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Misinformation about fake news: A systematic critical review of empirical studies on the phenomenon and its status as a 'threat'

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Abstract
After the 2016 US presidential elections, the term 'fake news' became synonymous with disinformation and a catch-all term for the problems that social networks were bringing to communication. Four years later, there are dozens of empirical studies that have attempted to describe and analyse an issue that, despite still being in the process of definition, has been identified as one of the key COVID-19 cyberthreats by Interpol, is considered a threat to democracy by many states and supranational institutions and, as a consequence, is subject to regulation or even criminalization. These legislative and criminal policy interventions form part of the first stage in the construction of a moral panic that may lead to the restriction of freedom of expression and information. By analysing empirical research that attempts to measure the extent of the issue and its impact, the present article aims to provide critical reflection on the process of constructing fake news as a threat. Via a systematic review of the literature, we observe, firstly, that the concept of fake news used in empirical research is limited and should be refocused because it has not been constructed according to scientific criteria and can fail to include relevant elements and actors, such as governments and traditional media. Secondly, the article analyses what is known scientifically about the extent, consumption and impact of fake news and argues that it is problematic to establish causal relationships between the issue and the effects it has been said to produce. This conclusion requires us to conduct further research and to reconsider the position of fake news as a threat as well as the resulting regulation and criminalization.

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Introduction

It is not easy to find references to the concept of fake news in academic literature before 2016 (Tandoc et al., 2017). Those that exist mainly connect it with 'parody news' (Brewer et al., 2013; Marchi, 2012), humorous content that imitates the format of the mainstream news (Berkowitz and Schwartz, 2016), or the use of real news for comedy – satirical news (Baym, 2005). The term subsequently began to acquire new nuances and to be linked to concepts such as political propaganda (Khaldarova and Pantti, 2016), but it was not until the 2016 US presidential election campaign that the concept of fake news gained the popularity and meaning it has today (McGonagle, 2017). First, a series of newspaper articles drew attention to the widespread dissemination of false information on the social network Facebook regarding issues connected to the political contest (Silverman and Alexander, 2016; Silverman, 2016). The subsequent victory of the Republican candidate, contrary to what most surveys had predicted,[1] led some authors to turn fake news into a modern version of disinformation linked to cyberspace and social networks (Lazer et al., 2018; Tandoc et al., 2017), and to relate it to political events such as the aforementioned Donald Trump victory (Bennett and Livingston, 2018) or Brexit (Bastos and Mercea, 2019). This prompted statements of concern from states and institutions about the risks of fake news (European Commission, 2018; Government of Spain, 2019; Parliament of Singapore, 2018), as well as the proliferation of journalistic initiatives that aim to verify information – fact-checking. In turn, social concern, as is often the case, has led to the emergence of various proposals for regulation and even criminalization (Lee and Lee, 2019; Tandoc, 2019).

It seems that a certain degree of moral panic (Cohen, 1972; Young, 1971) is being generated with regard to fake news and disinformation, or at a minimum the process of identifying a new phenomenon as a threat to social values and interests is under way, which constitutes the initial communicative step toward a response based on social control and criminal regulation. Faced with this type of situation, it is always necessary to conduct empirical studies that help substantiate the threat or call it into question (Garland, 2008). In fact, from 2016 there was indeed a significant increase in academic research on the issue and its potential negative impact (Farkas and Schou, 2018). However, the proliferation of studies in disciplines ranging from computer science to information science that quantify and measure the various impacts of fake news has not always been combined with reflection on and conceptualization of the phenomenon. Although it is clear that the potential to manipulate society and to alter democratic processes by means of false, distorted or decontextualized information needs to be studied scientifically, this means that it is necessary to adequately review how the concept of fake news is being empirically constructed.

And this is the main objective of the present article: to identify which conceptualization of fake news is being constructed as an empirically 'proved' object, to use Bourdieu's terminology (Bourdieu et al., 2002). This constitutes the first analytical step in order to reflect upon the consequences of the object being analysed and whether it is the object itself that should be of particular concern or whether we should broaden our outlook. To this end, an initial systematic review of the existing empirical literature will be conducted, followed by a critical reflection on the conceptual bases of the works analysed in

the review. Because, if we do not proceed in this manner, if we do not review what we are measuring, we run the risk of using science to misinform about an issue that is generating social concern and that is already being regulated and even criminalized.

