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The Loss of a Common World: Disinformation, Post-Truth and Democratic Instability

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Abstract

This research proposes an analytical model to investigate interdependencies and synergies between disinformation, post-truth, and democracy in the contemporary hyperconnected society, represented through a correlation diagram and *feedback loops*, developed based on specialized literature and Systems Thinking. Considering the interconnections between the key elements that determine the behavior of the system under investigation, challenges to democratic stability were identified and discussed, including personal data tracking; the formation of filter bubbles; the emergence of the disinformation industry; the enhancement of disinformation techniques; the persuasive use of technologies; the rise of denialism; the intensification of social tensions; increased polarization; the fragmentation of the public sphere; the delegitimization of traditional institutions; and the threat to privacy and individual autonomy. In order to intervene in this dynamic and shift the system's behavior towards the flourishing of democracy, transformative solutions were listed

and grouped into containment, awareness, and empowerment actions. The research findings highlight the need to deepen the debate on the confluence of human rights, corporate crimes, and corporate political activity, based on a critical reflection about the socio-political role of organizations in the context of a hyperconnected and weakly regulated society operating transnationally.

Keywords: social media; disinformation; post-truth; democracy; corporate political activity.

Introduction

In the digital environment, globally, in 2019, it was found that 1 million logins were made on Facebook; more than 18 million messages were sent on WhatsApp; 3.8 million searches were conducted on Google; 4.5 million videos were viewed on YouTube; and over $900,000 dollars were spent on online shopping (Desjardins, 2019). Between 2020 and 2021, 316 million new internet users emerged (Kemp, 2021), leading to a total of 4.95 billion users by 2022, who spend an average of approximately 6 hours and 58 minutes online daily (Kemp, 2022). In Latin America and the Caribbean, 82.0% of users reported using WhatsApp daily, and 1 in 3 viewed political information through the application (Newman, Fletcher, Kalogeropoulos & Nielsen, 2019).

This context characterizes the contemporary hyperconnected society, marked by a continuous interconnectivity on which a most of its relationships are based. However, the current scenario of greater connectivity and ease of access to information, especially of a social and political nature, has not contributed to generate greater engagement and critical reflection on issues of collective interest. The significant differentiation between groups, subjects, and communication styles in the digital environment has fostered the construction of an environment where discussions have become more selective and vulnerable to manipulation (Rasmussen, 2016).

The very logic of how digital platforms work to personalize content, provided by computer algorithms, involves extracting data from users to offer products and ideas that match their inclinations, helping to form filtered bubbles. These filters make certain content invisible to certain users, causing a distortion of reality, limiting the content that will be exposed and interfering in the choice of what the individual wants to access (Pariser, 2011). In addition, on social media, images, figures and symbols stand out and viewing them may not necessarily mean a full reading of the content or verification of its authenticity (Miskolci, 2016).

In this sense, the *online* environment, by facilitating the production and distribution of content, has also contributed to the spread of *fake news*. The term *fake news* covers two notions of disinformation, so that false information can be spread by those who believe it to be true, or it can be spread intentionally by those who know it to be false (Ireton & Posetti, 2018). Both types contribute to informational confusion, but lies deliberately produced with the intention of deceiving have been the means by which post-truth discourses have fortified themselves in a hyperconnected society, in contexts of great social tensions and polarization.

This described scenario aligns closely with the organizational world, particularly because of the fact the current business model of digital platforms has collaborated to the rise of industries that spread personalized disinformation and profit by exploiting user data to deliver targeted advertising and political campaigns. This phenomenon establishes a new corporate era defined by

Shoshana Zuboff (2019) as surveillance capitalism, a concept coined to describe a new mode of production based on users being monitored at every click by companies aiming to predict and modify their behavior—not only to sell products but also to influence their opinions on political issues.

This new era is characterized by the fact that digital platforms are shaped to suit each user according to their expectations, ideologies and emotional impulses. Thus, the way in which individuals absorb and interpret information is influenced by personal self-identity and the tribes they associate with, while information that opposes their worldview becomes inaccessible (Wardle & Derakhshan, 2017). While *fake news* can, to a certain degree, be corrected, the post-truth game goes further, as it involves creating parallel realities experienced by each individual in their "echo chambers" that are reinforced in the digital environment (Cook, Lewandowsky & Ecker, 2017).

Research has emphasized the role of digital platforms in manipulating public debate by amplifying disinformation, interfering with users' privacy, decreasing popular trust in the news and even in democratic institutions (Bradshaw & Howard, 2019; Pariser, 2011; Shahbaz & Funk, 2019). Thus, it is observed that the online world has favored the formation of niches with low plurality of ideas, contributing to the increased fragmentation and complexity of the public space, making it difficult to find consensus and solutions to collective problems (Alexey, 2018; Rasmussen, 2016). In this scenario, new challenges emerge such as vulnerability to polarization, the lack of transparency in the use of algorithms and the use of surveillance technologies as tools for social control and political distortion (Deibert, 2019; Diamond, 2019; Feldstein, 2019).

Given the above, this study aims to propose an analytical model linking disinformation, post-truth and democracy by identifying the challenges to democratic stability that emerge from the phenomenon of hyperconnectivity and call into question the immense power of organizations, governments, and individuals to interfere in social cohesion. Subsequently, transformative solutions are listed and grouped into containment, awareness, and empowerment actions, with the aim of helping to strengthen democracy in contemporary society.

Waves of democratization

Over the years, society has experienced waves of democratization and reverse waves of democratization. As identified by Huntington (1991), the first wave of democratization began in 1820, inspired by the ideals of the French Revolution, and lasted until 1926, giving rise to 29 new democracies. However, from 1922 onwards, there was a reverse wave that reduced the number of democracies to 12. In 1945, the Allied victory in the Second World War marked the beginning of a short second wave of democratization, which lasted until 1962 and brought the number of democratic states to 36, but was also followed by a reverse wave from 1960, which reduced the number of democracies to 30 (Huntington, 1991). Both reverse waves were caused by the weakness of democratic values, economic problems, social and political polarization and influences from regions that suffered democratic collapses, covering the periods of the rise of fascism, Nazism and the occurrence of military and civil coups (Huntington, 1991).

In 1974, a shift in the global landscape contributed to the occurrence of a third wave of democratization, promoted by the loss of legitimacy of authoritarian regimes, global economic growth and the positioning of the Catholic Church against authoritarianism and external

democratizing influences (Huntington, 1991). However, while a global democratizing wave favors the promotion of democracy externally, it does not create the necessary conditions for democratization in specific regions. For this reason, during the third wave, some authoritarian regimes still survived, while others suffered the transition to another type of regime that was not necessarily democratic, which justifies the proliferation of competitive authoritarianism in the 2000s, representing the decline of democratic regimes that did not sustain themselves, as well as authoritarian regimes that weakened (Levitsky & Way, 2002).

