Fake News, Social Media and Marketing: A Systematic Review

Giandomenico Di Domenico\textsuperscript{a}, Jason Sit\textsuperscript{a}, Alessio Ishizaka\textsuperscript{b}, Daniel Nunan\textsuperscript{a}

Abstract

There is growing concern amongst policy makers, managers and academic researchers over the role that social media plays in spreading misinformation, widely described as ‘Fake News’. However, research to date has mainly focussed on the implications of fake news for political communication and debate. There has been less focus on the implications of social media misinformation upon marketing and consumers. Given the key role of social media as a communication platform, there is a gap in our understanding of fake news through a consumer lens. We address this gap by conducting an interdisciplinary systematic review of the relevant literature. Through critical evaluation and synthesis of the literature, we identify five themes that explain the fake news phenomenon: the dissemination process, spreading channel features, outcomes, fabricated legitimacy and attitudes. Finally, we propose a theoretical framework that highlights themes’ relationships and research propositions to guide future research in this area.

Keywords: fake news; social media; systematic review; misinformation;

\textsuperscript{a} University of Portsmouth, Faculty of Business and Law, Richmond Building, Portsmouth, PO1 3DE, UK.

\textsuperscript{b} NEOMA Business School, 1 Rue du Maréchal Juin, 76130 Mont Saint Aignan, France
1. Introduction

Whilst social media platforms were originally created to enable connections between friends, these channels have become important routes for the production and exchange of information and news (Tandoc, Lim, & Ling, 2018). For example, in the US, Spain, Italy and the UK the majority of adults now receive their news from social media (Matsa & Shearer, 2018). Unfortunately, over the last years, we have seen a dramatic spread of misinformation through social media channels, widely described as “fake news”. The creation and spreading of false information are not new phenomena. False stories have existed as long as humans have lived in groups (Burkhardt, 2017), developing alongside writing and communication systems. In today's digital media landscape, the term “fake news” has gained relevance following the 2016 US presidential elections (Allcott & Gentzkow, 2017). The meaning of this term has evolved from denoting satirical television shows (Hartley, 1996) to false information mimicking the style of conventional news and created to deliberately misinform (Waisbord, 2018). Scholars from different fields have proposed different, in some cases contrasting, definitions of fake news, creating a tension in the literature. As social media becomes an important channel for brands’ marketing activities (Tajvidi et al., 2018), including customer service and product development (Baccarella et al., 2018), the potential impact of fake news for companies and consumers could be severe (Berthon & Pitt, 2018). For consumers, fake news creates confusion and doubt about prior knowledge and experiences of brands (Rapp & Salovich, 2018). Fake news can instil misleading beliefs in people who will subsequently base their decision on those false beliefs (Lewandowsky et al., 2012), influencing their attitudes toward firms (Visentin, Pizzi, & Pichieri, 2019). For firms, fake news can tarnish corporate reputations (Berthon & Pitt, 2018), with large multinationals such as Pepsi and New Balance facing product boycotts because of online misinformation (Obadă, 2019). Moreover, fake news can pose a financial threat to firms (Binham, 2019).
This paper presents a systematic, and thematic, review of a body of literature that is highly fragmented (Lazer et al., 2018), with individual research streams in fields including political psychology (Allcott & Gentzkow, 2017), consumer psychology (Bronstein et al., 2019; Pennycook & Rand, 2019; Quattrociocchi, Scala, & Sunstein, 2016), information technology and management (Colliander, 2019; Obadă, 2019; Thompson, Wang, & Daya, 2019). Whilst there is an emergent interest in fake news within consumer behaviour (Visentin, Pizzi, & Pichierrri, 2019; Talwar et al., 2019; Borges-Tiago et al., 2020), this is limited in scope when compared to other disciplines. Many questions about fake news remain still unanswered by the scattered and fragmented previous literature (Di Domenico & Visentin, 2020). The study presented in this paper analyses different perspectives and identifies key themes from relevant literature. In doing so, we address the definitional issue of fake news, shedding light on the various theoretical interpretations of the phenomenon. Moreover, we synthesize the existing knowledge about the spreading patterns of fake news and its consequences on consumers and firms. Another contribution of this paper is the development of an integrative framework to inform a future research agenda about fake news.

The paper is structured as follows. First, we describe the method adopted for our review. Second, we review existing conceptualisations of fake news from various disciplines. Third, we present a systematic review of the literature on fake news, followed by a thematic analysis of the findings. Fourth, we present and describe the theoretical framework for the fake news process and develop research propositions identifying promising areas for contribution. Finally, we discuss the theoretical and practical contributions of this study, and provide directions to guide future research from a marketing perspective.
2. Method

Drawing on principles of systematic review (Denyer & Tranfield, 2009; Paul & Criado, 2020), we conducted a review of the fake news literature, identifying relevant themes for this phenomenon. These principles promote reproducibility and transparency in the review process (Snyder, 2019) and suggest five steps for producing a systematic review: Question formulation; Locating studies; Study selection/evaluation; Analysis/synthesis and Reporting/using results (Denyer & Tranfield, 2009) which we adopted for this study.

2.1 Question formulation

The research scope, research questions and inclusion/exclusion criteria were established following an initial assessment of the literature and four research questions were formulated RQ1) How is fake news defined in the literature? RQ2) How does fake news spread? RQ3) What are the consequences of fake news for consumers? and RQ4) What are the consequences of fake news for companies?

2.2 Locating studies

Our search strategy focused on searching online databases such as Ebsco Host, Springer, Emerald Insights, Scopus and Google Scholar in order to identify any relevant studies. We included studies from multiple fields such as business, psychology, politics, sociology, information management, education and journalism to have an extensive and critical understanding of the phenomenon. We also included conference proceedings as well as the grey literature. Following Adams, Smart & Huff (2017) inclusion of the grey literature stems from the necessity of getting more practical insights on the topic. This means that while academic literature provides valuable insights on the “what” and “why” of fake news, grey literature provides more practical insights about “how” the fake news phenomenon works. Grey
literature was sourced by hand-searching, cross-referencing and including relevant articles from authoritative sources, identified in prior systematic reviews (Adams et al., 2016). We did not limit the search to specific years ranges. We considered articles published up to November 2019, when the bibliographic search was performed. Third, the keywords used were “fake news”, “fake news AND characteristics”, “fake news AND consumer behaviour”, “fake news AND consumer response”. Titles, keywords and abstracts were searched. Our decision to limit the set of keywords around the word “fake news” was motivated by two specific reasons. First, over the last years, the concept of fake news has gained academic relevance, becoming a trending word for researchers. Second, from a preliminary evaluation of the literature, we found that the fake news phenomenon has evolved into a specific concept, with its own peculiarities differentiating it from concepts such as misinformation and disinformation. Hence, adding other keywords would have shifted the scope of this review away from the fake news concept.