Background

The 'threat' (and moral panic) of fake news

The dissemination of false information with political or economic objectives is not a new phenomenon and neither can it be said that the dissemination of false information arose with the Internet (Levi, 2019). State use of propaganda, as a way of broadcasting the 'correct' worldview, is inherent in their existence. At the end of the 19th century, the magnate William Randolph Hearst, considered the creator of the yellow press (Spencer, 2007), used his media empire to spread distorted news that benefited his interests, even precipitating the Spanish–American War of 1898 (Lowry, 2013). However, it must be acknowledged that today's communicative ecosystem is not identical to that of the 19th century, or even that of the 20th century. The generalization of the Internet and the increasing prominence of social networks have substantially modified the field of communication, making access cheaper – the investment and knowledge needed to create a website and monetize visits are minimal – and offering new channels for the dissemination of information (Lazer et al., 2018).

In view of this new communicative context, many authors have suggested that, owing to the production and dissemination of fake news, there is increased risk of the population being manipulated and becoming incapable of distinguishing true information from false (Lazer et al., 2018). Moreover, this is aided not only by the content but also by the way in which it reaches the recipient. For example, the diffusion of fake news can be amplified by the use of automated fake-account networks on social networks. These are capable of increasing the diffusion of certain content, which can make it appear more reliable or credible and, therefore, contribute to disinformation (Bastos and Mercea, 2019; Shao, Ciampaglia et al., 2018). Furthermore, the consequences of this are not limited to the electoral sphere but can also affect other areas of vital importance, such as public health (Wang et al., 2019) or the economy (Fedeli, 2020; Zhang and Ghorbani, 2020). In fact, the COVID-19 crisis seems to have increased the perception that fake news and disinformation are a threat. The WHO warned (2020) that the COVID-19 pandemic was accompanied by an infodemic of disinformation, which seemed to be subsequently corroborated by both Europol (2020) and Interpol (2020). Via its Global Cybercrime Survey, Interpol confirmed the circulation of false information related to COVID-19 in many countries and, in addition, expressed concern that incorrect information could spread panic in the community and social disorder that have already been exacerbated by the pandemic. Their report also linked fake news to some forms of cyber fraud and to illegal trade in fraudulent medical products.

The status of 'threat' that has been assigned to disinformation and fake news in a short period of time has led to many forms of institutional responses. These range from official declarations by state (Government of Spain, 2019) or supranational (European Commission, 2018) bodies about the need for action, to the emergence of regulatory

codes (European Commission, EU Action Plan Against Disinformation (2018)) or legislative initiatives all over the world to avoid fake news and disinformation. Regulating this phenomenon is obviously difficult (Pielemeier, 2020) because of the intrinsic risk of limiting freedom of expression (Kaye, 2019), which could explain why some regulatory initiatives, such as in the United Kingdom or Italy, have not succeeded. Nevertheless, several laws have already been passed, such as in Germany, where the Network Enforcement Act (NetzDG) of 1 January 2018 requires censorship of content in order to avoid being punished with heavy fines (Schmitz and Berndt, 2018). In 2018, Malaysia passed an Anti-Fake News Act, allowing for prison sentences for those who spread fake news, but repealed it the following year (Kaye, 2020). Singapore's Protection from Online Falsehoods and Manipulation Act (POFMA) provides significant criminal sanctions for anyone, including service providers, that communicates a 'false statement' in Singapore when they know or have reason to believe that it is false and 'is likely to be' harmful in a variety of possible ways (Pielemeier, 2020).

Obviously, this cycle in the emergence of a social concern is not new – it is identified as a potential threat and there is an immediate legislative reaction in the form of criminalization, with the consequent jeopardization of fundamental rights. It is unique that the right that may be affected by these regulations is freedom of expression (Kaye, 2019), and the intimate relationship between the threat and what it entails and the media is certainly unprecedented. The emergence of a concept in the media that quickly becomes a source of social anxieties and an object of 'disproportionate' demands for criminalization (Hall et al., 1978) inevitably leads us to the concept of moral panics coined by Young (1971) and popularized by Cohen (1972). This concept has been used extensively in both criminology and public debate (Garland, 2008) and has been extremely successful in academia for studying the response to multiple criminal phenomena. But what is striking is that now it is the media themselves that are at the centre of the equation, not only as the disseminators of that moral panic but also as the recipients of it. It is in their field of activity (the diffusion of news) that the threat propagates, and some of them (those found in the new informational contexts; Walsh, 2020) could constitute both the threat as well as the guarantors of security against it. In these circumstances, it has been suggested that social networks have become the object of social anxieties and the source of what has come to be called 'technopanics' (Marwick, 2008). In fact, we can already find authors who classify the media treatment of fake news as an informational moral panic. Thus, Carlson (2020) maintains that, via their discourse on fake news, agents in the field of communication have created a deviant other that encompasses all the concerns derived from the irruption of social networks, while they present themselves as a truthful and trustworthy opposition to that other.

