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Free but fake speech: When giving primacy to the source decreases misinformation sharing on social media

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Abstract

Social media platforms are facing increasing tensions in balancing the desire to maintain freedom of expression with limiting the spread of fake news and misinformation. This study investigates whether giving primacy to the source of misinformation on Facebook influences users' sharing behaviour. Two experimental studies show that when fake news is presented in a source-primacy format, users are less likely to share the post because of reduced trust in the message and increased perceptions of deceptive intent. Additionally, this effect persists only when the person sharing the fake news has a weak interpersonal relationship with the receiver. The study extends current understanding of how misinformation is shared and provides insights into how presentation formats can be used to limit the spread of fake news without restricting freedom of speech.

KEYWORDS

deceptive intent, fake news, free speech, information primacy, misinformation, social media, trust, willingness to share

1 | INTRODUCTION

Whilst social media platforms have become key platforms for social communication and dissemination of information, they have faced growing criticism over their role in hosting and spreading “problematic content” (Di Domenico & Visentin, 2020). This ranges from criminal material and content that promotes hate speech through to fake news and more general forms of misinformation (Alkiviadou, 2019). Although substantial effort has gone into identifying solutions to these issues, such as developing algorithms to block problematic contents and efforts to educate users (Oakes, 2020), these activities are complicated by the key role of social media in governing the digital sphere of communication (Balkin, 2018). Attempts to remove harmful content typically result in accusations that the platforms are limiting freedom of expression (Westfall, 2020). To safeguard freedom of speech, social media platforms typically seek to take steps to

prevent the spread rather than the posting of misinformation. For example, social media have started flagging materials to users with the aim to discourage the sharing of the contents. However, such attempts have been proved to be generally ineffective (Meixler, 2017) or, even worse, to foster an implied “truth effect” such that fake headlines that fail to be flagged are seen as more accurate (Pennycook et al., 2018).

While the fake news phenomenon gained relevance in the political realm after the 2016 US Presidential elections (Allcott & Gentzkow, 2017), there are growing commercial consequences as brands and companies are not exempt from the threat of problematic contents (Berthon & Pitt, 2018). Fake news targeting private companies can have severe consequences in terms of brand trust (Berthon & Pitt, 2018), reputation (Visentin et al., 2019) and product boycotts (Obadä, 2019). For example, in 2017, New Balance faced reputational damages and negative reactions from consumers after

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false allegations of offering “a wholesale endorsement of the Trump revolution” (Hsu & Isaac, 2020). Similarly, in 2016 untrue news about parasites found in Coca-Cola bottles distributed across the US, rapidly spread through social media and forced the company to issue an official response to the hoax to protect the brand reputation (Chen & Cheng, 2019). As such, understanding how to prevent and decrease the spreading of misinformation on social media represents a relevant research area in marketing.

To date, studies on fake news in the marketing and consumer behaviour fields have mainly analysed the factors that increase fake news' believability. Selective exposure (or confirmation bias) has been identified as one of the most important drivers of fake news belief (Kim & Dennis, 2019; Quattrociocchi et al., 2016) as individuals tend to consume information that is consistent with their vision of the world and accept it as true (Lewandowsky et al., 2012). In the same vein, Pennycook et al. (2018) showed that even a single exposure to misinformation contents increases perceptions of accuracy and overall believability through an ‘illusory truth effect’. Moreover, previous research suggests that cognitive abilities influence the way individuals engage in the evaluation of the veracity of a piece of information (Metzger & Flanagin, 2013) such that less analytic individuals tend to believe more in fake news (Pennycook & Rand, 2019).

While studies from consumer psychology have analysed the psychological mechanisms that influence fake news belief, research from communication studies has mainly focused on the message characteristics that participate in perceptions of believability. In this sense, it has been demonstrated that source credibility (Buchanan & Benson, 2019) and source rating (Kim & Moravec, & Dennis, 2019) affect message believability and users' responses. Not only the source of the news, but also the person who is sharing it can influence other users' behaviour. This is particularly true on social media platforms, where trust in what other users share was found to be a predictor of fake news sharing (Talwar et al., 2019).

In addition to such characteristics, also the way the news is presented and crafted on social media platforms can influence the way individuals form beliefs. In this sense, the current news' presentation format on social media is designed to highlight the person who is sharing the news and the news' headlines rather than the source of the information, such that social media users generally are presented with the user who shares, the headline and the image first, while the source of the news is toned down. The impact of the presentation's order of and the emphasis given to information on individuals' impressions formation and their subsequent decisions is known as the primacy effect, and is well documented in the literature (e.g., Crano, 1977; Eyal et al., 2011; Fourakis & Cone, 2020). However, to date, only one study has explored this effect in the realm of fake news and social media showing that when the source precedes the message fake news belief decreases (Kim & Dennis, 2019).

Building on this, this paper aims to further expand Kim and Dennis' results and it investigates the impact of the fake news presentation format and tie strength on social media users' sharing behaviour. Specifically, we propose that placing primacy on the

source of the fake content on social media decreases sharing behaviour. We argue that this effect is mediated by a decrease of trust in the message (i.e., the information is delegitimized) and an increase of perceived deceptive intent of the source. Moreover, we investigate the moderating role played by the strength of the relationship between the person who share the content and the receiver (Mittal et al., 2008).

This study contributes to knowledge in several ways. First, we extend previous research (Kim & Dennis, 2019) showing that the primacy effect of the source decreases sharing of misinformation only when the content is shared by a weak tie (vs. strong tie). Second, the study adds to the fake news literature (Visentin et al., 2019) by identifying trust in the message and perceived deceptive intent as two psychological mechanisms that influence willingness to share misinformation on social media.

