

Presidential Influence and Public Opinion During Crises: The Case of COVID-19 in Brazil

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Abstract

Can presidential messages influence public opinion? The scholarship shows that common features in developed democracies such as fragmented audiences and partisan reasoning tend to limit the persuasive effects of the bully pulpit. In this article, we argue that the effectiveness of the presidential rhetoric is context dependent. Presidents will be the most likely to persuade public opinion when they seek to break consensus by using messages that activate defection among their supporters. To examine this framework, we focus on the setting of the COVID-19 pandemic in Brazil, where the outbreak was initially a valence issue, but quickly it became a divisive matter among the public. We use a survey experiment conducted days before the President Bolsonaro's national televised address to show that cueing subjects with one of his earlier denialist remarks about the outbreak polarized opinions. We then use Bayesian change-point models to demonstrate how his major televised speeches affected daily trends in online searches related to the pandemic during the first and the most crucial weeks of the outbreak. The findings shed light on the circumstances in which presidential influence can not only be most powerful, but also most harmful.

Pandemics require large-scale collective mitigation efforts that impose what behavioral scientists view as a cooperation dilemma. Voluntary vaccination and compliance in social-distancing practices by large collectivities require that individuals pay the costs of adopting such practices to maximize benefits to themselves and the group (Reluga, 2010). Since mitigation efforts against contagious diseases require near-full cooperation from the public in order to succeed, defection even by a small number of individuals can limit their effectiveness and harm the collectivity (Salathé & Bonhoeffer, 2008). Hence, the COVID-19 (or coronavirus) pandemic is an example of an urgent novel issue that quickly emerged and gained salience across different contexts, with responses from elites and the public being more reluctant and polarized in some contexts than others. Evidence shows, for instance, that partisan disagreements about the pandemic exist and affect behaviors in the U.S. (Gadarian, Goodman, & Pepinsky, 2021b; Grossman, Kim, Rexer, & Thirumurthy, 2020), while being primarily a valence issue in Canada (Merkley et al., 2020). How do these varying patterns of public opinion response emerge across contexts?

Given the central coordinating role of national leaders during large-scale crises, a critical question for democratic theory refers to whether presidents can shape the distribution of opinions on new critical issues. In general, the scholarship finds that the influence of presidential messages is quite limited (Edwards, 2003; Scacco & Coe, 2016). According to work about the US, presidential influence would be limited because of the fragmented media environments where television and

radio compete with online media for the public's attention (Baum & Kernell, 1999; Young & Perkins, 2005). Moreover, the strength of preexisting identities such as partisanship would shape opinion cleavages that are hard for the presidential rhetoric to overcome (Cohen, 2015).

In this article, we contribute to this debate by theorizing about the conditions in which presidents can be most effective in their persuasion efforts. We propose that the success of presidential influence depends upon the combination of two main factors: the type of message used by the leader and the distribution of opinions on the receiving end of that message. As the scholarship shows, presidential influence tends to be ineffective when leaders put forward a partisan message to reach an already divided audience (Edwards, 2003). Likewise, the presidents will have limited persuasiveness when they put forward unity messages about a valence issue in which partisan disagreements are secondary (Cohen, 2015). In this article, we leverage the unique context of a case study that shows how presidents can be influential when they use polarizing messages to reach supporters who were initially led by the informational environment to put their partisan identities aside. Given that those strong supporters of the president will seek to avoid cognitive dissonance (Gawronski, 2012), they will change their opinions to agree with the president upon learning about his/her position on the issue (Lenz, 2012).

To show evidence of such a process, we explore the puzzling case of public opinion formation during the COVID-19 pandemic in Brazil. During the initial stages of the outbreak, polls showed that the pandemic was a valence issue in the

country, with the public expressing high levels of concern and support for the social distancing policies (Datafolha, 2020b). Surprisingly, within less than a month and amid rapidly increasing rates of contagion and hospitalizations, polls showed considerably lower levels of concern, and more politically divided views on social distancing. We argue that the sudden transformation of the pandemic from the valence to position issue was neither due to changes in media coverage nor due to a gradual process of partisan learning. Rather, it was the rhetoric of a single relevant political actor, President Jair Bolsonaro, that triggered changes in public perceptions about the pandemic in the country.

We use a survey experiment conducted during the early weeks of the outbreak to show that the Brazilian President's rhetoric could polarize an issue that was not initially divided among the public. We also compare surveys over time to show that the Brazilians became more divided after the President escalated his denial regarding the gravity of the pandemic. Finally, to show that the President's rhetoric was the driving force in changes in public perceptions, we use the Bayesian change-point models to analyze time series data on daily online searches associated with concern about the pandemic. We show that high-profile speeches given by the President explain variation in aggregate public responses that are similar to the early survey experiment. Our findings suggest that, while consistent with theories about opinion formation on novel issues, the overwhelmingly cooperative scenario observed in Brazil during the early stages of the pandemic was a fragile equilibrium, soon to be broken by the president's effort to polarize public opinion. Hence, we shed light on how presidents can affect public opinion in critical moments when democracies are expected to reach agreements and establish cooperation.

The Conditionality of Presidential Influence

Individual-level cooperation is crucial in collective efforts to mitigate disease spread during the pandemics. When vaccines are available, individuals cooperate by accepting the costs and perceived risks of getting vaccinated. Without vaccines, cooperation implies that individuals must comply with guidelines for social distancing practices to avoid person-to-person transmission. In both the cases, the literature shows that cooperation plays a key role in building effective collective responses during the early stages of a disease outbreak (Fukuda & Tanimoto, 2016). However, studies also show that those situations involve cooperation dilemmas (Reluga, 2010). Since there are incentives for individuals not to take part in vaccination or social-distancing strategies, evidence shows that the presence of even a small proportion of "stubborn individuals" or "clusters of belief" who refuse to cooperate can accelerate the spread of the disease (Salathé & Bonhoeffer, 2008).

