Impact of political discourse on the dissemination of hoaxes about Covid-19. Influence of misinformation in public and media

Impacto del discurso político en la difusión de bulos sobre Covid-19. Influencia de la desinformación en públicos y medios

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ABSTRACT

Introduction: The information disorder generated by Covid-19 paints a strategic scenario for the dissemination of the fallacy and political propaganda. Social networks, in echo-chamber mode, reproduce the government's discourse of confusion and lie and favor a climate of destabilizing disinformation in democracies. In parallel, digital audiences are installed as prosumers of the political hoax on Twitter, and a tendency of the media to combat fake news is seen. Methodology: The main objective is to know which disinformation brands identify the leader's message, what role audiences play in the production and dissemination of the false, and what verification processes are carried out by fact-checking agencies (Pagella Politica, Maldito Bulo, Full Fact, and PolitiFact) and the media (La Repubblica, El País, The Guardian and The New York Times) in favor of the reliability of the public in a situation of maximum risk. On a sample composed of tweets published by the presidents of government (n = 272), news related to Covid-19 (n1 = 4,543), and hoaxes detected on Twitter (n1 = 200), we designed a methodology for quantitative-qualitative content analysis and critical analysis of political discourse. SPSS applied statistics software is used. Results, Discussion, and conclusions: The results reveal the prominence of a fallacious political language, which favors the production of hoaxes on the Internet and requires the effectiveness of the fact-checking system of international agencies and the media, to combat the false, always, and more if possible in moments of an unprecedented health pandemic.

KEYWORDS: Covid-19; Political speech; Fake News; Hoax; Disinformation; Fact-checking; Twitter; Journalists

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RESUMEN

Introducción: El desorden informativo generado por la Covid-19 dibuja un escenario estratégico para la difusión de la falacia y la propaganda política. Las redes sociales, en modo eco-chamber, reproducen el discurso gubernamental de la confusión y la mentira y favorecen un clima de desinformación, desestabilizador de las democracias. En paralelo, los públicos digitales se instalan como prosumidores del bulo político en Twitter y se atisba una tendencia de los medios a combatir las fake news. Metodología: El objetivo principal es conocer qué marcas de desinformación identifican el mensaje del líder, qué papel juegan las audiencias en la producción y difusión de lo falso y qué procesos de verificación desarrollan las agencias de fact-checking (Pagella Politica, Maldito Bulo, Full Fact y PolitiFact) y los medios (La Repubblica, El País, The Guardian y The New York Times) en una situación de máximo riesgo. Sobre una muestra compuesta por tweets publicados por los presidentes de gobierno (n= 272), noticias relacionadas con la Covid-19 (n1=4.543) y bulos detectados en Twitter (n1=200) diseñamos una metodología de análisis de contenido cuantitativo-cualitativo y análisis crítico del discurso político. Se emplea el software SPSS de estadística aplicada. Resultados, discusión y conclusiones: Los resultados revelan el protagonismo de un lenguaje político falaz, que favorece la producción del bulo en la red y requiere la efectividad del sistema de fact-checking de agencias internacionales y medios de comunicación, para combatir lo falso, siempre, y más si cabe en momentos de una pandemia sanitaria sin precedentes.

PALABRAS CLAVE: Covid-19; Discurso Político; Fake News; Bulo; Desinformación; *Fact-checking*; Twitter; Periodistas

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1. Introduction. 2. Methodology. 3. Results. 4. Conclusions. 5. Bibliography.

Translation by Paula González (Universidad Católica Andrés Bello, Venezuela)

1. Introduction

The significance and effects of Covid-19 will be difficult to quantify even in an advanced society, dominated by algorithms and artificial intelligence (Xifra, 2020; Hansen *et al.*, 2017; Powers and Kounalakis 2017). Citizens, faced with a situation of chaos, anxiety, and confusion (Brennan, 2014) increase their interest in the consumption of news through social networks (Newman *et al.*, 2019), in an adverse context marked by discredit and mistrust of elites and the media (Shearer and Gottfried, 2017). In turn, it faces a phenomenon of maximum risk such as disinformation, analyzed by communication and journalism theorists for decades (Salaverría *et al.*, 2020). Defined as an action in which the sender has the firm intention of exercising some kind of influence and control over its receivers so that they act according to their wishes (Rodríguez Andrés, 2017), disinformation is installed as a communication strategy that affects multiple social dimensions such as the political system, international relations, or public affairs derived from health (Brennen *et al.*, 2020).

The implosion of a critical and risky situation for the world population, such as that caused by Covid-19, linked to levels of maximum insecurity and uncertainty, has triggered the rates of fake news and hoaxes in the networks (Pérez-DaSilva *et al.*, 2020). The first research (Nielsen *et al.*, 2020) already collected survey results (N=8,502) among users from six countries -Germany, Argentina, South Korea, Spain, the United States, and the United Kingdom- conducted by the *Reuters Institute for the Study of Journalism* (March 2020), which finds that a third of those surveyed

claim to have seen a lot of false or misleading information in the last week, especially on the networks and mobile messaging services, an effect also studied in other contexts (Casero Ripollés, 2020; López-Borrull, Vives-Gràcia, and Badell, 2018).

To refer to the wide universe of false or erroneous information that circulates through the communication network, the expressions of "fake news", defined as "misleading or incorrect information, which pretends to be real news about politics, economics or culture" (Harsin, 2018) and hoax or false message manufactured on the networks by users and/or groups to create a certain state of opinion (Aparici, García-Marín, and Rincón-Manzano, 2019) have been used, among others. Such has been the magnitude of the fake news disseminated about Covid-19 that the World Health Organization (2020) has stated that we are faced with an overabundance of false information (Pérez Dasilva, Meso Ayerdi, and Mendiguren Galdospín, 2020) that makes some people have difficulty finding reliable resources or trusted guides when they need them (Aleixandre-Benavent *et al.*, 2020). This phenomenon defined by the WHO as an infodemic is hampering the outbreak containment measures, spreading panic, creating unnecessary confusion, and generating division at a time when we need to be in solidarity and collaborate to save lives to end this health crisis (Adhanom-Ghebreyesus; Ng, 2020).

In the field of Politics, the influence of fake news on citizenship has been identified in democratic processes such as the presidential elections in France (2017), in the 2018 electoral processes in Italy and Mexico, or the referendum on the permanence of The United Kingdom in the European Union (2016), or the plebiscite on the peace agreement in Colombia (2016) (Parra and Oliveira, 2018), although the climax of the production of fake news is reached in the campaign for the presidential elections in the United States (2016) in which fabricated stories favoring Trump were shared 30 million times, quadrupling the number of shares in favor of Hillary Clinton (Allcott and Gentzkow, 2017).

