Educommunication in the fight against fake news

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Abstract: This article addresses two fundamental concepts, educommunication and disinformation, trying to show the manipulation of information and that the influence of communication technologies on public opinion has been a central concern of philosophers and scholars of human communication. Thus, analyzing disinformation as a current phenomenon, the main theories of communication sciences are presented, which provide subsidies to study it - from different but complementary perspectives. From this approach, issues such as democracy, ideology and power become elements that bring these analyses together.

Keywords: disinformation; fake news; big data; educommunication; communication theories.

Resumo: Este artigo trabalha com dois conceitos fundamentais, a educomunicação e a desinformação, procurando mostrar que a manipulação de informações e a influência das tecnologias de comunicação sobre a opinião pública têm sido uma preocupação central dos filósofos e estudiosos da comunicação humana. Assim, analisando a desinformação como fenômeno da atualidade, são apresentadas as principais teorias das ciências da comunicação que trazem subsídios para estudá-lo - de perspectivas diferentes, mas complementares. A partir dessa abordagem, questões como democracia, ideologia e poder se tornam elementos aglutinadores dessas análises.

Palavras-chave: desinformação; fake news; big data; educomunicação; teorias da comunicação.

1. INTRODUCTION

The spread of disinformation – false content, adulterated images, decontextualized news – through social networks operating on digital platforms has attracted global attention for having influenced, if not determined, the results of important democratic elections, such as Brexit (a referendum that decided UK was to leave the European Union); the 2016 US presidential elections, which elected Donald Trump against all public opinion polls at the time; and, in a kind of chain reaction, several majoritarian elections that took place contaminated by fake news, including that of Jair Bolsonaro in Brazil, in 2018¹.

Digital humanities researchers belatedly identified the dimension and importance of this phenomenon. It was the media itself that started the debate on the dangers of fake news for democracies, even in September 2016, with the article "Art of the lie²," published by the English magazine *The Economist*, which highlighted the term *post-truth* and blamed the internet and social networks for the spread of lies by politicians. Months later, "post-truth" was voted the word of the year by the *Oxford Dictionary*, which describes it as "circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief³."

Saturated by fake news that parasitize fundamentalist religious beliefs⁴, such as issues related to gender identity, the role of women in public life, the right to abortion, expressions of sexuality, etc. (evoked from obscene, often grotesque images and videos), the most unwary participants in the digital public sphere tend to make political-electoral decisions contrary to their own class interests. In a climate riddled with ill-founded indignation and artificially infused hatred, public opinion emerges with a degree of polarization that prohibits democratic debate. As is seen with increasing frequency, the argument loses rationality to the point of becoming an unscrupulous guerrilla war, in which those who have more digital grenades and dirty bombs to throw against the opponent prevail. Not by chance, Jeff Giesea⁵ defended, in the official magazine of the North Atlantic Treaty Organization (NATO), the use of memes as a counter-information strategy in a scenario of global conflict.

The narratives about the hacking of Western democracies by ultra-right groups gained veracity as the episodes were investigated. The most emblematic case remains that of the 2016 United States presidential election, which featured accusations of data theft and Russian interference to privilege the campaign of Republican Donald Trump, who emerged victorious in the dispute. In 2017, Google, Facebook and Twitter admitted⁶ that Russian operators bought ads and exploited their services to spread fake news and promote the polarization of American society. A survey by journalist Jonathan Albright and published in *The Washington* Post revealed that posts from just 6 of the nearly 470 Russian Facebook accounts were shared more than 340 million times and had generated 19.1 million interactions⁷. The contents included defamatory messages against then-Democratic candidate Hillary Clinton.