2.3 Study selection & evaluation.

We excluded articles focusing on fake news detection methods and only articles written in English were included. This research strategy identified 1,550 articles. The database of literature was streamlined by eliminating overlapping materials and the remaining articles were screened through reading title and abstract. Finally, we screened the remaining articles following reading the full text. Grey literature was assessed on the basis of the contemporaneity of the articles, their relevance to the scope of this study and the authority of the source. The final number of articles included in our review consists of 117 articles: 105 published journal articles, 2 conference papers, 8 newspapers/online articles and 2 reports. Figure 1 provides an overview of the evaluation process of studies included in the review.

2.4 Analysis & synthesis
Following prior systematic reviews (Cinar, Trott & Simms, 2019; Vicente-Sáez & Martínez-Fuentes, 2018; Vrontis & Christofi, 2019) we manually developed a data extraction process to report the main characteristics of the papers (e.g. publication details, methodologies used, findings etc.). The authors then inductively coded the identified articles in themes, independently. This choice allowed us to have a broader and more complete understanding of the themes to identify. The first coding process identified six themes, namely dissemination process, spreading channel features, attitudes, fabricated legitimacy, outcomes and strategy. Alternative labels were identified from common terms in the articles and discussed. The results of the first coding process were also discussed. In particular, the theme of strategy was found to overlap significantly with other identified themes, therefore the list of codes was refined before the second round of coding. It brought a more appropriate and bounded identification of themes, allocating the articles coded under the strategy theme to more appropriate destinations. Finally, each of the authors independently coded the same ten articles and calculated intercoder reliability, resulting in 85% agreement.

[Insert Figure 1 here]

3. General characteristics of the studies

3.1 Publication year

Figure 2 presents the frequency of published studies on the topic of fake news. The first two papers were published in 2012 (Polage, 2012; Lewandowsky et al., 2012). The number of publications increased rapidly after 2016 as fake news gained academic and public profile in 2016 for the role played in important political events such as the US Presidential elections and the Brexit referendum (Allcott & Gentzkow, 2017; Bastos & Mercea, 2019).
3.2 Disciplines

The articles reviewed come from a range of disciplines (Figure 3). The majority of them from the fields of psychology and information technology/computer science because of scholars’ interest in understanding other people’s motivations of believing in and sharing fake news and the technological advances that enable its spread online.

The interest of political studies researchers in fake news was driven by recent political events, with researchers wanting to understand the impact that fake news has on voters and elections. Marketing studies, to date, represent a small part of the research base around fake news.

3.3 Themes identified

The identified themes closely resonate with the research questions of the present study. In particular, the theme of fabricated legitimacy was useful in solving the definitional problem of fake news (RQ1). The themes of attitudes, dissemination process and spreading channel features concur to explain how fake news spread (RQ2). Finally, the theme of outcomes addresses RQ3 and RQ4 by clarifying the consequences of fake news on consumers and companies. Table 2 provides an overview of the identified themes and their weighted citation (Christofi, Leonidou & Vrontis, 2017) in the set of articles.
The majority of articles analysed the dissemination process of fake news. Our findings indicate that researchers have focussed mostly on the spreading patterns of fake news, investigating the mechanisms enabled by fake news spreaders to achieve virality of contents. Such mechanisms could be either psychological and technological, with the majority of the studies analysing this theme come from psychology and computer sciences disciplines (Table 3). The second most studied theme is spreading channel features. This theme is closely related to the first one because it encompasses studies, mostly from the computer science discipline, that analysed the technological features of the channels through which fake news spreads. The third most studied theme is represented by the outcomes of fake news, where marketing research has focussed on evaluating the consequences of fake news spreading on consumers and firms.

Next, we identified the theme of fabricated legitimacy, referring to the practice of fake news creators of fabricating legitimacy through a strategic presentation of the fake content, such as website domains and headlines that recall legitimate sources of news. Finally, the least studied theme is represented by the attitudes of people who believe in fake news, relating to the psychological biases that lead individuals to believe in fake news. Examples of prominent studies for each theme are shown in Table 3.
4. Themes discussion

In the following section, we discuss and critically analyse the findings for each of the themes identified in this review.

4.1 Towards a definition of fake news

The definitional problem of fake news can be attributed to several factors. First, the boundaries of the phenomenon are blurred. It is still unclear to what extent it could be conceived as similar to other forms of misleading contents, well studied in previous literature, such as misinformation, disinformation, propaganda, satire, hoax or conspiracy theories. Second, the term fake news is used interchangeably to describe 1) news that is crafted for gaining financial profit or discrediting others (Allcott & Gentzkow, 2017; Lazer et al., 2018), 2) news that has a factual basis but is distorted to fit a particular context (Tandoc, Lim & Ling, 2018), and 3) news that people just don’t feel comfortable about or don’t agree with (Lilleker, 2017). Finally, previous research has described fake news interchangeably as either a form of misinformation and disinformation, two distinct concepts. While both refer to false contents, misinformation refers to unintentionally created false information (Hernon, 1995) and disinformation acknowledges the creators’ intent to deceive (Jack, 2017). So, finding an unambiguous definition of the phenomenon is difficult with some arguing that the terminology ‘fake news’ results in a “catch-all term with multiple definitions” (Lilleker, 2017; p.1). Table 4 provides an overview of the varying definitions of fake news from the literature. One of the first attempts to define fake news was made by Tandoc, Lim and Ling (2018). In their work, fake news is seen as a broad category of false information that contains different shades of purposes. A broad conceptualization of this phenomenon is also given by Martens and colleagues (2018),
and Zhang and Ghorbani (2020), conceptualizing fake news as encompassing all kinds of false stories or news, mainly distributed on the Internet, in order to mislead readers for financial or political gains.

Other scholars have provided a more precise conceptualization of fake news. Allcott and Gentzkow (2017) describe fake news as “news articles that are intentionally and verifiably false, and could mislead readers” (p. 213). Hence, in this definition some “related features” of fake news such as unintentional reporting mistakes, rumors, conspiracy theories, satire and false statements by politicians are excluded (Allcott & Gentzkow, 2017).

Recently, a more refined characterization of fake news is given by Gelfert (2018), defining this phenomenon as a form of disinformation. Whilst this definition resonates with other authors mentioned above, Gelfert’s (2018) concept of fake news is more precise in the sense that “the fake news term should be reserved for cases of deliberate presentation of typically false or misleading claims as news, where these are misleading by design, (...) systemic features of the sources and channels by which fake news propagates and thereby manipulates (...) consumers’ pre-existing cognitive biases and heuristics” (p. 108). This definition identifies some features that could help define the concept of fake news. That is, appealing to an individual’s pre-existing cognitive biases in order to change their mindset and behaviours. In this study, we adopt this definition of fake news, where it is defined as a deliberate intent to deceive by manipulating individuals’ cognitive biases and causing public harm for financial or ideological profit, exploiting the possibility of reaching a vast audience through social media.
4.2 The fake news dissemination process

The dissemination process involves creators who develop and use fake social media profiles to spread fake news online. Previous studies have consistently focused on the patterns behind the process, as well as the motivations that drive people to spread or share fake news, usually via social media. Studies (e.g. Beyens, Frison, & Eggermont, 2016; Bronstein et al., 2019; Colliander, 2019) in the psychology discipline have examined social influence and comparison theories to understand the fake news sharing behaviour of social media users. Individual behaviour is affected by social processes, and such influence is even more marked in social media environments: sharing behaviour was found to be strongly affected by the behaviour of other people within their social community (Beyens, Frison, & Eggermont, 2016; Bronstein et al., 2019; Colliander, 2019). Thompson and colleagues (2019) highlight that people seek gratification from sharing information within their online community, regardless of the veracity of such information. Others hypothesize that social media users experience a flow state when browsing social media platforms and sharing false information (Obadă, 2019). However, our findings suggest that two different types of agents can be involved in the dissemination process of fake news: non-humans and humans.