Given that collective distribution of opinions about pandemic outbreaks are related to patterns of compliance and support for the policies that attempt to mitigate disease transmission, they constitute a special type of political issue. When emergent health-related crises such as pandemics are framed as issues in which partisan perceptions undermine the common ground for dialogue, citizens may become less likely to evaluate incumbents based on the effectiveness of their response, as well as less willing to comply with measures to mitigate the spread of the disease. In this sense, there is a striking contextual variation with respect to how public

opinion reacts to such crises, with the coronavirus outbreak treated primarily as a valence issue in Canada (Merkley et al., 2020), for example, while displaying positional features in the US (Gadarian et al., 2021b; Grossman et al., 2020).

Theories of public opinion suggest that three factors can shape the collective distribution of preferences on the novel issues. Public response on emerging issues is more likely to be divided in contexts where party attachments are widespread and psychologically strong (Bolsen, Druckman, & Cook, 2014; Taber & Lodge, 2006), where issue-relevant information is scarce or difficult for citizens to learn (Althaus, 2003; Kam, 2005), and where competing elites provide cues that push individuals to rely on their political allegiances when forming new opinions (Chong & Druckman, 2007). One specific type of elite influence refers to presidential persuasion (Lenz, 2012; Mondak, 1993; Ragsdale, 1984; Rottinghaus, 2009). Given that national leaders play central coordinating roles during large-scale crises, the extent of their influence on public opinion has direct implications for democratic theory.

However, studies on the effects of presidential communication on public opinion come from the US and show limited effects in the recent times (Edwards, 2003). Presidential influence on public opinion tends to be limited because of the fragmented media environments that limit the reach of the president's message (Baum & Kernell, 1999; Young & Perkins, 2005). Polarized audiences also limit the spread and effectiveness of messages used by the presidents, since opposition voters tend to reject the persuasion attempt. However, as the study of presidential influence comes primarily from a single context where issues are strongly shaped by partisan divides, as it is the case for the coronavirus pandemic (Gadarian, Goodman, & Pepinsky, 2021a), it is worth exploring such dynamics in contexts where the conditions that limit presidential communication may change (Scacco & Coe, 2016).

Under what circumstances can presidents persuade voters to change their views on a political issue? We propose that the presidential influence depends on the combination of two main factors: the type of message used by the leader and the distribution of opinions on the receiving end of that message. Specifically, we propose that presidential rhetoric will be more likely to cause opinion change when they send a polarizing message that reaches a homogeneous public, that is, when the president's supporters are initially led by the informational environment to ignore their political identities when forming opinions about the new issue. As Cohen (2015) points out, presidential messages can either seek to homogenize opinions by adopting the role of a national leader in their rhetoric, or to polarize specific segments of the public, such as supporters and opposition, when adopting the role of party or group leaders (Cohen, 2015; Nicholson, 2012). In general, presidential rhetoric tends to be less effective when the message reaches an audience that is already divided along party lines about the issue (Edwards, 2003). That seems to be the case of COVID-19 in the US, as Gadarian et al. (2021a) show that partisan cues about the pandemic had no effect on views about the outbreak.

However, issue opinions do not necessarily display a partisan distribution over time and across contexts. In many countries, public opinion converged in viewing the pandemic as a valence issue (Bol, Giani, Blais, & Loewen, 2021; Merkley et al., 2020). Such contextual variation denotes that not all national leaders address a divided public when they speak about the problem. When addressing an audience with

converging opinions, leaders can choose to play the role of a national or of a party leader. Speaking in the framing of a national leader will likely have limited persuasion effects on public opinion, since the message mainly reinforces cooperation and seeks to produce a “rally around the flag” effect. Evidence from Europe and Latin America suggests that most leaders faced incentives to pursue such a role during the pandemic as a strategy to raise approval ratings (Bol et al., 2021; Sosa-Villagarcia & Lozada, 2021). Therefore, presidential messages tend to have limited persuasive effects when they reach divided audiences, or when they use rhetoric focused on unity to reinforce preexisting convergence of opinions among the public.

This framework suggests that presidents can be the most influential when they use polarizing messages to break an existing consensus about an issue. Notably, the attempt to break consensus among converging opinions can often lead to backlash that will hurt the president’s popularity, but recent scholarship suggests that such effects may be short lived (Sosa-Villagarcia and Lozada, 2021). First, attacking a bipartisan consensus can change public opinion because the influence of presidential messages in valence (cooperation) issues must only move the public in a single direction (defection). Second, while the effects of polarizing messages tend to balance out in the aggregate for position issues, those effects will essentially operate as persuasion when they convince a specific group of individuals to go against the dominant cooperative position. Such a group of people, namely supporters of the leader, will learn the position of the president from the cue and adjust their opinions on the new issue to avoid cognitive dissonance (Gawronski, 2012).