- 1. To illustrate how information circulated in the 2018 elections, we bring some of the data released by news check agencies. "From July to October, Aos Fatos denied 113 rumors about elections that, together, accumulated at least 3.84 million shares on Facebook and Twitter. Only on the weekend of the second round, Aos Fatos denied 19 pieces of misinformation that, in all, were shared 290 thousand times on Facebook" (LIBÓRIO. Bárbara; CUNHA, Ana Rita. Notícias falsas foram compartilhadas ao menos 3,84 milhões de vezes durante as eleições. Aos Fatos, Rio de Janeiro, 31 out. 2018. Available from: https://aosfatos. org/noticias/noticias-falsas--foram-compartilhadas--ao-menos-384-milhoes--vezes-durante-eleicoes/. Access on: Jan 3, 2020), "A survey carried out by Agência Lupa showed that the 10 most popular false news caught between August and October together had more than 865 thousand shares on Facebook" (FAKE news impactam a eleição e têm que ser combatidas. Agência Lupa, Brasília, DF, 22 out. 2018. Available from: https://piaui.folha.uol. com.br/lupa/wp-content/ uploads/2018/10/Propostas-checadores-TS.pdf. Access on: Jan 3, 2020).
- 2. ART of the lie. **The Economist**, London, Sep. 10, 2016. Available from: https://www.economist.com/leaders/2016/09/10/art-of-the-lie. Access on: July 12, 2019.
- 3. WORD of the year 2016. Oxford Languages, Oxford, Nov. 8, 2016. Available from: https://languages.oup.com/word-of-the-year/2016/. Access on: Jan 3, 2020.

4. BRADY, William J.; WILLS, Julian A.; JOSTA, John T.; TUCKER, Joshua A.; VAN BAVEL, Jay J. Emotion shapes the diffusion of moralized content in social networks. Proceedings of the National Academy of Sciences, Washington, DC, v. 114, n. 28, p. 7313-7318, 2017. Available from:

5. GIESEA, Jeff. It's time to embrace memetic warfare. **Defense Strategic Communications**, Riga, v. 1, n. 1, p. 67-76, 2015.

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- 6. ISAAC, Mike; WAKABA-YASHI, Daisuke. Russian influence reached 126 million through Facebook alone. **The New York Times**, New York, 30 out. 2017. Available from: https://www.nytimes.com/2017/10/30/technology/facebook-google-russia.html. Access on: Aug 31, 2019.
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- 8. ROSENBERG, Matthew; CONFESSORE, Nicholas; CADWALLADR, Carole. How Trump consultants exploited the Facebook data of millions. **The New York Times**, New York, Mars 17, 2018. Available from: https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html. Access on: Aug 19, 2019.

A new scandal surfaced in March 2018, when *The New York Times*⁸ revealed that Cambridge Analytica, the company responsible for Donald Trump's election campaign, used data stolen from millions of Facebook users to profile psychological profiles and shape personalized messages, capable of influencing the behavior of voters. The company obtained such data through a supposed personality test, without revealing the material would be used for electoral purposes and used geolocation information to distribute messages and monitor its effectiveness on platforms such as Facebook, YouTube and Twitter, as report from *The Guardian*⁹.

There is no longer any doubt: social networks have come to occupy the center of the global political-ideological dispute, relegating the great media corporations of the 20th century to a lower level. Noting that the center of gravity of social communication practices was rapidly migrating to new digital militias, the mainstream media reacted by implementing strategies to combat fake news "hand-to-hand," creating routine checks in newsrooms or building partnerships with agencies specialized in identifying, evaluating and reporting false news. In Brazil, Agência Lupa¹⁰ and the Comprova project¹¹ are the most important examples of these trenches that, although commendable, almost always act at the end of the problem, when most of the social consequences have already been produced. These initiatives just dry the ice off the tip of an iceberg that moves adrift through an ocean of disinformation that seems endless.

2. WHAT ARE FAKE NEWS?

The term fake news shall be conceptualized here, according to the definition adopted by the European Commission (EC), as intentional disinformation "created, presented and disseminated to obtain economic advantages or to deliberately deceive the public¹²." This definition expands on that previously suggested by Allcott and Gentzkow¹³, who characterized them as "news that is intentionally and proven to be false and can mislead readers." The keywords that unite them are "intentional" and "mislead," which seems to be a common denominator among all fake news. However, the EC recognizes that fake news is not necessarily disinformation packaged in the form of journalistic news but can be any misleading content that circulates virulently on social media. The encapsulation of meaning in relatively small units, which can be replicated *ad infinitum* in the logic of social networks, naturally evokes the concept of *meme* (videos, GIFs, photos or short texts produced for digital platforms, most of the time without source, without due context, nor defined authorship).

