The Definitional Challenges of Fake News

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Abstract

This paper considers the question of how “fake news” and “disinformation” have been defined and how this, in turn, has impacted research that seeks to better understand and counter the spreading of false or misleading information online. The paper identifies a tendency in political discourse and policy making to focus on addressing disinformation, i.e. false information spread intentionally, and a neglect of the problem of misinformation (false information spread unintentionally). On the other hand, academic research struggles to distinguish between mis- and disinformation. So far it has only marginally addressed the issue of intent and, instead, categorized information based on a true/false dichotomy. The challenges created by this disconnect between academic research output and policymaking obstruct our ability to effectively counter the negative effects of mis- and disinformation.

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1. Introduction

Over the last few years, increased concern has been voiced concerning the potential for false and misleading information, disseminated through online communication networks, to negatively affect democratic institutions. This has brought the field of information science to the attention of policymakers and social media providers around the world. This paper will consider the question of how “fake news” and “disinformation” have been defined and how this, in turn, has impacted research that seeks to better understand and counter the spreading of false or misleading information online. The definitions of concepts underlying the detection mechanism being developed by researchers have an impact on how we analyse and understand the current information environment. If governments seek to prevent, identify, and/or flag misinformation or accuse someone of mis/disseminating disinformation, they must have a clear understanding of what “fake news” or “disinformation” is, why they have defined it in a certain way, and why and in what way it should be countered.

2. Methodology

This paper reviews the most-cited research articles on “fake news”, “disinformation”, and “misinformation” since 2016. First, it evaluates how they conceptualise and categorise “fake news”, “disinformation”, and “misinformation.” Second, it considers the implications this might have on research into the phenomenon. Finally, it assesses the potential limitations this imposes the ability of academic findings to inform policy.

In order to evaluate definitions used in the collected research papers a definition of fake news based on the findings of *Fake News: A Roadmap* (2018) was used. This recent, comprehensive study into the phenomenon identified three aspects of “fake news”:

- Disinformation: false information spread deliberately via media channels.
- Misinformation: false information unintentionally spread via media channels.
- Expletive: using “fake news” as a term to “dismiss information that one disagrees with, for the purpose of closing down debate”.  

3. Conceptual analysis

Several studies analysing limitations in the research into the fake news phenomenon emphasise the need to clarify the definition of “fake news”. This section will provide a brief overview of how fake news has been defined in the existing research. While some researchers reject the term fake news, those who do use it focus on two main features: the falsity of information provided and an intention to mislead.

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Given that “fake news” has also been used as an expletive to describe arguments or information one disagrees with and to shut down dialogue, policymakers and researchers have become hesitant to use the term or rejected it completely. Recently published scientific and policy papers have used the term “disinformation” to speak about false information spread online, as a kind of synonym for “fake news.”\(^7\) Grappling with the slippery concept of fake news, policy papers, and commentaries have been consulting existing research in information science to clarify concepts and definitions. \(^8\) “Disinformation” has most frequently been defined as factually incorrect information that is spread with the intention to deceive. \(^9\) This is essentially the same definition as the one used for fake news, even though the term fake news speaks to a larger, more recent phenomenon. \(^10\)

As a term “disinformation” is relatively young, the Oxford English Dictionary identifies its first usage in the 1950s. Moreover, the term’s etymological origin is likely to be the early Cold War. The OED suggests that disinformation comes from the Russian dezinformacija (as found in S. I. Ożegov’s dictionary Slovar' russkogo jazyka from 1949). \(^11\) The state-centric emphasis of the term, which primarily refers to the dissemination of false information by a government or its agents for the purpose of influencing a foreign state, \(^12\) has also dominated the contemporary discussion of the issue. The European External Action Service East Stratcom Task Force was specifically set up in March 2015 to “address Russia’s ongoing disinformation campaigns.”\(^13\) The EU vs Disinfo campaign runs an online database as well as the Disinformation Review, collecting and fact-checking cases of alleged disinformation. Even though they do not make claims about origin and potential ties to the Kremlin, \(^14\) by using “disinformation” as a synonym for “fake news”, only one part of the wider phenomenon is being addressed.