Table 1 illustrates how the combination between type of message and distribution of opinions on the receiving end of that message moderates the likelihood of persuasion, that is, the probability that presidents will effectively induce voters to abandon their positions and follow the leader (Lenz (2012); Nicholson (2012). Presidential messages will be less persuasive when public opinion is already divided on the issue (bottom row of the table). Converging or unity messages will likely fall on “deaf ears” (Edwards (2003), while partisan messages will simply reinforce existing disagreements (Gadarian et al., 2021a). When presidents speak in favor of unity on an issue where opinions are not already sorted based on partisan lines (valence issues), by definition, they will not exert persuasion, since their messages will simply reinforce consensus and seek to produce a “rally around the flag” effect (Bol et al., 2021). Hence, presidential messages will be persuasive when they adopt a partisan message that is received by a convergent public. That is, presidents will influence public opinion when they induce their supporters to defect from a generalized consensus about an issue in which partisan sorting was initially weak.

In this sense, the COVID-19 pandemic in many contexts may provide a scenario where the initial consensus about the gravity of the issue between different sectors of the public and elites favors rather than undermines the influence of presidential messages. Notably, the extent of that influence depends on whether the president chooses to reinforce or break such consensus, which is determined by a multitude of factors that are exogenous to the scope of this article. Nonetheless, the theory proposed here suggests that some of the features that are often seen as limiting presidential influence in conventional contexts and issues, such as fragmented media and a politically divided public, can instead boost the effects of presidential rhetoric in the valence issues of cooperation during crises, since presidents can simply activate latent opinion divides and create dissent through the media environments that they can control.

The Case of Brazil

Brazil is a puzzling case of opinion formation during the coronavirus outbreak. Polls from the early stages of the pandemic (from late February to late March) show that the Brazilians initially saw the outbreak as a valence issue, with overwhelming levels of concern and support for large-scale measures to mitigate the spread of the virus. Surprisingly, polls from April show that, while the number of cases and deaths because of the coronavirus increased at alarming rates, levels of concern and support for mitigation efforts had decreased (Datafolha, 2020a). Evidence of a later divide in public opinion about the outbreak also appears in other types of data (Ajzenman, Cavalcanti, & Da Mata, 2020; Calvo & Ventura, 2021). Hence, while in other contexts the pandemic was either valence or a partisan issue from the beginning, the case of Brazil provides an example where the issue changed from valence to position issue in a specific period of time.

The factors theorized as related to collective patterns of issue opinion do not seem to explain the sudden shift in Brazilians’ views on coronavirus. Even though there is evidence that partisan attachments can shape issue opinions in the Brazilian electorate (Samuels & Zucco, 2014), the outbreak occurred in a political environment in which conventional allegiances were weakened. Since partisanship tends to be less salient in electoral cycle midpoints (Michelitch and Utych, 2018), it is unlikely that the patterns of opinion formation about the coronavirus are explained by short-term processes of partisan sorting or learning, especially in a context where partisan attachments are less stable (Baker & Dorr, 2019). Also, the shift in public perceptions does not seem to be explained by a confusing or scarce informational environment. Polls show that the public was highly aware of the issue since the early stages of the outbreak (Datafolha, 2020a). Mainstream media coverage was also largely uniform during the period (Batista Pereira & Nunes,

Table 1. Hypothesized Effects of Presidential Messages on Opinion Change Based on Type of Message and Public Opinion Distribution

Public opinion	Type of message	
	Converging	Diverging
Converging	No persuasion: “rally around the flag”	Persuasion: supporters’ defection
Diverging	No persuasion: partisan resistance	No persuasion: partisan reinforcement

2021). Finally, the response from elites and institutions also does not explain the shift in perceptions about the outbreak. Notably, institutions and leaders were initially reluctant to adopt large-scale mitigation policies, which is expected given the electoral cycle and deficits in democratic representation (Baekkeskov & Rubin, 2014). Moreover, the economic crises faced by the country contributed to the initial hesitation by authorities in accepting the costs imposed by large-scale mitigation efforts. Nonetheless, the overall response was predominantly cooperative during the first weeks of the outbreak, with governors and mayors having a central role in designing and implementing policies (Rocha, de Almeida, & Corrêa, 2020). Congress approved temporary cash-transfer payments in early April. The Ministry of Health supported local authorities and Congress while coordinating with the Judiciary to adjust the legal framework for the implementation of social distancing policies and the expansion of healthcare infrastructure (Croda et al., 2020). Centralized mobilization and coordination were also facilitated due to the unified healthcare system's previous response to the *Influenza A* (or H1N1, 2009) and *Zika* (2015) outbreaks.

The main shift in the informational environment after the early stages was in the behavior of President Jair Bolsonaro. Initially, with the Ministry of Health leading the coordination efforts, Bolsonaro's positions were less salient and reduced to isolated remarks conveying mixed signals. On March 7, 2020, the President stated that Brazilians should "rigorously follow the recommendations of experts," while saying days later that the virus was "overblown" (March 9th), a "media fantasy" (March 10, 2020), and that it caused "hysteria" (March 15, 2020).¹ On March 20, 2020, Bolsonaro again recognized the gravity of the situation, while referring to it as a "small flu." While those statements contained trivializing language, they were ambiguous and did not offer a clear counter-narrative for citizens to take the pandemic less seriously than they were at the time.

Bolsonaro changed his approach around late March. In a TV interview on March 22, 2020, the President once again used trivializing language to refer to the virus, but went further to call state governors "job killers" for implementing lockdown policies. The definitive turning point came on March 24, 2020, when Bolsonaro gave a nationally televised address in which he repeated several of the earlier remarks and urged Brazilians to go back to "normality" to save the economy. The trivializing language was now combined with an explicit denial of the gravity of the pandemic. The new message also provided the public with a counter-framing highlighting the economic effects of the pandemic, by arguing that lockdowns would be more harmful to the country than the outbreak itself. The statements were not just a rhetorical switch, but were also followed by actions. The growing conflict between the President and the Ministry of Health led two consecutive Health Ministers to resign within less than a month.