During the spread of the Covid-19 pandemic in Europe, we witnessed an overexposure of political information, derived from the multiple public appearances of government leaders, given the need to explain to the public what is happening, what are the risks, and to involve them in the solution, which makes communication an important ally of political, social, institutional, and health management (Costa Sánchez and López García, 2020). It happens in a political context characterized by the increase in computational propaganda practices (Rodríguez-Fernández, 2019; Redondo, 2016) aimed at: 1) Generating positive comments to reinforce positions and negative ones to diminish the opponent or divert attention from an issue; 2) Tag relevant people involved in the related conversation; 3) Sponsor accounts, websites, and applications that contribute to the dissemination of messages; 4) Using false accounts and computational propaganda (astroturfing) to manipulate the conversation on the network, and 5) Create content that contributes to supporting the digital strategy (Bradshaw and Howard; 2017). A dynamic that promotes information disorders and reopens the debate on the lack of protection of citizens against the spread of hoaxes (Aparici *et al.*, 2019) that in situations of collective shock can seriously affect social stability and the very foundations on which the Western democracies are based (Amat *et al.*, 2020).

The role of politicians as emitters of fallacies (Patwari et al., 2017; Dale and Talaga, 2016; Naderi and Hirst, 2018) and the influence they exert on network users (Powers and Kounalakis, 2017; Weedon, *et al.*, 2017) becomes a matter of interest for scientific research, especially in a crisis in which the levels of the propagation of the false skyrocket.

Immersed in a global risk society (Beck, 2002), identified by a change in the models of information production, new narratives, and artificial intelligence, the study of political discourse in the

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communication of Covid-19 is urgent. Political information leads to an activation of institutional messages about the coronavirus, often unverified, which becomes a breeding ground for anonymized users of the network. In this dilemma, it is necessary to analyze the verification function developed by fact-checking agencies (Mantzarlis, 2018) and the informative treatment of the news published about Covid-19 in the digital press. This task of verifying and contrasting sources, locating background information on the events, contextualizing the information, and using an informative language by journalists is part of a process that seeks to guarantee the veracity of the events and return the reliability of the public towards the media (Bennett and Pfetsch, 2018).

Based on a comparative quantitative, qualitative, and discursive content analysis methodology (Sillverman, 2016; Krippendorff, 2004; Neuendorf, 2002; Nocetti, 1990; Van Dijk, 2015; Flowerdew and Richardson, 2017), applied to the tweets broadcast in Twitter by the presidents of the US, Italy, United Kingdom, and Spain governments, on hoaxes related to politics, detected by the main fact-checking agencies and on the news published about Covid-19 in the digital press of reference of these countries, it is intended to meet the following objectives:

- O1. Identify the resources of fallacy and propaganda in the discourse of political leaders about the coronavirus.
- O2. Analyze the role of users of private Twitter accounts as producers and issuers of hoaxes and fake news about political information.
- O3. Check what resources and verification techniques use fact-checking agencies and the press to locate and deny hoaxes and increase the level of veracity of the news published about Covid-19.

1.1. Institutional policy and misinformation about Covid-19

The Covid-19 pandemic causes a situation of social, health, political, and economic crisis that has put scientific production systems to the test (Kupferschmidt, 2020) and has generated a climate of concern in the environment of the institutions (Xifra, 2020) and the media (Torres-Salinas; 2020) overwhelmed by the emergence of rumors, fallacies, and misinformation. The implosion of Big Data (Hansen *et al.*, 2017) and the use of bots (Chu *et al.*, 2012) and trolls (Jamison et al., 2019) affect the information glut (Xifra, 2020), which intensifies in moments of an impact health crisis (Mayo Cubero, 2020).

Origin of the virus, expectations before the vaccine, progression of the outbreak of infectious diseases, or preventive measures have been the object of hoaxes and misinformation in previous crises (Broniatowski *et al.*, 2018; Cheng *et al.*, 2018; Wang *et al.*, 2017; Ghenai and Mejova, 2017; Dredze *et al.*, 2016), which have had an active audience as producers and broadcasters (Guidry *et al.*, 2017) and expert in the viralization of fake thanks to mechanisms that resist filters and control of disinformation (Powers and Kounalakis, 2017).

To combat misinformation, numerous government institutions have published special pages that include specific rebuttals about the most recurrent and damaging myths surrounding the crisis. *The European Commission* recommends following the advice of public health authorities and the websites of relevant international organizations and the European Union (such as the *European Center for Disease Prevention and Control* and the *World Health Organization*), as well as not sharing unverified information from dubious sources (*European Commission*, 2020). However, and despite the declarations of good intentions that have dominated institutional speeches, the practice of disinformation remains permanently topical both in political communication and in international

relations (Rodríguez Andrés, 2017). In the 2016 US presidential elections, it was publicly questioned whether their interference would have contributed to Trump being elected president (Allcott and Gentzkow; 2017). Along these lines, it has been observed that the effects are more pronounced in political content than in terrorism, natural disasters, science, urban legends, or financial information (Vosoughi; Roy; Aral, 2018).

In the Covid-19 scenario, the public appearances of government presidents organized as a result of the spread of the coronavirus are an example of the use of misinformation and fallacy by political leaders, a fact that has become a reason for political debate. In Spain, during the first weeks of the state of alarm decreed by the Government, the political parties crossed mutual accusations of spreading hoaxes and false news (*El País*, April 9th, 2020). Many of these fallacious messages are derived from digital platforms such as Facebook, which has proceeded to alert on its profiles of the removal of misleading content (Rosen, 2020), or Google and Twitter that have taken measures to offer greater visibility to official information and reduce the exposure of its users to unverified content.

In any case, disinformation is on a growing trend. According to a report by *Corporate Excellence* (2018), in 2017 fake news increased by 365% and the trend is positive. The consulting firm *Gartner* (Panetta, 2017) predicts that in 2022 the western public will consume more false news than true ones. Therefore, fighting against disinformation is already an institutional objective not only in the political sphere but also in the media.

1.2. Informational verification. An exercise of journalistic quality

Disinformation is today a hot topic that has put the performance of political consultants, the media, and those responsible for social networks in the spotlight. Verifiers are added, erected as guarantors of veracity, which offer a new area of specialization to the sector (Rodríguez-Fernández, 2019; Bernal-Triviño and Clares-Gavilán, 2019; Magallón-Rosa, 2018).

