Technopower on Twitter platform

Tamara Tania Cohen Egler[1], **Thiago Costa Pereira[2]**, **Juan Manuel Salmenton[3]**, **Tamara Diana Micheline Cohen[4]**

Abstract

The objective is to analyze the narratives flowing on Big Tech platforms that form social networks and define collective subjectivities. Therefore, research was carried out on the Twitter Platform with the aim of identifying its technical and social functioning, the formation of technological networks, the enunciation of narratives associated with political principles in the context of the elections for the Presidency of the Republic of Brazil, in 2022. The methodology developed in this study, as shown in this article, produces graphs that represent networks, and quantitative data on influencers, their narratives, tweets and retweets. To analyze the technopolitical network, it was necessary to examine two items. Firstly, the influencers' physical dimension, including technical equipment, and mathematical data. Secondly, the social dimension involves the formation of techno-political networks associated with certain political events. To analyze how the polarization of society occurred, between the extreme authoritarian side and the democratic left side. Both fields produce a conflict associated with two conceptions of the world being carried out in a rhizomatic way in the world space. The analysis of technopolitical networks is urgent to illuminate public regulatory policies, in protection of democratic institutions and to focus on the formulation and implementation of public policies for the regulation of socio-technical networks, to place limits on the exercise of information technology corporations, their platforms and techno-political networks that are destroying the foundations of democracy.

Keywords: Twitter, technopolitical network, political polarization, authoritarianism, democracy

1 Instituto de Pesquisa e Planejamento Urbano e Regional, Universidade Federal do Rio de Janeiro, Brazil, tamaraegler [at] gmail.com
2 Instituto de Pesquisa e Planejamento Urbano e Regional, Universidade Federal do Rio de Janeiro, Brazil, thiago150297 [at] gmail.com
3 Instituto de Pesquisa e Planejamento Urbano e Regional, Universidade Federal do Rio de Janeiro, Brazil, j.salmenton [at] gmail.com
4 Retired researcher, d.m.cohen [at] terra.com.br

Introduction

What is the importance of the Twitter platform in political power relations? We will advance towards an answer throughout the reading of the article. It focuses on the analysis of the technopolitical networks that were formed on the Twitter platform during 2022, in the context that preceded the elections for the Presidency of the Republic of Brazil, which pitted Luiz Ignacio Lula da Silva and Jair Bolsonaro against each other. The starting point of the research identified 13 events considered important in the period from March 2022 to January 2023. For each event, it was possible to produce a graph representing the architecture of communication between tweets and retweets. It was necessary to study the narratives of the enunciation and dissemination processes, and we were therby able to recognize the sense and meanings of the narratives and to analyze the different fields that structure the technopolitical network.

The Brazilian political scenario in the pre-election context of 2022 was marked by a strong polarization, evidencing strong hostility towards both opponents and democratic institutions and their symbols. This hostility manifested itself on social media and also in everyday relationships, tainting public speeches and private interactions with growing tensions.

The dispute between Jair Bolsonaro and Luiz Inácio Lula da Silva was not just a clash between two government projects. It became a broader symbolic struggle, representing distinct worldviews that permeate Brazilian reality. In many narratives, the candidates ceased to be just public figures and began to embody, for their most fervent supporters, a true struggle between "good" and "evil". The political debate, thus, became a field of intense emotional disputes, crossed by fears, resentments and deep loyalties.

This conflict was expressed in several episodes throughout the period, one of the most emblematic being the tragic murder of Marcelo Arruda, in July of that year. A member of the Workers' Party and a municipal guard in Foz do Iguaçu, Marcelo was killed during his birthday party — decorated with PT and then-candidate Lula themes — by a supporter of Jair Bolsonaro. While progressive sectors denounced the crime as a direct result of the hate speech frequently uttered by Bolsonaro and his allies, conservative sectors, while repudiating the episode, insisted on treating it as a personal conflict, seeking to disassociate it from political motivations.

The radicalization of the debate was amplified by a series of speeches that encouraged confrontation, many arriving from the acting president himself. The defense of civilian armament, the representation of "leftist" opponents as enemies to be fought, and the successive attacks on democratic institutions and science consolidated a hostile environment, in which the symbolic clash often overflowed into concrete violence.

Tweet comes from the English verb "to tweet," which means "to chirp" or "sing", like a bird. That is why the name of the platform was conceived to represent the idea of small, short and quick messages, similar to the chirps of a bird. It is one of the most important platforms in the world. It is currently widely used for the rapid dissemination of information and plays a significant role in social and political communication, journalism and entertainment. It allows its users to follow each other so to receive updates, and it uses algorithms to personalize users' feeds based on their interactions and interests.

Its unique format is short messages, limited to 280 characters. Users can post tweets, which are text messages, as well as include links, images and videos. They can also interact with other people's tweets through retweets, likes and comments. For the purpose of this study, the research identified the actors who "tweeted" the narratives and those who "retweeted", in order to analyze the main senses and meanings they enunciate. This involved examining the relationship between the individual and the collective. Freud (2011) explains that there is a difference between individual and collective subjectivity. The technical functioning of social networks allows leaders' statements to influence and attract a large number of individuals that form a collective.

Regarding the relevance of the platform, it has approximately 450 million monthly active users, which places it among the most important platforms. On average, around 42% of monthly active users access Twitter daily. Most tend to be younger, mostly male, with a strong presence in the 18-

29 age group[1]. It generates billions of dollars annually; Twitter's advertising revenue in the US, for example, was approximately US$1.70 billion in 2022[2].

It is a representation of communication that circulates in the world and forms a tangle of narratives, in which around 500 million tweets are recorded every day, focusing on different fields, such as politics, entertainment, and advances in computer science, just to mention the most important[3]. This forms sociotechnical networks, known as *fields* (Bourdieu, 1998) because they gather individuals around shared ways of thinking, being, and acting. It is one of the main forums for political debate, in which politicians, analysts, and ordinary citizens share their opinions, news, and comments on the main facts in each field.

