tragedy.

The attack occurred on the morning of December 7, 1941 in Pearl Harbor just northwest of Honolulu, Hawaii at around 8:00 am Hawaiian Time. It is known that economic relations between the U.S. and China created feelings of American resentment in the minds of the Japanese since Japan and China were frequently at odds over prominence in the Far East.⁴⁵ The Japanese military had established a bold presence in the Chinese province of Manchuria, but the Roosevelt Administration's foreign policy plans were contingent on China and their conflict with Japan.⁴⁶ The Japanese and American governments met in negotiations up through December and even afterward to discuss these matters, but ultimately war was decided to be the solution.⁴⁷ Following the attacks, the U.S. barred Japan from any economic or material

⁴⁵ Encyclopedia Britannica, "Pearl Harbor attack"

⁴⁶ Encyclopedia Britannica, "Pearl Harbor attack"

⁴⁷ Encyclopedia Britannica, "Pearl Harbor attack"

assistance and the next weeks saw the U.S. ramp up involvement in international war affairs.⁴⁸

Pearl Harbor and 9/11 were two of the deadliest domestic attacks upon the American people in history, taking 2,403 and 2,996 lives respectively.⁴⁹ What makes these two crises easy to study polarization is that they were both a single event that required an immediate response from the government and the people. The December attack gave the population a reason to unite against the Japanese forces and assert that they would not take such an act of aggression lying down. These sentiments of domestic commitment and unity were represented in congressional voting, as the Congress just one day later declared war on Japan, committing the U.S. to another global conflict just 23 years after conclusion of the previous one. 9/11 was much the same, with the U.S. immediately establishing a presence in the Iraq and Afghanistan following the September 2001 attacks in New York and Virginia.

The attack on Pearl Harbor increased cohesion in Congress just like 9/11 did. **Figure 18** shows the cohesion scores of the House and Senate of the 77th Congress. Here, I am looking to see if there are similarities in the roll call data from 1941-42 that can be compared to what was seen during 9/11. If my theory holds up, then cohesion will increase in the House and the Senate following December 7th as polarization decreases.

Figure 18. Cohesion Scores of 77th Congress

⁴⁸ Encyclopedia Britannica, "Pearl Harbor attack"