The care in the precision of the data comes from years ago in journalism: the verification sections of media such as *Time* or *The New Yorker*, and the controls of the journalistic editing processes, were and are verification processes. The novelty is that the platforms are not departments of a newsroom that correct errors before publishing an article. Due to its planetary scope, the pandemic has transcended to these specialized platforms and has become a subject that monopolizes a large number of verifications on journalistic verification platforms or of more general topics. Experts speak of massive growth in fact-checks due to Covid-19 (Brennen *et al.*, 2020).

Journalism and the truth that its exercise contains are essential tools to identify and report false stories (Marcos-Recio, 2017). At a time when government agencies focus their efforts on fighting the disease, information professionals must play a relevant role in stopping the spread of misinformation related to the pandemic (Tandoc, 2020). For example, some world leaders like Donald Trump announced that a drug used to fight malaria, chloroquine and its derivative hydroxychloroquine, were effective in fighting Covid-19 (Chadwick; Cereceda, 2020; Larson, 2020). However, a study published on March 30th, 2020 by *Cochrane* indicated that the results of clinical trials that had evaluated its efficacy in the treatment of Covid-19 were inconclusive and that they had to be interpreted with caution due to the limitations in their design (*Cochrane Iberoamérica*, 2020).

Now more than ever, journalism needs to incentivize quality and credibility through reinforcements in the verification process, to avoid or mitigate the effects of the proliferation of fake news, whose traffic on the networks increases, given the anonymity that these make possible (Vázquez-Herrero *et*

al., 2019). The search for verifiable statements through the consultation of parliamentary recordings, the media, and social networks (1), the location of the original facts by consulting the best available source (2), and the correction of the content showing the available evidence using a truthfulness scale (3) are the three main phases of the verification process (Mantzarlis, 2018). At this time, journalism is witnessing a new challenge caused by the emergence of news about Covid-19, in which it is necessary to guarantee the veracity and contrast of sources, stop uncontrolled information consumption, and offer resources to dismantle the fallacy and the effect of fake news.

Based on different classifications provided by experts (López-Borrull, *et al.*, 2018, Nielsen; Graves, 2017; Nielsen; Graves 2017; Wardle, 2017; Zimdars, 2016) a catalog is designed that shows a typology of fake news and verification processes in the two study areas.

Agency Checkers Media Checkers Verification Codes Verification Codes Typology Typology Fake news Fake news Superficial Journalism Distinguish Parody Facts/Opinions Satire Montage Provocation Avoid fake sites and Extreme bias Corresponds to Conspiracy theory another date Partisanship links Rumor Corresponds to Search for political Include Background State News another place influence and Context Pseudoscience • Authorship of the Advantage • Locate the facts: Hate news hoax: anonymous or Sensationalism date/place Clickbait identified Lack of precision • Guarantee the use of Proceed • Level of Reliability Hyperpartisan content with more than one source. caution Level of authority Use of propaganda Avoid using conflicting Political • Level of impact and Use of political lies sources Verification interaction Sponsorship Use informative Topic language • Emphasis resources Marks of Fallacy

Table 1. Fake News Cataloging and Verification Codes

Source: self-made

The verification work of fact-checkers from media agencies and journalists shows differences and similarities, although it reflects a common denominator: knowing the wide spectrum of resources that promote the discourse of lies and provoke an increasingly marked increase in fake news and improve processes to combat them through verification protocols that can help users to recognize the false and act accordingly.

1.3. Chronology of Covid-19. Main context indicators.

At the end of January 2020, the World Health Organization declared the coronavirus 2019-nCoV outbreak as a public health emergency of international concern, which rose to a pandemic (March 11th, 2020) after alarming levels of spread from its origin in the Chinese city of Wuhan with more than 118,000 cases, in 114 countries, and 4,291 deaths (WHO, 2020).

The European focus of the pandemic begins in Italy, forcing President Giuseppe Conte, by Decree-Law of March 2nd, to increase restrictions and announce the confinement of the entire country (March 9th). In Spain, Pedro Sánchez, President of the Government declares a state of alarm (March

14th) in a situation of maximum emergency, stating: "Our hand is not going to shake to beat the virus. We put people's health at the center of our priorities, but at the same time, we must attend directly to our families, workers, the self-employed, and companies". In the case of the United Kingdom and the United States, the scientific community questions the effectiveness of the measures announced by Boris Johnson, publishes the report *Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce Covid-19 mortality and healthcare demand*², which maintains that in the absence of a Covid-19 vaccine, public health measures should be evaluated, known as non-pharmaceutical interventions (NPIs), which combine home isolation, quarantine, and social distancing of the elderly and people at risk, complementing them where appropriate with the closure of schools and universities. In the US, on March 13th, two days after the WHO classified the Covid-19 outbreak as a pandemic, President Donald Trump proclaimed a national emergency throughout the country³.

2. Methodology

Faced with a panorama of global confusion where the publication of government decrees on states of alarm and confinement of the population multiplies, it is interesting to analyze the discourse of the main representatives of world politics and the projection of these messages on Twitter and in the reference press of their respective countries. To this scenario must be added the holding of electoral campaigns (in the case of the United States) as influence factors in the communication of the crisis. The methodological analysis is governed by a cause-effect principle: politicians spread messages on Twitter identified by fallacy and propaganda (1); they influence digital users who produce and viralize hoaxes and fake news on the Internet (2); fact-checking agencies report these hoaxes, following false verification processes (3); Digital newspapers publish news about Covid-19, related to politics or politicians, the object of study and apply mechanisms for verification and information contrast (4). From this causality approach, the following research questions are posed:

RQ1. Is disinformation considered a feature of political discourse about Covid-19 on Twitter?

RQ2. To what extent do users of private Twitter accounts favor the spread of hoaxes and fake news about the coronavirus?

RQ3. What role do fact-checking agencies and journalists play and what filters do they propose to verify the information and combat fake news?

The research is based on two complementary methodological perspectives such as quantitative-qualitative content analysis (Silverman, 2016; Krippendorff, 2004; Neuendorf, 2002) and discourse analysis (Nocetti, 1990; Van Dijk, 2015; Flowerdew and Richardson, 2017) that allow identifying, on the one hand, the political messages considered as hoaxes by fact-checking agencies (@PolitiFact, @PagellaPolítica, @FullFact, and @malditobulo) and defining their characteristics, and, on the other, observing how these misinformations have been transferred to the international press environment⁴.

