



# Mapping political content on YouTube in the 2022 Brazilian elections

**yero**

**moz://a**



University  
of Exeter



## Authorship of the Report

**Dr. Ana Julia Bernardi** - Associate Researcher of Project Viu Política  
**Dr. Beatrice Bonami** - Head of Science and Innovation at Vero Institute  
**Dr. Chico Camargo** - Lecturer in Computer Science at University of Exeter  
**Isabela Inês Bernardino** - Researcher at Vero Institute  
**Rodger Richer** - Researcher at Vero Institute  
**Camila Tsuzuki** - Operations Coordinator at Vero Institute

## Coordination

**Dr. Beatrice Bonami** - Head of Science and Innovation at Vero Institute  
**Caio Machado** - CEO at Vero Institute  
**Dr. Chico Camargo** - Lecturer in Computer Science at University of Exeter  
**Becca Ricks** - Head of Open Source Research & Investigations at Mozilla Foundation  
**Jesse McCrosky** - Principal Data Scientist, Head of Sustainability and Social Change at Thoughtworks Finland  
**Camila Tsuzuki** - Operations Coordinator at Vero Institute

## Research and Collaboration

**Dr. Ana Julia Bernardi** - Associate Researcher of Project Viu Política  
**Isabela Inês Bernardino** - Researcher at Vero Institute  
**Rodger Richer** - Researcher at Vero Institute  
**Laura Pereira** - Researcher at FGV Rio  
**Ranadheer Malla** - Researcher at University of Exeter  
**Jesse McCrosky** - Principal Data Scientist, Head of Sustainability and Social Change at Thoughtworks Finland  
**Victor Durigan** - Head of Institutional Relations at Vero Institute

## Plug-In Development

**Ranadheer Malla** - Researcher at University of Exeter  
**Dr. Chico Camargo** - Lecturer in Computer Science at University of Exeter  
**Fábrica de Software Zetico**

## Communication

**Victor Vicente** - Head of Communication at Vero Institute  
**Agenor Neto** - Copywriter at Vero Institute  
**Matheus Vieira** - Designer at Vero Institute

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# LIST OF ACRONYMS AND ABBREVIATIONS

- 3G** - Third Generation Mobile Network
- 4G** - Fourth Generation Mobile Network
- 5G** - Fifth Generation Mobile Network
- ABRAJI** - Brazilian Association of Investigative Journalists
- ADI** - Direct Action of Unconstitutionality
- AEED** - Special Advisory on Disinformation Confrontation
- BBC** - British Broadcasting Corporation
- CNN** - Cable News Network
- COP27** - Conference of the Parties to the United Nations Framework Convention on Climate Change
- CPMI** - Joint Congressional Inquiry Committee
- FM** - Frequency Modulation
- LDA** - Latent Dirichlet Allocation
- LGBTs** - Lesbians, Gays, Bisexuals, Transsexuals
- NOVO** - New Party (Political Party)
- ONG** - Non-Governmental Organisation
- PUC** - Pontifical Catholic University
- PCC** - First Command of the Capital
- PL** - Liberal Party (Political Party)
- PT** - Workers' Party (Political Party)
- SAC** - Customer Service
- SBT** - Brazilian Television System
- STF** - Federal Supreme Court
- TIC** - Information and Communication Technology
- TSE** - Superior Electoral Court
- UFMG** - Federal University of Minas Gerais
- UFRJ** - Federal University of Rio de Janeiro
- UOL** - Universo Online

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## 1.0 ABOUT THE PROJECT

Brazil is a country with one of the largest populations connected to the internet in the world. Since the popularisation of the network, Brazilians have been quite active in the digital environment, whether for entertainment, work, or study. In recent years, the intensification of internet use and the growing popularisation of smartphones and mobile devices have contributed to a significant increase in online content consumption in the country. In the last decade, internet access has become even more accessible with the expansion of broadband networks, the advent of 3G, 4G, and 5G technologies, and the popularisation of more affordable mobile data plans. This scenario has led to significant transformations in how Brazilians relate to technology and how they use it to communicate, inform, and entertain themselves.

The expansion and importance of the internet for Brazilians are shown as a relevant phenomenon. According to the 2021 TIC Domicílios, 82% of Brazilian households have internet access (a percentage that was 71% in 2019), the cell phone is the most used device to access the internet (99%), and 58% of the interviewed population accesses the internet only by cell phone, predominantly for the lower classes (85%) and in rural areas (79%). Even access to television and streaming services over the internet has grown compared to previous years, and the main activity carried out is communication - 92% sent messages through social network apps, 76% used social networks, 73% talked by voice call. Regarding news consumption in the online environment, 56% of respondents said they read newspapers, magazines, or accessed news on the Internet (CGI, 2021).

The organisation We are social released a report which appointed that Brazilians are online for about 10h19 minutes a day, ranking among the Top 5 most connected countries in 2022. Also, according to the organisation, the Internet is used by 77% of the Brazilian population, and from this percentage, about 79% of the population actively uses a social network, and the average use of social networks is 3h41 minutes daily (Datareportal, 2022). The 2020 Reuters Digital News Report showed that for the first time, social networks (67%) are ahead of television (66%) as a source of information for Brazilians. Among the respondents, 87% cited using the online medium for information, including digital newspapers and magazines, as well as social networks, a trend that continued in 2022 (Newman et al., 2022).

In this sense, YouTube has been used as a source of political information by many Brazilians. However, if the democratisation of information is important for different content to be accessed, this phenomenon has also been identified as a proponent of increasing misinformation on various topics, especially in politics during election periods (Bernardi, 2020).

Among the various forms of content available on the network, political videos on YouTube stand out due to the volume of audiovisual production and high access and sharing rates. In this context, this report aims

to analyse the context of Brazilian access concerning the production and consumption of political videos on YouTube, seeking to understand the main trends and behaviors that permeate this form of political communication. Thus, our project was designed with three central questions:

1. What do Brazilians consider political on YouTube?
2. How do the videos flagged by volunteers portray the 2022 elections?
3. Do the videos recommended by YouTube reflect the content of the flagged video?

For this, we adopted an innovative methodology, relying on the voluntary tagging of videos by internet users through a plug-in published on October 10th 2022, for Chrome and Firefox that allowed flagging YouTube videos. Thus, we asked internet users to flag any videos that they considered political and also answer a non-mandatory survey anonymously and not linked to the collected videos. After the video collection phase, we conducted a qualitative and quantitative analysis to map the thematic categories of videos to understand how the different channels relate to and recommend each other.

Our communication campaigns sought to impact a broad audience beyond ideological fields, regions, or particular social strata. In this sense, the team sought dialogue with content creators with a multifaceted follower base. Given the intention to popularise the plug-in, there was special attention to potential malicious uses of the plug-in and attacks whose objective would be to “pollute” the database with unrelated content. Therefore, the team routinely monitored the number of extension downloads, in addition to the number of videos marked by volunteers.

The outreach efforts resulted in the collection of 1,281 videos, collected by about 65 volunteers, between 1 October 10th and November 30th, covering a considerable period between the first (October 2nd, 2022) and second round (October 30th, 2022) of the Brazilian elections, as well as the period immediately after the electoral process.

Figure 1: Project Promotion Material





## 1.1 RESEARCH GOALS

As the questions that guided the project, the plug-in promotion and the volunteers' survey were designed with an exploratory protocol in mind, we sought to design secondary goals that addressed the categorisation of the collected data based on specialised literature to better describe our findings.

Thus, three main goals can be listed for research purposes:

4. Understand what Brazilians consider political in YouTube videos;
5. Verify which events were highlighted in the eyes of Brazilians in the 2022 election; and
6. Analyse what types of videos are recommended by YouTube based on the flagged content, considering the electoral period and the contextualisation of the Brazilian political environment, both in terms of political polarisation and informational disorder<sup>1</sup>.

That being the case, we point out the following secondary objectives:

### **Regarding channels:**

- a. Determine the prevailing political-ideological tendency of the flagged channels;
- b. Verify if these channels reflect the political-ideological preferences of our volunteers or if they report inappropriate behaviour during the election period;
- c. Check if the recommendations of tagged videos reflect the same political line as the original video channel;
- d. Analyse which types of channels were most signalled in the research, evaluating whether opinion channels, traditional media, or independent media predominate, among others.

### **Regarding the video's themes:**

- a. Verify which themes stand out in the flagged videos
- b. Compare the themes marked as political in the forms with the description of the videos – both in the flagged videos and those suggested by YouTube.
- c. Graphically demonstrate the relationship between the flagged videos and those suggested by YouTube, forming a map of what Brazilians consider political and what is recommended by YouTube from that.

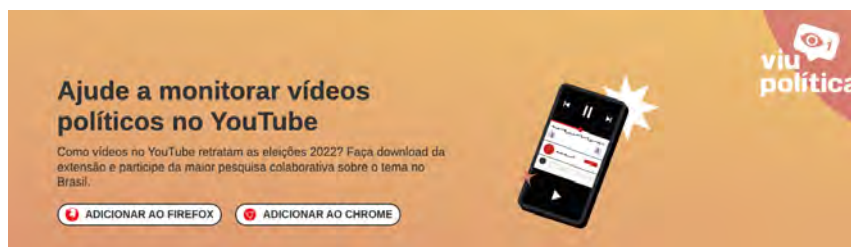
1. By "informational disorder," we refer to misinformation, propaganda, lies, conspiracies, rumors, frauds, hyperpartisan content, falsehoods, and manipulated media.

## 1.2 METHODOLOGY

As already explained in the introduction, we had two main methods of data collection for this research, the main one being the plug-in developed by the University of Exeter in partnership with the Vero Institute, sponsored by the Mozilla Foundation, and supported by Zetico software development company. The plug-in was launched on October 10th, 2022, and is available in the Firefox and Google Chrome app stores as a free plugin.

The plug-in's communication strategy included connecting with **digital influencers** and researchers, **press relations**, building a personalised landing page and promotion on social media, focusing on Twitter and Instagram, and disseminating communications in private messaging apps and email.

Figure 2: Promotion Card for the Viu Política Project



In addition to the invitation to use the plug-in, the landing page provided brief explanations on how to use the plug-in and a FAQ section.

Figure 3: Explanation of how to contribute to the project

### ENTENDA

Qual o papel do YouTube nas eleições brasileiras? O "Viu Política" é um projeto da Universidade de Exeter, no Reino Unido, do Instituto Vero e da Fundação Mozilla, que busca responder a essa pergunta. O mapeamento fornecerá uma visão inédita das narrativas em alta na plataforma, os vídeos que estão sendo amplificados por algoritmos e as pessoas e motivações por trás de todo esse conteúdo.

### COMO USAR



**#01: baixe a extensão**  
Extensões são programas que você instala no seu navegador Chrome ou Firefox. Baixe as extensões para começar a contribuir com a pesquisa.



**#02: acesse o YouTube**  
Seu YouTube mudou! Agora, os vídeos e as miniaturas de vídeos vão ter um botão novo, no canto esquerdo superior. Achou um vídeo político? Selecione o botão.



**#03: reporte o vídeo**  
Ao selecionar o botão, uma janela será aberta no seu navegador. Você precisará responder a pergunta e avançar para que o vídeo seja enviado para nossa análise.

Quer contribuir ainda mais? Preencha [este formulário](#).

The project was shared with researchers from the Coordination Room Against Disinformation (SAD), which brings together various third-sector organisations and research institutes that study and act against disinformation processes. Examples of these organisations are Sleeping

Giants, Netlab, Internetlab, Novelo, and networks of researchers from national and international Graduate Programs, among others.

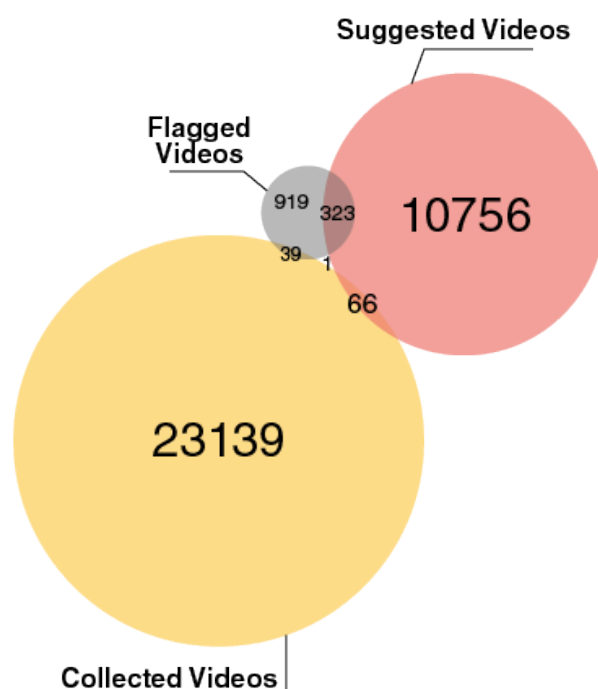
Using the plugin, our volunteers could easily flag content they deemed political and could add a comment about what they consider political in the video – voluntarily as well. Thus, the plugin itself was our first data collection instrument. When flagging a video, the data we collected were:

1. Video metadata, including title, description, original channel, number of likes and views
2. Between 20 and 30 videos recommended by YouTube, and their metadata;
3. With an additional script developed by the team, we could also collect the full transcript of these videos.

For each video flagged as political content, the plugin collected the video data and metadata through the Mozilla Foundation's telemetry system, which stores the data in Mozilla's data warehouse. The analysis was performed using Google BigQuery and Python in the Google Colab environment.

The next figure illustrates the total number of videos included in this data collection effort.

**Figure 4:** Universe of videos collected for analysis



Between 10th and 30th October 2022, we had 206 extension downloads, between Chrome and Firefox, with 65 contributions to video tagging. From this collaboration, we had 1,290 reported videos, which, with the recommended videos, generated more than 30,000 videos. The second data collection instrument was the survey, answered by 52 volunteers



with sociodemographic characteristics and explanations of what content they considered political. These responses will be described in Chapter 3 after contextualising the 2022 elections in Brazil. In this chapter, we also provide a historical and conceptual review of Brazilian politics, the use of social networks, and disinformation based on a systematic literature review that supported the construction of our classification.

Thus, we employed two distinct methods for classifying video content. The first classification was proposed based on the tagged video channels, such as the first specific objectives described earlier. It encompassed only the channels flagged by volunteers, describing the channel type, category, segment, origin, and political leaning. This classification was proposed by the researchers of this project based on a review of the flagged content, taking into account 1) the self-description of the channels, 2) a review of specialised literature about the type of content disseminated, and 3) observation of the tagged videos. Table 1 shows a summary:

**Table 1:** Channel classification

Channel Identity	Channel thematic category	Origin	Political Leaning
Communicator	Academic	Brazil	Centre
Culture	Political Analysis	International	Right
Media	Shorts		Left
Organisation	Comedy		Far-right
Podcast	Independent journalism		Unclear
Politician	Traditional journalism		
Religion	Influencer		
Other	Music		
	Opinion		
	Political Party		
	Politician		
	Entertainment and news		
	Reacts		
	Other		
	Outros		

And a second classification regarding the content of the videos, divided into two phases: a) classification of tagged videos by manual review of the researchers, taking into account criteria from specialised literature, b) topic modelling using the Dirichlet Latent Allocation (DLA) methods to identify videos covering the same themes, considering the full description of the flagged videos and their recommendations, and c) aggregation of topics into thematic groups, thus answering part of the questions concerning the content recommended by YouTube.