Regardless of the current revision of the concept of moral panic (Garland, 2008; Horsley, 2017; Jewkes, 2015; Thompson and Williams, 2013) and beyond the controversy regarding the concept and the theoretical framework built around it, Cohen's approach has the virtue of drawing attention to the role of the media in the process of creating threats that subsequently legitimize punitive responses. In our view, this approach adequately expresses a process that is under way in relation to fake news, at least in regard to the early stages of identifying something or someone as a threat, and the distorted and simplified dissemination of this threat by the media (Simons, 2019).

Although concern about fake news and its alleged threat to democracy arises from the media (Silverman and Alexander, 2016; Silverman, 2016), it seems reasonable to consider the possibility that we are witnessing a process, or at least an incipient process, whereby an artificial threat is constructed that can potentially be used by the authorities to implement the disproportionate and restrictive regulation of rights. However, what concerns us in this article is not so much analysing a 'moral panic' to determine whether the aforementioned theoretical framework explains the institutional response to the phenomenon. Rather, the aim is to show that criminalization is being proposed for an issue that is still in its definitional phase and that is being ascribed 'threat' status when the impact of fake news is only beginning to be measured and when, as we will see below, it is still not clear what is being measured, what is being included, what is being omitted and how, either by action or omission, the authors are producing the process of conceptual attribution of what is later evaluated as a threat.

Agreements and disagreements about the concept of fake news

Given the political and social interest that the phenomenon of fake news has acquired in recent times and, in particular, given that it is considered as a 'threat' to the essential interests of democracies, it is understandable that there have been attempts to empirically 'prove' hypotheses of a descriptive nature, such as those relating to the existence of an increase in fake news in certain electoral processes (Silverman, 2016), and hypotheses of the inferential variety, such as those linking the consumption of fake news to certain consequences (Allcott and Gentzkow, 2017). Yet, in reality, a phenomenon is beginning to be measured that, beyond its relationship to the concept of disinformation and the synonymy between them (Lazer et al., 2018; Wardle and Derakhshan, 2018), is still in the process of being defined. As other reviews of the literature have already observed (Tandoc et al., 2017; Zhang and Ghorbani, 2020), the term 'fake news' is closely linked to concepts such as satirical news, hyper-partisan news and conspiracy theories. Whereas some research restricts the concept of fake news to manufactured information that pretends to be news (Grinberg et al., 2019), others give it a broader meaning (Bovet and Makse, 2019; Giglietto et al., 2019) and consider fake news to be a category that includes both manufactured news and different combinations of hyper-partisan news, satirical news and conspiracy theories. But these differences in the theoretical contours of fake news, despite having repercussions on an empirical level, are secondary to the articulation of the concept of fake news as a scientific object. The central question, prior to the theoretical delimitation of the concept of fake news, lies in the form of attributing the characteristic 'fake' to that which is studied as fake news. This, as we will see below, derives from a conceptual debate that cannot be considered resolved, despite the fact that empirical research is under way.

Perhaps the most established definition of fake news in the academic literature is that of Lazer et al., for whom fake news consists of 'fabricated information that mimics news media content in form but not in organizational process or intent' (2018: 1094). It should be noted that this conceptualization of fake news avoids linking the concept directly to the idea of truth or lies, and it emphasizes, on the one hand, that this information formally imitates media content and, on the other hand, that it has not been produced following the same processes or with the same intention as news produced by the media. From this

definition it is derived that fake news is information that acquires the characteristic of fake because the producer neither uses the same processes nor has the same intentions as the media. In other words, based on this approach the 'attribution of fakeness is thus not at the level of the story but at that of the publisher' (Grinberg et al., 2019: 1).

Leaving process issues aside but maintaining the importance of appearance and of the objectives behind its production, the definition provided by Allcott and Gentzkow (2017) illustrates the other common way to define fake news. For these authors, fake news would be 'news articles that are intentionally and verifiably false, and could mislead readers' (2017: 213). These authors do introduce the concept of falsehood into the definition and place the attribution of falsehood at the level of the story itself. However, their definition clarifies that not all false information will be fake news, only that which is intentionally false, which can be verified as false and which, moreover, owing to its characteristics – of whatever kind – can deceive readers.

Although the above-mentioned definitions disagree on the origin of fakeness, to consider information fake news requires a certain degree of intentionality on the part of the author and that the information has the potential to not to be recognized as false. Hence, in the systematic revision by Tandoc et al. (2017), on the one hand, the ability of fake news to mimic real news and, on the other hand, the fact that there is no intention to inform, are what have led some authors to blame fake news for generating misinformation (Grinberg et al., 2019; Lazer et al., 2018) and undermining the traditional media system (Tandoc et al., 2017). Therefore, these definitions leave out cases of systematic and systemic, though unintentional, malpractice, which means omitting from the 'problem of fake news' a part of the phenomenon of disinformation that is intimately related to traditional media (Levi, 2019).