This paper is structured as follows. First, the context for this study is presented, reviewing the literature on free speech, misinformation and social media and their interrelationships. Second, we develop the theoretical framework and present the results of two experimental studies. Finally, we discuss our findings and consider directions for future research.

2 | FREE SPEECH, FAKE NEWS AND SOCIAL MEDIA

Free speech can be defined as: “*the process in which people communicate freely and responsibly when using any means of protected speech or speech-like activities*” (Haskins, 1996). Through the 20th Century, free speech was governed by a dyadic system of communication, based around two actors, nation/states and individuals, with communication being mediated through a range of channels including the mass media (Balkin, 2018). However, the growth of social media platforms has turned this dyadic system into a pluralist system, where the characteristics of social media platforms result in a shift in decision making over what is, and is not, acceptable speech from a system of public governance to one of private governance (Balkin, 2018). This requires social media platforms to negotiate these decisions within a complex web of overlapping legal and ethical boundaries. In their role as arbiters of online communication, they balance their publicly held philosophies of free speech whilst requiring users to adopt terms of services that provide them with the capabilities to limit such speech (Heins, 2013).

When addressing issues of freedom of speech around potentially harmful content, social media platforms have typically focused on actions that maintain freedom of expression, through allowing messages to be posted, but limiting their ability to be spread and accessed. Initial approaches in this direction include the simple flagging of misinformation. A very recent example of this strategy is provided by Twitter, who attached warning and fact-check labels to the latest posts by Donald Trump on US election results (The Guardian, 2020). However, preventing the sharing of fake news by tagging misinformation to users was found to be ineffective (Meixler, 2017).

On the contrary, it has been recently demonstrated that flagging misinformation contents can increase credibility and accuracy of those fake news that failed to be flagged (Pennycook et al., 2018). As social media platforms face increased pressure to take actions to limit the phenomenon, the challenge is therefore to understand how to manage the spread of misinformation.

2.1 | Fake news, misinformation, and problematic content

Fake news, defined as “news that is intentionally and verifiably false and could mislead readers” (Allcott & Gentzkow, 2017 p. 213), is a form of deliberate presentation of misleading information (Gelfert, 2018) that proliferate in our media landscape (Vosoughi et al., 2018). While the term fake news came to the forefront relatively recently, the existence of misinformation is not new; however, it seems to have found in social media a very powerful medium to spread (Lazer et al., 2018) and influence consumers (Borges-Tiago et al., 2020).

During the last years, the reasons behind people believe in fake news and share it through social media have attracted considerable academic interest (Di Domenico et al., 2021). Individuals' pre-existing beliefs were found to play an important role in determining exposure to (Del Vicario et al., 2016) and belief in (Lewandowsky et al., 2012) fake news. Confirmation bias, indeed, fosters the creation of echo chambers on social media (Del Vicario et al., 2016) so that users are continuously exposed to information consistent with their worldview. Thus, the continuous exposure to misleading information can increase people's belief that the false information is true (Fazio et al., 2015; Pennycook et al., 2018) and thus stimulate sharing behaviour (Effron & Raj, 2020). A large stream of research has also focused on the cognitive processes involved in evaluating information, affecting individuals' belief in fake news. Consistent with dual-process theories of judgement (Kahneman, 2011; Petty & Cacioppo, 1986), Pennycook and Rand (2019) suggest that individuals that engage more in reasoning and analytic thinking are less likely to perceive fake news as accurate, regardless of their partisan alignment. Other studies that support these findings propose that belief in fake news is also associated with dogmatism, religious fundamentalism and bullshit receptivity (Bronstein et al., 2019). Therefore, when individuals are nudged to engage in deliberation, the accuracy in evaluating information increases and thus facilitates more accurate belief formation (Bago et al., 2020) and limits the sharing of fake news on social media (Fazio, 2020).

In social media settings, the sharing of fake news is inevitably linked to the concept of trust. Trust helps in understanding how users interact with each other and with contents on social media platforms (Gretry et al., 2017). In the context of fake news, trust in other users was found to be a predictor of both fake news' belief (Halpern et al., 2019) and sharing (Talwar et al., 2019). Also, media trust was found to predict fake news persuasion on social media users (Chen & Cheng, 2019). In general, information coming from

trusted sources is more likely to be propagated, even in the case of fake news (Buchanan & Benson, 2019).

While research has advanced knowledge of the topic important factors in the understanding of the fake news sharing process remain underexplored (Di Domenico & Visentin, 2020). More specifically, the majority of studies have focused on the psychological profiles and mechanisms that influence fake news believability. However, little is known on how the way the news is presented and the interpersonal relationship between the sharer and the receiver may influence social media users' sharing behaviour (Kim & Dennis, 2019).

3 | CONCEPTUAL FRAMEWORK

3.1 | Primacy effects & responses to misinformation

Studies of how the order of messages' characteristics influences consumer responses have been a longstanding feature of research within consumer psychology (e.g., Asch, 1946; Crano, 1977). Many research has explored primacy effects (Tormala et al.,), that earlier presented information has the strongest impact on evaluations (Lund, 1925). Within marketing, scholars have explored behavioural primacy in brand decision making (Woodside & Uncles, 2005) as well as primacy effects in service encounters (Garnefeld & Steinhoff, 2013). On social media, we suggest that the presentation order of and the emphasis given to specific fake news' characteristics could play an important role in determining user interactions with a fake news message, specifically likelihood to share information. In this study, we focus on two particular aspects of the fake news: the *source* and the *headline* (Kim & Dennis, 2019).

