Future of disinformation studies: emerging research fields

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Abstract

This article examines research trends on disinformation. First, it explores the relationship between disinformation and digital news media, highlighting the negative impact of disinformation on citizens' trust in the news. Recent research on disinformation is classified into several areas, including typological studies, research on fact-checking, disinformation on digital platforms, and studies on media literacy. Next, the article identifies several emerging fields for research, such as studies on disinformation narratives, information manipulation and international interference, artificial intelligence generated disinformation, cross-platform disinformation, and thematic and multidisciplinary studies. Based on this analysis, the article highlights the need to continue investigating and combatting disinformation, as it is a persistent and growing problem in democratic societies.

Keywords

Disinformation; Fake news; Academic research; Research trends; Communication research; Disinformation theories; Fact-checking; Media literacy; Disinformation narratives.

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1. Introduction

Lying to achieve a purpose is as old as humanity. Throughout history there have been examples of manipulations, falsehoods, and lies (**Posetti**; **Matthews**, 2018). However, in the digital age we are experiencing a spiral of disinformation never seen before.

During the 20th century, the rise of totalitarianism and world wars has promoted strategies for the planned dissemination of false messages by global powers, in order to confuse adversaries, undermine their stability, and to affirm the cohesion of like-minded people. These techniques of lying have grown to the point where a complete theory and methodology of propaganda has been developed. In the first half of the last century, these practices were used with tragic results, especially in the case of Nazism (**Doob**, 1950) and Soviet communism (**Lasswell**, 1951). In the second half of the century, during the Cold War, the use of propaganda, lies, and the deliberate concealment of facts became widespread both in the Soviet bloc (**Bittman**, 1985) and in the Western world, led by the United States (**Snyder**, 1995), thus reaching a large proportion of the countries of the world.

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The emergence of the Internet in the 1990s and, especially, the popularisation of social networks starting in the first decade of this century, have exponentially multiplied the volume and scope of false messages targeted at citizens. This wave of misinformation has also coincided with a weakening of the news media. Citizens who used to consume news in the media have now begun to browse and share digital content, often from non-professional and hardly-verifiable sources. The millions of updates that appear per second on social networks have replaced news as the main currency in information transactions. As a result of this transformation, in the network ecosystem, regular users are unable to verify the traceability of messages, and lose all sense of who said what.

Although the main focus of the spread of disinformation is on social networks and messaging applications, paradoxically the most popular terminology for public falsehoods holds the journalistic media responsible: in this way, people refer to 'fake news' (**Tandoc Jr.**; **Lim**; **Ling**, 2018; **Quandt** *et al.*, 2019). This concept is controversial, and has been widely debated in recent years, both in scientific fields and in the media (**Egelhofer**; **Lecheler**, 2019; **Magallón-Rosa**, 2019). Today, the relationship between disinformation and digital news media is more complex, and entails more unexpected effects than are superficially apparent.

To begin with, disinformation contributes to the problem of the news media being discredited. According to the 2022 edition of the *Digital News Report* study (**Newman** *et al.*, 2022), based on 93,000 surveys in 46 national markets, in that year trust in the news had decreased in 22 of the countries studied, while it had increased in just seven, reversing the slight recovery in trust that the media achieved during the years of the pandemic. On average, just four in ten people in the total sample (42%) said that they trusted most news most of the time. Finland was the country with the highest level of general trust (69%), while in the United States a rapid deterioration continued, finally reaching 26%, the lowest level of trust in the survey. In the same study, at 33% Spain clearly fell below the average, and was among the countries with the least trust in the media.

In this general scenario of growing discredit and disinterest in the media, a large proportion of citizens, especially those who align themselves with extreme and populist ideological positions, are suspicious of journalistic information, and have begun to question every news or op-ed that opposes their beliefs (**Pérez-Curiel**; **Rivas-de-Roca**, 2022). For this increasingly polarised contingency of citizens (**Rodríguez-Virgili**; **Portilla-Manjón**; **Sierra-Iso**, 2022), media organisations are suspected of defending counterfeit interests, bending to the dictates of political or economic powers, and, ultimately, of disseminating fake news.

In parallel with the surge of disinformation, academic interest in this phenomenon has grown in recent years. Research groups, observatories, and international academic networks are studying this phenomenon, which is considered one of the main 'information disorders' (**Wardle**; **Derakhshan**, 2017) of our time. The projects, methodologies, and contexts by which the public dissemination of falsehoods is studied have multiplied, to the point where they now compose a diverse and especially fruitful corpus of research.

