



Administração Pública e Gestão Social

ISSN: 2175-5787

revistaapgs@ufv.br

Universidade Federal de Viçosa

Brasil

da Silva Ferreira, Douglas; Ávila Santos, Regina
Exploring the structure of the far-right networks on Telegram: a classification
proposal to understand their division and links between communities.
Administração Pública e Gestão Social, vol. 17, no. 1, 2025
Universidade Federal de Viçosa
Viçosa, Brasil

Available in: <https://www.redalyc.org/articulo.oa?id=351580876002>

- How to cite
- Complete issue
- More information about this article
- Journal's webpage in redalyc.org

redalyc.org

Scientific Information System Redalyc

Diamond Open Access scientific journal network

Non-commercial open infrastructure owned by academia

Exploring the structure of the far-right networks on Telegram: a classification proposal to understand their division and links between communities

Explorando a estrutura das redes da extrema-direita brasileira no Telegram: uma proposta de classificação para compreender a divisão e os elos entre suas comunidades

Explorando la estructura de las redes de extrema derecha en Telegram: una propuesta de clasificación para comprender su división y los vínculos entre comunidades

Douglas da Silva Ferreira

Pontifícia Universidade Católica do Rio de Janeiro, Brasil

ferreirads@tutanota.com

Regina Ávila Santos

Universidade de São Paulo, Brasil

avs.regina@gmail.com

Recepción: 12 Agosto 2023

Aprobación: 11 Septiembre 2024

Publicación: 17 Marzo 2025

Abstract

Research Objective: This study delves into Brazil's far-right network on the Telegram messaging app, examining its structure and dynamics. The aim is to understand the network's divisions and which nodes play a pivotal role in connecting its parts.

Theoretical Framework: This work is rooted in Social Network Analysis (SNA) and Grounded Theory. SNA enables the analysis of inter-relations among entities within a network, while Grounded Theory allows theory construction from the data, grounding insights in empirical reality. Continuing research on misinformation and the far-right, as outlined by Urman & Katz (2020), it contributes to literature examining the intersection of technology, politics, and society, exploring misinformation and the mobilization of extremist digital groups.

Methodology: An exponential snowball sampling technique was used to build a database of far-right channels and groups on Telegram. The Louvain method identified existing communities. Next, a ranking system based on the PageRank algorithm identified the most influential channels, and the Bridging Centrality measure pinpointed channels connecting different communities.

Results: The network on Telegram is highly decentralized, with communities having distinct ideological and political niches. Main channels connecting these communities are predominantly linked to influencers active on other digital platforms. **Originality:** This study uniquely classifies the far-right network based on its digital subdivisions, contrasting with commonly-used purely political divisions. It further sheds light on the role of digital influencers within Brazil's far-right.

Theoretical and Practical Contributions: The findings have significant implications for decision-making and public policy formulation against the spread of extremism and anti-democratic rhetoric online.

Keywords: social network analysis, ranking algorithms, online communities, far right.

Resumen

Objetivo de la investigación: Este estudio investiga la red de extrema derecha brasileña en Telegram, analizando su estructura y dinámicas. El objetivo es comprender cómo se estructura la red y cuáles nodos son esenciales en la conexión de sus partes.

Marco Teórico: Basado en el Análisis de Redes Sociales (ARS) y la Teoría Fundamentada. ARS es útil para entender interrelaciones entre entidades en una red, mientras que la Teoría Fundamentada construye teorías a partir de datos, anclando percepciones en realidad empírica. Siguiendo investigaciones sobre desinformación, como la de Urman & Katz (2020), este trabajo contribuye a la literatura que explora la relación entre tecnología, política y sociedad, y la movilización de grupos extremistas digitales.

Metodología: Se empleó muestreo exponencial en bola de nieve para construir una base de datos de canales y grupos de extrema derecha en Telegram. Luego, se usó el método Louvain para identificar comunidades y un sistema basado en el algoritmo PageRank para determinar canales influyentes, y la Centralidad de Puente para señalar canales que unen diferentes comunidades.

Resultados: Se descubrió que la red en Telegram es descentralizada, con comunidades que poseen nichos ideológicos y políticos distintos. Los principales canales conectores están vinculados a influenciadores activos en otras plataformas digitales.

Originalidad: Este estudio ofrece una clasificación única de la red de extrema derecha considerando sus subdivisiones digitales, en contraste con divisiones políticas tradicionales. Además, resalta el rol de influenciadores digitales en la extrema derecha

brasileña. Contribuciones teóricas y prácticas: Los hallazgos tienen relevancia para la toma de decisiones y la creación de políticas públicas dirigidas contra el crecimiento del extremismo y la retórica antidemocrática en línea.

Palabras clave: análisis de redes sociales, algoritmos de clasificación, comunidades en línea, extrema derecha.

Resumo

Objetivo da pesquisa: Este estudo tem como objetivo, investigar a estrutura da rede de extrema-direita brasileira presente no aplicativo de mensagens Telegram, compreendendo como a rede se divide e quais nós desempenham papel crucial na conexão entre as comunidades.

Enquadramento Teórico: Este estudo tem como base a integração da Análise de Redes Sociais (SNA) com a Teoria Fundamentada. A SNA possibilita a análise das interconexões entre diversas entidades em uma rede, enquanto a Teoria Fundamentada viabiliza a construção de teorias a partir da análise metódica dos dados, ancorando as conclusões na realidade empírica. No contexto das investigações sobre desinformação e extrema-direita, conforme evidenciado por Urman & Katz (2020), o estudo se insere na literatura que explora a complexa interseção entre tecnologia, política e sociedade, com enfoque na disseminação de desinformação na dinâmica de mobilização dos grupos extremistas digitais.

