“If this account is true, it is most enormously wonderful”:

Interestingness-if-true and the sharing of true and false news

Sacha Altay, Emma de Araujo, Hugo Mercier

Published in Digital Journalism

Altay, S., de Araujo, E. & Mercier, H. (2021) “If this account is true, it is most enormously wonderful”: Interestingness-if-true and the sharing of true and false news. Digital Journalism. *DOI: 10.1080/21670811.2021.1941163*

Abstract

Why would people share news they think might not be accurate? We identify a factor that, alongside accuracy, drives the sharing of true and fake news: the ‘interestingness-if-true’ of a piece of news. In three pre-registered experiments (N = 904), participants were presented with a series of true and fake news, and asked to rate the accuracy of the news, how interesting the news would be if it were true, and how likely they would be to share it. Participants were more willing to share news they found more interesting-if-true, as well as news they deemed more accurate. They deemed fake news less accurate but more interesting-if-true than true news, and were more likely to share true news than fake news. As expected, interestingness-if-true differed from interestingness and accuracy, and had good face validity. Higher trust in mass media was associated with a greater ability to discern true from fake news, and participants rated as more accurate news that they had already been exposed to (especially for true news). We argue that people may not share news of questionable accuracy by mistake, but instead because the news has qualities that compensate for its potential inaccuracy, such as being interesting-if-true.

Keywords: News sharing; Fake News; Accuracy; Interestingness-if-true; Misinformation; Social Media.

In 1835, New York City newspaper *The Sun* published a series of articles about the discovery of life on the moon, including extraordinary creatures such as man-bats. The discoveries were the talk of the day, and sales of the newspaper exploded. At the time, many respectable scientists believed life on the moon a possibility, and the author of the hoax had presented his articles as authentic scientific reports. Yet if the discovery of man-bats and other lunarians became so widely discussed, it was not only because the story was plausible—after all, newspapers are full of plausible stories. It was because, in the words of a contemporary observer, "if this account is true, it is most enormously wonderful" (quoted in Goodman, 2010, p. 268).

This "great moon hoax" would now be called fake news, understood as "fabricated information that mimics news media content in form but not in organizational process or intent" (Lazer et al., 2018, p. 1094; see also Tandoc, Lim, et al., 2018). Fake news has received a formidable amount of scholarly attention over the past few years (Allen, Howland, et al., 2020). If, on the whole, they represent at most 1% of people's news diet (Allen et al., 2020; see also: Grinberg et al., 2019; Guess et al., 2019, 2020; Nelson & Taneja, 2018; Osmundsen et al., 2020), some fake news have proven very culturally successful: for instance, in 2016, millions of Americans endorsed the (false) Pizzagate conspiracy theory, according to which high-level Democrats were abusing children in the basement of a pizzeria (Fisher et al., 2016; Jensen, 2016).

Even if the wide diffusion of a piece of fake news does not entail that it strongly affects those who endorse it (Guess et al., 2020; Kim & Kim, 2019; Mercier, 2020), its diffusion is still culturally and cognitively revealing. But what exactly does it reveal? Several studies have found that most people are able to distinguish true from fake news, consistently giving higher accuracy ratings to the former than the latter (Bago et al., 2020; Pennycook et al., 2019, 2020; Pennycook & Rand, 2019). These results suggest that the issue with the sharing of fake news does not stem from an inability to evaluate fake news' accuracy, but instead from a failure to let these accuracy judgments guide sharing decisions.

Scholars have suggested different reasons why people might consume and share news they do not deem accurate (e.g., Duffy et al., 2019; Tandoc, Ling, et al., 2018; Tsfati & Cappella, 2005). One article found that people high in 'need for chaos,' who want to 'watch the world burn' were particularly likely to share politically offensive fake news (such as conspiracy theories)—not a motivation one would expect to be associated with concern for accuracy (Petersen et al., 2018). By contrast, other studies have stressed the phatic function of news sharing, when news are shared to create social bond, in which case the humorous

character of a piece of news might be more important than its accuracy (Berriche & Altay, 2020; Duffy & Ling, 2020).