This thematic issue of *Profesional de la información* dedicated to 'Disinformation and online media' is an example of academic interest in the phenomenon. In particular, the issue is devoted to analysing the relationships between disinformation and journalism, and explores the extent to which hoaxes pose a threat or an opportunity for journalistic media. The erosion of citizen trust in public information constitutes a danger for the media, but is also an opportunity for professional journalism to vindicate itself. The articles that constitute this thematic issue reveal a dual dimension to disinformation, which consists of both light and darkness. Several studies confirm that disinformation is, indeed, a widespread problem, with worrying effects on society. However, at the same time, other studies reveal that we are beginning to find initiatives capable of mitigating it.

As an introduction to these studies, we present below a panoramic analysis of recent research on disinformation. We summarise what has been investigated so far, and offer an overview of the current main lines of research in this field. Next, we indicate some emerging fields that we think can boost studies on disinformation in the coming years.

2. Overview of disinformation studies

What have been the main lines of research on disinformation in this century? Some recent bibliometric studies confirm that, especially as a result of the Covid-19 pandemic, disinformation has become a priority topic in communication research (**García-Marín**; **Salvat-Martinrey**, 2021; **Salvador-Mata**; **Cortiñas-Rovira**; **Herrero-Solana**, 2023). We identify some characteristics of this scientific investigation from a qualitative perspective.

2.1. Typological studies of disinformation

One of the areas where researchers have placed the most emphasis has been on the definition and classification of disinformation content (**Wardle**; **Derakhshan**, 2017). Perhaps the immense popularity achieved by the concepts of 'post-truth' and 'fake news' (which became common in political and journalistic forums before breaking into the academic world) contributed to significant attention being devoted to the typological aspects of disinformation.

Indeed, many studies have been dedicated to outlining the concept of disinformation (**Kapantai** *et al.*, 2021; **Pérez-Escolar**; **Lilleker**; **Tapia-Frade**, 2023). Starting from a unanimously accepted distinction between involuntary errors (misinfor-

mation) and deliberate falsehoods (disinformation), researchers who have carried out typological studies have proposed a varied range of classifications, which specify multiple types of falsehoods within these two main categories.

Beyond proposing classifications, there have also been contemporary studies that investigate the nature of disinformation, how it spreads, what motivates it, and how it affects society at large. This conceptual analysis has provided a solid theoretical framework, based on which other empirical studies have addressed specific cases or have tested mitigation strategies.

2.2. Studies on fact-checking

In the last decade, one of the areas with the most prolific academic production in studies on disinformation has focussed on the work of fact-checking organisations (**Graves**, 2016). The innovative nature of these journalistic organisations – which are located at a different level from both classic media (press, radio, and television) and digital native media– has attracted research from multiple perspectives (**López-Pan**; **Rodríguez-Rodríguez**, 2020; **Dafonte-Gómez**; **Míguez-González**; **Ramahí-García**, 2022). Within these fact-checking organisations, the professional roles, ethical standards, and even corporate structures have been investigated, and in many cases these are in the context of non-profit organisations. However, the main focus of these studies has been fact-checking articles, a unit of analysis that has proved very useful for studies of disinformation through content analysis.

Thanks to the empirical evidence provided by fact-checking organisations, research in this field has delved into emblematic cases of disinformation, from hoaxes of limited scope to large-scale disinformation campaigns. Techniques for spreading false information have been analysed, from image manipulation to the creation of fraudulent websites. Additionally, how the perception of fact-checking can vary between different demographic groups has been explored, as well as how these disparities affect the spread of disinformation.

2.3. Studies on disinformation on digital platforms

When analysing disinformation cases and campaigns, digital platforms have undoubtedly been the environment to which researchers have devoted most attention (**Di-Domenico**, 2021). Despite the frequent difficulties in accessing data from platforms, which are not very transparent in this regard, many investigations have analysed the traceability and dynamics of online dissemination of disinformation content. Using graphs and other reticular representations, disinformation flows have been examined, identifying social network profiles that create false content and/or contribute to its dissemination.

This type of study has also demonstrated the existence of a varied range of falsification practices on the networks, such as imposter profiles, bots, trolls, or so-called astroturfing, a form of falsification that consists of artificially creating trending topics through the planned and hidden coordination of multiple social media accounts (**Arce-García**; **Said-Hung**; **Mottareale-Calvanese**, 2022; **Chan**, 2022).