Metodologia: Utilizou-se uma abordagem de amostragem exponencial discriminativa em bola de neve para compilar um banco de dados abrangente de canais e grupos associados à extrema-direita no Telegram. Além disso, a técnica Louvain foi aplicada para identificar as distintas comunidades presentes. Para a identificação dos canais mais influentes, empregou-se um sistema de classificação baseado no algoritmo PageRank, enquanto a métrica de Bridging Centrality foi empregada para reconhecer os canais que desempenham o papel de ligação entre diferentes comunidades.

Resultados: Dentre as descobertas, foi constatado que a rede de extrema direita no Telegram é caracterizada por uma notável descentralização, com comunidades que exibem distinções ideológicas e políticas. Os canais de maior relevância para a interconexão entre essas comunidades, em sua maioria, estão associados a influenciadores ativos em outras plataformas digitais.

Originalidade: Este estudo proporciona uma contribuição inovadora ao investigar o potencial da plataforma Telegram como ambiente de análise para categorizar a rede de extrema-direita, levando em consideração suas distintas subdivisões no contexto digital, em contraposição às divisões puramente políticas frequentemente adotadas. Sendo, até onde sabe-se, pioneiro ao aplicar o método de classificação em bola de neve a estudos deste gênero, ampliando ainda mais sua originalidade.

Contribuições teóricas e práticas: As conclusões alcançadas por meio desta pesquisa carregam implicações de grande relevância para orientar a tomada de decisões e a formulação de políticas públicas voltadas ao enfrentamento da disseminação do extremismo e discursos antidemocráticos no cenário digital.

Palavras-chave: análise de redes sociais, algoritmos de ranqueamento, comunidades online, extrema direita.

1 Introduction

The global rise of the far-right movement is closely linked to the emergence of digital media (Jungherr, Schroeder & Stier, 2019). In Brazil, the first signs of coordination among far-right groups appeared with the popularity of Orkut in the first decade of the 21st century (Rocha, 2019). In the second decade of the 21st century, far-right rhetoric found fertile ground on social media platforms, intensified by the perception of systemic corruption revealed by the Lava Jato Operation. This scenario culminated in Bolsonaro's election, whose strategy benefited from the intensive use of such media to disseminate radical discourse and misinformation (Fernandes et al., 2022). Initially, there were few efforts by digital platforms to curb these groups, resulting in an environment full of hate speech and misinformation (Pohjonen & Udupa, 2017). Only in 2019 did platforms like Facebook and Instagram adopt a more proactive approach to content moderation and banning users involved in such activities (Lorenz, 2023).

The recent content moderation initiatives by major social media platforms, such as Facebook, WhatsApp, and Twitter, have led to the migration of groups promoting political extremism, hate speech, and conspiracy theories to alternative networks whose moderation policies are more flexible or non-existent. This includes users spreading antisemitism, neo-Nazism, and other far-right ideologies (Rogers, 2020).

From this perspective, these users often claim that mainstream media is biased in covering or ignoring events related to their movement (Ellinas, 2018). This leads them to seek alternative ways to disseminate information reinforcing their worldviews. In this context, among the available applications, Telegram has emerged as one of the chosen platforms for those who were "de-platformed" in 2019, meaning those whose accounts were deleted or banned from platforms like Facebook and Twitter (Rogers, 2020).

Telegram, created in Russia in 2013, is an instant messaging platform that offers distinct features, such as anonymity, security, visibility, and permanence, which attract far-right groups—who prefer it over WhatsApp—and facilitate the spread of misinformation. Anonymity is enhanced by sending messages without revealing a phone number, while security is reinforced through robust encryption and the option to delete messages without leaving traces. The platform also allows the formation of groups with up to 200,000 members and channels with unlimited subscribers, maximizing visibility. Permanence is ensured by the ability to upload large files for continuous access and sharing. Finally, Telegram acts as a repository for content banned from other platforms, positioning itself as a hybrid messaging system with broadcast-style communication (Maia, Oliveira, Massarani, & Santos Júnior, 2023).

Compared to its competitors, this app showed the most significant growth in user numbers between 2018 and 2022, reaching 65% of Brazilian smartphones. This increase was particularly marked from 2020 onwards, with a 46% growth (Paiva, 2022). This growth became more pronounced when Meta Platforms, then Facebook Inc., announced content moderation on Brazilian misinformation pages on Facebook and Instagram after investigations by the Supreme Federal Court into a secret structure within the presidential bureaucracy, known in the media as the "cabinet of hate" (Zanini, 2020).

Thus, the migration of far-right groups to Telegram is already discussed in the literature, becoming the place for their main articulations (Nascimento, Cesarino & Fonseca, 2022). However, despite knowing that the platform has welcomed several actors associated with practices moderated on other networks, the nature of the groups forming this migration remains unknown. Unlike the historical far-right, monolithically organized into parties in the 1930s, the contemporary version consists of smaller, more dispersed groups that maintain ease of association between their organizations (Griffin, 2003). This behavior is reflected on the platform and can be measured through the direct links that these groups and channels maintain with each other.

This study addresses the open challenges of understanding these groups, categorizing them into communities with shared interests, and analyzing the discourses and actors connecting them. The aim is to demystify the classification of the "far-right" and deepen the understanding of its various facets within the Telegram environment.