Traditional disciplines are not sufficient to examine the complexity of technopolitical networks, so interdisciplinary dialogue is necessary. The method starts by associating researchers from different areas to achieve multidisciplinarity and interdisciplinarity, and to make the necessary articulation between theories, categories, and concepts from computer science and social sciences. To decouple the object and recognize its specificities, such as: computer science, to read and examine its platforms and algorithms; and social science to analyze political facts and their narratives. These platforms require the emergence of an epistemology that promotes the interaction of theories, categories and concepts from disciplines such as computer science, politics and communication. To study the complex reality in which we live.

Social networks bring together technical and social knowledge in the same totality. Their analysis requires multidisciplinary and interdisciplinary approaches to give them meaning. The essence of our contribution is to read the technopolitical network, represented in Graphs, based on an analysis that included the foundations of the social theory formulated by Bourdieu in Social Network Analysis (SNA). At the same time, our objective was to find meaning in the narratives that flowed in the network, and for this we used Corpus Theory, which guided us in analyzing the regularity of words that existed in the Twitter platform database. This made it possible to count the number of times the word was used, in order to interpret the meaning of collective subjectivity.

Our methodological objective is to produce technical processes and procedures that allow data collection, allowing for representation in graphs, in order to analyze technopolitical networks. To achieve this objective, the following steps were carried out:

- Access and download the Twitter database on facts considered emblematic.

- Use the Netlytic computer program to extract data from the Twitter platform.

- Apply the Gephi computer program to represent technopolitical networks.

- Analysis of the data extracted from the platform.

- Identify the agents, subjects, individuals and groups and their narratives.

- Decipher, recognize and document the groups that identify themselves through ways of thinking, doing and being and that participate in sociotechnical networks.

The application of the Gephi and Netlytic programs helps to visualize the relationships that are formed in the architecture of technopolitical networks. This is only part of the methodology we use to represent the graphs, and our main objective is to analyze the formation of collective subjectivity, which attributes political power in technopolitical networks. To do so, it was necessary to go further, to identify fields, identify influencers, analyze their tweets, count followers and their retweets, identify algorithm manipulation, observe the formation of groups and their power of influence. In order to analyze the subjectivity and collectiveness, associated with the historical facts that preceded the 2022 elections. And to attribute political power to the Twitter platform.

The turning point is seen in the extraction of data from the platform, when it was possible to obtain data on tweets and retweets, influencers, followers, narrative contents, author location and their

---

1 In: https://www.agenciamestre.com/redes-sociais/estatisticas-twitter-brasil/

2   https://revistapegn.globo.com/Tecnologia/noticia/2022/02/twitter-tem-salto-na-receita-com-novos-usuarios-e-impacto-modesto-de-mudancas-da-apple.html

3 https://pt.semrush.com/blog/usuarios-twitter/

biographies, to name the most important. data was gathered in a table that presented the main messages of all the statements made about the fact under scrutiny. It was possible to access around 100 thousand messages for each examined fact. Below is an example of the table and data we obtained.

Table 1. Data extracted from the platform

author	title	pubdate	retweet_count	lang	tweet_type	retweeted_screen_name	user_statuses_count	user_friends_count	user_followers_count	user_created_at
alt_corinthiano	RT @brunelianebrum: Execução de Dom Phillps e Bruno Pe	2022-06-20 10:45:54	131	pt	retweet	brunelianebrum	24600	1112	347	2009-08-25 20:15:21
Pedro_Chibe	RT @pirescarol: Agora, em Brasília, @caetanoveloso pede p	2022-06-20 10:45:47	849	pt	retweet	pirescarol	1211	35	9	2021-05-25 17:52:48
Robson_Costa88	RT @CoronelTadeu: Narcotraficante foi o mandatário das m Aristas usam drogas, portanto idolatram tra...	2022-06-20 10:45:45	1239	pt	retweet	CoronelTadeu	71325	1285	1068	2019-06-20 23:36:51
Izzymel	RT @blaescneva: Que ninguém se engane: o principal respo	2022-06-20 10:45:37	1422	pt	retweet	blaescneva	11621	348	109	2009-05-28 16:39:43
CafeVerena	RT @Hedibe49136857: BARROSO SOBRE AS MORTES D Vivemos um momento de selvageria: o país adoecau moral	2022-06-20 10:45:28	710	pt	retweet	Hedibe49136857	432	86	2	2015-03-30 09:28:39
BR12westminster	RT @cirogomes: O @igor_3k, um dos criadores do podcast	2022-06-20 10:45:13	340	pt	retweet	cirogomes	6905	3862	2148	2021-04-21 13:31:40
mvscosmo	RT @cirogomes: O @igor_3k, um dos criadores do podcast	2022-06-20 10:45:10	340	pt	retweet	cirogomes	14635	1074	534	2009-06-23 20:10:42
Rangel_Lucia	RT @ManuelaDavila: Chico Mendes, Dorothy Stang, Paulo C	2022-06-20 10:45:07	54	pt	retweet	ManuelaDavila	450557	2136	4504	2011-10-26 20:04:15
DarnabikO	RT @cirogomes: O @igor_3k, um dos criadores do podcast	2022-06-20 10:45:02	340	pt	retweet	cirogomes	415	619	255	2022-04-11 22:21:12
eusebio_me	RT @guardian: In his own words: Dom Phillps' reporting on N	2022-06-20 10:45:00	157	en	retweet	guardian	14306	1242	827	2022-04-19 10:13:08
aleonca	RT @IFEXALC: .@IFEXALC & @IFEXALC se solidariza	2022-06-20 10:44:50	1	es	retweet	IFEXALC	37565	2353	17706	2009-07-09 20:48:48
roller_ju	RT @FelipeSaudzir2: @leandronuschel De acordo com o gr	2022-06-20 10:44:45	1	pt	retweet	FelipeSaudzir2	198537	651	1101	2011-08-28 17:03:51
Carlos.grupon8	RT @ContaratoSenado: Apresentei, no @SenadoFederal, ve	2022-06-20 10:44:44	18	pt	retweet	ContaratoSenado	264256	1865	4548	2012-04-28 21:34:19
arnalinfra5	RT @blaescneva: Que ninguém se engane: o principal respo	2022-06-20 10:44:41	1422	pt	retweet	blaescneva	125891	1662	1478	2016-04-16 15:59:01
eusebio_me	RT @itvnews: Remains of UK journalist Dom Phillps formally	2022-06-20 10:44:37	18	en	retweet	itvnews	14306	1242	827	2022-04-19 10:13:08
olintochique	RT @CoronelTadeu: Narcotraficante foi o mandatário das m Aristas usam drogas, portanto idolatram tra...	2022-06-20 10:44:25	1239	pt	retweet	CoronelTadeu	15797	4964	2633	2011-05-14 21:35:50
eusebio_me	RT @Telegraph: 🔴 Brazilian police on Friday night officially p	2022-06-20 10:44:23	11	en	retweet	Telegraph	14306	1242	827	2022-04-19 10:13:08
RenataQ2097005	RT @CoronelTadeu: Narcotraficante foi o mandatário das m Aristas usam drogas, portanto idolatram tra...	2022-06-20 10:44:01	1239	pt	retweet	CoronelTadeu	14748	376	205	2021-05-29 14:44:12
eusebio_me	RT @thejpaper: Forensic tests confirm remains found in Ama	2022-06-20 10:44:01	11	en	retweet	thejpaper	14306	1242	827	2022-04-19 10:13:08
_vitoria_1999	RT @cirogomes: O @igor_3k, um dos criadores do podcast	2022-06-20 10:43:59	340	pt	retweet	cirogomes	67	391	296	2022-06-13 17:11:20
FabresCarla	RT @augustosnunes: Lula tenta culpar Bolsonaro pelos assa	2022-06-20 10:43:59	2423	pt	retweet	augustosnunes	18950	2846	2312	2018-12-18 16:04:15
eusebio_me	RT @guardiannews: In his own words: Dom Phillps' reportin	2022-06-20 10:43:43	27	en	retweet	guardiannews	14306	1242	827	2022-04-19 10:13:08
eusebio_me	RT @guardiannews: Brazilian police say suspects in killing o	2022-06-20 10:43:36	10	en	retweet	guardiannews	14306	1242	827	2022-04-19 10:13:08
AnaHelenaCorrea	RT @BingdoNoblal: Por que os bolsonaristas acham que nen	2022-06-20 10:43:19	397	pt	retweet	BingdoNoblal	3239	261	42	2010-09-24 18:56:36