That is why the EC definition emphasizes that the impact is on a much more general audience than consumers of news produced by the media, reaching even the extremes of the spectrum of age groups (for example, illiterate children and a large public with a low level of education, who had never been in the habit of reading news). Finally, the EC also identifies the economic objective

associated with the spread of fake news, since the business model of digital platforms such as Facebook, YouTube, Instagram etc. prioritizes monetization through clicks associated with ads produced according to users' browsing profiles. In this format, sometimes defined as digital capitalism, the focus of criticism and impact study should not only be on fake news, but also on the "speed and [...] ease of its dissemination, and it exists primarily because today's digital capitalism makes it extremely profitable – look at Google and Facebook – to produce and circulate false but click-worthy narratives¹⁴."

Pariser¹⁵ starts from the abundant flow of data in circulation on the internet and the algorithms used by different companies to talk about the so-called "personalization." According to the author, large corporations such as Google, Facebook, Apple and Microsoft use personal data provided by users and their web browsing trails to personalize information offers and, consequently, to be able to sell ads more aligned to the preferences of each user. According to Pariser¹⁶, personalization changes the way information circulates on the internet. This is because, based on prior assessment of the supposed preferences of people, the algorithms of websites and social networks create predictions about who they are and what they would like to do and, thus, select the information that each one will receive. This process, constantly updated and refined based on the interactions of users, leads to what the author calls the "filter bubble," an invisible mechanism in which individuals tend to receive only information aligned to their preferences, bringing people who have similar opinions together and pushing away those who think differently¹⁷.

Another problem is that many users are unaware of how this mechanism works. Among the consequences of personalization and the creation of bubbles are the limitation of the variety of content to which each person is exposed, the reduction of learning possibilities and the restriction in decision making¹⁸. In this mercantilist logic without proper regulation and no professional deontology on the part of the creators, fake news and spectacular content – developed in a *kitsch* aesthetic that appeals to mushy sentimentality or to high intensity pathetic emotions (visceral passion or visceral hate) – are much more profitable for their producers. In other words, in a kind of vicious circle that operates in a continuous movement, already viralized fake news converted into cash finance the next round of fake news yet to go viral.

This economic model typical of digital platforms and the increasing availability of data used improperly by marketing companies and parties have created a *modus operandi* for producing political content for election campaigns that violates ethical standards, legislation and human rights to achieve their goals. The problem should become even worse with the arrival of deep fake news, which use intelligent algorithms based on machine learning to create videos in which anyone's image and voice can be introduced in embarrassing or criminal situations, without the general public having the competence to discern between what is reality and what is falsity created computationally to achieve spurious purposes, almost always of control and mastery of the digital public sphere¹⁹.

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- 15. PARISER, Eli. **The filter bubble**: what the internet is hiding from you. New York: The Penguin Press, 2011.
- 16. Ibidem.
- 17. Ibidem, p. 14.
- 18. Ibidem, p. 77.

3. THE BIG DATA ERA AND THE DANGERS OF DATAISM

The collection of large volumes of data is not a new phenomenon. Census surveys, company registrations and bank transactions, for example, already involved the creation of huge databases. However, with the advance of ubiquitous computing and the internet, the exponential increase in the amount of data produced, stored and shared by and about people and their interactions has been the subject of several discussions about the potential and consequences of their use. But what differentiates the contemporary phenomenon known as big data from other forms of data collection?