2 Materials and Methods

In step with Prodanov's (2013, p. 72) methodological approach, this study incorporated qualitative and quantitative strategies to analyze the far-right network on Telegram. The procedures began with preliminary bibliographic and documentary research, followed by an exploration of the digital environment and data collection. The choice of Grounded Theory as the central methodological approach for this work was not random. Considering the mutable and multifaceted nature of far-right networks, especially in the digital environment, a methodology that allows for theory construction based on data is essential. The digital political scenario is characterized by fluidity, with ideologies, discourses, and alliances constantly evolving. Grounded Theory, in this context, enables us to accommodate such nuances, avoiding the imposition of preconceived theories or ideas that could limit or distort our understanding of the phenomenon under study.

The core of this approach lies in Grounded Theory, a method developed by Glaser and Strauss (1967). This method advocates for the emergence of theories from the data collected rather than verifying a pre-established theory. This approach is precious for exploring poorly understood or rapidly evolving phenomena, as with far-right networks on digital platforms.

As Charmaz (2006) highlights, this paradigm supports our goal of deciphering the complex and dynamic structure of far-right networks without the constraints of preconceived biases, allowing emerging patterns and relationships to guide our understanding and the development of new theories. This inherent flexibility of Grounded Theory provides the freedom to explore the digital landscape in its full complexity, paving the way for innovative discoveries and deep insights into the subject at hand.

2.1 Bibliographic Research

Bibliographic research was necessary for two main reasons: 1) to find, within the literature related to the subject—i.e., far-right—a conceptual definition of the social phenomenon, which could serve as a decision-making parameter for the inclusion of groups and channels in the database; and 2) to assess the main characteristics of the contemporary far-right, in order to generate a list of associated keywords that would be used in the subsequent stage. The definitions outlined by Cas Mudde (2019) were adopted for both cases.

2.2 On the Concept of Far-Right Adopted

The bibliographic investigation revealed a considerable challenge in accurately translating the phenomenon under study into Portuguese, particularly in trying to draw parallels with international terminologies, such as those established by respected researchers like Mudde (2019) and Matthew Goodwin (2018).

According to the classification proposed by Mudde (2019), the phenomenon we are analyzing is "far-right," an expression that, when literally translated into Portuguese, corresponds to the term *extrema-direita*. This typology divides the phenomenon into two main categories: the "extreme right" and the "radical right," which in Portuguese correspond to *extrema direita* and *direita radical*, respectively. This usage creates a certain ambiguity in Portuguese, as the term *extrema-direita* can refer both to the broader concept ("far-right") and one of its subdivisions ("extreme right"). In this study, our goal is to understand what is conventionally referred to as "far-right," i.e., groups that not only align with the political right—those who view social inequalities as natural and favorable conditions that should be defended or ignored by the state (Bobbio, 2012)—but also define themselves as "anti-system" and take a hostile stance towards liberal democracy (Mudde, 2019).

In this context, it was decided to incorporate both subdivisions into our study: the "extreme right," which encompasses groups that reject the essence of democracy, that is, the principle of popular sovereignty and majority rule, with fascism being the most evident example of this category; and the "radical right," which, although it accepts the idea of democracy, rejects its liberal elements, such as minority rights and the separation of powers, a

position that includes right-wing populism (Mudde, 2019). The "far-right" generally rejects the democratic consensus established after World War II; however, each subdivision rejects this consensus differently. The "radical right" can be seen as the "reformist" branch of the spectrum, while the "extreme right" presents itself as the "revolutionary" faction. Considering these specifics, we used the term *extrema-direita* (far-right) to refer to the phenomenon in a broader sense from this point on in our study.

In this study, we started with channels created by politicians known to be far-right. We searched for channels using keywords such as patriot, nationalism, integralism, Nazism, fascism, third position, *ucranizar* (Alessi, 2020), national socialism, red pill (Gaglioni, 2020), *narigudo* (a derogatory term used by the far-right to refer to Jews that would be translated into English as "big-nosed"), globalism, and new world order. Only the channels and groups that met the definitions we adopted of far-right were included in our initial list.

2.3 Field Research, Data Collection, and Processing

Groups and channels were manually mapped on the Telegram app, using the previously identified characteristics as a starting point for channel discovery. Channels linked to well-known far-right figures from Brazil's political and media spheres were considered. These channels were listed and used as the basis for creating a dataset (with channels and forwarded messages) through an exponential snowball sampling method, as practiced in other contexts (Peter, Kühn, Mitrović, Granitzer & Schmid-Petri, 2022; Urman & Katz, 2020).

The data collection for this research was carried out using Telegram's Application Programming Interface (API). The process was conducted through the Telethon library, which was developed explicitly for Python (Exo, 2020). In simplified terms, the technique employed involves starting with a pre-selected set of channels and, from these, tracking other channels that had messages forwarded from them. This method prioritizes and evaluates channels with the highest "ranking" at each subsequent iteration. It is important to note that the "ranking" of each channel is determined by the number of distinct channels that reference it. For this analysis, we selected 36 channels as our starting point. All relevant data for the research was collected on a specific date, January 10, 2023, to ensure the consistency and relevance of the data gathered.

Once data collection was complete, a direct network was constructed—a graphical representation in which nodes symbolize channels or groups, and edges represent forwarded messages, or "forwards," which serve as links from the origin channel to the destination channel. Within this network, the Louvain method was applied for community detection. This application was performed using Gephi, a network analysis software. Through this approach, it was understood that the intensity of connections—i.e., the number of forwarded messages—not only generated visible clusters in the graphs but also revealed common themes and subjects among the channels belonging to these clusters.

