The Power of Pre-existing Beliefs:

Impacts of Misinformation on Public Trust in Brazil's

2022 Presidential Election

#### Abstract

Efforts to increase trust in institutions struggle to overcome individuals' prior beliefs, including confirmation bias. This paper argues that when political institutions are a focus of misinformation, the efficacy of efforts to improve trust in those institutions is conditional on partisan preference. To test this hypothesis, I conducted a study in Brazil before the 2022 presidential election, which was saturated with misinformation, undermining confidence in elections in a country that already faced low institutional trust. Respondents were randomly selected to interact with neutral facts about or information that praised electoral institutions in the form of headlines and mock social media posts. Results show that exposure to positive information impacts perceptions of credibility. All perceptions, however, are conditional on partisan preference, and individuals update their beliefs only when the information presented is proattitudinal. The results highlight challenges with correcting misperceptions in a low-trust environment and conditions under which beliefs can be updated.

**Keywords:** Misinformation, elections, institutional trust, Brazil, experiment

## 1 Introduction

Political misinformation, including false claims of electoral fraud and lies about candidates, can undermine democracy and trust in democratic institutions, including elections (Valenzuela et al., 2022). The negative effects of political misinformation are not limited to newer democracies and autocracies; they can also be seen in established democracies like the United States. Given the prevalence of misinformation globally, scholars and the public are increasingly interested in understanding how these misperceptions can be corrected. These correction efforts, however, have had mixed success (Blair et al., 2023), raising questions about whether scholars sufficiently understand the mechanisms—particularly existing levels of institutional trust—underlying the spread of misinformation and if it is possible to prevent negative impacts on democracy.

Misinformation can undermine trust in institutions and, as a result, harm democracy. When individuals do not trust the media, for instance, they are less likely to be satisfied with democracy (Rodríguez & Zechmeister, 2018). When individuals do not trust elections, they may believe an election to have been stolen and lose faith in a fundamental democratic process (Pennycook & Rand, 2021b). More broadly, if individuals do not trust governing bodies, the economy suffers, collective action is less likely, government accountability by citizens decreases, and forms of extra-legal justice increase (Keefer & Scartascini, 2022). Furthermore, governmental mistrust will lead some individuals to support more populist versus traditional candidates (Keefer & Scartascini, 2022; Masala, 2020), leading voters to rely only on the cues of these candidates for what to believe and whom to trust (Druckman et al., 2013).

Prior political beliefs play a particularly important role in mediating how individuals seek out and process information and engage with misinformation corrections. Individuals hold strong attachments to their pre-existing political beliefs and may deliberately seek information confirming these beliefs, even if that information is false (Lewandowsky et al., 2012). Accordingly, partisan preferences can influence susceptibility to misinformation because indi-

viduals are more willing to accept information that is proattitudinal as true (Batista Pereira, Bueno, et al., 2022; Kreiss, 2019; Rossini et al., 2023). These inaccurate beliefs may increase partisan attachments and polarization (Kahan, 2012) and shape which institutions individuals trust (Rossini & Kalogeropoulos, 2021).

One particularly harmful form of misinformation targets the credibility of elections, which is widely understood to be a crucial element of democracy (Huntington, 1991). Therefore, I aim to answer the following questions related to electoral misinformation: In an environment saturated with false information, is it possible to correct, or partially correct, inaccurate beliefs? More specifically, what effect does exposure to positive information about an election have on an individual's perception of electoral credibility?

I conducted an online experiment in Brazil in September 2022 to test the effects of exposure to truthful claims that the electoral process was legitimate, what I refer to as positive information, on perceptions that the election would be fair. I measured baseline levels of institutional trust and post-treatment levels of electoral trust. During the presidential campaign, Brazil's information environment was saturated with misinformation related to, among many other topics, electoral processes (Horton & Gragnani, 2022). Incumbent Jair Bolsonaro (Partido Liberal, PL) repeatedly endorsed false claims about the election's legitimacy. At the same time, his opponent, former president Luiz Inácio Lula da Silva of Brazil's most institutionalized party, the Partido dos Trabalhadores (Workers Party, PT), praised the electoral process as both free and fair.

In the experiment, respondents were asked to what extent they believed and would be willing to share information that praised the electoral process. Those in the control group saw neutral facts about the election, while individuals in the treatment group saw neutral facts and information that praised the electoral process as fair. To avoid exposure to misinformation and associated ethical harms, all information was true and came from major Brazilian news sources. Information was presented to each respondent in the form of both newspaper headlines and mock Facebook posts with a high number of likes, comments, and

shares. After the experimental section, all respondents were asked about their trust in the 2022 election.

Overall, my results show that it is difficult—but possible—to increase perceptions that electoral institutions are fair due to individuals' confirmation biases. Experimental effects, however, were almost entirely conditional on partisan preference. When the information presented was counterattitudinal, based on partisan preference, perceptions of electoral credibility decreased. When the information was proattitudinal, based on partisan preference, individuals' perceptions of electoral credibility increased. The results show that it is possible to correct misperceptions in cases when corrective information aligns with individuals' pre-existing beliefs.

This paper has three main contributions. First, it supports the idea that partisan preferences are the filters through which information is processed, while also examining how these attachments interact with institutional trust. Prior work has found that addressing social identity is essential for effective misinformation corrections (Badrinathan, 2021; Gottlieb et al., 2022) and that political identity may be particularly important (Batista Pereira, Bueno, et al., 2022). These papers, however, do not consider trust as an outcome. This paper takes this idea of the importance of political identity and considers it together with baseline levels of institutional trust, finding that, even when individuals are less trusting of certain institutions, exposure to proattitudinal information may be sufficient to improve trust and correct misperceptions.

Second, this paper shows that misperceptions can be corrected but that these effects may only be seen for a subset of the population for whom the information presented is proattitudinal. When individuals see that their worldview is being confirmed, they are more receptive to corrections (Lewandowsky et al., 2012). However, if the information is counterattitudinal and does not confirm pre-existing beliefs, the correction efforts may backfire and incorrect beliefs are further solidified (Born, 2017). Therefore, corrective efforts should be designed with the understanding that they may inherently only be effective for a subset of the popu-

lation. Multiple intervention types or components that reflect various societal divisions may be needed. For instance, in a country where there are strong political divisions, a misinformation correction intervention should directly address or encourage participants to consider differences in political identity. Through an awareness of how identity influences efficacy of interventions, misinformation corrections may become more effective for a larger percentage of the population.

Finally, this paper broadens our understanding of how exposure to misinformation harms democratic institutions. In Brazil, misinformation undermined perceptions of electoral credibility, even for individuals for whom the information was proattitudinal. Prior to the election, Brazil's information environment was saturated with true, false, and misleading information (Horton & Gragnani, 2022). The information individuals were exposed to influenced the (mis)information they believed (Rossini et al., 2023). Beliefs became further divided, culminating on January 8, 2023, when supporters of Bolsonaro who did not accept the results stormed the capital in Brasília demanding that the military take over. Instead of accepting the results as valid, some Bolsonaro supporters likely maintained their existing beliefs that, without Bolsonaro having won, the election must have been stolen. The prevalence of political misinformation undermined faith in one of Brazil's core democratic institutions. The results in this paper demonstrate one reason why it is so challenging to combat these effects, as efforts to correct misperceptions may have only been successful for Lula's supporters.

The remainder of this paper continues as follows. The next section details how individuals process misinformation and disinformation. Section 2 explains the importance of institutional trust in relation to combating anti-democratic threats. Section 3 details the Brazilian case, followed by the hypotheses. The subsequent section explains the research design for the experiment. Section 6 details the results and the final section concludes.

## 2 Belief in (Mis)Information

Misinformation can be defined as information that is spread without knowledge of its inaccuracy, while disinformation adds a layer of malicious intent (Lim & Donovan, 2020).

While anyone can be susceptible to believing misinformation (Frenda et al., 2011), certain
attributes may make some individuals more susceptible than others. Some scholars argue
that ignorance of a given topic, for instance, is not associated with belief in misinformation (Lewandowsky et al., 2012; Miller et al., 2016; Nan et al., 2022). Others, however,
disagree, saying that ignorance increases susceptibility to believe misinformation (Frenda
et al., 2011; Zhu et al., 2010). Alternatively, not feeling the need to think critically may
increase susceptibility to misinformation (Pennycook & Rand, 2019; Pennycook & Rand,
2021b). Importantly, much misinformation spreads on social media, increasing accessibility,
particularly to those who may not trust traditional news sources (West, 2017).

Whether individuals believe information, regardless of its veracity, often has to do with whether it confirms or contradicts prior beliefs. Individuals tend to believe proattitudinal information (Roozenbeek et al., 2022), and this confirmation bias leads them to be highly resistant to changing (Lewandowsky et al., 2012) and clouds their ability to accurately judge facts (Kahan et al., 2017). Confirmation bias can also contribute to the spread of misinformation (Treen et al., 2020). Not only are individuals more likely to believe proattitudinal information, but they are also more likely to share it, especially when the information is about a polarizing topic (Vedejová & Čavojová, 2022). Furthermore, confirmation bias leads people to strengthen their pre-existing beliefs by generating more arguments in support of them (Baron, 2019) while also driving selective exposure (Van der Meer et al., 2020).