**Table 2:** Proposal for Video Grouping by Theme

Video Subject (Based on LDA topics)	Themes (based on forms)	Misinformation Content	Political Violence	Type of Political Violence/ Misinformation
Candidates and Elections	Public Security	Yes	Centre	Race
Democratic Threats	Racial Issues	No	Right	Gender
Public Policies	LGBT Issues		Left	Sexuality
Religion	Economy		Far-right	Xenophobia
Others	Transportation		Unclear	Political Discourse
	Health			Institutions
	Education			
	Indigenous Issues			
	Feminist Issues			
	Inequality			
	Gun Control			
	Misinformation			
	Religion			
	Political/Elections			

From these classifications, we address the guiding questions of the research and the objectives set. Next, we move on to a chapter on the context of the 2022 electoral period, highlighting the digitization of campaigns on social networks, the role of political polarisation, misinformation, and anti-democratic movements in the country. In Chapter 2, we describe YouTube's content regulation and guidelines for Brazil's election period. In Chapter 3, we anonymously describe our volunteers, and their inputs to the research. In Chapter 4 we describe the channels and the flagged videos, further exploring the categories and answering questions 1 and 2 of our research:

4. What do Brazilians consider political on YouTube?

5. How do the videos flagged by volunteers portray the 2022 elections?

In Chapter 5, we explore the recommendations of the flagged videos by YouTube, addressing question 3: do the videos recommended by YouTube reflect the content of the flagged video? Finally, in Chapter 6, we move on to the final considerations of the research.

## 2.0 BRAZILIAN SOCIOPOLITICAL CONTEXT, MISINFORMATION AND COMBATING ANTI-DEMOCRATIC ACTS

Since the 2013 protests against the increase in bus and subway fares in the main Brazilian capitals, such as São Paulo, Porto Alegre and Rio de Janeiro until the impeachment of President Dilma Rousseff in 2016, political polarisation in Brazilian society has intensified (Ortellado; Ribeiro, 2018). This was reflected in the 2018 general elections, in a heated, digital electoral campaign marked by misinformation and discursive radicalism (Tsuzuki; Rais, 2020).

SaferNet, an organisation operating in Brazil since 2006, specialises in monitoring crimes and human rights violations on the internet, and has observed a significant increase in the spread of hate speech between 2015 and 2017 (Soprana, 2017). Moreover, the institution recorded an even greater increase in the number of reports of intolerant speeches during the period covering the first and second rounds of the 2018 elections. In this period, there was an exponential growth in reports involving xenophobia (2,369.5%), advocacy and incitement of crimes against life (630.52%), neo-Nazism (548.4%), homophobia (350.2%), racism (218.2%), and religious intolerance (145.13%). SaferNet identified that most of the reported content was on social networks such as Facebook, Twitter, Instagram, and YouTube (Mesquita, 2018).

Social media and instant messaging apps have expanded the speed and reach of information, allowing for mobilisation around civic issues but also the spread of misinformation (Diamond, 2019). Shortly after the Cambridge Analytica scandal, the then-president of the Superior Electoral Court, Minister Luiz Fux, stated that, unlike the United States, where fake news was monitored and repressed, in Brazil the removal of such news would be done preventively (G1, 2018). However, the political dispute intensified in the second round of the presidential elections. The use of fake news was not limited to candidates, and it also questioned the legitimacy of the electoral process itself (Bernardi, 2020).

In response, the National Congress established a Joint Congressional Inquiry Committee (CPMI) in September 2019 to investigate the use of fake news during the 2018 elections (Bernardi, 2021). The investigations include cyber-attacks aimed at harming democracy and public debate, the use of fake profiles to influence the 2018 elections, and the practice of cyberbullying against vulnerable users and public officials (National Congress, 2019).

Different from the tone that prevailed in the previous election, misinformation in the 2022 general elections encompassed allegations about electronic ballot boxes and electoral polls, conspiracies about TV Globo (the main broadcasting company in Brazil) and electoral authorities (Mello; Soprana; Galf, 2022). According to Professor Fabrício Benevenuto of UFMG, “In 2018, misinformation aimed to build polarisa-



tion, antagonistically addressing issues that were not being debated in that way by people, feminist causes, LGBT issues.” In 2022, however, “polarisation is already established, and misinformation is focused on attacking candidates and delegitimising elections and polls.” (Mello; Soprana; Galf, 2022).

## 2.1 DISINFORMATION AND ANTI-DEMOCRATIC ACTS IN THE 2022 ELECTION

In 2016, the Oxford Dictionary chose the term “post-truth” as the word of the year, referring to circumstances in which public opinion is shaped more by emotion and personal beliefs than objective facts (Oxford University Press, 2016). Known by the nickname “fake news,” this phenomenon has been one of the greatest challenges of modern societies, particularly during electoral periods. However, there is controversy over using the term “fake news,” which political agents have appropriated and used to refute information or criticism contrary to their interests (European Commission, 2018). In this sense, specialist Claire Wardle (2020) proposes the use of the terms “disinformation,” “misinformation,” and “malinformation” to describe the phenomenon instead of “fake news.” In this report, we choose to follow this proposition and therefore elaborate on the key definitions below:

1. “Disinformation” refers to intentionally false information, used with the aim of causing harm or obtaining some advantage.
2. “Misinformation” refers to false information but spread by people who do not realise that it is inaccurate or misleading.
3. “Malinformation” refers to accurate information shared with the intention of causing harm, as in the case of information leaked to damage people’s reputations.

Even though lying and cynicism are inherent in human communication (Sloterdijk, 1983), the internet and constant technological evolution have changed the speed and reach of information dissemination, as well as sophisticated the creation of false content, thus expanding the capacity to polarise and manipulate opinions for political or economic advantages (Bernardi, 2020; Rais, 2020; Bernardino et al., 2022).

The challenges of the new communication logic have particularly affected the structural pillars of democracies. Financial crises, social inequality, and distrust in institutions are factors that have created space for the rise of leaders who reject the established political order, promoting alternatives to the liberal democratic system in the form of autocratic regimes (Castells, 2018).

With new communication tools and misinformative narratives, this anti-establishment movement has been seen in various parts of the world, including post-Chávez Venezuela; Brexit in the United Kingdom;

authoritarian regimes in China and Russia (Castells, 2018). And in Brazil, the government of former President Jair Bolsonaro.

Since being elected in 2018, Bolsonaro has questioned the trust in electronic voting machines (UOL, 2018), discredited traditional media (Mello, 2018), and encouraged anti-democratic demonstrations that call for the closure of Congress and a military intervention (Bernardi, 2021).

These issues have echoed in Brazilian society. In 2020, demonstrations held in various cities advocated for the closure of Congress and the Federal Supreme Court and the reissue of Institutional Act No. 5, which, during the military dictatorship, suspended political rights, instituted censorship, and closed the Federal Congress (Falcão; Vivas, 2020). In June of the same year, protesters fired fireworks at the Supreme Court building, an action publicised on social networks, in which threats and insults were directed at the ministers (Druzian, 2020).

Not surprisingly, research conducted in the first months of 2022 showed that attacks on the Superior Electoral Court (TSE), the Federal Supreme Court (STF), and the ministers of the higher courts surpassed references to President Luiz Inácio Lula da Silva, Bolsonaro's main rival, and mentions of other pre-candidates. The survey found that between September 2021 and March 2022, 3,578 videos mentioning conspiracies against courts and ministers were published on pro-Bolsonaro YouTube channels, with an audience exceeding 106 million views (Couto, 2022).

Attacks on the electoral system and the reliability of voting machines were also found on social networks since the first months of 2022. According to a survey conducted in March of the election year by researcher Marcelo Alves, professor of the Communication Department at *PUC Rio*, YouTube kept at least 1,701 videos attacking electoral integrity online, with 67.7 million views and 368,955 comments. Among the channels with the highest number of views, the study cites *Pingos nos Is* with 15.7 million views, followed by *Folha Política* (12.6 million), *Jovem Pan News* (2.5 million), *Foco do Brasil* (2.3 million), and *Bolsonaro TV* (2.2 million) (Mello, 2022).

During the election period, one of the most widely disseminated content claimed that the electronic voting machines<sup>2</sup> were being tampered with and rigged at a union connected to the Workers' Party (PT) in Itapeva. Congresswoman Carla Zambelli's (PL) video on the subject accumulated more than 600,000 views on Facebook in less than 24 hours. On YouTube, there were 84,000 views (Mello; Soprana; Galf, 2022).

2, Brazil has one of the most advanced electoral systems in the world with its electronic voting machines that are connected to a central database by the Electoral court, allowing elections to have fast and trustworthy results only a few hours after the election day is over. Also, different from other countries, in Brazil the elections happen in only one valid day, usually a Sunday, and votes have to be cast in person through the machines (not by mail or paper). In addition, voting is obligatory in Brazil from ages 18 to 60 years old, so all Brazilians are demanded to go and cast a vote on election day.

According to the Federal University of Minas Gerais (UFMG), in 2022, 37.3% of misinformative content were videos, an increase of 17.7% compared to the last federal election (2018), when most of them were images (Mello; Soprana; Galf, 2022). This increase in the dissemination of video disinformation accompanies the popularisation of deep fakes, i.e., videos manipulated using artificial intelligence (Rais, 2020). This is the case, for example, of the video in which William Bonner, anchor of *Jornal Nacional* (the main TV News broadcasted in Brazil by TV Globo), announces results of a federal survey in which Bolsonaro would be ahead of Lula. According to UFMG data, this was one of the most widely disseminated content between September 15th and 26th, 2022, in WhatsApp groups monitored by researchers (Mello; Soprana; Galf, 2022).

Cristina Tardáguila, from the International Center for Journalists, pointed out that disinformation in the 2022 election was disseminated through messages with links to watch live broadcasts or videos of people and media favourable to the government, such as *Jovem Pan*, *Gustavo Gayer*, *RedeTV!*, and *Record*. Tardáguila notes that the content had a long duration, which made fact-checking more difficult and reduced the likelihood of platforms removing the content due to only two or three false statements (Mello; Soprana; Galf, 2022).

On October 30th, 2022, Lula won the federal election and became the 39th Brazilian President. However, polarisation and the reach of misinformative narratives kept the political engagement of a part of Brazilian society, who believed in election fraud. According to *Folha de S.Paulo*, even before the election results were declared, numerous groups emerged to organise demonstrations. The coordination and engagement of those involved were carried out through messaging apps such as Telegram and WhatsApp, which had up to 60,000 members (Galf; Soprana, 2022).

On November 1st, truck and vehicle blockades against Lula's victory were identified in at least 23 of the 27 states nationwide (CNN Brasil, 2022). In addition, protesters camped in front of military commands demanding the intervention of the armed forces to annul the election, dismiss Federal Supreme Court (STF) ministers, and ensure Bolsonaro's continuation in power (BBC News Brasil, 2022).

Lula's inauguration was moved up to December 12th, partly due to fears that Bolsonaro supporters would try to disrupt the ceremony, as had happened in the United States in 2021 with President Joe Biden (UOL, 2022b). Nevertheless, a group of Bolsonaro supporters burned buses and cars in an attempt to invade the Federal Police headquarters in Brasília, in response to the temporary arrest of an indigenous leader suspected of threatening aggression and persecution against the elected president (UOL, 2022a).

On January 8th, mimicking the 2021 Capitol invasion, supporters of former President Bolsonaro invaded and vandalised the National Congress, the Federal Supreme Court, and the Planalto Palace. The act had been planned since January 3rd and resulted in a millionaire financial loss and the arrest of more than 1,300 people (Estadão, 2023).



This political instability and informational violence scenario further supports an analysis of the audiovisual content circulating on YouTube. Nevertheless, it requires a careful analysis of the available content and the recommendations these contents receive according to the platform's algorithm. This is because there appears to be a political polarisation fueled by the paradox between political sovereignty and consumer sovereignty (Sunstein, 2017), where citizens make political decisions without detriment to information from opposing positions, an essential factor in democratic design.

Cass Sunstein (2017) sees the virtual environment as a new forum where public debate occurs, people inform themselves, and there is interaction for political decision-making. The author believes, however, that in the virtual environment, especially on social networks, consumer sovereignty prevails, which is detrimental to collective decision-making. In consumer sovereignty, the priority is to satisfy individual desires rather than the communities. Social networks prove problematic for advancing political sovereignty, which is essential for democratic purposes.

Sunstein (2017) discusses the problems of consumer sovereignty - access to personalised and individual information, fragmentation, radicalisation, and others - and aims to present political sovereignty as the opposite to be sought - broad access to plural and diverse information, integration, sharing of experiences, and more. Following this debate, we promote a detailed analysis of how YouTube's recommendation systems work to understand how we guide our audiovisual consumption on the platform and how this affects political decision-making.

## 2.2. HOW YOUTUBE RECOMMENDATIONS WORK

Not only that, for Zeynep Tufekci (2019), in her article for Scientific American, YouTube is responsible for radicalising its users since even when consuming videos on trivial subjects, conspiratorial and extremist content appears in the recommendations. For the researcher, this has to do with issues of video profitability since, as is well known, incendiary, conspiratorial, and/or misinformative content is much more likely to attract attention (Netlab 2022).

NetLab's research concluded that YouTube content recommendations have a strong impact on user choices "especially by making them believe that recommended videos are based on relevance criteria, and not guided by commercial agreements or other interests" (Netlab, 2022).

In an attempt to address such problems, in 2020 Mozilla launched an extension called Regrets Reporter to better understand the harm caused to people due to the functioning of YouTube's algorithm. According to the research, 37,380 platform users provided data on their bad experiences for Mozilla researchers to analyse. Collectively, volunteers flagged 3,362 videos, which came from 91 countries between July 2020 and May 2021 (Mozilla, 2021).

Among the results of the quoted research, we highlight that most videos with unpleasant content have misinformative, violent, and hate speech content. Another interesting finding is that the problem of boosting these videos lies precisely in the way the algorithm works. According to Mozilla (2021), 71% of all videos classified as problematic were recommended to research volunteers by YouTube's own recommendation system. In addition, 40% of recommended videos were more likely to be reported by research volunteers than videos they searched on YouTube. Paradoxically, on several occasions, YouTube recommended videos that contradict its community guidelines, indicating problems with the way the algorithm works. The research also mentions that 60% of the videos catalogued as problematic were reported by countries that do not have English as their primary language (such as Brazil).

In light of these issues analysed, Mozilla has systematised some recommendations for YouTube. Among them, we highlight:

- a. The report points out that platforms should allow researchers to conduct audits and make recommendations to the system;
- b. Platforms should publish information on how the system's recommendations work, as well as transparency reports that provide insights into the platform's possibilities and limits over time;
- c. They recommend that the political class should demand YouTube to release information and create tools that allow independent scrutiny and recommendations of the algorithm, etc.