The modularity measure was extracted to understand better the network's structure, a parameter calculated simultaneously with community detection. This measure is handy because it verifies whether the network is centralized or decentralized. Additionally, it offers insight into whether the network is highly connected or fragmented into multiple distinct groups. This information was crucial for determining whether the structure of the far-right in Brazil on Telegram resembles or differs from the descriptions found in international literature, such as those provided by Griffin (2003) and Mudde (2019).

In this study, the most influential channels and groups within the analyzed communities were identified through the application of the PageRank algorithm, originally designed to determine the relative importance of web pages and rank them hierarchically (Brin & Page, 1998). In this context, a high PageRank value for a particular channel or group indicated that many messages from this channel were forwarded by other channels or groups also with a high degree of influence.

To gain a deeper understanding of each community, the top 5 channels or groups with the highest PageRank were selected and used to categorize each community based on the topics most frequently discussed in their

message histories. This analysis identified the dominant topics in each community's conversation. Furthermore, to replicate the methodology employed by Peter et al. (2022), we sought to define the role of the channel owner. Specifically, we aimed to identify whether the channel owner was a political actor, a news aggregator, an alternative media source, a digital influencer, or a political collective.

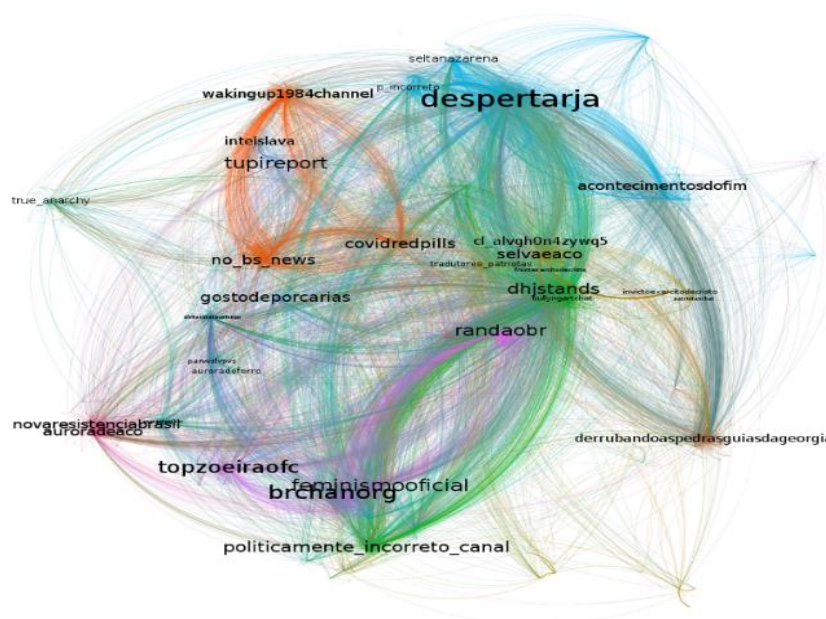
By using both classifications—the categorization of communities by topic and by type of actor—we could observe whether the social network structure on Telegram reflects the different ideological divisions within the far-right spectrum. Additionally, we were able to clarify if and how Brazilian networks are connected with other communities that are not directly related to the far-right ideological spectrum.

To further deepen the analysis, we sought to understand the relative importance of individual nodes in the network. For this, we employed a social network centrality metric known as "Bridging Centrality," as suggested by Freeman's (1977) methodology. This metric focuses on the importance of a specific node in connecting different parts of the network. Using it, we could identify the actors who control the flow of information between groups that do not frequently interact with each other. Identifying actors with high bridging centrality provided a deeper understanding of how information and ideas move across the network and how it remains unified despite its ideological diversity.

3 Results and Discussion

A total of 5,690 channels or groups were found. The community detection algorithm (Blondel, Guillaume, Lambiotte & Lefebvre, 2008) divided them into 20 communities. Nine of these consisted of only a single node and were excluded from the analysis; the remaining 11 communities accounted for 97.3% of the nodes. Modularity of 0.735 was found, which is close to the study's results by Urman et al. (2020), who analyzed the far right on Telegram for English-language channels. Such modularity implies that the network is highly decentralized, as values close to 1 indicate dense connections between nodes within a community but sparse connections between different communities. This result is expected as it reflects the structure of the far right outside of Telegram (Griffin, 2003). This topological phenomenon can be observed in Figure 01, created using the OpenOrd algorithm implemented in Gephi (Martin, Brown, Klavans & Boyack, 2011).

Figure 1. The network graph is divided into communities



Source: Original research results

It was also observed that channels in other languages, notably English and Russian, were included in the database through the sampling technique. This phenomenon is consistent with previous findings regarding studies on far-right movements from other nationalities, where Peter et al. (2022) found, through German-language channels, an English-speaking community (notably from the United Kingdom), and Urman et al. (2020) identified, from the U.S. context, communities in German, Italian, Russian, and Cantonese. These findings are intriguing as they may reveal international ties among the groups, demonstrating the specific nationalities of the groups that influence them. Table 1 summarizes the information found, including after applying the PageRank algorithm:

