The Hate Office? Bolsonaro's Discourse and COVID-19 Online Disinformation

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Campaigners exploited the global health crisis and the uncertainty regarding the coronavirus to spread inaccurate or manipulated information on social media. Online disinformation is often associated with political elites, though the extant evidence is limited because this form of propaganda usually operates in the background. Using a sequential explanatory design, this article analyzes the connections between COVID-19 disinformation on social media and the public speeches of Brazil's president Jair Bolsonaro in 2020. First, we conduct a content analysis of false or misleading social media publications related to the pandemic. Second, we employ a qualitative documental analysis of Bolsonaro's public speeches. Finally, we analyze overlaps between the most recurrent themes of each stage. Our results show that Bolsonaro and the disinformation echoed the same arguments and targeted the same actors. These connections are a relevant indication of his disinformation machinery at work. However, the highly symbiotic relationship between the content and the statements suggests that the agenda-setting of disinformation in Brazil is partly constructed by both the political elite and the public, challenging previous studies.

Keywords: disinformation, COVID-19, social media, political discourse, Brazil

Previous studies suggest that disinformation related to COVID-19 became yet another political tool for the far-right, framing the public debate about the pandemic within the terms of their polarizing strategy of mischief in many countries (Rossini & Kalogeropoulos, 2021; Vicente, 2021). That is, the global health

² The author gratefully acknowledges the Portuguese Foundation for Science and Technology (FCT– Fundação para a Ciência e a Tecnologia) supporting her doctoral study (scholarship 2020.04647.BD).

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¹ We are extremely grateful to Jean-François Daoust, João Manuel dos Santos Miranda, and Maria João Silveirinha for reading previous versions of this article and providing invaluable feedback. We also wish to thank the two reviewers whose helpful comments have improved this work.

crisis and the uncertainty surrounding the new coronavirus were exploited by campaigns spreading inaccurate or manipulated information on social media intentionally designed to mislead the readers (Ricard & Medeiros, 2020; Zarocostas, 2020). However, extant research has mainly focused on the content and styles of disinformation (Damstra et al., 2021). The connections between the actors, intentions, and techniques underlying deceptive information are not fully understood (Hameleers, 2022). Although studies have identified coordinated distributions of misleading content benefiting specific political actors (Keller, Schoch, Stier, & Yang, 2020; Lukito et al., 2020), evidence is scarce because of methodological challenges (Ferreira, 2021; Freelon & Wells, 2020).

In particular, empirical studies provide limited and contracting evidence on how political elites and social media users shape online disinformation (Abu Arqoub, Abdulateef Elega, Efe Özad, Dwikat, & Adedamola Oloyede, 2022). On the one hand, research along the lines of Ong and Cabañes (2018) and Recuero and Soares (2022) suggest that misleading messages published by political elites generate and increase the flow of disinformation on social media. On the other hand, research such as Cesarino's (2021) indicates that followers of misleading political elites reach the point of autonomously producing and distributing content replicating their discourse, as celebrities' fans often do on social media. Similarly, the participatory model proposed by Starbird (2021) identified relevant roles in the spread of disinformation for key digital influencers and regular users through multiple interactions. However, the model still regards political elites as crucial to mobilizing these audiences and is restricted to a very specific event (i.e., the Capitol invasion). Hence, our study contributes to our understanding of the interactions between political elites, media, and the spread of online disinformation, and it does so by focusing on a non-Western perspective.

To this end, we will systematically analyze the key messages and targeted social actors in the COVID-19 disinformation shared on social media in Brazil and how they relate to the public speeches of the country's president Jair Bolsonaro regarding the pandemic. The disinformation machinery implemented by populist leaders operates in the background. Therefore, such an apparatus is difficult to capture and only observable through its implications. Albeit not the only case, Brazil constitutes a relevant one because disinformation occupies a central space in the Global South (Kalil et al., 2021). Moreover, Bolsonaro's administration is thought to have built a powerful machinery, which is informally known as the "Hate Office" (Mello, 2020).

In this research, we provide two key contributions. First, we advance our understanding of the nature of disinformation and reduce the lack of systematic analysis and evidence by examining key topics and social actors. The results indicate that the COVID-19 pandemic was converted into a political tool by the Brazilian far-right through misleading content. Second, we contribute to the literature on how disinformation is shaped in the public debate by investigating the connections between this kind of content and political elites from a Global South perspective—which is currently limited. The vast majority of the content reproduces and/or supports Bolsonaro's key positions on the pandemic and attacks his rivals, which suggests a political machinery of disinformation related to the president operating in the country. However, the highly symbiotic relationship between the content and the statements indicates that the agenda-setting of disinformation in Brazil is partly constructed. Specifically, the agenda was shaped by both the political elite and the public, thus informing previous work that provided mixed

evidence around the process of agenda-setting (Cesarino, 2021; Ong & Cabañes, 2018; Recuero & Soares, 2020; Starbird, 2021).

Disinformation as a Political Tool

Disinformation campaigns successfully exploit the changes in the media ecosystem and can compromise the communicational dynamics of decision-making processes (Ferreira, 2021). Governments (Keller et al., 2020; Lukito et al., 2020), political actors (Ferreira, 2022), and hyperpartisan media (Benkler, Faris, & Roberts, 2018) have recently used social media to influence the public debate with false, misleading, or exaggerated information across the globe. Nonetheless, most of the literature argues that the emergence of disinformation on social media is deeply associated with a wave of radical right-wing populism seeking to legitimize and promote their political agenda (Bennett & Livingston, 2018).

Populism as a form of political communication is characterized by a discourse in the name of the people that blames the corrupt elite, which often includes opposing politicians and legacy media (Hameleers, Bos, & de Vreese, 2017). Building on the prominent role of social media in the current hybrid media system (Chadwick, 2017), this new far-right populist communication undermines the liberal democracy's authoritative flow of information, in which reliable information originates from the institutions. Bennett and Livingston (2018) argue that public spheres in many nations have become disrupted by this breakdown of trust in democratic institutions of press and politics, as well as in educational and civil society institutions in advanced cases (p. 126).

Indeed, this process has been more effective in promoting right-wing values and radicalizing audiences. Benkler and colleagues (2018) provide evidence that right-wing news readers on social media engage with and believe in misleading content in a greater capacity because they isolate themselves. Those who interact with right-wing content producers tend to ignore mainstream press, and as a result, hyperpartisan distortions are not exposed to a comparison with legacy factual reports, leading to systemic disinformation. By contrast, this effect is not verified significantly among left-wing viewers, which have the mainstream media as a counterpoint. Similarly, Rossini and Kalogeropoulos's (2021) study suggests that disinformation about COVID-19 has spread more among users who declare a right-wing political orientation.

The far-right in the Global South has appropriated issues often associated with the political left (e.g., poverty and social exclusion) and presents them as their own (Lugo-Ocando, 2020). However, leaders such as Brazilian president Jair Bolsonaro succeed in addressing these issues by framing them within antiglobalization and nationalistic discourses that resonate with "popular common sense" (Lugo-Ocando, 2020, p. 101). Although the far-right is marked by antiglobalization and isolationist discourse, the solution to a pandemic that knows no bounds requires cooperation on a global scale. Therefore, the measures to combat the coronavirus conflict with the discourse of the far-right, which resorts to attacks and denial. Supporters and leaders turn to tactics that were successful in elections and other public debates: disinformation campaigns on social media.