We propose that the rapid shifts observed in the Brazilian public opinion within the first two months of the pandemic were caused by presidential influence. The pandemic in Brazil was a "perfect storm" for Bolsonaro to move public opinion against the initial consensus by simply building upon his previous communication strategies. First, Bolsonaro's

persuasiveness is related to the use of populist rhetoric. While not able to persuade large portions of the electorate in favor of his views, his ability to mobilize his core supporters is largely due to the appeal of populism, the ideology that proposes a Manichean division of society between the "pure people" and "corrupt elites" (Mudde and Rovira Kaltwasser, 2017; Tamaki and Fuks, 2020, 5–6). That rhetoric, combined with an ability to capitalize on dissatisfaction with crime, corruption, and the economy, fostered *Bolsonarismo* as a powerful right-wing conservative force that shaped public opinion in Brazil after 2018 (Rennó, 2020). Second, Bolsonaro relies heavily on online environments to communicate with and mobilize his core supporters (Duque & Smith, 2019). Moreover, evidence from later stages of the pandemic suggests that Bolsonaro's rhetoric further influenced public opinion on vaccines and disease-related misinformation (Gramacho, Turgeon, Kennedy, Stabile, & Mundim, 2021; Gramacho and Turgeon, 2021).

Bolsonaro's unique stance during the initial stages of the outbreak makes him the main source of defection against converging views from experts, the media, and political groups. The context of the initial consensus about the pandemic in the country, primarily caused by a converging informational environment and weak partisan divides, provided the setting for a successful diverging message from a president that was willing to stir up a disagreement. In the following sections, we aim to empirically explore the Brazilian case to demonstrate that: 1) the President's diverging rhetoric had the potential (even before its escalation) to cause opinion change, especially by fostering defection among his core supporters (survey experiment); 2) the levels of public concern about the pandemic indeed decreased after Bolsonaro publicly escalated his rhetoric (comparison of surveys over time), and; 3) the turning point in this process were two nationally televised messages, a method that the literature shows to be a common tool of the presidential influence (Ragsdale, 1984; Rottinghaus, 2009) (analyses of daily google searches).

Evidence from a Survey Experiment

The data comes from a survey experiment embedded in a monthly online poll conducted by *Quaest Consultoria & Estratégia*.² The sample of 1,000 respondents is nationally representative of the online population in terms of age, gender, and education.³ Data collection occurred between March 19 and 23, 2020.⁴ The survey was conducted amid the peak of authorities' responses to the outbreak and concluded the day before the Bolsonaro's-televised address.

The survey was divided in two main sections. The first included questions about political and economic views, while the second had questions on attitudes toward the pandemic. Between the two sections, respondents were randomly assigned to one of four experimental conditions.⁵ The first corresponds to the control group that did not receive stimuli. The second group was asked whether they had heard

² The analysis of the survey data was conducted with Stata 13.1.

³ See [Supplementary Appendix](#) for descriptive statistics about the sample.

⁴ Because the polling company designed and collected the data as part of its monthly public opinion tracking and later shared the nonidentifiable data with the authors, the [redacted] deemed it as not requiring full review (Study Number 19-0817).

⁵ See [Supplementary Appendix](#) for instrumentation (in Portuguese).

¹ See [Supplementary Appendix](#) for the links to Bolsonaro's statements.

the Bolsonaro’s public statement (from March 10, 2020) that “the question of coronavirus is more of a fantasy than what the media propagates.” This condition tests whether the President’s statement could influence views about the outbreak.⁶ The third group was asked whether they had heard that the “World Health Organization (WHO), based on data from scientific research, had declared the coronavirus a pandemic, meaning that it had affected and would affect millions of people around the world.” This condition tests the level of saturation of public opinion by observing whether cueing subjects with the position of health authorities could further increase concerns. The fourth group received a question presenting both Bolsonaro’s and the WHO’s stances.⁷

Two features of the experiment may limit the extent to which Bolsonaro’s cue presented to subjects could exert persuasion. First, the statement happened in a context in which Bolsonaro’s own Health Cabinet was taking measures against the outbreak. Second, the cue neither provides a counternarrative nor utilizes clear populist language that is recurrent in the Bolsonaro’s rhetoric. Moreover, since we argue that the informational environment, especially through media coverage, had provided outbreak-related information to the public, we expect the WHO cue to have a null effect, which would indicate the saturation of the environment. Therefore, while strong stimuli and low-mundane realism tend to undermine the external validity of survey experiments (Barabas & Jerit, 2010), the features of the stimuli used here suggest that the observed effects could be weaker than those of the Bolsonaro’s subsequent behaviors.

The main dependent variable is the extent to which subjects express being worried/concerned about the pandemic. The question asked respondents: “how worried are you that you or someone that you know will get the coronavirus? Very worried, somewhat worried, a little worried, or not worried at all?” The variable is re-scaled to range from the lowest to the highest level of concern. Overall, the respondents are highly concentrated in the highest categories, with 76% of respondents being “very worried” and 16% being “somewhat worried,” which corroborates the idea of an initial overall agreement about the pandemic among the public.

The measure of support for Bolsonaro is based on four items. The first two asked respondents about the President’s performance approval and whether they thought his job was better or worse than expected. The other two questions were about vote choice in the second round of the 2018 election and vote intention if the 2022 elections were held that day. The latter were coded so that mentions to Bolsonaro were equal 1, mentions to his main opponent in 2018 (Fernando Haddad from the PT) were equal 0, and other responses (absences and null/blank votes) were equal to .5. The final scale consists of the average across items (ranging between 0 and 1), with higher values indicating support for Bolsonaro (Cronbach’s Alpha of .87).⁸ This variable is used here as the main moderator, as Bolsonaro supporters are expected to be more affected by his message.