Even if people share news for a variety of reasons (see, Kümpel et al., 2015), the most common factor appears to be the interestingness of the news. People say they share news they expect recipients to find relevant (Duffy & Ling, 2020), and they share news higher in perceived informational utility (Bobkowski, 2015). Content judged more interesting by participants is more likely to spread on Twitter (Bakshy et al., 2011), and articles from *The New York Times* rated as more interesting or surprising are more likely to be in the Most Emailed List (Berger & Milkman, 2012). Beyond news, people talk more about interesting products (Berger & Schwartz, 2011), and more interesting and surprising urban legends are more likely to be passed along (see, e.g. Heath et al., 2001). Furthermore, to entertain others, people are known to exaggerate stories by making them more interesting—which in turn increases their likelihood of being shared (e.g., Burrus et al., 2006; for a review see: Berger, 2014). In pragmatics, according to Relevance Theory, human communication is governed by expectations of relevance, leading senders to maximize the relevance of communicated information—and interestingness is likely strongly related to relevance (Sperber & Wilson, 1995).

Accuracy is one of the factors that makes a piece of news interesting: ceteris paribus, more accurate information is more relevant information (see, e.g., Sperber & Wilson, 1995). When it comes to misinformation, it has been suggested that "most people do not want to spread misinformation, but are distracted from accuracy by other salient motives when choosing what to share" (Pennycook et al., 2019, p. 1). Indeed, even if people are able to detect fake news, by systematically judging it less accurate than true news, that does not seem to stop them from sharing fake news (Pennycook et al., 2019, 2020). One hypothesis is that people who are too distracted or too lazy share inaccurate news because of a failure to think "analytically about truth and accuracy" when deciding what to share (Pennycook et al., 2019, p. 1). In support of this account, it has been shown that people are more likely to take the accuracy of a piece of news into account in their sharing decision if they have just been asked to consider its accuracy, rather than if they have only been asked whether to share the news (Fazio, 2020; Pennycook et al., 2019, 2020). These results, among others (see, e.g., Pennycook & Rand, 2019), suggest that people have the ability to distinguish accurate from inaccurate news, but that, unless specifically prompted, they largely fail to use these abilities in their sharing decisions.

Accuracy, however, is only one component of relevance or interestingness. The statement "I have a prime number of geraniums in my garden" would be irrelevant in nearly every possible context, irrespective of its accuracy. Since we are not aware of any fully developed theory of the interestingness of statements, we rely on Relevance Theory, arguably the dominant theoretical framework in pragmatics (see, e.g., Carston & Uchida, 1998; Clark, 2013; Sperber & Wilson, 1995; Wilson & Sperber, 2012). Within Relevance Theory, with cognitive processing costs held constant, the relevance of a message, which we equate here with its interestingness, is a function both of the plausibility of the message, and of its potential cognitive effects: whether it would generate rich inferences, and create substantial changes of mind (whether in beliefs or intentions). The statement about the geraniums is irrelevant as no useful inferences can be drawn from it, and it doesn't change anyone's prior beliefs. On the other hand, the statement "COVID-19 is a bioweapon that has been developed and released by the Chinese government" would have very significant cognitive effects if it were true, for instance by making us think that a conflict with China was more likely, or by making us distrust Chinese products. Thus, unless one is entirely sure that this statement is false, it has some relevance—indeed, more relevance than many true statements (such as the statement about the geraniums). There are many ways for a statement to elicit cognitive effects: to be about people we know, to bear on issues we have strong opinions on, to elicit strong emotions, to call for drastic action, etc.

For convenience, we will refer interchangeably here to interestingness and to the more technical, well-defined concept of relevance from Relevance Theory. Within this framework, interestingness-if-true should differ from interestingness in systematic ways. Interestingness-if-true assumes that the piece of news being considered is true. By contrast, as mentioned above, interestingness should vary with the perceived accuracy of the news. As a result, in order to understand sharing decisions, interestingness-if-true is a more natural complement of accuracy than interestingness.