In continuation of the last recommendation point, regarding the dialogue and openness between YouTube and the political class, we raise the question of how the Superior Electoral Court guided its actions during the 2022 elections in respect to dialogue, analysis, and evaluation of digital platforms in the face of the phenomenon of a polarised political class and the circulation of electoral disinformation. The next section presents the main findings to answer this question and how this influenced the Brazilian informational environment.

## 2.3 TSE's ROLE DURING THE ELECTION PERIOD

Since 2018, combating disinformation has become one of the priorities of the Electoral Justice system, which saw itself and the Brazilian electoral process as one of the main targets of disinformative narratives spread on social networks. In 2019, under the presidency of Superior Court Minister Rosa Weber, the Superior Electoral Court created the Program to Confront Disinformation Focusing on the 2020 Elections, established through TSE Ordinance No. 663. Intending to prevent and combat the dissemination of disinformation about the electoral process, the program became a permanent initiative of the Electoral Justice system in 2021 (TSE Ordinance No. 510) (TSE, 2023) and had more than 150 partners in the 2022 elections, including social networks, digital platforms, public and private institutions, professional entities, and others (TSE, 2022c).

As part of the program, it is important to mention other initiatives such as the information verification coalition and the Fact or Rumor page, bringing together various fact-checking agencies and communication advisors from the TSE and the Regional Electoral Courts. In addition, in 2022, the Special Advisory Office for Combating Disinformation (AEED) was created, responsible for actions to combat disinformation and rebuild the Court's reputation before public opinion (TSE, 2023), and the Disinformation Alert System Against Elections was launched, made available on the Court's Portal, where people could report false, decontextualised, or manipulated information about the electoral process and respective candidates (TSE, 2022c). According to information from the TSE, between August and December 2022, 41,605 alerts of disinformative materials were received. Through the verification coalition, 155 information verifications of content about the electoral process were carried out (TSE, 2022c).

The Superior Electoral Court, under the presidency of Superior Court Minister Alexandre de Moraes, adopted a strict stance regarding disinformation, determining, among other measures, the removal of content, demonetisation of channels, and even the approval of a Resolution dedicated to confronting disinformation that affects the integrity of the electoral process. This stance against disinformation undertaken by the court was seen, especially by supporters of President Bolsonaro, as abusive actions and censorship. Less than 10 days before the second round of elections, monitoring data showed that criticism of the Superior Electoral Court grew on social networks. The publications were driven by decisions made by the court that affected Bolsonaro's allies and his campaign (Lima, 2022).

One of these decisions ordered that the Jovem Pan radio station grant Lula the right to reply on their programming schedule at the request of the PT coalition, which complained about the lack of impartiality and references to "unconvicted" and "ex-convict" when referring to Lula. Criticism of the TSE was also fueled by disinformation, such as in the case of Pastor André Valadão, who simulated having been forced to retract statements about Lula (Lima, 2022; Rudnitzki; Barbosa, 2022).



According to the Aos Fatos Agency, between October 19th and 20th, 2022, at least 146 publications were identified on Twitter with false warnings that the content had been “removed by the Superior Electoral Court.” The action was carried out by 76 profiles in response to 80 different tweets. Some of them indicated publications containing insults to Lula and requests for military intervention. However, most were responses to publications on unrelated topics, such as current events or soccer (Rudnitzki; Barbosa, 2022).

The Court also ordered the demonetisation of channels, as was the case with the decision made on October 20th regarding the channels *Brasil Paralelo*, *Foco do Brasil*, *Folha Política*, and *Dr. News* on YouTube. In a preliminary injunction in the electoral judicial investigation action, it was highlighted that the companies had YouTube channels with millions of subscribers and that they produced and/or promoted content favouring Bolsonaro through false or severely decontextualised news. In addition, the channels received financial resources from subscriptions, paid advertising, and investments from people who shared the owners’ ideology. Therefore, the Court considered the potential to influence the elections, ordering the suspension of their monetisation until the end of the second round (Brasil, 2022a).

In the same decision, the plenary decided to postpone the screening of the documentary “Who ordered the killing of Jair Bolsonaro?,” produced by *Brasil Paralelo*, which was scheduled to premiere on October 24th, 2022. For Superior Court Minister Carmem Lúcia, the decision was considered “extraordinarily exceptional” but necessary to ensure the electoral process’s transparency, integrity, and security (Brasil, 2022a; TSE, 2022b).

The actions and measures adopted by the Superior Electoral Court raised doubts about the proportionality of its decisions and actions in combating disinformation. The Brazilian Association of Investigative Journalists (Abraji) spoke on the subject on October 7th, following the decision of Minister Alexandre de Moraes on the content published by the *O Antagonista* website, with the title: “Exclusive: in Federal Police wiretapping, Marcola declares vote for Lula. ‘It’s better, even being a crook.’”

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Marcola’s (leader of the criminal faction PCC) vote declaration for Lula was considered “knowingly false” content, and its removal was ordered, a measure also applied to Jovem Pan radio content. In response, Abraji stated that it is concerned about “decisions that place the Judiciary in the position of deciding what a journalistic outlet can or cannot publish.” It also said that it considered more appropriate indemnity me-

asures in favour of those affected in their honour and the determination of correction when there was an error in the information (Abraji, 2022).

For electoral lawyer Fernando Neisser, however, the Superior Electoral Court has acted within the limits of its powers to protect the legitimacy and normality of the electoral process to prevent illegitimate influences. He emphasises that everyone can be the target of judicial decisions, but there is special attention to those who have the power to reach the electorate and illicitly influence the formation of the vote (Neisser, 2022). Regarding the decision to suspend the documentary's premiere, the electoral lawyer did not see it as an act of prior censorship since the decision only postponed the documentary's premiere, recognising its ability to exert illegal influence on the electorate on the eve of the second round (Neisser, 2022).

It is also relevant to highlight the approval by the Superior Electoral Court of Resolution 23.714, dated October 20th, 2022. The regulation expands the Court's police power to act *ex officio* against disinformation that affects the integrity of the electoral process, allowing the extension of collegiate decisions on certain disinformation to other situations with identical content. Non-compliance subjects the content or application provider to fines of BRL 100,000 to 150,000 per hour of non-compliance, starting from the end of the second hour after receiving the notification. Between the day before the eve and the three days following the election, the fine applies from the end of the first hour.

In addition to the possibility of removal by extension, the Resolution provides for the temporary suspension of profiles, accounts, or channels maintained on social media and the suspension for up to 24 hours of access to the services of the implicated platform, proportional to the severity of the infraction if repeated non-compliance with the Resolution is found (TSE, 2022a).

The approval of the Resolution was an atypical measure, but according to Superior Court Minister Alexandre de Moraes, the removal of identical content without the need for new legal action is already done by platforms when disinformative content is replicated on networks. The idea is to expedite the removal process, preventing parties to a process from having to file new petitions to remove content that has already been removed before but is identical and on the networks with a different link (Netto, 2022).

In his speech, Alexandre de Moraes emphasised that the Resolution deals with a 1,671% increase in the volume of disinformation complaints sent to digital platforms compared to the 2020 State elections and a 436% increase in political violence on social networks compared to the 2018 Federal elections. However, the measure was met with surprise by the platforms, which assessed that the implementation of the measure would have to be done in a short period and that they were unsure if they could remove content at speed determined by the regulation (Netto, 2022).

Attorney General Augusto Aras filed direct action of unconstitutionality 7,261 against parts of the Resolution, which would violate the Federal Constitution and the binding jurisprudence of the Electoral Court, as is the case with the imposition of a fine for the dissemination of electoral propaganda, which could not be done *ex officio* by the TSE, and the exclusion of the Public Ministry from initiating actions (Brasil, 2022b). Superior Court Minister Edson Fachin, the rapporteur of ADI 7,261, denied the granting of an injunction on October 25th, a decision endorsed by the majority of the STF plenary, keeping the Resolution in force for the second round of elections (Brasil, 2022).

In a context where disinformation spreads quickly on digital platforms, it is crucial to strengthen democratic acts and protect political sovereignty in our country. The YouTube recommendation algorithm, for example, plays an important role in disseminating content on the platform, which can directly impact electoral processes and public opinion formation. In this sense, it is essential that competent authorities, such as the Superior Electoral Court, act effectively to ensure fair and democratic elections. At the same time, it is necessary to recognise that consumer sovereignty is also a relevant factor in the digital environment and that the conscious choice of the content we consume can help combat disinformation. This is a shared responsibility for all of us, Brazilian citizens. In the next section, we will discuss the role of the project's collaborators and volunteers regarding this issue, showing anonymously the profile of these citizens who made this project possible.

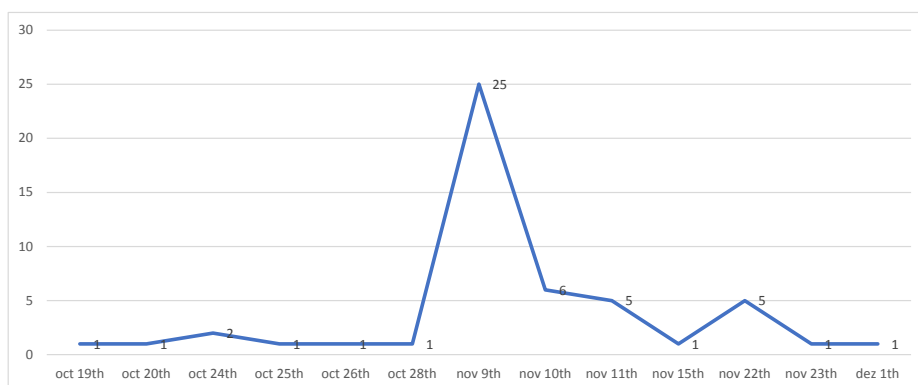


### 3.0 DESCRIPTION OF COLLABORATORS

After analysing the context involving YouTube, disinformation, and the TSE, it is worth presenting a detailed report on the profile of the volunteer collaborators who used the Plugin. As already explained, the plugin was made publicly and freely available in application libraries and was used by 65 volunteers. When downloading the plugin, we asked these volunteers to answer a brief questionnaire - voluntarily, without identifying authorship with the data collected by the tool. Of the approximately 65 collaborators, 51 answered the questionnaire, demonstrating high engagement from respondents.

The peak of collaboration occurred on November 9th, as shown in Chart 1:

**Chart 1:** Volume of questionnaire responses over time

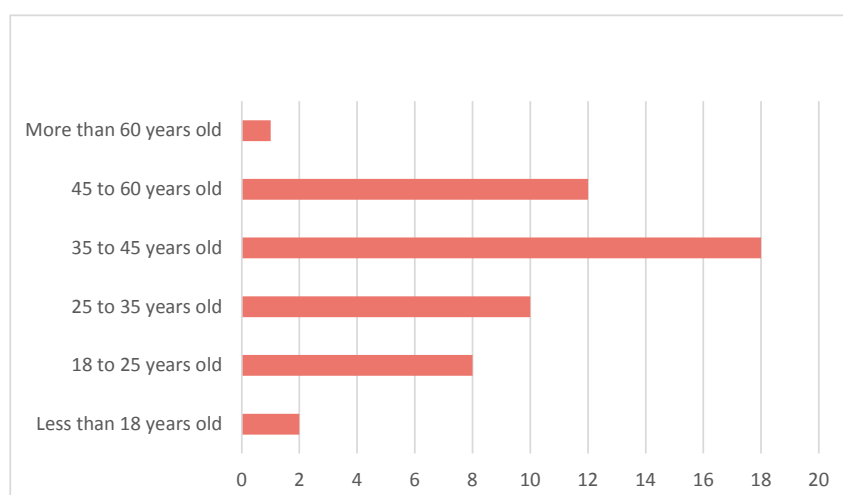


It is worth highlighting the exploratory nature of the research, which did not aim to represent the Brazilian sample universe, but rather a spontaneous cross-section of network collaboration. With this, the goal of the questionnaire was to have a sociodemographic profile of the collaborators and also to better understand their perceptions about politics. In this sense, we present this data, highlighting the main findings.

### 3.1 SOCIODEMOGRAPHIC DESCRIPTION

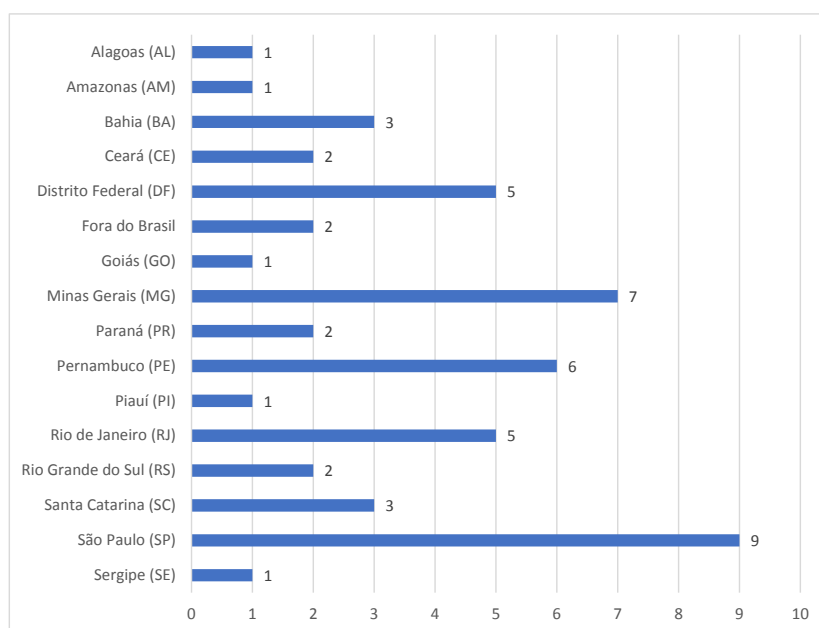
The first question asked about the age of the participants. The largest portion of respondents was in the age range between 35 and 45 years, totaling 18 respondents. However, as shown in Chart 2 below, we had respondents within different age groups addressed.