Factors contributing to belief in information may also influence intention to share it (Majerczak & Strzelecki, 2022). For instance, individuals may simply not desire to think critically about the information they share (Pennycook & Rand, 2021a). Individuals may also share information to deliberately induce chaos (Peterson & Iyengar, 2021) or because they do not trust traditional news sources and wish to share information they deem more

reliable (Born, 2017). As a result of frequently sharing proattitudinal information, social media can become increasingly polarized, regardless of its veracity (Modgil et al., 2021).

Due to the prevalence of misinformation and its ability to influence beliefs ranging from democratic processes to public health issues, efforts have been made to correct these incorrect beliefs. Fact-checking, while common, may not be effective in doing so (Lim & Donovan, 2020), or it may only work in some contexts (Bachmann & Valenzuela, 2023). Similarly, media literacy workshops may not be effective in arming people with the tools to combat misinformation (Badrinathan, 2021) or only be effective in certain circumstances, like in a classroom and with a fixed curriculum (Dumitru et al., 2022; Edwards et al., 2021). Nudges, a strategy that encourages people to share or believe only accurate information, may be somewhat effective in reducing belief in misinformation (Arechar et al., 2023; Pennycook & Rand, 2022; Scherer & Pennycook, 2020). Finally, inoculation, or pre-bunking, may effectively reduce belief in false information. In Brazil, Batista Pereira, Bueno, et al. (2022) use an inoculation-based intervention to prevent rumor acceptance. While their intervention was successful, its efficacy may be limited to Brazil or the structure of the intervention. Overall, corrections may improve one's ability to identify accurate information regardless of partisanship (Weeks, 2015), but successes are often limited to specific contexts, such as a classroom setting or a specific country or aspect of the intervention. Above all, existing research is mixed on how to correct misinformation and why it is so challenging to do.

Even when efforts to correct misinformed beliefs are successful, there can be unintended consequences. Pre-existing beliefs make correction efforts more difficult (Born, 2017; Lodge & Taber, 2013). A troubling unintended consequence is the backfire effect, where attempts to correct misinformation may unintentionally strengthen existing beliefs (Lewandowsky et al., 2012). However, as Coppock (2022) argues, individuals actually update their beliefs in the direction of the information provided, even if it is counterattitudinal. Regardless, efforts to correct misinformation may not lead individuals to update their beliefs in the intended direction.

#### 2.1 Institutional Trust, Partisanship, and (Mis)information

While many factors influence the extent to which individuals believe misinformation, institutional trust, and partisanship play a unique role in mediating one's propensity to accept false or misleading information. The connection between misinformation and institutional trust is cyclical: Misinformation can decrease trust in institutions (Valenzuela et al., 2022), and not trusting institutions is associated with a greater belief in anti-government conspiracies (Freeman et al., 2022). For example, false claims of electoral fraud can decrease trust in elections, and variations in trust can be attributed to partisanship (Levitsky & Ziblatt, 2018).

When institutional trust is undermined, there are negative repercussions for democracy. High-trust societies have less corruption and more functional government (Uslaner, 2002). Additionally, in countries with lower levels of institutional trust, accountability of elected officials is more challenging (Keefer & Scartascini, 2022). Often, however, the quality of institutions impacts the extent to which individuals trust them (Dahlberg & Linde, 2018).

In addition to the role of institutional trust, partisanship also influences whether or not individuals believe information. Individuals intentionally seek out information that reflects positively on their partisan in-group (Peterson & Iyengar, 2021). For example, partisanship influenced individuals' opinions regarding the COVID-19 vaccine (Ebeling et al., 2022). It may also influence assessments of corruption (Anduiza et al., 2013). Additional examples of belief updating being conditional on partisanship have been shown in countries like Venezuela (Andrade, 2021), Côte d'Ivoire (Gottlieb et al., 2022), and India (Badrinathan, 2021).

Partisan preference often influences the extent to which individuals trust institutions and those around them. Stronger partisan preferences are associated with increased affective polarization (Hernández et al., 2021) and decreased interpersonal trust (Hooghe & Oser, 2017). More specifically, trust in scientists, for instance, can be divided along partisan lines (Funk et al., 2019). In the United States, Levitsky and Ziblatt (2018) explain that when a president lies to citizens, institutional trust is undermined as it is more difficult to hold

elected officials accountable. As a result, citizens do not have faith in their representatives and leaders, and democracy suffers. Prior beliefs also influence satisfaction with democracy (Blais & Gélineau, 2007) as does supporting a winning candidate in an election (Nadeau et al., 2023; Singh, 2014).

# 3 Institutional Trust, Partisanship, and (Mis)information in Brazil

The contextual factors surrounding institutional trust and partisanship in Brazil present an ideal case in which to study the relationship between these aspects and belief in (mis)information. Brazil has one of the lowest levels of both institutional and interpersonal trust in Latin America (Keefer & Scartascini, 2022). Figure 1 shows data from the AmericasBarometer, the most comprehensive public opinion survey in the region. The figure compares levels of respect for government institutions across all countries included in the 2021 wave. The question was asked on a 1-7 Likert scale, with a lower score indicating lower trust while a high score indicating the opposite. While this question does not directly ask about institutional trust, it is the closest approximation to how individuals feel about their government. A more detailed breakdown of trust in specific institutions in Brazil over time can be found in Appendix E.1.

As illustrated in Figure 1, of all countries for which there is data, Brazil has the second lowest level of respect for institutions in all of Latin America. As a region, Latin America has an average level of trust lower than the rest of the world (Keefer & Scartascini, 2022). Electoral trust, specifically, is relatively low in Latin America (Carreras & İrepoğlu, 2013). Brazil's level of respect (4.57) is also significantly lower than the average for the region (5.04). These data were collected not long before Brazil's presidential election and indicate the environment in which the election took place.

There are historical explanations for why Brazilians do not have as much respect for institutions as other countries in Latin America. The figure in Appendix E.1 breaks down

#### Respect for Political Institution Uruguay El Salvador Costa Rica Ecuador Guatemala Panama Argentina Mexico Latin America Colombia Bolivia Chile Nicaragua Peru Honduras Brazil Paraguay

Figure 1: Source: The AmericasBarometer by the LAPOP Lab, www.vanderbilt.edu/lapop Note: Data are taken from responses to the question, "To what extent do you respect political institutions in (country)?"

Levels of Trust (1-7)

individual measures of trust in Brazil over time. Trust in the presidency was perhaps the most volatile, decreasing and then increasing significantly, while levels of electoral trust remained relatively constant but relatively low compared to other measures of trust.

Since roughly 2010, Brazil has struggled with a series of protests and corruption scandals, namely, the *jornadas de junho* protests, which began in 2013. Originally started as a protest over an increase in the price of public transportation, the movement became focused on dissatisfaction with Brazil's political system. While the government tried to respond to the protesters' requests, the movement left a feeling of mistrust in institutions while increasing levels of politicization of the Brazilian public, especially against the PT (Yamaguti, 2023).

In 2016, President Dilma Rousseff (PT) was impeached partly for her handling of revelations of Lava Jato(Operation Car Wash), a corruption scandal in Brazil that ended with the indictment of many high-ranking government officials, including Lula. Rousseff's impeachment and continued protests into her successor's term led many Brazilians to want something different politically. This dissatisfaction is likely one of the reasons why Bol-

sonaro, who painted himself as a political outsider, was elected in 2018 (Furtado, 2019). Furthermore, as both Bolsonaro and Lula were populist candidates, individuals may have been likely more inclined to trust their rhetoric (Keefer & Scartascini, 2022; Masala, 2020).

During the 2022 campaign, Bolsonaro and Lula's platforms varied in many ways. One of the most notable differences was how they spoke about the legitimacy of the electoral process, particularly the electronic voting machines. Bolsonaro frequently and vehemently attacked Brazil's electronic voting machines (Nicas & Spigariol, 2022). Taking a page from Trump's playbook, Bolsonaro repeatedly claimed that, if he lost, the election must have been stolen (Faiola, 2022) and that machines could be tampered with by government employees. On the other hand, Lula's platform praised the electronic voting machines and emphasized the need for a democratic Brazil (Marra, 2022). The candidates' opposing narratives about the credibility of the electoral process affected public perceptions. In July of 2022, 31 percent of Bolsonaro supporters did not trust the voting machines compared to 14 percent of Lula supporters (Datafolha, 2022). Misinformation contributed to the politicization of the voting machines and a broader skepticism towards the electoral process (Nicas & Spigariol, 2022). Not only was each candidate expressing opposing narratives, but many of their supporters believed them.

Furthermore, the information environment became saturated with facts and misinformation regarding the legitimacy of the electoral process, with one's opinions being dependent on which candidate someone supported. For instance, Batista Pereira, et al. (2022) find that partisan motivated reasoning is what drives belief in information. Specifically, individuals with more right-wing beliefs are more likely to believe misinformation (Rossini & Kalogeropoulos, 2021; Rossini et al., 2023), and Bolsonaro supporters are more likely to believe misinformation and conspiracy theories about the COVID-19 pandemic (Gramacho et al., 2021).