Source: data extracted from Twitter platform on 06/20/2022

The main goal was to analyze the debate in the political field, to identify the main authors of the narratives, who publish tweets, known as influencers, and to examine their ability to produce diffusion through the number of followers who retweet. Every week, the main political events were identified and, to do so, the number of hashtags published on the platform, which guided the breakdown of the main event of the period under analysis, were observed. In total, thirteen (13) technopolitical networks were produced to represent the main political events identified by the research.

Technopolitical network on the Twitter platform

Twitter is a platform that allows the organization of sociotechnical networks. It organizes actors who post tweets, experts in posting narratives, and others who retweet, which brings people together around a theme, gives it a common meaning which brings communities together forming identity bubbles. It is about identifying who posts, what they post, and who reproduces this post, multiplying its reach on the social network.

How does computer engineering transform political practices and redefine ways of organizing society? This is the question that drives us. To get answers, it was necessary to identify methodologies, processes, and procedures to analyze the political complexity in the current historical context. In other words, to make the analytical articulation of the platform's control over the modes of communication between influencers and followers, that is, between computing operations and political practices. We start demonstrating using a graph associated with the murder of Dom Phillips and Bruno Pereira.

Graf 1. Network of the murder of Dom Philips and Bruno Pereira– 06/20/2022

- ● Conservadores
- ● Progressistas
- ● Progressistas - internacionais
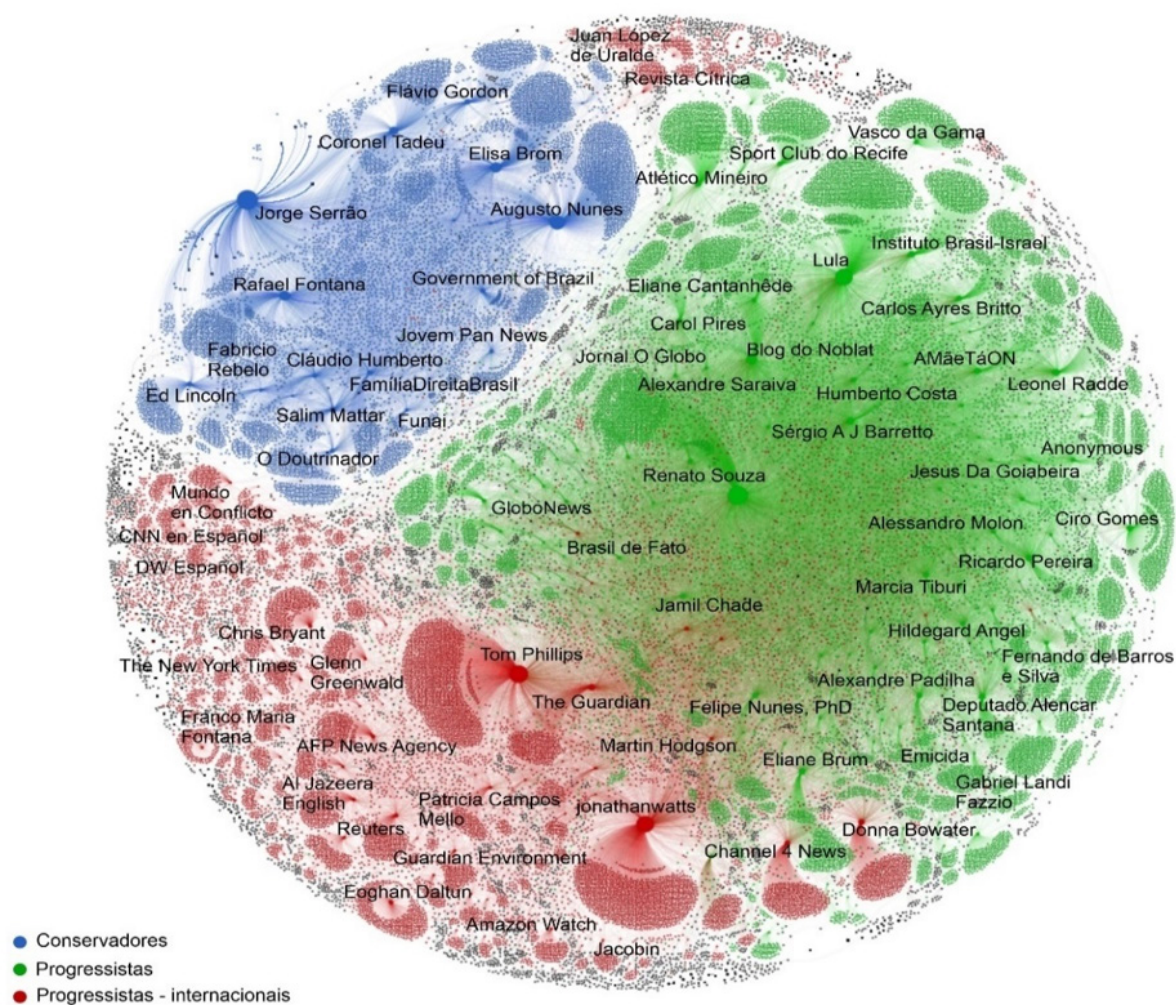
Two computer programs were used to represent the graphs: Netlytic and Gephi. The first allows data extraction, while the second allows data computation and representation in a network. This makes it possible to identify tweets and retweets in order to analyze the architecture of communication, observe their meanings and significance, and identify those who enunciate conservative and progressive narratives. This bears the identification of those who enunciate facts and others who enunciate narratives devoid of any references to reality. The result is the formation of two fields: the progressive field formed by Brazilian influencers, in green, and international in red. The conservative field is in blue. We have a polarization and a divide of society into bubbles. These conflicts are artificially produced under the baton of computer corporations that aim to achieve neoliberalism objectives. Built on political values, they reflect an emphasis on economic efficiency, individual freedom, and minimization of the role of government in the economy, leading to a fragmentation of the social fabric. They promote the polarization of the social fabric in order to produce the fragmentation of relevant public policy programs, where social issues become rivals defined by different cultural values, while structuring transformations do not find an effectiveness capable of producing cohesion in the collective social consciousness around a project for the country (Costa, 2021, p.35).

