

#Polarized2020: Division and Duress in Policy Responses to COVID-19

Eric C. Vorst

University of Missouri – St. Louis

Thomas Leath

Lindenwood University

Prepared for the 2021 State of the Parties Conference

Ray C. Bliss Institute of Applied Politics – University of Akron

November 4th, 2021

Chaos: COVID-19 Catches the World Unaware and Unprepared

From the moment COVID-19 first reached American soil in early 2020, politicians, pundits, and citizens were forced to adjust their way of life to combat an invisible enemy which would challenge healthcare system capacities and incur a high death total. For the greater part of 2020, there was no known cure or vaccine to prevent contraction and illness related to COVID-19. As such, preventative measures such as wearing masks, washing hands, disinfecting surfaces, and engaging in social distancing were widely encouraged. The primary information sources for disseminating such preventive measures were the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO).

However, the information being released by these scientific institutions (as well as other medical professionals) would go through an additional information dissemination layer where it was sculpted, pruned, and spun by politicians, media outlets, and even every day citizens, each with their own political ideologies and – arguably – their own political agendas. As a result, drastically different assessments of the dangers related to COVID-19 and opinions regarding proper response began to form. This divergence extended to the point where daily reporting and commentary almost appeared to capitalize upon the pandemic as a means for shaping public opinion along party lines. While such coverage placed a focus upon the recommended ways to prevent the rapid spread of COVID-19, there was an undeniable undercurrent of division based upon which political party had the best solutions. In turn, partisan voices widened a political schism with respect to how scientific and medical assessments were perceived among the general public.

Mitigating the Spread of COVID-19: The Science

Initially, the specific nature of COVID-19 was not fully understood beyond the knowledge that it was similar to previously encountered strains of the SARS virus. As such, early recommendations from the scientific community were somewhat mixed and in some cases inconsistent. However, several recommended types of mitigation techniques gained prominence and began to be widely communicated by both the U.S. Center for Disease Control (CDC) and the World Health Organization (WHO) in early 2020.

There has been general guidance from the CDC and WHO on preventative measures people can take to slow the spread of the disease and avoid infection. The experts advise people to wash their hands regularly with soap and water for twenty seconds each time. If soap and water is not readily available, people are advised to use hand sanitizer as a substitute. Additional guidance has included; coughing or sneezing into your elbow or sleeve vs. your hands, avoid touching your face, stay home and isolate yourself if you feel sick, and practicing physical distancing by avoiding large groups of people and reducing/restricting travel to areas with a high infection rate (Center for Disease Control).

As this guidance has been rolled out and digested by the American public, different perspectives and directions have been suggested by political leaders and news media in an attempt to slow the spread of the disease. These guidelines and in some cases, orders have been given to keep the virus under control. These include; physical distancing recommendations, wearing a facemask in public, as well as the requirement for non-essential business to close their doors. People have been asked to shelter in place for a determined amount of time and to not go out in public except for essential necessities, such as grocery shopping and required work. Hair salons, tattoo parlors, bars, restaurants, and even churches have been required to close down due to

the shelter in place orders disseminated from state and local governments across the United States of America (Washington Post, Staff).

Mitigating the Spread of COVID-19: The Politics

As disagreements regarding the proper response to COVID-19 deepened during early 2020, many debates began to divide along partisan lines. In some instances, people protested local and state governments which had imposed strict stay at home orders and guidelines. These protests typically came from conservative political groups who were upset with a liberal or Democratic governor or official who had enacted orders for businesses to shut down. Libertarians became increasingly angry and outraged over, what they deemed to be government overreach and abuse of power (DeBrabander). As these hostile feelings escalated, the country became almost evenly divided as to whether the shelter in place orders should continue or if state and local governments should lift the regulations and allow citizens to open their businesses and be allowed outside of their homes.

This divide was also apparent on the federal level. Over time, U.S. President Donald Trump expressed several different viewpoints relating to the seriousness of the pandemic. In late February, 2020, Donald Trump seemed to dismiss the severity of the Coronavirus, stating that “in the summer it will disappear, almost like a miracle” (Burns). Trump speculated that the warmer weather would likely kill the virus and it would be gone without warning, just as it had appeared. In early March, Trump compared COVID-19 to the flu stating that the flu kills anywhere between 27,000 and 77,000 people every year, implying the pandemic is comparable to the common cold (Rieder). However, in mid-March his tone changed drastically. He stated on March 16th, 2020, “The recommendation is that all Americans, including the young and

healthy, work to engage in schooling from home when possible. Avoid gathering in groups of more than ten people. Avoid discretionary travel. And avoid eating and drinking at bars, restaurants and public food courts. If everyone makes this change or these critical changes and sacrifices now, we will rally together as one nation and we will defeat the virus” (Gittleson). At this moment in time, cities, counties, and states around the country began to roll out and impose strict, lock down orders.

From Mid-March to late April, 2020, it appeared that both Republican and Democrat politicians could agree on something: shelter in place and physical distancing would slow the spread of the disease. Still, many Democrat leaders, such as House Speaker Nancy Pelosi and Senate Minority Leader Chuck Schumer, forwarded a narrative accusing the president and his administration of failing to act swiftly enough and touted his handling of the pandemic as far less than adequate (Stolberg). Pelosi and Schumer criticized Trump’s administration for not doing enough to ramp up testing, enforce shelter in place orders, and ramp up production of ventilators and personal protective equipment for healthcare workers (Stolberg). Additionally, Pelosi and Schumer argued that the President was setting a poor example for all Americans due to his habit of appearing before the country without a face covering or mask, in contrast to CDC recommendations that wearing a face mask can help slow the spread of the disease (Centers for Disease Control).