⁶ The subjects were debriefed immediately after the questionnaire and a week later with information about the study and the importance of prevention habits against the virus.

⁷ About 75% of subjects reported that they had seen the Bolsonaro’s statement, while 95% reported that they had seen the WHO’s statement.

⁸ See [Supplementary Appendix](#) for models assessing the unidimensionality of the battery.

Figure 1 shows the predicted probabilities of a respondent selecting the option “very worried” about the outbreak for the four experimental conditions in the survey. The estimates are based on an Ordered Probit model (instead of ordinary least squares) because of the uneven distribution of the ordinal dependent variable. The model does not include control variables, since the treatments are uncorrelated with pretreatment variables in the study.⁹ As expected, the graph shows very high levels of concern about the coronavirus across the board. Subjects receiving the Bolsonaro’s cue tend to become slightly less likely relative to the control group to express high concern about the virus, but that difference is only marginally statistically significant ($p < .058$). Hence, there is weak evidence for general persuasion by Bolsonaro. The other treatment effects are very close to zero.

Figure 2 shows the marginal effects of the cues on the predicted probabilities of “very worried” about the outbreak by level of support for the President. The estimates are also based on Ordered Probit models that include interaction terms between the treatment conditions and the scale of support for Bolsonaro.

The left-side graph in Figure 2 shows that supporters of the President become substantially less concerned about the virus after seeing his statement. The center graph shows that support for Bolsonaro does not moderate the overall null effect of the WHO cue, since the interaction term is not statistically significant. This result is consistent with the idea that the levels of concern were already high because of a saturated informational environment. At last, the right-side graph shows that combining both cues results in a pattern of response similar to showing the Bolsonaro cue alone. Moreover, alternative specifications show that variables such as partisanship and ideology do not moderate the treatment effects.¹⁰ The absence of other moderators may have two important implications. First, it shows that opinions on the issue are polarized by *Bolsonarismo* rather than by other political predispositions. Second, it suggests that the effect of the Bolsonaro’s cue on opinion change among his strong

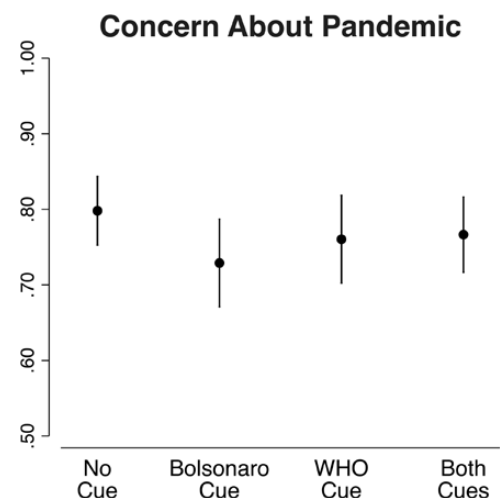


Figure 1. Predicted probabilities of “very worried” about coronavirus by treatment condition—march survey-experiment (Oprobit estimates).

⁹ See [Supplementary Appendix](#) for randomization checks.

¹⁰ See [Supplementary Appendix](#) for results. The findings on ideology are consistent with [Pereira, Medeiros, & Bertholini \(2020\)](#).

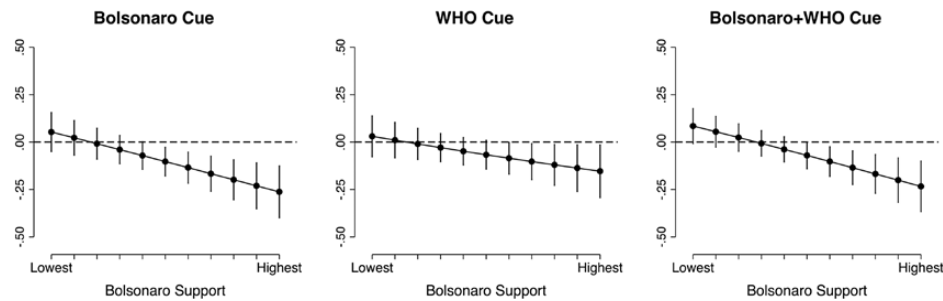


Figure 2. Marginal effects of each experiment condition on predicted probabilities of “very worried” about coronavirus by support for Bolsonaro—March survey experiment (Oprobit estimates).

supporters seems more related to those subjects learning his position and adjusting it to avoid cognitive dissonance rather than being primed by it. Priming would likely trigger other types of subjects (right wing and *antipetistas*) to rely on more ideological predispositions, which is not observed in the results. While the evidence for learning rather than priming is indirect, it is consistent with previous scholarship (Lenz, 2012).

One striking feature of the results is the absence of polarization in the control group, even with the questions about the outbreak positioned after questions about politics within the questionnaire. This pattern supports the claim that the pandemic was a valence issue in the early stages of the outbreak. At the same time, the results show that there was the potential for the President to influence public opinion, especially by providing a strong counter framing. Bolsonaro did so in a televised speech the day after the conclusion of data collection for the March poll of the survey. About a month later (April 25–26, 2020), an online poll with 1,000 respondents was conducted including the same question about the concern, but without any of the cues from the survey experiment. If the Bolsonaro’s escalation in downplaying the pandemic affected public opinion, as suggested by the survey experiment, then opinions about the issue should be less cooperative and more politically divided in April.