2.4. Studies on media literacy

Education and media literacy are crucial components in the fight against disinformation. This has been recognised by multiple international institutions and organizations, which have promoted literacy campaigns (**Aguaded**; **Sandoval-Romero**; **Rodríguez-Rosell**, 2016; **Sádaba**; **Salaverría**, 2023). In recent years, academic studies on this discipline have focussed mainly on young people, a group particularly exposed to false information due to their intensive use of digital devices and consumption of content from unfiltered sources. Research has explored effective strategies for teaching critical thinking and fact-checking skills through educational programmes.

3. Emerging fields for disinformation studies

Despite the development achieved in recent years by disinformation studies (**Correia**; **Jerónimo**; **Amaral**, 2022), new fields are opening up for the investigation of this phenomenon. The continuous transformation of the channels of dissemination, production technologies, and derived effects of false content demands that new lines of study are opened. Accordingly, below we list some of the lines that have not been sufficiently explored so far, and that may pave the way to a new era of disinformation studies.

3.1. Studies on disinformation narratives

In recent years, research has been more concentrated on analysing isolated hoaxes than identifying complex disinformation narratives. However, the study of hoaxes has revealed that public falsehoods often respond to a planned strategy, where the authors of the falsehood aim to stimulate certain visions or topics of debate in public opinion. However, if we only study the trees, we run the risk of not seeing the forest.

As some of the studies in this thematic issue show (**Suau**; **Puertas-Graell**, 2023), the new era of disinformation studies will have to focus more on general and systemic aspects, and attempt to account for the coordinated logic that explains why certain hoaxes, apparently independent, arise in certain contexts and situations. It is only if we identify the general patterns of false content, will we be able to anticipate strategic measures to neutralise the social impact of disinformation campaigns.

3.2. Studies on foreign information manipulation and interference

Unfortunately, disinformation has countless parents. These range from large countries with geostrategic interests to individuals who have fun confusing their peers, but also include political parties, ideological groups, and activist organisations of various kinds that indiscriminately manipulate messages with the purpose of defending their postulates and harming their adversaries. Among all these actors, there is increasing concern about the incidence of disinformation agents of international reach, who seek to destabilise countries, manipulate electoral processes, or criminalise certain social groups.

Research on the phenomena of *Foreign Information Manipulation and Interference* (*FIMI*) is often close to strategic intelligence and cybersecurity, transcending the capabilities and competencies of ordinary academic researchers. However, teams that investigate disinformation can also provide relevant knowledge to unmask these strategies of foreign interference. If, as we have indicated in the previous point, researchers focus on identifying disinformation campaigns beyond simple isolated falsehoods, they will be contributing to detecting international flows of disinformation, the dynamics of which we have only just begun to understand.

3.3. Studies on AI-generated disinformation

The emergence of generative artificial intelligence technologies, which allow texts, images, sounds and videos to be created or manipulated with astonishing ease, pose one of the greatest challenges to disinformation research. Some fear that these technologies will produce an 'infinite' supply of misinformation (**DiResta**, 2020). The risk of deep fake content is no longer a remote possibility (**Paris**; **Donovan**, 2019) and, in 2023, this phenomenon began to appear in some hoaxes and disinformation campaigns. To face this challenge, a priority research area in the coming years will be studies aimed at detecting deep fake content, as well as studies on the perception of AI-generated content.

3.4. Cross-platform disinformation studies

A large number of studies in recent years have revealed that the main strand of disinformation is found on digital platforms, particularly social networks and messaging applications. Thanks to the application programming interfaces (API) of some of these platforms, researchers have been able to track and quantify disinformation content on social networks. The scarcity of similar technological resources on other platforms may, however, have led researchers to neglect disinformation phenomena outside of social networks. Although it has been less studied, disinformation also circulates elsewhere.

It may be surprising, for example, that one of the areas where disinformation has been least investigated is that of the news media. There is a lot of talk about 'fake news' but, paradoxically, very little research has been done on the dynamics of the spread of false content in the media. We do not know to what extent current media fulfil their social function and act as shields for disinformation. Nor do we know to what extent some of the news media contribute to the dissemination of disinformation, perhaps driven by a relaxation in internal fact-checking processes, a desire to increase traffic at all costs, or even by hidden political agendas. Nor has the role of the so-called 'pseudo-media' (**Palau-Sampio**, 2022) been sufficiently studied; these are organisations that adopt the appearance of professional news media but in reality serve a propaganda or disinformation purpose.