During this phase, it was noted that regions with ties to the West underwent greater democratization, driven by economic changes, technological development and greater penetration of the media and international NGOs that favored the promotion of human rights and democracy (Levitsky & Way, 2005). Countries with greater ties and more vulnerable to Western influences, such as those in Central Europe and the Americas, experienced greater democratizing pressure, while those with low ties and less vulnerable to Western influences, such as countries in the Middle East and East Asia, relied on a more permissive external environment (Levitsky & Way, 2005).

According to Diamond (1996), in 1990 there was a superficial democratization due to the continuous growth of electoral democracies and the stagnation of liberal democracies. In 1996, there were 117 electoral democracies, but the proportion of liberal democracies fell from 85.0% in 1990 to 65.0% in 1996 (Diamond, 1996). When analyzing the democratic transitions of the third wave, from 1974 to 2012, Mainwaring and Bizzarro (2019) found that of the 91 democratic regimes that emerged, 34 collapsed, 2 eroded, 28 stagnated, 23 achieved democratic advances and 4 maintained high levels of democracy. Thus, of the 79 countries that experienced democratic transitions in the third wave, only 12 were robust liberal democracies in 2017 (Mainwaring & Bizzarro, 2019).

According to the *Freedom in the World 2019* report, after the Cold War and the fall of the Berlin Wall, the share of non-free countries[1] fell by 14 percentage points between 1988 and 2005. However, in recent years, most regions have received lower scores and, from 2008 to 2018, the percentage of Free countries fell, from 46.1% to 44.1%, and of non-free countries increased, from 21.8% to 25.6% (Freedom House, 2019). In 2022, out of a total of 195 countries, the report classified 83 as Free, 56 as non-free and 56 as Partly Free, which represents, globally, that 8 out of every 10 people, approximately, live in countries that are part of these last two classifications (Repucci & Slipowitz, 2022). The same research showed that 81.0% of the countries in Europe and 66.0% of the countries in America were classified as Free, while 77.0% of the countries analyzed in the Middle East were given the status of non-free and none of the 12 countries investigated in Eurasia were classified as Free, due to the maintenance of authoritarian regimes in these regions. The report shows that over the last 16 years, between 2005 and 2021, most countries have suffered democratic declines (Repucci & Slipowitz, 2022).

The most common declines listed in the *Freedom in the World 2020* report (Repucci, 2020) are in the subcategories: Functioning of Government, related to government accountability and safeguards against corruption; Freedom of Expression and Belief, related to religious, media and academic freedom; and Rule of Law, related to equal treatment under the law and an independent judiciary. In the 2019 and 2022 reports, there was also a drop in the Electoral Process subcategory, related to the existence of free and fair elections, due to the manipulation of electoral rules (Freedom House, 2019; Repucci & Slipowitz, 2022).

The bottom line is that the last decade has seen a weakening of the democratic impulse and a weakening of political commitment. Western democratic forces have encountered a more competitive external environment and have exerted less democratizing pressure on authoritarian regions (Carothers, 2015). Diamond (2020) points out that the current moment cannot yet be defined as a reverse wave of democratization like those that have occurred before. However, the scenario is approaching, as since 2006 there has been a global democratic recession through democratic collapses, a decline in the quality of democracies in strategically important regions and the deepening of authoritarianism (Diamond, 2015).

However, there are other interpretations of the recent historical process. Levitsky and Way (2015), for example, emphasize that the 1990s was composed of an authoritarian crisis and not an era of democratization and suggest that in recent years there has not been a democratic crisis, but rather an authoritarian reconsolidation, due to the economic strengthening of some authoritarian regions and the emergence of new powers, such as China and Russia. Similarly, instead of calling it a reverse wave of democratization, Lührmann and Lindberg (2019) argue that since 1994 there has been a third wave of autocratization, a period in which the number of democratizing countries decreases while the number of autocratizing countries increases.

According to Fukuyama (2015), what has happened is a failure of institutionalization and the State has not been able to keep up with and meet the demands for democratic responsibility from its citizens, which causes the delegitimization of democracy. In this way, the author argues that legitimacy depends on the capacity for good governance, the provision of basic public goods to the population, which has led countries like China and Singapore to increase their prestige, which has been lacking in countries like Brazil and Mexico. From this perspective, structural factors such as extreme social inequality, the weakness of the State and the weakness of political parties have contributed to the scenario of popular discontent in Latin American democracies, as essential services are distributed unequally among citizens, contributing to perceptions of injustice, corruption and government negligence (Levitsky, 2018).

Another challenging issue is the resurgence of the illiberal right-wing, which represents a danger to liberal rights and constitutional norms (Levitsky, 2018). The desire for hegemony, the exaltation of a leader above institutions and disrespect for pluralism serve as a trigger for rulers to take control of institutions that should oversee them, such as courts, regulatory agencies and media channels (Diamond, 2020). In addition, the intensification of the polarization scenario turns political rivals into personal enemies who need to be eliminated at any cost (Levitsky, 2018). Unwritten rules, such as mutual tolerance and institutional reserve, are fundamental to the functioning of democracy and are based on the legitimate recognition of political opposition and the respect and civility of electoral competition (Levitsky & Ziblatt, 2018).

By defining different political camps as intolerable and exclusionary, polarization corrupts democratic norms and also reinforces the acceptance of authoritarian tendencies (Levitsky & Ziblatt, 2018). Voters prefer to ignore democratic misdeeds of their political leader to avoid supporting the opposition, trading democratic principles for partisan interests by accepting authoritarian tendencies of those politicians or parties that defend their interests (Svolik, 2019).

In the current context, authoritarian tendencies have spread beyond the borders of their territories, as these regimes spread abroad, taking advantage of the openness of democracies to the

pluralism of ideas (Walker, 2016). According to Walker (2016), the main intention of authoritarian regimes is not to promote authoritarianism, but to contain the spread of democracy, distorting and staining the image of influential democratic regions such as the European Union (EU) and the United States (US), manipulating information that undermines understanding of global causes and stimulating the creation of pseudo-realities.