Common non-human agents exist in the form of social bots (Zhang and Ghorbani 2020), involving computer algorithms that are designed to exhibit human-like behaviour, artificially produce content and interact with humans on social media (Ferrara et al., 2016). By artificially performing actions such as liking, sharing and commenting, social bots are known to accelerate the spread of fake news (Lazer et al., 2018). Some studies have confirmed the large presence of social bots on social media: between 9%-15% of Twitter users and 60 million Facebook accounts are thought to be social bots (Lazer et al., 2018). Social bots are not only able to
perform a wide range of activities, but have become increasingly sophisticated or ‘smart’ since they can scout the Internet for information to fill their profiles and post collected materials at a scheduled rate (Ferrara et al., 2016). Given the vulnerability of social media to large-scale infiltrations, social bots are often organised in networks (i.e. Socialbot Networks), resulting in hundreds of unique accounts being managed by only one computer (Boshmaf et al., 2011). Networked social bots communicate with each other to perform scheduled activities simultaneously and are programmed to follow and re-message one another on social media (Kollanyi, Howard, & Woolley, 2016). Social bots play a significant role in spreading fake news on social media for two reasons. First, they amplify fake news in the early spreading moments and spearhead the fake narrative to go viral (Azzimonti & Fernandes, 2018). Second, they are able to recognize and target influential users through replies and mentioning, so such influential users are involved in the spreading process (Shao et al., 2017).

Human agents are also responsible for the spread of fake news on social media, knowingly or unknowingly, and can be classified in two distinct groups: malicious and benign. The former user group includes real users who decide to share the content even if recognized as false, presumably pursuing a political or ideological goal. In addition, some malicious users are paid in order to disseminate a particular content or target a specific demographic (Zannettou et al., 2019). The second group is the most difficult to analyse because it includes all the users who share some piece of false information without recognizing it as false, but actually believing in and trusting it. These kinds of users re-share some information through social networks on different occasions. For example, users are more willing to re-share content when they perceive a high quality of such information (Koohikamali & Sidorova, 2017). The perception of quality plays an important role, especially when users show high online trust in the sender of the information (Talwar et al., 2019). In addition, social media users are strongly influenced by
conformity to other users in their sharing behaviour. Individuals spend little time and cognitive effort when digesting online content (Weinreich et al., 2008). Therefore, the actions of other users (i.e. sharing, liking and commenting) significantly influence individuals’ attitudes toward misinformation and their intention to comment and share fake news (Colliander, 2019). This suggests that the social impact and collective opinion on social media can drive the diffusion of misinformation amongst benign online users (Li & Sakamoto, 2014). This evidence sheds new light on the sharing motivations associated with fake news: benign online users might not share fake news in the pursuit of a financial or political/ideological goal, but pursuing social acceptance in a desired group through informing the other members about specific concerning topics, also reinforcing the group solidarity.

4.3 Spreading channel features

This theme focuses on the role played by social media in spreading fake news. Social media represents an ideal environment where fake news spreads freely and widely (Lazer et al., 2018; Rochlin, 2017; Zhang & Ghorbani, 2020), because of four important features. The first feature is represented by low entry barriers. The cost of entering the market and producing contents on social media is very low (Allcott & Gentzkow, 2017). Creating an account on social media is free and improving the popularity of an account, in order to amplify the effects of the posted contents, has a relatively low cost. There are some specialized social media companies who provide services such as selling followers (real and bots), spreading contents via bots and posting contents at a scheduled rate. For example, it is possible to reach 300,000 followers on Twitter in a month by spending just $2,600 or to discredit a journalist on social media for $55,000 (Gu, Kropotov & Yarochkin, 2017).
The second feature is the format of social media itself. Information on social media is presented in ‘thin slices’ (Allcott & Gentzkow, 2017) so it is difficult for the reader to judge its veracity. Therefore, headlines are created to grab users’ attention: the more users interact with a post (by liking, commenting or sharing) the higher the probability that this post will appear in the news feed (Gu, Kropotov, & Yarochkin, 2017). Social media operates in a so-called “Headline-primacy world” where more importance is given to headlines than to the source of the information (Kim & Dennis, 2019). This means that what readers think about the information (i.e. confirmation bias) has more influence on the believability of the information than its source (Kim & Dennis, 2019). Furthermore, the varied users who re-share posts on such platforms make it difficult to identify the real source of information (Tandoc, Lim, & Ling, 2018). This blurring of sources makes users legitimate socially proximate sources of information as credible (Buchanan & Benson, 2019). Moreover, “the shallowing hypothesis” suggests that new media technologies that provide people the possibility of performing social media activities (e.g. sharing and texting), lead to a decline in ordinary reflective thinking and instead promote superficial thinking (Anisette & Lafreniere, 2017). Consequently, people’s susceptibility to fake news increases in the social media environment (Bronstein et al., 2019; Pennycook & Rand, 2019).

The third characteristic is the polarization of social media. Several studies confirm that users on social media platforms are polarized (Bessi et al., 2016; Del Vicario et al., 2019), meaning that they tend to read and share information consistent with their prior beliefs (confirmation bias), creating close, non-interacting communities around different topics: the so-called echo chambers (Bessi et al., 2016). Users that are confined within these communities tend to be exposed only to confirmatory information that gets accepted even if containing deliberately false claims (Bessi et al., 2016; Del Vicario et al., 2019). Personalization algorithms facilitate
the creation of echo chambers, enabling disinformation to thrive across these platforms (Borges & Gambarato, 2019; Spohr, 2017).

The fourth feature is that social media is a *source of information*. Over the past decade, social media have transformed how individuals, organizations and institutions create and share information with each other (Marchi, 2012). Social media started as platforms where users could connect with their friends, but it has morphed into platforms where users produce, consume and exchange different types of information, including fake news (Tandoc, Lim & Ling, 2018). As a result, contents get published and shared without editorial oversight (Verma, Fleischmann, & Koltai, 2017), so false claims can diffuse significantly farther, faster, deeper and more broadly than real news (Vosoughi, Roy & Aral, 2018).