It can therefore be seen that there is significant agreement on some of the aspects that characterize fake news, as well as significant disagreement and a fundamental unresolved discussion centred on the epistemological question of how the falsehood or 'fake' nature of the information should be determined: whether it should be determined on the basis of the content of the news, the characteristics of the issuer, or otherwise. Many other discussions can probably be derived from this that are closely related to the difficult question of how to attribute the condition of truth to something. In any case, the questions that interest us are: Are these consensuses, and also these discrepancies, reflected in the empirical research that is already claiming to study fake news? Do all studies that measure fake news or similar phenomena start from the same concept and use the same method to determine what falls within the object of study? And, above all, does this different conceptual configuration have an impact on the perception of the threat that disinformation and fake news can pose?

In the present article we investigate the object that is being studied, and what the empirical research that claims to describe the phenomenon and the impact of fake news is actually measuring. After all, this research can form part of the public debate on the risks that fake news can entail and, therefore, it can influence its regulation, or even criminalization. And, if we do not first review the object that empirical research is studying, in an area in which the definitive question clearly seems neither simple nor irrelevant, we run the risk of collaborating in the false configuration of a threat and in the justification of inadequate regulations.

Method

With the aim of addressing the objects that guide empirical research on disinformation, a systematic review of the literature was conducted. To this end, the most relevant articles in which the term 'fake news' was mentioned have been extracted from the Web of Science (WoS) database. The number of citations was used as the reference criterion to determine the relevance of the articles; thus, we extracted all articles published before 2019 with 10 or more citations, articles published in 2019 with five or more citations and articles published in 2020 with three or more citations. This initial search was supplemented by a second Google Scholar search, which yielded nine articles with more than 100 citations that were not found on Web of Science.

After combining the results from both databases, a list of 99 articles was obtained. These were manually reviewed to distinguish those of a theoretical nature (42 articles) from those that provided their own empirical results, as well as to certify that the articles on the list dealt with the subject matter of interest and did not simply mention the term 'fake news' (15 articles were removed from the final review for this reason). This process produced a list of 42 empirical articles that constitute the object of the present bibliographical review (see Figure 1).