Huntington (1991) points out that various forms of authoritarianism arise based on the specificities of the context, such as religious fundamentalism in the Islamic world and populist dictatorships in response to economic privileges, so that a technocratic electronic dictatorship would be possible, with an authoritarian regime legitimized by the capacity to control sophisticated media and the manipulation of information. In contemporary society, therefore, new strategies for interfering in public opinion are emerging through the use of digital media, free of charge and even for profit. Social media have been the main allies of authoritarian regimes, as have surveillance and control techniques facilitated by artificial intelligence, helping to control popular manifestations and delegitimize opponents (Feldstein, 2019).

The political effect of social media on democracies is felt through the targeting of content and the lack of editorial control, with anyone producing and disseminating information, which can distort facts and lead to a war of narratives. The government itself can also hire agents to promote online debates and even programmed robots, directly affecting public opinion and, consequently, the electoral process (Diamond, 2019).

Despite the openness and broadness of participation in the internet public sphere, what has happened is the formation of niches with a low plurality of ideas that do not seek to influence the general agenda or be part of a universal public sphere (Alexey, 2018; Kruse, Norris, & Flinchum, 2017). This increased fragmentation and complexity of the public space creates new challenges for democracy (Rasmussen, 2016). Within this context, post-truth discourses have been strengthened through digital media, which contribute to informational confusion and the weakening of the public sphere by undermining diversity, dialog and the possibility of a common world.

The formation of public opinion in the post-truth era

Since the rise of traditional media, there has been a debate about their role in the commodification of information and in discouraging critical thinking. Historically, the State and power groups have relied on media strategies to manufacture public opinion (José, 2000). Nowadays, this situation is reinforced by the emergence of new digital media, which through computer algorithms contribute to a passive acquisition of information by acting on the digital landscape, filtering users' information to match their preferences (Pariser, 2011). In this way, although new technologies facilitate access to information and encourage public engagement in political and social issues, they have also become powerful tools for manipulating public debate and promoting post-truth.

The term post-truth first appeared in a 1992 article by Steven Tesich in *The Nation* magazine, in a scenario in which, in the midst of political scandals in the United States, the truth became equated with bad news and the population decided to live in a post-truth world as a consolation (D'Ancona, 2018). In 2010, Roberts introduced the term related to the sharing of beliefs,

emphasizing that voters choose a tribe based on similar values, create arguments that support their positions and then choose facts that reinforce those arguments, in other words, they make a biased assimilation when evaluating facts based on their beliefs. In 2016, events such as Trump's election and Brexit[2] influenced the choice of "post-truth" as the word of the year by the Oxford Dictionary, which was defined as "relating to a situation in which people are more likely to accept an argument based on their emotions and beliefs, rather than one based on facts".

Social media has proven the fact that individuals respond to emotional triggers and share information that reinforces their beliefs and even existing prejudices, regardless of the credibility of that content (Wardle, 2019). Those who are more sober and truthful tend to cause less commotion, so that even a small, organized and radical network can cover up a more extensive network of moderate opinions (Shahbaz & Funk, 2019). Among the abundance of information on social media, those that most attract users' attention are those that touch the emotions, have visual content and strong narratives (Wardle & Derakhshan, 2017).

In this context, it is understood that digital media have come to shape not only content for users, but also the affective structures of public discourse (Hannan, 2018). There is a transformation from a society of facts to a society of data, in which the use of digital technologies and computer algorithms has contributed to tracking public feeling, which becomes more valuable than statements about reality (Davies, 2016). This creates the image of an audience consuming entertainment, rather than the perception of a critically engaged electorate (D'Ancona, 2018).

According to Cook et al. (2017), the trends of recent decades that have contributed to the strengthening of post-truth in today's society are: declining social capital and changing values; growing inequality; increasing polarization; declining of trust in science; politically asymmetrical credulity; and a changing media landscape. The last relates to the digital environment, characterized by the fractioning and heterogeneity of audiences, atomized into polarized niches, as well as the high incivility of online discourses (Cook et al., 2017).

It is understood that the public sphere is nourished by the values of the world, culture and the diversity of institutions and stimulates the formation of public opinion, which translates into material for political decisions (Rasmussen, 2016). In a scenario in which rationality and reality are losing legitimacy, post-truth discourses are growing stronger, thus eliminating the possibility of forming an engaged public opinion oriented towards collective decisions.

The philosopher Bruno Latour (2020) calls this phenomenon "the erosion of a common world", which for him means both the absence of an epistemic community in which the public manifestation of difference and, above all, cultural translation (mutual constitution through dialog among different people) is possible, and the lack of habitable soil on which it is possible to live in times of the Anthropocene and political fragmentation.

The French thinker offers an original interpretation to understand this loss of social cohesion generated by post-truth. In his opinion, part of the world's elite has understood that in order to be successful it would need to "depoliticize politics" and the origin of this process would be climate skepticism. In order to hide the threat of the finiteness of natural resources and delay the political and economic transformations it would require, this global elite began a deliberate strategy of creating a social atmosphere based on scientific denialism, confusing citizens about the nature of the facts and funding fake news to delay public awareness of the urgency of the problems. Hence,

post-politics is born: "It is not a question of a politics of 'post-truth', but of a politics of post-politics, that is, literally without an object, to the extent that it rejects the world it claims to inhabit" (Latour, 2020, pp. 49-50), abandoning the link with truth and leading us to a life "outside this world", to a reality without foundation. In the era of post-politics, the reason for the very existence of politics becomes its own negation, since politics, far from being a consensus, is the affirmation of the possibility of a common world between different people.

Methodology

A literature review was carried out, with an interdisciplinary approach, in the areas of democracy, social media, data management, post-truth and disinformation. Reports produced by research organizations were also analyzed to gain a better understanding of the current global situation on the subject in question. By integrating these investigations with the Systems Thinking approach, an analytical model was created that links disinformation, post-truth and democracy.

A system is understood as "an interconnected set of elements that is coherently organized in a way that achieves something" (Meadows, 2008, p. 11). In this way, systems consist of identifying elements, their interconnections and the attainment of a purpose that determines their behavior, so that the impacts caused by the elements and their connections influence the understanding of the behavior of the system as a whole (Stroh, 2015).

When behaviors persist over time, creating interconnected circular relationships, there are feedback loops, which indicate whether systems grow or remain stable (Stroh, 2015). When there is stability, resistance to change and equilibrium around the objectives already achieved by the systems, equilibrium feedbacks are identified (Stroh, 2015). Reinforcing feedbacks, on the other hand, reinforce the direction of change by promoting growth and are more common in social and economic systems (Stroh, 2015). In order to modify the behaviors produced by a system, it is necessary to identify its leverage points, which produce specific changes in the long run (Stroh, 2015).