Another insufficiently studied scenario of disinformation is the political sphere. Fact-checking organisations dedicate much of their work to verifying public discourse but, in contrast, there is little academic research dedicated to analysing the creation and strategic dissemination of disinformation discourses from political parties and leaders (e.g. **Llorca**; **Fabregat-Cabrera**; **Ruiz-Callado**, 2021).

In short, we know a lot about the disinformation that circulates on social networks, but comparatively little about what happens in other spaces. A complete understanding of the disinformation phenomenon implies delving into those fields that until now have been less addressed by research.

3.5. Thematic studies on disinformation

Until the outbreak of the pandemic in 2020, the vast majority of studies on disinformation focussed on politics. Electoral processes, political campaigns and parties were, in fact, the usual focus of studies that employed different methodologies and in different geographical frameworks (**Bovet**; **Makse**, 2019). Thanks to its global impact and long duration, Covid-19 produced a sudden explosion of disinformation studies around health (**Salaverría** *et al.*, 2020; **García-Marín**, 2020; **Cardoso**; **Sepúlveda**; **Narciso**, 2022), which extended to other scientific topics (**León** *et al.*, 2022). Subsequently, at the beginning of 2022, the Russian invasion of Ukraine unleashed a new wave of war disinformation, resulting in a number of studies focussing on that conflict. As expected, academic research on disinformation is focussed on public issues that, at all times, serve as a trigger for falsehoods.

However, there are other topics that are also the subject of disinformation and that, perhaps because they do not have the sudden social impact of the events we have just mentioned, receive relatively little attention from researchers. Issues such as the environment and the global climate crisis, immigration, or the reduction of social inequalities are a permanent focus of disinformation campaigns but, by comparison, they are much less investigated. One of the challenges to renew research on public falsehoods is to open up the field to a range of new topics.

The 17 Sustainable Development Goals established in 2015 by the *United Nations General Assembly* offer a good collection of key issues to research. As essential challenges for the future of humanity, they are critical areas for the proliferation of disinformation discourses. Therefore, it is advisable to expand the spectrum of research to these aspects because, although they lack the prominence of other issues, they constitute an area of permanent attention.

3.6. Multidisciplinary studies of disinformation

As we have already explained, the public dissemination of deliberately falsified content has been addressed by multiple disciplines. Various specialist branches of the social sciences, computer science, and even some areas of the humanities have addressed and studied disinformation phenomena in recent years. However, studies with a multidisciplinary approach are scarce.

The systemic nature of disinformation indicates the necessity of further investigations where different specialist areas collaborate. In fact, some of the most promising and fruitful lines of work in recent years come from this knowledge sharing. For example, the combination of linguistics and artificial intelligence technologies, in particular the branch of natural language processing, has opened a very productive field of research that is allowing the automatic identification of linguistic patterns of false content and hate speech. Other disciplines with great possibilities for collaboration are psychology, neuroscience and communication studies. Understanding how the mind perceives reality and how cognitive biases affect us when we consume information has been revealed as a key factor, which is beginning to be considered in numerous contemporary studies on disinformation (**Pennycook**; **Rand**, 2021; **Martínez-Costa** *et al.*, 2022).

3.7. Studies on media literacy for older people

Along with fact-checking, media and information literacy (MIL) has been one of the main areas that has been explored in recent years to counter the rise of disinformation. Public and private institutions have launched campaigns to train citizens in digital skills and to promote safe practices in the consumption of information. Although most media literacy initiatives have been aimed at young people, in recent years there has been a multiplication of initiatives aimed at an intergenerational audience.

However, in terms of research, until now most of the studies on digital literacy have focussed on younger sectors of the population. Although it is recognised that older people show a particular vulnerability to disinformation messaging, there are few studies aimed at analysing their information consumption habits and ways to reinforce their protection against purposefully false messages. This is another line of research necessary in the coming years, given the increasing ageing of the population in Western countries.

4. Final thoughts

Much has already been researched about disinformation, but new fields are emerging that demand renewed research. It is necessary to face the new scenarios, technologies, and narratives in which fake content is present, once again.

However, faced with these new challenges, we would make a mistake if we conceived disinformation studies as just a passing fad, which is bound to be replaced sooner or later by some new major topic of communication research. Manipulation and falsification of information is a serious problem for democratic societies and, unfortunately, it does not stop growing. Its impact on the behavior of citizens is unquestionable. In the coming years, researchers will continue to face the challenge of providing ways to understand and combat it.

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