In an article that discusses the epistemological implications of big data, Kitchin²⁰ argues that the term cannot be understood only in relation to the volume of data. According to the author, other characteristics of big data are: continuous and high-speed production; the variety of data; exhaustiveness and refinement in scope; the relational nature of the data, with the possibility of joining different types; flexibility and scalability²¹. More than the type, quantity or speed with which data is produced, big data is related to a new way of storing, analyzing and correlating data from the possibilities brought by the development of high-powered computers, new analysis techniques and technologies such as artificial intelligence, which allow the detection of patterns and the construction of predictive models²².

danah boyd and Kate Crawford²³ understand big data as a cultural, technological and academic phenomenon, based on the interaction between technologies, types of analysis and the false belief that large amounts of data are sufficient to generate a new form of objective knowledge, accurate and true. Faced with the rise of big data, the authors warn of the need for critical reflection on the topic and propose questions about the origin of data, the forms of access, the various interests involved, the assumptions and biases related to the data.

Today, data is collected through different activities, such as using smart-phones, clicking on websites, banking transactions, sharing personal information on digital social networks, using GPS, registering with government control systems, registering fingerprints, use of machine-readable objects, such as travel passes or bar codes, online shopping and navigation, among others²⁴. Just and Latzer²⁵ explain this increase in the flow of digital data generated the growth in demand for automated algorithmic selection to deal with the massive amount of data collected. The authors thus clarify that big data and the algorithmic selection process are interconnected, since the first works as "a new economic asset class," while the second represents "a new method of extracting economic and social value from big data²⁶."

By big data, however, we do not mean only the new digital era of databases that collect, in real time and from computerized mobile devices, immense amounts of information, which arrive continuously and with an immense diversity of sources and parameters. This is a definition closer to the materiality of the phenomenon. What we want to emphasize, in the big data era, is the nascent

19. CHESNEY, Robert; CITRON, Danielle Keats. Deep fakes: a looming challenge for privacy, democracy, and national security. **SSRN Electronic Journal**, Amsterdam, Jul. 21, 2018. Available from: https://dx.doi.org/10.2139/ssrn.3213954. Access on: Jan 3, 2020.

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22. Ibidem, p. 2.

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24. KITCHIN, op. cit., p. 4.

25. JUST, Natascha; LATZER, Michael. Governance by algorithms: reality construction by algorithmic selection on the internet. Media, Culture & Society, Thousand Oaks, v. 39, n. 2, p. 238-258, 2016. Available from: https://doi.org/10.1177/0163443716643157. Access on: Jan 3, 2020.

26. Ibidem, p. 240.

epistemology that accompanies it, the so-called dataism²⁷, based on the belief in a new set of methodological tools for searching and tracking correlations between accumulated digital data, in order to create predictive hypotheses impossible to be reached by other methods.

In fact, Pearl and Mackenzie²⁸ show that big data methods and techniques allow social scientists to find "invisible" correlations to traditional scientific research methods in databases, increasing the reliability of hypotheses. Dataism, as an emerging epistemology, contrasts and even disdains the statistical methods made from sampling and with margins of error and confidence linked to the number of cases observed within a specified domain or universe – the case of traditional public opinion polls. As he admits the research domain is the universe of interest itself, i.e. that the continuous extraction of information from individuals depletes the possibilities of knowledge, in addition to faithfully representing in real time the fluctuations in intensity of the parameters chosen for observation²⁹, dataism assumes digital "proxies" as perfect representatives of the state of complex social systems at certain time intervals.

In dataism, probing correlations, stimulating or restricting actions on digital *proxies* have the same cognitive value as research on the reality of phenomena. More specifically, an algorithm that, based on certain rules registered in a program, applies a punitive penalty to the virtual profile of a user of social networks corresponds perfectly to a judge who punishes the citizen attributable to the laws that reach him. In fact, the action of the algorithm on the data starts to support, if not determine, the judge's decision. This determinism is a remnant of Enlightenment scientific epistemology that further advances from thermodynamics and mathematical information theory itself seemed to have eliminated from Western scientific culture. However, dataism, metaphysically, recovers the dream of a complete and unequivocal determination of the phenomena, in which the cause and effect relationships are not obscured under the fog of statistical unpredictability. In a nutshell: in dataism, correlations are naturally accepted as causations.