As Democratic leadership and liberal media outlets strongly criticized the president and his administration’s response to reduce the spread of COVID-19, Donald Trump responded with self-praising statements applauding his own ban on Chinese goods and travel back in mid-January, 2020. He further gave credit to himself stating that his swift, decisive action has saved countless American lives (Keith). He touted from his bully pulpit that the United States was the

most prepared country in the world and his administration was handling the pandemic better than anyone else could, including his predecessor, Democrat Barack Obama (Burns). In late March, 2020, he stated America would be open for business soon and a lot sooner than the three to four months that had been originally suggested. He said, “We cannot let the cure be worse than the problem itself” (Trump Remarks Mar. 23). By mid-April, 2020, he tweeted “Liberate Michigan!” as well as other states in a response to the protestors demonstrating for the reopening of their state economies (Keith). Donald Trump was now promoting the reopening of the American economy and encouraged state and local officials to start easing their lockdown guidelines; however, he ultimately left the decisions up to state governors (Keith).

All of these narratives, scrutiny, and partisan politics surely could be argued to have contributed to the divisive opinions on the severity and handling of the pandemic. The effects of the virus, as it pertained to public health and a sinking economy, had come to the forefront of conversations across the country. Due to these divergences, COVID-19 had evolved from a national crises facing all Americans into a tale of two realities divided along partisan lines.

Pandemic Polarization: Partisan Perceptions of COVID-19

Extensive research exists suggesting American citizens tend to consume media from outlets that most closely align with their own political affiliation. In addition, those people are often influenced by the political leaders they voted for and tend to reject statements and guidance from opposing political elites. According to an article written on fivethirtyeight.com, an affiliation of ABC News by Perry Bacon Jr., several surveys have been conducted regarding reactions to the Coronavirus pandemic. The article illustrates numerous surveys which have been administered in an attempt to demonstrate how Republicans and Democrats are reacting

similarly in some instances but differently in others to direction from government and the media as it relates to COVID-19. The article suggests that at the beginning of the pandemic, Republicans were more likely to say the Coronavirus was not a serious problem; however, over time, that viewpoint has shifted to align more closely with Democrat ideology and the notion that the virus is in fact more serious than it had originally been perceived. The article goes on to point out that as the current executive administration has shifted their stance, direction, and tone in regard to the ongoing pandemic, so have people who identify as Republican. And, in addition, survey data suggests the media might be contributing to the divisive response to the Coronavirus by constantly reporting that the country is so divided in their reactions (Bacon Jr.).

In a paper published by four members of the University of Montana's Psychology Department titled, *Why are Conservatives Less Concerned about the Coronavirus (COVID-19) than Liberals?*, the researchers claim that it is curious as to why Republicans are less concerned about the pandemic. They find this odd because older people typically identify as Republican and older citizens are more susceptible to disease, especially this one. The researchers go on to state that the political motivation of Republicans outweighs their motivation by experiential reasons. This argument does have some validity because Republicans typically denounce big government, government intervention and oversight, which has led to some disdain by far right libertarian conservatives, as it relates to the virus. Their research supports the fact that Republicans are reacting differently to the pandemic vs. Democrats due to demographics and government responses. The paper goes on to suggest that typically more conservative, rural areas have been less affected by the pandemic and, in contrast, more urban Democratic regions of the country have had a higher volume of infections, hospitalizations, and loss of life (Conway et al).

Another study by four members of different departments at the University of Pennsylvania titled, *Political Partisanship Influences Behavioral Responses to Governors' Recommendations for COVID-19 Prevention in the United States*, discusses the differences in risk perception and engagement in preventative behaviors. The researchers demonstrate how people perceive the pandemic based on their local and state governments' directions and involvement. This contributes to the notion that political leaders are playing an important role in convincing people to take drastic measures, such as social distancing, to prevent the spread of the disease. They also make the argument that news outlets and social media elites have directed uninformed citizens to follow these guidelines; however, they also have the ability to cause citizens to reject valid scientific facts. The researchers also pose an interesting theory stating the actions by some Republican Governors and city officials to enforce shelter in place regulations in which Democrats already believed should be in place, made the Democrat's argument that the threat of the Coronavirus was very serious and real even stronger. As conservative media and politicians have been downplaying the severity of the pandemic during its onset, when Republican Governors took more of a Liberal backed position, it further strengthened those beliefs in Democrats (Grossman).

A recent article written by Andrew F. Johnson titled *Mass Casualty Event Scenarios and Political Shifts: 2020 Election Outcomes and the U.S. COVID-19 Pandemic*, poses an interesting hypothesis pertaining to the pandemic's potential effect on the 2020 presidential election. The article hypothesizes that voter turnout in the 2020 election could diminish due to the coronavirus pandemic. It goes on to state there could be potentially significant political changes due to the loss of older people who have or will succumb to mortality due to contracting COVID-19. These people could potentially have been key voters in swing states. The article also raises discussion

regarding the impact of the economy and how peoples' viewpoints on economic recovery are influencing their ideology of the pandemic response. The writer utilizes current and past research from survey data to identify how age affects political identification. He then tries to extrapolate the data and predict the outcome of the 2020 presidential election based on how many potential Republican voters, in swing states, either already have or could die before voting commences in November. He predicts this could lead to a potential swing from Red to Blue in some key states (Johnson).

As this research suggests, perceptions regarding the COVID-19 pandemic have been shaped differently based on political affiliation, demographics, and opinions regarding the proper role of government. Political framing of these responses and guidelines has led to a sharper and sharper divide between conservatives and liberals. While Americans' initial anxiety over COVID-19 appeared more or less consistent regardless of political identification, partisanship began to play an increasing role over the remainder of 2020. Gradually, people began to feel less threatened by the disease in some areas of the country, as their political identification played a larger part in their perception of and responses to COVID-19.