⁴⁹ National WWII Museum, "Remembering Pearl Harbor," 1-2

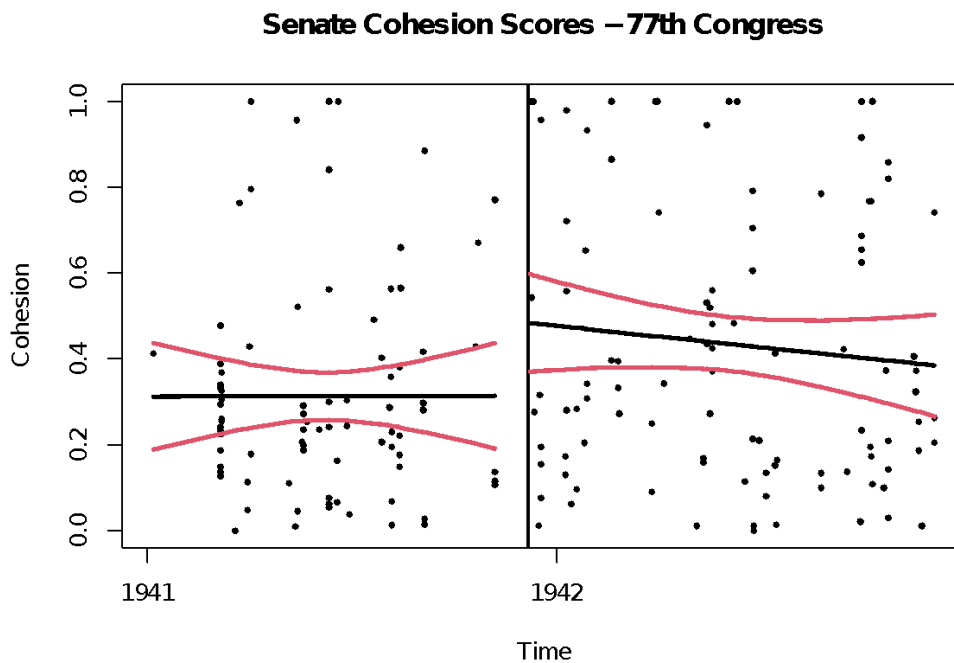
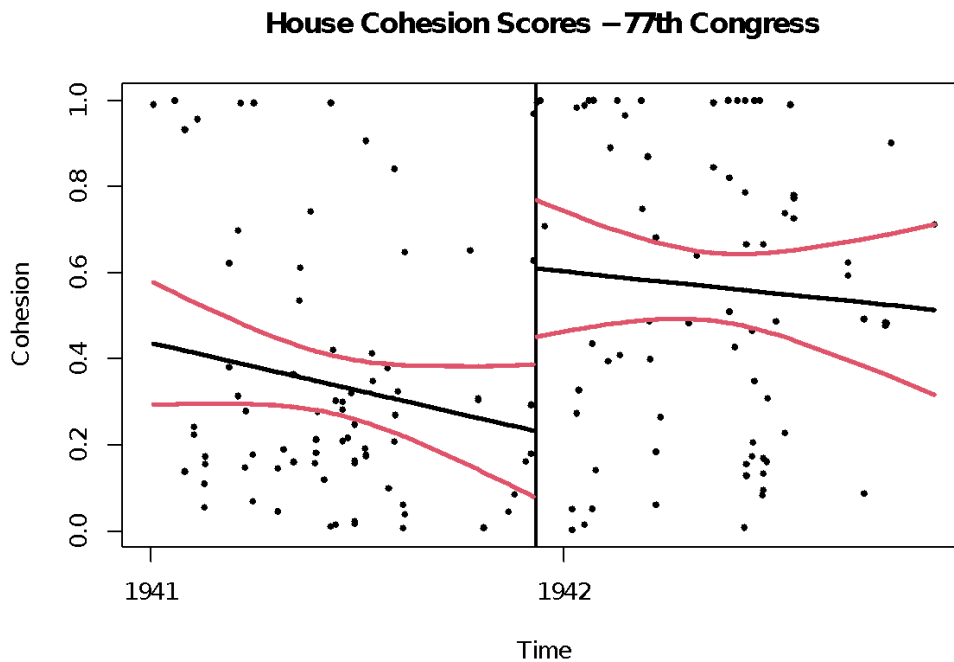


Figure 18 depicts two scatter plots of every bill's cohesion score in the 77th House and Senate (1941-1942). The vertical divider marks December 7, 1941. The black line indicates a trend in the data and the red curves show the range of trends with 95% confidence.

Much like what was seen in 9/11, average cohesion increased across the board. Prior to the attacks, the House was becoming steadily polarized. The average cohesion was around 0.3 during that time and was very likely due to differing views on the U.S.' position in the war. Come December 7th, the House experienced a massive jump in cohesion up to 0.6, a 30 percent increase from where it stood before. The Senate was at a constant rate of cohesion, hovering just under a score of 0.3 before rising about 10 percent. In both chambers did the average cohesion after December 7th entirely surpass that of the average cohesion before. This suggests that, not only did the Pearl Harbor attack decrease polarization in Congress, but when compared with 9/11, it could suggest that a crisis of this type has a universal healing effect. Of course, more research into other crises of this nature would be required to say that with greater sureness, but the trends seen here from two different points in U.S. history are undoubtedly similar in that they increased the cohesion of the Congress and overall decreased political polarization.