The Brazilian Context

The pandemic reached a country divided, radicalized, and under the direction of an unstable government with authoritarian tendencies. Brazil's first official case of COVID-19 was registered on February 26, 2020, during the second year of the four-year presidential term for the far-right populist Jair Bolsonaro. Bolsonaro's presidency is marked by attacks on democratic institutions, disinformation, and aggressive speech that characterized his electoral campaign, prioritizing the most radical supporters (Hunter & Power, 2019; Kalil, 2018). Since the very beginning of the pandemic, Bolsonaro has repeatedly downplayed its risks and opposed health experts, acting against protective measures and advocating for unproven treatments (Arcanjo, 2021).

The extant research attributes Bolsonaro's rationale for denying the pandemic and undermining protective measures mostly to a focus on protecting the economy (Béland, Rocco, Segatto, & Waddan, 2021; Nowak, 2023). Indeed, this was one of the predominant arguments in his discourse during 2020, as we shall see in the analysis. de Oliveira and Veronese (2023) argue that Bolsonaro's authoritarian values are aligned with a logic that prioritizes market interests above all else, producing an "ultra-neoliberalism" in both the financial and social spheres. However, the president also consistently advocated against the COVID-19 vaccines that could have supported a faster reopening of the country (Recuero & Soares, 2022), suggesting that his stance toward the pandemic is part of a broader political strategy. The first vaccination programs were initiated by Bolsonaro's rivals at the state level (Fagundes, 2021), and his allies profited financially from the federal government orders to produce drugs such as chloroquine (Nowak, 2023, p. 105). At the same time, it is important to note that Bolsonaro's radical supporters hold a combination of distrust in science and an antivax mindset intertwined with a distorted idea of liberalism (Kalil et al., 2021). This suggests that the political elite's stance and agenda-setting were influenced in part by the actions and beliefs of both political actors and members of the public who expressed themselves on social media platforms in the context of Brazil.

In addition to a constant struggle with the Parliament and the Supreme Court, Bolsonaro fought mayors and governors who adopted protective measures. The president also prompted two health ministers to resign amid COVID-19's first escalating wave of cases. Luiz Henrique Mandetta and Nelson Teich, both physicians, left the government precisely because Bolsonaro demanded the large-scale use of chloroquine and encouraged agglomerations (Folha de S.Paulo, 2020). From May to December 2020, which is the end of our analysis period, Brazil faced the pandemic with an interim minister with no experience in public health, Army General Eduardo Pazuello. The mismanagement is reflected in the numbers: Brazil, a country of 200 million citizens, reached 7.7 million cases and 194,949 deaths of COVID-19 on December 31, 2020 (Johns Hopkins University, n.d.)

Research Design

This article aims to analyze the connections between social media disinformation related to COVID-19 and public speeches by Brazilian president Jair Bolsonaro regarding the pandemic. To achieve this goal methodologically, we developed a sequential explanatory design (Creswell, 2009, p. 211) to answer the following: (1) What are the main messages conveyed by COVID-19 disinformation in Brazil? (2) Who are the main social actors targeted by these narratives? (3) How do these narratives connect with President Jair Bolsonaro's discourse?

First, we conducted a content analysis (Krippendorff, 2012) of false or misleading social media publications related to the pandemic shared between January and December 2020, accessing the original content through reports from the leading fact-checking agency in Brazil, Aos Fatos. Second, we employed a qualitative documental analysis (Bowen, 2009) of Bolsonaro's public speeches in the same period, using the archives of the three leading newspapers in Brazil, namely *Folha de S.Paulo, O Estado de São Paulo*, and *O Globo* (Newman, Fletcher, Robertson, Eddy, & Nielsen, 2022). Third, we identified and analyzed overlaps between the most recurrent themes of each stage.

The sample of disinformation consists of content previously classified as false or misleading and stored by Aos Fatos (2015). We selected only the fact-checking reports of content spread through social media. These were mostly carried out by Aos Fatos as part of their role in Meta's third-party fact-checking program, which focuses on viral disinformation on Facebook, Instagram, and WhatsApp (Meta, 2023). In addition, this data set includes a small amount of social media posts and WhatsApp messages that were sent by concerned members of the public directly to the fact-checking agency. In both cases, Aos Fatos chose to primarily verify content with the highest engagement and number of complaints, which allowed us to analyze disinformation with more impact in the public debate.

The false or misleading contents were accessed through the agency's checking reports. This methodological option was deemed effective by previous research in this area (Alcantara & Ferreira, 2020; Ferreira, 2021) and allows us to build a relevant sample and ensure a reliable classification of disinformation. The fact-checking reports were used to collect the disinformation data, but our analysis focuses on the original misleading content. First, we identified all disinformation stories reported in 2020 (N = 530). Then, the manifested content was analyzed to collect the ones related to the pandemic (N = 255, 48.1%), which form the final sample of this article.

The analysis matrix was developed through an inductive-deductive process, which is based on both the literature and the data (Elo & Kyngäs, 2008; Mayring, 2000). First, we built an initial set of codes using previous studies about COVID-19 disinformation (Alcantara & Ferreira, 2020; Brennen, Simon, Howard, & Nielsen, 2020). Subsequently, we constructed a more specific matrix using inputs from our data through four rounds of categorization followed by matrix adjustments. To minimize subjectivity, each author conducted two rounds independently. Finally, we discussed the classifications we disagreed with to reach a decision and complete the matrix (Table 1).

Categories	Codes
Topic (central theme of the message)	Number of cases and deaths
	Treatments and prevention
Subtopics (specific themes	Vaccine
within the most recurrent	Early treatment ³
topics)	Mask
	Social distancing
	Against the measures
	In favor of the measures
	Government actions
	Origin of the virus
	Others
Reference to risk (manifested reference of	Yes
danger)	No
Social actor (protagonist present in the story)	Name of the social actor
Image of social actor	Yes
	No

 Table 1. Analysis Matrix Shows the Distribution of Codes in Each Category. The Two Most

 Recurrent Topics Were Unpacked During the Rounds of Classifications.

Source: Developed by the authors.

Regarding Bolsonaro's public statements, newspapers report his interviews with journalists, statements at official and informal events, and his communications on social media in one stable archive. Bolsonaro frequently speaks in informal public settings and on social media, which makes government archives incomplete. Conversely, social media posts are subject to removal by the author or the platforms even months after publication, which would generate a sample missing valuable influential content. Moreover, our analysis integrated data from three newspapers and considered the entirety of the statements often available in the articles (i.e., not only headlines and highlighted phrases) to minimize the dependence on journalists' focus and interpretation.

Findings and Discussion

The most cited topics are "Treatments and prevention" (N = 102), "Number of cases and deaths" (N = 44), and "Social distancing" (N = 41), which were also analyzed by month (Figure 1). Our results indicate that the spread of disinformation about these topics had specific fluctuation patterns. Furthermore, our analysis of these patterns suggests, as we shall see, a strong connection with the president's communications.