One of the key characteristics of social media is the difficulty that readers of information have in determining the veracity of information and thus the reliance upon heuristics to evaluate the legitimacy of individual messages (Sundar, 2008). We argue that the source of the news is a particularly important variable due to the fundamentally different nature the concept of source has on social media compared to traditional media. With traditional forms of media, the primary basis of selection is a source, where there is first a selection of a newspaper or magazine title, website or TV channel before an article is selected (Kim & Moravec, & Dennis, 2019). On social media, the source of material is typically disintermediated from the content, and information is made visible based on an algorithmically driven basis, linking through an individual's social graph or interests (Quattrociocchi et al., 2016). Sharers of information who are seeking to generate a social response to their messages understand the key role that headlines have in gaining the attention of users. In turn, this attention increases the likelihood that posts will be interacted with and appear in a news feed (Gu et al., 2017). This “Headline-primacy world” (Kim & Dennis, 2019) means that initial evaluations have more influence on the trust in the information than its source. Kim and Dennis (2019) have demonstrated that

highlighting the source of an article increases message believability regardless of the source's credibility and rating. Based on the above, we suggest that if the norms of social media are altered and the message source is given primacy, mirroring the traditional media format, this will significantly reduce information sharing than where the headline has primacy (Kim & Dennis, 2019). Formally:

H1: *The presentation format of fake news on social media influences fake news sharing such that source-primacy (vs headline-primacy) format decreases sharing behaviour.*

3.2 | Legitimation and trust in information

Creators of misinformation contents can use different techniques to fabricate legitimacy to gain credibility (Di Domenico et al., 2021). First, the creators tend to adopt websites names that recall legitimate sources of news (e.g., USA Today.com.co; NationalReport.net and WashingtonPost.com.co (Allcott & Gentzkow, 2017). 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). Second, also the headlines and sub-headlines are written in a journalistic style to appear more credible (Allcott & Gentzkow, 2017). Thirdly, legitimacy is evoked through the narration of the story. During the narration, so-called "Pseudo-experts" present their arguments making false claims, seeking legitimacy by falsely pretending to be an expert and/or defending their arguments with misleading and deceptive evidence (Sorral, 2017).

Legitimacy is not a stand-alone variable, it is auxiliary to other processes. In social media settings, the ability of a social media user to provide legitimate information was found to be a predictor of trust (Chari et al., 2016). Trust is "the willingness to be vulnerable to the actions of another based on the expectation that the other will perform a particular action important to the trustor" (Mayer et al., 1995, p.712) and it has been identified as one of the most important factors in online environments (Foehr & Germelmann, 2020). Due to the absence of physical elements, users in online contexts may feel more vulnerable (Lu et al., 2016). Therefore, the development of trust-building mechanisms in social media relationships may decrease perceived risks and uncertainty (Hong & Cha, 2013) and, by eliminating opportunistic behaviours, generate an atmosphere that allows members of a community to interact openly (Shin, 2013). Consequently, heightened trust facilitates information sharing and exchange in social media (Chu & Kim, 2011). Credibility is one of the main dimensions of trust, referring to the belief that the interlocutor is reliable (Ba & Pavlou, 2002).

In this vein, the presentation format of the fake news could help in providing heuristic cues to assess the credibility of the content shared. Previous studies showed that individuals are more likely to trust messages when the source of the information is regarded as reputable (Tormala et al., 2007). Moreover, exposure to fake news was found to lead to a profound mistrust of fake news sources (Kwon & Barone, 2020). Therefore, we argue that, in source-primacy format,

where information about the (illegitimate) source of false information is made prominent, social media users will perceive less trust in the information shared, which, in turn, will lower their willingness to share. Stated formally:

H2: *Trust in the fake news message mediates the relationship between fake news presentation format and fake news sharing, such that source-primacy (vs. headline-primacy) format reduces trust in the message that, in turn, reduces sharing.*

3.3 | Deceptive intent of the source

Deception is defined as a message knowingly transmitted by a sender to foster a false belief or conclusion by the receiver (Ekman, 1997). It occurs when communicators control the information contained in their messages to convey meanings that are different from the truth (Buller & Burgoon, 1996). Lying is part of everyday life (DePaulo et al., 1996) and often the motivations underlying deception are social, finalized at enhancing the self in the eyes of others (Kashy & DePaulo, 1996). In the case of fake news financial motivations come at play in eliciting the creation and dissemination of lies (Braun & Eklund, 2019). The evaluation of whether a piece of information is true or false is not an easy task. Previous literature shows that in the absence of special training, individuals' accuracy in detecting deception is low (Kraut, 1980; Vrij, 2000) and that they are more accurate in judging audible than visible lies (Bond & DePaulo, 2006). Thus, identifying lies (and liars) on social media becomes an even harder task, requiring social media users to adopt heuristic cues to evaluate the deceptive intent of the information source. Some linguistic cues were proven to be effective in deception detection in social media (Toma & Hancock, 2012). However, often social media users rely on authority heuristics to assess the credibility of the source (Sundar, 2008) and, in turn, perceive deception (Jensen et al., 2010). The more an individual assesses the source to be credible, the less the individual is likely to detect deception (Marett & George, 2004). We argue that, when primacy is placed on the (illegitimate) source, social media users will be more able to assess the credibility of sources of information, and will perceive a greater deceptive intent of the deceptive sources. This, in turn, will lower the willingness to share the information. Formally:

H3: *Perception of the deceptive intent of the source mediates the relationship between fake news presentation format and fake news sharing, such that source-primacy (vs. headline-primacy) format increases perceptions of the deceptive intent of the source that, in turn, reduces sharing behaviour.*

3.4 | Who shares the information?