For editorials, 100 were sampled, 50 from each source, 25 before/after per source, as was with the Spanish Flu. Similar limitations exist with these as well since the sample size is much smaller than that of the primary two crises and these editorials focus primarily on America's war efforts with the rest of the world. Though unlike the flu, news coverage of the attack was widespread across both sources for weeks following the incident, whereas the news hardly mentioned the flu at all in place of economics or war talks. Editorials from this era confirm that domestic support increased in the news following December 7th with a primary focus on the U.S. entering World War II. An excellent contrast that shows proof of this is in two consecutively coded editorials from

December 3 and December 9, 1941. The December 3 article was titled “MUSSOLINI AS PROPHET” and criticized the growing autocratic movement in Europe and the rise of Fascism in Italy and denounced the war altogether. The other article from just six days later was headlined “UNITED WE STAND” and expressed support for the American government and its decision to join the war, along with encouragement of the population to take a stand against the terror that befell them. It is evident beyond a reasonable doubt that the news coverage of the 1941 crisis sparked a sense of action in the communities across the entire nation and even drew worldwide attention. The editorials from this period further verify that the attack on Pearl Harbor unified the nation to adopt pro-war sentiments and decreased polarization in the short-term.

Discussion and Conclusion

After examining four unique crises, a summation of my findings follows with the results of the hypothesis tests, discussion of limitations dealt with in organizing this analysis, and commentary on where to expand upon this research. This paper set out to see the effects of a national crisis on political polarization in the United States using metrics of roll call voting in the two chambers of Congress and a measure of public opinion in news editorials. I first laid out the basis of scientific literature on the topics of polarization and national crises. It has been repeated throughout many studies that polarization is on the rise in the United States, and some say specifically that it has been occurring for several decades now. Without any actual data analysis, an older individual might arrive at the conclusion that American politics have become more of a grudge match and less about policy reform just by observing how politicians conduct themselves on and off the job now compared to thirty or forty years ago. Politics have

certainly evolved to be more territorial in terms of partisanship and it is the reasons for that in which I have taken interest. As for national crises, there is limited literature available on anything specifically regarding what I chose to study. I assume this is because the word “crisis” is inherently broad, ranging in scope from business-related crises of finance or circumstance and climbing all the way up to a worldwide catastrophe. The inspiration to study these phenomena came from the fact that we as a society in 2021 were put through a series of trials that have tested the patience, resiliency, and cooperation of the entire human race, let alone just Americans. Combined with an interest in the advantages and shortcomings of the American political system, my goal was to draw a connection between disastrous events like pandemics and terrorist attacks with the cohesiveness of our politics and our nationwide community.

Limitations

There are some limitations to be aware of in this study. One major one is that COVID data is somewhat scarce as of the time of this writing since it is still an ongoing crisis. Because of this, the period from which editorials were taken from was shortened for all four. This does not hinder the central message to the study, nor does it create any major confound, but it is something to keep in mind as the true end of COVID-19 has yet to come. Another limitation is the “crisis” problem. For the purposes of this thesis, I comprised a definition of a crisis using three criteria that were determined from collecting information from several different sources on what has been commonly defined as a “crisis” in the existing literature. The literature either focused on specific styles of crisis that did not apply to this study or mentioned it in the broadest of senses,

so this study is reflective of my definition of a crisis, whereas another researcher may have used different parameters.

Editorials were at a premium as well. There were more available from the left-leaning New York Times than the right-leaning Wall Street Journal. However, they served their purpose in providing insight to current events that explained legislative voting behavior. This shortcoming can be attributed to the size of the opinion sections of both news sources and the availability of news sources widely recognized enough to justify usage. For the Spanish Flu and Pearl Harbor, there were an insufficient number of editorials available in the study to draw a hard conclusion in that area like was possible with COVID-19 and 9/11, but again they were useful for the specific task of insight to where the mindsets of the masses were at in 1918 and 1941. This study can surely be expanded upon with future research that dives further into various aspects such as alternative reasons for fluctuations in political polarization in Congress, other methods for gauging cohesion and polarization, or effective methods for monitoring mass polarization.

Hypotheses

I set out two hypotheses that would test to see if this increase in political polarization that we have seen over the years can be attributed in part to these crises unfolding upon American society, and to what degree this occurs. I can first reject the null hypothesis H_0 , which claims that crises do not have any effect on political polarization. The data I have collected to test two alternate explanations for this has shown that there is a correlation between the variables.