As systemic diagrams are simplified descriptions of the real world (Meadows, 2008), in this work, the proposed analytical model is represented by a correlation diagram and *feedback loops*, in order to promote a simplified visualization of reality. To identify the elements that make up the diagram, key parameters were selected, filtered and organized. Subsequently, connections between these elements were identified and represented using connective arrows. Connections between elements are indicated by positive signs (+) when they vary in the same direction, and by negative signs (-) when they vary in opposite directions. Where a *loop* is closed, a reinforcing *feedback loop* or a balancing *feedback loop* is formed.

Based on the *iceberg framework*, a Systems Thinking tool proposed by Meadows (2008), it is understood that events emerge from patterns of behavior generated over time by sustaining certain structures[3]. Through the creation of the conceptual model, we aim to highlight the relationships between the elements and the behavior that the system produces. In the case of this research, Systems Thinking will be applied to the identification of problems and challenges that cause democratic instability in a scenario of hyperconnectivity and, subsequently, to the identification of leverage points, which will act as potential solutions for the survival and stability of democracy.

Proposed analytical model: hyperconnectivity and democratic instability

The central axis of the correlation diagram and *feedback loops* (Figure 1) contains the events focused on in the research (located at the top of the iceberg), which are visible and relevant in the current scenario. The elements to the left, right and above are those identified as the main drivers of the emergence of the events, ranked by relevance (from top to bottom, left to right). The phenomena at the bottom add an opposing force to prevent events from reinforcing themselves, acting as potential leverage points.

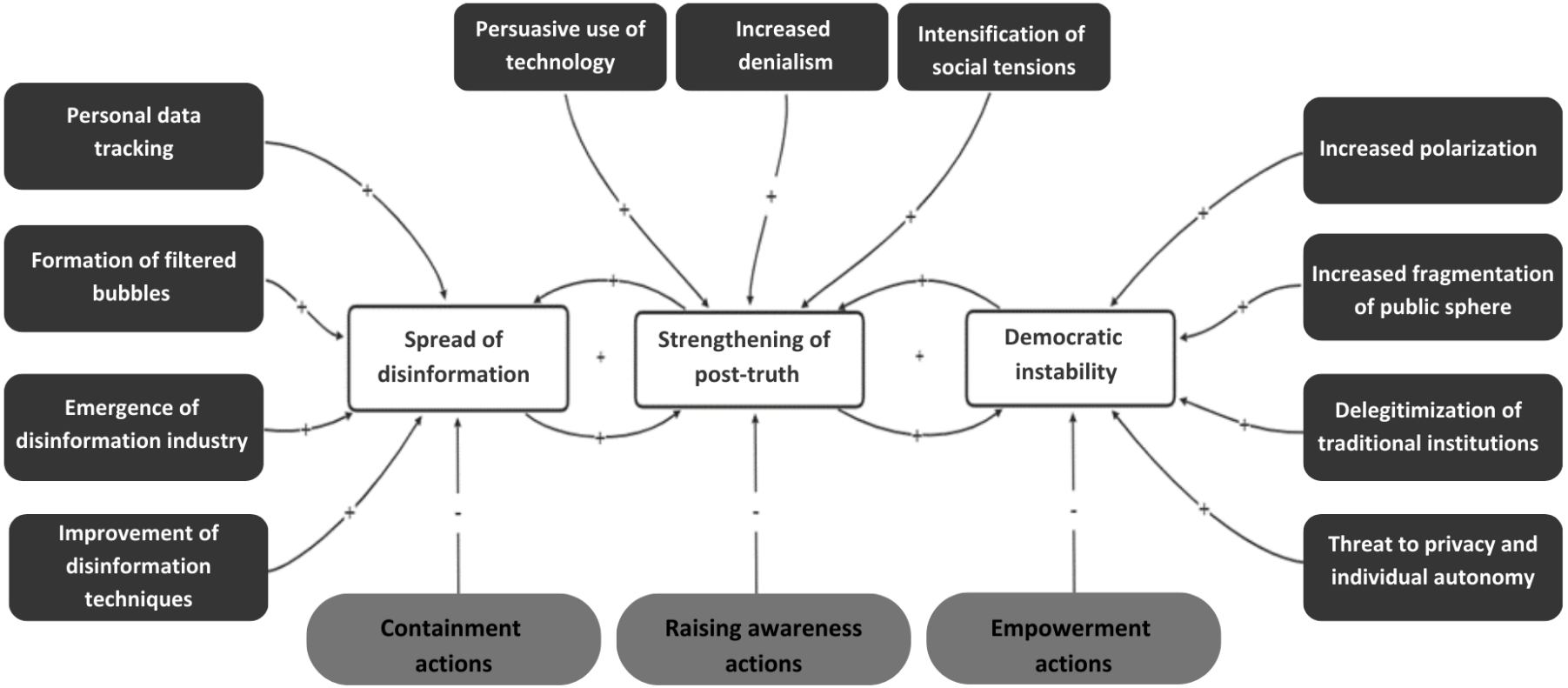

Figure 1. Correlation diagram and *feedback loops.*
Source: created by the authors (2022).

There is a reinforcing *feedback loop* between the dissemination of disinformation and the strengthening of post-truth, so they feed off each other and gain strength. The same happens between the strengthening of post-truth and democratic instability.

Hyperconnectivity scenario is the contemporary novelty that has affected all spheres of social life. Trends such as technological development, the popularization of the internet and social media and the formation of a global network of users, have contributed to any individual being able to create and share content online in real time. This makes it possible for large amounts of information to be produced without the need for an editor, facilitating the process of disseminating disinformation. This constant interconnectivity also contributes to users leaving their digital footprints. By tracking personal data, the media mold themselves to the individual - and vice versa - building a universe of their own for each user through the formation of filtered bubbles (far left of Figure 1). Computer models personalize content to match users' beliefs and positions, reinforcing an idea and undermining diversity (Pariser, 2011).

Leveraging this advantage provided by machines and their algorithmic calculations, digital platforms sell their precision judgments of each individual's personality to advertisers, giving rise to a new mode of accumulation called surveillance capitalism (Zuboff, 2019). This business model, based on monetization through segmented and personalized advertising, has become a lucrative means in the digital environment and has contributed to the emergence of the disinformation industry - an organized and deliberate process for producing disinformation, aimed at manipulating public opinion in exchange for political and financial benefits.

The longer people stay connected, the more advertisements and content they will consume and the greater the financial return for the players involved. Platforms profit by selling users' attention to advertisers. Advertisers profit from targeting ads to users who are already likely to consume. Content creators' profit from clicks, which attract relevance and, consequently, advertisers to their pages. As a result, the public space formed by the internet has become extremely commercialized and the user (human subjectivity) has become the source of raw material. In this context, in order to gain relevance in the online environment, it is necessary to stand out among the large amount of information created every minute and, in order to do so, it is necessary to refine convincing and persuasive techniques.