Table 1. Distribution of communities by percentage of nodes

Communities	Nodes (%)	Top 5 Channels (PageRank)	Brief Description of Public Channels and Groups Dominating the Community
1	21.30%	despertarja, acontecimientosdofim, seitanazarena, p_incorreto, ancapmemesintensifies, escobar221	Olavo de Carvalho, Bolsonaro, climate denial, conspiracy theories, anti-vaccine, antisemitism, radical Christianity, conservatism, nationalism, radical right, populism
2	19.84%	wakingup1984channel, no_bs_news, covidredpills, rtnews, theconspiracyhole	Independent English-language media agencies, anti-vaccine, content about Russia, conspiracy theories, geopolitics, radical right
3	15.31%	bullyngartchat, politicamente_incorreto_canal, armbhgp, armbhn, bullyingart	Antisemitic, racist, misogynistic, xenophobic, and fatphobic content; integralism, fascism, Nazism, anti-communism, nationalism; far-right
4	14.67%	brchanorg, randaobr, topzoeiraofc, feminismooficial, gdomemes	"Humorous" content with misogynistic, homophobic, and transphobic tones; anti-Workers' Party (Brazil), anime and manga, far-right, incel culture; related to "chan" sites
5	8.93%	selvaeaco, cl_alvh0n4zywq5, tradutores_patriotas, patriotaschat, frontexercitodecristo	Anti-Workers' Party (Brazil), Bolsonaro, anti-vaccine, conspiracy theories, antisemitism, Christianity, conservatism, the radical right, right-wing politicians and influencers, military
6	4.87%	auroradeaco, minayba, novaresistenciabrasil, embusteqtp, ffotsugua	Russian propaganda, nationalism, police actions, Fourth Political Theory, Dugin, anti-Duginism, New Resistance, historical fascism, Catholicism
7	4.69%	parvvslpvs, true_anarchy, anarquismobr, auroradeferro, randomanarchy	Anarcho-capitalism, conspiracy theories, anti-communism, firearms
8	4.18%	dhjstands, gostodeporcarias,	Games, pop culture, pornography, misogyny, memes, radical right and far-right

Communities	Nodes (%)	Top 5 Channels (PageRank)	Brief Description of Public Channels and Groups Dominating the Community
		tupireport, nikolasferreira, paulokogoss	
9	4.06%	minasgeraisderrubando, cursoscarosgratis, passaportespravida, derrubandoaspedrasguiasd ageorgia, jesuschristoabestadoapocalipse	Conspiracy theories, anti-vaccine, anti-Workers' Party (Brazil), anti-system, anti-democracy, spiritualist content, sale of fake COVID-19 vaccine cards
10	1.53%	shitposteruniongp, shitposterunion, randomshitposter, shitpostagemdobaia, republicabr	Fight and "fail" videos, anti-communism, misogyny, homophobia, racism, Nazism, fascism; far-right
11	0.32%	dicastelegram, telegramtipsbr, telegram, ton_br, profedigleyalexandre	Telegram usage tutorials, network anonymity, cryptocurrencies, technology

Source: Original research results

The data analysis presented in Table 1 revealed the existence of 11 distinct communities, demonstrating both ideological and linguistic characteristics. The largest identified community, labeled as Group 1, includes 1,212 channels or groups, which feature content aligned with what we define as the radical right, particularly in its populist form. This group is characterized by the conception of society as divided into two opposing categories: the pure people and the corrupt elite. In this case, the political practice would be the expression of the desires and aspirations of the first group, with the widespread dissemination of conspiracy theories being one of its main trademarks (Mudde, 2019).

The second community (2), on the other hand, predominantly comprises alternative English-language news sources, including news agencies and aggregators. Interestingly, many groups and channels that comprise this community have already been mentioned in the international literature (Urman et al., 2020), suggesting a significant role in articulating far-right networks across various countries, not just in the Lusophone world. From this observation, the possibility arises for a more in-depth analysis that could cross-reference data from similar studies conducted by researchers from different nationalities to investigate whether this set of channels plays a role in the ideological articulation and formation of a global far-right.

This particular community becomes even more intriguing when considering that, although its content is predominantly in English, a significant portion is related to Russia and involves geopolitical debates. Many channels with higher PageRank values have positions favorable to Putin's regime, although some present conflicting viewpoints. What can be asserted with relative confidence is that the theme of "Russia" and geopolitical debate are common elements in this community.

This finding reinforces a conclusion present in a classic study on historical fascism (Bernardo, 2003), which describes the fundamental ideological operation of fascism as a transformation of class struggle into a struggle between nations. In other words, fascism tends to identify the interests of the dominant class with those of the nation. In contrast, the interests of the dominated class are identified with those of enemy nations. Thus, fascism replaces typically sociological reflections—such as class and social structure—with geopolitical concerns, which

ultimately lead to conflicts between nations and respective celebrations and loyalties, characterizing the phenomenon of nationalism. In this way, community (2) and its focus on geopolitics provide a contemporary glimpse of this ideological dynamic.

The communities identified as (3) and (4) exhibit similar content, although their presentation is notably distinct. Both can be characterized as aligned with the "extreme right," featuring images and videos that address recurring themes within this ideological subgroup. Community (4), in particular, shows a predominance of content associated with the "incel" (involuntary celibate) subculture, frequently referencing youth culture, including elements such as anime and manga. This group presents itself differently from the community (3), employing a supposed sense of humor to propagate its ideas.

In this regard, it is worth noting that communities focusing on such themes have already been identified in previous studies (Panizo-Lledot, Torregrosa, Bello-Ortiz, Thorburn & Camacho, 2020). Considering the Brazilian context, a potentially relevant field of investigation would be examining the relationship between anime and manga and the spread of extremist ideas, given that Brazil is one of the countries that consume most of these forms of entertainment worldwide (Abadde, 2017). Additionally, such an investigation could reveal age demographics within far-right groups, as Japanese animations only became popular in Brazil in the 1990s (Soares, 2019).