As mentioned earlier, credibility assessments of information are usually dependent by evaluations of the credibility of the source of

such information. On social media, the role of the user who shares the information is an important heuristic in determining engagement with (Giakoumaki & Kreppa, 2020) and credibility of the shared information, as it could be psychologically perceived itself as the real source (Sundar, 2008). In this regard, we examine the role of the strength of the relationship between the sharer and the receiver of the information in fake news sharing behaviour.

Tie strength is defined as “the potency of the bond between members of a network” (Granovetter, 1973). These bonds can be classified in terms of strong and weak ties depending on the importance attached to the relationship (Ibarra, 1997), the frequency of social contacts (Nelson, 1989) and the level of intimacy and reciprocity between two individuals (Granovetter, 1973). Consequently, strong ties involve higher levels of closeness, reciprocity and emotional involvement than weak ties (Granovetter, 1973; Marsden & Campbell, 1984). Tie strength affects different marketing outcomes from services evaluation (Mittal et al., 2008) to inter-organizational alliances (Rindfleisch & Moorman, 2001). However, most of the research on tie strength concerns information propagation dynamics (Burt, 1987; Granovetter, 1973).

The strength of weak ties in facilitating information flow was first demonstrated by Granovetter (1973) in the context of employment opportunities. Weak ties were also found to be more effective in increasing WOM referrals by allowing broader information dissemination (Brown & Reingen, 1987). Moreover, previous studies demonstrate the power of weak ties in driving sales (Godes & Mayzlin, 2009), due to more accurate quality inferences that consumers can make based on information from weak ties (Zhang et al., 2015).

On the other hand, strong ties are more influential than weak ties (Brown & Reingen, 1987) especially in later stages of product adoption (Hu et al., 2019). This is because while weak ties facilitate the dissemination of information in terms of volume (Frenzen & Nakamoto, 1993), strong ties convey the transfer of more useful information for the receiver (Levin & Cross, 2004). Thus, strong ties are influential in raising awareness about products (De Bruyn & Lilien, 2008) and strong-tie communications on social media are positively associated with product attitudes and intentions to purchase (Wang et al., 2012). The more influential nature of strong ties is conveyed by higher credibility and trustworthiness than for weak ties (Rogers, 1995). This is because, in assessing trustworthiness, individuals take into account past experiences with others (Rotter, 1980), their perceived benevolence (Mayer et al., 1995) and the emotional ties between them (McAllister, 1995). Therefore, strong ties are generally associated with more trust than weak ties (Coleman, 1990).

Based on the above, there is an expectation that users process information less accurately when a message is shared by a strong tie rather than a weak tie. In this sense, it can be assumed that the interpersonal tie strength is a stronger heuristic in determining how users engage with shared content. Drawing on the above, potential changes in the presentation format of fake news could be less effective in a strong-tie condition. Specifically, we propose that while the effect of source-primacy format on users' willingness to share

fake news will persist when the content is shared by a weak tie, this effect will disappear for a strong tie. Moreover, we expect that the effect will be mediated by trust in the message and perceptions of deceptive intent of the source. Formally,

- H4:** *The interpersonal tie strength between the sharer and the receiver moderates the effect of fake news presentation format on fake news sharing such that source-primacy (vs. headline-primacy) format decreases sharing behaviour only when the fake news is shared by a weak (vs strong) tie.*
- H5:** *Trust in the message and perceived deceptive intent mediates the effect of the interpersonal tie strength on fake news sharing when the fake news is presented in the source-primacy (vs. headline-primacy) format.*

Figure 1 shows the overarching framework of the present study. We argue that fake news presented in a source-primacy (vs. headline-primacy) format on social media decreases users' sharing behaviour by reducing trust in the message and enhancing perceptions of deceptive intent (Study 1). We further suggest that this effect will only persist when the fake news is shared by a weak (vs. strong) interpersonal tie (Study 2).

4 | STUDY 1: EFFECT OF PRESENTATION FORMAT ON WTS

Study 1 aims to test whether placing primacy on the source (vs headline) of a fake news post on social media decreases consumers' willingness to share the post (H1). Furthermore, it investigates the mediating role of trust in the fake news message (H2) and perceptions of deceptive intent of the source (H3).

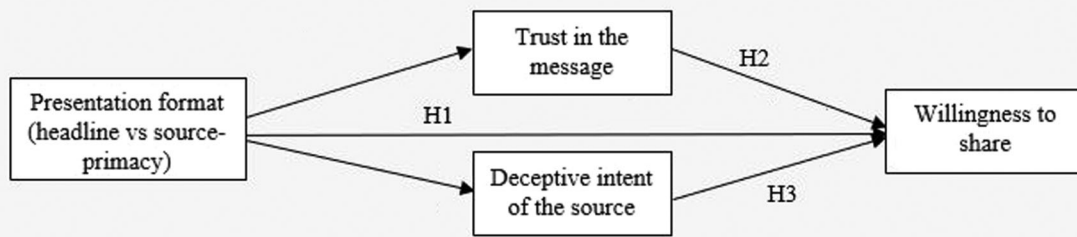
4.1 | Experimental stimuli and pretesting

Being recognized as a leading social media site with almost 2.5 billion monthly active users in 2019 (Statista, 2020), Facebook was chosen as the context of our investigation. Two versions of a mock Facebook post containing misinformation were created as the experimental stimuli. We tested our stimuli and manipulations in a set of pre-tests.