Based on the analytical perspective previously outlined and as a result of the bibliographic review, it has been established that research on fake news can be classified into two large groups according to where they seek to identify the origin of its fake nature (Figure 2). Thus, on the one hand, there are studies that attribute the fakeness to the issuer of the message, so that it will be some quality attributable to the issuer that will lead to the information being assumed to be true or false. On the other hand, there are studies in which the characteristics of the information itself will determine, in the eyes of the researchers, whether it is considered fake. In turn, and independently of the method for attributing fakeness, the different studies can also be divided between those that carry out internal analysis and those that conduct external analysis. The research that conducts external analysis takes fake news as a variable and observes how it relates to other variables, whereas the research that carries out internal analysis will observe the characteristics of those contents that have been called fake news. When conducting internal analysis, researchers who attribute the condition of fake news to the issuer, by selecting what they are going to observe based on its source and not on its intrinsic characteristics, are in fact studying the characteristics of the content published by certain issuers; in contrast, when carrying out an external analysis, researchers will be studying how the receivers relate to certain issuers, or, if they take a psychological perspective centred on the subject, they will be studying the psychology of the receiver – personality traits or cognitive skills that could influence how the subject relates to fake news – when faced with these new issuers that seem to have appeared in the field of communication. On the other hand, the studies that attribute some form of falsehood to the messages will be studying the characteristics of these – specifically those to which they attribute the status of fake – when they carry out internal analysis. In the case of external analysis, we can distinguish between studies on the psychology of the receiver when faced with certain content (if they study the relationship between the human psyche and fake news) and studies on the relationship of the subject with certain content (if we observe how the subject relates to fake news).
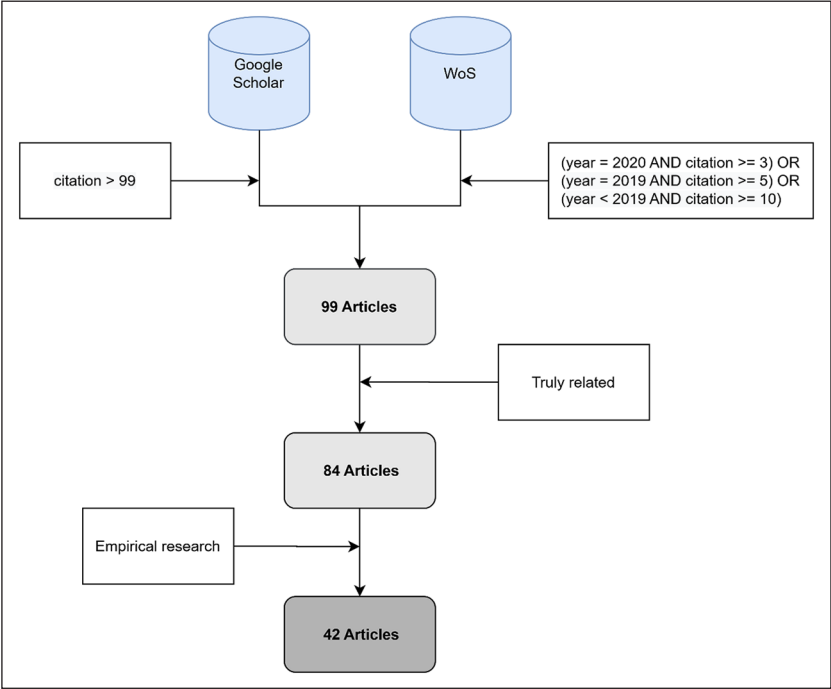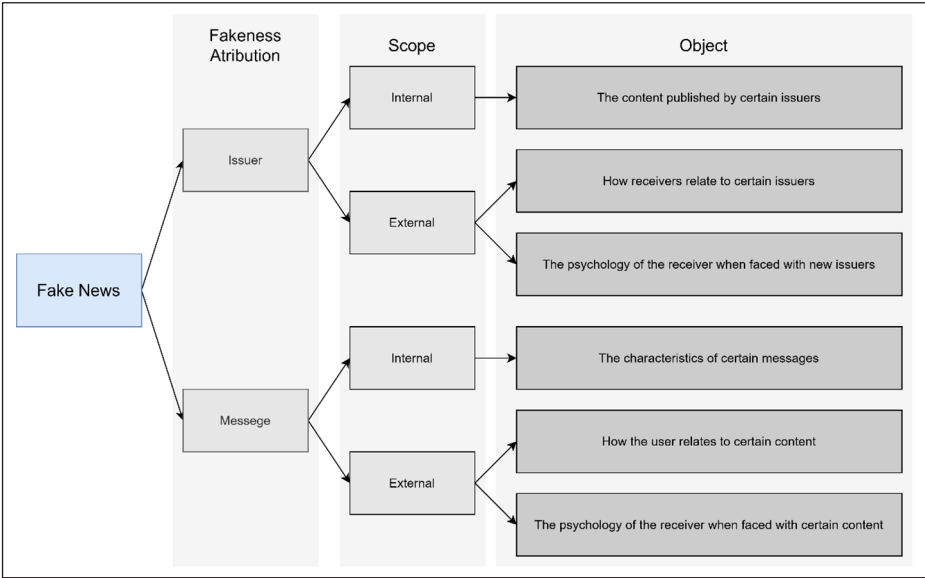
Figure 1. Selection process.

Figure 2. Classification diagram.

Results

As can be seen in Table 1, regardless of the way in which the characteristic of fake is attributed to news, very few studies carry out internal analyses, and 90 percent of the reviewed research focused on external analyses. Within this category, all investigations that attribute fakeness based on the issuer study how the receivers relate to certain issuers. This perspective has been used by studies that have measured the dissemination and consumption of fake news in certain contexts. It should be noted that this group of research accounts for only 26 percent of all empirical studies analysed in the present article.

On the other hand, the research that, via external analysis, attributes falsehood as a result of the characteristics of the message is divided between researchers who study the psychology of the receiver when faced with certain content and those who study how the users relate to that content. This last group, which is mainly composed of proposals for algorithms capable of detecting fake news on social networks, is the most numerous of all, accounting for 40 percent of all the research reviewed.

About the issuer

Many of the studies analysed have chosen to determine the fakeness of the news not by its content, but by its source, so that the 'fake' status of the information is determined by its issuer. Thus, a fake news item is conceptualized, in a broad sense, as a piece of information that comes from a website that pretends to be a real media outlet (Lazer et al., 2018). This way of understanding fake news has been prominent in the empirical studies that have tried to measure the diffusion or consumption of fake news among the population, as it allows the news consumed or shared by the subject to be configured as independent variables, without the need to individually evaluate the content of each piece. Furthermore, this approach has also allowed research on the patterns of dissemination of

Table 1. Number of items per category.