The enhancement of disinformation techniques has been facilitated by the use of technologies and the stimulation of pre-existing social tensions through extremism, radicalization and appealing to emotions. Cook (2020) identified several disinformation techniques involving denialism and scientific skepticism. Among these strategies is the extended minority technique, which seeks to cast doubt on a consensus by presenting the opinion of a dissenting minority group. In addition, fake debates are created to give the impression of a balanced discussion taking place. On digital platforms, the opinion of a small group, through filtered bubbles, can easily be reproduced in the social environment, creating a false sense of majority.

Politicians also take advantage of their power of influence by disseminating unsubstantiated opinions as absolute truths, using personal experiences and isolated examples rather than evidence to support an argument, a strategy called anecdote (Cook, 2020). Another common technique in the political environment, especially in extremely polarized environments, is the *ad hominem* strategy, which represents attacking a person rather than countering their arguments. Other

stratagems cited involve the creation of conspiracy theories, in which individuals ignore evidence and official reports and reinterpret the facts (Cook, 2020).

In the recent scenario of the COVID-19 pandemic, 500 websites that spread conspiracy theories about the coronavirus earned 25 million dollars from ads (Global Disinformation Index, 2020a). In Brazil, more than 42.5 million Brazilians have been affected by *fake news* about the pandemic, with WhatsApp being the main platform for dissemination (PSafe, 2020). According to the study by Recuero and Soares (2021), on Twitter, the category of disinformation most present in the country about the coronavirus was defined as misleading framing, which means the reinterpretation of facts as a way of legitimizing a position, so that the transformation of scientific discussion about health into a discursive dispute related to political discourse was noted.

As these disinformative strategies are improved and incorporated by content-producing agents, they spread in the online environment, causing great informational confusion and creating fertile ground for the strengthening of post-truth. There is an increase in the persuasive use of technologies (upper part of Figure 1) by various actors and individuals are vulnerable in relation to their own information consumption habits, so that digital platforms have become the main stage for persuasion by influencing behavior and the perception of reality. This context also contributes to an increase in denialism, both in the scientific and socio-political spheres.

Recent examples include discussions about the legitimacy of the US elections, which culminated in Trump supporters storming the Capitol during the session that would certify the victory of Joe Biden, the current US president who took office in January 2021 (Sanches, 2021). This led to the blocking and suspension of the former president's social media, due to speeches inciting violence and support for the protesters (Wallace, 2021). Similarly, in Brazil, posts by former president Jair Bolsonaro were also removed from social media due to his negative and anti-scientific speeches, as well as questions and demonstrations by his supporters against the legitimate outcome of the elections (Freedom House, 2020; Reuters, 2022), leading to the anti-democratic act of invading the National Congress in 2023.

In addition to the speeches disseminated by political leaders that can contribute to the intensification of social tensions, supporting extremist movements and ideas, there is also the role of digital influencers and content recommendation structures. Networks tend to be centralized and a small number of people at the center of that network, connected to many others, are able to exert a high level of influence. Public figures with many followers on networks have great power to amplify their opinions and can often use the disinformation technique called positive thinking (Cook, 2020), legitimizing beliefs just because they want them to be true. In this way, when faced with a reality that is different from what they expected, individuals prefer to deny it and build their own.

In this way, in digital media, truth is decided based on the popularity and affinity of those who disseminate information, and the more interest an individual has in a topic, the more likely they are to attribute credibility to the information they mention (Hannan, 2018; Besalú & Pont-Sorribes, 2021). In this context, post-truth politicians act by maintaining their positions with conviction, regardless of the scientific or factual evidence against them. Such an attitude contributes to the strengthening of beliefs among a like-minded group and promotes rivalry with those who think differently.

The rise of polarization (far right of Figure 1), in addition to the post-truth political debate, is

one of the main trends that has contributed to democratic instability in the world (Committed to Improving the State of the World, 2017). This phenomenon has already been a relevant problem since the first reverse wave of democratization (Huntington, 1991), but the uniqueness of the present moment is related to the influence of social media in the construction of dichotomous and excluding realities. What we see is that nations are increasingly divided, which contributes to the increased fragmentation of the public sphere. In 2018, a survey of 27 countries found that six out of ten people agreed that their countries were more fragmented today than ten years ago (Ipsos, 2018). In the US, 84.0% of the population said that there is division between groups and the antagonism between Republicans and Democrats has been increasing in recent years (Ipsos, 2018). One possible explanation for this may lie in the sources of information considered relevant by the two groups, since when evaluating 30 different sources of information, Republicans said they distrusted 20 of them, while Democrats said they trusted 22 (Jurkowitz, Mitchell, Shearer, & Walker, 2020).

This different and often opposing perception of problems also influences the vision of solutions and can contribute to the delegitimization of traditional institutions. In the Latin American and Caribbean region, between 2010 and 2018/2019, trust in the electoral process fell from 52.3% to 45.5%, trust in the executive fell from 55.2% to 42.5% and satisfaction with democracy fell from 58.7% to 39.6% (Zechmeister & Lupu, 2019). Globally, the proportion of those dissatisfied with democracy increased from 47.9% in 1995 to 57.5% in 2020 (Foa, Klassen, Slade, Rand, & Collins, 2020).

This complex context raises a number of questions, including the debate about the responsibility of the actors who have to deal with disinformation. It's problematic to give this power to the big media and technology corporations, because as well as having the technique and control over user data, they will have authority over the debate on causes of public interest. However, it is also questionable to give this responsibility to governments, which in many regions act as "disinformation" agents. In the cases of Brexit and the US elections, partnerships between governments and digital *marketing* corporations promoted intense exploitation of citizens' data and targeting of biased content in order to influence votes. In Brazil, there is also an apparent coordination between governments and the dissemination of disinformation financed with public money (Freedom House, 2020).

Another relevant problem afflicting the hyperconnected society is the development of media monitoring programs by both authoritarian and democratic countries. In the UK, police have been found to monitor activists using digital footprints, and in the US, surveillance technologies have been developed in partnership with Asian countries (Shahbaz & Funk, 2019). Authoritarian powers have been expanding their presence in the technology market, especially in relation to surveillance and control tools. During the US elections, among the top five disinformation websites found, two of them were based in Russia and their content received 13 million views from Americans (Global Disinformation Index, 2020b).