³ Misleading stories defending the use of drugs ineffective to treat COVID-19. Chloroquine is the most famous, but content also refer to hydroxychloroquine, ivermectin, azithromycin, or a "COVID Kit."

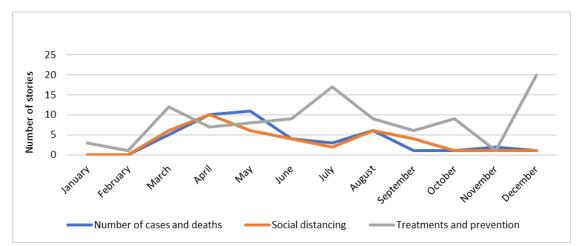


Figure 1. Most recurrent topics by month. Developed by the authors.

The stories on "Social distancing" mostly mislead to portraying measures of distancing, activity reduction, and lockdowns as unnecessary, ineffective, or harmful (N = 35). On "Number of cases and deaths," all false stories claim that COVID-19 infections and deaths in Brazil are being inflated through fraud and conspiracy, usually pointing to Bolsonaro's opposition, corruption in the health sector, and the media. As shown in Figure 1, both topics presented two periods of more significant spread. First, between March and May, as we discussed, there was a period of intensive activity by the president and his supporters, including Bolsonaro's strong statements and staged photo ops designed to cause crowding. The second of significant spread, around August, was mostly related to the discussion of the reopening of the economy at the very beginning of the local elections debate. A drastic drop at the end of the year for both topics can be perceived as a shift in focus toward vaccination.

"Treatments and prevention" constitutes the most recurrent topic, resurfacing consistently throughout the year. Because the stories presented noteworthy diversity, we analyzed this topic in detail. Figure 2 shows how false claims about the efficacy of the so-called "early treatment" had spread every month. These stories are focused on drugs such as chloroquine, hydroxychloroquine, ivermectin, and azithromycin, which medical research proved to be ineffectual in treating COVID-19. All "early treatment" content in our sample was classed as disinformation because it began circulating in March 2020—that is, after key health authorities had provided statements advising against the large-scale use of these drugs because of the lack of evidence (U.S. Food and Drug Administration [FDA], 2020; World Health Organization, 2020a). These authorities also disavowed taking them preventively and considering them as a miraculous cure (i.e., better than vaccination), which again contradicts the claims in our sample. Furthermore, misleading content on this theme increased in May and July, when evidence of their ineffectiveness and fatal adverse reactions was widely available (WHO, 2020b). These drugs were heavily advertised as effective by Bolsonaro, which, as we have seen, underpinned conflicts with his health ministers. The nonexistent "early treatment" or the "COVID Kit" became an obsession among the president's supporters, who continued to advocate it even after the vaccination.

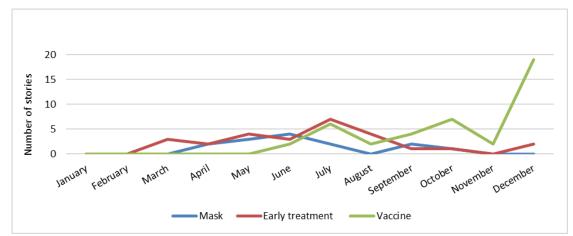


Figure 2. Subtopics within "treatments and prevention." Developed by the authors.

False and misleading antivaccine stories dominate the second semester. Overall, the content discredits efficiency, vilifies means of production, and insists on false side effects, including death. The stories emerge in June (N = 2), but they gain traction in July (N = 6) and October (N = 7) when the topic of the development of vaccines evolves in the public debate. The highest spread was in December (N = 19) when the first jab was administered in the United Kingdom, and Bolsonaro suggested that immunized individuals could become alligators (Agence France-Presse, 2020). The end of the year also sees the beginning of a denial narrative, which claims that the jabs are false and that doctored images or misleading texts are being used.

Although in reduced quantity in relation to the other two subtopics, misleading stories about masks present two noteworthy characteristics. First, the majority (N = 14) contend that the equipment should not be used, resorting to false claims that masks increase the concentration of coronavirus, damage the respiratory system, and harm circulation. Second, the spread is higher between April and June and in September, which is consistent with Bolsonaro's public appearances without masks and his noncompliance with local regulations (Sandes, 2020). The president also claimed that wearing a mask was a "fag thing," a recurring homophobic statement that was revealed during this time frame (Bergamo, 2020, para. 3). False content on treatments also included secret miracle cures that called for tea or vinegar, but this content appeared in a less significant amount and was mostly restricted to the beginning of the year.

Connected Narratives and the Risk Perception

The detailed analysis of the main topics addressed by disinformation related to COVID-19 in Brazil suggests a particular set of connected false narratives that are at play in a complementary manner in the public debate. Most misleading content regarding "Number of cases and deaths" claims that the numbers are fake and that a conspiracy is artificially increasing them. In the category "Social distancing," messages advocate that lockdown does not work to fight coronavirus or try to exaggerate the suppression of rights by such measures. In addition, the majority of "Treatments and prevention" content falsely argues the existence of simple cures and treatments for COVID-19, except for several false stories about vaccines' inefficacy and risks. Therefore, disinformation contends that the pandemic is not a threat, that it is not as harmful as has been described, and that there are drugs that can easily protect people. Consequently, people should have returned to work normally and should not have followed the protective guidelines, including personal protective equipment and vaccines, because they are more dangerous than the pandemic.

This interpretation and the key differential regarding vaccines are well reflected in the results of our risk perception analysis. Stories that contain direct expressions minimizing the threat of the pandemic are 41.9% (N = 107) of our sample. Although a significant 20% conveys concerning and alarming claims (N = 51), these stories tend to focus on protective measures. Almost half of them use false claims and fearmongering to elevate the risks of vaccines (N = 23, 9%). Though limited in numbers, stories coded as "elevating risk" also include wild allegations that masks and self-isolation rules increase contagion and that COVID-19 tests cause brain damage. As we discussed, disinformation often uses complex narratives with innuendo subtexts. Therefore, a noteworthy 38% of the sample comprises stories without a direct manifested expression of risk within the text (N = 97).

Social Actors

Among the 255 misleading stories about the pandemic in our sample, 94 stories (36.8%) featured at least one social actor. In this group, 68 of these 94 stories (72.3%) identified at least one of the actors with an image (photo or video). All content portrayed these actors in a potentially negative/critical context. The major target is the governor of São Paulo, João Doria, who appears in 17 stories, followed by the World Health Organization (WHO) director-general, Tedros Ghebreyesus, who figures in 7. Doria was one of Bolsonaro's main political opponents; a situation of conflict escalated during the pandemic when the governor sought to adopt a position contrary to that of the president, prioritizing care and combative measures. In the same vein, Bolsonaro carried out constant attacks against WHO in 2020 regarding the severity of the pandemic. The results reinforce the perception that disinformation relating to COVID-19 in Brazil supported Bolsonaro's claims and political bigotry with regard to the pandemic.