**Chart 2: Age of respondents**



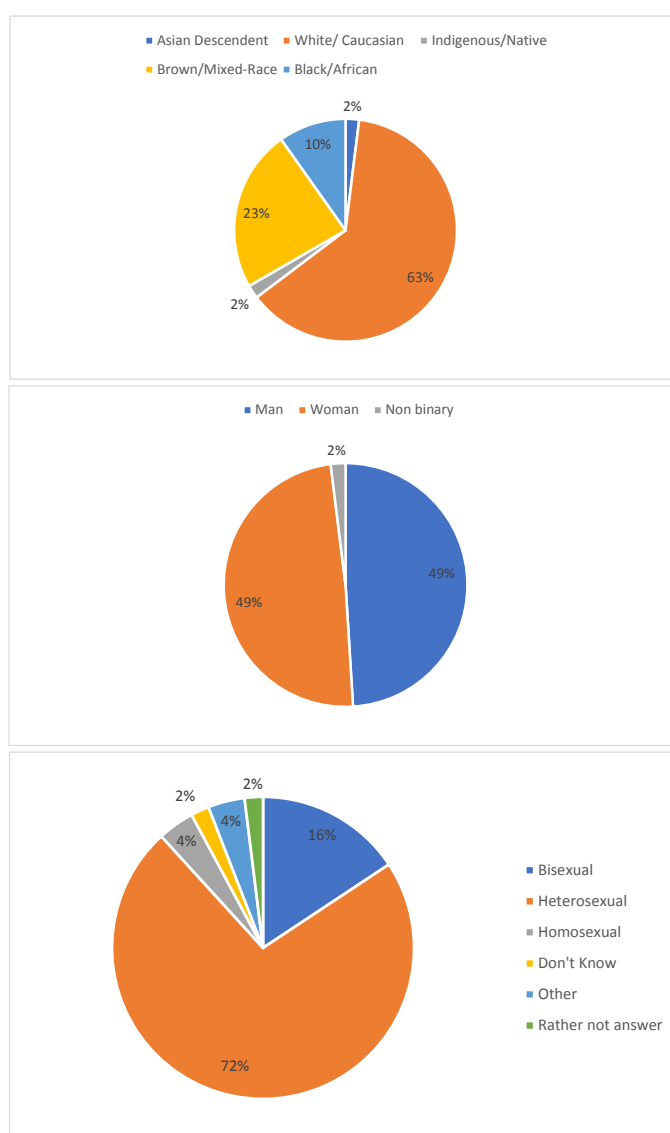
Regarding the geographic distribution of the participants shown in Figure 3, although there is a higher concentration in Southeastern states (21 in total) – with 9 contributors from São Paulo, 7 from Minas Gerais, and 5 from Rio de Janeiro – we found significant coverage with respondents from the South (8), North (1), Northeast (13), and Midwest (6) regions of the country. Two volunteers from outside the country also contributed.

**Figure 5: Geographic Distribution**



In relation to self-declaration of race/color/ethnicity, the data is represented in Chart 4. Of the 51 respondents, 32 identified themselves as white (63%), 12 as mixed race (23%), 5 as black (10%), 1 as indigenous and 1 as Asian (2% each). About gender identification, as shown in Chart 5, 25 volunteers identified as men (49%), 25 as women (49%), and 1 as non-binary (2%). Additionally, we asked volunteers if they identified as transgender, receiving only 2 positive responses and 49 negative ones. Chart 3 illustrates the volunteers' responses.

**Chat 3:** Self-declaration of race/color/ethnicity, Gender Identification, Identification concerning sexuality



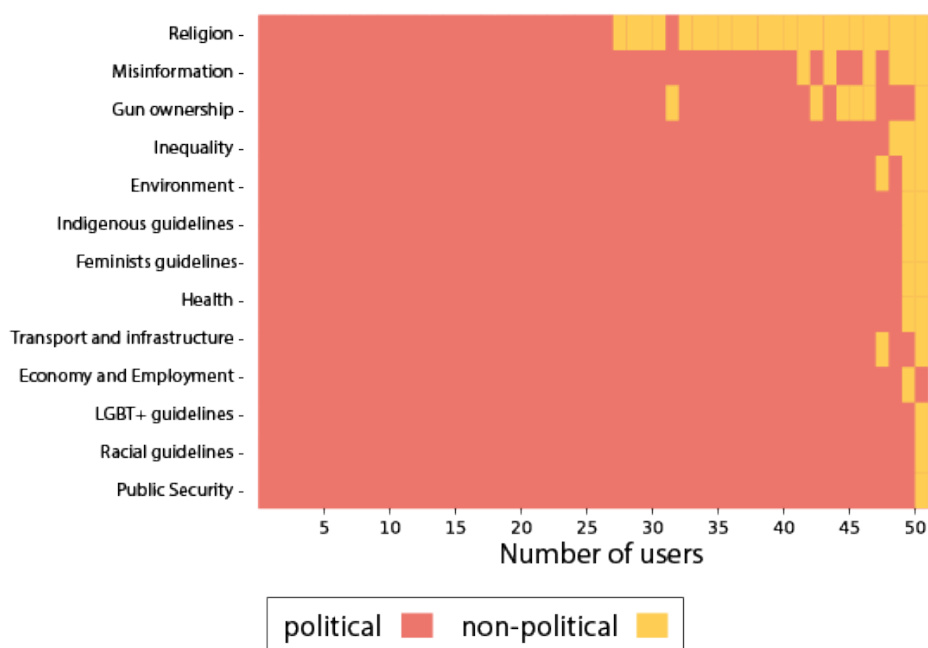
Of the total of 51 respondents, 37 identified themselves as heterosexual, being the majority of respondents (72%). Next, 8 respondents, representing 16% of our sample, identified themselves as bisexual, 2 identified themselves as homosexual and 2 declared the category “Others”, each representing 4%. Additionally, 1 respondent declared “I don’t know” and another declared “prefer not to answer”.

## 3.2 POLITICAL SELF-IDENTIFICATION AND PERCEPTION ON POLITICAL ISSUES

After describing our volunteers, we analysed how they perceive politics. First, we asked what topics they perceived as political, presenting a list that allowed them to mark all the items they agreed with. The list of topics was created based on discussions with the Project Council Board, considering topics that were being discussed in 2022’s elections and that permeate the Brazilian political environment.

In this way, there was a high agreement among respondents that most of the topics listed were related to politics, with all respondents marking at least one of the listed options. Only one of the respondents (Respondent 27) marked only one of the topics, which was the economy. All the others marked three or more topics as political. The list of topics and the frequency of marking is shown in Chart 7.

**Chat 4:** Which user considered which subject as political



The topics that had almost 98% agreement as a political theme - with only one of the participants not marking - were: Public security, racial issues, LGBT issues, and the economy. Next, 96% of participants agreed that transportation, health, education, indigenous and feminist issues encompass topics related to politics. Thirdly, 94% of respondents pointed to environmental and inequality issues as political topics. Disinformation and gun control were pointed out by 45 volunteers as political issues, corresponding to 88% agreement. Finally, religion was perceived by 54%, only 28 respondents, as a political issue.

Additionally, we asked what other topics our volunteers would like to add as political, obtaining 21 responses delimited in the following word cloud.



**Figure 6:** Word cloud of the Other political topics category:



The themes that were most repeated in the open responses were: Culture (6), Everything (3), [Policies for] Children (2), Agriculture (2), Leisure (2), Hunger (2), Science (2), and Privacy (2). In general, we can often observe the statement that [almost] everything is politics - as in the delimitation of Respondent 8 who said “I understand the project, what is meant to be marked, but in the end, everything is politics.”

Seeking to deepen our understanding of our volunteers’ politics framing, we also included an open-ended question asking, “What does politics mean to you?” answered by 50 volunteers. The word that appears most often in the responses is society (19). Our respondents frequently associated politics with the practice of “organising” society in general.

The area of life in society that deals with power relations, determination of rules and rights.

(Respondent 2)

Everything is politics, from the organisation of our society to the prices we pay for food.

(Respondent 24)

Politics is of paramount importance in society, as it defines our laws, our education system, our health, our world in general, and that’s why we should always be aware and informed about what’s happening, to make the best possible decisions.

(Respondent 40)

The word everything (12) was also mentioned frequently, with references that everything is political, and that politics is present in all our relationships.

Life is politics. Everything is politics. What we eat, what we wear, what we watch.

(Respondent 21)

Everything that has to do with the collective

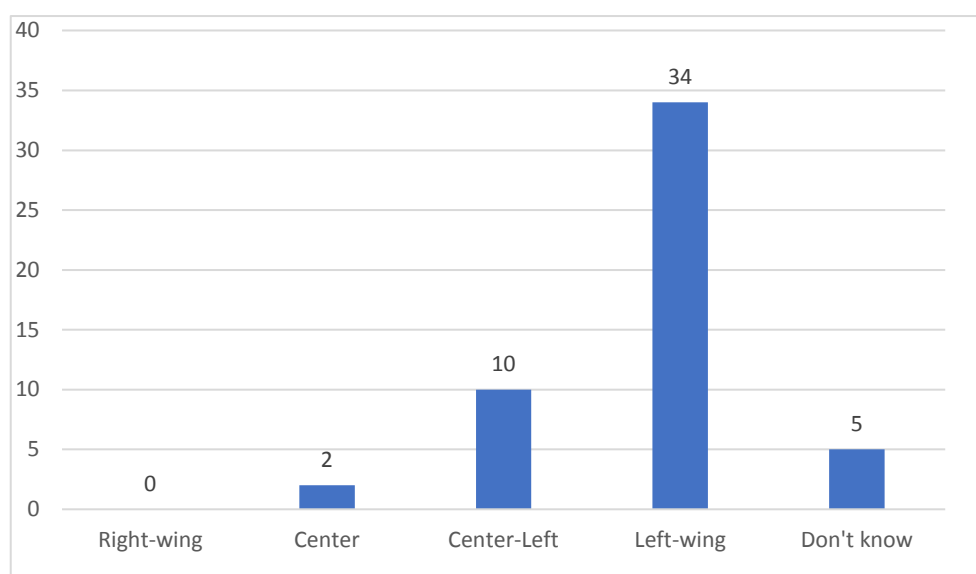
(Respondent 47)

Politics is everything, it is intrinsic to our lives at all times. Also, politics is social participation, civic duty, and contribution to a better country/state/municipality.

(Respondent 1)

Words indicating society such as everyone (6), group (5), our (5), relationships (5), and organisation (4) were also frequently repeated. Finally, we asked respondents how they see themselves in terms of the political spectrum, through the question: “How do you identify within politics?” Results are shown in Chart 5:

**Chart 5:** Political self-identification



None of the 51 respondents within the proposed categories identified with the right-wing political spectrum. The highest rate of respondents identified as left-wing (67%, 34 respondents), followed by centre-left (19%, 10 respondents). The third field with the most responses was those who claimed not to know their political position (10%, 5 respondents), and lastly, those who identified as centre (4%, 2 respondents).

Next, based on the analysis of the forms, we carried out the categorisation of the marked videos - first by channel, describing the types of channels marked by users, as well as those that were repeated more often and how they relate in the political spectrums.

## 4.0 ANALYSIS OF THE TAGGED CONTENT

With the growing importance of social networks and digital platforms as a source of information, mapping YouTube channels becomes increasingly relevant in assessing online political content in videos. YouTube is the second-largest social network globally and the largest online video repository, with billions of active users daily. However, the platform is also known for being fertile ground for spreading misleading information and hate speech, especially during electoral moments or political polarisation. In this context, mapping YouTube channels becomes an important tool for identifying channels that produce and disseminate political content, allowing for a more in-depth analysis of the discourse and narratives used in this content and the recommendation systems among these mapped channels. In this way, we can understand social media's role in the current political landscape.

In this section, we analyse the content that was marked by volunteers throughout the research. We understand that the research took a bias regarding the flagged content, which essentially goes against the political self-identification of the volunteers: while most of the volunteers identified themselves as left-wing, the denunciation of anti-democratic issues focused on pro-Bolsonaro and far-right content.

Thus, our interpretation is that the mapping of videos occurred much more as a signalling of anti-democratic and disinformative content than as content of interest to the volunteers. Throughout the following sections, we describe the data found, through categorisation that occurred via manual review by researchers already described in the methodology, and discuss notable cases.

### 4.1 CATEGORISATION AND DESCRIPTION OF CHANNELS

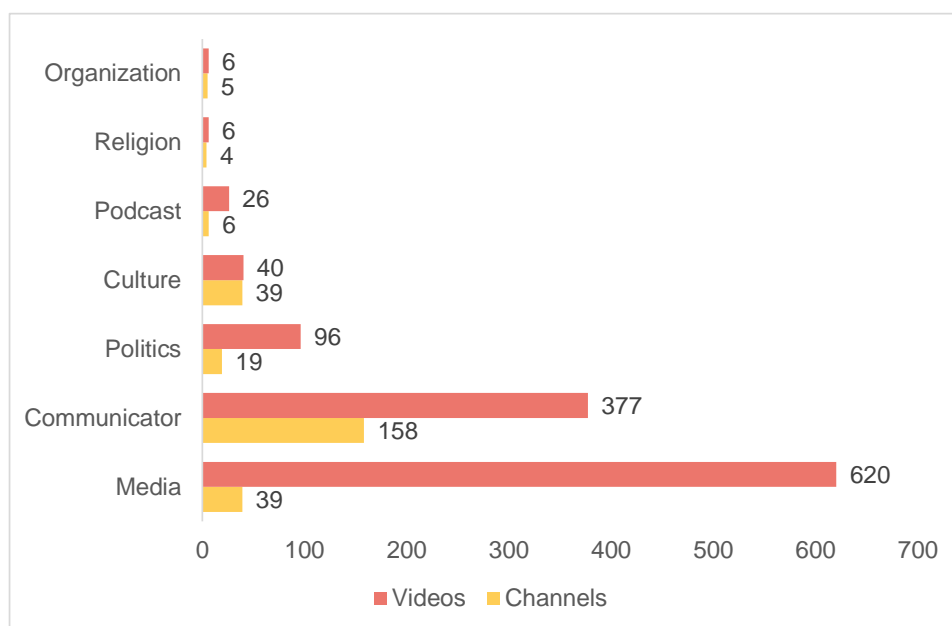
In this section, we seek to describe the YouTube video channels that were marked before delving into the content of specific videos. After an exploratory review of the channels, we defined a review in channel types (meta-category) and categories (greater detail) to better describe the flagged channels, detailed below.

### 4.1.1 Channel Types

The first meta-categorisation was titled Types. It concerns the primary origin of the channel and its “field of activity,” being related to the disclosing entity.

After an exploratory study of the sample, 7 types were designated in the sample, plus the type “video removed by YouTube” which contained 53 videos, as described in Chart 6.

**Chart 6:** Types of Channels and the number of videos in each type

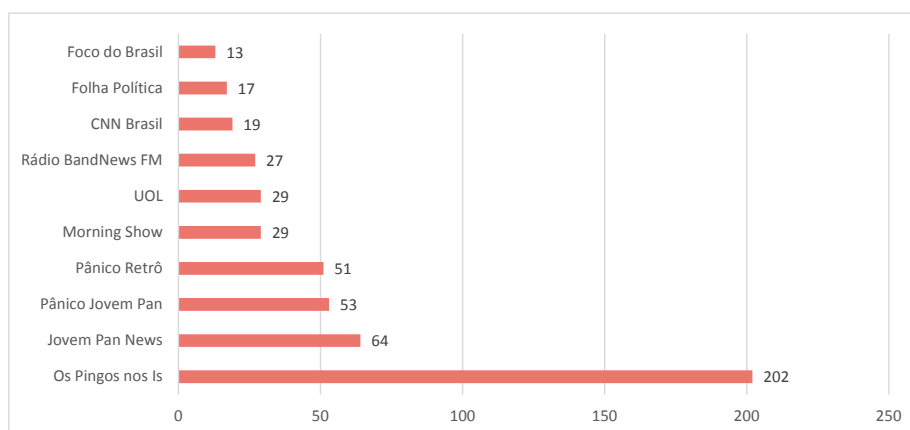


**1. Media:** The Media type presents television, radio, and online press channels - these being journalism channels such as Band TV, Globo, Globo News, UOL, Gazeta do Povo - or specific programs such as “Morning Show” and “Pingo nos Is” from Jovem Pan, or “Band Journalism” from TV Band. The highest volume of flagged videos was in the Media type (620), however, there were only 39 different channels within this classification, and 10 of these were marked only once.