Monitoring technologies and, consequently, the targeting of personalized content, mediated by technology companies and appropriated by governments, represent a major threat to individual privacy and autonomy. The greater the monitoring of citizens, the more they seek to influence the information that reaches them, limiting contact with opposition positions, controlling and repressing popular mobilizations and restricting the use of digital tools as a form of social

engagement and democratic expression. Faced with this structure, citizen users find themselves coerced, manipulated and molded by the information universe that constitutes their bubbles.

It can be seen that, gradually, through the implementation of surveillance mechanisms, censorship and control of media channels and the intense manipulation of discussions on causes of public interest, authoritarian tendencies are spreading in democratic regions. This corroborates the idea that in the current scenario, actions against democracy are emerging under apparent legality, in the name of order and national security, so that rulers have abolished democratic norms while maintaining institutions (Levitsky & Ziblatt, 2018; Lührmann & Lindberg, 2019). There is therefore a close relationship between how countries deal with their information environment, especially through digital technologies, and the erosion of democracies in these territories. As Klein (2022) points out, this scenario emphasizes the need to debate ethical responsibility in the digital transformation process led by organizations, institutions and individuals.

In summary, the analytical model proposed makes it possible to relate the events that emerge in contemporary society with the trends and structures that have been maintained over time and have contributed to their emergence, identifying the challenges to democratic stability. Next, the elements in the lower part of the diagram, which represent potential solutions to the problems listed, will be presented.

Levers for democratic floursing in a hyperconnected society

It is necessary to understand how the negative effects of the use of technologies can be minimized or even converted into actions that restore the common good. The construction of the diagram contributed to the visualization and shared understanding of the dynamics of the system under analysis, raising awareness of the current scenario and helping to detect the leverage points for change. This involves modifying the patterns of behavior described in order to affect the structures that contribute to the emergence of events.

The lower part of the diagram (Figure 1) shows elements that represent three groups of actions, which correlate and influence each other positively, and will act as leverage points by imposing a force contrary to the system's historical trend, modifying its behavior. Containment actions act directly and inversely on the spread of disinformation, so that more actions imply less spread of disinformation. Due to the reinforcing *feedback loop* between the elements of the axis, this also implies a retraction of the other events, *i.e*. a reduction in post-truth and democratic instability. The same reasoning applies to raising awareness and empowerment actions, which by acting directly on one event change the dynamics of the whole.

The actions will be presented in the same sequence as the challenges were listed, but they are related and complement each other. There is no single solution to the multiple challenges listed; the historical moment requires interventions implemented by different actors, which together will contribute to strengthening democracy in contemporary society.

Containment actions

Actions of this nature aim to contain the structures that facilitate the spread of disinformation and limit the actions of agents who take advantage of them. Examples include

initiatives that affect practices that sustain the digital media business model, such as data tracking, the formation of filtered bubbles and advertising monetization.

As a way of limiting companies' actions on data tracking, governments can implement regulations. In the European Union, in 2018, the General Data Protection Regulation (GDPR) was implemented to regulate the processing and circulation of personal data. The regulation states that the data collected must be accurate, adequate, up-to-date and limited to its purpose, stored securely for as long as necessary for its purpose and, in addition, the processing must be lawful, fair and transparent (Reuter, 2018).

Brazil stands out for the creation of Law No. 12.965 in 2014, known as the Marco Civil da Internet (MCI), the first regulatory policy aimed at Internet use in the country. This legislation defined the principles, guarantees, rights and duties of Internet use, including the recognition of the global scale of the network and the preservation of its participatory nature, plurality and diversity, the guarantee of freedom of expression, the protection of privacy and personal data, the guarantee of network neutrality and the accountability of agents according to their activities.

Despite its unprecedented and innovative nature, the MCI established essential general foundations that must guide the development of new complementary regulations (Lima, Dantas, & Buzanello, 2023). An example of continuity with what was introduced by the MCI is the creation of the General Data Protection Law (LGPD) in 2018. Inspired by European law, the LGPD regulates the processing of personal data with a view to protect the fundamental rights of freedom, privacy and the free development of personality (Law No. 13,709, 2018). Its text emphasizes that consent is a necessary condition for the processing of data, and the purpose of its use, the means of capture, the length of storage and whether it will be shared with third parties must be made explicit. This regulation can act as a brake on the system of exploitation and monetization of user data, but for it to be complied with and have effective results, the need for complementary action between the State and private companies is emphasized.

To minimize the effects of the formation of filtered bubbles, technology companies must be transparent about the use of algorithms, issuing warnings about the impacts generated by the consumption of information. One measure would be to change the logic of content targeting so that users are exposed to diverse subjects, promoting a plurality of ideas on the networks (Wardle & Derakhshan, 2017). Another way would be to give users autonomy and freedom to customize their algorithms, but they could still choose to continue consuming similar content (Wardle & Derakhshan, 2017). Changing the terminology used can also be effective, as it helps to promote closeness and the creation of emotional bonds (Wardle & Derakhshan, 2017). The user is “friend”, “follow” and “like” people and content that is in line with what they believe in, removing interest in what is different or opposite.

In order to contain the disinformation industry and the enhancement of disinformation techniques, technology companies must be able to prevent the amplification of *bots*, verify audiovisual strategies that involve the falsification of lines and faces and work to build authenticity tools that allow the original material to be differentiated from other fabricated material (Wardle & Derakhshan, 2017). This can be done by partnering with fact-checking agencies, as Facebook did by starting its fact-checking program in 2016 through partnerships with agencies certified by the International Fact-Checking Network.

Meta's policies (n.d.-b) emphasize that content that violates the Advertising Standards is removed, including hate speech, fake accounts, terrorist, violent, criminal and discriminatory content, illegal products and services, sensationalist content and even content that discourages vaccination. Other content identified as disinformation, but which does not violate the platform's policies, is not removed, but its distribution is reduced and it receives warning labels. Pages and websites that continually share false content may lose their ability to monetize advertising.

Removing financial incentives by reducing or eliminating advertising monetization is an effective measure to contain the actions of agents who profit from the disinformation industry. The Global Disinformation Index (GDI) is a research organization that signals the disinformation risk of news domains, classifying them between those with maximum and minimum disinformation risk, and also identifying the ad programs and brands that fund them (Global Disinformation Index, 2019). The GDI also warns advertisers about the content they sponsor and encourages them to remove advertising from sites classified with high disinformation risks, undermining the financial stimulus that sustains these portals.