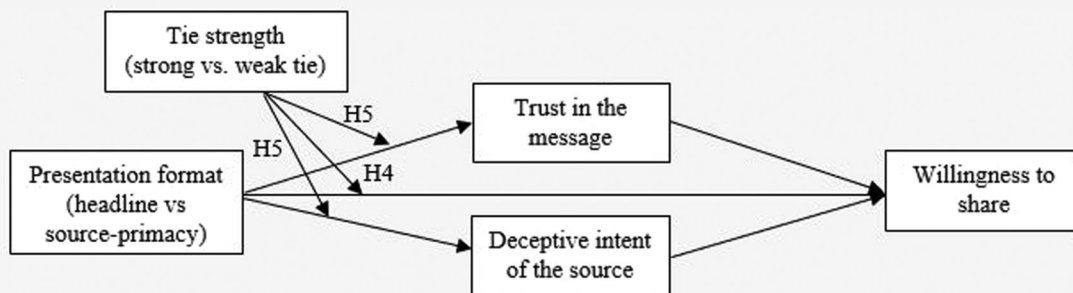
First, we pretested the credibility of the fake news headline. To create our stimuli, we invented a plausible source name (Portal24hs.com) and verified it to be inactive before the experiment, and three plausible headlines mimicking the fake news style of writing (Allcott & Gentzkow, 2017; Lazer et al., 2018). To avoid consumer bias towards political topics, we created the headlines around three relatable business topics (i.e., fast-food chains, shoes and smartphone manufacturers). They were then tested for credibility with 52 participants recruited from the Amazon Mechanical Turk online panel (male 57.7%; $M_{\text{age}} = 38.87$, $SD = 11.64$). Participants were pre-screened on the criterion of having an active Facebook account. This screening criterion has been applied for all the further pre-tests and

Study 1: main effect of the presentation format and the mediating role of trust in the message and deceptive intent of the source on willingness to share

Online Experiment N= 214


Study 2: The interplay between presentation format and tie strength on trust in the message, deceptive intent of the source and willingness to share

Online Experiment N= 277


FIGURE 1 Overarching framework of the study

main studies. Not mentioning any company name, the headlines read: “BREAKING: Video shows rats running inside a famous fast-food chain.”, “BREAKING: increase of explosions of phones made by a famous manufacturer” and “BREAKING: chemicals-made shoes catch on fire”. During the pre-test, participants initially viewed the three headlines in random order and then scored their credibility on a three-items semantic differential seven-points Likert scale (unbelievable/believable; not credible/credible; not convincing/convincing) (McCroskey & Teven, 2007). Descriptive statistics indicated (Table 1) that the second headline (i.e., “BREAKING: increase of explosions of phones made by a famous manufacturer”) scored the highest perceived credibility ($M = 4.34$, $SD = 1.92$). Thus, it was employed in our stimuli.

The manipulation of the independent variable (i.e., source-primacy vs. headline-primacy format) was successively tested in a second pre-test. We developed our stimuli to either place primacy on the headline of the message or the source. While the stimuli for the headline-primacy condition were designed to emulate the Facebook style of presentation where the design highlights the headlines and

de-emphasize the source, the stimuli for the source-primacy condition were different in that the source of the information preceded the message. Stimuli are available in Appendix A.

The second pre-test involved 30 participants recruited from the Amazon MTurk online panel (male 56.7%; age: $M_{age} = 39.53$, $SD = 13.12$). Participants were asked to rate each of the two stimuli on a seven-points Likert scale whether they noticed the headline or the source of the post first (e.g., “The source of the Facebook post was the first thing I noticed”). Descriptive statistics (Table 2) indicated stimulus 2 as the most evident source primacy and thus we adopted it for the subsequent online experiment.

4.2 | Procedures and measures

A total of 214 participants (male 49.8%; $M_{age} = 40.58$, $SD = 12.86$) were recruited from Amazon Mechanical Turk online panel and randomly assigned to one of the two experimental conditions.

TABLE 1 Credibility mean scores of headlines tested in pre-test 1

	N	Mean	SD	Cronbach's alpha
Headline 1	52	4.20	1.85	0.910
Headline 2	52	4.33	1.93	0.912
Headline 3	52	4.29	1.82	0.939

TABLE 2 Primacy mean scores for source and headline presentation format in pre-test 2

	N	Presentation format	
		Source-primacy	Headline-primacy
Stimulus 1	30	4.63	4.93
Stimulus 2	30	5.20	4.67

As in the second pre-test, we manipulated the Facebook post by giving primacy to either the headline of the message or the source. The presentation of the scenario was the same across the two conditions and it read: "Imagine you are at home and you are scrolling your Facebook page in your free time. At some point, you come across a posted news. The news' title states "BREAKING: increase of explosions of phones made by famous manufacturer." Please, take a look at the Facebook post and pay attention to its headline and source. The post shared looks like this." As a manipulation check, participants were asked to indicate which information's characteristic between headline and source was presented first. Next, they rated their willingness to share the news ($\alpha = 0.93$; Pennycook et al., 2020), which served as our dependent variable. Afterwards, we measured the perceived deceptive intent of the source ($\alpha = 0.95$; McCornack et al., 1992) and the trust in the message ($\alpha = 0.93$; Pan & Chiou, 2011). Finally, respondents rated their degree of personal involvement ($\alpha = 0.84$; Jiménez et al., 2020) and familiarity with the topic of the news ($\alpha = 0.87$; Pennycook & Rand, 2019) as controlled variables. Items for these variables are presented in the Appendix A. Finally, respondents answered to demographics questions (age and gender).