My first alternate hypothesis claims that the two variables are connected, and this can be confirmed through my analysis, although the expected results are selective and smaller than anticipated. H_{A1} claims that a crisis will affect polarization since a crisis will generate various reactions and responses from the population and the political elite. I have found this proposal to be partially true. For a start, not all crises directly cause polarization. My research indicates that the circumstances that follow a crisis will dictate both the government's response and the public's. A national security event such as 9/11 or Pearl Harbor has a tendency to generate an immediate response from the government, as well as a mix of fear and anger from the population that prompts everyone into action against the aggressor. I found that this type of crisis decreases actual polarization since everyone tends to unite on the common ground that they've been attacked and need to act in unison to combat the threat. Public health crises, on the other hand, have less of an effect overall, and even lean slightly towards increasing polarization, but only if other conditions are met. When dealing with a crisis of greater variability, such as COVID or the Spanish Flu, there is not the aforementioned consensus that there is reason to unite. With national security crises such as the former two, there is apparent reason to unite against any attacker, but with public health crises, as are the latter two, the increased uncertainty factor leaves too much room for debate on the proper course of action then on. With crises such as COVID and the flu, there are too many different viewpoints as to the origins of the crisis, too much variation in the proposed response to the issue, and misinformation is more easily spread since there is no direct attack or clear event for all to witness live. It is for these reasons that I propose a secondary hypothesis, H_{A2} .

H_{A2} states that a crisis of public health will generate more political polarization than a crisis of national security for the abovementioned reasons. In my analysis, I found this to be partially the case as the cohesion scores, margins, and editorials all pointed to the fact that public health crises generate much more uncertainty in the short term than national security crises, but that there are also many other variables involved with these crises that need to be accounted for before claiming with any level of certainty that they irrefutably increase polarization. Trends seen in the data are much more pronounced with crises of national security than they are with crises of public health. Due to this, political polarization has increased with crises of public health, but not to a degree where it can be considered the major role-player in the equation without considering other determinants. There are often several other factors that have an effect on this phenomenon that I did not incorporate into this paper. Future research projects would find it useful to look into these other factors to determine specifics as to why public health crises are more variable in their unfolding than national security crises are.

Conclusion

Yes, national crises do have an effect on political polarization, but not all crises boast the same effect. Ones that involve a single major event that disturbs the peace, such as national security emergencies like 9/11 and Pearl Harbor have shown to have a unifying effect since everyone forms a coalition against any threat to them. Others that unfold slowly or are not characterized by a single point in time, such as the Spanish Flu and COVID-19 tend to create pockets of bias and misinformation that infiltrate the masses and can often divide us further. However, it is imperative to examine the other major events in society at that point in time to eliminate the potential influence those

could have before drawing any final conclusions. The topic of polarization is a phenomenon that should receive continual study in political science given that it has dramatic effects on the course of our lives. Polarized politics can lead to clashes in Congress, the Courts, with the President, and within the masses, which ultimately have dire effects on the forward progress of the American people as a nation. As we exit the COVID-19 pandemic in the coming months, we as a nation should stop and think where we next want to go with ourselves. The United States has proven its resiliency and has stood the test of time as one of the world's initial democracies and Americans across the country should continue to strive for unification and restoration of our politics.