To test whether the country became polarized in April, we compare respondents from April with the control group from March by stacking them in one dataset. Figure 3 shows results from two models similar to those from the experimental data analyses. The left-side graph shows the predicted probability of a respondent being “very worried” among the March control group and the April sample based on an Ordered Probit model including a binary indicator for April as the main independent variable. The right-side graph shows the marginal effect of the April variable by level of support for Bolsonaro based on an interaction term. Since the data is observational, the models control for age, media exposure, ideology, religious affiliation, income, sex, and region.¹¹

The results show that views about the outbreak changed substantially between March and April. There is an overall decrease in concern as the probability of a respondent selecting “very worried” about the pandemic drops about .15

¹¹ The questions on partisanship and views on science were not asked in the April survey.

¹² The results do not change after controlling for perceptions about a scandal involving Minister of Justice Sérgio Moro days before the data collection in April (see [Supplementary Appendix](#)). Also, Bolsonaro’s support dropped only .05 points between March and April, so the observed patterns cannot be attributed to changes in his basis of support.

points ($p < .000$). The right-side graph also shows that, consistent with the experimental results, the largest differences between the April sample and the March control group are observed among respondents expressing high support for Bolsonaro. Moreover, no other potentially relevant variables have the same moderating role as the scale of support for Bolsonaro.¹²

All in all, this section presents suggestive evidence that the change in perceptions about the coronavirus outbreak from a valence to a positional issue over time in Brazil is related to the president’s message. Since there is no direct evidence that it was Bolsonaro’s growing rhetoric and counter-framing that produced the changes after the March study, we now turn to observational data of online search trends in Brazil to examine whether the Bolsonaro’s actions and words were the driving factor in the reshaping of COVID-19 as a political issue.

Evidence from Online Search Trends

In this section, we examine the Bolsonaro’s influence on public opinion about the pandemic during late March. We use time series data from online searches (Google Trends) to measure and monitor aggregate perceptions about the outbreak daily. Using the Bayesian change-point models, we identify the specific days in the time series that constitute breaking points in public opinion trends (Wawro & Katznelson, 2014; Western & Kleykamp, 2004). Finally, we combine the quantitative results with a qualitative assessment of the main political events that coincide with the change points.

To measure public opinion about the pandemic during the specific timeframe when the President escalated his stance, we use data from Internet searches between February 15, 2020 (10 days before the first confirmed case of coronavirus in Brazil) and May 2, 2020 (1 week after the April survey data used here). Aggregate data from online searches is used across different disciplines to assess issue salience and valence (Mellon, 2014; Nuti et al., 2014). Daily data on frequency of searches are available through Google for the period covered here for nearly all countries, states, and cities around the world. The quantities are indices of the number of Google searches for a word or set of words within the specified period, indexed to the highest frequency of searches observed within the period.

To measure our dependent variable of concern about the outbreak, we collected daily indices of terms in Portuguese related to “contagion” (*contágio* or *contaminação*) and “symptoms” (*sintomas* or *sintoma*). We searched for variations of each term, as well as common misspellings.¹³ The

¹³ We follow the recommended protocols by Nuti et al. (2014). See [Supplementary Appendix](#) for a full description.

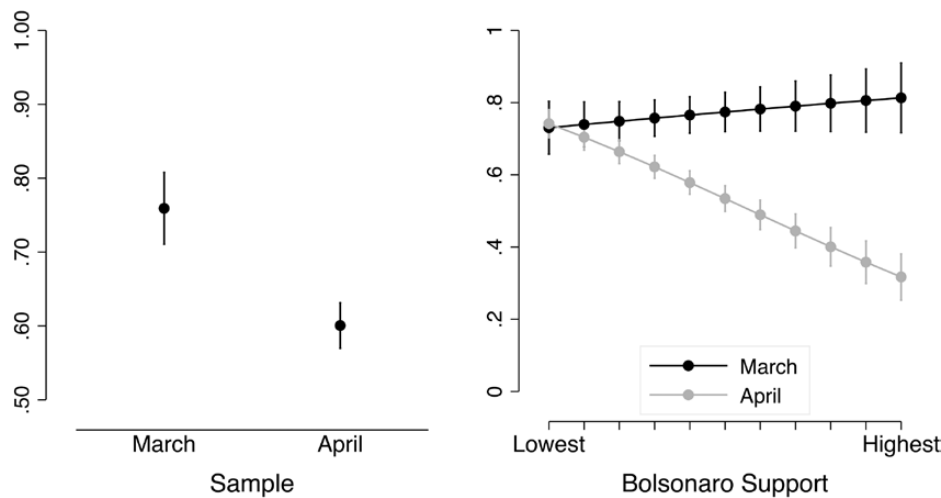


Figure 3. Predicted probability of “very worried” (left) and marginal effects of April on predicted probabilities of “very worried” (right) by support for Bolsonaro (Oprobit estimates).

final measure represents the daily indices for searches of any of those terms (using the search term “+”). We do not include specific terms with direct references to “coronavirus” or “covid,” since those terms were highly salient beyond the specific content covered by the measure.

We follow Mellon (2014) to validate the measures, in the extent to which they apply to the short time frame analyzed here. With respect to content validity, we compared the search indices for each possible term used and selected only the five most common. Also, we checked the most common search queries associated with each term in order to verify that they were not systematically related to confounding events. We do not have a long time series available for a criterion validity variable, such as daily surveys for the time covered. However, the frequency of searches measuring the dependent variables varies between late March and late April consistently with the available surveys. Another concern is the representativeness of the online search data relative to the Brazilian population. The online surveys used in the previous section do not show strong associations between socioeconomic factors and the dependent variables, which suggests that selection is likely not a major concern in this case. Finally, in order to assess threats from other time series complications, we compared our measures with themselves in 2019. The measures from 2019 display considerably lower intensity of searches, less over-time variation, and do not present clear seasonal patterns (see [Supplementary Appendix](#)).