The criteria for establishing the general sample is based on different milestones published by the WHO and by the EU during March: WHO declares the global pandemic due to Covid-19 (March 11th), WHO reports that Europe has become the epicenter of the pandemic (March 13th), and The President of the European Commission Ursula Von der Leyen calls for the "fight against

¹ https://www.lamoncloa.gob.es

² https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/2020-03-16-COVID19-Report-9.pdf

³ www.whitehouse.gov

⁴ www.nytimes.com, www.repubblica.it, www.theguardian.com y www.elpais.com

disinformation" (March 31st). The specific sampling is focused on the period between March 11th and 27th, selecting the countries that registered the highest rate of infected at the European and global level in that period (WHO, 2020; European Council, 2020). Likewise, and given the political field in which the study focuses, the highest representatives of these countries are chosen: Giuseppe Conte (Italy), Pedro Sánchez (Spain), Boris Johnson (Great Britain), and Donald Trump (United States), to analyze from the perspective of critical discourse analysis, the use of fallacy and propaganda resources that they use in their Twitter messages and the influence on the production of hoaxes by network users.

Twitter is chosen, a platform used, among others, by politicians, parties, governments, international organizations, third sector agents, civil society, and the media. Since its inception in 2006, it has had a growing importance in electoral campaigns and has been applied in a wide range of political contexts —local, national, and international- (Campos Domínguez, 2017), which make it a consolidated tool for the political communication in front of Facebook, Youtube, or Instagram.

The criteria for selecting fact-checking agencies (*Pagella Politica*⁵, *Maldito Bulo*⁶, *Full Fact*⁷, *and PolitiFact*⁸) responds to their membership of the International Data Verification Network (IFCN) ⁹, as well as to the trajectory and scientific reference in the verification of false information on specific political topics and statements by politicians ¹⁰. For the election of press headlines (*La Repubblica*, *El País*, *The Guardian*, *and The New York Times*), the results of the *Reuters Institute of the University of Oxford* 2019 report on digital news have been used (Newman *et al.*, 2019) besides the geographical criterion (national and international press), and the topic criterion (prevalence of political information about Covid-19).

The study universe is made up of government political representatives, fact-checking agencies, media, and private Twitter user accounts and their respective role in the production, broadcast, verification, and informative treatment of fake news and hoaxes published about the coronavirus. The general sample comprises the messages broadcasted on Twitter by the presidents of the government of the selected countries about the coronavirus (n=272) tweets), the hoaxes detected by the different fact-checking agencies (n=200 hoaxes), and the total of news about Covid-19 published by the different digital headers, the object of study (n=4,543 news). The specific sample is derived from the general sample, according to keywords such as "politics" and/or politicians", a condition that reduces the sample (197 tweets, 61 hoaxes, and 68 press news directly related to this topic) and adjusts it to indications of previous methodological models (Baker 2006; Cleary *et al.*, 2014; Silverman, 2016, or Khan *et al.*, 2019), which recommend that, in the collection of data in discourse studies, quality should prevail rather than the amount. Therefore, the sample is not equivalent to all the hoaxes disseminated during the indicated period, but only reflects those that refer to political content and actors, verified by the four selected platforms.

⁵ https://pagellapolitica.it/

⁶ https://maldita.es/malditobulo/

⁷ https://fullfact.org/

⁸ https://www.politifact.com/

⁹ Founded in 2015 by the <u>Poynter Institute</u> (a reference in the promotion of good practices and honesty in journalistic activity), the International Data Verification Network was born to promote fact-checking and join the efforts of verification organizations. Five years after its creation, the IFCN is today the largest organization of fact-checkers in the world, a kind of international network against hoaxes. Their functions range from training journalists or monitoring trends in fact-checking to promoting basic fact-checking standards, which they have dubbed the <u>Code of Principles</u>. https://ifcncodeofprinciples.poynter.org/signatories

https://www.cac.cat/sites/default/files/2019-01/Q44_Revista_Webs_ES.pdf

Both the tweets from the leaders' accounts and those published by the fact-checking agencies were downloaded through *T-Hoerder17*, which works with a methodology called *t-hoarder_kit*, an evolution of the *t-hoarder* platform (Congosto, BasantaVal, and Sánchez Fernández, 2017). The program consists of a set of resources with open source software that allows both the downloading and processing of Twitter information to facilitate the use of analysis tools and visualization in networks.

The press releases have been located through online search engines¹¹. The advanced search equation responds to: (coronavirus OR "covid-19" OR "2019-nCoV" OR "SARS-CoV-2" OR "CoV-SARS-2" OR koronabirus) & xoptions=contentfields=title:subtitle.

The statistical program chosen for the processing of data related to the defined categories is *IBM SPSS Statistics*, Version 24. The reliability of the intercoder has been calculated with Scott's Pi formula, reaching an error level of 0.98. The method, supported by previous research on informative quality and a guide to good practices in journalism (Redondo, 2018), and source cataloging portals (opensources.com), allows us to study the verification mechanisms developed by fact-checking agencies and media, in a parallel or complementary process.

The method is supported by variables related to the profiles that make up the study universe: political leaders, Twitter users, and verifiers of the information published about the coronavirus.

Producers of	Fact-checking	Digital media	Quantitative/Qualitative	Discursive variables
Disinformation	agencies		Variables	
 Political leaders 	• Pagella	 La Repubblica 	Hoaxes and Fake News	• Fallacies
 Private users 	Politica	 El País 	• Topic	 Propaganda
	 Maldito Bulo 	 The Guardian 	• Text	mechanisms
	• Full Fact	 The New York 	Images	
	 PolitiFact 	Times	• Videos	
			News	
			 Background 	
		 Political 	 No. of sources 	
		Leaders	Context	
			 Language 	
		 Digital media 		

Table 2. Coding of Sources and Typology of Variables

Source: self-made

The analysis of variables generates the development of contingency and frequency tables related to the type of sources, topic, and resources of the political language on Covid-19 in the context of Twitter. In the same way, the results reflect the processes of locating, reporting, and verifying hoaxes and fake news developed by fact-checking agencies and the media, the object of study.

3. Results

To structure the results after the application of a combined statistical methodology, three phases are distinguished, related to the actors in the process and their role as producers, issuers, and consumers of the information.

¹¹ https://www.mynews.es/, https://www.kioskoymas.com y https://www.kiosko.net/

Phase 1. Disinformation indicators in the political discourse of the presidents of Governments

In a crisis such as the one drawn by the pandemic, the levels of intervention of governments, parties, and political leaders are reproduced in traditional and digital media. Information surrounded by uncertainty in the face of the effects of the virus, lack of prevention, and errors in communication to the public (López García, 2020) describe the political radiography during Covid-19.