### 4.4 Outcomes

For consumers and firms, the negative outcomes of fake news are linked in three ways. First, firms are targeted by fake news (Berthon & Pitt, 2018) in an attempt to change consumers’ minds about a particular firm or product. For example, Pepsi and New Balance faced a period of people boycotting after falling victims of fake news (Obadă, 2019). The same happened to McDonald's when the company was accused of using worms as an ingredient in their hamburgers (Cheng & Chen, 2020) and to Coca Cola when a false message reported a recall of Dasani water due to the presence of a parasite (Chen & Cheng, 2019). Being a victim of fake news requires companies to plan carefully a response strategy to minimise its negative impact (Vafeiadis et al., 2019). Second, firms can give legitimacy to fake news and also be contaminated by association (Berthon, Mills & Pitt, 2018). When a reader comes across a suspect story, he or she is more likely to validate it if sponsored by a well-known brand.
(Berthon & Pitt, 2018). Additionally, fake news has a negative impact on consumers’ brand attitudes. For instance, when a firm’s advertising appears alongside fake news or within a fake news website, consumers’ perceptions of source credibility influence brand trust and, in turn, brand attitudes (Visentin, Pizzi & Pichierri, 2019). Finally, the association with fake news exposes firms to high reputational risks (Berduygina, Vladimirova, & Chernyaeva, 2019). The relationship between firms and fake news is facilitated by advertising, specifically programmatic online advertising (Berthon & Pitt, 2018). Programmatic advertising is the practice of automated distribution and placement of content, chasing online traffic (Mills, Pitt & Ferguson, 2019). Firms are increasingly opting for online advertising, so fake news’ creators are incentivized to deliver greater volumes of fake content to drive more online traffic. Hence, programmatic advertising and fake news encourage each other, exacerbating fake news’ impact on firms branding and consumer brand attitudes (Mills, Pitt & Ferguson, 2019; Bakir & McStay, 2018; Visentin, Pizzi & Pichierri, 2019).

Fake news can also have negative outcomes beyond marketing. Exposure to media discourses on fake news has a negative effect on individuals’ media trust and on the ability to distinguish real from fake news (Van Duyn & Collier, 2019). This is likely to create confusion about prior knowledge, doubts about whether the prior knowledge is correct and reliance on inaccurate information (Rapp & Salovich, 2018). Consequently, people will base their subsequent behaviours and choices on this inaccurate knowledge. This can have negative impacts in politics (Allcott & Gentzkow, 2017), on health-related issues such as vaccination (Carrieri, Madio, & Principe, 2019), on finance and stock markets (Hart, 2017; Brigida & Pratt, 2017) as well as within marketing.

4.5 Fabricated legitimacy
This review suggests that for fake news to be successful, it must appear credible and trustworthy by readers. Fake news creators achieve this apparent legitimacy by employing a process of strategic presentation of fake contents, and thus can be labelled as “fabricated legitimacy”. Its effectiveness relies on several conditions. First, creators present their articles mimicking legitimate sources of news in order to gain credibility and trust from its target audience (Lazer, 2018). Second, fake news is often presented in the same form as authentic news, for example by using fonts and colours for headlines that could recall legitimate sources of news’ articles (Allcott & Gentzkow, 2017). Third, fake news is built around topics that are also addressed by the mainstream media (Xu et al., 2018), misrepresenting facts (e.g. manipulating images or changing names or places) to the point that they are no longer accurate (Tandoc et al., 2018).

Whether it is an article from a fake news website or a tweet, fake news possesses many of the same features as a trustworthy news article. The first feature is represented by the website domain and layout. Starting from the name of the website, nothing is casual with news websites’ names chosen to resemble those of other legitimate sources of news. For instance, among the most influential fake news websites in the run-up of 2016 U.S. presidential elections we find: denverguardian.com; USAToday.com.co; NationalReport.net and WashingtonPost.com.co (Allcott & Gentzkow, 2017; Molina et al., 2019). In addition, those websites are designed to mimic official news sources in terms of page layout, colours and fonts used (Lazer et al., 2018; Rini, 2017). Often such domains are registered via proxy services for the creators to remain anonymous (Xu et al., 2018).
Moreover, the headlines and subheadings of fake news articles are carefully designed. Fake news articles are written in a journalistic style, with sensationalistic headlines (e.g. “BREAKING: Donna Brazile dies in fiery car crash.” or “Pope Francis shocks world: endorses Donald Trump for President”) and subheadings in order to catch the attention of the target audience and “infect” their minds and feelings (Gu, Kropotov & Yaronin, 2019). Then the fake name of the author is presented (Allcott & Gentzkow, 2017; Rochlin, 2017). In order to fight the fabricated legitimacy embedded in headlines, several social media platforms introduced labels to warn readers about the possibility of the article being false. Such efforts, though, were found to have a negative effect on belief in misinformation (Clayton et al., 2019), actually they were found to reduce the perceived accuracy of true news headlines (Pennycook & Rand, 2017).

Finally, the text corpus. Even though its appearance could recall legitimate sources of news, there is a difference in the tone and style of the writing. In fact, in order to put more emphasis on provoking readers, fake news often contains profanities, pronouns and a low linguistic register (Jack, 2017). Additionally, fake news articles present longer paragraphs than real news articles and also have more positive and negative affect (Asubiaro & Rubin, 2018). In other words, the text corpus is specifically designed to provoke readers. However, often fake articles include manipulated pictures or videos that could reinforce their perceived credibility (Jack, 2017; Tandoc, Lim & Ling, 2018; Shen et al., 2019). For example, in 2017 Starbucks fell victim of a fake news that affected its reputation: some social media accounts advertised the so-called “Dreamer Day” in which the coffee chain would give out free frappuccinos to unregistered migrants in the US (Obadă, 2019). This fake news was successful as creators used the real Starbucks logo and colours in advertising this fake event.
4.6 Attitudes

The final theme is labelled as attitudes, referring to the analysis of psychological mechanisms and biases that make individuals believe in fake news (Pennycook et al., 2018; Bronstein et al., 2019; Britt et al., 2019). The most important driver of belief in fake news was found to be confirmation bias, also known as selective exposure or belief bias. Quattrociocchi, Scala & Sunstein (2016) reported that selective exposure on social media is responsible for people’s belief in fake news, because of users’ exposure to contents consistent with their vision of the world. Furthermore, a new piece of information is more likely to be accepted as true by individuals if it is consistent with other things they assume to be true (Lewandowsky et al., 2012). Selective exposure enhances third-person perception of fake news as individuals perceive others as more susceptible than themselves to the detrimental effects of fake news (Jang & Kim, 2018). Confirmation bias also mediates individuals’ social networking activities, as it is a form of psychological defence from being exposed to divergent opinions (Kim et al., 2017), and it is also responsible for activating another mechanism: the illusory truth effect (Polage, 2012). Given that individuals show a tendency to select information that is consistent with their prior beliefs, the continuous exposure to the same contents can influence individuals’ subjective truth (Unkelbach et al., 2019). The mere repetition of fake news (Britt et al., 2019; Fielden, Grupac & Adamko, 2018), in combination with a process of continuous exposure to it (Pennycook, Rand & Cannon, 2018), leads individuals to validate them as true. Repetition of information “primes” (priming theory) users’ minds, making the recalling of (false) information easier and influencing subsequent evaluations of information (Van Duyn & Collier, 2019).
Cognitive abilities and style also play a fundamental role in evaluating the veracity of information (Haug & Gewald, 2018). This process requires a certain level of cognitive abilities. Consequently, individuals who engage less in analytic thinking or have a lower level of cognitive abilities, are more likely to believe in fake news (Bronstein et al., 2019; Pennycook & Rand, 2019). Moreover, such less-analytic individuals are also less likely to adjust their attitudes, even after they learn that they based a previous evaluation on fake news (Roets, 2017). This is also due to the fact that our memory system (memory bias) does not automatically replace the old wrong information, that actually remains available and can continue to have an effect on individuals, known as the continued influence effect (Britt et al., 2019).