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Notes

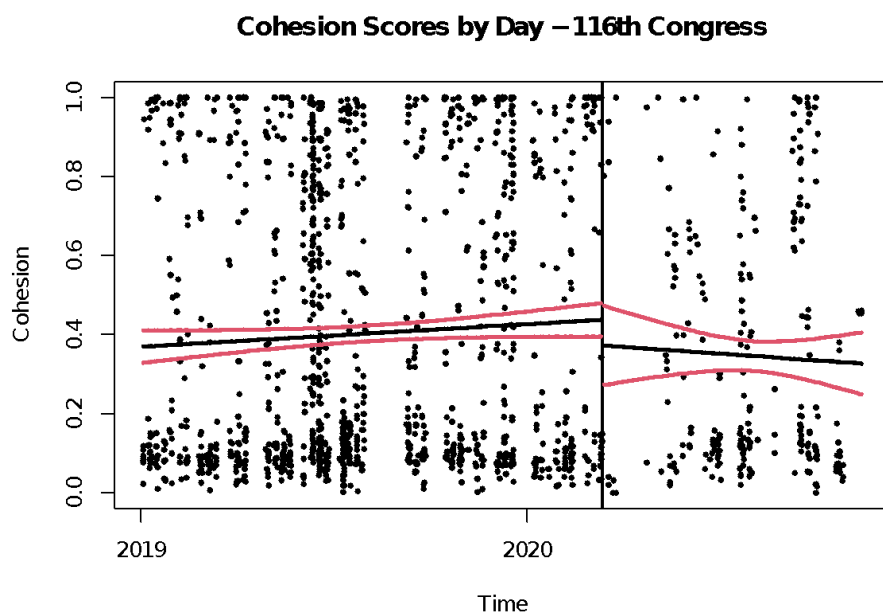
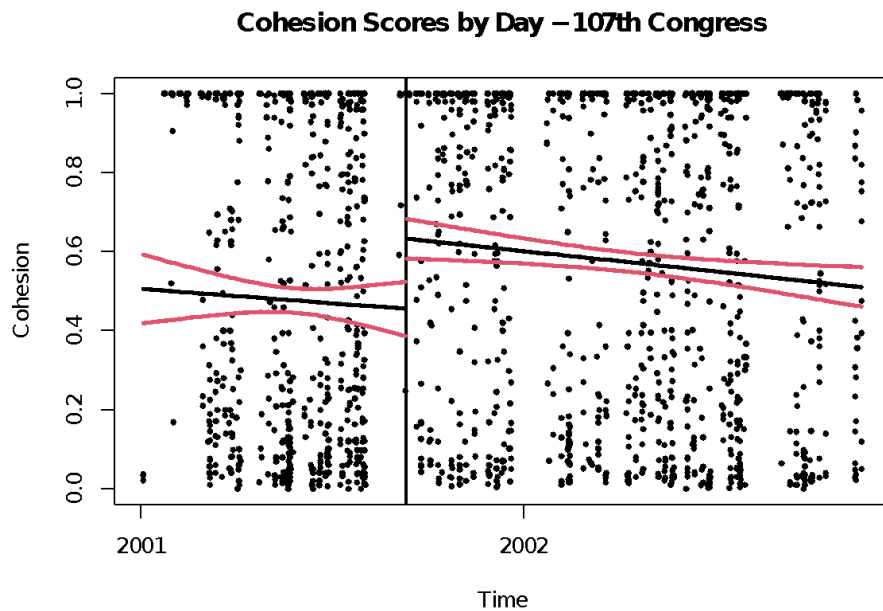
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Appendix