This methodology allows us to observe the network from above, producing a map that makes it possible to identify the main influencers and followers. This representation is very important for us, because it represents the technopolitical network formed around this political fact. We can read who are the main influencers and which narratives are most widespread, authorizing us to represent a mosaic of actors, articulated by narratives that form the network. At the same time, with the extracted data we can build tables in which we identify the senses and meanings of the

narratives, which allowed us to separate the authoritarian and democratic fields. In other words, we can make the invisible visible.

Table 2 shows the most important authors of the narratives[4], and quantitative data on tweets and retweets, so we may advance the analysis. And in Table 3 we have the progressive influencers of foreign origin. The last table, Table 4, shows the presence of conservative influencers.

Table 2. Progressive tweets, narratives e retweets

Name	tweet	retweets
Emicida	My condolences to the families of Bruno Pereira and Dom Phillips. Living (or trying to survive) in brazil (with a lowercase b) has been an experience that means receiving more misfortunes than one can process every day. My condolences to everyone.	2800
Marcia Tiburi	Bruno Pereira and Dom Phillips were executed in the current government's war against the Amazon rainforest and those who defend it. The president of Brazil supports illegal mining and tramples on the dead. This is Bolsonaro's Brazil. The killing and destruction cannot continue.	2452
Fernando de Barros e Silva	The way Bolsonaro referred to Dom Phillips in an interview with that woman who was once a journalist is the stuff of psychopaths. Brazil has a perverse psychopath in cahoots with all kinds of illegalities in the presidency of the Republic. That is what this is all about.	1861
Lula	The confirmation of the murder of Bruno Pereira and Dom Phillips is news that causes pain and indignation. Solidarity with their families and friends. What is required now is a rigorous investigation of the crime. Bruno and Dom will live in the hope of a better world. https://t.co/FQ8Rk3eT7B	1845
Renato Souza	ATTENTION: The United States is calling for Brazil to be "held accountable" for the murders of journalist Dom Phillips and indigenous rights activist Bruno Araújo, reports AFP.	1689
Eliane Brum	Malu Mader asks: where are Bruno Pereira and Dom Phillips? https://t.co/7iqIhcInjY	1678
Anonymous [Brasil]	Dom Phillips and Bruno Araújo Pereira were threatened, persecuted, tortured, burned and buried. For defending the Amazon. This crime bears the fingerprints of Bolsonaro's militias. We will not forget.	1559
Blog do Noblat	Bolsonaro says that Dom Phillips should have "doubled his attention" because he was "disliked" by miners. For Bolsonaro, the blame never lies with those who kill, but with those who die.	1245
Atletico Mineiro	Atlético regrets the murder of indigenous rights activist Bruno Pereira and journalist Dom Phillips in Amazonas. In 2013, Dom reported on Atlético's saga in winning the Libertadores Cup for a British newspaper, showing the world the passion of the Atlético fans. https://t.co/v9hBoOW36T	944
Alessandro Molon	Amid investigations into the murder of indigenous activist Bruno Pereira and British journalist Dom Phillips in the Amazon, Bolsonaro mocks and decides to keep the motorcycle rally in Manaus. Disgusting mockery!	499
Jamil Chade	The deaths of Bruno Pereira and Dom Phillips deepen international unrest and could "bury" any attempt by Jair Bolsonaro's government to gain a foothold abroad. https://t.co/aNDdTUbZ50	458