Similar to much of the rest of the world, misinformation in Brazil predominately spreads on social media (Rossini et al., 2023). Brazil is one of the most online countries in the world, with roughly 81 percent of the population having access to the internet (Silva, 2022), and usage is most common among younger Brazilians (Perea et al., 2012). Misinformation typically spreads on Facebook (Dourado & Salgado, 2021; Galhardi et al., 2022; Rossini & Kalogeropoulos, 2021), YouTube (Lemos et al., 2021), Instagram, Twitter (Galhardi et al., 2022), and, most notably, WhatsApp (Dourado & Salgado, 2021; Galhardi et al., 2022; Rossini & Kalogeropoulos, 2021; Soares et al., 2021). Information on WhatsApp, in particular, tends to be more politically polarizing (Machado et al., 2019).

In summary, an individual's level of trust in institutions and their partisan preferences influence perceptions of electoral credibility. Brazil, given its lower levels of institutional trust, saturated information environment, and the influence of partisanship, provides an ideal case in which to study factors that influence the relationship between information about the electoral process and perceptions of electoral credibility as well as aspects that only influence the latter. It remains uncertain, however, how trust may influence partisanship and how partisanship may influence the relationship between information exposure and perceptions of electoral credibility.

## 4 Hypotheses

Given the existing literature on the relationships between trust in institutions, partisan preference, and belief in misinformation, I propose three hypotheses to address situations where individuals may update their beliefs in a low-trust, high-misinformation environment. Repeatedly seeing the thematically similar information can lead people to believe it is true (Foster et al., 2012; Lewandowsky et al., 2012). Additionally, the treatment itself involves a degree of social pressure through mock social media posts with high numbers of likes, comments, and shares. Therefore, it can be predicted that respondents in the treatment group (who are exposed to information that reflects positively on the legitimacy of the electoral process) would be more likely to believe the election to be credible when compared

to the control group. The first hypothesis states:

H1: Interacting with positive information about the election will lead to an increase in one's perceptions of its credibility.

The remaining hypotheses address heterogeneous effects related the partisan preference, baseline levels of institutional trust, and frequency of social media use. The second hypothesis addresses the efficacy of the treatment may be conditional on partisan preference. Given that Bolsonaro repeatedly spread false claims about the electoral process while Lula did not, it can be expected that those who support Bolsonaro would be more likely to maintain their pre-existing beliefs. The treatment may not be strong enough for Bolsonaro supporters to update their beliefs to the same extent as Lula supporters. The second hypothesis reads:

H2: Effect sizes will be smaller for individuals for whom the treatment information is counterattitudinal based on their partisan preferences.

The third hypothesis takes Brazil's broader and historical political environment into account. Institutional trust is low, and polarization is high. Given that lower trust in media and other institutions may increase an individual's susceptibility to misinformation (Miller et al., 2016; Roozenbeek et al., 2020) and that individuals in low trust environments may rely on cues from trusted elite (Keefer & Scartascini, 2022; Masala, 2020), it would be expected that those in the treatment group who trust institutions would be more likely to update their beliefs and believe the election to be more credible compared to respondents in the control. The third hypothesis states:

H3: Effect sizes will be smaller for individuals with lower levels of institutional trust as they will be less likely to respond to treatment. Individuals with higher baseline levels of institutional trust will be more likely to perceive the election as credible.

Finally, the fourth hypothesis addresses the role social media may have played in impacting perceptions of electoral credibility. Given that misinformation frequently spreads on social media (Dourado & Salgado, 2021; Galhardi et al., 2022; Rossini & Kalogeropoulos, 2021), and this information may be particularly polarizing (Modgil et al., 2021), individuals who use social media frequently are more likely to be exposed to inaccurate or misleading information and may become more polarized in their beliefs. It can be expected that frequent social media users in the treatment group would, therefore, be less likely to view the election as fair when compared to individuals in the control group. The fourth hypothesis states:

H4: Individuals who use social media frequently will be less likely to view the election as credible. This effect will be moderated by partisan preferences.

## 5 Research Design

To understand how positive information impacted perceptions of electoral credibility, I conducted a survey experiment in September 2022, the month prior to the election. The first section asked basic demographic questions about partisan preference, measured by vote choice in the 2018 election, and social media usage. The second section asked participants to rate the extent to which they trusted various political institutions on a seven-point Likert scale. The six trust measures included: Congress, the judiciary, the presidency, elections, the military, and traditional media sources.

For the third section, participants were randomly sorted into the experimental or control group, with 50 percent of respondents in each. In the first subsection, participants were presented with a headline and asked 1) if they believed it to be true, measured with a four-point Likert scale, and 2) with whom they would most likely share it. In the following subsection, participants saw a mock Facebook post that looked as if an anonymous poster were sharing an article. Each mock post had many likes, comments, and shares. An example



Figure 2: Sample positive mock social media post Translation: Learn why e-voting is safe in a new video series about the 2022 elections

of a positive mock post is shown in Figure 2. After completing the survey, respondents were debriefed about the contents of the survey. It was explained that the posts they saw were not real, but the information contained in them was all factual and from reputable Brazilian newspapers.

Respondents in the treatment group were exposed to information that praised the legitimacy of the electoral process (positive information) and general facts about the election (neutral facts) whereas those in the control just saw neutral facts. Headlines were taken from reputable Brazilian news sources, including Folha de São Paulo, O Globo, and Jornal do Brasil. Sources were not disclosed to isolate the effects of the information contained in the headline. No headline mentioned a particular candidate by name. Rather, each focused on the election itself or the electoral process. Neutral headlines were facts about the election. For example, one headline taken from Jornal do Brasil (translated), read, "More than 156 million people are eligible to vote in October" (JB, 2022). This headline, as well as the other

neutral headlines, were simply facts about the election itself and did not praise or criticize the electoral process. Positive headlines contained information that praised the electoral process, discussing its legitimacy or widespread support. For instance, Figure 2 shows a headline taken from *Folha de São Paulo* (translated) that reads, "Learn why e-voting is safe in a new video series about the 2022 elections" (Lourenço, 2022). Like other positive headlines, it praises the electoral process by stating that the oft-attacked voting machines are safe.

The fourth and final section asked questions about the 2022 presidential election. First, respondents were asked about their voting intention in the likely event of a runoff between Lula and Bolsonaro and were then asked to rate how credible they believed the election to be on a six-point Likert scale. Those who rated their perceived credibility as low were then asked why they believed the election not to be fair and asked to rank given choices from a list. These choices can be sorted into three major groups: elite messaging, information networks, and institutions. Those who rated their perceived credibility as high were asked an identical question except language asked why they trusted the election.

## 5.1 Sample

In total, 1,000 individuals responded to the survey. Of these, 872 answered the attention check question correctly, and their responses were included in the analysis. I census balanced for age, gender, and ethnicity to ensure a balanced sample. Given that the survey was conducted online, the sample is slightly skewed towards those who have more years of education, with the majority of respondents falling into the more highly educated category. Even so, the sample remains balanced between the treatment and control groups. Complete demographic information and balance tables can be found in Appendix B.

Participants were recruited through the survey company Cint. Individuals who were a part of Cint's panel and who met certain demographic criteria (e.g. age or gender) were invited to participate in the study. Potential respondents were only informed that they

qualified for the survey, participation was voluntary, and they would receive an incentive for participation. They were not given any information about the purpose of the study until the post-survey debrief.

### 5.2 Model Specification and Measures

The data were analyzed using the following regression model:

$$Y = \beta_0 + \beta_1 X_T + \beta_2 X_X + \beta_1 X_T X_X + \epsilon$$

Y represents the primary outcome of interest, perceptions of electoral credibility. A lower score indicated that respondents did not trust the 2022 electoral process, while a higher one indicates that they did.  $X_T$  is a dummy variable indicating if someone was randomly assigned to the treatment (1) or control (0) group.  $X_X$  is a dummy variable used to represent variables of interest. For example, in the second hypothesis, it represents whether an individual voted for Bolsonaro (1) or not (0). To rule out the possibility that treatment affected vote choice, I used an indicator of whether someone voted for Bolsonaro in 2018. One concern may be that treatment status affected vote choice. This was not the case. Only a few voters switched their vote from Bolsonaro in 2018 to Lula in 2022, and any party switch did not impact the final results significantly. Additionally, treatment status did not significantly influence whether or not someone reported switching their vote. A breakdown of these results can be found in Appendix B.

## 6 Results

Hypothesis 1 predicted that exposure to positive information would increase an individual's perception that the electoral process would be fair. Overall, treatment did not have a significant effect on perceptions of electoral credibility. There are, however, heterogeneous

effects when the sample is divided by vote choice, initial levels of institutional trust, and social media usage. The treatment primed individuals to think about the electoral process, but their reactions were conditional on their beliefs before the survey and whether they were confirmed or contradicted.