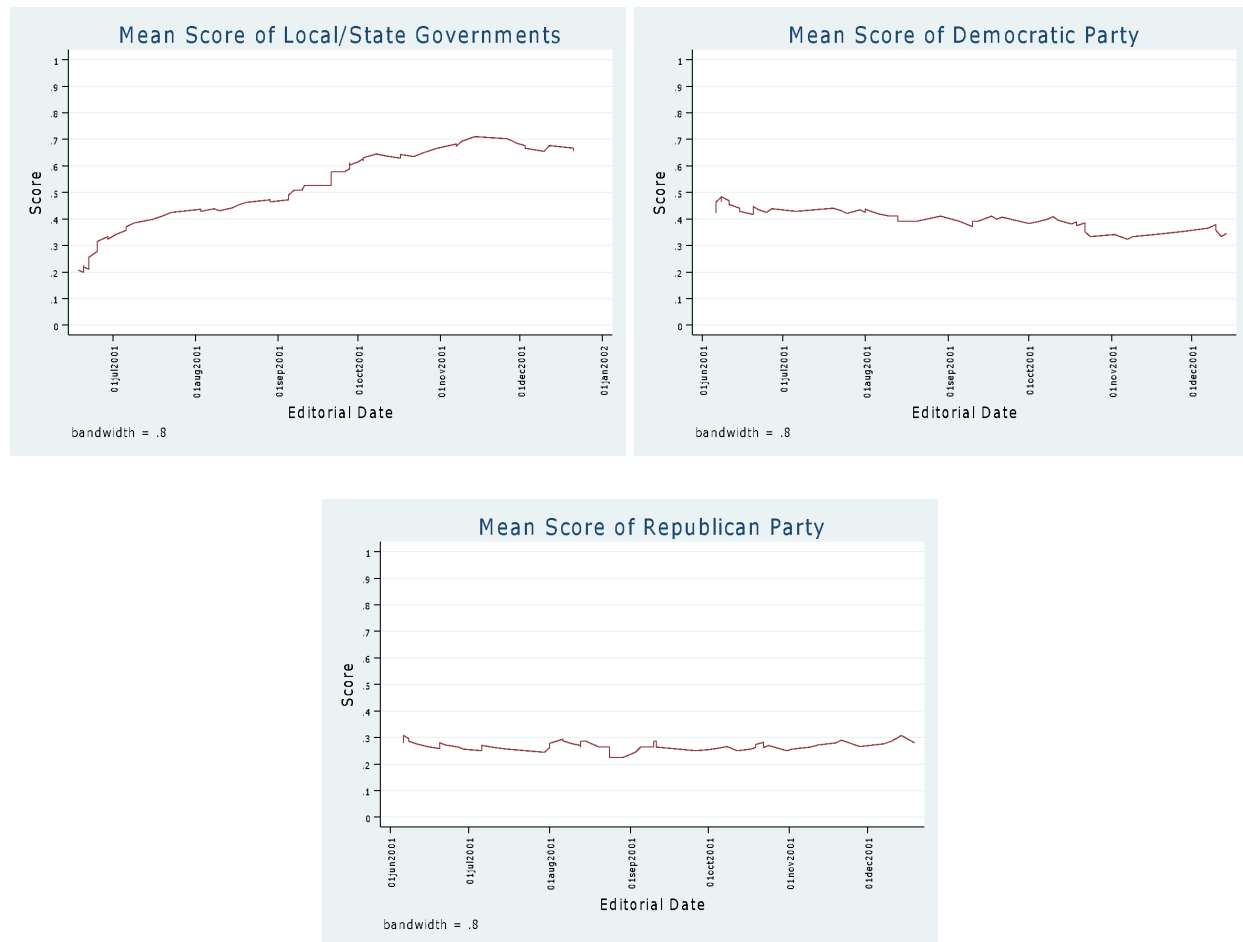
Figures 7.1 and 8.1. Cohesion Scores of Entire 107th and 116th Congresses



Above are plots of the cohesion scores of the entire 107th and 116th Congresses. These plots are a combination of the House and Senate data but provide an overall direction of

the Congress as a whole. When combined, it is still so that cohesion rose overall after 9/11 and started to drop as COVID began its sweep.