Rodrigo Maia, leader of the Brazilian Parliament and another outspoken critic of the president's mismanagement of the health crisis, is cited in five stories. The same amount of content targeted Bruno Covas, the mayor of São Paulo, usually linked to Doria and to the local research institute Butantã, which was involved in the distribution of the vaccine discredited by Bolsonaro. Bolsonaro's former ministers of health, other governors and mayors, and key members of the opposition were also targeted. Altogether, Brazilian coronavirus disinformation targeted Bolsonaro's adversaries 58 times in 53 stories, with more than half of the stories mentioning social actors (56.3% of the 94) and always portraying them negatively. Bolsonaro appears as a social actor in four stories and not necessarily in a negative frame.

Comparing the Disinformation Strategies

The results of this study indicate a strong connection between the disinformation about COVID-19 and the far-right in Brazil, which is represented by Bolsonaro as its current most prominent leader. Most of

the content in our sample overlaps with Bolsonaro's rallies and statements. Such connection materializes not only in the dates at which each topic reaches the public debate, but also in the core discourse of the misleading narratives. We identified five key arguments in this overlap between COVID-19 disinformation in Brazil and Bolsonaro's discourse. In this section, we will discuss and exemplify each one using our misleading content sample and a data set of statements made by the president. We constructed this data set for the purpose of our discussion based on the news outputs of the three leading Brazilian newspapers within our period of analysis. These are *Folha de S.Paulo*, *O Estado de São Paulo*, and *O Globo* (Arcanjo, 2021; O Globo, 2020; Vasconcelos, 2020).

Minimizing Risks and Denial

One of Bolsonaro's most echoed misleading phrases about the pandemic comes from March 24, when the president called COVID-19 a "little flu" that would only cause mild symptoms, particularly in people with "an athlete's background" like him (*O Globo*, 2020, para. 6). However, he downplayed the well-documented risks of coronavirus throughout the entire year of 2020, which at that point was ravaging Europe. Representative of this narrative is the following statements from our sample. On March 9, Bolsonaro said: "In my opinion, the destructive power of this virus is over-dimensioned. Maybe it is being used for economic reasons" (Arcanjo, 2021, para. 12). On March 10, the president continued: "It is much more a fantasy, the coronavirus issue, which is not all that the mainstream media propagates" (Vasconcelos, 2020, para. 7). He also asserted that "other kinds of flu killed more" than COVID-19 on March 11, which is false (Arcanjo, 2021, para. 14). As a sounding board for pandemic denial, Bolsonaro frequently introduced conspiratorial cues during interviews, such as "it is not all they say" on March 16 (Vasconcelos, 2020, para. 20). On March 27, he escalated critics to target one of his rivals, the governor of São Paulo:"[The number of cases] is too big for São Paulo. We have to see what is going on there. It cannot be a numbers game to favor political interest" (Arcanjo, 2021, para. 33).

In an effort to insist that COVID-19 was not a threat, the president even mocked Brazilians in a preposterous statement on March 26: "Brazilians have to be studied. They don't catch anything. The guy jumps in the sewer over there. He dives, goes out, and nothing happens to him" (Arcanjo, 2021, para. 32).

These same arguments were found in our sample, mostly in the category of "Number of cases and deaths." Figure 3 shows story 81,⁴ one typical disinformation piece of this group (personal communication, April 30, 2020), in which a photo of an empty coffin is used to deny the high number of deaths caused by COVID-19. One of the most shared is story 40, a false claim about a death of a tire repairman in a work accident that was registered as COVID-19 (personal communication, March 29, 2020).

⁴ Each disinformation narrative in our sample was numbered from 1 to 255. Our research dataset is available online (see Ferreira & Alcantara, 2023).



Figure 3. The discovery of an empty coffin during a police operation against life insurance fraud in 2017 in Sao Paulo was used to deny COVID-19 deaths in Manaus (personal communication, April 30, 2020). The marks in some images of our sample were placed by the fact-checking agency to avoid possible reuse by disinformation spreaders.

Similarly, several publications distort numbers from the Brazilian national registry of deaths, such as story 174 (personal communication, August 10, 2020), or allege that hospitals and regional governments are registering COVID-19 as the cause of any death to receive more money from the federal government, such as story 165 (personal communication, July 30, 2020). Some stories use false data to contend that previous epidemics killed more people in Brazil. A notable example is story 30, which directly reproduces one of the president's statements and misleadingly compares the number of COVID-19 cases during Bolsonaro's tenure with the number of H1N1 cases during Lula's presidency (personal communication, March 24, 2020). Furthermore, this story adds an attribution of blame to the media in typical far-right fashion with "data doesn't lie, careful with the media" and "understand how the left-wing media manipulates your life" (personal communication, March 24, 2020).

The "Early Treatment" Advocate

Bolsonaro mentioned chloroquine for the first time on March 21, when he announced that the Brazilian army would manufacture the drug (Shinohara, 2020). From that point onward, the president became a strong advocate of the substance's effectiveness in the treatment of COVID-19, which has never been proven. As previously discussed, renowned health authorities were already warning about the lack of evidence of the effectiveness of these drugs in March. In the following months, medical research showed

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that chloroquine and hydroxychloroquine had no significant results in preventing or fighting the coronavirus but could cause dangerous side effects (FDA, 2020). Bolsonaro included other drugs in his messages over the year, such as the remedy for worms, ivermectin. This set of medicines, as examined earlier, is referred to as the "COVID Kit" or the "early treatment" by the president and his supporters, albeit chloroquine is the media icon of this narrative. Bolsonaro encouraged the use of this combination of remedies at the very first symptoms of COVID-19, and even as a preventive measure. During the same period, health authorities, including WHO, advised against the large use of these drugs and asserted that the so-called early treatment does not exist (Carvalho, 2020).

The president made several statements advocating the use of these drugs throughout 2020, especially chloroquine. Bolsonaro often behaved as a pharmaceutical sales representative in his social media live transmissions, showing boxes of the medication and effusively praising its unproven results. Over time, the use of chloroquine became part of the political dispute in the country and a symbol of allegiance to the far-right president, who stated on May 19: "Right-wing people take chloroquine. Leftists take Tubaína⁵" (Vasconcelos, 2020, para. 99).

The president strengthens the chloroquine defense after testing positive for COVID-19 on July 7. On that date alone, Bolsonaro repeats the name of the drug 17 times when announcing his results. On July 19, he left the presidential residence, infected, to raise a box of the medicine in front of a hysterical crowd of supporters screaming, "Chloroquine, chloroquine!" For illustrative purposes, we have included an image of what political analyst Leonardo Sakamoto (2020) defined as "the chloroquine cult" (para. 1; Figure 4).



Figure 4. Brazilian president Jair Bolsonaro raises a box of chloroquine to supporters at the entrance of the official residence on July 19 (Bolsonaro, 2020).

⁵ Tubaína is a Brazilian soft drink.