The original experimental design of Study 1 included also a second manipulation aimed at testing two types of fake news sharers, that was "real name" (i.e., John Smith) versus "anonymous sharer" (i.e., User90922). This manipulation was later suppressed due to its inability to affect the other tested variables. Specifically, as it did not provide participants with information on the strength of the interpersonal relationship with the fake news sharer, all the stimuli for Study 1 resembled the "weak ties" condition that has been manipulated and tested in Study 2. In this first study, we thus focused on the "source versus headline" primacy manipulation. The Stimuli for the suppressed manipulation can be found in the Appendix A.

5 | RESULTS

First, we checked our manipulations. As expected participants in the source-primacy condition identified the source as the first presented information, while the opposite occurred in the headline-primacy condition (Wald $\chi^2 [1, 213] = 21.849$; $p < 0.001$).

A one-way analysis of variance (ANOVA) was performed to test the direct effect of source-primacy vs headline-primacy format on willingness to share. The results show that participants in the source-primacy condition expressed a lower willingness to share ($M_{sp} = 2.91$) than their counterparts in the headline-primacy condition ($M_{sp} = 3.65$) so that source-primacy format has a significant negative effect on the willingness to share ($F(1,213) = 5.99$; $p = 0.01$). Moreover, there were no differences in personal involvement ($M_{sp} = 3.47$ vs. $M_{hp} = 3.26$; $F(1,213) = 0.445$; $p = 0.44$) or familiarity with the topic ($M_{sp} = 2.99$ vs. $M_{hp} = 2.93$; $F(1,213) = 0.360$; $p = 0.54$) across conditions. Therefore, H1 is supported.

To test whether trust in the message and deceptive intent of the source mediate the effect of presentation format on willingness to share, we performed a mediation analysis employing the Hayes

(Hayes & Preacher, 2014) Model 4 macro with 10,000 bootstrapped samples. In the model, presentation format (source-primacy vs. headline-primacy) served as the independent variable, trust and deceptive intent of the source as mediating variables, and willingness to share as the dependent variable. Headline-primacy was coded as 0, source-primacy as 1. Results reveal that the presentation format had a significant effect on consumers' trust in the message ($b = -0.89$; $p < 0.05$; 95% confidence interval [CI]: [-1.37, -0.40]), which, in turn, has a significant effect on willingness to share ($b = -0.67$; $p < 0.01$; CI 95% [0.50, 0.84]). Consistently, presentation format significantly influenced consumers' perceived deceptive intent of the source ($b = 0.78$; $p < 0.05$; CI 95% [0.126, 0.31]), decreasing their willingness to share ($b = -0.35$; $p < 0.01$; CI 95% [-0.52, -0.17]). Moreover, the information format is no longer a predictor of willingness to share when controlling for the mediators ($b = 0.13$; $p = 0.47$; 95% CI [-0.22, 0.48]), which indicates a fully mediated model. Overall, these results reveal that when primacy is placed on the source, trust in the message decreases, the deceptive intent of the source increases and, in turn, consumers' willingness to share is reduced. Thus, H2 and H3 are supported.

6 | STUDY 2: THE MODERATING ROLE OF TIE STRENGTH

Study 2 aims to investigate the moderating role of the interpersonal tie strength and it tests whether the relationship strength between the sharer and the receiver of a fake news post influences the receiver's willingness to share.

6.1 | Experimental stimuli and pretesting

Following on from the previous study, we created two different versions of a mock fake news Facebook post as stimuli.

To improve the validity of our results and increase the accuracy of a fake news style, we created a new plausible source name. The process involved pre-testing two potential new sources, 4FUNBZ.COM. CO and BLOG. THETRUTH. ORG, for credibility with 82 participants recruited on Amazon MTurk (male 50.7%; $M_{age} = 39.56$, $SD = 11.75$). Descriptive statistics revealed that the second name, BLOG. THETRUTH. ORG, scored higher in perceived credibility ($M = 2.49$, $SD = 1.01$), thus it was employed in our stimuli.

In terms of headlines, we used the second most credible headline from our previous pretest (see Table 1). Examples of our stimuli are available in the Appendix A.

6.2 | Procedures and measures

Two hundred and seventy-seven participants were recruited on Amazon MTurk (male 50.1%; $M_{age} = 40.66$, $SD = 12.84$) and randomly assigned to conditions in a 2 (presentation format: source-primacy

vs. headline-primacy) \times 2 (tie strength: strong vs. weak) between-subjects design.

In the experiment, we manipulated both the presentation format and the tie strength. As in the previous study, respondents were told to imagine they were scrolling their personal Facebook feed and came across the posted news. To manipulate the strength of the interpersonal relationship, we followed previous studies and prompted individuals to identify real social network connections (Zhang et al., 2014). The prompt in the strong tie condition read: "Imagine that you accidentally meet X, your closest friend. Please write down the name of this person here ____."; while in the weak tie the condition read: "Imagine that you accidentally meet X, a casual acquaintance of yours, that is someone you interact with from time to time, but not close enough to count as a friend. Please write down the name of this person here ____." The scenarios then reinforced the manipulation such that participants in the strong tie condition read "You and your friend have a little conversation and then you go back home. After a while, you decide to have a look at your Facebook Feed. When you open Facebook, you notice that your friend has shared a post. You and your friend are very close: you often interact on Facebook, you have several mutual friends and you are tagged together in many pics. The news' title that your friend shared states "BREAKING: chemicals-made shoes catch on fire" Please, take a look at the Facebook post and pay attention to its headline and source. The post shared looks like this:"; while participants in the weak tie condition read: "You and your acquaintance have a little conversation and then you go back home. After a while, you decide to have a look at your Facebook Feed. When you open Facebook, you notice that the acquaintance has shared a post. You and this acquaintance do not interact on Facebook and you do not have many mutual friends. The news' title that your acquaintance shared states "BREAKING: chemicals-made shoes catch on fire. Please, take a look at the Facebook post and pay attention to its headline and source. The post shared looks like this."