Tabela 3. International progressive tweets, narratives, retweets

name	tweet	retweets
Tom Phillips	My friend and colleague @domphillips has disappeared while reporting in the Brazilian Amazon with a leading indigenous expert Bruno Pereira, just days after receiving threats. Extraordinarily worrying. Please share as widely as possible. https://t.co/hvL7PW2zeb	6247
Jonathan Watts	Dom Phillips, a superb journalist, regular contributor to @guardian, and great friend, is missing in Javari Valley of Amazon after death threats to his indigenista companion, Bruno Pereira, who is also missing. Calling on Brazilian authorities to urgently launch search operation.	4494
Donna Bowater	Surreal to watch Brazilian authorities congratulate themselves on the search for Dom Phillips and Bruno Pereira in a press conference to announce the discovery of human remains.	3244
Channel 4 News	This is the moment an Indigenous rescue team find blood-stained clothes they recognise as belonging to Bruno Pereira, the Indigenous expert who went missing with UK journalist Dom Phillips in the Amazon more than a week ago. @GuillermoGaldos was there when they made the find. https://t.co/1d7AEUZzkW	1819
Martin Hodgson	"Democracy and Brazil can no longer tolerate hatred and contempt for the values of civilisation. Bruno and Dom will live in our memory – and in the hope of a better world". https://t.co/KeYNMcIwjg	758
AFP News Agency	UN, environmental and rights groups express outrage at the murder of British journalist Dom Phillips and Indigenous expert Bruno Pereira. Groups blame the murders on Brazil President Bolsonaro's willingness to allow commercial exploitation of the Amazon https://t.co/BMFVSYhM8C https://t.co/SSzW8SCaGw	150

---

4 This is just an example, part of the general table, where the main influencers are identified through their tweets and retweets, which is valid for tables 2, 3 and 4

Tabela 4. Conservative tweets, narrativas e retweets

name	tweet	retweets
Jorge Serrão	Contrary to the claims of the Federal Police, Peruvian drug trafficker Rubens Villar Coelho, alias "Colombia", was the one who had journalist Dom Phillips and indigenist Bruno Pereira tied to a tree, tortured, murdered and eviscerated. Doesn't the left criticize when the drug traffickers kill?	3473
Salim Mattar	Minister Barroso of the Supreme Federal Court gave the federal government 5 days to present measures regarding the disappearance of journalist Dom Phillips and indigenist Bruno Pereira. I think that some ministers are exceeding themselves and their activism is going beyond the Constitution	2671
Augusto Nunes	Lula tries to blame Bolsonaro for the murders of Bruno Pereira and Dom Phillips. He is a well-known corpse gouger. When he was President, the military working in the Amazon demanded a 3rd helicopter and couldn't get it https://t.co/SriC8LUBaU	2430
Elisa Brom	In 13 days, "Bolsonaro's PF", as they like to say, found the Executioner and 2 suspects involved in the murders of indigenist Bruno Pereira and British journalist Dom Phillips. Nobody finds out who ordered the murder of: -20 years old Celso Daniel -21 years old Toninho do PT - 3 years Bolsonaro	1261
O Doutrinador	23:59 - Brazilian Jean Charles, mistaken for a terrorist on the London subway, is executed with 7 shots. All the police officers were decorated, acquitted and the family was denied compensation. 00:00 - Dom Phillips was murdered. We DEMAND a response and an apology from Bozo.	1317
FamiliaDireitaBrasil	Arthur Lira annulled though administrative act the summons of the Minister of Justice, Anderson Torres, to explain to the Chamber's Human Rights Commission the actions being taken by the federal government to find indigenist Bruno Pereira and journalist Dom Phillips.	778

As seen in the tables, it was possible to identify Brazilian conservatives, progressives, and foreigners who participated in the debate. At the same time, we accessed the dissemination of narratives, tweets, and the number of retweets. The greater the number of retweets, the greater the influencer's media capital on the network. In short, access to the database allows the identification of influencers and their narratives.

The heinous murder of two environmentalists provoked a wave of protests, which widely mobilized society. We can therefore affirm that the political or progressive field, allied with the international, defined a collective subjectivity favorable to the protection of researchers, and moved social emotion towards the defense of a progressive society. This is an important analytical result, associated with the importance of facts that happen in the real world and can move and mobilize the social fabric.

When the British journalist Dom Phillips and the Brazilian indigenist activist Bruno Pereira were murdered in June 2022, there was a broad debate, with the participation of national and international actors. Phillips, a contributor to media such as The Guardian, and Pereira, a licensed employee of the National Indian Foundation (Funai), disappeared during a trip through the Javari Valley, known for conflicts involving illegal fishermen, miners and loggers.

From this fact, it was possible to produce Graph 1 shown above. In blue, we highlight the influencers who enunciate narratives in favor of the government, of then-President Jair Bolsonaro. They are dedicated to valuing the government's actions, blaming alleged drug traffickers who were operating in the Javari Valley region, a remote region in the Amazon. In green, we show the progressive influencers who spoke out critically about this murder, associating the fact with the policies of the Bolsonaro government at the time, for having dismantled mechanisms and institutions that monitor and protect the Amazon. In red, we identify international agents who report the fact to the world. Among those who stand out are British news agents, such as The Guardian. The fact that Dom Phillips is an English citizen gave international visibility to the murder. As we can see in the graph, this network of international journalists is associated with a narrative critical of the Bolsonaro government.

The press reported that both were working on a project to monitor indigenous lands and collect information for a book about preserving the forest. The disappearance occurred after a meeting with a community leader, and concerns about their safety soon arose, exacerbated by threats Pereira had already received from illegal groups in the region. Investigations quickly identified suspects: Amarildo da Costa Oliveira, known as "Pelado", and his brother, Oseny da Costa de Oliveira. "Pelado" soon confessed to his involvement in the murders, leading authorities to the site where the bodies were buried[5].

_____

5 https://www.bbc.com/portuguese/brasil-61865523-

International repercussion was intense, with global media outlets pressuring the Brazilian government to take more effective and immediate action. Editors of major newspapers sent an open letter to then-President Jair Bolsonaro, expressing their concerns and demanding more efforts in the searches and investigations. The incident exposed not only the violence in the Amazon, but also the vulnerability of environmental defenders and journalists in the region, clamoring for the need for greater protection and stricter policies against illegal activities in the forest.

Data analysis allows us to identify the main actors that influence political action and their fields that define the polarization between authoritarianism and democracy. As we can see in the graph, this methodology allows us to identify influencers from both fields. Based on tweets and retweets, we can determine the importance of the influencer, with the number of retweets revealing the most widely disseminated. Therefore, it allows us to map and identify the main leaders that drive political polarization in Brazil. It is equally important to note that there are communication flows that articulate technopolitical networks that support authoritarian and/or democratic action. The political field is constantly changing, requiring an analysis that values the existence of technopolitical networks, far beyond the traditional arenas of politics such as political parties and unions.