Under the epistemology of dataism, in a context where the objects of the world, arranged in the most diverse areas of science – such as those of computing, physics, mathematics, political science, bioinformatics, sociology etc. –, have been affected by the increasing use of big data³⁰, the opinions of individuals, consequently, do not escape the irrepressible movement of datification.

4. THE ROLE OF EDUCOMMUNICATION

The complexity of the fake news phenomenon requires, therefore, equally complex measures, with transversal and multidisciplinary approaches. Because it is a side effect of cybercommunication and depends, for the effectiveness of its strategies, on a set of knowledge and values shared by an immense variety of communities that share the same field of experiences in cyberspace,

27. VAN DIJCK, José. Datafication, dataism and dataveillance: big data between scientific paradigm and ideology. Surveillance & Society, Chapel Hill, v. 12, n. 2, p. 197-208, 2014. Available from: https://doi.org/10.24908/ss.v12i2.4776. Access on: Jan 3, 2020.

28. PEARL, Judea; MAC-KENZIE, Dana. **The book of why**. New York: Basic Books, 2018.

29. LOHR, Steve. **Data-ism**: the revolution transforming decision making, consumer behavior, and almost everything else. New York: Harper Business, 2015.

30. BOYD; CRAWFORD, op. cit., p. 663.

educommunication naturally arises as an intervention strategy. As an emerging theoretical-practical field at the interface between education and communication, with lines of action that develop the critical appropriation of media content in a participatory and creative way, educommunication has an important role (although still timidly occupied) in the search for solutions for the problem of fake news.

The preoccupation with disinformation and the manipulative power of messages whose origin, intention, and meaning are unknown is very old – it is registered even in the 6th century BC, with the myth of Plato's cave. Known by all, at least by those in the field of communication sciences, this is an allegory, published in Plato's book *The Republic*³¹, which proposes the following dilemma: a group of men chained in a cave, facing a wall that reflects images projected from the outside, live in fear imagining that they are reflections of dangerous beings that await them outside. Having managed to get rid of this prison, one of the men ascends abroad and discovers the manipulation of the projections, but he tries in vain to alert the others, who remain immobilized by the terrifying images.

Also called "allegory of the cave," this myth seeks to alert ancient Athenians to the misunderstandings to which those who do not want to leave the comfort of their prejudices and review their interpretations of the world are subject to. Although Hellenic culture was very distant from the information society, the Greeks already understood the consequences of this type of mystification in a society that had discovered public and participatory life and the human capacity to think reality through arguments, far beyond the revelationist vision of the other ancient peoples. Therefore, the importance of this myth is in its consequences for democracy and public and participatory life. This Hellenic heritage has been invaluable – as society becomes more complex in the West, we are more concerned with knowing what actually constitutes reality and defending public, free and non-manipulative communication.

In modern times, taking up the classic heritage and organizing an urban, diversified and, to a certain extent, anonymous society, the bases on which communication is produced and processed become increasingly important. The development of education and science has enabled the organization of thinking aimed at defending freedom and deconstructing possible ways of manipulating ideas and values. Along with the development of the increasingly sophisticated means of communication, there is a growing interest in unraveling the intricacies of messages that misinform. This interest becomes more profound as modern society democratizes itself, so that centralizing and authoritarian regimes give way to more eclectic, participatory and constitutional forms, which value individuality, critical posture and participation – a society that is organized around a diverse, intense and dynamic public life.

We can identify at least three large groups of thinkers who develop theories of communication seeking to investigate this naivety or difficulty in perceiving the forms of manipulation developed in the press and other media. The first

31. PLATÃO. **A República**. Rio de Janeiro: Best Seller: 2002.

is composed by authors like Walter Lippmann³², who explores the fact the information that circulates in society is second-hand and generates, due to its assiduity and its stereotypes, a public opinion highly suggested and directed by the great media agencies. This concern with what constitutes, in general, a society's view of reality will be the basis of authors who analyze communication as a form of power in dispute with other institutions, such as the legislative and the executive.