A similar initiative, originating in civil society, is Sleeping Giants, a Twitter account created in 2016 in the USA. This initiative inspired the movement to spread to several countries. Sleeping Giants communicates to companies which portals that publish disinformation their ads have appeared on, highlighting the brands that commit to demonetizing these websites, as well as those that don't, which encourages many customers to pressure these corporations to change their behavior.

In addition to financial disincentives, actors who seek political gain through disinformation must also be contained. This is a major global challenge: to create democratic institutional mechanisms to investigate and hold accountable networks made up of politicians, public officials and the private sector for spreading false news for electoral purposes and slandering candidates in elections. It has been observed that, through party alliances and power games, political actors - and their supporters - often shield themselves from investigations and accusations.

It is important to note that there is a fine line between regulation and censorship, so legislation aimed at containing structures, content and agents that spread disinformation must be clear about its definitions and implications so that it is not applied in a way that represses discourse and positions. Freedom of expression and fundamental rights must always be a priority and guide the actions implemented, so that neither companies nor the State can act arbitrarily and for their own benefit (United Nations, 2018a). Furthermore, in order to comply with and complement containment actions, raising awareness in society and empowering the citizen-user become fundamental.

Raising awareness actions

By dealing with the collective imagination and re-signifying reality, the strengthening of post-truth has a number of implications for social and political life. In view of this, actions that elucidate disinformation techniques, their dissemination mechanisms and their consequences can help to minimize the persuasive use of technologies and, consequently, discourage the intensification of social tensions and reduce political and scientific denialism. It is therefore urgent to raise awareness of potential agents of disinformation responsible for spreading post-truth discourses.

Digital influencers play a key role in this system and need to reflect on the impact of their speeches in promoting democratic dialogues on networks. One initiative promoting this awareness was the partnership between Redes Cordiais, a media education project, and InternetLab, an independent research center, to hold *workshops* in different regions of Brazil about freedom and responsibility on networks during the 2020 municipal elections. The initiative counted with the participation of 150,000 influencers, who together reached 83 million followers (Redes Cordiais, 2021). Community health agents were also trained by the Information Agents project, promoted by Redes Cordiais. The idea is that these members of the front line in the fight against the coronavirus could become propagators of quality information, demystifying fake news surrounding the pandemic. The program has trained more than 200 agents and community leaders responsible for serving 1.5 million people (Redes Cordiais, 2021). The training of journalists was also the focus of a project carried out in partnership with the Institute of Technology and Society and with the support of the Facebook Journalism Project, in which courses and manuals on good practices were offered to more than two thousand journalists, covering the topics of network monitoring, bot detection, privacy settings and fact-checking (Redes Cordiais, 2021).

Given the quantity and diversity of disinformation disseminated, research institutions play a fundamental role in helping to map disinformation, identifying the most common types in each region, the vehicles and devices most used and also the public's perception of it. One of Facebook's measures, following pressure from academics, was to release access to the platform's data in order to study its impacts. Researchers were given access to more than 1.3 million targeted ads about elections, politics and democracy during the 2020 US election, with the aim of understanding the practices used to reach potential voters (Meta, n.d.-a).

Scientific research has also played an important role in producing manuals to raise awareness of the disinformation techniques used today and the effective ways to debunk them, such as *The Debunking Handbook*, with one version published in 2011 and another, more recent, in 2020. According to the handbook, effective debunking of disinformation requires focusing on essential facts, emphasizing the correct information; explicit warnings that it is false information; an alternative explanation that fills in the gaps left by the debunking, explaining the inconsistencies present in the disinformation; and finally, restating the correct fact again, displaying it graphically, if possible, to make it easier to understand and visualize the situation (Cook et al., 2020).

Another material produced, *The Conspiracy Theories Handbook*, aims to understand conspiracy theories and list strategies for debunking them (Lewandowsky & Cook, 2020). The authors warn that real conspiracies can exist and are discovered through investigations and documentary analysis, which encourage healthy skepticism and consider consistent evidence. However, unlike real conspiracies, conspiracy theories are characterized by stimulating skepticism about everything that does not fit the theory and the evidence produced is inconsistent and interpreted based on the pre-existing belief (Lewandowsky & Cook, 2020). Therefore, it can be seen that refuting false information involves dealing with cognitive and emotional processes, requiring, in addition to correction and awareness, the learning and strengthening of the individual.

Initiatives such as those highlighted above must be popularized around the world, stimulating the formation of global research and political networks that contribute to a better understanding and awareness of current challenges and the investigation and implementation of solutions that promote the strengthening of democratic societies. Following the example of the

governance system created to tackle the climate crisis, one could think of creating an institution similar to the Intergovernmental Panel on Climate Change (IPCC), responsible for promoting articulations between the scientific community, politicians, public agents in general and society.

Empowerment actions

Knowledge about the structures, agents and strategies used to promote disinformation and post-truth discourses that foster polarization, fragmentation and delegitimization of traditional institutions is the key to awakening critical thinking and a democratic culture in the relationships promoted on the networks, while also helping to guarantee forms of protection for privacy and individual autonomy. This can be done through actions to empower the citizen-user, who is seen not only as a consumer of digital services and products, but also as a human being with rights and duties in the internet sphere.

As a way of neutralizing the influence of disinformation, one strategy is the inoculation process. Inspired by medicine, this technique suggests that in the same way that people protect themselves from a virus, they can also protect themselves from persuasion (Amazeen, 2021; Cook et al., 2017). The individual is preventively alerted about the imminent threat of being deceived by being explicitly warned about the disinformation techniques used and thus, by being "inoculated", becomes less vulnerable to accepting that information. For example, by explaining how the tobacco industry acted by using fake experts to create a scientific debate about the health effects of smoking, people become resistant to attempts using similar techniques (Lewandowsky et al., 2020). However, this process requires knowledge about disinformation strategies and their transfer to society.

A major challenge is dealing with communities that share beliefs and skepticism and act with rejection or indifference to scientific evidence that could challenge their worldview. For this reason, the way in which messages are delivered to these groups must be adapted, and the messenger must be someone who can be trusted, who has at least something in common with the members, since the effectiveness of correcting information and the ability to learn depends on the recipient's willingness to believe (Lewandowsky et al., 2020). Furthermore, approaches must be empathetic, use inclusive language and avoid mocking, stigmatizing and aggressivity in the argumentation (Lewandowsky et al., 2020). Only by undermining polarization, which stimulates rivalry between groups, will dialogue be possible to build shared common knowledge.

Media organizations can act by promoting literacy resources on how to deal with digital news, by stimulating critical thinking in their audience, explaining the process carried out for fact-checking and demonstrating the impacts of misinformation in the world (Wardle & Derakhshan, 2017). This requires journalists with adequate training that involves critical evaluation of sources, verification and authentication of content and ethical use of technologies.