Technical and sociopolitical dimension of the platform

Each platform has a particular way of operating. Twitter's main characteristic is its limitation of 280 characters per tweet, enabling a summarized direction of the action in order to ensure the swift pace of digitalization processes – which require rapid updates and timely messages[6]. It is mainly used by actors in the political and media fields to disseminate information in real time and produce instant information on facts. No less important is to understand how tweets and retweets produce public interactivity, forming a tangle of widely accessible information, in which interests are defended based on different value structures.

It is also interesting to observe the use of hashtags, how they are counted on certain facts, in each situation. This produces the attraction of actors who join the debate and form the identity groups that participate in the sociotechnical network. By observing the numbers, it becomes possible to identify the effects of each fact, read into the narratives, and their results on collective subjectivity. The greater the number of hashtags, the greater their impact on the collective field that shares their values, whether conservative or progressive, and allows an analysis of trends regarding the advances and setbacks of democracy or authoritarianism.

In addition, it is a synthesis in the instantaneous messages of time, in the digital political public space, in which influencers articulate themselves by enunciating tweets and their followers retweeting. They form a network of communication threads that expands rhizomatically and defines the direction of politics. Throughout the year of data collection and analysis, it was possible to follow political developments, read and analyze the ability of influencers to produce narratives, observe their ability to form political opinions, to outline the important polarization between the extreme right and the left in Brazil. It is a battle of narratives between those associated with an authoritarian value structure and those associated with a democratic one.

We applied the method of organizing thought proposed by Bourdieu *et al.* (2005, pp. 27-35) and Ana Clara Torres Ribeiro (2012). It involved *decoupage* – that is, cropping out the object of knowledge – for the necessary task of identifying the platforms of their technical dimension and their social dimension. The aim was to produce an analysis capable of articulating them. To construct the theoretical object, the challenge was to promote the path of acknowledged authors in the field, to survey the state of the art and to establish the necessary dialogue for scientific work.

To perform this analysis, we divided the object into two axes: the first examined computer science read in the platform operating mode, and its algorithms. Its technical dimension is formed by the unification of mathematical and computer data, processors, computers, and technical networks. The sociopolitical dimension is formed by political facts, symbolic systems, the sense and meaning of the narratives enunciated on the platform, the density of its dissemination and forms of political participation.

---

6 https://canaltech.com.br/empresa/twitter/

This connection between computer science and social science had already been examined and analyzed by sociologist Bruno Latour (2012, pp. 19-28). When he formulated the actor-network theory, he recognized the relationships between humans and non-humans as a social and scientific phenomenon. He recommended the analysis of complex networks of participants, which articulate objects, technologies and institutions and play active roles in the configuration of social relationships.

Technical dimension

It is necessary to understand how the platform and its algorithms work in order to examine this polarization. Advances in computer science made the construction of platforms and the design of algorithms possible, building a software engineering that produces a way of functioning for the publication of narratives that define social relations. In other words, it defines who we speak to, how we publish, and who can access the published narrative. We can see these relations, for example, on WhatsApp, because it is the group coordinator's decision to include members or not. In the case of Facebook, it is proposed that we can publish content, and it is our decision to open or close access. On Twitter, messages must be short, and their importance will be determined by influencers. They are the ones who publish tweets, and retweets are produced by followers, resulting in the network of narratives that form the system defining the importance of the influencer and their narrative on the network. In other words, these data help us analyze the importance of the engineering that shapes social relations (Latour, 2012, pp. 148- 165), as well as the formation of fields that produce cohesion among the group that identifies itself through shared ways of thinking, reading and acting, as formulated by Bourdieu (1998; 2005).

What is an algorithm? It is a sequence of mathematical instructions that guide the processing of data that follow a logical order, with the aim of executing tasks. It predicts human behavior, which Shoshana Zuboff (2000) calls behavioral future markets. In other words, algorithms can anticipate the actions of individuals, because they produce predictive products. In her analysis, she reveals that they are capable of persuading, influencing and shaping behaviors to obtain results that accumulate political or economic power. In other words, they identify our personalities and emotions, whether to buy goods or to associate with one candidate or another. Algorithms define what the main narratives are and who participates in polarized fields.

We can imagine the power of platforms that identify the content of messages and their meanings and disseminate them to those who share the same meaning. Categories of narratives and categories of social groups are created. When individuals are instrumentally connected to form social identity groups, they associate because they share the same subjectivity. This allows us to analyze the complexity of the ongoing processes, which explains the formation of two polarized groups, each associated with a field.

No less important are the specificities in the design of the algorithms that take on the task of constructing the fields. The control of the algorithms manipulates the messages and forms two discourses, so to structure two conflicting fields, which leads to political instability, war and death. Just recall the civil war in Rwanda, when, in the confrontation between two senses of the world, 800 thousand people died[7]. Or when the then President of Brazil, Jair Bolsonaro, in the context of the pandemic, campaigned for chloroquine: "A miracle...it saves lives". This behaviour minimized the severity of the virus, and the fight against Covid-19, which lead people to take that drug. Contesting the need to follow the recommendations of health organizations and scientists – such as social isolation and the use of masks – it resulted in the death of more than 700 thousand people (Barbosa, 2023, pp. 54). Under these views, the limits of life are not respected, everyone transgresses, there is an instrumentalization of life, destruction of bodies and populations. They defines who can live and who must die, as analyzed by Mbembe (2019, pp. 56-78).

---

7 Documentary by Karim Amer and Jehane Noujaim, *Privacidade Hackeada*. Produced by Geralyn White Dreyfous, Judy Korin, Karim Amer, Lisa Kleiner Chanoff. Estados Unidos: Netflix, 2019. 1 vídeo (113 min).