Although it is not a statement, the act was broadcast on social media as a crucial part of his discourse. Moreover, it was followed by numerous misleading declarations by the president. On August 8, Bolsonaro said: "The use of hydroxychloroquine, even though it has not yet been scientifically proven, saved my life and, as reported, those of thousands of Brazilians" (Arcanjo, 2021, para. 43). On October 26, the president stated: "The cure, I, for example, I am a witness. I took hydroxychloroquine, others took ivermectin, others took annita, and it worked. By all indications, everyone who dealt early with one of these three options was cured" (Arcanjo, 2021, para. 51). The expressions "as reported," "by all indications," and "everybody" in the extracts demonstrate that Bolsonaro used typical marks of disinformation. First, there are the insinuations and the conspiratorial appeal, as evidenced in the statements denying the pandemic. Second, as indicated by the terms highlighted, there is an absence of reliable sources and the fabrication of data. Bolsonaro maintained the narrative of the "early treatment" based on chloroquine even after the arrival of COVID-19 vaccines. In the second semester, the president started to portray the infective drugs in opposition to the vaccines. On October 26, he asked: "Isn't it cheaper or easier to invest in a cure than even a vaccine?" (Arcanjo, 2021, para. 51)

Beyond supporting the false narrative of a simple cure for COVID-19, most of the disinformation about chloroquine and the "early treatment" contends that Bolsonaro is resolving the situation and that the pandemic is over. For example, story 63 claims that the drug was proven effective and clear for use in COVID-19 patients in the United States (personal communication, April 13, 2020). The piece starts with the title "It is over" and goes on with false statements that support Bolsonaro's positions, such as "FDA, the US drug regulatory agency, has approved the use of hydroxychloroquine in all patients with COVID-19" and "research results show that hydroxychloroquine kills the virus" (personal communication, April 13, 2020). The text also alerts that "activists" in the press and in WHO will fight against the cure because they are "profiting politically from the despair" (personal communication, April 13, 2020). Another revealing example in the sample is story 39, which uses a photo of a patient with pulmonary emphysema to falsely claim a COVID-19 cure by chloroquine (personal communication, March 29, 2020). The publication was first spread by an extreme-right website supportive of the president and came to be shared by one of his sons, Eduardo Bolsonaro, who is also a member of Parliament.

Against Social Distancing, Self-Isolation, and Lockdown

Denial of the pandemic and the promise of a simple cure, discussed in the previous sections, pave the way for what appears to be Bolsonaro's main goal: avoid any reduction of economic activities. In 2020, the president's statements against social distancing, self-isolation rules, and lockdowns were as frequent as the ones minimizing the risks associated with the pandemic. While several countries adopted those restrictions as oriented by health authorities, Bolsonaro refused to enforce what he classified as "exaggerated measures." Further, he started to criticize regional governors who implemented those measures, starting in March and intensifying the tone over the year. On March 17, the president said: "There are some governors who are taking measures that will seriously harm the economy" (Vasconcelos, 2020, para. 26). At an event with farmers who support him on September 18, Bolsonaro stated: "You didn't stop during the pandemic. You didn't get into the 'stay at home' bullshit. This is for the weak" (Arcanjo, 2021, para. 44). On November 10, he escalates to advocate the withdrawal of restrictions: "Everything is the pandemic now. You have to end this. We are all going to

die one day. It must stop being a country of sissies!" (Arcanjo, 2021, para. 45). On November 13, the president continues: "And now there is this bullshit of second wave. You have to face it, if it happens. Because if the economy breaks once and for all, we will be a country of miserable people" (Arcanjo, 2021, para. 46).

Two key and symbiotic aspects arise from these statements. First, the underlying homophobia and misogyny in Bolsonaro's rhetoric translate into an "alpha male" approach to the pandemic. That is, "real men" are not affected, the society is for the strongest to take, and protective measures are feminine and therefore less important. Second is a constant concern about the impacts on the economy. Appalling as it is, the "alpha male" speech and lack of empathy with the victims, as we discussed, appeal to his most radical supporters. However, by downplaying risks and undermining restrictions, he argues that life can go on normally. Bolsonaro establishes this condition as a priority over public health, understanding the pandemic as a political power play, which is well reflected in a statement from March 16: "If the economy sinks, Brazil sinks. If the economy ends, any government ends. My government ends. It's a power struggle" (Vasconcelos, 2020, para. 23).

Moreover, the president even claimed that social distancing and self-isolation rules caused deaths, distorting a UK study (Weterman, 2020). In turn, the disinformation depicts social distancing and restrictions as ineffective and a risk to the economy. One frequent strategy was to attack WHO and to simultaneously use them as a credible source of a false story. For example, story 44 displays an image of Tedros Ghebreyesus with the message: "WHO director-general backs off and says lockdown could cause irreparable damage to the economy" (personal communication, April 1, 2020). This narrative of a false policy shift by WHO resurfaces over the year and is one of the most recurrent claims, including stories 58 (personal communication, April 9, 2020) and 120 (personal communication, June 9, 2020). Several pieces also fabricate food shortage, such as story 34 (personal communication, March 25, 2020), and business collapses, like story 49 (personal communication, April 2, 2020), to criticize social distancing.

Against Masks

Bolsonaro's statements are also connected to his discourse that coronavirus is not a threat and protections are not for "real men." The president implied on several occasions a baseless idea that masks could cause harm to people's health (Arcanjo, 2021; Bergamo, 2020). He also attended public events without the equipment (Sandes, 2020), which sends a powerful visual message in line with his discourse of normality. As previously pointed out, Bolsonaro also referred to masks as "a fag thing" (Bergamo, 2020, para. 3). Although the disinformation pieces about masks do not reproduce Bolsonaro's homophobia, several stories in our sample claimed that the equipment could harm people's health. A typical example is story 138, which lists false side effects caused by the use of masks, including "breathing your own carbon dioxide" and "reducing pulmonary oxygenation" (personal communication, June 26, 2020). The piece reinforces the argument of a coordinated construction of misleading narratives because it includes an attack on WHO with the question: "Does WHO want to kill us slowly?" (personal communication, June 26, 2020).

Against Vaccines

As we discussed in point 2, the president tried to equate the ineffective drugs of the "early treatment" and vaccines. He even claimed that vaccines have not been scientifically proven to be effective, despite the documented clinical trials. However, the focus of Bolsonaro's statements on this topic was to portray vaccines as dangerous. The first COVID-19 vaccine in the country was pushed by the São Paulo government, which used a vaccine developed by China. Therefore, the president concentrates his attacks on Governor João Doria and the Chinese government. As we discussed, Doria emerged as a significant political adversary. Moreover, China and communism have been portrayed as a "bogeyman" in Brazilian far-right discourse long before the pandemic. Nonetheless, the president also raised baseless doubts about the Pfizer vaccine. The statements become more frequent toward the end of the year. On October 21, he dismissed Coronavac, the vaccine being developed by the São Paulo government in partnership with China:

It will not be purchased. The Brazilian people will not be anyone's guinea pig. We will not buy from China. It is my decision. I do not believe that the vaccine is safe enough for the population because of its origin (Folha de S.Paulo, 2021, para. 20).