To answer the first research question (RQ1), we analyzed in this first phase the role of politicians as producers and emitters of disinformation. The statements made by the presidents of the government in the different public calls to inform the public about the pandemic are projected on Twitter. The highest institutional representatives publish a total of 197 specific tweets on political issues and coronavirus resorting to political communication strategies and mechanisms of fallacy and propaganda that can increase the levels of confusion and insecurity of the social audience.

Table 3. Coding of fallacies and resources of political propaganda¹²

Categories	@Giuse ppe ConteIT % within Resourc es	@Giuse ppe ConteIT N° of tweets/ 197 total	@sanch ezcastej on % within Resourc es	@sanch ezcastej on N° of tweets/ 197 total	@Boris Johnson % within Resourc es	@Boris Johnson N° of tweets/ 197 total	@Donal d Trump % within Resourc es	@Donal d Trump N° of tweets/ 197 total	Average Values	N° of tweets/ 197 total
Appeal to authority	14.3	28.1	14.7	28.9	20.5	40.3	21.4	42.1	17.7	34.8
Appeal to emotion	17.7	34.8	16.3	32.1	19.6	38.6	19.2	37.8	18.2	35.8
Appeal to ignorance	11.4	22.4	11.1	21.8	14.1	27.7	15.2	29.9	12.9	25.4
Attributions	5.1	10.0	5.5	10.8	6.4	12.6	6.5	12.8	5.8	11.4
Emphasis	5.5	10.8	6.4	12.6	5.7	11.2	7.4	14.5	6.2	12.2
Opinions as facts	12.8	25.2	11.4	22.4	9.1	17.9	7.1	13.9	10.1	19.8
Selection of information	16.8	33.0	16.7	32.8	9.2	18.1	7.3	14.3	12.5	24.6
Use of labels	16.2	31.9	17.8	35.0	15.2	29.9	15.8	31.1	16.2	31.9

Source: self-made

The widespread use of the fallacy (Table 3) is a constant in the messages of all the profiles analyzed. The average values are concentrated in the figures of appeal to emotion (18.2%), appeal to authority (17.7%), use of labels (16.2%), and appeal to ignorance (12.9%), which is identified with the strategies of conflict situations, political confrontation, and the production of false messages.

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 $^{^{12}}$ The table refers to percentages and the number of tweets. The percentages in bold indicate the type of resources most used by political leaders. More than one resource can appear in the same tweet.

Regarding the leaders, the maximum values reached by Donald Trump in line with his strategy of publishing more than 10 daily tweets and producing fake news stand out (Pérez Curiel and Limón Naharro, 2019). The data also reveal differences between conservative politicians, more akin to a populist discourse, and politicians who advocate liberal and independent positions.

Along these lines, Donald Trump (Republican Party) and Boris Johnson (Conservative Party), reach referential percentages in appeal to authority (21.4%/20.5%), related to false slogans and conspiracy theories against other countries and appeal to emotion (19.2%/19.6%), with a speech addressed to the feelings of citizens and the need to collaborate to defeat the virus.



Image 1: *Appeal to authority, emphasis, and appeal to ignorance* **Source:** https://twitter.com/realDonaldTrump/status/1240243188708839424?s=20



Image 2: Appeal to emotion, appeal to ignorance, and attribution **Source:** https://twitter.com/BorisJohnson/status/1241348429546217475?s=20

In the case of Donald Trump, the attacks have been concentrated in China, which he blames for the pandemic, on former President Barak Obama, his predecessor, whom he blames for errors in the testing system of the Centers for Control and Prevention of Diseases (CDC), or Democrats, as the

authors of the Covid-19 hoax. For Boris Johnson, the initial discourse of underestimation of the disease responds to unconfirmed facts or messages that put the economy before health.

Faced against them, Giuseppe Conte (Independent) and Pedro Sánchez (PSOE), are positioned ahead in fallacies such as the use of labels (16.2%/17.8%), *selection of information*, (16.8%/16.7%), and *opinions as facts* (12.8%/11.4%), which can generate confusion due to the veracity of the events. In both cases, the institutional discourse tries to justify action in the face of the epidemic. For example, in Italy, with Conte's decision not to isolate Bergamo (Italy), one of the areas most affected by the coronavirus, or in Spain, with Sánchez's statement about the symmetrical impact of Covid throughout Europe, when contexts, cases, and government actions were different in each country.



Image 3: *Use of labels, opinions as facts, emphasis* **Source:** https://twitter.com/sanchezcastejon/status/1240218588725772293?s=20



Image 4: Selection of information

Source: https://twitter.com/GiuseppeConteIT/status/1237694727203454976?s=20

Other resources such as the emphasis (6.2%) in the case of Conte when he insists on the unconditional help of the government to the population¹³, or Boris Johnson (5.7%) when he refuses

¹³ https://twitter.com/GiuseppeConteIT/status/1237792996743151622?s=20

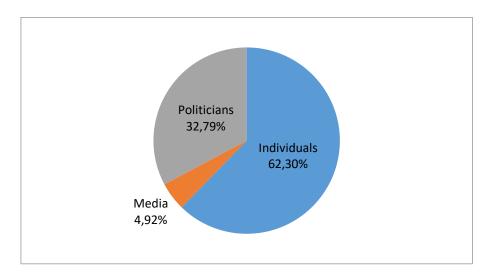
to close schools and public spaces because it is not time to test the resistance of the population ¹⁴, or the use of attributions when Trump (5.8%) accuses the mainstream media of taking advantage of the coronavirus to discredit him before the next elections ¹⁵, or Sánchez (5.5%) when he affirms "I am the President of the Government and I assume full responsibility" referring to the measures taken against the coronavirus, identify the marks of political discourse on Twitter.

These results highlight the use of an electoral narrative (Kaiser, 2020) that continues to be maintained or even increases in health emergencies, causing insecurity and distrust in the public. The reaction of Twitter users to these messages can generate a chain of false news, which originates from the political fallacy.

Phase 2. Fake news production indicators and type of sources

The influence of the message of public representatives on the audiences through Twitter is a factor shown in previous research (Pérez Curiel and Limón Naharro, 2019), which the pandemic has increased, given the prominence of social networks compared to traditional media (Carlson, 2017; Casero-Ripollés, 2020).

In connection with the second research question (RQ2), the role of audiences as producers and viralizers of hoaxes is studied. The number of false messages published on Twitter about Covid-19, promoted by private users, ahead of other sources in the field of politics or the media, is a characteristic that identifies the production of content in the research period.