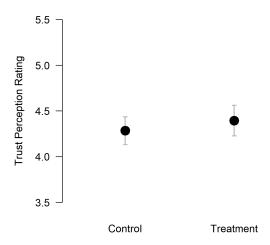


Figure 3: Overall effects of treatment

Figure 3 shows the overall effects divided by treatment status. There are no overall or even weak effects of treatment (at the 0.95 level). I, therefore, must reject the first hypothesis on the overall effects of treatment. Regression tables can be found in Appendix C.

Hypothesis 2 predicted heterogeneous effects of partisan preference. As illustrated in Figure 4, among Bolsonaro and Lula supporters, there were only weak effects of the treatment. After exposure to treatment, Lula supporters' perceptions that the election would be fair increased while those of Bolsonaro supporters decreased significantly.

Furthermore, there is a statistically significant difference between the ratings of Lula and Bolsonaro supporters, what I refer to as a *perceptions gap*. If the perceptions gap does not exist among the control group but widens significantly among the treated or exists in the control but closes among the treated, then there was some degree of belief updating. In 4,

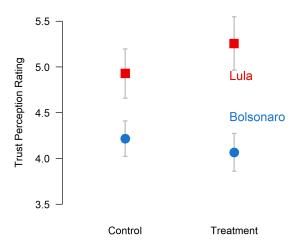


Figure 4: Effects based on vote choice

the perceptions gap did not widen or close significantly. The absence of a closure or widening of the perceptions gap may indicate that vote choice is a strong signal of what people believe and is a filter through which they process information.

On average, Lula supporters, regardless of treatment status, were more likely to rate their perceptions of electoral credibility higher than Bolsonaro supporters. Considering Bolsonaro's negative rhetoric towards the electoral process and how Lula praised it, this result makes sense. Bolsonaro supporters were, after all, three times more likely to list Bolsonaro's messaging as one of the reasons why they believed the election not to be credible when compared to Lula's supporters (who listed Lula's messaging as a reason why they believed the election to be fair). These results suggest that elite messaging was important in establishing how individuals formed their beliefs.

Hypothesis 3 predicted that existing levels of institutional trust would condition the efficacy of treatment. In the survey prior to treatment, participants responded to a battery of six questions related to institutional trust where they rated the extent to which they trusted the judiciary, Congress, elections, the presidency, the military, and the media on a

1-7 Likert scale. To analyze these responses, I conducted a principal component analysis (PCA) to understand how individual aspects of trust related to the others.

The results of the PCA show a split along two dimensions. <sup>1</sup> The first dimension includes trust in Congress, the judiciary, elections, and traditional news media. The second dimension combines trust in the presidency and the military. Each dimension can be interpreted as aligning with one of the candidates' rhetoric, at least in the context of the 2022 election and campaign. Lula, for instance, was more supportive of the electoral process and traditional media sources. Furthermore, Brazil's Electoral Court is affiliated with the country's Supreme Court. The question's wording asked broadly about trust in the judiciary. It is, therefore, possible that respondents interpreted this question as trust in the Supreme Court and, by extension, due to its salience around the time of the election, the Electoral Court. Dimension one can be interpreted as trust in institutions that Lula supported and will be referred to as dimension-L.

The second dimension, which will be referred to as dimension-B, can be interpreted as types of trust that are affiliated with Bolsonaro and the institutions that he supported. First, individuals likely interpreted the question on trusting the presidency as trusting the incumbent, Bolsonaro. Second, Bolsonaro was supportive of the military, even claiming that the dictatorship was a "very good" period for Brazil (Reeves, 2018). When his supporters stormed the capital after Lula's inauguration, they demanded a return to military rule. Bolsonaro supporters, therefore, were more likely to rate trust in the presidency and military higher than other aspects of institutional trust.

These results point to an interesting dynamic of institutional trust: When individuals answer questions on institutional trust, they likely conflate their responses with their opinions on the incumbent government and partisan preferences. An average of the battery of six trust questions did not accurately or comprehensively capture how individuals view institutions. The PCA demonstrates that individuals interpret questions on trust through the lens of

 $<sup>^{1}</sup>$ Additional tests related to the PCA, including analyzing trust with an additive index, can be found in Appendix D.

partisan preferences. Lula supporters were more likely to have higher levels of dimension-L trust, while Bolsonaro supporters were more likely to have higher levels of dimension-B trust.

When interpreting the PCA in the framework of the third hypothesis—that levels of institutional trust will determine the efficacy of treatment—again, there are only weak effects of treatment. There are also statistically significant changes in the perceptions gap. In order to analyze differences among subgroups within each dimension, the sample was divided into those with higher and lower scores along a given dimension. Individuals who had dimension scores above zero (essentially the mean and median of both groups) were rated as "high" in that dimension. Those who scored less than or equal to zero were divided into the "low" scoring group of that dimension.

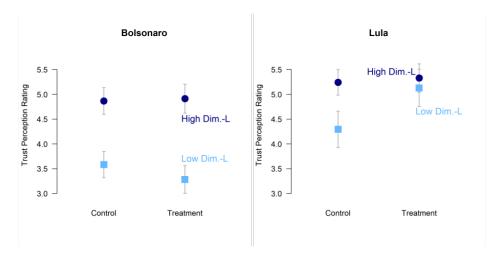


Figure 5: Effects based on dimension-L trust (trust in Congress, the judiciary, elections, and traditional media sources)

Figure 5 shows the effects of treatment for individuals with high and low levels of dimension one trust divided by vote choice. Overall, I find that there is no large effect of treatment on perceptions of electoral credibility. Individuals who are more trusting of Congress, the judiciary, elections, and traditional news media are no more likely than those who are less trusting of these institutions to perceive the presidential election to be credible. The overall results, again, mask heterogeneous effects based on vote choice.

When looking at dimension-L results, Bolsonaro supporters did not update their beliefs

after treatment. The perceptions gap did not change significantly. Additionally, there were no weak effects among high- and low-trust individuals. Existing beliefs related to the election were unchanged by treatment.

For Lula supporters, however, the perceptions gap closes when participants were exposed to positive information about the election. Among individuals in the control group, there was a statistically significant difference between those with higher and lower levels of dimension-L trust. The perceptions gap disappeared, with low dimension-L individuals increasing to the levels of high dimension-L individuals among those in the treatment group.

In addition to the changes in the perceptions gap, there were weak effects of treatment. Those in the high dimension-L group had a slight decrease in their trust perceptions rating. These results are likely due to ceiling effects where levels of dimension-L trust among the already highly trusting could not increase significantly. Individuals in the low dimension-L group had a statistically significant increase in perceptions of electoral credibility. Exposure to information praising the electoral process led individuals to update their beliefs and correct likely misperceptions. These results are only seen when the information presented was proattitudinal.

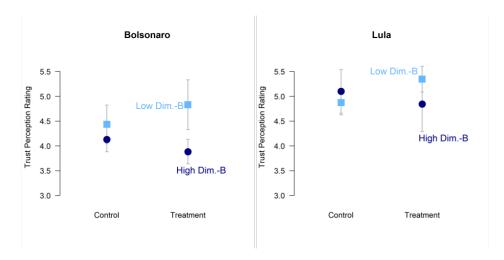


Figure 6: Effects based on dimension two trust (trust in presidency and military)

The opposite can be seen when looking at the results along dimension-B, trust in the presidency and military. Overall, the effects when looking at presidential and military trust,

the perceptions gap closes. This effect is mainly driven by Bolsonaro supporters, as seen in Figure 6.

Among Bolsonaro supporters, there are two primary results. First, individuals with lower levels of dimension-B trust were more likely to trust elections compared to higher levels of dimension-B trust. Perceptions of electoral credibility appear to be negatively correlated with dimension-B trust. Second, the perceptions gap widens. In the control group, the perception ratings of supporters with high and low dimension-B scores were not statistically different from each other. Among the treated, however, supporters with high levels of dimension-B trust were significantly less likely to trust the election compared to those with lower levels of dimension-B trust. Similar to the results of Figure 4, there appears to be a weak backfire effect, found only among Bolsonaro supporters in the high dimension-B group.

For Lula supporters, while there was no statistically significant difference between treatment and control and the perceptions gap did not change significantly, there were weak effects of treatment. Treated individuals with lower levels of dimension-B trust had higher perceptions of electoral credibility. Those with higher levels of dimension-B trust had lower perceptions (although this coefficient is only significant at the 0.1 level).

The impacts of treatment were conditional on partisan preference. Bolsonaro claimed that the electoral process was rigged, and many of his supporters accepted these claims as true (or likely true). When exposed to positive information, Bolsonaro supporters were unlikely and potentially unwilling, to update their beliefs as it did not confirm their beliefs. Furthermore, along dimension-B trust, they doubled down on their pre-existing beliefs after being exposed to counterattitudinal information, resulting in a backfire effect.