Already in 2013 the World Economic Forum identified “massive digital misinformation” as one of the key threats to society, using the term “digital wildfires” to talk about this issue. \(^15\) Similar to the vocabulary from the semantic field of war and illness frequently invoked in


\(^12\) Ibid.


\(^17\) “Just as vaccines generate antibodies to resist future viruses, inoculation messages equip people with counterarguments that potentially convey resistance to future misinformation, even if the misinformation is congruent with pre-existing attitudes.” John Cook, Stephan Lewandowsky, and Ulrich K. H. Ecker,
papers on disinformation, “wildfire” underscores that we should think about disinformation as a national security threat. This results in a tendency to attempt to find a malicious actor, someone or something that can be stopped to thus eradicate the problem.

This, in turn, leads to a neglect of authoritative and legitimate actors (mainstream media, governments) and how they might be susceptible to spreading misinformation. “Misinformation” has been used as a term for an overarching category of false information, spread both intentionally and unintentionally. However, we would recommend using misinformation to describe unintentionally disseminated information, because otherwise we are faced with a terminological gap (i.e. no word to describe this kind of unwittingly disseminated false information), which might in turn intensify the current focus on disinformation (false information spread with the intention to deceive). While one could argue that deception is in and of itself morally “wrong”, it does not follow that the degree to which someone intends to deceive and the impact that has on society are directly proportional.

4. The disconnect between research output and policy making

The definitional issues discussed above create several challenges for scientific research into the phenomenon. First, it can be argued that data samples collected for research into false information do not reflect the entire population of information available online, as they are primarily drawn from the news verified by fact-checking platforms and algorithms. Second, it cannot be assumed that the researcher’s classification of true versus false information is interpreted by the reader in the same way. This is influenced by factors related to the circumstances in which it is communicated. Third, current scientific research fails to recognise the importance of context.

Data collection

Most frequently, the data underlying disinformation studies is ascertained from fact-checking websites and algorithms. As human editors do not have the capacity to verify all information on the internet, they will focus on those stories that at most ‘suspicious’, and on the topics that are most contested, e.g. political events. Furthermore, algorithms such as the PHEME-project designed to detect dis- and misinformation often focus on rumours, stories that go viral. Hence, the data drawn from these sources will be a non-representative subset of the information environment. Whilst using such data does not necessarily pose a problem to the research as such, not acknowledging this could lead to biased conclusions about the broader information environment.

Vosoughi et al.’s 2018 paper, for example, investigates the spread of true and false rumours online, with rumours meaning news stories or claims spread through Twitter. In this case, they are sampled from news classified as either true or false by six independent fact-checking platforms. When the study concludes that “Our analysis of all the verified true and false rumors that spread on Twitter confirms that false news spreads more pervasively than the

\cite{vosoughi:2018}

\cite{lafer:2017}

\cite{zhang:2018}

\cite{vosoughi:2018}

\cite{sobre:2018}
truth online” (emphases added), it conflates an analysis of rumours already on the fringes of the information environment and thus fact-checked, with the information environment as a whole.

These claims bring a particular risk when they are being quoted in further research or used to inform policy. Lazer et al. cite the abovementioned study, stating that it provides evidence that false information spreads more quickly than true information, extrapolating these findings to the entire information environment. In policy-making, this can create a degree of alarmism and drive decision-making based on a too narrow sample.

**Categorizing types of information**

The primary challenge in analysing false statements disseminated online is the criteria used to code collected data into categories. The vast majority of research on the issue takes truth versus falsity as its main criterion of categorising information. While most research agrees that disinformation is defined by an intention to mislead on behalf of its author/disseminator, intentionality is extremely difficult to quantify. Instead when coding information, studies often fall back on using the falsity of a statement as an indicator. Starbird et al. do indeed distinguish between “purposeful” and “accidental misinformation”, but this distinction is not addressed any further in their study or their coding of tweets.