Besides training journalists who deal with news, it is also necessary to train information technology professionals, who are responsible for creating, implementing and maintaining the tools used in the digital information environment. The training of these professionals must include topics involving ethics and human rights in relation to the mechanisms for processing personal data, surveillance and control technologies and the ways in which the disinformation industry operates. They should also be trained to educate the population by sharing knowledge about the implications of technological tools in the online environment, which could be done through the development of

teaching and extension projects involving the community.

The civil society, in partnership with various actors, must also act to educate the public about disinformation and promote actions that encourage empathy and healthy dialogue on the networks. The American Democracy Project, a network of 296 American state universities and colleges, has created The Digital Polarization Initiative, which aims to promote civic and digital literacy among its students, teaching them to check facts and contextualize news online (American Association of State Colleges and Universities, 2021). Another initiative, which aims to educate not only young people but the entire community, is Learn to Discern, promoted by the non-profit organization International Research & Exchanges Board (IREX). This project aims to educate communities about disinformation, empowering them to recognize these narratives and search for quality information, and has been implemented in Ukraine, Tunisia, Jordan, Indonesia and the USA (IREX, 2021).

The Learn to Discern pilot project, carried out in 50 schools in Ukraine, which integrated media literacy into History, Art, Culture and Literature lessons for 8th and 9th grade classes, found that participants increased their ability by 18.0% in identifying fake news and performed 16.0% better in differentiating between facts and opinions (IREX, 2021). A study of the project's impact on the ability of adult citizens to detect disinformation, after a year and a half of completing the literacy program, found that participants were 28.0% more likely to demonstrate knowledge about the media industry, 25.0% more likely to check news sources and 13.0% more likely to critically analyze fake news (IREX, 2021).

These actions demonstrate the potential to educate and empower citizens to strengthen a democratic culture based on deconstructing disinformation, learning to search for quality information and promoting inclusive communication and dialogue. Only by understanding and recognizing the problems faced in a hyperconnected society will citizen-users be able to claim rights, demand action from technology and media companies, from governments and even produce their own initiatives.

In summary, it is understood that all the actions grouped into the three categories described must be focused on transparency and respect for human rights. The reports produced by the United Nations (UN) emphasize that censorship cannot be imposed or privacy violated, and that the implementation of products and services by technology companies must be submitted to public consultations and human rights impact assessments (UN, 2018a; UN, 2018b). Companies should also prioritize the establishment of complaint channels to assist victims of surveillance and rights abuses, seeking reparation (UN, 2019). The plurality of the information environment must be prioritized, limiting the power of large technological monopolies.

In this way, understanding that the information produced and consumed shapes and re-signifies the world for individuals and the communities to which they belong, promoting an understanding of current challenges and presenting potential solutions is a necessary and timely contribution capable of contributing to the historical mission at this moment in humanity, which is to act in favor of democratic flourishing in contemporary hyperconnected society.

Final considerations

In this article, the research and theoretical propositions derived from the investigations carried out were articulated in an analytical *framework* that aimed to correlate the phenomenon of hyperconnectivity with democratic instability, highlighting the relationships between the elements of the model and the behavior that this dynamic system produces, in the light of the concepts of Systems Thinking.

It was noted that there is a reinforcing *feedback loop* between the dissemination of disinformation, the strengthening of post-truth and democratic instability, demonstrating that the current dynamics of the system point towards the deterioration of democracy. The elements that reinforce this movement were identified as challenges to democratic stability. The leverage points detected, represented by containment actions, raising awareness actions and empowerment actions, present themselves as potential solutions for the stability and flourishing of democracy in a hyperconnected society, although there is a long way to go to mitigate the perverse effects of disinformation.

In this way, the results of this research suggest that the direction of contemporary democracies is delineated by the way in which they deal with their informational environment. In addition, it was noted that the use of Systems Thinking can be adapted to research in different areas, helping to explore a broad understanding of complex social problems. It was also possible to observe that the literature on the subject studied is dispersed in different areas of knowledge, and there is still no solid research agenda on the subject and its more direct implications for organizational studies, especially in Brazil.

This scenario points to the need to deepen the debate on the confluence between organizations, human rights, corporate crimes and corporate political activity, taking into account the critical and continuous reflection about the political-social role of companies in a context of a hyperconnected and weakly regulated society, operating transnationally. This debate is of paramount importance, given: the deep transformations in global governance generated by organizations and the increase in their relative influence compared to national States (Barros, 2018); the corporate crimes committed systematically in our modern history, revealing themselves as an intrinsic *modus operandi* of capitalism (Oliveira & Silveira, 2021); and the capture of the State and the public sphere by companies (Coelho & Barros, 2021), in the form of algorithmic manipulation. The issues addressed by these authors, together with the findings of the research carried out, point to the enormous challenge of creating a global internet governance system that prevents the deterioration of democratic regimes, the polarization of public opinion and the strengthening of authoritarian tendencies.

Finally, it should be emphasized that the events highlighted in this paper include multidisciplinary issues, and that a continuous mapping of information disorder and its impacts is essential. It is argued that, if used appropriately, both the online environment and new information technologies have great potential for developing global citizenship, promoting collective action and helping to (re)construct the perspective of a shared common world.

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Notes

1. The *status* of a country or territory depends on its aggregate Political Rights score, on a scale of 0 to 40, and its aggregate Civil Liberties score, on a scale of 0 to 60. The sum of these scores ranks countries from 1 to 7. The higher the aggregate score, the closer to 1, the lower, the closer to 7. Thus, countries acquire the status of Free (1 to 2.5), Partly Free (3 to 5) or Non-Free (5.5 to 7). For the full methodology go to: https://freedomhouse.org/reports/freedom-world/freedom-world-research-methodology.
2. *Britain exit*, meaning the exit of the United Kingdom from the European Union.
3. The *iceberg* model is a Systems Thinking tool that helps us understand how a problem (an event, incident or occurrence) is linked to patterns of behavior, which in turn are linked to structures that ultimately connect to mental models (Meadows, 2008). The basic premise of this model is that the very description of this chain of interdependence has the power to bring us closer to proposing more effective and lasting solutions, since we will be better able to propose appropriate actions for each "level" of the iceberg (behavior, structure and worldview). For a visual representation of the model, go to: https://donellameadows.org/wp-content/userfiles/Final-Iceberg-Model.pdf.

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The authors use inclusive language that recognizes diversity, shows respect for all people, is sensitive to differences and promotes equal opportunities.

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