Bolsonaro supporters were also less likely to believe information that praised the electoral process when compared to neutral facts. They were also less likely to report wanting to share positive information with a wider social network. Therefore, it is possible that Bolsonaro supporters were more likely to reject or ignore the information presented and be less receptive to treatment. Ultimately, however, these results were influenced by the extent to which

Bolsonaro supporters trusted political institutions. Respondents who trusted the presidency and military more—and, as a likely extension, Bolsonaro's narrative—were less likely to trust the electoral process.

Lula, on the other hand, expressed faith in the electoral process and the legitimacy of the elections, and these claims were an important aspect of his platform. Even respondents who supported Lula but had lower levels of dimension-L trust were more responsive to the treatment. It is possible that these individuals had lower initial levels of trust but after seeing proattitudinal information, increased their faith in the electoral process enough to match that of respondents with higher initial levels of trust. Lula's supporters, after all, would be more inclined to accept the narrative that the election would be fair.

Overall, Bolsonaro and Lula supporters trusted different institutions. Lula supporters tended to trust Congress, the judiciary, elections, and traditional news media—all of which are institutions that Lula vocally supported. Bolsonaro was more supportive of the presidency and military, which were the institutions his supporters trusted more.

These dimension-based divisions are important for understanding how receptive individuals are to information that is either pro or counterattitudinal. First, they show that it is difficult to measure institutional trust as it is often intertwined with trust in the current government. Second, there is a strong connection between institutional trust and how individuals process information. More specifically, how individuals view different political institutions influences whether or not they perceive information to be pro or counterattitudinal. These perceptions of both institutions and information are ultimately conditional on vote choice.

Finally, Hypothesis 4 predicted that individuals who use social media more frequently, particularly those who are also Bolsonaro supporters, would be less likely to perceive the election to be credible. Since Brazil is one of the most online countries in the world and misinformation frequently spreads online, it was important to analyze whether or not social media use impacted how receptive individuals were to treatment. Respondents were asked

how frequently they use social media for political reasons. Those who reported using social media at least once per day were classified as frequent social media users, while those who reported using it once per week or less were considered infrequent users. The results broken down by social media use are shown in Figure 7.

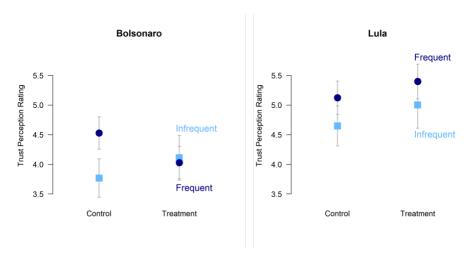


Figure 7: Effects based on frequency of social media use

When looking at just Bolsonaro supporters, the perceptions gap between frequent and infrequent social media users closes after treatment. Similar to the results in Figure 6, individuals appear to have updated their beliefs in line with the narrative they trusted more.

Perceptions of credibility for Bolsonaro supporters who frequently used social media for political reasons decreased significantly between the control and treatment. Again, it is possible that individuals in this subgroup experienced a backfire effect where their initial beliefs were reinforced after being exposed to counterattitudinal information. In particular, the positive information in the treatment was contrary to Bolsonaro's narrative of a fraudulent election. Being exposed to this information may have led Bolsonaro supporters to not only reject the information but to become more adamant about their initial beliefs.

The results for Lula supporters are not statistically significant in the treatment group. Even so, the information in the treatment only confirmed what Lula supporters likely already believed. There would not be a difference between frequent and infrequent social media users as the information would affect them in the same manner.

In summary, the positive information in the treatment affected subgroups differently, with results ultimately being conditional on vote choice. Treatment effects were seen among groups within tests of vote choice, institutional trust, and social media use. Results depended on whether the information presented confirmed or contradicted individuals' pre-existing beliefs, which were conditional on vote choice and which candidate's narrative they trusted most.

## 7 Conclusion

This paper extends our existing understanding of belief updating in low-trust environments as well as those with weaker party systems. Results show that efforts to increase institutional trust struggle to overcome confirmation bias, as pre-existing beliefs are unlikely to change. Instead, individuals interpret new information in an expected direction, and these updates are conditional on vote choice. Across all subdivisions of partisanship, trust, and social media usage, vote choice was the most notable predictor of the efficacy of treatment. Bolsonaro supporters were more likely to reject information praising the electoral process, resulting in a null or backfire effect. Lula supporters were more likely to accept the treatment which was associated with an increase in their perceptions that the election would be fair.

This study demonstrates how initial levels of trust determine how individuals process new information, making it challenging to build institutional trust in a low-trust environment. Importantly, it speaks to dangers that can arise when trust in elections is split along partisan lines. When individuals rely on cues from party leaders and co-partisans for indications of what to trust, they are increasingly likely to reject counterattitudinal information.

This rejection of counterattitudinal information has three effects. First, the more individuals reject counterattitudinal information, the more polarized they will likely become in their beliefs. When individuals choose to selectively expose themselves to proattitudinal in-

formation while rejecting anything that goes against their beliefs, their beliefs may, in turn, become more polarized (Levendusky, 2013).

Second, a lack of trust in traditional media sources creates an environment where misinformation can flourish. In Brazil, as in many other countries, trust in traditional media sources has been decreasing, leading individuals to get their news on social media or from peers (Carro, 2023). It becomes easier for individuals to find and spread information that confirms their beliefs, regardless of its veracity.

Third, when individuals are less likely to interact with counterattitudinal information, misinformation correction efforts become more difficult. Efforts like inoculation, media literacy, and fact-checking all require exposing individuals to information that may be counterattitudinal. As a result, individuals are less likely to interact with the intervention. Future research should investigate if misinformation correction interventions can be more effective at reducing belief in false information if they take aspects like social identity into account, specifically partisan preferences, or incorporate nudges or warnings that individuals may encounter information that goes against their beliefs. Efforts must also consider that while misperception correction is possible, it will likely only be successful for the subset of the population for whom the corrections and information are proattitudinal.

A final implication of the study deals with the importance of elite rhetoric on trust. Political (and social media) elite have the unique ability to instill faith in or cast doubt on institutions vital to the functioning of democracy. In Brazil, Bolsonaro expressed faith in the military and himself as the president, and his supporters followed. Lula vocally supported elections, the judiciary, and the media, and his followers trusted those institutions. Elite politician rhetoric impacts how individuals view information, process new material, and trust institutions—especially when they may not trust these institutions initially. As a result, politicians may be vital in efforts to combat misinformation, but more research is needed to understand the impacts of elite rhetoric on belief in misinformation (Blair et al., 2023).

Overall, in countries with weak institutional trust, individuals update their beliefs in a predictable direction that is conditional on partisan preference. Elite rhetoric plays an important role in shaping how individuals view institutions, like elections, and how they will respond when presented with new information. Ultimately, trust and partisanship are the most important factors determining how individuals will process new information.

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# Appendix

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# A Deviations from the Pre-Analysis Plan

As Rubenson, 2021 recommends, I include a list of deviations from the pre-analysis plan (PAP) as well as a justification for why those changes were made.

Framing of the paper: Initially, this paper was to primarily be about correcting misinformation. As the paper progressed, it became more closely aligned to my first research question about institutional trust as well as the role of partisanship in mediating the relationship between information and perceptions of credibility. The questions asked in the survey did not directly address an individual's propensity to believe misinformation. Rather, they gauged the extent to which respondents trusted information presented (that varied in whether it was positive or neutral) and how exposure to this information impacted perceptions of electoral credibility. As a result, a story focusing on institutional trust and vote choice was more coherent than one that emphasized mental models and misinformation.

Addition of the PCA: I did not pre-register a PCA to analyze measures of trust. While conducting initial analyses of the data using an average of all of the measures of trust, the coefficients from the resulting regressions were not behaving in a way that made sense. After running the PCA, it became clear that the six measures of trust could be divided into two clear dimensions that had a strong theoretical justification. I therefore decided to use the PCA in my analysis.

**Sample Size:** I pre-registered that my sample size would be 1000. In total, 1871 individuals responded to the survey. However, 871 did not fit the age requirements or demographic quotas and were filtered out before any analyses occurred and before they were able to answer questions after the demographic section.