Fakeness attribution (FA)	Scope	Object	N	Percent in FA category	Percent of total
Issuer	Internal	The content published by certain issuers	2	15.4	4.8
	External	How receivers relate to certain issuers	11	84.6	26.2
		The psychology of the receiver when faced with new issuer	0	0.0	0.0
Message	Internal	The characteristics of certain messages	2	6.9	4.8
	External	How the user relates to certain content	17	58.6	40.5
		The psychology of the receiver when faced with certain content	10	34.5	23.8
Total			42	200.0	100.0

certain content through social networks, which has led to botnets being detected as significant collaborators in this task (Bastos and Mercea, 2019; Shao, Ciampaglia et al., 2018; Shao, Hui et al., 2018). However, this way of approaching fake news via the issuer is not exclusive to external analyses. We also find internal analyses that study the characteristics of the content created and disseminated by these issuers (Bakir and McStay, 2018; Mourão and Robertson, 2019).

Using the issuer to determine the 'fake' nature of information makes it necessary to determine which sources are actually considered as media, or legitimate media, and which are not. In order to solve this problem, the observed studies resort to categorizations of media elaborated by academics, media or fact-checking organizations (such as Opensources.co,[2] Buzzfeed,[3] FactCheck.org[4] and PolitiFact.com[5]).

About the message

The other conceptual model for the study of fake news places the condition of 'fake' in the study of the content, and not of the issuer. From this perspective, research has also been carried out to measure the importance and extent of the phenomenon of fake news in certain political contexts, such as the 2016 US presidential elections (Allcott and Gentzkow, 2017) or the 2014 Ukraine–Russia conflict (Khaldarova and Pantti, 2016). This way of attributing falsehood to fake news has also been used by the different studies on the psychology of the receiver when faced with content considered to be fake (Bronstein et al., 2019; De Keersmaecker and Roets, 2017; Pennycooka and Randa, 2019). In both cases, for the construction of the variable 'fake news' we no longer find media lists but we do find fake news lists.

It should be noted that, within the studies that attribute the fakeness of fake news to its content, the most numerous group is made up of proposals for models trained by machine and deep learning for the detection of this type of content. Those models that carry out internal analysis use features based on questions related to the use of language – grammar, syntax, etc. (Jang et al., 2018; Pérez-Rosas et al., 2018; Potthast et al., 2018). On the other hand, research that carries out external analysis uses as features the patterns of dissemination of false information in social networks, as well as characteristics associated with the user posts through which they are disseminated – characteristics of the account or of the message or the presence and characteristics of associated images (Alrubaian et al., 2018; Jang et al., 2018; Jin et al., 2016; Jin et al., 2017; Reis et al., 2019; Ruchansky et al., 2017; Shin et al., 2018; Wang et al., 2018).

As with the previous model, to access this false information, researchers use fake news indexes that are also developed by certain official news agencies or media outlets that are dedicated to fact-checking. Thus, with the exception of the proposals from Pérez-Rosas et al. (2018), who build their database by inventing fake news, and Alrubaian et al. (2018), in which the participating researchers verify the information, the different algorithms proposed for the detection of fake news have been trained on databases that have been constructed using information labelled as fake news by the aforementioned fact-checking organizations (news agencies such as Xinhua News Agency, or fact-checkers such as Snopes.com). However, in this kind of approach the object is no longer the fake news itself, understood as the 'original' false information. The focus of the research, and

Table 2. Articles that analyse the impact of fake news on the 2016 US presidential elections.

Fakeness attribution (FA)	Main data source	N	Percent of total
Issuer	Poll	0	0.0
	Web traffic (navigation history)	2	28.6
	Social network data	4	57.1
Message	Poll	1	14.3
	Web traffic (navigation history)	0	0.0
	Social network data	0	0.0
Total		7	100.0

consequently of the classification model, becomes the characteristics of the vehicles, accounts and messages through which fake news is disseminated and the patterns of dissemination. In other words, the research focuses on how users relate to certain content but also endows them with an active role in the production of misinformation.

The impact of fake news on democracy

Finally, it should be noted that few studies were found that address the impact of fake news. Of the articles reviewed, only eight based their research on a specific context in such a way that it was possible to use relevant empirical material to attempt to gauge the impact of fake news within that context. With the exception of one of them – related to Brexit (Bastos and Mercea, 2019) – the remaining seven studies examine fake news in the context of the 2016 US election (Allcott and Gentzkow, 2017; Bovet and Makse, 2019; Grinberg et al., 2019; Guess et al., 2019; Guess et al., 2020; Nelson and Taneja, 2018; Shao, Hui et al., 2018). These studies have taken different perspectives (see Table 2) but their results are consistent, as all found substantially small and highly concentrated diffusion and consumption of fake news among a specific profile of subjects, which significantly weakened the initial hypotheses about the relationship between fake news and Donald Trump's victory (Mihailidis and Viotty, 2017; Silverman, 2015). Studies such as that by Guess, Nyhan and Reifler (2020) have estimated that fake news accounted for 5.9 percent of the news consumed by each user in the month prior to the elections. With regard only to Twitter, Grinberg and co-authors (2019) observed that, during the month prior to the elections, each user was exposed to fake news related to the political campaign 10 times on average, only 1.18 percent of the user's total exposure to political news. This same research also found that 1.0 percent of their sample consumed 80.0 percent of the detected fake news. These big consumers of fake news were mainly conservative and were characterized by high consumption of all kinds of news. This conclusion regarding the profile of consumers of fake news is shared with other studies reviewed herein (Allcott and Gentzkow, 2017; Guess et al., 2019; Guess et al., 2020; Nelson and Taneja, 2018). These findings are summarized in Table 2, and, as will be considered in greater detail in the Discussion section, none of the existing studies allows a causal relationship to be established between the results of the elections and fake news.