These beliefs and memory biases are a core part of human behaviour and make it difficult for individuals to detect lies. However, these factors are exacerbated by the nature of the contemporary ‘post-truth’ world. (Berthon & Pitt, 2018; Cooke, 2017). ‘Post-truth’ can be defined as “relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief” (McDermott, 2019. p 218). In this world emotions play a significant role in shaping individuals’ opinions, even more than facts. Moreover, nowadays there is an overall loss of trust in institutions, including news media (Tandoc et al., 2018). As mentioned earlier, social media has emerged as one of the most powerful information channels, disintermediating the access to the production of news (Tandoc, Lim & Ling, 2018). Therefore, fake sensationalistic news can find it easier, today, to appeal to different people and gain credibility (McDermott, 2019).

5. Theoretical framework for the fake news process
Drawing from the insights identified through the review and analysis of interdisciplinary literature, we propose a framework (Fig. 4) for the fake news process and relevant research propositions to illustrate the fake news process. The framework synthesizes the process of creating and disseminating fake news, as well as its consequences on consumers and firms.

5.1 Antecedents

Antecedents represent the factors that prompt fake news creation, including the motivations behind the creation of fake news and the techniques employed to fabricate legitimacy. Fake news creation is a deliberate and strategic act (Gelfert, 2018). Different entities could be involved in the process of creating fake news, from teenagers (Subramanian, 2017) to political organizations or activists (Zannettou et al., 2019). Despite their different background, these creators share some of the same motivations that encourage them to create fake news. The first motivation is financial. Often, fake news is created as clickbait to chase online traffic and, in turn, revenues from advertising (Berthon & Pitt, 2018). The second motivation is political or ideological. In this case, fake news aims to discredit a political opponent (Rini, 2017) and influence individuals about particular political topics (Allcott & Gentzkow, 2017). Through the strategic presentation of their content, a process we label as Fabricated Legitimacy, fake news creators make their content appear credible in order to enable its spread through social media.

Therefore, we propose:

Proposition 1: Fake news is created to pursue financial and/or ideological goals and is materialised via fabricated legitimacy to enable content virality.

5.2 Dissemination Process
The dissemination process includes 1) all the actors involved in the retransmission of fake news on social media, 2) their relationships and motivations to share and 3) the psychological factors influencing individuals’ belief in fake news. Social media represents the ideal medium to spread fake news as for 1) its low entry barriers (Allcott & Gentzkow, 2017), 2) its information presentation format (Kim & Dennis, 2019), 3) the polarization of users within echo chambers where fake news can thrive (Del Vicario et al., 2019), and 4) its adoption as a source of information (Tandoc, Lim & Ling, 2018). Three main actors are involved in the dissemination process of fake news. Non-human spreaders, in the form of bots or Bots Networks, can magnify the reach of fake news by automatically re-sharing contents (Zhang & Ghorbani, 2020). Malicious human spreaders contribute to the dissemination process either because they share some of the creators’ goals or are paid to do so (Zannettou et al., 2019). Benign human spreaders are also involved in the dissemination process. Interestingly, belief in fake news drives their sharing behaviour. Two factors play a fundamental role in shaping benign spreaders’ belief in fake news. First, fabricated legitimacy makes fake news appear as legitimate and trustworthy news (Lazer et al., 2018). Second, individuals’ attitudes, such as confirmation bias (Pennycook et al., 2018), cognitive abilities (Bronstein et al., 2019) and emotions (McDermott, 2019) can also determine fake news’ belief. Therefore, we propose:

Proposition 2: The dissemination process can involve either a human or a non-human spreader, with either malicious or benign intent. Regardless of its nature and intent, a spreader seeks to elicit a set of responses from consumers. These cognitive, emotional and behavioural responses determine individuals’ belief in fake news, which, in turn, enables fake news’ dissemination.

5.3 Outcomes
Outcomes refers to the negative consequences of fake news at different levels. While previous literature has focussed on the consequences at the societal level, this review identifies the outcomes of fake news for consumers and firms. For consumers, fake news lowers trust in the media (Van Duyn & Collier, 2019) and creates confusion and doubt about prior knowledge (including knowledge about brands). Consumers will then base subsequent behaviours on inaccurate information (Rapp & Salovich, 2018). Firms can be 1) targeted by fake news (Berthon & Pitt, 2018), in an attempt to change consumers’ minds about a particular brand or product, 2) or co-opted to give legitimacy to fake news (Visentin, Pizzi & Pichierri, 2019), 3) exposing them to high reputational risks (Berduygina, Vladimirova, & Chernyaeva, 2019). Consumer-level and firm-level consequences of fake news are strictly interlinked (Berthon & Pitt, 2018). Consequently:

Proposition 3: Fake news will impact consumers and firms differently. More specifically, fake news will change consumers' knowledge, attitudes and behaviours related to brands and products. Fake news will also expose firms to negative consequences, ranging from brand reputation tarnishment to product boycotts.

6. Discussion and further research

This review provides a systematic overview of the interdisciplinary literature on fake news, develops a framework integrating the research findings with three propositions, and then identifies directions for future research from a marketing perspective.

Definitions. The literature around fake news faces a *definitional problem* or issue. Misinformation is not a new phenomenon, it has ancient roots (Tandoc, Lim & Ling, 2018). It would be wrong, then, to define fake news as a “new phenomenon”. Fake news is actually an evolution of old misinformation spreading techniques enabled by digital technologies. This review strongly highlights the role played by the Internet, and specifically social media,
spreading of fake news. Social media magnify the spreading of fake news, making it travel fast and far in the online sphere (Vosoughi, Roy & Aral, 2018). However, there is still uncertainty and inconsistency around the definitions of fake news (Shu et al., 2017). Some authors adopt a narrower definition (Allcott & Gentzkow, 2017; Rini, 2017; Gelfert, 2018), while others favour a broader one (Tandoc, Lim & Ling, 2018; Martens et al., 2018). In addition, definitions also show confusing treatment of fake news as either misinformation or disinformation, two distinct concepts. One factor in this debate is that the term fake news has been politicized by political opinions and judgements, rather than just to material that could automatically be considered false in content. Future research should address this gap, proposing a clear conceptualization of fake news, giving an understanding of what fake news is and what is not. In this way, it will be easier to recognise and classify fake news and analyse their spreading patterns in the online sphere. For example, should memes and fake videos posted on social media platforms regarding a company’s bad practice (e.g. the presence of mice inside a fast-food restaurant) be considered as fake news?