Wearing a Mask is Political?

There is compelling data to suggest Americans' decisions to follow or not follow WHO and CDC recommendations could be related to their political identification. For example, a Gallup poll conducted April 14-2020 found that 49% of Democrats/Democratic-leaning independents always wear a face mask, 34% sometimes wear one, and only 18% never wear one. In contrast, only 26% of Republicans/Republican-leaning independents always wear a mask, 28% reported sometimes wearing one, and an astounding 46% said they never wear one (Ritter).

Additionally, a poll taken in early May of 2020 painted a picture illustrating the likelihood as to whether or not people would adopt face mask wearing broken down by individual states (Nguyen).

[Insert Graphic 1.1]

When examining the map created from the survey results, it is interesting to note that it appears almost identical to the 2016 Presidential Election Results by state map. This could be a signal that people are responding to this particular guideline along party identification lines and could also have some indication as to how the Electoral College could look after the November 3, 2020 presidential election vote.

[Insert Graphic 1.2]

Fast forwarding to January 6th, 2021 when the Electoral College certified the 2020 presidential election in favor of Democratic Nominee, Joe Biden, the heat map for the 2020 election (Image 1c) is very similar to the 2016 comparison with a few notable differences. The likelihood people would wear masks was slightly higher in Michigan, Georgia, and Pennsylvania based on the poll taken back in early May of 2020. Interestingly, these three states were pivotal in switching the balance of power in the White House during the 2020 election. Although these three states were separated by a few hundred thousand votes, the mask wearing ideology could have had an effect on swing voters in these key states.

[Insert Graphic 1.3]

When comparing people's views towards mask wearing from the beginning of the pandemic to present day, it appears that people are becoming more willing to wear a mask in certain situations regardless of political affiliation. A poll taken in February of 2021 still showed a divide among democrats and republicans when it comes to wearing masks. The poll asked

U.S. adults if wearing face masks during travel on airplanes and public transportation was necessary to reduce the spread of COVID-19. 72% of Republicans felt it was necessary and an astounding 96% of Democrats stated it was a necessity. Although this is still a 24% difference based on political ideology, a vast majority of the population seems to have formed some type of agreement when it comes to mask wearing on planes and other forms of transportation.

[Insert Graphic 2.1]

[Insert Graphic 2.2]

In addition, a timeline poll asking Democrats and Republicans whether or not they regularly wear masks in stores or businesses netted a similar outcome (Image 2b). The poll, conducted by the Pew Research Center in June of 2020, showed 53% of Republicans and 76% of Democrats always or most of the time wore masks in stores. By February of 2021, the poll found that 83% of Republicans wore masks in stores and 93% of Democrats comply with this mitigation measure. These polls suggest that people's willingness to wear a face mask in a store or business has drastically increased over the past year. Based on these more recent surveys, it appears that the constant push by politicians and the news media from June 2020 to February 2021 has had an effect on people's compliance to wear a mask; however, this data does not suggest that these higher numbers indicate a desire or positive attitude towards wearing a mask, but simply people's willingness to comply with the direction provided by media, political, and medical elites.

The news media and politicians have a great effect on how people view the pandemic and how it is being handled. With such contrasting ideas and criticism being slung by both sides, it should be noted that people are being divided and forced to decipher which statements are actual fact and which ones are an attempt by a politically motivated person or news outlet to influence

United States' citizens. Due to these unprecedented circumstances and times, it appears clear that partisan framing of the Coronavirus pandemic by political and media elites has increased politically polarized responses in the electorate.

Survey: Policy Responses to COVID-19

The *Policy Responses to COVID-19* survey is an original and IRB approved survey consisting of 38 questions designed to measure the types of variables that may influence a person's willingness to agree (or disagree) with proposed policy alternatives for addressing the COVID-19 pandemic. The main mechanic for measuring this sentiment involved capturing respondents' acceptance of certain statements ranging from 1 (strongly disagree) to 100 (strongly agree). Respondents were presented with several statements made by Donald Trump, Joe Biden, and Anthony Fauci during 2020 regarding proper steps for addressing COVID-19. However, respondents were randomly assigned to two groups: a control group and a test group. In both groups, some deception was used in statement attribution in order to isolate the effects of elite cues as well as of priming. Participants were drawn from Amazon's mTurk and from several hundred students enrolled in Introduction to American Government courses spanning two semesters (Fall, 2020, and Spring, 2021).

The control group was provided with twelve statements regarding proper policy responses to COVID-19. The control group was designed to both provide a baseline for the test group as well as to isolate a baseline for measuring the priming effect. Four statements were correctly attributed to Donald Trump and two statements were attributed to Donald Trump but

were in fact made by Anthony Fauci; similarly, four statements were correctly attributed to Joe Biden and two statements were attributed to Joe Biden but were in fact made by Anthony Fauci.

The test group was designed to provide a comparison to the results obtained in the control group by extending the deception in speaker attribution to include all twelve statements. Four statements were attributed to Donald Trump but were in fact made by Joe Biden and two statements were attributed to Donald Trump but were in fact made by Anthony Fauci; similarly, four statements were attributed to Joe Biden but were in fact made by Donald Trump and two statements were attributed to Joe Biden but were in fact made by Anthony Fauci.

The survey measured a full battery of variables intended for use both as independent variables and as control variables in a series of OLS regression models for hypothesis testing. Additionally, a number of other questions were asked to gather further data that can be used in future studies. These questions included measurements of internal and external political efficacy; trust in the media, politicians, and government; and the extent of media consumption in using both traditional/mainstream outlets and alternative/social media platforms. As noted above, we believe these additional data points significantly increase the utility value of this survey for use by other academics in their own future research.