# **B** Demographic Information of Survey Respondents

#### Gender

|        | Number |
|--------|--------|
| Male   | 426    |
| Female | 445    |
| Other  | 1      |

# Race/Ethnicity

|               | Number |
|---------------|--------|
| Asian         | 7      |
| Preto (Black) | 99     |
| Indigenous    | 12     |
| Pardo (Mixed) | 286    |
| White         | 460    |
|               |        |

Religion

|                | Number |
|----------------|--------|
| Afro-Brazilian | 20     |
| Catholic       | 378    |
| Evangelical    | 257    |
| Jewish         | 2      |
| Non-religious  | 133    |
| Pentecostal    | 18     |
| Protestant     | 21     |

#### Age

| Age     | Number |
|---------|--------|
| 18-25   | 153    |
| 26 - 35 | 224    |
| 36-45   | 154    |
| 46-55   | 131    |
| 56-65   | 86     |
| 66+     | 24     |
|         |        |

#### Highest Level of Education

|                        | Number |
|------------------------|--------|
| University Complete    | 226    |
| University Incomplete  | 86     |
| Primary Complete       | 64     |
| Primary Incomplete     | 77     |
| Graudate Complete      | 57     |
| Graduate Imcomplete    | 15     |
| High School Complete   | 216    |
| High School Incomplete | 115    |
| No Education           | 1      |
| Specialization         | 13     |

Vote Choice (Overall)

|              | 2018 | 2022 | Correlation |
|--------------|------|------|-------------|
| Bolsonaro    | 457  | 378  | 0.675       |
| PT Candidate | 231  | 343  | 0.715       |
| Undecided    |      | 92   |             |

#### Vote Choice (Control Group)

#### Vote Choice (Treatment Group)

|              | 2018 | 2022 | Correlation |              | 2018 | 2022 | Correlation |
|--------------|------|------|-------------|--------------|------|------|-------------|
| Bolsonaro    | 242  | 196  | 0.700       | Bolsonaro    | 215  | 182  | 0.682       |
| PT Candidate | 124  | 185  | 0.660       | PT Candidate | 107  | 158  | 0.779       |
| Undecided    |      | 53   |             | Undecided    |      | 39   |             |

#### Percent of Individuals Using Each Social Media Platform for Political Reasons

|           | Total  | Bolsonaro Supporters | Lula Supporters |
|-----------|--------|----------------------|-----------------|
| YouTube   | 76.491 | 82.932               | 76.623          |
| Facebook  | 74.656 | 80.088               | 73.160          |
| Instagram | 72.362 | 72.867               | 80.519          |
| WhatsApp  | 63.417 | 67.834               | 61.905          |
| Telebram  | 39.564 | 43.107               | 40.260          |
| TikTok    | 33.716 | 34.792               | 43.290          |
| Twitter   | 29.014 | 31.947               | 28.571          |
| Other     | 9.289  | 7.440                | 10.390          |

Balance Table

|                             | Type    | Difference (Unweighted) | Threshold        |
|-----------------------------|---------|-------------------------|------------------|
| Age                         | Contin. | 0.009                   | Balanced, $<0.1$ |
| Age (NA)                    | Binary  | 0.005                   | Balanced, $<0.1$ |
| University Complete         | Binary  | 0.070                   | Balanced, $<0.1$ |
| University Incomplete       | Binary  | -0.021                  | Balanced, $<0.1$ |
| Primary Complete            | Binary  | -0.034                  | Balanced, $<0.1$ |
| Primary Incomplete          | Binary  | -0.011                  | Balanced, $<0.1$ |
| Graudate Complete           | Binary  | 0.008                   | Balanced, $<0.1$ |
| Graduate Imcomplete         | Binary  | -0.004                  | Balanced, $<0.1$ |
| High School Complete        | Binary  | -0.038                  | Balanced, $<0.1$ |
| High School Incomplete      | Binary  | 0.019                   | Balanced, $<0.1$ |
| No Education                | Binary  | 0.002                   | Balanced, $<0.1$ |
| Specialization              | Binary  | 0.009                   | Balanced, $<0.1$ |
| Education (NA)              | Binary  | -0.004                  | Balanced, $<0.1$ |
| Afro-Brazilian              | Binary  | 0.009                   | Balanced, $<0.1$ |
| $\operatorname{Catholic}$   | Binary  | -0.002                  | Balanced, $<0.1$ |
| Evangelical                 | Binary  | -0.069                  | Balanced, $<0.1$ |
| Jewish                      | Binary  | -0.004                  | Balanced, $<0.1$ |
| Non-religious               | Binary  | 0.045                   | Balanced, $<0.1$ |
| Pentecostal                 | Binary  | 0.014                   | Balanced, $<0.1$ |
| Protestant                  | Binary  | 0.007                   | Balanced, $<0.1$ |
| Religion (NA)               | Binary  | 0.011                   | Balanced, $<0.1$ |
| Vote Choice 2018: Bolsonaro | Binary  | -0.006                  | Balanced, $<0.1$ |
| Vote Choice 2018 (NA)       | Binary  | -0.030                  | Balanced, $<0.1$ |
| $\operatorname{Gender}$     | Contin. | 0.032                   | Balanced, $<0.1$ |
| Asian                       | Binary  | 0.004                   | Balanced, $<0.1$ |
| Preto (Black)               | Binary  | 0.028                   | Balanced, $<0.1$ |
| Indigenous                  | Binary  | -0.007                  | Balanced, $<0.1$ |
| Pardo (Mixed)               | Binary  | -0.010                  | Balanced, $<0.1$ |
| White                       | Binary  | -0.015                  | Balanced, $<0.1$ |
| Race (NA)                   | Binary  | 0.015                   | Balanced, $<0.1$ |

# C Regression Tables for Results

Overall Effects

|   | Electoral Credibility (1-6)  |   |  |
|---|--|---|--|
|   | (1)  | (2)   |  |
| Treatment   | 0.110 $(0.115)$  | $0.081 \ (0.114)$   |  |
| Education   |  | $0.437^{***}$ $(0.127)$   |  |
| Gender  |  | 0.133 $(0.114)$   |  |
| Evangelical   |  | -0.155 $(0.126)$  |  |
| Constant  | 4.284***<br>(0.077)  | 3.972***<br>(0.143)   |  |
| Observations R <sup>2</sup> Adjusted R <sup>2</sup> Residual Std. Error F Statistic | 865<br>0.001<br>-0.0001<br>1.678 (df = 863)<br>0.929 (df = 1; 863) | 863<br>0.018<br>0.013<br>1.664 (df = 858)<br>3.910*** (df = 4; 858) |  |

Vote Choice

|                     | Electoral Credibility (1-6)  |                              |  |
|---------------------|------------------------------|------------------------------|--|
|                     | (1)                          | (2)                          |  |
| Treatment           | 0.327                        | 0.308                        |  |
|                     | (0.202)                      | (0.203)                      |  |
| Bolsonaro Supporter | $-0.712^{***}$               | $-0.664^{***}$               |  |
| 11                  | (0.169)                      | (0.171)                      |  |
| Education           |                              | 0.219                        |  |
|                     |                              | (0.139)                      |  |
| Gender              |                              | 0.121                        |  |
|                     |                              | (0.118)                      |  |
| Evangelical         |                              | -0.161                       |  |
| C                   |                              | (0.132)                      |  |
| Treatment*Bolsonaro | $-0.477^{*}$                 | $-0.480^{*}$                 |  |
|                     | (0.248)                      | (0.249)                      |  |
| Constant            | 4.927***                     | 4.731***                     |  |
|                     | (0.137)                      | (0.194)                      |  |
| Observations        | 683                          | 682                          |  |
| $\mathbb{R}^2$      | 0.082                        | 0.088                        |  |
| Adjusted $R^2$      | 0.078                        | 0.080                        |  |
| Residual Std. Error | 1.529 (df = 679)             | 1.528 (df = 675)             |  |
| F Statistic         | $20.138^{***} (df = 3; 679)$ | $10.874^{***} (df = 6; 675)$ |  |

# ${\bf Dimension\text{-}L\ Trust\ (Overall)}$

|                       | Electoral Credibility (1-6)  |                              |  |
|-----------------------|------------------------------|------------------------------|--|
|                       | 4.2                          |                              |  |
|                       | (1)                          | (2)                          |  |
| Treatment             | 0.189                        | 0.132                        |  |
|                       | (0.152)                      | (0.151)                      |  |
| Dimension 1           | 1.342***                     | 1.321***                     |  |
|                       | (0.143)                      | (0.142)                      |  |
| Education             |                              | 0.425***                     |  |
|                       |                              | (0.117)                      |  |
| Gender                |                              | 0.016                        |  |
|                       |                              | (0.105)                      |  |
| Evangelical           |                              | -0.177                       |  |
|                       |                              | (0.116)                      |  |
| Treatment*Dimension 1 | -0.098                       | -0.044                       |  |
|                       | (0.212)                      | (0.210)                      |  |
| Constant              | 3.577***                     | 3.350***                     |  |
|                       | (0.104)                      | (0.151)                      |  |
| Observations          | 865                          | 863                          |  |
| $\mathbb{R}^2$        | 0.151                        | 0.167                        |  |
| Adjusted $R^2$        | 0.148                        | 0.162                        |  |
| Residual Std. Error   | 1.549 (df = 861)             | 1.534 (df = 856)             |  |
| F Statistic           | $50.944^{***} (df = 3; 861)$ | $28.682^{***} (df = 6; 856)$ |  |