The goal of the analyses is to test whether messages from the president decreased levels of concern about the virus. We use the Bayesian change-point models that estimate the specific locations (days) that represent change points in the time series (Wawro & Katznelson, 2014; Western & Kleykamp, 2004). Instead of modeling temporal instability by including indicator variables for the hypothesized change points (parametric approach), the Bayesian change-point models allow the timing of the change to be discovered

from the data (diagnostic approach), while enabling formal inferences about the identified change points. From a computational standpoint, the Bayesian change-point models rely on the flexibility of Markov–Chain Monte-Carlo simulations and the Gibbs sampler to estimate the change-point locations.¹⁴

Figure 4 presents the results of a Bayesian change-point model for the measure of concern about the pandemic based on online searches.¹⁵ The top graph shows the posterior means for the searches, that is, the estimated intensity of searches at each location (day) of the time trend. The bottom graph shows the posterior probabilities that each day in the time series is a change point.¹⁶

The top graph in Figure 4 shows that the levels of concern start to increase around the days between late February and the first half of March. Searches related to concern about the virus peak in late March, but sharply decrease and stay at lower levels in April. The bottom graphs identify the nonrandom change points in the time series. Five locations appear with posterior probabilities considerably higher (>.99) than the rest of the series.

Do the change points identified by the models correspond to events related to the COVID-19 outbreak in Brazil? To assess that, we searched news websites for the main headlines associated with the pandemic in the country. We then used key terms in their headlines to assess the intensity of searches for those terms and identify the most important event of the day.¹⁷ Table 2 shows the locations identified by the models as having more than 99% of probability of producing change points, as well as their corresponding dates. The table also shows the effect each location has on the trend, with “positive” indicating that they increase and “negative” indicating that they decrease the frequency of searches. We expect health-relevant events to have a positive effect of concern, while salient public speeches made by Bolsonaro should have a negative effect on the trend of concern over time. Finally, the last two columns show the posterior probability that

¹⁴ See [Supplementary Appendix](#) for a brief discussion on the statistical reasoning in change-point detection models.

¹⁵ The analyzes were conducted using R package `vbc` (version 4.03 (Erdman & Emerson, 2007)). The models use 10,000 iterations (1,000 burnin). The priors on the change point probabilities follow $U(0, 0.008)$.

¹⁶ For simplicity, the models do not include control variables. The results are robust after controlling for indicators of weekends, the number of new COVID-19 cases, and data on cell phone mobility (from Google). See [Supplementary Appendix](#).

¹⁷ See [Supplementary Appendix](#) for a description of the procedures.

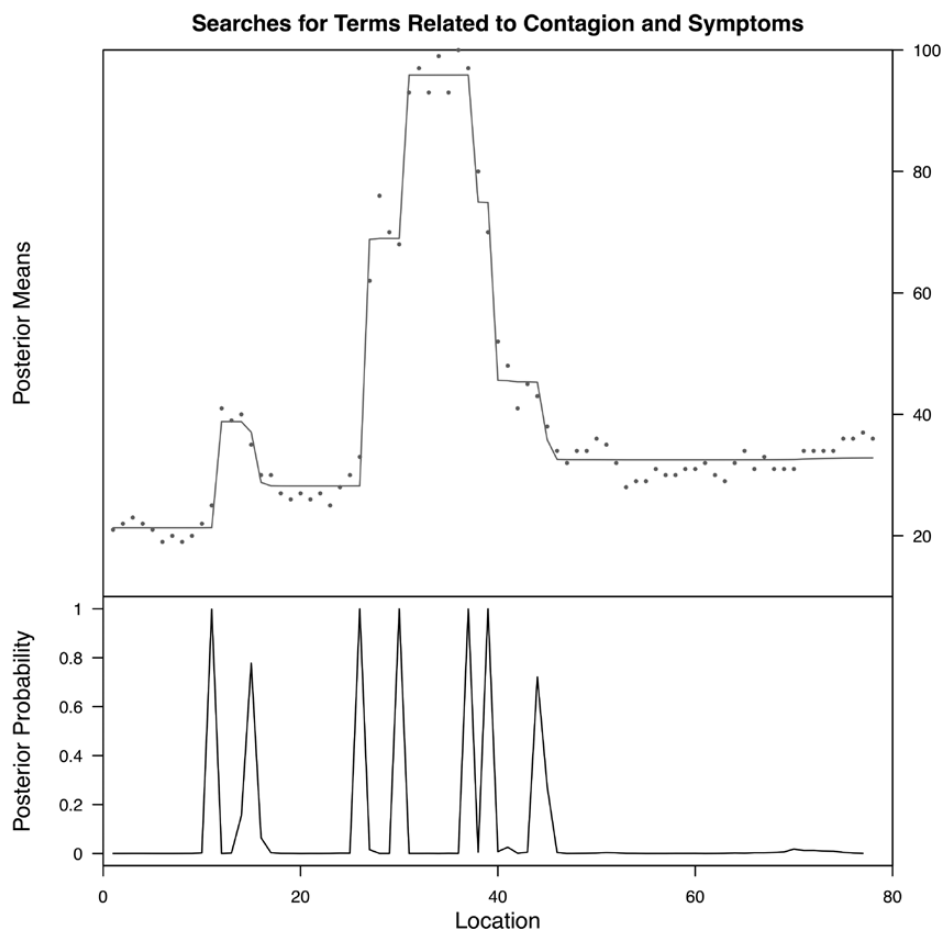


Figure 4. Bayesian change-point model results for concern about the coronavirus. *Note:* The top graph shows the posterior means of intensity of online searches over time. The bottom graph shows the posterior probabilities that each location (day) in the series constitutes a change-point. The model uses 10,000 iterations and 1,000 burnin iterations. Priors on the change-point probabilities follow the distribution $U(0, 0.008)$.