**Dissemination process and spreading channel features.** The most studied theme identified in the considered set of articles is the dissemination process of fake news. The majority of the articles studied this theme from the disciplines of psychology and computer science, investigating why people share fake news and the technological advances that enable and magnify the spreading process. Our results suggest that, together with the malicious spreaders of fake news, there are also *benign social media users* that share such contents for various reasons that are, to date, understudied. We suggest future opportunities for research in marketing and consumer behaviour to address this gap. Marketing literature suggests that people share information because of three main reasons. The first motivation is self-enhancement, for the willing to appear expert or knowledgeable in the eyes of others (Tellis et
The second motivation is social: people share information to engage with their community and feel part of a group (Oh & Syn, 2015). Lastly, the third reason is altruistic. In this sense, individuals share information to show concern for others (Hennig-Thurau et al., 2004) and to try to help others (Lovett, Peres, & Shachar, 2013). These motivations may also apply to benign agents spreading fake news, given their inability to recognize the veracity of the shared information. They may be strongly motivated by the social and altruistic goals of informing the other members of their online community about political misconduct (Allcott & Gentzkow, 2017), health issues (Li & Sakamoto, 2014) or firms’ malicious activities (Obadă, 2019). Therefore, marketing research about self-enhancement and group solidarity motivations to share fake news on social media should be taken into consideration. Alongside this, as confirmed by preliminary findings from Borges-Tiago and colleagues (2020), information literacy and information technology skills could play a role in determining the sharing of fake news. Specifically, more experienced users might be more aware of the information dissemination dynamics on social media: by better evaluating the reliability of information networks these users limit the spreading of fake news through these platforms.

**Outcomes.** Outcomes and consequences of fake news represent the third most studied theme in our analysis. We found that fake news not only has a negative influence on consumers and brands, but also on society at large. The impact of fake news exists at societal, firm and consumer levels. Each of the levels of analysis focuses on different relationships between victims and spreaders of fake news and on the various sources from which fake news gain legitimacy. Most of the research focus at the moment is on the broader societal level, concerning the effects of political fake news on individuals as voters and, in turn, on governments. At this level, fake news primarily presents a political or social slant, created in order to 1) discredit an opposite political party, 2) create tension around social issues or 3) create confusion about important health issues such as vaccinations. However, much of the
misinformation relating to marketing exists at the firm and consumer levels, focussing on the
relationship between consumers as well as consumers and firms. At the firm level, fake news
is created and spread to manipulate consumers’ minds about a particular firm or product. Then,
when the fake news is spread, it thrives in online echo chambers (Del Vicario et al., 2016) and
gains legitimacy through the trust that consumers have on other user-generated content (UGC),
with abiding negative consequences (Zollo et al., 2017). Future research in marketing should
investigate how firms should respond to these kinds of attacks, helping brand managers to plan
the right response strategy in terms of contents, channels and time frames. Trust in co-creation
of value online is also the source of legitimacy of fake news at the consumer level. This level
of analysis is the most important: analysing the mechanisms that enable fake news to gain
legitimacy at this stage will result in a clearer understanding of the relationships at broader
levels. As fake news targets a variety of actors, from politicians to firms, adopting a multi-level
approach could help differentiate and clarify the phenomenon. The main contribution of this
approach is to consider the interdependence of agents and sources of legitimacy for fake news
operating at different levels.

**Attitudes.** Our review revealed that attitudes are the least studied theme in the literature. This
theme is mostly identified in the psychology discipline, while marketing scholarship represents
just a marginal contribution. We suggest that marketing scholars focus on this theme as there
is room for further research in this area. For example, knowing the psychological mechanisms
that influence people’s belief in fake news (e.g. confirmation bias, referential theory, priming
theory) could help in understanding the *determinants and the effects of Electronic Word-of-
mouth* (eWOM) around a firm when it falls victim of fake news or some competitors’ deceptive
marketing strategies. In addition, studies about media trust and credibility could support in
evaluating whether seeing a firm’s advertisement alongside a fake news could affect the
**attitudes** of people towards that specific firm (expanding Visentin et al. findings). While
previous studies have focussed more on the cognitive mechanisms, little attention was given to the affective and emotional determinants of belief in fake news, elicited by the polarization mechanisms of social media (Del Vicario et al., 2016). Emotions play an important role in creating a strong bond between consumers and firms (Thomson et al., 2005; Grisaffe & Nguyen, 2010). Thus, when consumers feel strongly attached to a firm, they will be more loyal and less price-sensitive (Dunn & Hoegg, 2014), and they will likely be engaged in repurchasing behaviours (Grisaffe & Nguyen, 2010). Finally, it is inevitable to pay attention to the political implications of fake news. In times when consumer behaviour is more and more driven by political ideology (Mittal, 2018), the polarizing power of fake news plays an important role in shaping consumers’ behaviours, with negative consequences for brands such as in the case of product boycotts.

7. Conclusions

Applying the process recommended by Denyer & Tranfield (2009), we conducted a systematic literature review on fake news. This paper represents the first attempt to provide an extensive and critical review on the topic of fake news. Previous studies have consistently opted for a more empirical methodological approach to study fake news and its impact on consumer behaviour, such as experiments (Visentin, Pizzi & Pichieri, 2019). A systematic review approach helps advance our current knowledge of fake news in three ways. It identifies 1) a broad range of disciplines in which fake news has been studied, further highlighting the growing interest in this topic; 2) the unique traits or characteristics underpinning fake news, which can be used to support consumer detection of it, and 3) a collection of themes that summarise the issues that have been discussed and their interrelationships, summarised through the proposed theoretical framework.
Our work highlights that fake news is an emerging research stream in the business and marketing field. With this in mind, this study provides an important contribution to our understanding of opportunities for theoretical development. This review’s results have also highlighted a number of knowledge gaps that researchers should resolve. Our discussion section provides the basis for future research efforts that can make a substantial contribution to developing the domain of fake news, avoiding the weaknesses of prior works. Finally, this review informs practice about the importance of fake news. In particular, it will assist marketing practitioners in understanding the impact that online misinformation can have on their business and formulating the appropriate marketing strategies. In addition, by providing a more holistic understanding of fake news, this review will help policy-makers develop approaches to curb this phenomenon.