In this sense, the 10 channels with the most marked videos within the Media type were the following:



**Chart 7: Main channels of the media type**

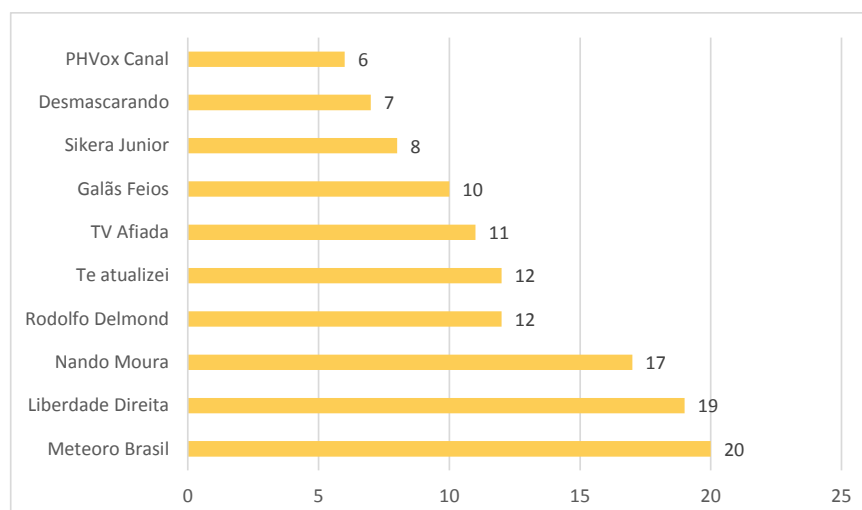


We can highlight the volume of programs from the *Jovem Pan* channel (added here, they reach 399 flagged videos), with *Pingo Nos Is* being the most marked, reaching 202 videos, followed by *Jovem Pan News* (64), *Pânico Jovem Pan* (53), *Pânico Retrô* (51), and *Morning Show* (29). Next, journalistic channels such as *UOL* (29), *Radio Band* (27), and *CNN* (19) appear. Both *Folha Política* and *Foco do Brasil* are also channels identified as part of the disinformation ecosystem, which will be better addressed in the categories.

**2. Communicator:** This group includes channels of individuals and collectives who work in the media without necessarily belonging to a television/radio/journalism group, using the internet in general and YouTube specifically to communicate with their audience. This group has the second-highest volume of channels found (158), with 377 videos - including influencers, TikTokers, and content producers, in general, who use their channels to address various topics - which will be further discussed in the subsequent categories. In this type, there is a greater variability of channels, and 102 channels on the list had only one video marked.

In Chart 8, we can visualise the 10 channels with the most marked content:

**Chart 8: Top 10 Channels with the most flagged content in Communicators Group**

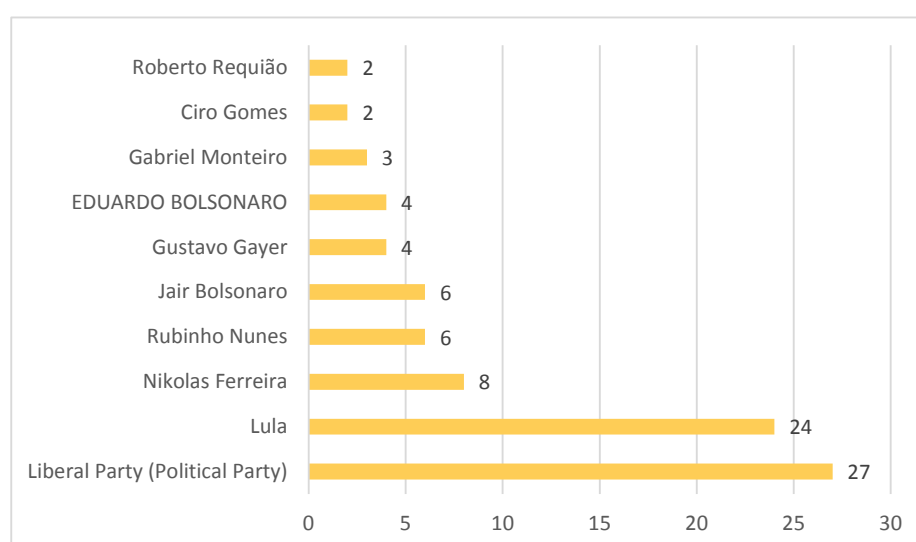


It is interesting to observe how channels with more self-proclaimed political positions had a higher volume of marked videos. In this sense, *Meteoro Brasil* and *Galãs Feios* are channels that position themselves on the left side of the political debate, although they also deal with different topics. On the other hand, the channels *Liberdade Direita*, *Te Atualizei*, Nando Moura, Rodolfo Delmond, and Sikera Junior are part of the communicators associated with Bolsonarismo and the far-right, often producing disinformative content.

**3. Political:** in this type, we include candidates for different positions in national politics or politicians who have already been present in the national debate, as well as political parties and institutional channels of political bodies. Within the 19 channels in the sample, only 10 contained only one marked video, and 96 videos make up the political type.

The 10 channels with the most flagged videos are pictured below:

**Chart 9:** Top 10 Political channels with the most flagged videos



It is worth mentioning that the only political party present in the Top 10 is the Liberal Party (27), the political party for which Jair Bolsonaro ran for president in 2022. The other channels featured politicians, highlighting the personalistic characteristic of the Brazilian political debate, where the connection to people is much greater than to their parties. Lula, elected president by the Workers party PT, appears with 24 videos, followed by Congressman Nikolas Ferreira (8), who before entering politics worked as an influencer and was the most voted congressman in the past election – highly associated within the Bolsonarismo movement. This is also the case for Gustavo Gayer and Gabriel Monteiro, who have a large number of followers on social networks. Also, Jair Bolsonaro and Rubinho Nunes appear tied with 6 videos each. In this sense, the dominance of the far-right among the channels is striking, pointing to the technique this segment has appropriated for the virality of content.

**4. Culture:** Mainly channels of musicians or programs about music, concerts, or video clips of national and international origin were grouped in this section. Only one channel was marked more than once - [Eric](#)

**Johnson** (2). The musical types were varied, including rock, pop, death metal, forró, funk, Axé, MPB, and Bossa Nova. Some examples of musicians include MC Poze do Rodo (funk Brazilian singer), Shakira, Jorge Ben Jor, The Smiths, Gal Costa, Erasmo Carlos, and One Direction.

**5. Podcast:** Podcasts represent this communicative genre that has been expanding in the country. We found 6 channels from 5 different podcasts: 1) *Cortes do Flow* (14 videos) and *Flow Podcast* (5 videos); 2) *Inteligência Ltda* (3 videos); 3) *Não inviabilize*, 4) *Podpah*, and 5) *Desce a Letra Show*, each with one video.

**6. Religion:** Although the religion theme also appears in other channels, those classified within this genre had religion as the central topic of the channels' operation. We found 4 channels and 6 videos - all associated with the evangelical religion. **Silas Malafaia's channel** had three indicated videos, **Povo da Fé** (1), **Pastor Rodrigo Mocelin** (1), and **Pastor Everton Alves Oficial** (1) were the others.

**7. Organisation:** Organisation refers to Institutes, NGOs, Social Movements, or Collectives. Here we found 5 organisations and 6 videos: **ANCAPSU** (Anarcho-capitalist Channel, 2 videos); **Institute of Economics of Unicamp** (1); **MBL LiveTV** (1), **Instituto Conhecimento to Liberta** e **Experiência Cética** (anarcho-communist channel, 1).

Finally, in the sample, we had 53 videos that volunteers marked, but when running the plugin to collect data, they had already been taken down, so we need more complete information about them.

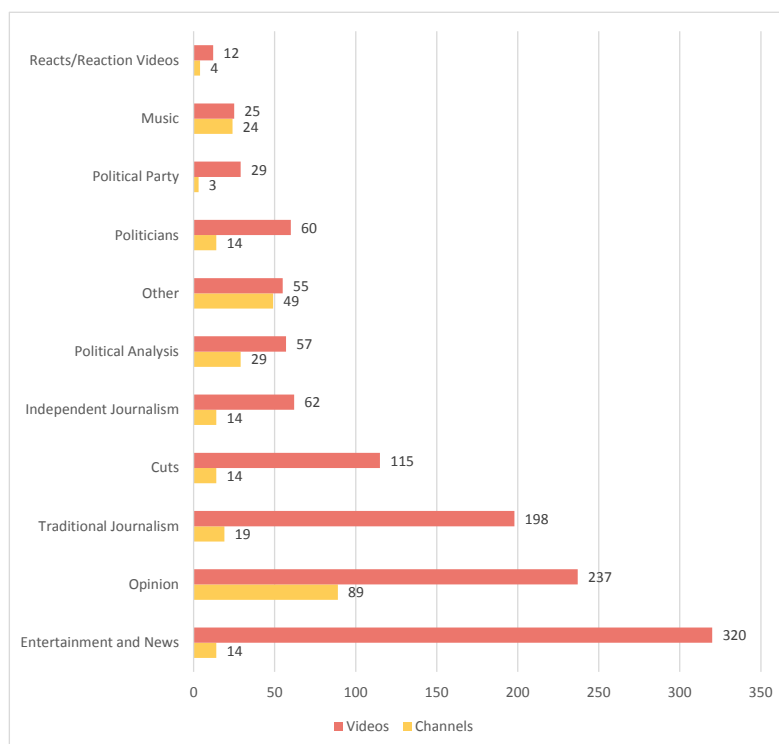
## 4.1.2 Channel Categories and their Segments

The categories present a greater detail within the types of channels, referring to the line of action and video format within each channel, resulting in a total of 12 categories - not including the category of taken-down videos here. The categories are related to the type, but a category can also be associated with more than one type. For example, the "Opinion" category is present in almost all types of videos described earlier, as well as "Cuts," since it is related to the video format released by the channels.

Next, the segments of the channels are analysed within each category. The segments provide more specific characteristics, such as political positioning, the channel's "editorial" line, and the content's format.

Chart 10 illustrates the number of videos present in each of the categories:

**Chart 10:** Channel categories and number of videos



Below we detail the categorisation of the main categories, with examples of the channels found:

### 1. Entertainment and news

Within the program category, both television programs and podcast episodes flagged by volunteers are described. There were a total of 320 videos and 14 programs flagged. Of these, 296 originated from the *Jovem Pan* broadcaster. In total, there were 202 videos from the *Pingo nos* is Channel and Program, 53 videos from the *Pânico Jovem Pan* Channel and Program, 29 from the Morning Show, and 12 from the *Jovem Pan 3 em 1* Channel (which brings together pieces of broadcaster programs). In this line of misinformative communication, the Sikera Junior (8 videos) and Programa 4 por 4 (7 videos) channels are also included.

### 2. Opinion

In the opinion category, 89 channels and 237 videos were classified - with 53 channels that only had 1 marked video. These channels contain opinions about political facts - mostly. Within this category, although the largest volume is related to channels identified with the Bolsonaro far-right ecosystem, including potentially misinformative content (65%), 2 channels that identify themselves as progressive entered the Top 5 channels with the most marked videos - *Meteoro Brasil* and *Galãs Feios*. The channels with the most marked videos in this category were: 1) *Meteoro Brasil* (20 videos); 2) Nando Moura (17 videos); *Foco do Brasil* (13 videos); 4) *Te Atualizei* (12 videos); 5) Rodolfo Delmind (12 videos) and 6) *Galãs Feios* (10 videos).



### 3. Traditional journalism

The traditional journalism category included well-known and credible press channels associated with informative journalism. With a total of 18 channels and 186 videos, *Jovem Pan News* (64 videos), UOL (29 videos), *Rádio BandNews FM* (27 videos), *CNN Brasil* (13 videos) stand out. Programs such as *Jornal da Record* also gained prominence in this list, with 12 marked videos, and newspapers such as *O Globo* (3 videos), *Estadão* (3 videos), and *Folha de São Paulo* (2 videos).

### 4. Cuts

The Cuts category includes channels that aim to primarily share small excerpts from other videos, editing the main video and pointing out “highlights.” In the sample, 115 videos from this category were found, belonging to 14 different channels, in which 6 channels contained only 1 video. The channels with the highest volumes are 1) *Pânico Retró* (50 videos), 2) *Liberdade Direita* (19 videos), 3) *Cortes do Flow* (14), 4) *TV Afiada* (11 videos), and 5) *Desmascarando* (7 videos), which already have in their description that they are channels dedicated to this content format.

### 5. Independent Journalism

62 videos from 14 different channels were identified in this category. Here, we have media outlets that are not as well-known and traditional in the press, including examples from the disinformation ecosystem aligned with the far-right (such as *Folha Política* (17 videos) and *Jornal da Cidade Online*) (4 videos), as well as more progressive-leaning portals (such as *TV 247* (7 videos), *Poder360* (6 videos), and *RedeTVT* (5 videos)).

### 6. Political/Academic Analysis

The main difference between the opinion and political analysis categories is that the latter brings a more academic discussion and opinions on politics based on readings from experts in humanities fields. In this category, 57 videos from 29 different channels were identified. Unlike the opinion category, where far-right disinformation ecosystem channels stand out, in this category, the channels with the highest number of videos are identified with the defence of democracy. These include 1) *Portal do José* (6 videos), 2) *Outro Lado da História* (5 videos); 3) *TV Coiote* (4 videos); 4) *Gabriela Prioli* (4 videos), and 5) *Eduardo Moreira* (3 videos).

### 7. Others

The “Others” category contains channels that are not directly related to politics or do not fit a specific focus. Within the 49 channels mentioned and 55 videos, we find subjects such as games, soccer, DIY, narrative podcasts, and spirituality themes. The only channels with more than one video in this topic were from [Manual do Mundo](#) (6 videos) and Podcast [Não Inviabilize](#) (2 videos).

## 8. Reacts

Reacts are a video format that shows the communicator reacting to some content. 12 videos with content from 4 channels were found: 1) Daniel Alvarenga, a pro-Bolsonaro YouTuber (6 videos); 2) *História Cabeluda*, a history teacher and communicator (4 videos); 3) *React - Ouve isto* (1), and 4) *Galera Brasil* (1). It is important to note how an entertainment modality is increasingly being incorporated as an arena for political commentary.