 ${\bf Dimension\text{-}L\ Trust\ (Bolsonaro\ Supporters)}$ 

|                       | Electoral Credibility (1-6)  |                              |  |
|-----------------------|------------------------------|------------------------------|--|
|                       | (1)                          | (2)                          |  |
| Treatment             | -0.300                       | $-0.327^*$                   |  |
|                       | (0.196)                      | (0.197)                      |  |
| Dimension 1           | 1.284***                     | 1.297***                     |  |
|                       | (0.192)                      | (0.193)                      |  |
| Education             |                              | 0.217                        |  |
|                       |                              | (0.165)                      |  |
| Gender                |                              | 0.116                        |  |
|                       |                              | (0.141)                      |  |
| Evangelical           |                              | -0.159                       |  |
|                       |                              | (0.153)                      |  |
| Treatment*Dimension 1 | 0.346                        | 0.350                        |  |
|                       | (0.281)                      | (0.283)                      |  |
| Constant              | 3.582***                     | 3.432***                     |  |
|                       | (0.135)                      | (0.208)                      |  |
| Observations          | 453                          | 452                          |  |
| $\mathbb{R}^2$        | 0.195                        | 0.203                        |  |
| Adjusted $R^2$        | 0.189                        | 0.192                        |  |
| Residual Std. Error   | 1.494 (df = 449)             | 1.492 (df = 445)             |  |
| F Statistic           | $36.205^{***} (df = 3; 449)$ | $18.914^{***} (df = 6; 445)$ |  |

Dimension-L Trust (Lula Supporters)

|                       | Electoral Credibility (1-6) |                             |  |
|-----------------------|-----------------------------|-----------------------------|--|
|                       | (1)                         | (2)                         |  |
| Treatment             | 0.836***                    | 0.709***                    |  |
|                       | (0.266)                     | (0.265)                     |  |
| Dimension 1           | 0.948***                    | 0.958***                    |  |
|                       | (0.227)                     | (0.224)                     |  |
| Education             |                             | 0.474**                     |  |
|                       |                             | (0.190)                     |  |
| Gender                |                             | -0.174                      |  |
|                       |                             | (0.159)                     |  |
| Evangelical           |                             | -0.287                      |  |
|                       |                             | (0.192)                     |  |
| Treatment*Dimension 1 | -0.748**                    | $-0.650^{**}$               |  |
|                       | (0.331)                     | (0.327)                     |  |
| Constant              | 4.293***                    | 4.102***                    |  |
|                       | (0.186)                     | (0.254)                     |  |
| Observations          | 230                         | 230                         |  |
| $\mathbb{R}^2$        | 0.090                       | 0.131                       |  |
| Adjusted $R^2$        | 0.078                       | 0.107                       |  |
| Residual Std. Error   | 1.191 (df = 226)            | 1.172 (df = 223)            |  |
| F Statistic           | $7.465^{***} (df = 3; 226)$ | $5.595^{***} (df = 6; 223)$ |  |

### Dimension-B Trust (Overall)

|                       | Electoral Credibility (1-6) |                             |  |  |
|-----------------------|-----------------------------|-----------------------------|--|--|
|                       | (1)                         | (2)                         |  |  |
| Treatment             | 0.441***                    | 0.387**                     |  |  |
|                       | (0.165)                     | (0.164)                     |  |  |
| Dimension 2           | -0.235                      | $-0.267^*$                  |  |  |
|                       | (0.153)                     | (0.154)                     |  |  |
| Education             |                             | 0.442***                    |  |  |
|                       |                             | (0.125)                     |  |  |
| Gender                |                             | 0.101                       |  |  |
|                       |                             | (0.113)                     |  |  |
| Evangelical           |                             | -0.076                      |  |  |
| O                     |                             | (0.126)                     |  |  |
| Treatment*Dimension 2 | -0.586***                   | -0.529**                    |  |  |
|                       | (0.226)                     | (0.226)                     |  |  |
| Constant              | 4.403***                    | 4.095***                    |  |  |
|                       | (0.109)                     | (0.160)                     |  |  |
| Observations          | 865                         | 863                         |  |  |
| $R^2$                 | 0.031                       | 0.046                       |  |  |
| Adjusted $R^2$        | 0.027                       | 0.040                       |  |  |
| Residual Std. Error   | 1.655 (df = 861)            | 1.642 (df = 856)            |  |  |
| F Statistic           | $9.144^{***} (df = 3; 861)$ | $6.956^{***} (df = 6; 856)$ |  |  |

### Dimension-B Trust (Bolsonaro Supporters)

|                       | Electoral Credibility (1-6) |                            |  |  |
|-----------------------|-----------------------------|----------------------------|--|--|
|                       | (1)                         | (2)                        |  |  |
| Treatment             | 0.394                       | 0.344                      |  |  |
|                       | (0.323)                     | (0.326)                    |  |  |
| Dimension 2           | -0.307                      | -0.315                     |  |  |
|                       | (0.234)                     | (0.236)                    |  |  |
| Education             |                             | 0.110                      |  |  |
|                       |                             | (0.181)                    |  |  |
| Gender                |                             | 0.212                      |  |  |
|                       |                             | (0.155)                    |  |  |
| Evangelical           |                             | -0.117                     |  |  |
| O .                   |                             | (0.169)                    |  |  |
| Treatment*Dimension 2 | $-0.639^*$                  | $-0.611^*$                 |  |  |
|                       | (0.369)                     | (0.370)                    |  |  |
| Constant              | 4.435***                    | 4.321***                   |  |  |
|                       | (0.197)                     | (0.261)                    |  |  |
| Observations          | 453                         | 452                        |  |  |
| $\mathbb{R}^2$        | 0.030                       | 0.035                      |  |  |
| Adjusted $R^2$        | 0.023                       | 0.022                      |  |  |
| Residual Std. Error   | 1.640 (df = 449)            | 1.641 (df = 445)           |  |  |
| F Statistic           | $4.558^{***} (df = 3; 449)$ | $2.729^{**} (df = 6; 445)$ |  |  |

# Dimension-B Trust (Lula Supporters)

|                       | Electoral Credibility (1-6) |                            |  |
|-----------------------|-----------------------------|----------------------------|--|
|                       | (1)                         | (2)                        |  |
| Treatment             | 0.472**                     | 0.392**                    |  |
|                       | (0.183)                     | (0.184)                    |  |
| Dimension 2           | 0.228                       | 0.214                      |  |
|                       | (0.258)                     | (0.259)                    |  |
| Education             |                             | 0.453**                    |  |
|                       |                             | (0.198)                    |  |
| Gender                |                             | -0.070                     |  |
|                       |                             | (0.165)                    |  |
| Evangelical           |                             | -0.248                     |  |
| Ü                     |                             | (0.201)                    |  |
| Treatment*Dimension 2 | $-0.730^{*}$                | -0.590                     |  |
|                       | (0.404)                     | (0.408)                    |  |
| Constant              | 4.872***                    | 4.637***                   |  |
|                       | (0.127)                     | (0.226)                    |  |
| Observations          | 230                         | 230                        |  |
| $\mathbb{R}^2$        | 0.032                       | 0.062                      |  |
| Adjusted $R^2$        | 0.019                       | 0.037                      |  |
| Residual Std. Error   | 1.229 (df = 226)            | 1.218 (df = 223)           |  |
| F Statistic           | $2.481^* (df = 3; 226)$     | $2.476^{**} (df = 6; 223)$ |  |

# Social Media Use (Overall)

|                           | Electoral Credibility (1-6) |                             |  |
|---------------------------|-----------------------------|-----------------------------|--|
|                           | (1)                         | (2)                         |  |
| Treatment                 | 0.408**                     | 0.390**                     |  |
|                           | (0.178)                     | (0.178)                     |  |
| Frequent Social Media Use | 0.633***                    | 0.572***                    |  |
|                           | (0.155)                     | (0.155)                     |  |
| Education                 |                             | 0.401***                    |  |
|                           |                             | (0.128)                     |  |
| Gender                    |                             | 0.122                       |  |
|                           |                             | (0.114)                     |  |
| Evangelical               |                             | -0.149                      |  |
|                           |                             | (0.126)                     |  |
| Treatment*Social Media    | -0.579**                    | $-0.574^{**}$               |  |
|                           | (0.232)                     | (0.232)                     |  |
| Constant                  | 3.948***                    | 3.690***                    |  |
|                           | (0.114)                     | (0.162)                     |  |
| Observations              | 858                         | 857                         |  |
| $\mathbb{R}^2$            | 0.020                       | 0.034                       |  |
| Adjusted $R^2$            | 0.017                       | 0.027                       |  |
| Residual Std. Error       | 1.663 (df = 854)            | 1.655 (df = 850)            |  |
| F Statistic               | $5.839^{***} (df = 3; 854)$ | $4.965^{***} (df = 6; 850)$ |  |

# Social Media Use (Bolsonaro Supporters)

|                           | Electoral Credibility (1-6) |                            |  |
|---------------------------|-----------------------------|----------------------------|--|
|                           | (1)                         | (2)                        |  |
| Treatment                 | 0.342                       | 0.284                      |  |
|                           | (0.253)                     | (0.258)                    |  |
| Frequent Social Media Use | 0.761***                    | 0.739***                   |  |
|                           | (0.216)                     | (0.218)                    |  |
| Education                 |                             | 0.045                      |  |
|                           |                             | (0.186)                    |  |
| Gender                    |                             | 0.197                      |  |
|                           |                             | (0.157)                    |  |
| Evangelical               |                             | -0.162                     |  |
|                           |                             | (0.169)                    |  |
| Treatment*Social Media    | -0.841***                   | $-0.794^{**}$              |  |
|                           | (0.321)                     | (0.325)                    |  |
| Constant                  | 3.768***                    | 3.730***                   |  |
|                           | (0.165)                     | (0.233)                    |  |
| Observations              | 450                         | 449                        |  |
| $\mathbb{R}^2$            | 0.030                       | 0.034                      |  |
| Adjusted R <sup>2</sup>   | 0.023                       | 0.021                      |  |
| Residual Std. Error       | 1.643 (df = 446)            | 1.645 (df = 442)           |  |
| F Statistic               | $4.525^{***} (df = 3; 446)$ | $2.594^{**} (df = 6; 442)$ |  |