Although community (5) addresses themes similar to community (1), it is distinguished by the more significant number of public figures, including various channels of professional politicians and digital influencers aligned with the Brazilian right. On the other hand, community (1) comprises channels that post anonymously.

The community identified as (6) is centered around the controversial figure of Alexandr Dugin, a Russian philosopher and political theorist, and his most well-known work, *The Fourth Political Theory*. The content disseminated in this community frequently references national and religious traditions, addressing Catholicism and Orthodox Christianity while emphasizing a stance of moral conservatism. Posts also present significant criticism of the imperialism of two global powers, the United States and the European Union.

However, within this community, there is a noticeable presence of channels that take opposed stances, issuing critiques of both the Russian philosopher and his theory, as well as the Brazilian groups aligned with it, such as *A Nova Resistência* (The New Resistance). These channels often proclaim themselves as representatives of the "third position," referring to historical fascism. It is interesting to observe that, in this opposing segment, there is frequent sharing of information related to the Azov Special Operations Regiment, a Ukrainian paramilitary militia founded by neo-Nazis (John & Lister, 2022), highlighting the ideological contrast that exists within the community (6).

Community (7) focuses primarily on anarcho-capitalism, individual liberties, and rejecting voting and the state. Although this community appears to have a well-defined political and ideological bias, many posts related to Christian religiosity and moral conservatism can be observed.

The eighth community analyzed comprises channels related to the video game universe and channels owned by two prominent figures of the Brazilian far-right. One of these figures is a highly influential digital personality, while the other is a current parliamentarian. Intriguingly, this community is also characterized by the dissemination of pornographic and misogynistic content. Most posts in this community feature memes and humor, which, on some occasions, serve as vehicles for the spread of Nazi propaganda and attacks against the left. Notably, an English-language channel based in Brazil publishes international news. A particular feature of this community frequently mentions a digital influencer whose eponymous channel occupies a prominent position. This phenomenon indicates the importance of this personality to the audience, demonstrating the significant impact this figure has on the discourse and social interactions within the community.

The community labeled as (9) is characterized by the heavy use of language aligned with conspiracy theories. The content disseminated in this environment is closely tied to these theories, promoting highly peculiar concepts such as the existence of reptilian beings and human-animal hybrids. Additionally, this community is dedicated to attacking public figures associated with the Brazilian left and the pharmaceutical industry while promoting anti-communist rhetoric and the endorsement of alternative medicine and pseudoscience. There is a robust

dissemination of anti-vaccine propaganda, suggesting the presence of an active anti-vaccine group within this community. Alarming and surprisingly, some channels offer "vaccine passports," which supposedly allow the alteration of records in the Brazilian public health system (SUS) to indicate that unvaccinated individuals have received COVID-19 vaccine doses falsely. This is a highly illegal practice that poses severe risks to public health.

The tenth community, in turn, mainly comprises videos depicting accidents and physical fights. Additionally, there is a notable presence of videos and comments with homophobic, racist, and misogynistic content, as well as Nazi glorification. This environment appears to be characterized by a climate of aggression and intolerance.

Community (11), in contrast, is dedicated to technical discussions focused on ensuring privacy on the Internet. The topics discussed include strategies for protecting personal data and using cryptocurrencies, as well as methods for accessing content prohibited in the country, such as government-blocked websites or materials considered illegal. Among the most recurring discussions are using Virtual Private Networks (VPNs) to hide the user's IP address, using anonymous browsers to avoid data tracking, and adopting virtual currencies to ensure greater anonymity in financial transactions.

At least when observing the channels with the highest PageRank, the division into communities (i.e., based on the intensity of connections between nodes) corresponds to distinctions in recurring themes or the language employed. Within the Telegram ecosystem, the far-right in Brazil consists of several distinct groups with few links despite sharing some common values.

In this sense, the next stage addresses the following question: If the groups are sparsely connected, which channels are responsible for creating links between them? Which channels act as bridges between the different communities? Table 2 summarizes the ten channels with the highest Bridging Centrality in our network, understanding that they may explain how the communities are connected.

Table 2. Top 10 Channels with the Highest Bridging Centrality

Channel	Subscribers	Community	Brief Description of the Channel
Domesdras	26,955	5	Channel of far-right influencer Dom Esdras. Conspiracy theories, anti-vaccine, deep state, anti-globalism, conservatism
Brasilsemmedo	21,464	5	Channel of the news portal <i>Brasil Sem Medo</i> .
Biakicisoficial	45,44	5	Channel of federal deputy Beatriz Kicis.
Bkuster	52,27	5	Channel of influencer Bernardo Küster
Desmagnetizado	10,459	3	Channel with content related to Brazilian far-right parliamentarians, moral conservatism, conspiracy theories, attacks on democracy, and anti-Workers' Party (Brazil). In the channel description: "Anti-System & Anti-New Order"
Aslantwitter	11,792	3	Spread of false news about COVID-19, anti-vaccine, including alleged cases of severe side effects.
Lruschel	33,36	5	Channel of economist and influencer Leandro Ruschel.