The remaining categories listed are self-explanatory, but below, we list some examples found in each of them:

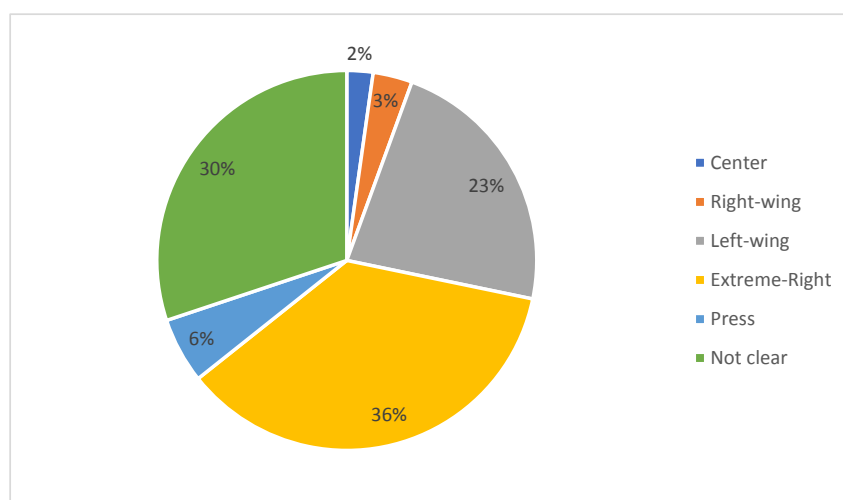
**Políticos:** In this category, both elected politicians, such as Lula (24 videos), Nikolas Ferreira (8), Rubinho Nunes (6), Eduardo Bolsonaro (4), as well as those who were not elected, such as Jair Bolsonaro (6 videos); Roberto Requião (2 videos), and Ciro Gomes (2 videos) were included.

**Partido Político** – 3 channels and 29 videos: Partido Liberal (Liberal Party) (27 videos); Partido dos Trabalhadores (Workers' Party - PT) (1 video), and Partido Novo (New Party) (3 videos)

**Música:** A total of 25 videos in 24 channels.

In addition to categorisation, the study also aimed to classify the ideological bias of the identified channels. Many of them have a clear segmentation, even clearly displaying political positions. The team's review took into account elements of the channels' self-description – in the About section – as well as the titles of the posted videos, the channels' history of political positioning, and their relation to the Brazilian political spectrum. The results are shown in Chart 11:

**Chart 11:** Ideological Positioning of the Channels



As mentioned in the introduction, the political identification of the channels does not generally correspond to the profile of the respondents. Our understanding is that the identified videos represent the volunteers' study objectives and reports of disinformation content more directly than the volunteers' actual ideological profile.

## 4.2 CATEGORISATION BASED ON VIDEO CONTENT

To better understand the universe of videos identified by volunteers, the researchers at the Vero Institute also manually classified the main contents of the videos. This classification took into account the titles, comments from the identifiers, video descriptions, and transcriptions. Considering the main topics of interest, the subjects of the videos were divided into five main subjects, which served as a basis for understanding the entire universe of recommended videos.

Chart 12: Video Subjects

VIDEOS SUBJECTS				
6	15	168	204	773
Religion	Public Policies	Others	Threats to Democracy	Candidates and Elections

### 1. Candidates and Elections

Most of the content collected by the plugin dealt with candidates or the election (770 videos). This category, considering not only the identified videos but also the recommended ones, represents 42% of the total videos in the sample. Next, we highlight some of the videos that had the highest number of views within this theme:

#### Bolsonaro on Flow Podcast - Flow Podcast Channel



The video with the most views in this category was the episode of the [Flow Podcast](#) featuring an interview with Jair Bolsonaro. It had more than 1,600 likes and over 16,000,000 views.

### Lula's arrest was a big setup (Official Lula Channel)

The second video with the most views in this classification was from Lula's official channel, with more than 4,700 likes and over 15,000 views. The video on President Lula's own channel, lasting only 30 seconds, emphasises that Lula's arrest in 2018 was a political setup to remove him from the 2018 election.



Caption: "The imprisonment of Lula was a big political setup"<sup>3</sup>

The video from the official Band Journalism channel features the presidential debate on August 28 in its entirety, with 593,000 likes and more than 14,000,000 views.

Analyzing other videos of this type, we also found channels of programs classified as "Entertainment and News" such as [Morning Show](#), [Os pingos nos Is](#) e [Pânico Jovem Pan](#). Canais de Opinião como [Galãs Feios](#), [Meteoro Brasil](#), [Te Atualizei](#) e Foco do Brasil also have videos in this sample. Although most of the videos are centred on the presidential race, we also recorded videos about the contests in some states. Notably, this was the largest category found within the recommended videos, representing 42% of the videos in the sample.

3. "The imprisonment of Lula was a big political setup" is a sentence that refers to the former president of Brazil, Lula, who was sentenced to prison on corruption charges in 2018. However, many of his supporters believe that he was convicted as part of a political conspiracy to prevent him from running in the 2018 presidential election. The sentence suggests that the charges against Lula were fabricated for political reasons, rather than being based on real evidence. It's worth noting that Lula was released from prison in November 2019 after a Supreme Court ruling, which determined that defendants should only begin serving their sentences after they have exhausted their appeals.



## 2. Threats to Democracy

In the “threats to democracy” category, we included videos that contained disinformation and/or questioned the integrity of the electoral process and electronic voting machines, called for anti-democratic acts, featured threats or words of violence against candidates and/or political institutions - especially the Superior Electoral Court (TSE), the Federal Supreme Court (STF), or members of these higher courts. In total, 202 videos were flagged on this theme, representing 19% of the total videos (including those recommended by these). It should be noted that some of these only reported cases of threats to democracy, covering these issues and often criticising anti-democratic events and speeches. Of the videos that actually presented threats, many of them were later taken down, either by YouTube or by court order. However, we highlight some of the main themes.

In the axis of antagonism against candidates, many videos in this section show demonstrations of support for Bolsonaro that antagonise candidate Lula and feature anti-democratic messages on posters. From the pro-Bolsonaro influencer, *Guto Canal Solar*, the videos “Lula can’t stand a minute in Recife” [\(+29K likes, +520K views\)](#) and “Lula can’t stand a minute walking on Boa Viagem Beach” [\(+29K likes, +500K views\)](#) stand out.

Various videos of antidemocratic demonstrations<sup>4</sup> that took place on the September 7th were also highlighted, some of which showed banners calling for the closure of the higher courts and the impeachment of ministers. Sensationalist programs, which often disseminated biases, disinformative content like *Pingo nos is*, *Boletim Coppola*, and *Programa Sikeira Junior* have several videos in this regard:

[Escondidos com medo do povo, ministros do STF reagem ao 7 de Setembro \[Hidden in fear of the people, STF ministers react to September 7\]](#)

[IMPrensa chora no 7 de Setembro \[PRESS CRIES ON SEPTEMBER 7\]](#)

[Golpe da Cartinha/ Moraes Militante/ Esquerda Arrega no 7 de Setembro - Os Pingos nos is 11/08/2022 \[“LETTER” COUP/ MORAES MILITANT/ LEFT BACKS DOWN ON SEPTEMBER 7 - OS PINGOS NOS IS August 11th, 2022.\]](#)

[Em shopping, Barroso é interpelado sobre o 7 de Setembro: “Tava difícil, né?”; veja vídeo \[In a mall, Barroso is questioned about September 7: “It was tough, wasn’t it?”; watch vídeo\]](#)

[“Enlouqueceu”? Band DETONA Alexandre de Moraes! Coppolla está chocado... – Boletim n.129 \(02/09/22\) \[“Lost his mind”? Band SLAMS Alexandre de Moraes! Coppolla is shocked... – Bulletin n.129 September, 9th, 2022\]](#)

4. On September 7th, Brazil celebrates its Independence Day, commemorating the country’s declaration of independence from Portugal in 1822. In recent years, the date has also become a platform for political demonstrations from the Bolsonarista movement, which supports Brazilian President Jair Bolsonaro. The movement has co-opted the day, using it to hold large demonstrations in support of the president and his policies. These demonstrations often feature nationalist and conservative themes, with participants waving Brazilian flags and wearing green and yellow clothing, the colors of the Brazilian flag.

Calls for anti-democratic protests and videos questioning the election results, with calls for highway closures, also gained prominence in the sample after Lula's election on October 30th 2022.

115 CAMINHÕES do EXERCITO chegam em BRASILIA- RELATÓRIO- URNAS AGORA! O Brasil está parando! [115 ARMY TRUCKS arrive in BRASILIA- REPORT- BALLOT BOXES NOW! Brazil is stopping!]

Some of these videos explained the differences between Article 142, Federal Intervention, and Military Intervention, and reinforced the belief that the Military could intervene after the election:

URGENTE ACABA DE SAIR! FORÇAS ARMADAS! NOTICIA FFAA! ALEXANDRE DE MORAIS [[URGENT! JUST RELEASED! ARMED FORCES! FFAA NEWS! ALEXANDRE DE MORAIS]

Entenda o que significam o Art. 142, intervenção Federal e Intervenção Militar [Understand what Article 142, Federal Intervention, and Military Intervention mean]

In the sample, we also found a series of videos denouncing anti-democratic behavior, both from journalism channels and other communicators:

INFLUENCER BOLSONARISTA DESENHA O "CAMINHO DO GOLPE" E VIRALIZA NAS REDES; DINO VAI SER CHEFE DA PF [Pro-Bolsonaro Influencer Draws The "Coup Path" And Goes Viral On Social Media; Dino Will Be The Head Of The Federal Police]

Reinaldo: Com saudade da cadeia, Valdemar endossa tese golpista [Reinaldo: Missing prison, Valdemar endorses the coup thesis]

### 3. Others

Within the "others" category, we found a wide range of subjects ranging from Shakira's music videos to Felipe Neto's video cuts, videos about the death of Queen Elizabeth, and "ninja-style" cake-slicing shorts. Considering the recommendations, the "others" category videos represent 25% of the total sample.

Shakira - La Tortura (Official HD Video) ft. Alejandro Sanz

Guarda real da Escócia recebe caixão da rainha Elizabeth II | CNN DOMINGO [Scotland's royal guard receives Queen Elizabeth II's coffin | CNN SUNDAY]

Jeito Ninja de fatiar bolo [Ninja way of slicing cake] [https://www.youtube.com/shorts/PmcAzCU\\_gmE](https://www.youtube.com/shorts/PmcAzCU_gmE)

OS MELHORES COMENTÁRIOS DA INTERNET [THE BEST COMMENTS ON THE INTERNET]

## 4. Public Policy

The videos marked with the public policy theme sought to draw a parallel with those issues marked by volunteers in the form - such as LGBTQIA+ issues, Disinformation, Racial Issues, Education, etc. However, among the tagged videos, only 15 referred directly to the theme, with most related to videos about the spending cap, COP27 and the environment, and Bolsa Família. Considering the share of recommended videos, 11% of the total were about public policies.

[TETO DE GASTOS: porque não precisa e porque não funciona \[SPENDING CAP: why it's not necessary and why it doesn't work\]](#)

[BOLSA FAMÍLIA - POLÍTICAS PÚBLICAS – \[BOLSA FAMÍLIA - PUBLIC POLICIES\]](#)

[Lula ao vivo na COP27: veja discurso, análises de Tales, Mariliz e Hartung e últimas notícias \[Lula live at COP27: watch speech, analysis by Tales, Mariliz, and Hartung, and latest news\]](#)

## 5. Religion

Although the religion theme also appears in other channels, within these videos, the relationship between politics and religion is made explicit by the speakers. We found 4 channels and 6 videos – all associated with the Evangelical religion. Within the total sample, it represents 4%. [Silas Malafaia's](#)<sup>5</sup> the channel had three indicated videos, [Povo da Fé](#) [People of Faith] (1), [Pastor Rodrigo Mocelin](#) (1) e [Pastor Everton Alves Oficial](#).

[O que é pior? A ofensa de Roberto Jefferson ou o voto da ministra Cármen Lúcia? \[What is worse? Roberto Jefferson's offense or Minister Carmen Lúcia's \(STF\) vote?\]](#)

[Did you see what the teacher said she would do with your child? | Pastor Rodrigo Mocelin \[Viu o que a professora falou que fará com seu filho? | Pastor Rodrigo Mocelin\]](#)

Although it is not the focus of this project, in the manual review of the tagged videos, the researchers made an additional effort to list the volume of videos containing some type of disinformation and/or political violence in their content and which type was predominant. This classification took into account the volunteers' comments, the title, and the description of the first few minutes of the videos, which were not watched in their entirety.

5. Silas Malafaia is a Brazilian evangelical pastor and televangelist. He is the founder and president of the Assembleias de Deus Vitória em Cristo (Victory in Christ Assemblies of God) church in Rio de Janeiro, Brazil. Malafaia is known for his conservative views on social issues, particularly on homosexuality and abortion, and has been an active political commentator in Brazil. He is also known for his media presence, including his television program and social media accounts.

The proposal here is not to be a final and deterministic classification but rather to provide a general parameter of the sample, since the videos were not watched in their entirety by the researchers.

Regarding disinformation, at least 450 videos containing some type of disinformation content were identified - about 30% of the sample. The highest incidence of disinformation in these videos was precisely about politicians and mentioned candidates, or disinformation about political institutions - notably the Higher Courts - or attacks on the press. Among the examples, spread as opinion, we have many videos from Jovem Pan Programs and channels like *Sikêra Júnior* that question the legitimacy of electoral polls, which supposedly are fake because they do not capture the “datapovo”, “datalive” e “data motociata” – as bolsonarist movement refers to their demonstration of support for Bolsonaro that that attempt to provide proof of the popularity of the President, Jair Bolsonaro (PL) in a way of delegitimise established institutes of polls such as DataFolha<sup>6</sup>.

Analysing signs of political violence, we found about 113 videos with violent speeches - less than 10% of the total - most of them related to violence concerning political positions - pejorative terms concerning different political biases, mainly from the far right criticising candidates and voters from the left and/or institutional violence concerning the electoral process. Among the recorded aggressions, many are directed at the Ministers of the Higher Courts, seen by the far right as “dictators.” In this vein, videos attacking the media, labelled as “leftist”, were also recorded.

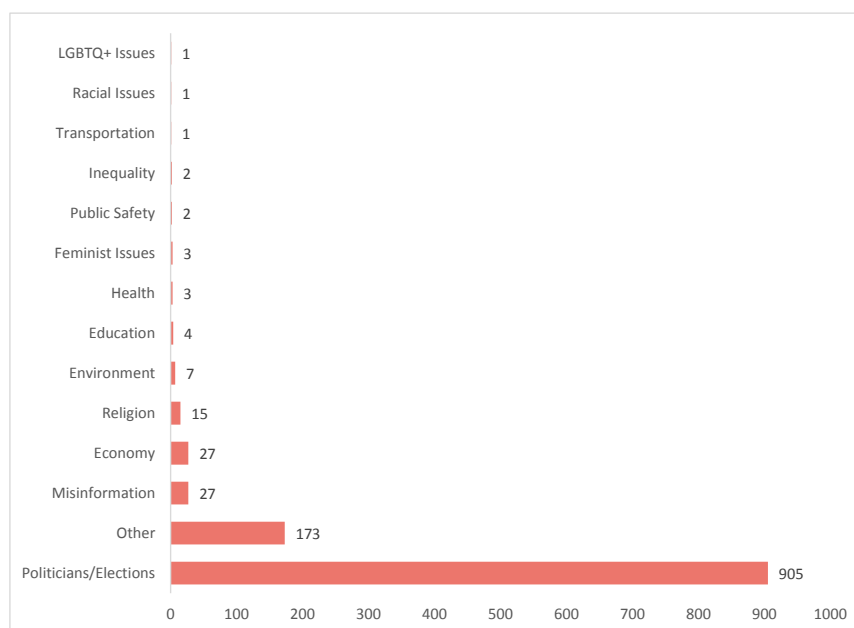
### 4.3 DIALOGUE BETWEEN VOLUNTEERS' INPUTS AND TAGGED CONTENT

Although we cannot cross-reference the questionnaire data with the video tagging, this stage allows us to verify which themes our volunteers perceived as political, in theory, – from the questionnaire – and which ones they actually found and tagged on the YouTube environment.