Research Question and Expectations

In the broadest of terms, our survey focuses on how political polarization shapes people's perceptions of reality. Specifically, we focus on addressing the following research question: In what ways does polarization in the electorate influence the mass public's perception of the risks of a global pandemic and the proper policy responses needed to best mitigate those risks? We expect political polarization in the electorate to have a strong influence on the degree to which a

person agrees or disagrees with a political elite who shares their ideological leanings. Further, we expect that emotional assessments of political elites will have similar influences.

Specifically, we expect that the more “warm” a person feels for either Donald Trump or Joe Biden, the more likely that person is to agree with a statement purported to have been said by the person for whom they feel warmth – even if that statement was in fact made by the person for whom they feel the opposite.

We also expect there to be a strong priming effect due to a combination of the order in which we presented respondents with questions, as well as the “double juke” we employ. Essentially, this involves a deception preceded by a deception: respondents in the Test Group are presented first with four statements incorrectly attributed to Donald Trump but actually made by Joe Biden, followed by two statements incorrectly attributed to Donald Trump but actually made by Anthony Fauci. The same “double juke” is performed with four statements incorrectly attributed to Joe Biden but actually made by Donald Trump, followed by two statements incorrectly attributed to Joe Biden but actually made by Anthony Fauci. In doing so, we seek to capture the combined effects of both priming and affective polarization.

Last, we expect polarized attitudes will impact the manner in which people share information about COVID-19 on social media. Given that affective polarization should be expected to be more strongly evident in discussion involving political figures than discussion involving scientists and medical doctors, we expect evidence of affective polarization to be more evident in Tweets about political candidates (Donald Trump and Joe Biden) when discussing coronavirus than in Tweets about a nationally recognized medical expert in infectious disease (Anthony Fauci). Additionally, given that presidential elections are increasingly intense contests that typically reach a crescendo in their final weeks, affective polarization in discussion about

Donald Trump and Joe Biden should increase as proximity to Election Day draws closer, while no noticeable changes should be evident in discussion about Anthony Fauci. Last, we expect that under conditions of high negative sentiment, politically polarized messages will be less central to discussion within a network than messages centering on medical concerns related to COVID-19. In other words, we expect to see potentially polarizing messages to be sequestered on the perimeters of the network, where the potential audience is more limited in scope – even if it is crowded with participants. Conversely, we expect to see less polarizing messages to be centrally located within the network, where the potential audience is far more broad in terms of potential readers. Simply put, when it comes to messages that are more likely to be seen by a wider range of participants in a Twitter network, we anticipate that science will trump politics even during periods of elevated affect.

Methods

One method for testing our expectations was the use of OLS regression, although the data provided through the *Policy Responses to COVID-19* survey will allow for a wide range of other tests to be performed. For the purpose of addressing our research question, we ran eight individual regression functions using a set of four dependent variables from both the control and test survey data sets, as well as 15 independent and control variables:

Dependent Variables	Measurement
Statement attributed to Donald Trump and made by Donald Trump	Control Group 1: Strongly Disagree to 100: Strongly Agree
Statement attributed to Donald Trump and made by Anthony Fauci	
Statement attributed to Joe Biden and made by Joe Biden	
Statement attributed to Joe Biden and made by Anthony Fauci	
Statement attributed to Donald Trump and made by Joe Biden	Test Group 1: Strongly Disagree to 100: Strongly Agree
Statement attributed to Donald Trump and made by Anthony Fauci	
Statement attributed to Joe Biden and made by Donald Trump	
Statement attributed to Joe Biden and made by Anthony Fauci	

Independent variables included feeling towards Donald Trump, Joe Biden, Fox News, and CNN (1 very cold to 7 very warm); ideological self-placement (1 strong liberal to 7 strong conservative); party identification (1 strong Democrat to 7 strong Republican); gender; age group (in 10-year increments); education level (no high school, finished high school, some college, bachelor’s degree, master’s degree, professional degree); employment status (not employed/not looking, not employed/looking, part time, full time); income level (\$25k increments to \$100+); and race represented as a dummy variable (0 for no, 1 for yes) including the self-identification of White, Black, Hispanic, and Asian. The full results for the four OLS regressions from the Control Group and four OLS regressions from the Test Group are provided in Tables 1.1 through 2.4 in the Appendix.

[Insert Table 1.1; Table 1.2; Table 1.3; Table 1.4; Table 2.1; Table 2.2; Table 2.3; Table 2.4]

For the purpose of testing our expectations regarding the prevalence and effects of affective language in social networks over time, we draw upon a collection of approximately 30

million tweets mentioning the word “coronavirus” gathered daily during the month leading up to the 2020 presidential election. These tweets were captured using a Live Stream API interface in the popular data mining software application NodeXL Pro, then filtered to create three subsets of data. The first subset included “coronavirus” tweets mentioning either “Biden” or “@JoeBiden”, the second mentioning either “Trump” or “@realDonaldTrump”, and the third mentioning “Fauci”. Each subset underwent content analysis to identify positive and negative language, drawing upon a sentiment dictionary of over 7,000 words.

Measuring the “Double Juke”

For the purpose of testing our expectations regarding the combined influences of priming and mass polarization (the “double juke”), we propose the following model, which is intended to tease out these influences by measuring the comparative effects between control and test groups. Since participants in both the control and test groups received different Fauci quotes depending upon whether they were preceded by a Trump or Biden quote (whether correctly or incorrectly attributed to Trump or Biden), it is difficult – if not impossible – to determine whether or not the Trump or Biden quotes primed respondents to respond more positively or negatively to the subsequent Fauci quotes. In an attempt to isolate this possible variance, we “flip” the attribution pairs, as detailed in the theoretical model images located in the Appendix.