Channel	Subscribers	Community	Brief Description of the Channel
Flaviogordontelegram	8,738	5	Channel of anthropologist and influencer Flávio Gordon.
Factoranalysis	6,843	5	Spread of false news about COVID-19, geopolitics, conspiracy theories.
Opropriolavo	55,176	5	Official Telegram channel of Olavo de Carvalho. It is still active and is now managed by third parties.

Source: Original research results

The analysis of Table 2 provides an insightful view that Community 5 holds significant relevance within the Telegram network. This is because 8 out of the ten channels with the highest Bridging Centrality values are associated with this community, a noteworthy fact given that this community represents only 8.93% of the nodes. This community has a distinctive characteristic: its top PageRank channels are maintained not by anonymous individuals but by publicly recognized personalities, primarily through the internet. This aspect is fundamental for understanding the configuration and dynamics of the network.

Moreover, it is essential to note that six of the eight most important channels in this community are linked to far-right digital influencers in Brazil. Additionally, one of these channels is a news portal founded by one of the personalities listed in Table 2. This finding indicates that these public figures' role in the context of the Telegram network is essentially to act as connectors between the different communities.

A key aspect to emphasize is that these channels represent only a fragment of the online presence of the individuals who control them. They also serve as a link between other social media platforms and web spaces where these far-right personalities maintain an active presence and the far-right network on Telegram. Due to their visibility in various other contexts, both digital and non-digital, they function as bridges not only between the different communities on Telegram but also with the environment outside the app.

Considering the above, it is possible to hypothesize that these influencers also play a gateway role in the network. They survive moderation on other platforms and maintain websites easily searchable via search engines, attracting new users to the Telegram network and the far-right informational ecosystem. Here, more radical and extreme content can circulate freely without significant moderation, which could contribute to user radicalization and exposure to themes that might not initially have been on these individuals' radar.

The modularity found (0.735) and the variety of themes related to the channels indicate that the far-right network formed on Telegram is more diverse than the literature initially suggested. The communities differ not only in terms of their political divisions but also in more evident ways, such as the cultural references they adopt, the type of content disseminated, the main topics discussed, the target audience of the posts, and the language used. Any approach to addressing this network's expansion must consider its heterogeneity.

Thus, it becomes clear that the far-right network on Telegram shares some common values—such as a conception of freedom that includes the right to offend and to exercise power based on social hierarchies. However, these are not sufficient to create a highly integrated network. This network can only be understood as a unit to the extent that the insularity of the communities is overcome by the role played by highly visible influencers who still maintain an online presence on other platforms.

This analysis leads us to conclude that the primary role of these personalities is to unite heterogeneous groups, providing some degree of political convergence. While many users expelled from more mainstream social networks—such as Facebook and Instagram—continue their activities on Telegram, the network's expansion and integration still depend on the presence of certain actors on these other platforms.

As of June 6, 2024, several channels and groups mentioned in this study are no longer available on Telegram. A longitudinal analysis, that is, examining how the configuration of this ecosystem transforms over time, is beyond the scope of this article. However, this observation may serve as a premise for future investigations. Such studies could reveal which channels and groups remain and which have disappeared, shedding light on the properties of this network that the present article could not address.

4 Conclusion

This study thoroughly analyzed the far-right network on Telegram in Brazil, revealing a complex and highly decentralized structure. Composed of 20 distinct communities, this network showcases a diversity of actors and themes reflecting the plurality within the far-right spectrum.

Through a network analysis approach, we identified the 11 communities comprising most nodes and classified them according to the predominant themes in their highest PageRank channels. This study revealed significant divisions in terms of the topics addressed and the languages used. Additionally, the analyses suggest potential age-based divisions within the communities.

We highlighted that many of the channels with the highest PageRank are categorized as either supposed humor channels or are known for disseminating disinformation and conspiracy theories. These channels seem to share an underlying ideology: the belief in a "forbidden truth" and the defense of unrestricted freedom of expression, regardless of shared content.

On the other hand, the channels with the highest bridging centrality were associated with far-right personalities and media outlets that also maintain a presence on other online platforms. This reinforces the hypothesis that these figures and media outlets are crucial in maintaining the network's cohesion and expanding it into other digital contexts.

Based on these findings, we conclude that, despite its fragmented nature, the far-right network on Telegram in Brazil is united by some core principles and ideas. The linguistic and thematic diversity these communities exhibit is essential when analyzing this network.

At the same time, the network's cohesion is maintained by the personalities and media outlets that manage to remain active on other platforms despite content moderation strategies. This study suggests that these entities function as "bridges," facilitating the circulation of content and ideas between different communities and platforms, reinforcing the integration and expansion of this network.

References

- Abadde, J. (2017, 25 de março). Brasil está entre os países que mais assistem anime no mundo - NerdBunker. Recuperado de <https://jovemnerd.com.br/nerdbunker/brasil-esta-entre-os-paises-que-mais-assistem-anime-no-mundo/>
- Alessi, G. (2020, 8 de abril). Explícito nas ruas, bolsonarismo neofascista se inspira em extremismo e anticomunismo da Ucrânia. EL PAÍS Brasil. Recuperado de <https://brasil.elpais.com/brasil/2020-06-02/explicito-nas-ruas-bolsonarismo-neofascista-se-inspira-em-extremismo-e-anticomunismo-da-ucrania.html>
- Bernardo, J. (2003). *Labirintos do Fascismo: Na encruzilhada da ordem e da revolta*. Boitempo Editorial.
- Blondel, V. D., Guillaume, J.-L., Lambiotte, R., & Lefebvre, E. (2008). Fast unfolding of communities in large networks. *Journal of Statistical Mechanics: Theory and Experiment*, 2008(10), P10008.
- Bobbio, N. (2012). *Direita e Esquerda: Razões e significados de uma distinção política*. Editora Unesp.
- Brin, S., & Page, L. (1998). The PageRank citation ranking: Bringing order to the Web. Technical report, Stanford Digital Library Technologies Project.