Social dimension

Regarding the social dimension, narratives represent symbolic systems. They are instruments of knowledge, communication and political power. Narratives construct reality, to give meaning to the social world. Because they formulate a homogeneous conception of facts, it enables agreement between intelligences producing social aggregation. As we can read in the graphs, there are two narratives that seek to produce consensus, to make subjectivities agree and thus establish their political power. Symbolic systems have a political function of imposing and legitimizing domination of one field over the other field. It is about defending the interests of those who exercise symbolic power. It produces a collective subjectivity over the natural and social order. It is the result of a strategy to produce a belief to "make people see and believe". It is about power imposing a way of thinking about the world and producing domination (Bourdieu *et al.*, 2005, pp. 34-43).

No less important is knowing that computer systems make it possible to read the particularities of the digitized image and the use of tools that alter the gestures, clothing, smiles and speech of characters manipulating the sense of reality. When any narrative can be enunciated, it allows the emergence of the phenomenon of fake news. These are fictional narratives that, when circulating freely in sociotechnical networks, produce misinformation and create a parallel reality (Rocha, 2021, pp. 28-29), in the sense of producing a collective subjectivity that bears little or no relation to objective reality and guides political action based on an understanding associated with a reality that does not exist.

Cultural values in conflict

As we have seen, the two poles defend opposing narratives and, when confronted in a conflict, form a political action in technopolitical networks. Ana Clara Torres Ribeiro's (2012, pp. 63-69) theory of Cartography of Action illuminates our analytical capacity as it seeks to design the new systematicities arising from social practices, to propose research and the analytical unraveling of sociopolitical struggles. In this sense it recognizes the conflict that acts in the formation of social reality. This theory can be used to analyze technopolitical networks, since the world is facing innovative forms of sociopolitical struggle.

While we observe the process of digitalization and its particular forms of accumulation, led by big techs, the possibilities of social participation in politics are expanding. We must consider that the process of digitalization affects social action in the political field. Claims are associated with ethical and moral principles that form a structure of values to symbolize different ways of being, thinking, doing politics and intervening in social reality.

This allows us to analytically unravel the conflict in the technopolitical network. It involves identifying and recognizing the conflict between two forms of social participation in politics, the first associated with an authoritarian value structure and the second democratic. This defines a conflict between two fields that shape social reality. This is very important because we observe conflict between two political fields. Both are formed by an association between agents and subjects that represent the same fields that we extract from social reality. Better, we can identify individuals who represent politicians, media professionals, businesspeople and professionals who participate in the fields in conflict.

In this context, conflict is defined by a set of cultural values of vision and division of the world. There are two distinct groups, united by their agreement of subjectivities, which form a collective that gives common meaning to political action.

The conservative field, which defends a homogeneous national identity, emphasizes the preservation of cultural traditions and national values. They oppose those who are different and are hostile towards immigrants and ethnic or religious minorities. On social issues, they are critical of changes in gender roles, LGBTQ+ rights, and issues related to morality and family. They favor a more authoritarian form of government, which includes restrictions on civil freedom, and the strengthening of police power to maintain order and security.

On the other hand, the democratic field is founded on principles of social, political and economic equality. The social dimension focuses on the promotion of civil and political rights, gender equality and social inclusion. In terms of economy, it proposes income distribution and the elimination of gender differences in terms of salaries. And, in politics, broad social participation, decentralization and democratization of political processes and procedures in all areas. It prioritizes the role of the State and democratic management for the formulation of public policies.

This polarization has a direct impact on the conditions of social existence: on one side, there is the defense of democratic values, which recognize State institutions as structures of democracy and social well-being; and, on the other side, there is the search for the destruction of the foundations of democracy, denying public welfare policies in order to value market action and individual potential, without neglecting its moral foundations, which defend female subordination, the prohibition of same-sex love relationships, racism and xenophobia against immigrants.

In other words, polarization produces a conflict between one side – a social action that defends democracy – and the other side – a social action that defends moral and retrograde principles that were previously hidden. Our challenge is to follow the unfolding of the conflict and contribute to the analysis of political relations in the current technologically advanced historical context, in order to outline the contours of the political hegemony that is achieved through symbolic structures, forming a hegemonic discourse that defines the ways in which social reality is structured.

Hence, in the conflict opposing the two fields constituted by two technopolitical networks, formed with broad social participation, two opposing value structures are defended in order to advocate a proposal for society. We are no longer talking about a conflict between capital and labor, nor between the State and Social Movements. It is rather a conflict around different value structures concerning perspectives over social reality.

The novelty is that, very early on, the global far right realized the sociotechnical networks potential to spread its conservative, retrograde ideology, supported by a political action enunciating hatred and valorizing violence (Tiburi, 2019). More recently, the progressive field began to observe the importance of networks in the formation of the digitalized public space and initiated a process of confronting fake news, disinformation and their effects on politics.

This problem is on the agenda, since the current historical context requires facing the conflict between two ways of conceiving the world: the first, associated with the knowledge produced by science, supported by existing facts and the defense of socially agreed principles by the society, and the second one, associated with the fictitious symbolic formulation, supported by authoritarian ideologies that emanate hatred, violence and death. It has no relation to what exists in the reality of the present and frays the social fabric and the emergence of violence.

Political polarization makes it especially relevant to value action and to recognize the transformations in the cultural references that guide political action (Ribeiro, 2012, pp.73-78). The intense process of digitalization produced by computer corporations, which inaugurates innovative forms of political relations, requires an epistemological redefinition of categories and concepts to carry out its analysis (Martins, 2015, pp. 187-214). One cannot do without an analysis in which computer systems have been acting to decisively transform society and politics.

We cannot fail to note, at each historical moment, how the poles of formation of what becomes popular will are redefined. We can recall the classic analysis that observes the rise and fall of the Church, schools, radio, television and now the Internet. The analysis that reveals how technopolitical networks play an important role in the formation of what is popular will is unequivocal.

Therefore, there is an urgent need to redefine social science in the context of an increasingly digitalized society that is profoundly transforming forms of social cohesion (Tomaél & Marteleto, 2015, pp. 16-21). It requires research that considers the digitalization of political communication relations and the formation of fields, as proposed by Bourdieu (1999, 2005). To enable us to decode this new world and allow the enunciation of an analysis that accounts for the identification of new social subjects and political actors as computer corporations begin to play an important role in the formation of collective subjectivity, free will and the production of polarization.