# Social Media Use (Lula Supporters)

|                           | Electoral Credibility (1-6) |                             |  |
|---------------------------|-----------------------------|-----------------------------|--|
|                           | (1)                         | (2)                         |  |
| Treatment                 | 0.353                       | 0.301                       |  |
|                           | (0.261)                     | (0.261)                     |  |
| Frequent Social Media Use | 0.476**                     | $0.430^{*}$                 |  |
| •                         | (0.222)                     | (0.222)                     |  |
| Education                 |                             | 0.468**                     |  |
|                           |                             | (0.195)                     |  |
| Gender                    |                             | -0.070                      |  |
| <u> </u>                  |                             | (0.163)                     |  |
| Evangelical               |                             | -0.198                      |  |
|                           |                             | (0.198)                     |  |
| Treatment*Social Media    | -0.079                      | -0.075                      |  |
|                           | (0.332)                     | (0.331)                     |  |
| Constant                  | 4.647***                    | 4.412***                    |  |
|                           | (0.171)                     | (0.256)                     |  |
| Observations              | 230                         | 230                         |  |
| $R^2$                     | 0.048                       | 0.078                       |  |
| Adjusted R <sup>2</sup>   | 0.035                       | 0.053                       |  |
| Residual Std. Error       | 1.219 (df = 226)            | 1.208 (df = 223)            |  |
| F Statistic               | $3.763^{**} (df = 3; 226)$  | $3.128^{***} (df = 6; 223)$ |  |

# D Principal Component Analysis

Additive Index

|                      | Electoral Credibility (1-6) |                          |                          |  |
|----------------------|-----------------------------|--------------------------|--------------------------|--|
|                      | (1)                         | (2)                      | (3)                      |  |
| Add all              | 0.090***<br>(0.007)         |                          |                          |  |
| Dim. 1 Individual    |                             | $-0.073^{***}$ $(0.013)$ |                          |  |
| Dim. 1               |                             | 0.154***<br>(0.008)      |                          |  |
| Dim. 2               |                             |                          | 0.516***<br>(0.029)      |  |
| Dim.2                |                             |                          | $-0.323^{***}$ $(0.037)$ |  |
| Constant             | 1.971***<br>(0.197)         | 2.412***<br>(0.179)      | 4.334***<br>(0.048)      |  |
| Observations         | 852                         | 852                      | 865                      |  |
| $R^2$ Adjusted $R^2$ | $0.155 \\ 0.154$            | $0.320 \\ 0.318$         | $0.308 \\ 0.307$         |  |

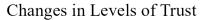
Individual Measures of Trust on Perceptions of Electoral Credibility

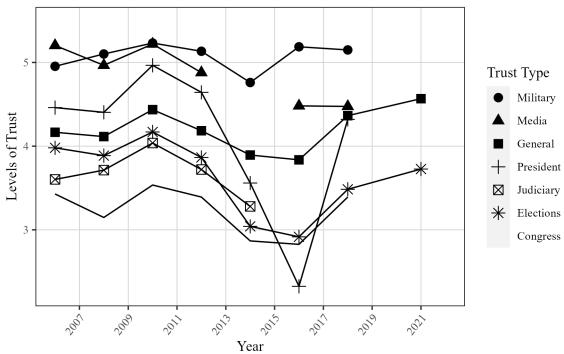
|                             | Electoral Credibility (1-6) |                         |                     |                     |                     |                     |
|-----------------------------|-----------------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|
|                             | (1)                         | (2)                     | (3)                 | (4)                 | (5)                 | (6)                 |
| President                   | $-0.094^{***}$ $(0.025)$    |                         |                     |                     |                     |                     |
| Military                    |                             | $-0.067^{**}$ $(0.031)$ |                     |                     |                     |                     |
| Elections                   |                             |                         | 0.504***<br>(0.024) |                     |                     |                     |
| Judiciary                   |                             |                         |                     | 0.386***<br>(0.027) |                     |                     |
| Traditional Media           |                             |                         |                     |                     | 0.335***<br>(0.028) |                     |
| Congress                    |                             |                         |                     |                     |                     | 0.288***<br>(0.030) |
| Constant                    | 4.722***<br>(0.120)         | 4.691***<br>(0.170)     | 1.960***<br>(0.123) | 2.715***<br>(0.124) | 2.882***<br>(0.132) | 3.274***<br>(0.124) |
| Observations R <sup>2</sup> | 860<br>0.016                | 861<br>0.005            | 862<br>0.336        | 861<br>0.194        | 861<br>0.143        | 857<br>0.098        |
| Adjusted R <sup>2</sup>     | 0.010                       | 0.003                   | 0.335               | 0.194               | 0.143               | 0.098               |

# **E** Additional Information

IRB:

#### E.1 Trust in Brazil





Source:

The AmericasBarometer by the LAPOP Lab, www.vanderbilt.edu/lapop Note: Measures of trust were not asked every year.

by the LAPOP Lab, n.d.

# E.2 Why Respondents Believed the Election to Be Credible or Not

In the final section of the survey, respondents were asked to three questions. First, they were asked who they planned to vote for in the 2022 election. Second, they were asked to what extent they perceived the election to be credible (primary outcome of interest) on a 1-6 Likert scale. Finally, they were asked why they gave the answer they did. Those who reported trusting the election (responding with a 4, 5, or 6) were shown a question asking why they did trust the election, while those who reported not trusting the election (responding with a 1, 2, or 3) were asked why they did not trust the election.

Regardless of whether individuals did or did not trust the election, they were asked to order a list of 6 reasons. These can be broken down into three main categories: institutional trust (trusting or not trusting the electoral court, electronic voting machines, or Brazilian elections in general), elite messaging (Lula or Bolsonaro said), and network messaging (a family member or friend said the election would or would not be credible or reading about the election's credibility online). The count of respondents who listed each option in their top three is listed below, divided by those who did and did not trust the election.

Reasoning Among Those Who Trusted the Election

|              | Overall | Bolsonaro | Lula |
|--------------|---------|-----------|------|
| Institutions | 527     | 247       | 189  |
| Elite        | 179     | 114       | 39   |
| Network      | 207     | 123       | 59   |

Reasoning Among Those Who Did Not Trust the Election

|              | Overall | Bolsonaro | Lula |
|--------------|---------|-----------|------|
| Institutions | 224     | 129       | 23   |
| Elite        | 94      | 43        | 13   |
| Network      | 109     | 48        | 20   |

#### E.3 Believing and Sharing Information

#### **Believing Information:**

Individuals in the treatment group were exposed to both positive and neutral information about the election. Respondents were asked how accurate they believed the information to be. I took the averages of these scores across positive and neutral information. The T-tests for comparison are below.

Belief in Information

|           | Estimate | Mean Positive | Mean Neutral | P-value | CIs           |
|-----------|----------|---------------|--------------|---------|---------------|
| Lula      | -0.036   | 2.539         | 2.576        | 0.570   | -0.163, 0.09  |
| Bolsonaro | -0.413   | 1.815         | 2.228        | 0       | -0.557, -0.27 |

#### **Sharing Information:**

After the headline questions in the experimental section, respondents were asked about their willingness to share the information they were viewing with no one, a small circle (private groupchat, family, or friends) or a large circle (anyone or on social media). Below are T-tests comparing Bolsonaro and Lula supporters' willingness to share information with each group size.

# Willingness to Share Information Among Bolsonaro Supporters

| Share With   | Estimate | Mean Positive | Mean Neutral | P-value | CIs            |
|--------------|----------|---------------|--------------|---------|----------------|
| No One       | -0.061   | 0.327         | 0.388        | 0.191   | -0.152, 0.03   |
| Small Circle | -0.079   | 0.605         | 0.684        | 0.087   | -0.17, 0.012   |
| Big Circle   | -0.117   | 0.402         | 0.519        | 0.015   | -0.211, -0.023 |

# Willingness to Share Information Among Lula Supporters

| Share With   | Estimate | Mean Positive | Mean Neutral | P-value | CIs           |
|--------------|----------|---------------|--------------|---------|---------------|
| No One       | -0.140   | 0.150         | 0.290        | 0.013   | -0.251, -0.03 |
| Small Circle | -0.009   | 0.664         | 0.673        | 0.885   | -0.137, 0.118 |
| Big Circle   | -0.084   | 0.467         | 0.551        | 0.220   | -0.219, 0.051 |