- Cavalini, A., Malini, F., Gouveia, F., & Comarela, G. (2023). Politics and disinformation: Analyzing the use of Telegram's information disorder network in Brazil for political mobilization. *First Monday*, 28(5).
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Pine Forge Press.
- Ellinas, A. A. (2018). *Media and the Radical Right*. Oxford University Press.
- Exo, L. (2020). Telethon: Full-featured Telegram client library for Python 3 (1.11.2) [Python]. Recuperado de <https://github.com/LonamiWebs/Telethon>
- Freeman, L. C. (1977). A Set of Measures of Centrality Based on Betweenness. *Sociometry*, 40(1), 35–41.
- Gagliani, C. (2020, 8 de abril). Como o filme 'Matrix' se tornou símbolo na extrema direita. *Nexo Jornal*. Recuperado de <https://www.nexojornal.com.br/expresso/2020/05/20/Como-o-filme-%E2%80%98Matrix%E2%80%99-se-tornou-s%C3%ADmbolo-na-extrema-direita>
- Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. *Aldine*
- Griffin, R. (2003). From slime mould to rhizome: An introduction to the groupuscular right. *Patterns of Prejudice*, 37(1), 27–50.
- John, T., & Lister, J. (n.d.). Azov movement analysis: A far-right battalion has a key role in Ukraine's resistance. Its neo-Nazi history has been exploited by Putin | CNN. Retrieved August 3, 2023, from <https://edition.cnn.com/2022/03/29/europe/ukraine-azov-movement-far-right-intl-cmd/index.html>
- Jungherr, A., Schroeder, R., & Stier, S. (2019). Digital Media and the Surge of Political Outsiders: Explaining the Success of Political Challengers in the United States, Germany, and China. *Social Media + Society*, 5(1).
- Lorenz, T. (2023, 28 de janeiro). Instagram and Facebook Ban Far-Right Extremists. Recuperado de <https://www.theatlantic.com/technology/archive/2019/05/instagram-and-facebook-ban-far-right-extremists/588607/>
- Maia, L. R. H., Oliveira, T., Massarani, L., & Santos Júnior, M. A. dos. (2023). Contestação às vacinas contra Covid-19 em grupos do Telegram no Brasil. *Intexto*, 55, 127361.
- Martin, S., Brown, W. M., Klavans, R., & Boyack, K. W. (2011). OpenOrd: An open-source toolbox for large graph layout. In P. C. Wong, J. Park, M. C. Hao, C. Chen, K. Börner, D. L. Kao, & J. C. Roberts (Eds.), *Visualization and Data Analysis 2011* (pp. 786806). Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 7868.
- Mudde, C. (2019). The far right today. *Polity*.
- Nascimento, L. F., Cesarino, L. M., & Fonseca, P. F. C. (Coords.). (2022). "Democracia digital: análise dos ecossistemas de desinformação no Telegram durante o processo eleitoral brasileiro de 2022" - vol. 1. São Paulo.
- Paiva, F. (2022). *Panorama Mobile Time/Opinion Box - Mensageria no Brasil*.
- Panizo-Lledot, A., Torregrosa, J., Bello-Orgaz, G., Thorburn, J., & Camacho, D. (2020). Describing Alt-Right Communities and Their Discourse on Twitter During the 2018 US Mid-term Elections. In H. Cherifi et al. (Eds.), *Complex Networks and Their Applications VIII* (pp. 427-439). *Studies in Computational Intelligence* (Vol. 882). Springer International Publishing.
- Peter, V., Kühn, R., Mitrović, J., Granitzer, M., & Schmid-Petri, H. (2022). Network Analysis of German COVID-19 Related Discussions on Telegram. In P. Rosso et al. (Eds.), *Natural Language Processing and Information Systems. Lecture Notes in Computer Science*. Springer International Publishing, 25–32.
- Pohjonen, M., & Udupa, S. (2017). Extreme speech online: An anthropological critique of hate speech debates. *International Journal of Communication*, 11, 1173–1191.
- Prodanov, C. C., & Freitas, E. C. de. (2013). *Metodologia do trabalho científico*. Editora Feevale.
- Rocha, C. (2021). *Menos Marx, mais Mises: O liberalismo e a nova direita no Brasil*. Todavia.
- Rogers, R. (2020). Deplatforming: Following extreme Internet celebrities to Telegram and alternative social media. *European Journal of Communication*, 35(3), 295–309.

Rosa, & Monteiro. (2019). 'Gabinete do ódio' está por trás da divisão da família Bolsonaro.

Soares, D. F. V. (2019). O processo histórico dos animes e mangás no Brasil.

Urman, A., & Katz, S. (2020). What they do in the shadows: examining the far-right networks on Telegram. *Information, Communication & Society*, 23(6), 904–923.

Zanini, F. (2020, 2 de novembro). Paineis de bolsonaristas nas redes sociais são suspensos por determinação de Alexandre de Moraes. *Folha de S.Paulo*. Recuperado de <https://www1.folha.uol.com.br/colunas/painel/2020/07/perfis-de-bolsonaristas-no-twitter-sao-suspensos-por-determinacao-de-alexandre-de-moraes.shtml>