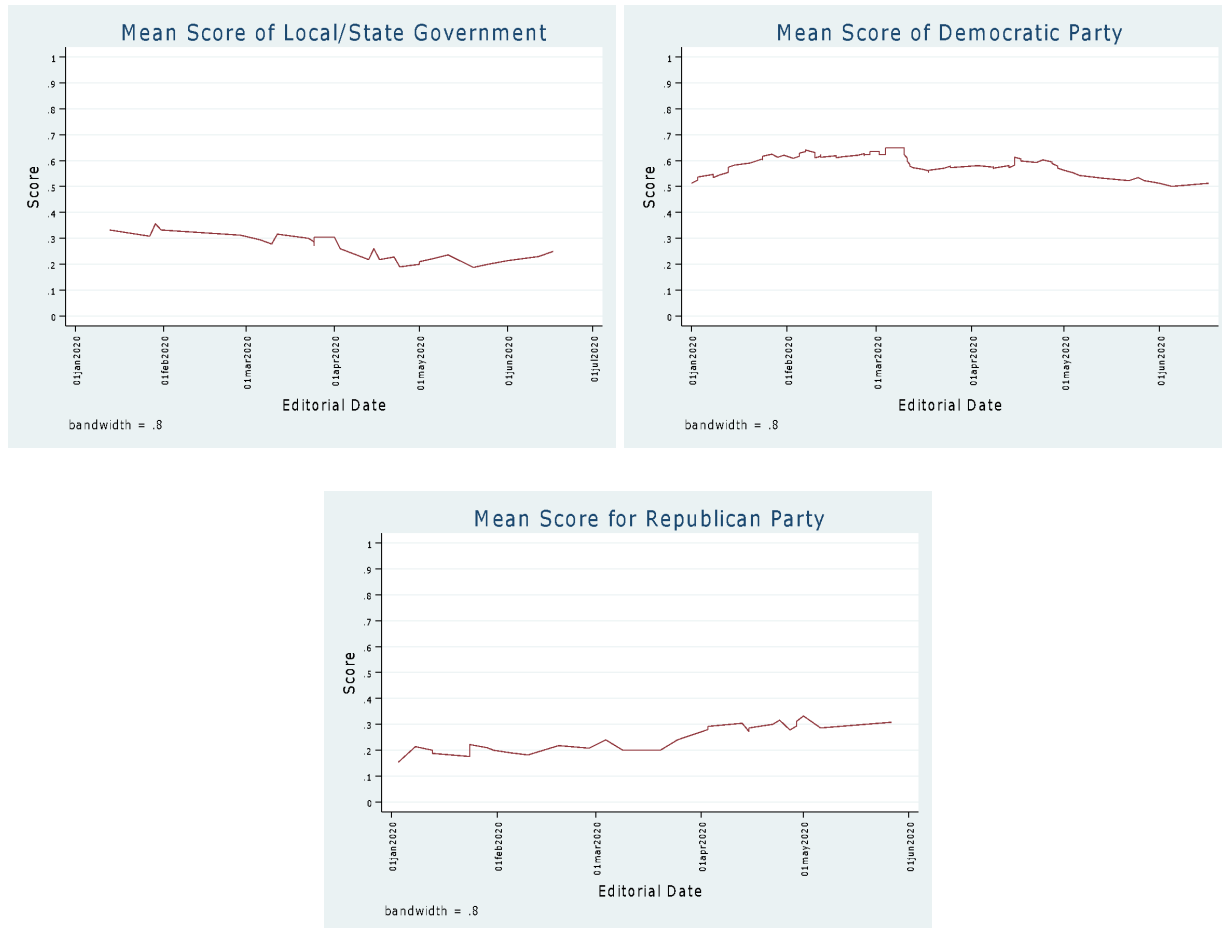
Figures 13.1, 13.2, and 13.3. 2001 Mean Scores of Local/State, Democrats, and Republicans



These are the mean editorial scores from the local/state governments, Democrats, and Republicans. The local/state graph shows a bump immediately following 9/11 due to the increased support to Rudy Giuliani and Mike Bloomberg. The other graphs show that both parties made little net progress towards altering their opinions of them in the news. It is plausible that identity politics is stronger today than before by looking at these lines.

Since both are below 0.5 in their entirety, this indicates that the news often disparages either party and these sentiments are picked up by the masses and projected in the form of prejudice against one party or the other

Figures 14.1, 14.2, and 14.3. 2020 Mean Scores of Local/State, Democrats, and Republicans



Same presentation but with the 2020 graphs. Democrats are most highly regarded here but make little net progress overall with the networks and the dip in favorability following the COVID announcement can be seen about midway through the graph. Local/State officials received continued criticism at their respective levels for their handlings of the pandemic response and this is reflected in the increased criticism seen over time.

Republicans grew more favorable, but they only ever make it just over 30 percent favorability throughout COVID with much of that explained by the constant criticism from many congressional Republicans and their conduct throughout the crisis.