Despite the contributions presented earlier, we acknowledge some limitations. First, our work is based on secondary data, primarily, the academic literature of fake news. Whilst we have endeavoured to incorporate grey literature in our review, sources of this are very limited and thus future research can continue this endeavour and develop a more comprehensive understanding of the topic in question. Second, we have applied meaningful keywords and prominent databases to source relevant articles in order to address our research objectives and support our critical review work. Given our keyword strategy, we position our work as entirely original, extensive and critical in nature. It provides a springboard for future research that seeks to pursue the emerging topic of fake news.
REFERENCES


https://doi.org/10.15655/mw/2019/v10i1/49561


https://doi.org/10.1177/0276146718755869


https://doi.org/10.1371/journal.pone.0159641


https://doi.org/https://doi.org/10.1016/j.chb.2016.05.083


https://doi.org/10.1016/j.jarmac.2018.09.005


https://doi.org/10.1080/14719037.2018.1473477


Gu, L., Kropotov, V., & Yarochkin, F. (2017). The fake news machine: how propagandists abuse the
internet and manipulate the public. *Trend Micro.*


https://doi.org/10.1016/0740-624X(95)90052-7


http://10.0.98.212/MISQ/2019/15188


truthfulness and sharing of information. *Computers in Human Behavior, 41*, 278–287. https://doi.org/10.1016/j.chb.2014.08.009


https://doi.org/10.1016/j.ibusrev.2020.101717


https://doi.org/10.1111/jopy.12476


https://doi.org/10.1108/LHT-03-2017-0062


effects of source, intermediary, and digital media literacy on contextual assessment of image credibility online. *new media & society*, 21(2), 438-463.


https://doi.org/10.1080/08874417.2019.1566803


https://doi.org/10.1080/15205436.2018.1511807


https://doi.org/10.1016/j.intmar.2018.09.001


### Conceptualizations of fake news from the literature

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Conceptualization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tandoc, Lim &amp; Ling, 2018</td>
<td>The authors identified six ways that previous studies have operationalized fake news: satire, parody, fabrication, manipulation, propaganda, and advertising</td>
</tr>
<tr>
<td>Lazer et al., 2018</td>
<td>News stories that were fabricated, but presented as if from legitimate sources, and promoted on social media to deceive the public for ideological and/or financial gain.</td>
</tr>
<tr>
<td>Rini, 2017</td>
<td>A fake news story is one that purports to describe events in the real world, typically by mimicking the conventions of traditional media reportage, yet is known by its creators to be significantly false, and is transmitted with the two goals of being widely re-transmitted and of deceiving at least some of its audience</td>
</tr>
<tr>
<td>Allcott &amp; Gentzkow, 2017</td>
<td>Intentionally and verifiably wrong or false news produced for the purpose of earning money and/or promoting ideologies</td>
</tr>
<tr>
<td>Özgöbek &amp; Gulla, 2017</td>
<td>Fake news articles are intentionally fabricated to be deceptive and can be proven that they are false</td>
</tr>
<tr>
<td>Source</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Martens et al., 2018</td>
<td>(fake news) as disinformation that includes all forms of false, inaccurate or misleading information designed, presented and promoted to intentionally cause public harm or for profit (e.g., commercial click-bait)</td>
</tr>
<tr>
<td>Zhang &amp; Ghorbani, 2020</td>
<td>Fake news refers to all kinds of false stories or news that are mainly published and distributed on the Internet, in order to purposely mislead, befoul or lure readers for financial, political or other gains</td>
</tr>
<tr>
<td>Gelfert, 2018</td>
<td>The fake news term should be reserved for cases of deliberate presentation of typically false or misleading claims as news, where these are misleading by design, (...) systemic features of the sources and channels by which fake news propagates and thereby manipulates (...) consumers’ pre-existing cognitive biases and heuristics.</td>
</tr>
<tr>
<td>Rochlin, 2017</td>
<td>Fake news can be roughly defined as a knowingly false headline and story is written and published on a website that is designed to look like a real news site, and is spread via social media.</td>
</tr>
</tbody>
</table>
Table 2

Research themes of the reviewed literature

<table>
<thead>
<tr>
<th>Theme</th>
<th>Adjusted citations</th>
<th>Weight %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissemination process</td>
<td>42.23</td>
<td>35.88</td>
</tr>
<tr>
<td>Channel</td>
<td>34.56</td>
<td>29.37</td>
</tr>
<tr>
<td>Outcome</td>
<td>16.16</td>
<td>13.70</td>
</tr>
<tr>
<td>Fabricated legitimacy</td>
<td>14.74</td>
<td>12.56</td>
</tr>
<tr>
<td>Attitudes</td>
<td>9.99</td>
<td>8.49</td>
</tr>
</tbody>
</table>

*Themes were weighted by adjusted citations, where adjustments were made for papers categorized in multiple themes. For example, if one paper was included in two themes, the adjusted citation would be 0.5 for each theme.

Table 3

Discipline contribution for each theme

<table>
<thead>
<tr>
<th></th>
<th>DISSEMINATION PROCESS</th>
<th>SPREADING CHANNEL FEATURES</th>
<th>OUTCOME</th>
<th>FABRICATED LEGITIMACY</th>
<th>ATTITUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCHOLOGY</td>
<td>21%</td>
<td>9%</td>
<td>18%</td>
<td>6%</td>
<td>54%</td>
</tr>
<tr>
<td>IT/COMPUTER SCIENCE</td>
<td>17%</td>
<td>18%</td>
<td>-</td>
<td>37%</td>
<td>26%</td>
</tr>
<tr>
<td>COMMUNICATION</td>
<td>13%</td>
<td>11%</td>
<td>18%</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>INTERDISCIPLINARY</td>
<td>16%</td>
<td>9%</td>
<td>-</td>
<td>-</td>
<td>3%</td>
</tr>
<tr>
<td>POLITICS</td>
<td>8%</td>
<td>8%</td>
<td>11%</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td>NEWSPAPER/REPORTS</td>
<td>6%</td>
<td>14%</td>
<td>2%</td>
<td>25%</td>
<td>-</td>
</tr>
<tr>
<td>MARKETING</td>
<td>4%</td>
<td>8%</td>
<td>18%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>4%</td>
<td>11%</td>
<td>-</td>
<td>-</td>
<td>3%</td>
</tr>
<tr>
<td>ECONOMICS</td>
<td>-</td>
<td>1%</td>
<td>12%</td>
<td>4%</td>
<td>-</td>
</tr>
<tr>
<td>JOURNALISM</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>7%</td>
<td>-</td>
</tr>
<tr>
<td>ETHICS</td>
<td>1%</td>
<td>3%</td>
<td>4%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td>3%</td>
<td>2%</td>
<td>-</td>
<td>8%</td>
<td>-</td>
</tr>
<tr>
<td>PHILOSOPHY</td>
<td>2%</td>
<td>2%</td>
<td>9%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ACCOUNTANCY</td>
<td>-</td>
<td>-</td>
<td>7%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SOCIOLOGY</td>
<td>3%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>STRATEGY</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The weight of each discipline contributing to a specific theme was calculated by the same method used in Table 2.