The post format was manipulated as in Study 1 by either placing primacy on the source or the headline of the posted news.

A three-item scale was used as a manipulation check of tie strength ($\alpha = .93$; Mittal et al., 2008). Participants were then asked to indicate which information characteristic was presented first between the source and the headline, which served as a manipulation check of the presentation format. Next, respondents were asked to rate their willingness to share ($\alpha = 0.78$; Hayes and Preacher, 2014), the trust in the message ($\alpha = 0.94$; Bart et al., 2005), and the perceived deceptive intent of the source ($\alpha = 0.89$; McCornack et al., 1992). Finally, we

measure the degree of personal involvement ($\alpha = 0.94$; Jiménez et al., 2020) and familiarity with the topic of the news ($\alpha = 0.93$; Pennycook & Rand, 2019) as control variables. Finally, participants answered two demographics questions (age and gender).

7 | RESULTS

An ANOVA for the tie strength manipulation revealed that participants in the strong tie condition rated the relationship with the person who shares the post as stronger compared to the weak tie condition ($M_{st} = 5.33$, $SD = 1.7$ vs. $M_{wt} = 2.52$, $SD = 1.1$; $p = 0.000$). Further, a binary logistic regression confirmed that respondents identified the correct information characteristics (source vs. headline primacy) (Wald χ^2 (1, 277) = 5.45; $p < 0.05$). Thus, the manipulations were effective.

To test our hypotheses, we performed a two-way ANOVA where presentation format (source-primacy vs. headline-primacy) served as the independent variable, tie strength (strong vs. weak) as the moderator, and willingness to share as the dependent variable. We controlled for personal involvement and familiarity (Kim & Dennis, 2019).

The results show a significant main effect of the presentation format on willingness to share (F [1,276] = 44.87; $p < 0.005$) meaning that respondents were less likely to share the post in the source-primacy condition ($M_{sp} = 1.86$, $SD = 1.09$ vs. $M_{hp} = 2.98$, $SD = 1.2$) than in the headline condition, while the direct effect of tie strength on sharing behaviour is not significant ($p = 0.2$). More importantly, a two-way ANOVA reveals a marginally significant interaction effect (F [1,274] = 12.56; $p = 0.06$) between the presentation format and the tie strength. Follow-up planned contrasts (Table 3) support our H4 as respondents were less likely to share the fake news post when a source-primacy format was shared by a weak tie ($M_{sp} = 1.7$; $F = 5.21$; $p < 0.05$), while no effect was found when the same post was shared by a strong tie ($M_{sp} = 2.02$; $F = 0.86$; ns).

To test the relationship between presentation format and tie strength on trust in the message and perceived deceptive intent, we performed a two-way ANOVA with each mediator. Weak tie condition was coded as 0, strong tie as 1. Results reveals a marginally significant interaction effect on trust (F [1,274] = 3.78; $p = 0.06$) and a full significant interaction effect on deceptive intent (F [1,274] = 4.65; $p = 0.03$). Specifically, we found that when the fake news post is

TABLE 3 ANOVA results of tie strength and presentation format conditions on willingness to share (WTS)

Tie strength	Presentation format	WTS mean	Effect		95% Confidence interval	
			F	p	Lower bound	Upper bound
Weak	Headline primacy	2.18	5.21	0.23	1.92	2.43
	Source-primacy	1.75		0.23	1.48	2.01
Strong	Headline primacy	1.98	0.864	0.82	1.72	2.23
	Source-primacy	2.02		0.82	1.75	2.28

Abbreviation: ANOVA, analysis of variance.

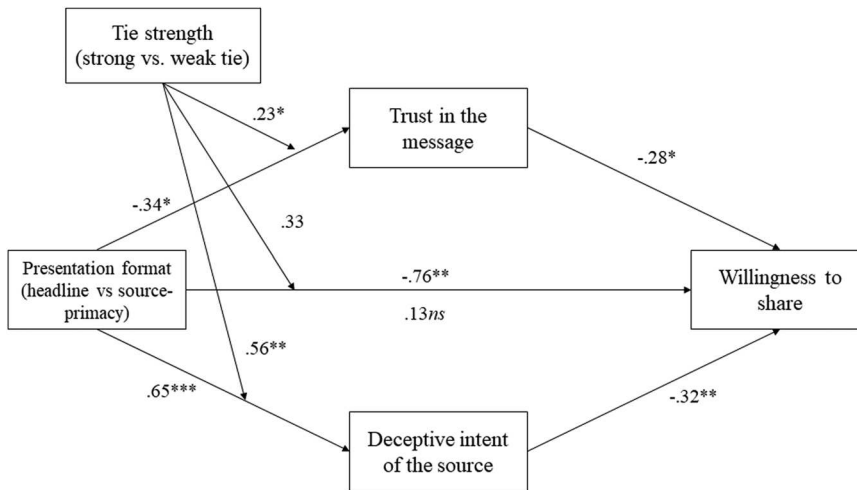


FIGURE 2 Model of presentation format and willingness to share the news. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

shared by a weak tie, source-primacy format reduces trust in the message ($M_{sp} = 1.7$ vs. $M_{hp} = 2.2$; $F = 7.31$; $p < .01$) and increases perceived deceptive intent of the source ($M_{sp} = 5.7$ vs. $M_{hp} = 5.0$; $F = 9.42$; $p < 0.00$), but these effects do not persist when the post is shared by a strong tie (trust $p = 0.27$, deceptive intent $p = 0.64$).