Graph 1: Sources and quantification compared in the production of hoaxes (%) **Source:** self-made

As reflected by the percentages (Graph 1), the relevance of private sources as authors of false information (62.30%) compared to other actors such as politicians (32.79%) or the media (4.92%) is a defining feature of the behavior of audiences in conflict situations. Coinciding with previous studies, networks favor the production of information disorders (Del Fresno García; 2019; Bakir and McStay, 2018), fake news (Ghenai; Mejova, 2018; De-Keersmaecker and Roets, 2017), and the

¹⁴ https://elpais.com/sociedad/2020-03-13/la-estrategia-del-gobierno-de-johnson-contra-el-coronavirus-divide-a-la-comunidad-cientifica.html

¹⁵ https://twitter.com/realDonaldTrump/status/1242905328209080331?s=20

¹⁶ https://elpais.com/espana/2020-03-21/sanchez-advierte-de-que-llega-la-ola-mas-duray-pide-fortaleza-y-unidad.html

anonymity of the users (Pérez Curiel and Velasco Molpeceres, 2020; Hernández-Santaolalla and Sola-Morales, 2019).

The mention of politicians and matters related to public statements by institutional representatives have been the main object of hoaxes, at a time when public appearances to report on the progress of the pandemic multiplied in all the countries selected as study cases.

Count Total Who do they mention in the hoax? Presidents Other Official/Minis The the members of terial politicians Governme Documents the nt Government Individuals 38 Hoax 10 3 14 11 Issuers Media 0 0 1 2 3 7 1 Politicians 4 8 20

4

19

21

61

78

17

Total

Table 4. Frequency of sources mentioned and profile of issuers of hoaxes

Chi-square tests					
	Value	df	Asymptotic		
			significance		
			(bilateral)		
Pearson's Chi-square	4,224a	6	.646		
Likelihood ratio	5,138	6	.526		
Linear by linear association	,000	1	.999		
N of valid cases 61					
a. 6 cells (50.0%) have expected a count less than 5. The minimum					
expected count is .20.					

Source: self-made

The situation of chaos and insecurity that defines the first stage of the coronavirus shows an increase in false messages (Table 4) that mention politicians in general (21), official and ministerial documents (19), or presidents of government (17). Specifically, private users are the sources that publish the greatest number of hoaxes on Twitter (38), related to official gazettes, orders, norms, or decrees announced by public institutions (14), adding misrepresented information and without including links that derive from the official source. Other focal points for these accounts are politicians (11) and the figure of the president of the government (10), who has become the first institutional spokesperson, ahead of other public officials.

When the authorship of the hoax corresponds to the politicians, there is an interest in mentioning other politicians (8) and the highest representative of the Executive (7) resorting to criticisms, errors, or fictitious arguments supported by fallacy and propaganda. Provoking confrontation and conflict respond to political game schemes (horse-race), to see who wins on the electoral stage (García Marín, Calatrava, and Luengo, 2018; Reinemann and Wilke, 2007), a key strategy in the production of hoaxes.

As the data shows, the members of the Executive (ministers, spokesmen, or general directors) have not been considered as reference sources (4) of the false messages detected by the agencies.

The term "Politics" determines the selection of hoaxes published by fact-checking agencies, referring to Covid-19. Using contingency tables, we relate the topic of the hoaxes with the producing and broadcasting sources of these messages. The exploitation of data allows us to know which issues have concentrated the greatest concern of audiences on Twitter, as well as of politicians and the media.

Table 5. The contingency of Topic and Sources of Hoaxes published by Fact-checking Agencies

Topic			Sources' Pro	Sources' Profile		Total
-			Individuals	Media	Politicia	
					ns	
	Politics and	Count	14	2	6	22
	Politicians	% Authorship/ Topic	36.8%	66.7%	30.0%	36.1%
	International	Count	3	0	0	3
	politics	% Authorship/ Topic	7.9%	0.0%	0.0%	4.9%
	Regional politics	Count	1	0	1	2
		% Authorship/ Topic	2.6%	0.0%	5.0%	3.3%
	Security forces	Count	9	1	0	10
		% Authorship/ Topic	23.7%	33.3%	0.0%	16.4%
	Economy	Count	3	0	1	4
		% Authorship/ Topic	7.9%	0.0%	5.0%	6.6%
	Health	Count	7	0	11	18
		% Authorship/ Topic	18.4%	0.0%	55.0%	29.5%
	Education	Count	1	0	0	1
		% Authorship/ Topic	2.6%	0.0%	0.0%	1.6%
	Defense	Count	0	0	1	1
		% Authorship/ Topic	0.0%	0.0%	5.0%	1.6%
Total		Count	38	3	20	61
		% Authorship/ Topic	100.0%	100.0%	100.0%	100.0%

Chi-square tests					
	Value	df	Asymptotic		
			significance		
			(bilateral)		
Pearson's Chi-square	18,071 ^a	14	.204		
Likelihood ratio	22,981	14	.061		
Linear by linear association	3,188	1	.074		
N of valid cases	61				
a. 19 cells (79.2%) have expected a count less than 5. The minimum					
expected count is .05.					

Source: self-made

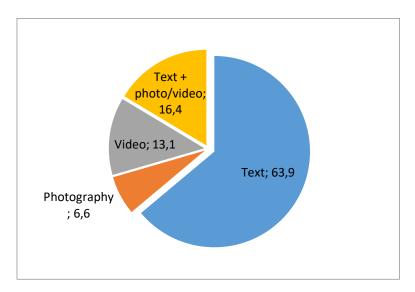
According to the values obtained (Table 5), the most frequently used topics in the messages located by fact-checking agencies on Twitter are those related to Politics and Politicians (36.1%), Health (29.5%), and State Security Forces (16.4%), which is consistent with the continued presence in the media and the networks of political actors from these fields. If the percentages are observed and taking into account the number of false published, the issues related to the Politics are the common denominator of hoaxes from private users (36.8%) and from politicians themselves (36.1%), followed by contents related to Health, a topic to which the leaders have dedicated a significant percentage (55.0%). Compared to other sources, the media reach lower levels as authors of hoaxes (3/61), with Politics (66.7%) and the Security Forces (33.3%) being their maximum objective. Other issues such as Economy (6.6%), International Politics (4.9%), Regional Politics (3.3%), or Education

and Defense (1.6%) did not stand out as axes of hoaxes in the first stage of pandemic information. In later phases, these blocks increase their prominence in the networks and in the media, due to the consequences and effects caused by government decisions.