When Coronavac development tests were temporally interrupted to check for adverse reactions on November 10, the president distorted information to attack the vaccine: "Death, disability, anomaly. This is the vaccine that Doria wanted to force all São Paulo residents to take. I said the vaccine could never be mandatory. Another one that Jair Bolsonaro wins" (Folha de S.Paulo, 2021, para. 21). On December 17, he encourages people to refuse vaccination: "Nobody can force anybody to get a vaccine. I won't take it." He then cooked up wild side effects:

In the Pfizer contract, it is quite clear: "We are not responsible for any side effects." If you turn into an alligator, that's your problem. If you become a Superman, if a woman grows a beard, or if a man speaks sharp, Pfizer has nothing to do with that. (Folha de S.Paulo, 2021, para. 22)

Similarly to the president's statements, the disinformation also raised fear about reactions and mostly targeted Doria and China. The vast majority of the disinformation pieces in our sample use the term "Chinese vaccine." Figure 5 shows story 162, claiming that a nurse published pictures with a swollen face to prove the side effect of the immunization during the trials in São Paulo (personal communication, July 28, 2020). The photos were published in 2016 by a student suffering an allergic reaction to peanut butter. Using a similar argument, story 206 claims that three children died after getting the vaccine (personal communication, September 14, 2020), and story 218 promotes a misleading statement: "the side effects are worse than the disease" (personal communication, October 26, 2020).

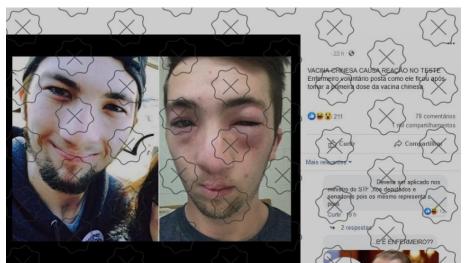


Figure 5. A photo of an allergic reaction to peanut butter in the United States was used to claim that the "Chinese vaccine" caused side effects during trials in São Paulo (personal communication, July 28, 2020).

However, most antivax pieces invested in images of Doria, often associated with Chinese symbols and political actors. Figure 6 reproduces a key example, story 161, in which the governor's eyes were covered with Chinese flags, followed by the preposterous accusation that the "Chinese vaccine" uses cells from aborted babies, which mobilized religious groups in Brazilian politics connected to Bolsonaro (personal communication, July 28, 2020).



Figure 6. A montage puts Chinese flags in the eyes of the governor of São Paulo and claims that the vaccine uses cells from aborted babies (personal communication, July 28, 2020).

Similar attacks were published throughout the end of 2020. For example, story 240 shows Doria holding the jab, and it deceives when saying that trials of the "Chinese vaccine" were interrupted because it can cause paralysis (personal communication, December 14, 2020). Likewise, story 245 highlights Doria; the Chinese president, Xi Jinping; and the vaccine with the false claim: "Chinese vaccine can cause 10 types of cancer and suicidal thoughts" (personal communication, December 16, 2020).

Conclusions

This article set out to advance our understanding of the connections between the actors, intentions, and techniques underlying online misleading content. Specifically, this study was designed to systematically analyze the key messages and targeted social actors in the COVID-19 disinformation stories shared on social media in Brazil and how they relate to President Jair Bolsonaro's discourse about the pandemic.

In the first year of the COVID-19 pandemic, the most recurrent themes were early treatment, the number of cases and deaths, and social distancing. These themes are articulated with risk perception. Importantly, the majority of the data analyzed minimizes risks. The risk perception is well reflected in the narratives, which are interrelated. This can be illustrated by the cascade of false arguments mapped by our results: (1) the pandemic is not a threat; (2) consequently, people do not have to follow the protective guidelines; (3) therefore, do not use protective equipment and do not take the vaccine because they are more dangerous than the virus. Moreover, more than a third of the stories targeted a political actor. These results advance our understanding of the disinformation's nature and indicate that the COVID-19 pandemic was converted into a political tool by the far-right in Brazil through misleading content.

The same misleading cascade of arguments was employed by the president in highly identical ways. Moreover, our investigation indicates a correlation between his actions and the content's publication dates. Baseless claims about social distancing and the "early treatment" drugs are present throughout a great majority of the year, but the spikes highlighted in our findings tend to follow occasions when Bolsonaro addressed these issues or publicly broke social distancing rules. In addition, more than half of the stories with an identifiable social actor targeted an adversary of Bolsonaro, depicting these adversaries in a potentially negative way. These connections between COVID-19 disinformation and Bolsonaro's statements and attitudes suggest the existence of a propaganda machinery working in favor of the president. As previously discussed, such an apparatus operates in the background and is challenging to seize. However, our research allows for a better grasp of the mechanisms of the machinery by examining its implications. Moreover, the highly symbiotic relationship between the content and the statements identified in our sample also indicates that the agenda-setting of disinformation in Brazil is neither top-to-bottom nor bottom-to-top. Our analysis offers the building blocks to comprehend this agenda as partly constructed by both the political elite and the public, challenging previous studies, as detailed in the introduction.

Notwithstanding these contributions from a non-Western case to the rapidly expanding field of disinformation, considerably more work needs to be done. We recognize that assessing "who follows who"

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in media systems defined by overproduction and interconnections is very challenging. We believe our work represents an important contribution on this important issue applied to online disinformation, but future research should be undertaken by applying our approach to a larger sample and using a longitudinal perspective to establish a greater degree of accuracy on this matter.

References

- Abu Arqoub, O., Abdulateef Elega, A., Efe Özad, B., Dwikat, H., & Adedamola Oloyede, F. (2022). Mapping the scholarship of fake news research: A systematic review. *Journalism Practice*, *16*(1), 56–86. doi:10.1080/17512786.2020.1805791
- Agence France-Presse. (2020, December 18). *Bolsonaro sobre vacina de Pfizer: "Se você virar um jacaré, é problema de você"* [Bolsonaro on Pfizer vaccine: "If you turn into an alligator, it's your problem"]. UOL. Retrieved from https://noticias.uol.com.br/ultimasnoticias/afp/2020/12/18/bolsonaro-sobre-vacina-de-pfizer-se-voce-virar-um-jacare-e-problemade-voce.htm
- Alcantara, J., & Ferreira, R. R. (2020). A infodemia da "gripezinha": uma análise sobre desinformação e coronavírus no Brasil ["Little flu" infodemic: An analysis of disinformation and coronavirus in Brazil]. Chasqui. Revista Latinoamericana de Comunicación, 1(145), 137–162. doi:10.16921/chasqui.v1i145.4315

Aos Fatos. (2015). Nosso Método [Our method]. Retrieved from https://www.aosfatos.org/nosso-método/

- Arcanjo, D. (2021, March 5). Relembre o que Bolsonaro já disse sobre a pandemia, de gripezinha e país de maricas a frescura e mimimi [Remember what Bolsonaro has already said about the pandemic, from little flu to country of sissies]. Folha de S.Paulo. Retrieved from https://www1.folha.uol.com.br/poder/2021/03/relembre-o-que-bolsonaro-ja-disse-sobre-apandemia-de-gripezinha-e-pais-de-maricas-a-frescura-e-mimimi.shtml
- Béland, D., Rocco, P., Segatto, C. I., & Waddan, A. (2021). Trump, Bolsonaro, and the framing of the COVID-19 crisis. *World Affairs*, 184(4), 413–440. doi:10.1177/00438200211053314
- Benkler, Y., Faris, R., & Roberts, H. (2018). *Network propaganda: Manipulation, disinformation, and radicalization in American politics*. Oxford, UK: Oxford University Press.
- Bennett, W. L., & Livingston, S. (2018). The disinformation order: Disruptive communication and the decline of democratic institutions. *European Journal of Communication*, 33(2), 122–139. doi:10.1177/0267323118760317