A definition of fake news in which falsity is an inherent, constant feature fails to recognise the potential misleading effect of true information. As the receiver of information interprets this based on the timing and context in which it is being spread and presented, factually correct information can still mislead. Likewise, correct information can be interpreted by the reader as false based on the context in which it is presented.

Furthermore, the mere fact that a reader has been exposed to false information does not mean that the reader believes this story. The classification and analysis of information based on a true versus false dichotomy is thus insufficient in informing policy implemented to counter the effect, rather than the spread of fake news.

**Extending the scope of current research**

In her analysis of how algorithmic detection limits research on disinformation, Obelitz points out that if we only focus on the true/false dichotomy there is a tendency to neglect the nuances and details of online behaviour. In addition to this, a true/false categorization of information neglects the importance of wider issues in society, including a lack of trust in institutions, social inequality and a perception of crisis.

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23 Shu et al., ‘Fake News Detection on Social Media’, 23.
25 Ibid., 25.
26 Fallis ‘What Is Disinformation?”.
An understanding of the heuristic cues involved in judging the truthfulness of information can improve our understanding of the behavioural patterns of media users. For example, research has shown that whether or not a piece of news fits into one’s worldview is one of the first things the reader considers when judging its truthfulness.\(^{29}\) As a result, news (be it true or false) that runs counter to those views will be met with a higher degree of suspicion. This is especially the case given that people are aware that false or misleading information is being used to discredit political actors and influence political behaviour.\(^{30}\) In addition, we all have a ‘bias blind spot’, i.e. we find it uncomfortable to admit that we might be partial to certain views and can be manipulated by false information.\(^{31}\)

Insights from cognitive psychology such as these are highly relevant when assessing the effectiveness of fact-checking. Even though research has found that readers indeed use search engines to fact check,\(^{32}\) it has not investigated how people decided what to fact-check. The abovementioned pre-existing biases can influence choices in fact-checking behaviour. Hence the news not verified by the reader could have been incorrect.

Furthermore, in line with the broader definition this paper proposes for “fake news”, the phenomenon should be considered as a symptom of wider issues in society. This occurs alongside a rise of “populist” politicians and low levels of trust in institutions traditionally considered authoritative. Instead of focusing on whether a message is true or false according to empirical science and evidence, the content of false news should be considered in more detail. If the aim of disinformation is to appear as truth to the reader, we need to consider what might be appealing about them. What grievances, fears and hopes in the population are conspiratorial narratives speaking to?

### 5. Findings

This paper has identified a tendency in political discourse and policymaking to focus on addressing disinformation, i.e. false information spread intentionally, and a neglect of the problem of misinformation (false information spread unintentionally). On the other hand, academic research struggles to distinguish between mis- and disinformation. So far it has only marginally addressed the issue of intent and, instead, categorized information based on a true/false dichotomy.\(^{33}\) The challenges created by this disconnect between academic research output and policymaking could obstruct our ability to effectively counter the negative effects of mis- and disinformation. An isolated analysis of information and its spread is not sufficient in addressing fake news in our current media environment. Rather researchers and policymakers should agree on shared definitions of concepts and broaden their approach by including domestic societal dynamics, and knowledge from fields such as cognitive psychology.

\(^{29}\) Stephan Lewandowsky et al., ‘Misinformation and Its Correction: Continued Influence and Successful Debiasing’, Psychological Science in the Public Interest 13, No 3 (2012): 112.

\(^{30}\) Rasmus Kleis Nielsen and Lucas Graves, ““News you don’t believe”: Audience perspectives on fake news”, Reuters Institute, University of Oxford, 2017, 1.


\(^{33}\) Shu et al., ‘Fake News Detection on Social Media’, 27.
Bibliography

Books, Articles and Reports


Guess, Andrew, Brendan Nyhan, and Jason Reifler. ‘Selective Exposure to Misinformation: Evidence from the Consumption of Fake News during the 2016 U.S. Presidential


**Documents and Websites**