[Insert Image 1.1 and Image 1.2]

Testing the “Double Juke” with Summary Data

We first chose to test the utility of this model only using summary data (rather than data from the OLS regressions). This decision was also made in order to see if any intriguing patterns

emerged that would warrant further investigation into the “double juke” effects. When examining the data from both the Control Group and Test Group and using ideological self-placement as the key independent variable, an expected pattern was confirmed: respondents who self-identified as strong conservatives consistently approved of Donald Trump statements at a far higher rate than strong liberals. The same was true with respect to respondents who self-identified as strong liberals, as they consistently approved of Joe Biden statements at a far higher rate than strong conservatives. This trend was similar, albeit more muted, when presented with Anthony Fauci statements misattributed to Donald Trump and Joe Biden respectively.

However, a quite surprising trend emerged when the question sets were arranged to compare reactions to *identical* Fauci quotes between the Control and Test groups. This manipulation allowed for the isolation of the suspected priming effects from respondents being first told that a statement was made by either Donald Trump or Joe Biden.

[Insert Image 2.1 and Image 2.2]

When comparing the rates at which respondents agreed with statements attributed to Joe Biden, there is a trend consistent with ideological self-placement. This trend is consistent in both the Control and Test groups, suggesting that ideological self-placement predicted approval of a statement solely based upon the person to whom the statement was attributed. Another noteworthy trend is the rate which individuals in both the Control and Test groups approved of the two identical statements made by Anthony Fauci, regardless of whether they were made by Trump (Test group) or Biden (Control group). In general, as ideological self-placement went from strong liberal to strong conservative, respondents in both groups agreed with statements made by Fauci at lower rates. It is also interesting to note that respondents were more approving

of Fauci statements if they were preceded by Biden statements (Control group) rather than when the same exact Fauci statements were preceded by Trump statements (Test group). In short, being primed with Trump statements – even if they were purported to have been made by Biden – correlated with respondents being less approving of Fauci statements (purported to have been made by Biden) regardless of ideology.

A more interesting set of results is evident in the second pairing of statement sets comparing the rates at which respondents agreed with statements attributed to Donald Trump.

[Insert Image 2.3 and Image 2.4]

Similar to the first pairing, there appeared to be a strong correlation between ideological self-placement and the approval rate of statements attributed to Trump and made by Trump. A similar trend was evident between ideological self-placement and the approval rate of statements attributed to Trump and made by Fauci. In both cases, as respondents' ideological self-placement became more conservative, they were far more likely to approve of a statement attributed to Trump (even if it was made by Fauci). However, the correlation between ideological self-placement and approval rate of statements attributed to Trump and made by Biden was far less evident. Respondents from all seven ideological self-placement categories agreed more than they disagreed with statements attributed to Trump but made by Biden and Fauci. Of all four set pairings, this appeared to demonstrate the least variance in statement acceptance.

One final observation may be made when looking at respondents' approval of statements across all four sets. Regardless of ideological self-placement or statement attribution (or misattribution) across both Control and Test groups, respondents consistently approved of statements made by Fauci at a higher rate than they approved of statements made by Trump and

Biden. This is noteworthy, as Fauci's name was never provided to respondents as a prompt for any of the statements. Perhaps one of the hidden gems from these results is that a scientist's (Fauci's) recommendations were more favorable to the general public than those from politicians (Trump and Biden).

Testing the "Double Juke" with OLS Regression Results

Whereas our first set of observations sought to isolate the combined influences of priming and mass polarization through the examination of summary data, our second set of observations sought to isolate the combined influences of priming and affective polarization. Rather than using ideological self-placement as our main independent variable, we drew upon the OLS regression results and used respondents' self-reported feelings towards Joe Biden and Donald Trump.

[Insert Table 2.1 and Table 2.2]

Using this data, we applied the same proposed theoretical model as used in the first round of observations. Unfortunately, two of the 16 data points did not meet the 95% confidence interval, so the statistical significance of these results cannot be confirmed. However, we felt there was still value in applying the results to our proposed theoretical model if for no other reason than to demonstrate a proof of concept.

[Insert Image 3.1]

As was the case in our first round of observations which used ideological self-placement, we found similar differences in disagreement with Fauci statements among those with warmer

feeling towards Trump when compared to those with warmer feelings towards Biden. (It should be restated that respondents were never told the statements were actually made by Fauci).

When comparing the effects of warm feelings towards Trump on the acceptance of identical Fauci statements, there was a stronger correlation (4.672) between warmth towards Trump and agreement with statements made by Fauci but attributed to Trump (in the control group) compared to the correlation (2.099) between warmth towards Trump and agreement with the same statements made by Fauci but attributed to Biden (in the test group). The control group was primed with Trump statements, while the test group was primed with Biden statements – yet both groups were told the statements were made by Trump. We calculated this difference as a median effect of 3.385, meaning when primed with an alleged Trump statement, as a respondent moved from 1 to 7 on the “warm feelings towards Trump” scale, their acceptance of Fauci quotes attributed to Trump increased by 3.385 points.

Warmth towards Trump decreased the likelihood (-4.087) that respondents would agree with statements attributed to Biden but made by Fauci when primed with correctly attributed Biden statements (-3.863), while when primed with statements attributed to Trump but made by Biden (2.099) the likelihood of agreeing with Fauci statements attributed to Trump was -0.924. We calculated this difference as a median effect of -0.206, meaning when primed with an alleged Biden statement, as a respondent moved from 1 to 7 on the “warm feelings towards Trump” scale, their acceptance of Fauci quotes attributed to Biden decreased by 0.206 points.