The crossing of data reveals an attitude of the sources that favor misinformation in moments of a health crisis, a behavior already analyzed by previous studies that address the limitations of Twitter to verify rumors about emergencies (Laylavi et al., 2017; Stieglitz *et al.*, 2018), political conspiracy theories (Consentino, 2020), or people's distrust towards heads of government, politicians, officials, and state media, turned into propagators of the false (Pérez Dasilva *et al.*, 2020).

Phase 3. Information verification indicators in agencies and media

In this scenario, it is urgent to know the fact-checking procedures that are applied in the detection and treatment of fake, check what level of presence this news reaches in the online press, and what formulas of journalistic quality combat the spread of disinformation. To answer the third research question (RQ3), we study the verification function of agencies and the media. In the case of agency fact-checkers, the location characteristics and format of the hoaxes are analyzed.



Graph 2: Frequency of appearance of the hoax according to its location **Source:** self-made

After examining the titles, full text, and additional multimedia material (photos, videos, audios) of each of the hoaxes verified by the four platforms (*Pagella Politica*, *Maldito Bulo*, *FullFact*, and *Politifact*), Graph 2 confirms that the majority of misinformation appears in the text of the message (63.9%) ahead of video (13.1%), photography (6.6%), or a combination of the three formats (16.4%). We observe some examples in the following disinformation units:



Image 5: Disinformation Unit at PolitiFact

Source: https://twitter.com/PolitiFact/status/1242935753799335936?s=20

PolitiFact denounces the false message of President Donald Trump that defends the supremacy and the efforts of his government to apply the coronavirus detection tests, compared to other countries such as South Korea (Image 5). Most of the information is concentrated in the text, although the agency does not rely on sources, background, or contextual data to help prove the lie.



Image 6: Disinformation Unit in Pagella Politica

Source: https://twitter.com/PagellaPolitica/status/1241650828101832704?s=20

The text (Image 6) refers to a piece of fake news published by *Pagella Politica* that denounces as false the statements of Italian senator Elio Lannutti, belonging to the Five Star Movement party. The politician assures the unproven success of a drug against the coronavirus, in line with President Conte's speech in his public calls. The fact-checking agency confirms that there is no evidence of the drug's effectiveness. In this case, all the information on the hoax is concentrated in the text and does not include sources or arguments from the agency that justify why the message is considered fake.

Another of the techniques used by hoax producers is the audiovisual montage. The agencies warn of the lack of correspondence of the facts with the text (43.5%), with the place (23.4%), or the date

(17.2%) of the events, a factor that benefits the reproduction of fakes in the networks and that worsens in times of health crisis (Salaverría *et al.*, 2020).



Image 7. Maldito Bulo's Misinformation Unit

Source: https://maldita.es/malditobulo/2020/03/12/equipo-medico-pedro-sanchez-moncloa-coronavirus/

Maldito Bulo alerts that the matter of Pedro Sánchez's medical team in Moncloa corresponds to a content contained in a 2006 agreement. In this case, the agency rescues the old information and argues the false one, providing the evidence.



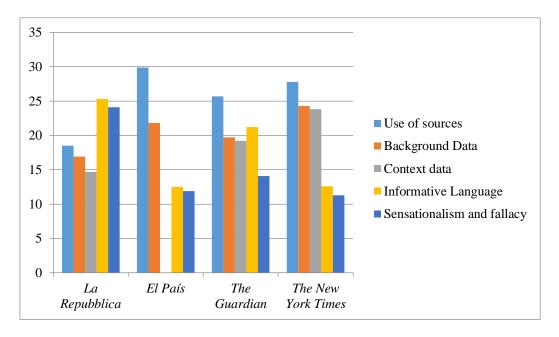
Image 8: Disinformation Unit in Full Fact

Source: https://twitter.com/FullFact/status/1242793645092352002?s=20

Again, the fake news is based on statements by politicians, in this case by Boris Johnson, ensuring that Covid-19 tests will be increased for the British population. Data and dates that the agencies put into question are provided. Besides, formal resources such as photographs or videos that do not correspond to the real events are used.

In general, agencies' verification dynamics abound in the use of formal resources, through underlining, colors, capitalization, overprinted marks, or the use of the "No Evidence" logo to verify that the information cannot be proven. The issue is to what extent the work of the agencies contributes more to the spread of the lie than to its denial, taking into account that the reporting of false news does not always achieve the impact and notoriety caused by the original news (Tuñón Navarro *et al.*, 2019). The online format itself does not facilitate verification supported by an explanation, interpretation, and the provision of evidence that guarantees that the public has access to truthful information (Vázquez Herrero, Vizoso, and López García, 2019).

The phase of locating and reporting the hoax requires complementary actions that have not yet been defined by agency fact-checkers. From this perspective, it is interesting to see how the newspapers behave in terms of the treatment of false news about the pandemic in the field of politics (Lázaro-Rodríguez and Herrera-Viedma, 2020).



Graph 3: Cataloging of resources applied to the news published about Covid-19 **Source:** self-made

Pursuing and reporting hoaxes requires applying filtering records to which are added the resources that enhance the credibility of the story: number and quality of sources, background data, context data, and the use of an informative-explanatory language that optimize the interpretation and critical analysis of audiences (Vázquez-Herrero *et al.*, 2018).

As Graph 3 shows, the analysis of the total number of news published in the press (68), which refers to hoaxes on politics found by the agencies (61), confirms that the inclusion of expert sources in different fields is a characteristic feature that stands out in newspapers such as *El País* (29.9%), *The New York Times* (27.8%), and *The Guardian* (25.7%), compared to anonymity or the identification of false sources in hoaxes published on Twitter. Both *The New York Times* and *El País* show significant values in the use of background (24.3/21.8%) and the contextualization of facts (23.8/23.7) compared

to the less prominent use of informative language (12.6/12.5%), which is usually the tone of the usual discourse of both media. Faced with these data, newspapers such as *La Repubblica* (25.3%) or *The Guardian* (21.2%) choose a story that, without abandoning the broad technical and scientific terminology linked to epidemics, is more accessible to digital readers. Regarding the block of sensationalism, an increase in false language marks is detected in the total of news and of propaganda in the texts of *La Repubblica* (24.1%), a headline that in parallel makes less use of the number of sources in news production (18.5%). In all cases, the use of the fallacy appears linked especially to appearances by politicians and presidents of governments about the pandemic, which journalists try to explain supported by statements from other sources or through the explanation and critical argumentation of the messages.