Table 2. Change Points for Trends of “Concern About the Pandemic” in Online Search Behaviors Over Time in Brazil, February–May 2020.

Location	Date	Effect	Probability	Event
11	February 25	Positive	.99	First confirmed case in Brazil
26	March 11	Positive	1	WHO declares pandemic
30	March 15	Positive	1	200 confirmed cases + protests
37	March 22	Negative	1	Bolsonaro’s TV interview
39	March 24	Negative	.99	Bolsonaro’s Televised Address

Note: Rows are locations (days) in the time series with more than 99% posterior probability of being a change-point. Model uses 10,000 iterations and 1,000 burnin iterations. Priors on change-point probabilities follow the distribution $U(0, 0.008)$.

each day identified by the model is a change-point, and the description of the most relevant event related to the pandemic that was reported that day.

The first two change points identified by the model as increasing searches related to concern about the pandemic are the day of the first confirmed case of the disease in Brazil (February 25, 2020) and the day on which the WHO declared the outbreak as a pandemic (March 11, 2020). The third day with an acceleration in searches related to concern is March 15, 2020, when Brazil confirmed 200 cases of the disease and small pro-Bolsonaro demonstrations took place in Brasília. The two change points in which searches related to concern decrease correspond to the two days in which Bolsonaro

gave high-profile speeches about the outbreak (March 22 and March 24, 2020). The results corroborate the patterns observed in the experimental and survey analyses. There was a rapid change in perceptions about the pandemic between late March and April of 2020, and that change is associated with public speeches by Bolsonaro.

We repeated the analyses aforementioned using more direct measures of online searches about the president and the pandemic. Measures of intensity of searches for terms related to the president (*Presidente* and *Bolsonaro*) and the pandemic (*coronavírus*, *COVID-19*, *corona*, among others) show that March 24, 2020 (day of televised address) represents the highest point in the series. Moreover, using a

measure of searches for some of the trivializing words used by Bolsonaro about the pandemic, such as “small flu” and “hysteria” (*gripezinha*, *resfriadinho*, and *histeria*), the model also identifies March 24, 2020 as the single main peak in the trend.¹⁸ Finally, we also replicate the same main model using the entire first semester of 2020 as timeframe, which produces the same results as the shorter period cover in the analysis.¹⁹ The robustness of the findings using an extended time period reinforce the idea that the later divide in opinions was not because of a longer process of partisan learning, but rather to a more sudden change driven by the presidents escalated rhetoric.

Conclusion

What makes public opinion in different contexts more likely to treat pandemics as valence issues? In this article, we explore the change in the Brazilians’ views about the coronavirus outbreak to show that presidential influence—an understudied phenomenon in developing democracies (Love and Windsor, 2018)—can be a major factor driving public opinion on the emerging issues. We show data from a survey experiment, public opinion surveys, and aggregate patterns of online searches that support the idea that the Brazilian President’s switch in rhetoric from ambiguous trivialization to explicit denialism drove the changes in public opinion about the pandemic. The findings converge with other studies using aggregate evidence (Ajzenman et al., 2020; Cabral, Ito, & Pongeluppe, 2021).

This study contributes to our understanding of the process of issue formation during crises, especially with respect to the role of leaders. We show that, while extant scholarship on developed democracies finds mixed results with respect to the president’s ability to influence public opinion, that effect is moderated by a combination of type of message and the distribution of opinions on the issue. We theorize and empirically explore a specific case to show that presidents can influence public opinion by using polarizing messages that reach convergent opinions on valence issues. Under those conditions, factors that boost moderation and agreement, such as weaker partisan cleavages and intense media coverage, can actually favor the emergence and success of populists, since they are more likely to succeed by capitalizing on weak party systems and economic turmoil (Carreras, 2017). In this sense, those structural conditions may lead to a paradox during bad times. While they make it easier to persuade citizens that a certain issue requires general attention and agreement, they also make it easier for populists to promote defection.

Notably, with respect to the hypothesized conditions for the effectiveness of presidential influence, this article consists primarily of a theory-building effort based on an in-depth analysis of a specific case. In other words, we do not provide a direct empirical test of the combination between type of message and convergence/divergence among public and its moderating effects of persuasion. Rather, we propose to focus on a real case in which those contextual requirements for persuasion are met, in order to provide the contextual variation of interest that most studies focused on the US do not offer. Future scholarship should further investigate the

role of contextual variation to advance our understanding of presidential influence. All in all, president-centered systems with weak parties can benefit from cooperative presidential influence during crises, but they are also vulnerable to sabotage, since populist leadership “makes it hard to establish cooperative dialogue and reach agreements” (Rovira Kaltwasser, 2017, 621). Consequently, the combination of populist ideas with the denial about the seriousness of a crisis, as exemplified in Brazil, can be deleterious not only for democracy, but also for health outcomes and human capital more directly.

Biographical Note

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¹⁸ See [Supplementary Appendix](#) for results.

¹⁹ See [Supplementary Appendix](#) for results.

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