Discussion and critical reflection

The possible impact of disinformation on the 2016 US presidential elections brought into public debate the potential need to regulate fake news on social networks, either through criminalization or by forcing social media to prevent its dissemination. In turn, this gave rise to an important debate on the role that Internet service providers play in regulating political debate and shaping freedom of expression (Kaye, 2019). The premise on which all the regulatory proposals are founded is that misinformation, as a genus, and fake news, as a species, constitute a serious threat to essential values such as democracy, public health or free public opinion. Empirical studies have begun to emerge that attempt to confirm some of these premises or to detect 'fake news', despite the enormous difficulties posed by the measurement of phenomena that are conceptually not very precise, or to determine causal inferences in political processes or similar areas of social decision-making. The results of our study show, however, a tendency to simplify the characterization of the conditions that constitute 'fake news' for the purposes of its empirical measurement.

We have seen that a large number of studies on fake news introduce a concept that is related to the incursion of new actors into the field of communication who do not follow the traditional verification processes and to whom the characteristic 'fake' is implicitly attributed. Without denying the possible relationship between source and truth, this omits certain news from the phenomenon of fake news and disinformation that, because of its content, may be clearly untrue but does not come from sources categorized as fake or that is even disseminated by legitimate media. Furthermore, this ignores the possibility, hypothesized by certain authors (Mihailidis and Viotty, 2017; Silverman, 2015) and rejected by others (Guo and Vargo, 2020), that the content disseminated by these new actors can influence the content of legitimate media sources by filtering into them or conditioning their agenda. Moreover, the vast majority of the empirical research on fake news depends on pre-constituted lists of information or media that are prepared by fact-checkers or government news agencies. In both cases, the criteria for the attribution of the status of 'fake' and for the elaboration of the lists are not transparent, and nor are they scientific since none of these organizations principally carries out scientific activities.

It is true that the models proposed for the detection of fake news in social networks, which, as we have seen, constitute 36 percent of all the empirical research reviewed, deserve separate attention. This is because, although these studies also depend on the sources from which they extract what they consider to be fake news, the very nature of machine and deep learning is the generation of tools that transcend the database and are capable of learning beyond it. Furthermore, this way of approaching the phenomenon is not limited to observing user interaction with certain agents that disseminate fake news; it also observes how users disseminate this information, how they modify and re-distribute it, and how they react to it and to other users. This is, therefore, a broader and more ambitious way of approaching disinformation, since it is not limited to the origin of the information but takes into account the waves – the different reactions – generated by the appearance of false information in a social network. Right now, this kind of research says little about the phenomenon of disinformation because it has been limited to developing tools in 'laboratories', that is, within databases created specifically for this purpose, but the application of this type of tool 'to the real world' could have great potential to generate knowledge.

It is true that dependence on the sources from which the potential fakes are extracted is understandable, given the philosophical complexity intrinsic to any phenomenon based on the ideas of 'truth' or 'lie'. However, it is undeniable that such a procedure introduces significant bias into research that aims to study fake news and forces us to be careful when establishing consequences from these studies. The question of disinformation, misinformation and fake news is a complex issue that cannot be reduced to the circulation of information on social networks by websites that pretend to be media and are obviously false or partisan. On several occasions, the theoretical and empirical literature on this subject has drawn attention to the need to observe the role of media considered legitimate or traditional in disinformation (Brulle et al., 2012; Lewandowsky et al., 2017). From this perspective, issues such as clickbait (Rochlin, 2017), the primacy of opinion over expert analysis (Case and Given, 2016), or the speed of publication imposed by their own corporate structure (Cooke, 2017) cannot be ignored if we are to understand the phenomenon in its entirety and its potential effects. If one wishes to study the dissemination of fake news and the impact that it can have as a 'potential threat to democratic systems', one must at least explore the possibility that governments and large media institutions have some role in the propagation of this type of content. Likewise, if the objective is more ambitious and one wishes to approach disinformation and misinformation as a social phenomenon, the logics and practices of the main actors in the field of communication – large media institutions, news agencies, press offices, etc. – cannot be completely ignored. Ignoring the questions we have just mentioned and 'borrowing' the object of study means that scientific research into fake news runs the risk of being caught up in the game of exchanging meanings and legitimacy that, as in any other field (Bourdieu and Wacquant, 2005), is disputed in the field of communication.