This analytical direction allowed us to analyze the technopolitical network and the process of political

polarization that took hold in Brazil during the months leading up to the October elections for the Presidency of the Republic, in 2022. Throughout the research, and based on the analysis of key facts, it was possible to represent the graphs and the flow of communication, and it was possible to reveal the main names of the influencers associated with both fields.

Analytical results

Our analysis led to the identification of the main influencers in this context, both from the far right and the left, and confirming our hypothesis that it is possible to follow the political debate and identify its key actors. It became clear that new public policies for regulating the Internet and social networks are necessary and should be formulated. Similarly, the actions by all those who participate in the networks to defend democracy should be valued.

The use of data science allowed us to identify subjectivities and desires of human beings to massively disseminate messages that manipulate emotions and political action for the benefit of private interests (Morozov, 2020, pp. 74-81; Zoboff, 2020, pp. 54-57). Currently, IT corporations, which are led by big techs, create platforms, hold the power to define algorithms, produce a process of economic accumulation and determine the possibility of social interaction.

It is important to practice control and regulation of socio-technical and techno-political networks, in order to identify influencers who command the authoritarian field, dissociated from the principles of scientific relationships, devoid of social facts and scientifically controlled objects. In the current historical context, it is impossible to ignore that the Earth is round and that vaccines save lives. Our goal was to formulate a methodology capable of producing scientific knowledge through the definition of an interdisciplinary theoretical problem backing the critical analysis of platforms, the detection and identification of imaginary narratives, fake news, which have the power to produce disinformation in collective subjectivity. Our approach thus seeks to counter the discourse manipulating political culture and bringing back obscurantism originating from a place in history when Nazism and fascism advanced.

Technopolitical networks must be considered a digital social space. They must embrace the responsibilities that are defined by law in the social space. There is no unlimited freedom; individual freedom ends where the freedom of others begins. We are certain that there is sufficient scientific knowledge to account for the complexity of the world in which we live, and it is necessary to set institutional, criminal and social limits for those who dominate the platforms and manipulate narratives devoid of references to reality. The group of researchers focused on this research has already gathered evidence that this is possible by applying the necessary interdisciplinarity: such as knowledge of computing, social science, psychology, in order to recognize their specificities and propose public policies for the common good.

That is why it is important to have a public policy creating legislation that allows access to corporate databases, which we know as GAFA (Google, Amazon, Facebook, Apple). They have the power to produce a collective subjectivity that is favorable to the commandments of the Big Tech's accumulation. They are also capable of identifying early on the fictitious narratives that are destroying the foundations of a democratic society.

Finally, based on the analytical results achieved, policies of control and regulation of the technologically driven public space should be proposed, to set limits on the platforms that produce narrative manipulation, political polarization, and the fraying of the social fabric. These policies are expected to identify, prosecute, and criminalize the far right technopolitical network that is challenging the foundations of democracy. No less important is to enlarge and enhance the possibilities of public policy action to expand the technopolitical networks associated with the production of scientific knowledge, which gives support to democracy. We hope to contribute to advancing knowledge and setting limits on the exercise of computer corporations and their platforms, which form technopolitical networks that are destroying the foundations of democracy.

References

Amer, K., Noujaim, J. (2019) Privacidade Hackeada. Produção de Geralyn White Dreyfous, Judy Korin, Karim Amer, Lisa Kleiner Chanoff. Estados Unidos: Netflix, 2019. 1 vídeo (113 min).

Bourdieu, P., Chamborden, J. C., Passeron, J.-C. (2005). *Oficio de sociólogo*. Metodologia na pesquisa. Petrópolis: Vozes.

Costa, M. A. N. (2024). A polarização identitária e a pulverização programática no Brasil, Marcas da Inovação no território, vol 1. Rio de Janeiro Editora Letra Capital.

Empoli, G. (2020). *Os engenheiros do caos*. São Paulo: Vestígio.

Furtado, M. B. (2023). Desinformação e implementação de políticas no contexto das pandemias de covid-19. Monografia de graduação, GPDES/IPPUR/UFRJ.

Freud, S. (2011). *Psicolgia das massas e analise do eu*, Rio de Janeiro: Companhia das Letras.

Latour, B. (2012). *Reagregando o Social: Uma Introdução à Teoria Ator-Rede* Tradução de Maria Cristina Soares. Rio de Janeiro: Editora 34.

Lévy, P. (2010). *As tecnologias da inteligência: o futuro do pensamento na era da informática*. Rio de Janeiro: Editora 34.

Martins, P. H. (2015). Redes sociais. Como novo marco interpretativo das mobilizações. In M. I. Tomael, R. M. Marteleto (org.). *Informação e redes sociais*: interface de teorias, métodos e objetos Londrina: Eduel.

Mbembe, A. (2018). *Necropolítica*. 1. ed. São Paulo: N-1 Edições.

Morozov, E. (2020). *Big Tech*: a ascensão dos dados, e a morte da política. São Paulo: UBU Editora.

Ribeiro, A. C. T. (2012). *Sociologia do presente*: ação, técnica e espaço. Rio de Janeiro: Letra Capital.

Ribeiro, A. C. T. *et al.* (2012)*Por uma cartografia da ação*: pequeno ensaio de método, Cadernos IPPUR, Ano XV, No 2, Ago-Dez 2001, pp.33-52.

Rocha, J. C. C. (2021). *Guerra cultural e retórica do ódio*. Goiânia: Caminhos.

Santos, M. (1994). *Técnica, espaço, tempo*: globalização e meio técnico-científico informacional. São Paulo: Hucitec.

Santos, M. (2006) . *A natureza do espaço:* técnica e tempo, razão e emoção. São Paulo: Editora da Universidade de São Paulo,

Tiburi, M. (2019). *Delírio do Poder*. São Paulo: Editora Record.

Tomaél, M. I., Marteleto, R. M. (2013). Redes sociais de dois modos: aspectos conceituais. *Transformação (Campinas), 25*(3), 245-253, https://www.scielo.br/j/tinf/a/L7QwLS5RZ5JwffJ5Bxrzc4v/?format=pdf&lang=pt.

Zuboff, S. (2020). *A era do capitalismo de vigilância: a luta por um futuro humano na nova fronteira do poder*. 1ª edição. Rio de Janeiro: Intrínseca.