When comparing the two median effects, we argue there is evidence that warm feelings towards Trump predict a higher likelihood of respondents accepting Fauci statements attributed to Trump, than cold feelings predict respondents accepting Fauci statements attributed to Biden.

In all observations, respondents' warmth towards Trump predicted positive assessments of Biden statements merely due to being told that Trump made those statements.

[Insert Image 3.2]

When comparing the effects of warm feelings towards Biden on the acceptance of Fauci statements, warmth towards Biden decreased the likelihood that respondents would agree with statements attributed to Fauci but made by Trump when primed with correctly attributed Trump statements (-1.712), yet when provided the same Fauci quotes and being told Biden made them (after being primed with Trump quotes misattributed to Biden), respondents were far more accepting of those same Fauci statements (2.056). We calculated this difference as a median effect of 0.172, meaning when primed with an alleged Trump statement, as a respondent moved from 1 to 7 on the “warm feelings towards Biden” scale, their acceptance of Fauci quotes attributed to Trump decreased by 0.172 points. Perhaps the bigger story is that as warmth towards Biden increased, respondents went from rejecting Fauci statements attributed to Trump and after being primed by Trump statements – to accepting those same statements after being primed by identical Trump statements (attributed to Biden) and being told Biden made the same Fauci statements that were presented to the Control Group.

Warmth towards Biden increased the likelihood that respondents would agree with statements attributed to Biden but made by Fauci (4.791) when primed with correctly attributed Biden statements (6.145) than the rate at which they agreed with identical Fauci statements attributed to Trump (1.574) after being primed with identical statements attributed to Trump but made by Biden (2.143). We calculated this difference as a median effect of 3.183, meaning when primed with an alleged Biden statement, as a respondent moved from 1 to 7 on the “warm

feelings towards Biden” scale, their acceptance of Fauci quotes attributed to Biden decreased by 3.183 points.

When comparing the two median effects, we argue there is evidence that warm feelings towards Biden predict a higher likelihood of respondents accepting Fauci statements attributed to Trump, than cold feelings predict respondents accepting Fauci statements attributed to Biden. In short, this further suggests affective polarization and priming combine to shape people’s perceptions of scientific advice. Interestingly, warm feelings towards Biden appeared to have a stronger effect on this phenomenon than warm feelings towards Trump. This phenomenon can be seen more clearly when comparing the effects of affect on acceptance of Trump and Biden quotes within the control group versus the test group, as well as in comparing the effects of priming on acceptance of Fauci quotes within the control group versus the test group. In short, warmth towards Biden predicted positive assessments of Trump statements merely due to being told that Biden made those statements. These observations strongly suggest affective polarization and priming combine to shape people’s perceptions of scientific advice.

[Insert Image 3.3, Image 3.4, Image 3.5, and Image 3.6]

Testing the Effects of Affect in Social Media Discourse

The second major element of our research examines the extent to which affective polarization shapes the communications landscape that serves as a platform for discussing COVID-19. One could say the first major element of our research asks “Does polarization shape our perceptions of reality?”, while the second element asks “Does polarization shape our digital reality?” We approach the latter question by first measuring levels of affective language directed towards Donald Trump, Joe Biden, and Anthony Fauci in “coronavirus” discussions on Twitter

to identify whether levels of affective language vary when directed towards politicians compared to a nationally recognized expert in infectious diseases. Second, we isolate periods of high affect in order to take a closer look at how such language shapes the network environment and, in turn, the manner in which this shapes people's exposure to such language.

One of our first expectations was that affective language surrounding coronavirus would increase in proximity to Election Day, 2020. Rates of positive sentiment stayed relatively consistent during the month leading up to Election Day, which at first blush ran contrary to our expectations. However, the data did show a fairly consistent increase in rates of negative sentiment during the same time span, with notable spikes in the week immediately prior to Election Day. While discussion on Twitter about coronavirus did not appear to be any more or less positive in the month leading up to the presidential election, it did get measurably more negative.

[Insert Image 4.1]

Next, we tested our expectation that political candidates (Donald Trump and Joe Biden) would incite higher levels of affective polarization than an infectious disease specialist (Anthony Fauci). Specifically, our expectation was that Donald Trump and Joe Biden would see higher levels of negative sentiment and lower levels of positive sentiment than Anthony Fauci, especially as Election Day drew nearer. However, this expectation could not be confirmed by the data and, in some cases, the opposite was found to be true.

When examining rates of affect in "coronavirus" Tweets in the month leading up to Election Day, 2020, negative sentiment in tweets mentioning Anthony Fauci actually *increased* as Election Day drew near, while negative sentiments in tweets mentioning Donald Trump or Joe

Biden *decreased*. Rates of positive sentiment in tweets mentioning Donald Trump, Joe Biden, and Anthony Fauci were relatively consistent among each other. These observations indicate that at least on one significant level, Anthony Fauci was a stronger catalyst for affective polarization in Twitter discussions about coronavirus than Donald Trump and Joe Biden. In sum, these findings were particularly striking, as they suggest high levels of politicization associated with perceptions of ostensibly science-based policy alternatives (Fauci) compared to policy alternatives that one would expect to be more politicized (Trump and Biden).