- Bergamo, M. (2020, July 7). Máscara é "coisa de viado," dizia Bolsonaro na frente de visitas [Mask is "a fag thing," said Bolsonaro in front of visitors]. *Folha de S.Paulo*. Retrieved from https://www1.folha.uol.com.br/colunas/monicabergamo/2020/07/mascara-e-coisa-de-v-diziabolsonaro-na-frente-de-visitas.shtml
- Bolsonaro, J. (2020, July 19). *Live transmission* [Facebook page]. Retrieved from https://www.facebook.com/jairmessias.bolsonaro
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40. doi:10.3316/QRJ0902027
- Brennen, J. S., Simon, F. M., Howard, P. N., & Nielsen, R. K. (2020). *Types, sources, and claims of COVID-19 misinformation*. Reuters Institute for the Study of Journalism—Factsheet, April 2020. Retrieved from https://www.primaonline.it/app/uploads/2020/04/COVID-19_reuters.pdf
- Carvalho, M. A. (2020, March 1). Grupo da OMS publica forte recomendacao contra uso de hidroxicloroquina na prevenção à COVID-19 [WHO group publishes strong recommendation against the use of hydroxychloroquine to prevent COVID-19]. O Estado de S.Paulo. Retrieved from https://www.estadao.com.br/saude/grupo-da-oms-publica-forte-recomendacao-contra-usode-hidroxicloroquina-na-prevencao-a-covid-19
- Cesarino, L. (2021). Pós-verdade e a crise do sistema de peritos: uma explicação cibernética [Post-truth and the crisis of the expert system: A cybernetic explanation]. *Ilha Revista de Antropologia*, 23(1), 73–96. doi:10.5007/2175-8034.2021.e75630
- Chadwick, A. (2017). *The hybrid media system: Politics and power* (2nd ed.). Oxford, UK: Oxford University Press. doi:10.1093/oso/9780190696726.001.0001
- Creswell, J. W. (2009). *Research design: Qualitative and mixed methods approaches*. London, UK: Sage Publications.
- Damstra, A., Boomgaarden, H. G., Broda, E., Lindgren, E., Strömbäck, J., Tsfati, Y., & Vliegenthart, R. (2021). What does fake look like? A review of the literature on intentional deception in the news and on social media. *Journalism Studies*, 22(14), 1947–1963. doi:10.1080/1461670X.2021.1979423
- de Oliveira, G. M., & Veronese, M. V. (2023). Brazil and the "Bolsonaro phenomenon": Politics, the economy, and the COVID-19 pandemic, 2019–2020. *Latin American Perspectives*. Advance online publication. doi:10.1177/0094582X221147597.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. doi:10.1111/j.1365-2648.2007.04569.x

- Fagundes, M. (2021, January 17). Doria vence guerra da vacina, critica Bolsonaro e fatura com CoronaVac [Doria wins vaccine war, criticizes Bolsonaro and profits from CoronaVac]. *Poder360*. Retrieved from https://www.poder360.com.br/coronavirus/doria-vence-guerra-da-vacina-critica-bolsonaroe-fatura-com-coronavac/
- Ferreira, R. R. (2021). Liquid disinformation tactics: Overcoming social media countermeasures through misleading content. *Journalism Practice*, *16*(8), 1–21. doi:10.1080/17512786.2021.1914707
- Ferreira, R. R. (2022). Democracia sequestrada. Como a desinformação ajudou a eleger Bolsonaro president [Hijacked democracy. How misinformation helped elect Bolsonaro president]. Porto, Portugal: Media XXI.
- Ferreira, R. R., & Alcantara, J. (2023). COVID-19 online disinformation in Brazil, 2020 [image]. Edinburgh, UK: University of Edinburgh, School of Social and Political Science. doi:10.7488/ds/7513
- Folha de S.Paulo. (2020, May 15). Após ultimato sobre cloroquina, Teich pede demissão do Ministério da Saúde [After ultimatum on chloroquine, Teich resigns from the Ministry of Health]. Folha de S.Paulo. Retrieved from https://www1.folha.uol.com.br/equilibrioesaude/2020/05/apos-ultimatosobre-cloroquina-teich-pede-demissao-do-ministerio-da-saude.shtml
- Folha de S.Paulo. (2021, March 11). Relembre ataques de Bolsonaro contra vacinas e veja como ele agora tenta esconder essas investidas [Remember Bolsonaro's attacks against vaccines and see how he now tries to hide these attacks]. *Folha de S.Paulo*. Retrieved from https://www1.folha.uol.com.br/poder/2021/03/relembre-ataques-de-bolsonaro-contra-vacinas-eveja-como-ele-agora-tenta-esconder-essas-investidas.shtml
- Freelon, D., & Wells, C. (2020). Disinformation as political communication. *Political Communication*, *37*(2), 145–156. doi:10.1080/10584609.2020.1723755
- Hameleers, M. (2022). Disinformation as a context-bound phenomenon: Toward a conceptual clarification integrating actors, intentions and techniques of creation and dissemination. *Communication Theory*, 33(1), 1–10. doi:10.1093/ct/qtac021
- Hameleers, M., Bos, L., & de Vreese, C. H. (2017). "They did it": The effects of emotionalized blame attribution in populist communication. *Communication Research*, 44(6), 870–900. doi:10.1177/0093650216644026
- Hunter, W., & Power, T. J. (2019). Bolsonaro and Brazil's illiberal backlash. *Journal of Democracy, 30*(1), 68–82. doi:10.1353/jod.2019.0005

Johns Hopkins University. (n.d.). COVID-19 map. Retrieved from https://coronavirus.jhu.edu/map.html