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Image 9: Conte's speech before the Senate attacking the opposition **Source:**

https://www.repubblica.it/politica/2020/03/26/news/conte_parlamento_renzi_fico_berlusconi-252349192/



Image 10: Appearance of Pedro Sánchez before the declaration of the State of Alarm **Source:** https://elpais.com/espana/2020-03-21/sanchez-advierte-de-que-llega-la-ola-mas-duray-pide-fortaleza-y-unidad.html

Boris Johnson orders UK lockdown to be enforced by police

Prime minister escalates UK response to coronavirus with series of strict measures

- UK lockdown-live updates
- What are the UK lockdown measures?
- See all our coronavirus coverage



Image 11: The British Prime Minister orders the closure of UK borders

Source: https://www.theguardian.com/world/2020/mar/23/boris-johnson-orders-uk-lockdown-to-be-enforced-by-police

Trump's Baseless Claim That a Recession Would Be Deadlier Than the Coronavirus

The opposite is more likely to be true, according to research and experts.



President Trump during a coronavirus briefing at the White House on Wednesday. Erin Schaff/The New York Times

Image 12: Donald Trump comparing the effects of the recession and the coronavirus **Source:** https://www.nytimes.com/2020/03/26/us/politics/fact-check-trump-coronavirus-recession.html?searchResultPosition=7

Although Covid-19 is associated with health emergency keys, the topic and typology of sources from politics is a characteristic shared by all newspapers and which also coincides with the profile of the actors in the hoaxes published by the agencies.

Faced with previous stages in which traditional media lose audience, income, credibility, and authority (Carlson, 2017), given the prominence and influence of the networks (Casero, 2020), the trend of the digital press in the coverage of the coronavirus denotes an implementation of filters added to an analytical and critical journalistic treatment, which avoids confusion and detects lies. It has not been possible to check whether the newspapers have eliminated hoax news from their timeline if the fake was detected, which can be considered a limitation of the network broadcasting system and of the research itself.

4. Conclusions

The strategies of political communication and the influence of the discourse of the leaders on the electorate and the citizenry through the media and social networks multiply in crises of any kind and origin (Casero-Ripollés, 2020). Covid-19 is an illustrative example of the behavior of political representatives in continuous public appearances in a situation of political and economic instability, surrounded by insecurity and social confusion (López García, 2020; Mantzarlis, 2018).

Although the use of the rhetoric of persuasion, fallacy, and propaganda as identifying features of political discourse is not new (Mancera Rueda & Helfrich, 2014), during the initial phase of the spread of the coronavirus in Europe and the world, the increase in fake news and hoaxes on social networks (European Commission, 2020) has been the subject of debate and accusations among politicians (Salaverría *et al.*, 2020; Waisbord, 2018).

The fallacy and propaganda index of the messages published on Twitter by the presidents of government responds to a first premise (RQ1) that identifies disinformation as a characteristic of institutional political discourse. In all the analyzed political profiles (Donald Trump, Boris Johnson, Giuseppe Conte, and Pedro Sánchez), the quantity and diversity of fallacies related to the virus, leads to a serious reflection on the consequences for a citizenry increasingly exposed to misleading messages and ultimately for democratic stability.

However, in this scenario of the viralization of false ones, linked to politics and politicians, the role of the social audience stands out, as the main axis of the production and dissemination of rumors and hoaxes about the coronavirus. The distrust of the public towards politics and the traditional media that are losing their preeminence as the main sources of information on public affairs (Bennett; Pfetsch, 2018) generates new habits of news consumption and changes how citizens attribute relevance to the present. Communities of users are created in social networks that seek information produced by their peers, generally not contrasted or verified by media professionals (Gil de Zúñiga et al, 2017). At the end of the chain, there is often a user who does not know the origin and viralizes the fake (Redondo, 2018).

A second premise (RQ2) is then confirmed that highlights the role of citizens as producers and consumers (prosumers) of hoaxes about the pandemic, actively cooperating with the information disorder that politicians have already caused with their appearances to inform about the Covid-19 and later with its dissemination on Twitter.

Identifying the possible actors of such misinformation would allow public health authorities to monitor social media discourse, distinguish shortcomings in current communication strategies around

health, and detect misinformation before it may cause irreparable damage (Pérez-Dasilva *et al*, 2020). In a field such as health, where the effects of misinformation are exacerbated (Ghenai; Mejova, 2018), the verification work of fact-checking agencies and the media is even more important. We are witnessing a crisis in which the authorities themselves are demonstrating sometimes unjustified levels of ignorance, overlapping a fallacious discourse, acting irresponsibly, and spreading a discourse that affects emotions more than rationality on the networks (Boczkowski, 2016).

The function of detecting and reporting hoaxes registered by the fact-checking agencies (*PolitiFact*, *Full Fact*, *Pagella Politica*, *and MalditoBulo*) responds more to an exercise of treatment of the contents through the use of formal resources than to an in-depth explanation of the causes, the context, the background, or the timing. In the face of the audiences, a procedure is necessary to help locate the lie and develop a critical attitude towards the facts, which avoids making unproven information viral. From this perspective, a reflection on control procedures that helps to locate the lie and develop a critical attitude towards the facts is proposed, which avoids turning unproven information into viral. From this perspective, a reflection is proposed about the procedures of fact-checking agencies as promoters of disinformation rather than as channels of denial, in the face of the defenselessness, passivity, or alliance of the audiences themselves (Coromina and Padilla, 2018).

To counteract the weaknesses of some fact-checking agency verification models, and to reinforce the work of the gatekeeper that continues to identify the media, the task of controlling hoaxes and fake news requires journalists as guarantors of veracity and informative contrast. Transparency, credibility of sources, contextualization, reference to background data that help users to differentiate the truth from the lie (Palau Sampío, 2018) are values that, far from losing meaning, have been reinforced as journalism strategies to tackle the effects of fallacy and sensationalism (Journell, 2017; Allcott & Gentzkow, 2017). Faced with moments of decline in the media overwhelmed by the emergence of new narratives and new rhythms of news production caused by social networks (Van-Aelst *et al.*, 2017), the response of information professionals is reaffirmed in combating all the lies that a situation of maximum confusion and citizen insecurity generate.

In this framework, a third premise (RQ3) linked to the importance of journalism and its professionals as experts in verifying and contrasting sources that resist the influence of politicians and citizens as prosumers of falsehood is confirmed.

Faced with an unexpected crisis to which neither experts, politicians nor the media have been able to respond, future research is proceeding that, hand in hand with new narratives, advanced technology, and artificial intelligence, analyze the extent to which citizens will respond to new outbreaks, with behaviors capable of facing disinformation that their peers spread, and that intensifies an imminent risk for democracy.

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