[Insert Image 4.2, Image 4.3, Image 4.4, and Image 4.5]

Testing the Effects of Affect in Social Media Networks

Our final test of social media data focused on approximately 241,000 tweets mentioning “coronavirus” gathered on October 31st, 2020, which was the day of highest negative sentiment in the month leading up to the 2020 Presidential Election. A network visualization was created using the software program Gephi 0.8.2 and the modeling algorithm Force Atlas 2. This particular algorithm maps out users, tweets, and hashtags as “nodes” (represented by circles), then links these nodes through the use of “edges” (represented by lines) according to likes, retweets, and mentions. Each node also carries a specific “weight” based on the total amount of volume it receives in the form of likes, retweets, and mentions. When the Force Atlas 2 algorithm is activated, unconnected nodes tend to “repel” away from each other, while nodes connected with edges tend to be “attracted” to each other. After several thousand iterations, a visual map is produced that helps to reveal where various types of discussion are concentrated, the amount of traffic various nodes generate, and the types of themes that are more closely linked with each other. Ultimately, nodes that are located closer to the center of the network are more

likely to be seen by a broader audience, while nodes located at the periphery of the network are less likely to be seen by other participants in the network. The purpose of this test was to identify any high volume areas of significant clustering within the network, as this is an indication of a polarized community. Once any of such clusters were identified, the content of the tweets was analyzed to assess the nature of the tweets (e.g. politically polarized language versus “hard news” or reporting on coronavirus preventative health information). In this network visualization, eight cluster regions were identified as areas of interest.

[Insert Image 5.1 and Image 5.2]

[Insert Image 5.3, Image 5.4, Image 5.5, Image 5.6, Image 5.7, Image 5.8,
Image 5.9, and Image 5.10]

While the network visualization results were somewhat mixed, the content within these highly concentrated and peripheral clusters mostly supported our initial expectations. Cluster 1 and Cluster 4 documented a study that suggested Trump campaign rallies were “superspreader” events. While this may have been true to some extent, the inclusion of a political figure in this tweet very likely could have introduced polarized engagement. Cluster 4 also included an image claimed to have been spread around Twitter by “German doctors”, in which the estimated risk reductions associated with wearing a mask and social distancing were given in specific percentages all the way down to “0% risk”. This image was not accompanied by any citations, which could have incited partisan debate. Cluster 5 cited “creepy testimony” from a mother whose child died from non-Covid related symptoms, with the implication that proper treatment could have been obtained if not for the pandemic. The fact that blame was being leveled due to current pandemic response at the time could have invited additional blame to be targeted at

governmental figures. Cluster 6 was the last of the peripheral clusters and contained one grouping around a tweet promoting a “Prevention Traffic Light” to lower the risk of Covid transmission, while the second grouping was around a tweet detailing a violent round of looting in Barcelona blamed on far-right groups. While it is difficult to imagine the first of the two groupings as one to incite polarizing language, it is similarly as easy to infer the latter of the two could do so.

The final two clusters were located near the center of the visualization and, as such, were most likely to be viewed by a wider and more diverse audience within the network. The content of these tweets was mixed and did not provide much evidence to support our expectations that potentially polarizing discussion would be limited to the peripheral regions of the network. One of the tweet groups in Cluster 7 made the claim that the Trump family “don’t seem to understand” that their supporters were dying of coronavirus. One could easily infer such a claim could instigate partisan debate. However, the second tweet group in the cluster was fairly unbiased and focused on a “newsworthy” piece of information. Specifically, it reported that the Trump Administration had the goal of having 100 million doses of the vaccine ready by the end of October, with a total of 300 million ready in January. Finally, Cluster 8 appeared almost directly in the center of the network (appearing next to the #COVID19 hashtag) and leveled a claim of hypocrisy against those who called Fauci an “alarmist” several months prior for predicting Covid-19 cases could reach 100,000 per day, while the tweet went on to share the news that daily cases had nearly reached that point.

In sum, the initial visualization analyses do indicate the type of content in a tweet cluster matters when it comes to the type of visibility those messages will receive. Such evidence merits closer investigation of the types of users making these tweets and spreading those messages to

others on social media. Additional analysis can accomplish this by collecting individual user data within clusters, then estimating partisanship of users based on the other Twitter users they follow. Such an approach will likely produce a treasure trove of useful data for future researchers.

Conclusions

The last two years have been marked with unprecedented challenges as Americans have struggled to cope with a global pandemic that has strained health care systems, the economy, and citizen's very way of life. In a perfect world, solutions to these challenges would be based on rational, objective, and dispassionate scientific methodology and research. Unfortunately, it is an all-too-often habit of politics to get in the way of progress. Regardless of a person's political ideology, warmth towards an individual politician, or dedication to a particular party, it is nearly impossible to deny that politics quickly and permanently placed itself center stage in our attempts to cope and conquer the challenge of COVID-19. This tendency should alarm people from all backgrounds, ideologies, persuasions, and creeds, as it places politics before science.

One major goal of this research was to develop data and tools for helping to better understand the psychological and emotional mechanisms behind the tendency of people to allow political preferences and ideological allegiances to preclude pragmatism and common sense. The result of this mission is represented in the *Policy Responses to COVID-19* survey and data set. The research and tests presented in this paper are but a few examples of how we believe this data can be used to address not just our own research question, but other similar research questions as well. The methods we use to probe our research questions are fairly experimental and our results somewhat mixed; however, we believe our initial results present strong evidence

that ideology, affective polarization, and priming effects shape people's perceptions on the proper responses to a pandemic that has claimed the lives of millions of people. It is our hope that future researchers will draw upon and improve these methods in a way that expands our understanding of these phenomena, as we all live in a time when such types of rational assessments are desperately needed.