This is not to deny the usefulness, even the necessity, of conducting empirical research on this, let us say, restricted concept of fake news. But, in addition to the fact that we must demand an explanation of the concept that is being used as a starting point and of the manner in which the condition of fake is attributed, we believe that it is essential to make it compatible with other empirical research. The present article establishes the need to adopt a clear, as well as a broad, concept of the phenomenon of disinformation that, in turn, can be empirically articulated in different typologies. These should, at a minimum, pay attention to the way in which something is considered fake, whether it is through the medium or through the message, and make the process of attribution explicit so that it is possible to debate and refute the procedure. What we have seen in the literature analysed in the present article is that, despite the fact that what guides and justifies the research is disinformation and its potential harmful effects, what is ultimately studied, either because of lack of reflection on the concept of fakeness or because the attribution of fakeness is not dealt with scientifically, are questions related to certain contents or certain issuers whose relationship with fake news is not sufficiently demonstrated – beyond the fact that someone has said at some point that this content was fake news or that this website disseminated fake news. We do not believe it is appropriate to study a social phenomenon merely as a given natural object that has not previously been configured by any type of conceptualization, especially if the intention is to analyse the consequences of this object and to derive from this research responses that are related to control, normative regulation or criminalization.

In any case, and broaching the second question that we aimed to discuss in this article, we must emphasize that the empirical data available right now, despite their limitations, do not allow us to establish a causal relationship between this concept of fake news and the harmful consequences that would theoretically make it a threat and that would justify criminalization. Thus, given what we know right now about the phenomenon, the proposals for criminalization, as well as classifying it as a threat, may be remarkably disproportionate. As the United Nations Special Rapporteur on Freedom of Expression has recently emphasized, when a state is preparing to restrict freedom of expression in some way, which includes freedom of information, it is not enough that the objective pursued be legitimate. 'It must establish a direct and immediate connection between the expression and the threat said to exist', and, furthermore, this restriction 'must be the least intrusive instrument among those which might achieve the desired result' (Kaye, 2020: 6). It should also be borne in mind that restricting freedom of expression can have the well-known chilling effect (Miró-Llinares and Gómez-Bellvís, 2020), which is particularly harmful because freedom of expression is a fundamental right that is indispensable for other fundamental rights, such as the right to information or to free public opinion, without which there can be no democratic society (Alcácer-Guirao, 2012).

Furthermore, research on the concept of fake news is being conducted empirically using lists of stories and media that have been identified as fake news by actors in the field of communication, ignoring any reflection on the fakeness of the news. Thus, it seems necessary, firstly, to state clearly that we are still in an initial phase of empirical research that has not been able to confirm the threatening nature of fake news, and, secondly, to call for new areas of empirical research on the phenomenon to avoid turning research into a vehicle for the legitimization of the criminalizing discourses that circulate in the field of communication and the political sphere.

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Notes

1. It should be noted that some predictions did point to Donald Trump as a possible winner, such as those made by survey aggregator FiveThirtyEight: https://fivethirtyeight.com/features/the-real-story-of-2016/.
2. Opensources.co is a project by Merrimack College that offers a list of news sites categorized as: *fake, satire, hate* and *clickbait*. This classification is based on the content of the publications, their 'About us' section, the fonts used and the writing style. The project is not yet available, but some information about the project can be found at URL (accessed 28 January 2021): https://github.com/BigMcLargeHuge/opensources.
3. Buzzfeed is a media outlet that, during the 2016 US presidential elections, carried out a series of reports on the dissemination of fake news on Facebook. During the year following the

elections, the journalist responsible for the investigations, Craig Silverman, continued to update the list of websites in various reports until it reached 233 websites.

4. PolitiFact.com is a portal composed of journalists and is primarily dedicated to the verification of news in North America. In December 2016, this organization began to collaborate with Facebook on the verification of news that circulated through the social network. From this experience, they developed a list of 324 entries of the websites from which fake news on the social network came most frequently.

5. FactCheck.org is a project that acts as a 'consumer advocate' for US voters. Also, as a result of its collaboration with Facebook, in July 2017 it published a Misinformation Directory of websites dedicated to the dissemination of fake news – URL (accessed 28 January 2021): https://www.factcheck.org/2017/07/websites-post-fake-satirical-stories/.

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