When we asked volunteers which subjects they understood as political, the candidates and election category was not explicitly stated since it has an obvious and logical relationship with politics. However, as the video collection took place during the electoral period, we see that most of the themes found in the videos were about candidates and the electoral race, with a low volume of the themes identified as political in the initial form. Among the subjects of the form, those with the highest volume in the collected video sample were Economy and Disinformation (27 videos in each), 15 videos on Religion, and 7 on the environment.

6. For more on that topic: <https://towcenter.medium.com/bolsonaro-supporters-talk-on-datapovo-and-attack-institutes-to-discredit-polls-c78056e684f3>

**Chart 13:** Relationship of the themes of the marked videos – considering inputs from the form



## 5.0 VIDEO RECOMMENDATIONS - WHAT DOES THE ALGORITHM RECOMMEND FROM THE MAPPED VIDEOS?

With the videos marked by the volunteers and the recommendations collected from these videos, we built a “map” of YouTube during the 2022 elections, indicating which videos recommend which videos, and which channels recommend which channels. Graphic 14 represents a recommendation network between channels. In this network, each vertex represents a YouTube channel, the links between vertices represent channels with recommendations between them.

In the image below, different colours represent different channel communities identified by the Louvain algorithm for community detection in networks. These communities represent groups of YouTube channels with many recommendations between them.



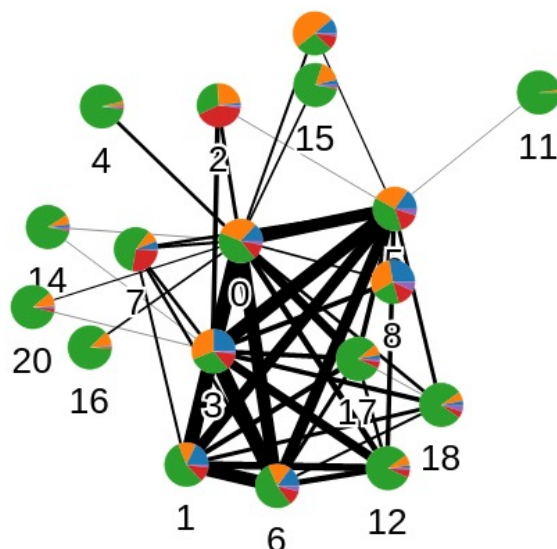
**Graph 14:** Channel recommendation network.



From the mentioned network, we created a “meta-network” between communities, presented in Graph 15. In this network, each vertex represents a group/cluster of channels, and the connections represent channel communities with frequent recommendations between them.

Graph 15 also represents each vertex/channel as a pie chart. Each of these charts represents the proportion of the five subjects described in the content of each channel community in the network. For example, Group A presents 13% on the subject “Attacks on Democracy” and 31% on the subject “Candidates and Elections”.

**Graph 15:** Meta-network of channel groups



In total, the network of channel clusters presents five central clusters, with a high level of recommendations between them, and a periphery of 13 other clusters less connected with the rest of the network. For almost all clusters, the number of recommendations between videos from the same cluster was higher than the number of recommendations between different clusters.

The following paragraphs describe the five central groups identified.

### Group A: Lula and diverse media

This group, with 739 channels, includes the “Lula” channel and various traditional media channels, with an average anti-Bolsonaro bias. Examples of main channels in this group include *UOL*, *Rádio BandNews FM*, *Meteoro Brasil*, *SBT News*, *Jovem Pan News Bauru*, *Poder360*, *Galãs Feios*, *MyNews*, *Eduardo Moreira*, *Cortes 247*, *Cortes de História Pública*, *História Cabeluda*, *TV 247*, *Gabriela Prioli*, *HBO Brasil (Greg News)*, *Meio*, *CartaCapital*, and *TV Fórum*. Along with Group B, this is the group of channels with the highest volume of content on the Candidates and Elections topic, having 31% of its content on this subject. This channel is also responsible for 40% of the content on the Religion theme, followed distantly by Group B, with 17%.

### Group B: Bolsonaro and diverse media

This group, with 301 channels, includes the “Jair Bolsonaro” channel and various traditional media channels, with a pro-Bolsonaro bias. Examples of main channels in this group include *Jovem Pan News*, *Os Pingos nos Is*, *Jornal da Record*, *CNN Brasil*, *Domingo Espetacular*, *Rádio Bandeirantes*, *Folha Política*, *Leda Nagle*, *Sikera Junior*, and *Te Atualizei*. This is the group of channels with the highest volume in the Threats to Democracy topic, with 25% of its content on this subject, along with 31% on the Candidates and Elections topic.

### Group C: Liberal media

This group, with 220 channels, mostly represents liberal media. Examples of channels in this group include *Band Jornalismo*, *Partido Liberal*, *Record News*, *Gazeta do Povo*, *Estadão*, *Metrópoles*, *g1*, *O Antagonista*, *Brasil Paralelo*, *VejaPontocom (Revista Veja)*, *NOVO 30 (Partido Novo)*, *Jornal da Gazeta*, and *Folha de São Paulo*.

This is the group of channels with the highest volume in the topics Public Policy (15%) and Religion (5%).

### Group D: Podcasts, radio programs, and cuts

This group, with 147 channels, mostly represents radio programs, online podcasts, and cut channels. The channels here have a Bolsonaro bias, and the group also includes the *Eduardo Bolsonaro channel*. Other examples include the channels *Pânico Jovem Pan*, *Pânico Retrô*, *Inteligência Ltda*, *Os Sócios Podcast*, and *Bastidores do Brasil*. In terms of content, Group D talks the least about Candidates and Elections

(13%), and talks the most about other less relevant subjects for this research (56%), including various topics, such as music and football.

### Group E: Secondary Bolsonaro group

This group, with 277 channels, is mostly radio programs, online podcasts, and cut channels. These channels also have a pro-Bolsonaro bias, and include *Flow Podcast*, *Cortes do Flow*, *(Jovem Pan) Morning Show*, Nando Moura, Alexandre Garcia, and Nikolas Ferreira. In content, this cluster is very similar to Group D, coming in second place in the Other theme (54%).

Table 3 shows the distribution of subjects for each channel cluster/group described, and Graphic 22 presents the meta-network of channel groups.

**Table 3:** Table of subjects by channel groups

Group	Threats to Democracy	Candidate/Elections	Public Policies	Religion	Others
A = "Lula and diverse media"	13%	31%	11%	3%	42%
B = "Bolsonaro and diverse midia"	25%	31%	12%	2%	30%
C = "Liberal Midia"	15%	27%	15%	5%	38%
D = "Podcasts, radio programs, and cuts"	18%	13%	11%	2%	56%
E = "Secondary Bolsonarist group"	15%	17%	11%	4%	54%

Among the main channel groups, Group B (channel *Jair Bolsonaro*, *Jovem Pan News*, *Pingos nos Is*, *Sikêra Junior*, *Te Atualizei*) stands out as the most central group in the network. All other channel groups, particularly Groups C and E, have a strong recommendation relationship with Group B, with 30% to 37% of the recommendations of the videos watched in Groups A, C, D, and E recommending a video in Group B. In the case of Groups C and E, this number is even higher than the fraction of recommendations that lead to more videos within the same cluster (C and E, respectively). In comparison, for videos watched in Group B, 62% of the recommendations lead to other channels within Group B, and only 5%-12% of the recommendations are from channels in each of the group's A, C, D, and E.

This pattern makes it very clear a centralisation of the discourse around the 2022 elections.

Despite the relatively balanced number of pro- and anti-Bolsonaro videos (2911 videos in Group A, 2752 in Groups B and E), the majority of recommendations from all groups point directly to Group B.

The fact that the channel group which discussed threats to democracy the most, such as fraud at the ballot boxes and corruption allegations, is also the most central group in the network, and the group that received the most recommendations from other channels -- 48,032, or 37% of all recommendations - is consistent with the concentration of content on this topic in only a fraction of channels. Groups B, D, and E, containing 36% of the channels in our sample, accounted for more than half of the content on threats to democracy found in this study.

And finally: while the channel recommendation network indicates which channels are connected by YouTube's recommendation system, this dataset reveals a second network: the indications, mentions, interviews, and all comments connecting the various channels responsible for the political discourse present during the 2022 election period. Videos such as Gazeta do Povo interviewing the person responsible for the Te Atualizei channel, or Leda Nagle interviewing Silas Malafaia and Olavo de Carvalho, also form a network, not emerging algorithmically, but rather emerging from (and evidence of) a coordination of discourse and narrative among multiple actors. This occurs alongside the multiple channels that interviewed or showed speeches by Lula and Bolsonaro, and the declaratory journalism often found on YouTube, where the political agenda of different actors and candidates is often expressed through titles and videos of the type "So-and-so says such thing".

## 6.0 FINAL CONSIDERATIONS

The Viu Política Project brings several levels of reflection in its final considerations. After ten months of execution, we return to the initial research questions that guided the procedures and writing of this report. Therefore, our first effort here is to bring answers to the questions outlined in the introduction: after all, what do Brazilians consider political on YouTube? How do the flagged videos by volunteers portray the 2022 elections? And finally, do the videos recommended by YouTube itself reflect the content of the flagged video?

Given the fact that Brazilians have increasingly used social networks in general, particularly YouTube, as a source of political information, what Brazilians consider political on YouTube can vary according to the political and social context, as well as the moment when the videos are analysed.

However, our research shows that users, when questioned, claim that various spheres of life (if not all spheres of life) have a political aspect - an input that was given in the form filled out by volunteers when downloading the plugin.

Naturally, this observation does not reflect Brazilian society as a whole, but it is still an interesting piece of data - since networks begin to behave as an extension of this conception. For example, we can highlight that

content creators, without official affiliation or traditional political training, are also recognised as political influencers, especially those who deal with controversial issues.

This observation leads us to formulate an answer to the second question, about whether the flagged videos reflect and how the electoral process, especially the 2022 elections. The videos flagged by volunteers portray various aspects of the electoral process, such as candidate campaigns, debates, political analyses, news about the electoral scenario, and the voting itself. Some of these videos present critical analyses of candidates or parties, while others seek to clarify voters' doubts about proposals and government programs. Therefore, we consider that our sample reflects the 2022 electoral process, albeit with different lenses. In the content analysis chapter, it was possible to observe that videos reflect the polarised political environment, mirroring Brazilian political behaviour in audiovisual production.

However, the platform's recommendation system remains an enigma due to the opacity of the algorithms that recommend new content. The videos recommended by YouTube may or may not reflect the content of the flagged video, but it was possible to observe (both from the content analysis and the study of recommendation algorithms) that user choices reflect the nature of the recommended content. Therefore, it is an interaction model that depends on how citizens signal their preferences on the platform. This is because YouTube's recommendation algorithm is based on several factors, such as viewing history, watch time, and user engagement. Thus, a video flagged as political content may be recommended to a user who has shown interest in this type of content, but it can also be recommended to a user who has different interests.

It is worth mentioning here that, although YouTube adopts measures to prevent the spread of disinformation during the electoral process, it is a process that still needs improvement. For this purpose, a general regulation of digital platforms - with a focus on transparency in the recommendation-based business model - is something that can be emphasised at various multi sectoral levels.

Advances are already being made in this regard, such as the international conference "Internet for Trust" promoted by UNESCO in February 2023, which discussed the regulation of digital platforms, with the aim of safeguarding freedom of expression and access to information for all citizens of all countries.

More than 50 countries had representatives at the conference, in order to collect best practices and understand regulatory models and their effectiveness in various contexts. UNESCO released a document with guidelines that had two versions (1.0 and 2.0) and which presented the incorporation of public consultations carried out by the institution, as well as opinions from experts in the field of digital rights.

Nevertheless, in addition to international regulations and guidelines, it is worth noting that interaction with content can follow a hybrid approach, both Top-Down and Bottom-Up, in which users are also responsible for cre-



ating a more qualitative, healthy, and sustainable information environment. And this follows the expression of our volunteers who signalled that politics is present in all spheres of life, reinforcing the importance of discussing political issues in different contexts and levels of civic decision-making.

Digital platforms, such as YouTube, can drive and strengthen political polarisation, but recommendation systems are not the only factor behind it, making it a relevant concern that deserves deeper analysis. Above all, the reasons that lead users to seek sources of information about politics that are not very credible and are more linked to a spectacularisation of politics, often bordering on, and sometimes even reaching, disinformation biases – as in the case of many entertainment and news programs broadcast by Jovem Pan.

In conclusion, the YouTube recommendation network is one of many relevant networks for understanding the circulation of political content on the platform, and it is necessary to explore the networks of referrals, mentions, interviews, and comments that connect the various channels responsible for political discourse. These aspects deserve attention and further study, especially in the electoral context.

In terms of final considerations, we revisit the novelty and importance of this study, considering the sample from the perspective of volunteers. Despite the methodological limitation of not having a representation of the Brazilian population, and with many of the volunteers being associated with research centres on disinformation and political communication, some interesting data emerges and denotes new research agendas.

From the description of the flagged videos, we can notice the variability of the included channels, despite the predominance of traditional media. Communicators of different ideological shades, who also use different communication formats - reacts, podcasts, cuts - were highlighted.

In this sense, we see a growth of political positioning from entertainment, which shows the potential for expanding political debate to communities that traditionally are not so fond of discussing the subject.

Upon analysing the marked and recommended videos, several questions arise, far beyond the scope of this report and that can reverberate in future studies:

From the marked (and recommended) videos:

- Do we have sensationalist videos? News? Vlog format videos? Who are they addressing? Is the audience that the video speaks to the same audience that flagged the video?
- Are they mostly informative videos? Or entertainment?
- How do the variables we have intersect with the reach of the videos and the size of the channel?
- How many videos do we have about the democratic process (e.g., how to vote)?

- How many with explicit electoral propaganda? How many official politician channels?
- How many videos are from private initiatives? What narratives are promoted there?
- How many videos are “Reacts” or responses to other videos?
- How many were produced outside of YouTube? Kwai? TikTok?

And on more specific topics, like diversity, questions also reverberate:

- How are gender narratives constructed? How are certain people discussed (e.g., Simone Tebet, Soraya Thronicke, Dilma), and what terms surround them? What is the role of intersectionality in these narratives?
- The same goes for racial issues: what readings of black people are made more than white people? How are they discussed? Looking at trans candidates: what is the discourse around them? It seems that in general, those who speak about broader politics do not talk about “identity issues.”
- How is religion being discussed? What is discussed when talking about religion? Morality? Identity? Public policy?