**Table 4**

**Examples of prominent papers in themes**

<table>
<thead>
<tr>
<th>THEMES</th>
<th>CITATION</th>
<th>KEY FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISSEMINATION</td>
<td><strong>Grinberg, N. et al. (2019). Fake news on Twitter during the 2016 US presidential election. Science.</strong> [Empirical Paper]</td>
<td>This study estimated the extent to which people on Twitter shared and were exposed to content from fake news sources during the 2016 election season. Although 6% of people who shared URLs with political content shared content from fake news sources, the vast majority of fake news shares and exposures were attributable to tiny fractions of the population. Only 1% of individuals accounted for 80% of fake news source exposures, and 0.1% accounted for nearly 80% of fake news sources shared.</td>
</tr>
<tr>
<td>PROCESS</td>
<td><strong>Jang S. M. et al. (2018). A computational approach for examining the roots and spreading patterns of fake news: Evolution tree analysis. Computers in Human Behavior.</strong> [Empirical Paper]</td>
<td>The findings revealed that root tweets about fake news were mostly generated by accounts from ordinary users, but they often included a link to non-credible news websites. Additionally, the authors found significant differences between real and fake news stories in terms of evolution patterns: tweets about real news showed wider breadth and shorter depth than tweets about fake news.</td>
</tr>
<tr>
<td>Allcott, H. &amp; Gentzkow, M. (2019)</td>
<td>User interactions with false content rose steadily on both Facebook and Twitter through the end of 2016. Since then, however, interactions with false content have fallen sharply on Facebook while continuing to rise on Twitter.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Bessi A et al. (2016) Users polarization on Facebook and YouTube. PloS One. [Empirical Paper]</td>
<td>Content drives the emergence of echo chambers on both platforms. Moreover, the authors show that the users’ commenting patterns are accurate predictors for the formation of echo-chambers.</td>
<td></td>
</tr>
<tr>
<td>Talwar, S. et al. (2019) Why do people share fake news? Associations between the dark side of social media use and fake news sharing behaviour. Journal of Retailing and Consumer Services. [Empirical Paper]</td>
<td>The study results suggest that online trust, self-disclosure, fear of missing out, and social media fatigue are positively associated with the sharing fake news (intentionally). In contrast, social comparison has a negative association. The study findings also indicate that online trust has negative association with authenticating news before sharing</td>
<td></td>
</tr>
<tr>
<td>Visentin, M.; Pizzi, G. &amp; Pichierri, M. (2019) Fake News, Real Problems for Brands: The Impact of Content Truthfulness and Source Credibility on</td>
<td>The results highlight that fake news can produce different consequences that spill over to the brand advertised alongside the fake news — encompassing not only brand trust and brand attitudes, but also</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Summary</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>consumers’ Behavioral Intentions toward the Advertised Brands. Journal of Interactive Marketing.</td>
<td>[Empirical Paper]</td>
<td>Behavioural consequences such as purchase intention, word-of-mouth referral and intention to visit the brand's store.</td>
</tr>
<tr>
<td>Rapp, D. &amp; Salovich, N. (2018) Can’t We Just Disregard Fake News? The Consequences of Exposure to Inaccurate Information. Policy Insights from the Behavioral and Brain Sciences.</td>
<td>[Conceptual Paper]</td>
<td>Exposure to inaccurate information creates at least three comprehension problems—confusion, doubt, and reliance—all of which are cause for concern given how frequently people encounter falsehoods, including fake news.</td>
</tr>
<tr>
<td>Carrieri, V., Madio, L. &amp; Principe, F. (2019) Vaccine hesitancy and (fake) news: Quasi-experimental evidence from Italy, Health economics.</td>
<td>[Empirical Paper]</td>
<td>The authors found that larger accessibility to non-traditional media (via broader broadband coverage) led to a reduction in child immunization rates, in Italy. Interestingly, the negative and significant effect encompasses all vaccines and led immunization rates to reach below the critical threshold of 95%</td>
</tr>
<tr>
<td>Kim, A. &amp; Dennis, A. (2019). Says who? The effects of presentation format and source rating on fake news in social media. MIS Quartely.</td>
<td>[Empirical Paper]</td>
<td>The results of two studies show that presenting articles on social media in a source-primacy format (with the source of the article before the headline) as compared to Facebook’s current headline-primacy format (with the headline before the source) makes users less likely to believe them. The source-primacy format nudges readers to be more skeptical of all articles, regardless of their source. Source reputation ratings influenced the believability of articles. When the sources were unknown, a low rating reduced readers’ belief.</td>
</tr>
<tr>
<td>ATTITUDES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Tandoc, Lim &amp; Ling (2018). Defining “Fake News”: A typology of scholarly definitions. Digital Journalism.</strong></td>
<td>The authors identified different types of fake news with different features: news satire, news parody, fabrication, manipulation, advertising, and propaganda. These definitions are based on two dimensions: levels of facticity and deception.</td>
<td></td>
</tr>
<tr>
<td>[Review]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Report]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pennycook, G. &amp; Rand, D. (2019) Who falls for fake news? The roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking. Journal of Personality.</strong></td>
<td>The tendency to ascribe profundity to randomly generated sentences—pseudo-profound bullshit receptivity—correlates positively with perceptions of fake news accuracy, and negatively with the ability to differentiate between fake and real news (media truth discernment). Relatedly, individuals who overclaim their level of knowledge also judge fake news to be more accurate</td>
<td></td>
</tr>
<tr>
<td>[Empirical Paper]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bronstein, M. V. et al. (2019). Belief in Fake News is Associated with Delusionality, Dogmatism, Religious Fundamentalism, and Reduced Analytic Thinking. Journal of Applied Research in Memory and Cognition.</strong></td>
<td>Delusion-prone individuals displayed an increased belief in “fake news” headlines, which often feature implausible content. Mediation analyses suggest that analytic cognitive style may partially explain these individuals’ increased willingness to believe fake news. Exploratory analyses showed that dogmatic individuals and religious fundamentalists were also more likely to believe false (but not true) news, and that these relationships may be fully explained by analytic cognitive style</td>
<td></td>
</tr>
<tr>
<td>[Empirical Paper]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Abstract</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>Britt, M. A. et al. (2019)</td>
<td>A reasoned approach to dealing with fake news. Policy insights from the Behavioral and Brain Sciences.</td>
<td>The authors review belief and memory biases that play a significant role in shaping people’s belief in fake news.</td>
</tr>
</tbody>
</table>
Figures List

Figure 1

Flow diagram for the literature review process

Figure 2

Year of publication for articles included in the review
Figure 3

*Number of studies from different disciplines*

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Number of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>21</td>
</tr>
<tr>
<td>Information Technology/Computer Science</td>
<td>21</td>
</tr>
<tr>
<td>Communication</td>
<td>13</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>11</td>
</tr>
<tr>
<td>Politics</td>
<td>10</td>
</tr>
<tr>
<td>Newspaper/Reports</td>
<td>10</td>
</tr>
<tr>
<td>Marketing</td>
<td>6</td>
</tr>
<tr>
<td>Education</td>
<td>4</td>
</tr>
<tr>
<td>Economics</td>
<td>4</td>
</tr>
<tr>
<td>Journalism</td>
<td>2</td>
</tr>
<tr>
<td>Ethics</td>
<td>2</td>
</tr>
<tr>
<td>Management</td>
<td>2</td>
</tr>
<tr>
<td>Philosophy</td>
<td>1</td>
</tr>
<tr>
<td>Accountancy</td>
<td>1</td>
</tr>
<tr>
<td>Sociology</td>
<td>1</td>
</tr>
<tr>
<td>Strategy</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 4

*Theoretical Framework*