Works Cited

- Burns, Katelyn. "Trump's 7 Worst Statements on the Coronavirus Outbreak." *Vox*, Vox, 13 Mar. 2020, www.vox.com/policy-and-politics/2020/3/13/21176535/trumps-worst-statements-coronavirus.
- Bacon, Perry. "Are Democrats And Republicans Reacting Differently To Coronavirus? It Depends What You're Asking Them." *FiveThirtyEight*, FiveThirtyEight, 3 Apr. 2020, 5:55 AM, fivethirtyeight.com/features/are-democrats-and-republicans-reacting-differently-to-coronavirus-it-depends-what-youre-asking-them/
- Conway, Lucian Gideon, et al. "Why Are Conservatives Less Concerned about the Coronavirus (COVID-19) than Liberals?" *University of Montana*, 13 Apr. 2020, pp. 1–28. *PsyArXiv Preprints*, psyarxiv.com/fgb84/.
- "Coronavirus Disease 2019 (COVID-19)." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, www.cdc.gov/coronavirus/2019-ncov/index.html.
- "Coronavirus." *World Health Organization*, World Health Organization, www.who.int/health-topics/coronavirus#tab=tab_1.
- DeBrabander, Firmin. "The Great Irony of America's Armed Anti-Lockdown Protesters." *The Atlantic*, Atlantic Media Company, 13 May 2020, www.theatlantic.com/ideas/archive/2020/05/guns-protesters/611560/.
- Gittleson, Ben, and Jordyn Phelps. "Government Response Updates: Trump Issues Stricter Guidelines to Stop Virus Spread." *ABC News*, ABC News Network, 16 Mar. 2020, 3:10 PM, abcnews.go.com/Politics/white-house-grapples-coronavirus-guidelines-markets-plummet/story?id=69620218.

Grossman, Guy, et al. "Political Partisanship Influences Behavioral Responses to Governors' Recommendations for COVID-19 Prevention in the United States." *University of Pennsylvania*, 22 Apr. 2020, pp. 1–52. *SSRN*, papers.ssrn.com/sol3/papers.cfm?abstract_id=3578695.

Haidt, Jonathan. *The Righteous Mind: Why Good People Are Divided by Politics and Religion*. Penguin Books, 2013.

Keith, Tamara. "Timeline: What Trump Has Said And Done About The Coronavirus." *NPR*, NPR, 21 Apr. 2020, www.npr.org/2020/04/21/837348551/timeline-what-trump-has-said-and-done-about-the-coronavirus.

Johnson, Andrew F. "Mass Casualty Event Scenarios and Political Shifts: 2020 Election Outcomes and the U.S. COVID-19 Pandemic." *Taylor & Francis Online*, 17 Apr. 2020, www.tandfonline.com/doi/full/10.1080/10841806.2020.1752978.

Nguyen, Hoang. "The States That Are More and Less Likely to Adopt Face Masks." *YouGov*, YouGov, 8 May 2020, today.yougov.com/topics/politics/articles-reports/2020/05/08/states-are-more-and-less-likely-adopt-face-masks.

"Pelosi Statement on Next Steps on Coronavirus Response." *Speaker.gov*, 3 Apr. 2020, www.speaker.gov/newsroom/4320-0.

"Pelosi Statement on Observance of Memorial Day." *Speaker.gov*, 25 May 2020, www.speaker.gov/newsroom/52520.

Peters, Jeremy W., et al. "260,000 Words, Full of Self-Praise, From Trump on the Virus." *The New York Times*, The New York Times, 27 Apr. 2020, www.nytimes.com/interactive/2020/04/26/us/politics/trump-coronavirus-briefings-analyzed.html.

“Remarks by President Trump and Vice President Pence in Roundtable with Industry Executives on the Plan for Opening Up America Again.” *Whitehouse.gov*, 29 Apr. 2020, www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-roundtable-industry-executives-plan-opening-america/.

“Remarks by President Trump at Ford Rawsonville Components Plant.” *The White House*, The United States Government, 21 May 2020, www.whitehouse.gov/briefings-statements/remarks-president-trump-ford-rawsonville-components-plant/.

“Remarks by President Trump, Vice President Pence, and Members of the Coronavirus Task Force in Press Briefing.” *Whitehouse.gov*, 23 Mar. 2020, www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-9/.

Rieder, Rem. “Trump's Statements About the Coronavirus.” *FactCheck.org*, 18 Mar. 2020, www.factcheck.org/2020/03/trumps-statements-about-the-coronavirus/.

Ritter, Zacc, and Megan Brenan. “New April Guidelines Boost Perceived Efficacy of Face Masks.” *Gallup.com*, Gallup, 16 June 2020, news.gallup.com/poll/310400/new-april-guidelines-boost-perceived-efficacy-face-masks.aspx.

Staff, Washington Post. “Where States Are Reopening after the U.S. Shutdown.” *The Washington Post*, WP Company, 22 June 2020, www.washingtonpost.com/graphics/2020/national/states-reopening-coronavirus-map/.

Stephanopoulos, George, and Nancy Pelosi. “This Week' Transcript 4-19-2020: House Speaker Nancy Pelosi, Dr. Deborah Birx, Gov. Jay Inslee.” *ABC News*, ABC News Network, 19 Apr. 2020, 9:02 AM, abcnews.go.com/Politics/week-transcript-19-20-house-speaker-nancy-pelosi/story?id=70229816.

Stolberg, Sheryl Gay. "Live From Her Kitchen, Pelosi Works to Counter Trump's Coronavirus Show." *The New York Times*, The New York Times, 16 Apr. 2020,

www.nytimes.com/2020/04/16/us/politics/pelosi-trump-coronavirus-response.html.

"Transcript of Pelosi Interview on MSNBC's All In with Chris Hayes." *Speaker.gov*, 26 May 2020, www.speaker.gov/newsroom/52620-0.