These questions, although not answered in this research, serve as a rudder for the next steps and further investigations. To conclude our analyses, it is worth mentioning that we noticed that volunteers named politics as present in all spheres of life, which reinforces the importance of discussing political issues in different contexts and levels of decision-making. Moreover, when analysing the flagged and recommended videos, several questions arise that denote the need for more research on the role of digital platforms in shaping public opinion.

**In continuation, it is important to note how even without a specific focus on polarisation, our project was able to identify clusters of videos and groups of channels aligned and, at times, politically opposed. This result contributes to understanding how recommendation systems like YouTube’s can drive and strengthen political polarisation, even though they are not the only factor behind it. Naturally, this is a relevant concern and deserves a more in-depth analysis with the collaboration of digital platforms that can reduce the opacity of their algorithms.**

**Third, as we mentioned in the previous section, the YouTube recommendation network is one of many relevant networks for understanding the circulation of political content on the platform. There is also a network of referrals, mentions, interviews, and comments that connect the various channels responsible for political discourse during the 2022 elections. This network does not emerge algorithmically but is evidence of coordinated discourse and narrative among multiple actors.**

**This suggests that political influence on YouTube may be more complex than the recommendation algorithm's influence, denoting that content producers intentionally influence related content to ensure user engagement. Furthermore, interview videos and political statements on YouTube often reflect the political agendas of actors and candidates, which can contribute to political polarisation and the spread of misinformation on the platform. This becomes a crucial point of attention that should be investigated thoroughly, especially in the context of future elections.**

In this sense, based on what we have mapped in this report, we can think of possible actions that institutions and platforms can take to address the challenges that arise in the digital environment. This report can serve as a starting point for future research and studies, which can deepen the issues raised here and provide more insights into how we can face the challenges that arise in the digital environment. Among these future studies - beyond the research questions already outlined earlier - we can highlight the investigation of the impact of political polarisation on democratic institutions, the analysis of public policies to combat misinformation, the regulation of digital platforms, actions that institutions and digital platforms can adopt to promote transparency, equity, and diversity in the digital environment, and the evaluation of the role of social networks and digital platforms in shaping public opinion.

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## ANNEX A: MACRO-TOPICS TO GUIDE DIGITAL PLATFORMS REGULATION

*Rapporteurs:*

*Beatrice Bonami*

*Isabela Inês Bernardino*

*Rodger Richer*

The Viu Política research project aimed to analyse political content on YouTube related to the Brazilian elections of 2022. Through a partnership between the Mozilla Foundation, the University of Exeter, and Instituto Vero, the project collected with a plugin around 30,000 videos, which were analysed using qualitative and quantitative methods in an attempt to understand what Brazilians consider political (or not) on YouTube and how the platform recommends content and information. At the end of the research, the project prepared a closed Chatham House-style event in which 20 experts gathered to answer the following question:

“How do user-produced audiovisual content on platforms impact Brazil’s online political debate environment, and what paths can be adopted to enhance this environment as a healthy space for citizen learning and political discussion?”

In this document, we summarise the event’s conclusion topics and report on the discussion’s main findings, following the format of eight macro-topics of debate.

## THE PROJECT

The event's first phase was to present the context and objectives that guided the execution of the research, providing an overview of the project's main questions and goals. The main goal was to create an initiative with volunteers who could identify political videos on YouTube, leading to the categorisation of videos and channels on the platform. This initiative was inspired and based on the Mozilla Regrets Reporter (which invited users to mark YouTube-recommended videos that did not adhere to the user's preferences). One of the overall objectives connecting Viu Política and Mozilla Regrets Reporter is to understand how YouTube recommends content and what factors influence this action. This scenario becomes even more relevant when we consider an electoral period [like the one of 2022 in Brazil] in a context where citizens access information and form political and personal opinions through digital platforms. The project's main questions were:

1. What do Brazilians consider political on YouTube?
2. How do the videos flagged by volunteers depict the 2022 elections?
3. Do YouTube-recommended videos reflect the flagged video's content?

Among the main results presented, it is worth listing the following:

1. The plugin was the primary data collection tool that allowed for detailed video information to be analysed to understand part of Brazil's audiovisual universe of politics.
2. Project volunteers who downloaded the plugin filled out a form in which they could donate demographic data and express political positioning and self-identification. When asked, through the form, several volunteers expressed the perception that "Everything is political." Furthermore, the vast majority identified as "Left-Wing," and no volunteer identified as "Right-Wing."
3. Most of the collected videos were categorised as "Far-Right" or "Right" positions, which was concluded as a movement by volunteers to mark videos they considered politically inappropriate, containing disinformation and/or threats to democracy.
4. Indeed, the flagged universe via the plugin reflected content and videos related to the Brazilian Elections of 2022. Regarding YouTube's recommendation, we could map clusters of channels that recommend themselves, despite the opacity of the recommendation algorithms. However, we observed a non-algorithmic but narrative and discursive network among channels that recommend themselves within the videos to ensure the continuity of the informational and political positioning.

5. The need for platform regulation is an evident point that emerged during the project, as well as the urgent importance of media and information literacy to form and prepare new generations for the civic challenges of the 21st century.

Based on these conclusions, we turn to experts who shared their general perceptions about the project and the topic. Under Chatham House rules, we do not attribute authorship to the statements made, and we have summarised the discussion into the following macro-topics:

1. **Transparency of Recommendation Systems;**
2. **Digital Platforms and Brazilian Electoral Norms;**
3. **Global Guidelines for Digital Platforms;**
4. **Creation of Representative Panels;**
5. **Polarisation, Disinformation, Extremism, Democracy, and Science;**
6. **Algorithmic Amplification;**
7. **Data Security and Financial Responsibility of Digital Platforms;**
8. **Relevance of Diversity for the Regulation of Digital Platforms.**



# THE DEBATE

## 1. Transparency of Recommendation Systems

Recent crises indicate that observing the YouTube recommendation system is increasingly important for society, directly influencing public debate and user opinion formation. Therefore, transparency and accessibility are crucial so researchers can study the subject. The crisis of violence in schools in April 2023<sup>1</sup> in Brazil highlighted the necessity to improve recommendation systems, with greater control and commitment from platforms to build algorithms that respect human rights and avoid radicalisation. Restrictions on recommendation systems, such as the review of the autoplay feature, are necessary so that users can choose whether or not to receive recommended content. In addition, transparency measures can show which contents are recommended by design and which are related to user preferences. User-chosen content must be privileged over recommended content, and these practices are in place on YouTube Kids<sup>2</sup>, a platform aimed at children. Still, they can be extended to the rest of society, including websites from other corporations. In summary, transparency and control restrictions by platforms are essential to ensure that users have access to reliable and safe information. Removing the autoplay feature and prioritising user-chosen content are some measures that can improve the recommendation system and prevent the dissemination of extremist, harmful, and/or disinformative content to avoid the radicalisation of the Brazilian political debate.

## 2. Digital Platforms and Brazilian Electoral Norms

As observed in the previous topic, digital platforms have been the subject of intense debate in Brazil, especially regarding the recommendation system and the electoral code<sup>3</sup>. Specific norms must ensure parity of instruments between political positions and that channels and influencers are more aware and responsible when influencing public opinion during the electoral period. There are even questions about whether the recommendation system can be considered a form of remuneration or donation from platforms to political parties, which current Brazilian elec-

1. About two weeks after a man killed four children in a Brazilian daycare centre in April 2023, authorities already have rounded up some 300 adults and minors nationwide accused of spreading hate speech or stoking school violence.

2. This feature encouraged children to watch more videos extending their screen time, sometimes without the parents' knowledge. Under the new rules, YouTube has turned off autoplay permanently for users under 18 years of age and for YouTube Kids.

3. The Brazilian electoral system refers to the set of means used to choose representatives and government members of the Federative Republic of Brazil. The current system is defined by the 1988 Constitution and the Electoral Code (Law No. 4,737 of 1965), in addition to being regulated by the Superior Electoral Court (Portuguese: Tribunal Superior Eleitoral, TSE) as delegated by law. The Constitution itself already defines three different electoral systems, which are detailed in the Electoral Code: proportional elections for the Chamber of Deputies, mirrored in the legislative powers at the state (Legislative Assemblies) and municipal (City Council) levels, majority elections with one or two elected representatives to the Federal Senate and majority elections in two rounds for president and other executive heads in other spheres.

toral norms would prohibit. With that in mind, we need minimum parameters to ensure transparency, including restrictions on the recommendation system and transparency measures on recommended content. Digital platforms are not neutral, and their practices can influence public debate and elections. Effective measures can guarantee the transparency of the electoral process and preserve Brazilian democracy.

### 3. Global Guidelines for Digital Platforms

Global guidelines can regulate digital platforms based on human rights and freedom of expression, and international organisations have prioritised this agenda. For this, a multi-sectoral approach is necessary to ensure the integrity of democratic processes and to promote media and information literacy and digital rights at the centre of any regulatory process. However, there are cultural concepts that vary in each region of the world, making it challenging to develop global documents. The Paris Conference “Internet 4 Trust”<sup>4</sup> in February 2023, promoted by UNESCO, was an important step towards that goal. It compiled a series of multi-sectoral public consultations to prevent governments and companies from negatively impacting human rights. Furthermore, it is necessary to highlight the sustainability of the responses developed to stay relevant in the medium term; and regulate the business model based on recommendation systems and algorithmic opacity.

### 4. Creation of Representative Panels

A central issue in regulating digital platforms is creating representative panels to help understand how people use platforms and how these companies influence user behaviour. A representative panel is a carefully selected sample of users that represents the diversity of the population in terms of characteristics such as age, gender, social class, geographic region, and interests. This group is followed over time to understand how they are using the platforms, what type of content they are consuming and sharing, and how they are being affected by the policies and algorithms of the companies. The creation of representative panels is essential for platform regulation for several reasons. First, it allows researchers and regulators to access more reliable and representative data to understand the behaviour and impact of company policies. Additionally, it enables more profound and more accurate analysis through cross-referencing quantitative and qualitative data and identifying patterns and trends that would be otherwise impossible. Another important aspect is the transparency of the companies concerning the data they possess. Companies would share more detailed information on users and how policies and algorithms affect their behaviour with a representative panel. This initiative would enable a more precise and reliable analysis of user behaviour, facilitate greater transparency of the companies, and allow for the creation of more effective and fair policies and regulations.

4. UNESCO hosted in Paris the “Internet for Trust” conference to discuss a set of draft global guidelines for regulating digital platforms, to safeguarding freedom of expression and access to information. More information at: <https://www.unesco.org/en/internet-conference>.

## 5. Polarisation, Disinformation, Extremism, Democracy, and Science

Defining concepts such as polarisation, misinformation, and extremism is crucial for understanding and analysing political phenomena. Polarisation can be understood as a discursive and narrative distance between political ideologies, while disinformation is the deliberate spread of false or misleading information. Extremism refers to radical and inflexible political positions. It is important to emphasise that using these terms without a rigorous definition can be problematic from a scientific and political standpoint. In the study context, disinformation and hate speech were essential topics of discussion, as they are associated with a threat to democracy. One point worth noting is the absence of respondents from the right-wing political spectrum in our research<sup>5</sup>. This absence can be a weakness of the project, and we must reach respondents representing the right-wing political spectrum in a future initiative. However, the study's goal was not to categorise and analyse the videos from a specific ideological perspective or to create a sample representing Brazilian society. The focus was on understanding how the circulation of political audiovisual material occurs and how the YouTube recommendation system works. We want to know how the propagation of radical and inflexible ideas can be encouraged by digital platforms and how this affects democracy. Regulation is thus a way to defend human and digital rights. It is also worth noting the dichotomy between politics and science, which has become an increasingly relevant topic in various areas. During the project, volunteers expressed the idea that "Everything is political," even issues that seem to be technical. And the reason for that might be that people make science with their values, interests, and goals. It is essential not to fall into the dichotomous view in which politics and science would be opposite poles of the same balance, just as politics and scientific facts are not in complete symbiosis. We can moderate these discussions to ensure a more constructive and inclusive dialogue - as a measure to combat Polarisation, Disinformation, and Extremism. This allows scientific evidence to inform the political debate and diverse voices to be heard and considered in decision-making.

## 6. Algorithmic Amplification

Algorithmic amplification is a concept that refers to the process by which recommendation algorithms disseminate certain content to the detriment of others. However, it is difficult to establish a clear baseline for this analysis because it is difficult to determine how the amplification occurs. In addition, regulating algorithmic amplification is complex because classifying what is relevant content is subjective. The usefulness is a leading asset to determining amplification reasons since improper recommended content could be false amplification. The precise definition of this concept and its regulation is essential in the coming years and regulations, and Platforms should commit to avoid amplification aimlessly and ensure as much transparency as possible in this process.

5. Following the second point of conclusion: project volunteers who downloaded the plugin filled out a form in which they could donate demographic data and express political positioning and self-identification. When asked, through the form, several volunteers expressed the perception that "Everything is political." Furthermore, the vast majority identified as "Left-Wing," and no volunteer identified as "Right-Wing."

## 7. Data Security and Financial Responsibility of Digital Platforms

Data security is a crucial issue in the age of technology. Recently, digital platforms have relied on it as the main argument for not providing information and not offering more transparency to their algorithms - due to security infrastructure, which is one of the primary investments made by Big Tech corporations. Considering that data is the revenue of these corporations, any disruption in how they deliver content to users would cause a crisis in their business model. Platforms have a considerable investment in security since information leaks result in severe punishments. For research and educational institutions, the issue of data security is even more complex, as often, these institutions need extra financial capacity to guarantee the security of their servers. Dealing with data, analysing it, and preventing leakage are challenging, and Big Techs can offer technical and financial support to ensure ethical instrumentalisation and prevent leaks. Thus, a possible solution would include more financial responsibilities for Big Techs to support information security in the ecosystem. Various regulations (such as LGPD<sup>6</sup> and GDPR) enforce Cybersecurity to assist sectors in dealing with this issue. It is up to public, private, and civil sector representatives to engage in more open and proactive dialogues and come together to pursue a healthier internet. Technology companies are crucial in ensuring information security and financing research initiatives based on platform data. Science is undergoing significant changes with the monetisation of data access, and companies need to be aware of the ethical dimensions of research on social networks and ensure that ethics committees of scientific and educational institutions are consistent in their evaluations (for example, on data extraction activities).

## 8. Relevance of Diversity for Digital Platform Regulation

Linguistic, social, and cultural diversity is relevant when regulating digital platforms and creating a healthy online environment. Cultural discussions and conceptions may vary depending on the region, and different perspectives are central to creating a common ground for discussing topics such as electoral process integrity, data privacy, inauthentic behaviour, and disinformation. A multi-sectoral approach is necessary to address these issues effectively, and cultural and linguistic diversity becomes a vital tool in creating a healthy online environment. In a world with more than 7,000 languages, media literacy comes to the fore as a step to ensure that diverse citizens participate in regulations. And it is up to us to insist with public and private stakeholders to provide the most significant possible plurality in this process.

6. The LGPD amended the previous Brazilian Internet Law and the Consumer Protection Act. Like the GDPR, the LGPD is focused on data subjects' rights and requires companies to adopt procedures and measures to protect personal data and to process it lawfully under LGPD requirements.