Next, we tested the mediating role of trust in the message and perceived deception intent of the source in the relationship between presentation format and tie strength using a moderated mediation model (Model 8, bootstrapped 10,000; Hayes & Preacher, 2014). The results reveal that when the fake news post is shared by a weak tie, source-primacy format decreases willingness to share through trust ($b = -0.16$, 95% CI: $[-0.18, -0.06]$) and increases perceived deception intent ($b = .24$, 95% CI: $[0.04, 0.31]$), while these relationships do not persist when the fake news is shared by a strong tie. Thus, H5 is confirmed. Figure 2 shows the coefficients of the effects of the variables in our model.

8 | DISCUSSION AND CONCLUSION

Finding effective ways to address the spread of misinformation on social media is one of the key contemporary challenges facing social media firms. This challenge is heightened by the need for techniques to achieve this to comply with users and public norms of free speech, limiting the scope for blanket deletion of content. Across two studies, we show that the presentation format of fake news messages influences user trust in messages, perception of deceptive intent of the source, and subsequently likelihood to share. We further uncover an important boundary condition on the impact of the interpersonal tie strength on willingness to share. Specifically, Study 1 demonstrates that fake news messages presented in a source-primacy format reduce users' willingness to share via decreased trust in the message and increased perceptions of deceptive intent of the source. Study 2 shows that the effect of source-primacy format is effective in decreasing sharing behaviour but it is conditioned by the weak tie between the sharer and the receiver of fake news.

The research has important theoretical and practical implications. First, the findings shed light on the role of the primacy effect of altering the order of source and headline information upon users' likelihood to share. This is consistent with previous studies suggesting that the primacy effect can have a significant impact on how information is interpreted (Kim & Dennis, 2019) and acted upon (Tormala et al., 2007). While Kim and Dennis (2019) found source-primacy messages increasing believability, we show that not only the presentation format influences the credibility of the message but also directly affects sharing behaviour.

Second, findings from this study enrich the literature on fake news (Talwar et al., 2019; Visentin et al., 2019) and primacy-effects (Kim & Dennis, 2019) by unveiling two psychological mechanisms that explain the sharing of misinformation. Previous studies have mainly focused on confirmation bias (Quattrociochi et al., 2016) and prior exposure (Pennycook & Rand, 2019) as drivers of fake news believability, and believability as a driver of sharing. This study extends this literature and, by adopting a broader perspective, identifies trust in the message and perceptions of deceptive intent in the source as the factors that explain the decrease of misinformation sharing.

Third, this study complements and extends previous research on primacy effects (Kim & Dennis, 2019) by identifying the strength of the interpersonal bond between the person who shares the fake news and the receiver as a relevant boundary condition on the impact of presentation format on the sharing behaviour. Specifically, we show that the source primacy approach is effective in decreasing willingness to share and increasing the perceived deceptive intent of the source only for weak tie connections. As social media users' weak ties outnumber strong ties (De Meo et al., 2014), giving primacy to the source of a fake content may serve as an effective strategy to limit the spread of misinformation.

This study also provides several practical implications. First, it offers practitioners insights into the role of fake news presentation format on consumers' sharing behaviour. Specifically, results of this study demonstrate that changing the way news is presented (i.e., presenting source information before headline information) can en-

hance the capabilities of social media users to detect misleading sources, thus reducing the spread of misinformation through social media platforms. Second, findings from this study can benefit social media companies to the management of fake news sharing and freedom of speech. Rather than requiring social media companies to be proactive in removing contents, which can bring accusations of censorship, our results provide guidance on the use of presentation formats that can limit the spreading of fake news without affecting users' freedom of expression.

9 | LIMITATIONS AND FUTURE DIRECTIONS FOR RESEARCH

Despite the important contributions of this study, results must be interpreted considering their limitations. By exposing respondents to a fictional Facebook news' feed containing only one post, the treatment situation could be considered artificial. Further research should validate these findings in more real-world settings. Although manipulating presentation format in live social media settings is challenging, there are new promising approaches to social media experimental research that could be effective in replicating social media settings (e.g., see: Jagayat & Choma, 2020). Additionally, while we analysed the interplay of presentation format and tie strength on sharing behaviour, other factors influencing fake news believability, such as prior exposure were not examined. Further research can explore these relationships and investigate whether the effect of source-primacy on fake news sharing persists when users have been already exposed to the fake news content.

In light of a social influence perspective (Mittal et al., 2008), further research could consider the effect of social media feedback mechanisms, such as the number of likes (Sundar, 2008), the number and valence of comments (Vinales & Thomas, 2020), or the number of shares that a misinformation post receives. Finally, as spreading misinformation is a widespread problem across other social media platforms, such as Twitter (Grinberg et al., 2019), future research should confirm the effect of source primacy across different social media contexts and platforms.

DATA AVAILABILITY STATEMENT

Data available on request due to privacy/ethical restrictions.

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