- Kalil, I. (2018). Who are Jair Bolsonaro's voters and what they believe. Retrieved from https://www.researchgate.net/publication/335127980_Who_are_Jair_Bolsonaro's_voters_and_what_they_believe
- Kalil, I., Silveira, S. C., Pinheiro, W., Kalil, Á., Pereira, J. V., Azarias, W., & Amparo, A. B. (2021). Politics of fear in Brazil: Far-right conspiracy theories on COVID-19. *Global Discourse*, 11(3), 409–425. doi:10.1332/204378921X16193452552605
- Keller, F. B., Schoch, D., Stier, S., & Yang, J. (2020). Political astroturfing on Twitter: How to coordinate a disinformation campaign. *Political Communication*, 37(2), 256–280. doi:10.1080/10584609.2019.1661888
- Krippendorff, K. (2012). Content analysis: An introduction to its methodology. London, UK: Sage.
- Lugo-Ocando, J. (2020). The 'changing' face of media discourses on poverty in the age of populism and anti-globalisation: The political appeal of anti-modernity and certainty in Brazil. *International Communication Gazette*, 82(1), 101–116. doi:10.1177/1748048519880749
- Lukito, J., Suk, J., Zhang, Y., Doroshenko, L., Kim, S. J., Su, M.-H., . . . Wells, C. (2020). The wolves in sheep's clothing: How Russia's Internet research agency tweets appeared in U.S. news as vox populi. *The International Journal of Press/Politics, 25*(2), 196–216. doi:10.1177/1940161219895215
- Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2), 1–10. doi:10.17169/fqs-1.2.1089
- Mello, P. C. (2020, August 4). Brazil's troll army moves into the streets. *The New York Times*. Retrieved from https://www.nytimes.com/2020/08/04/opinion/bolsonaro-office-of-hate-brazil.html
- Meta. (2023). *Meta's third-party fact-checking program*. Retrieved from https://www.facebook.com/formedia/mjp/programs/third-party-fact-checking
- Newman, N., Fletcher, R., Robertson, C. T., Eddy, K., & Nielsen, R. (2022). *Reuters institute digital news* report 2022. Oxford, UK: Reuters Institute for the Study of Journalism.
- Nowak, J. (2023). The pandemic politics of the Bolsonaro government in Brazil: COVID-19 denial, the chloroquine economy and high death rates. In A. W. Cafruny & L. Simona Talani (Eds.), *The political economy of global responses to COVID-19. International Political Economy Series* (pp. 105–123). London, UK: Palgrave Macmillan. doi:10.1007/978-3-031-23914-4_6
- O Globo. (2020, July 7). Relembre frases de Bolsonaro sobre a COVID-19 [Remember Bolsonaro's phrases about COVID-19]. O Globo. Retrieved from https://oglobo.globo.com/epoca/brasil/relembrefrases-de-bolsonaro-sobre-covid-19-1-24520078

- Ong, J. C., & Cabañes, J. V. A. (2018). Architects of networked disinformation: Behind the scenes of troll accounts and fake news production in the Philippines. Amherst, MA: University of Massachusetts Amherst, Communication Department Faculty Publication Series (Vol. 74). doi:10.7275/2cq4-5396
- Recuero, R., & Soares, F. (2020). O discurso desinformativo sobre a cura do COVID-19 no Twitter [The disinformative discourse about the COVID-19 cure on Twitter]. *E-Compós, 24*, 1–29. doi:10.30962/ec.2127
- Recuero, R., & Soares, F. B. (2022). #Vachina: How politicians help to spread disinformation about COVID-19 vaccines. *Journal of Digital Social Research*, 4(1), 73–97. doi:10.33621/jdsr.v4i1.112
- Ricard, J., & Medeiros, J. (2020). Using misinformation as a political weapon: COVID-19 and Bolsonaro in Brazil. Harvard Kennedy School Misinformation Review, 1(2), 1–6. Retrieved from https://misinforeview.hks.harvard.edu/article/using-misinformation-as-a-political-weapon-covid-19-and-bolsonaro-in-brazil/
- Rossini, P., & Kalogeropoulos, A. (2021). *News and (mis)information about COVID-19 in Brazil*. Department of Communication and Media, University of Liverpool—Report. Retrieved from https://www.liverpool.ac.uk/media/livacuk/schoolofthearts/documents/communicationandmedia/ Rossini,Kalogeropoulos,Report,insights,07122020.docx.pdf
- Sakamoto, L. (2020, July 20). Cena de culto à cloroquina mostra que ela se tornou símbolo do bolsonarismo [Chloroquine cult scene shows that it has become a symbol of Bolsonarism]. UOL. Retrieved from https://noticias.uol.com.br/colunas/leonardo-sakamoto/2020/07/20/cena-deculto-a-cloroquina-mostra-que-ela-se-tornou-simbolo-do-bolsonarismo.htm
- Sandes, A. (2020, May 17). Bolsonaro esteve, em média, em uma aglomeração por dia durante a pandemia [Bolsonaro was, on average, in one crowd per day during the pandemic]. UOL. Retrieved from https://noticias.uol.com.br/politica/ultimas-noticias/2020/05/17/bolsonaroesteve-em-media-em-uma-aglomeracao-por-dia-durante-a-pandemia.htm
- Shinohara, G. (2020, March 21). Coronavírus: Bolsonaro diz que Exército vai ampliar pro- dução de cloroquina [Coronavirus: Bolsonaro says the Army will expand chloroquine production]. O Globo. Retrieved from https://oglobo.globo.com/sociedade/coro-0Anavirus-bolsonaro-diz-que-exercitovai-ampliar-producao-de-cloroquina-1-24320671
- Starbird, K. (2021, May 4). Participatory disinformation [Keynote address]. Washington, DC: George Washington University Institute for Data, Democracy & Politics Conference. Retrieved from https://www.cip.uw.edu/2021/05/26/participatory-disinformation-kate-starbird/

- U.S. Food and Drug Administration. (2020, January 7). *FDA cautions against use of hydroxychloroquine or chloroquine for COVID-19 outside of the hospital setting or a clinical trial due to risk of heart rhythm problems*. Retrieved from https://www.fda.gov/drugs/drug-safety-and-availability/fdacautions-against-use-hydroxychloroquine-or-chloroquine-covid-19-outside-hospital-setting-or
- Vasconcelos, R. (2020, July 7). Coronavírus: relembre o que Bolsonaro já falou sobre a pandemia [Coronavirus: Remember what Bolsonaro has already said about the pandemic]. O Estado de S.Paulo. Retrieved from https://politica.estadao.com.br/noticias/geral,coronavirus-o-quebolsonaro-ja-falou-ate-agora-sobre-a-pandemia,70003234776
- Vicente, M. (2021). Challenges and threats posed by COVID-19 on democracy: The European Union case. Observatório Político, Working Paper #101, 1–16. Retrieved from https://www.observatoriopolitico.pt/wp-content/uploads/2021/03/WP_101_MV.pdf
- Weterman, D. (2020, August 9). Após 100 mil mortes por covid-19, Bolsonar o lamenta óbitos "seja qual for a causa" [After 100,000 deaths from COVID-19, Bolsonaro regrets deaths "whatever the cause"]. O Estado de S.Paulo. Retrieved from https://brasil.estadao.com.br/noticias/geral,apos-100-mil-mortes-por-covid-19-bolsonaro-lamenta-obitos-seja-qual-for-a-causa,70003393413
- World Health Organization. (2020a, March 13). Informal consultation on the potential role of chloroquine in the clinical management of COVID 19 infection. Retrieved from https://www.who.int/publications/i/item/informal-consultation-on-the-potential-role-ofchloroquine-in-the-clinical-management-of-covid-19-infection
- World Health Organization. (2020b, May 25). WHO Director-General's opening remarks at the media briefing on COVID-19—25 May 2020. Retrieved from https://www.who.int/directorgeneral/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-oncovid-19---25-may-2020
- Zarocostas, J. (2020). How to fight an infodemic. *The Lancet, 395*(10225), 676. doi:10.1016/S0140-6736(20)30461-X