Another group of researchers also addresses the issues of power, but working with the central concept of ideology, which we can define as a set of ideas that guide our perception of reality, preventing us from discerning deviations and misunderstandings about values and understanding criticism of society's life. Although already used by Francis Bacon, before Karl Marx, as an explanation for the illusions of reality produced by the culture of a group, the theater and the market, it is in Marxist theory that the concept acquires substance and political strength. Treated mainly in *German ideology*³³ and *The Capital*³⁴, the concept of ideology points out the correspondence between the insertion of agents in a given productive structure, the interests that result from it and the worldview that supports the defense of those interests. In this way, ideology is expressed in the ideas that are spoken and defended and in the way, in a permanent ideological conflict for hegemony. The use of the communication means masks these trends and the manipulative power of the media.

In this line of investigation, numerous Marxist authors have stand out, especially those from the so-called Frankfurt School, such as Theodor Adorno and Walter Benjamin³⁵, who explored the possibilities of authoritarian governments establishing alliances with major media companies, enticing the masses to their political ideals. In addition to the power of mass media, ideology becomes less and less noticeable in its power to stimulate behavior and disseminate values, dulling the critical spirit and working with substitutive desires for political participation and the struggle to defend one's own interests. Disguised in advertising, consumerism and modern and contemporary forms of entertainment, ideology becomes an unbeatable asset in the struggle for power. There are also other important researchers working with symbolic power, such as Pierre Bourdieu³⁶, in addition to Jean Baudrillard³⁷ and Guy Debord³⁸, the latter with a seminal work – *The society of the spectacle* – in which he analyzes Western culture in its perverse relationship with capitalism.

A third way in the communication sciences is found within the field of language study. Authors such as Ludwig Wittgenstein, Mikhail Bakhtin³⁹, John Austin and John Searle⁴⁰ focus on methods that, investigating the symbolic functions of speech, deconstruct messages in their unconscious instances, such as the use of words whose meaning, although historical, sometimes has origins unknown. With this methodology, they also expose the symbolic exchanges established in communication, guiding what is said, heard, observed and seen, and conducting our communicative interaction with others.

It is from these groups of theories, although there are others, as well as research that tries to sew one theory to another, that educommunication has developed, an interdisciplinary field that provides, as an antidote to these different and complex forms of manipulation of culture, communication and of the means, a social intervention whose objective is to free those trapped in Plato's cave. In addition, educommunication is a vast and complex field that seeks, on the one hand, to educate the public about the media, exploring its discursive possibilities and the way technology shapes and informs products and messages, allowing for different interpretations of the world that surrounds us. On the other hand, aware of the unequal distribution of access to the means of communication and production of information, educommunication seeks to educate the public about alternative forms of communication, favoring the creation and use of popular channels for the transmission of messages, with autonomy and even in opposition to the so-called mainstream media. It is hoped, therefore, to give voice to those who cannot find a space to speak and to work for the diversity of expressions of ideas.

It is also a concern of educommunication to defend freedom of expression and individual rights, with free expression in all available means. As we have seen, the symbolic struggles for the communication means, for ideological hegemony and for the use of communication as a way of accessing and maintaining power induces innumerable mechanisms that try to limit criticism, denunciation, dialogue and opposition. Working for freedom of expression is, therefore, the task of the educommunicator. To fight for the strengthening of democracy is to fight for the democratization of communication. It is about making communication theories the basis for an increasingly dialogic, diverse and liberating culture.

In Latin America and Brazil, several communication researchers dedicated themselves to the development of educommunication. Some of the best-known names are those of Jesús Martín-Barbero⁴¹, Spanish researcher who lives in Colombia, Guillermo Orozco Gómez, in Mexico, and Néstor García Canclini, Argentine sociologist who lives in Mexico. In Brazil, since Mário de Andrade, the concerns of educators have turned to cultural and symbolic production. Paulo Freire received international recognition and continues to be the patron of educommunicators. Here, educommunication is studied in universities and has already become an academic training – by the hands of teachers like Ismar de Oliveira Soares, Maria Aparecida Baccega and Adilson Odair Citelli. This article, to revive this contribution, starts from a current phenomenon like fake news to understand all its urgency and currentness.

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