The relative weight of accuracy and interestingness-if-true will vary as a function of one's goal (among other factors). When one's main motivation in sharing news is informing others, accuracy should play a crucial role. However, laypeople's main motivation to share news stories is often more social than informational (Ihm & Kim, 2018; Lee & Ma, 2012). To fulfil certain social goals, such as to entertain or comfort, the accuracy of a piece of news might play a less important role: "users may have low expectations in terms of the credibility of online news, and simply share news stories as long as they are interesting and relevant to attract attention and initiate interactions" (Ma et al., 2014, p. 612). Still, whatever one's goal

might be, both accuracy and interestingness-if-true should influence sharing decisions, since they are both necessary, to some degree at least, to make a statement interesting.

The interestingness of at least some fake news has been recognized (e.g. Tsfati et al., 2020) and several studies have attempted to understand what makes some fake news attractive, finding that successful fake news tends to share some traits, for instance evoking disgust, being surprising, or bearing on celebrities (Acerbi, 2019; Vosoughi et al., 2018). However, these studies have not attempted to disentangle what we suggest are the two main components of a piece of news' relevance: its accuracy, and how interesting it would be if it were true.

The ability to evaluate how interesting a piece of information would be if it were true is important. When we encounter a piece of information that we think very interesting if true, but whose accuracy is uncertain, we should be motivated to retain it, and to inquire further into its accuracy. For example, when encountering threat-related information that we deem mostly implausible (say, that a neighbor we liked is in fact violent), it is good to realize the import the information would have if it were true, and to attempt to establish its validity.

The interplay of the accuracy and the interestingness-if-true of a piece of information, and their impact on people's propensity to share it, could be studied in a number of ways. Qualitative work might attempt to elicit whether participants explicitly ponder not only the accuracy, but also the interestingness-if-true of a piece of information, in the manner of the observed quoted above as saying, of a story about life on the moon, "if this account is true, it is most enormously wonderful." Using trace data analysis, it might be possible to test whether successful news—whether true or fake—tends to be interesting-if-true. Here, we have adopted an experimental approach, for two main reasons. First, we needed to measure, and establish, the validity of the concept of the interestingness-if-true of a piece of news. Second, the experimental design allows us to measure whether news that are more interesting-if-true are more likely to be shared, while controlling for a variety of factors that make trace data analysis more difficult to interpret (e.g. the source of the news, how participants become exposed to them, etc.). With these precise measures, it is easier to fit statistical models informing us of the relative role of accuracy and interestingness-if-true in sharing intentions.

The present experiments offer, to the best of our knowledge, the first evidence that these two factors—accuracy and interestingness-if-true—interact in the willingness to share news, whether they are true or false, and that interestingness-if-true systematically differs from interestingness. Participants were presented with news items—half of which were true news, the other fake news—, asked to rate the accuracy and interestingness-if-true of the

items (and, in Experiment 3, their interestingness), and to indicate how willing they would be to share the items.

Based on the literature reviewed above, we suggested three main hypotheses (pre-registered for all three experiments):

> H_1: Participants judge fake news to be less accurate than true news (see, Bago et al., 2020; Pennycook et al., 2019, 2020; Pennycook & Rand, 2019).

Because people share news they expect others will find relevant (Bobkowski, 2015; Duffy & Ling, 2020) and that relevance depends on accuracy and on interestingness-if-true (Sperber & Wilson, 1995), both factors should drive sharing intentions.

> H_2: The more accurate a piece of news is deemed to be, the more willing participants are to share it.

> H_3: The more interesting-if-true a piece of news is deemed to be, the more willing participants are to share it.

Experiments

In each experiment, participants were presented with ten news stories in a randomized order (five true and five fake) and asked to rate their accuracy, interestingness-if-true, and to indicate how willing they would be to share them. Experiment 2 is a replication of Experiment 1 with additional research questions not directly related to our main hypotheses (such as how trust in mass media correlates with fake news detection). Experiment 3 is a replication of the first two experiments with novel materials and additional questions aimed at establishing the validity of the interestingness-if-true question (such as its face validity and whether it differs from interestingness and accuracy as we predict it does).

We pre-registered the experiments' sample size, exclusion criterion, hypotheses, research questions, and statistical analyses.

Participants

U.S. participants were recruited on Prolific Academic and paid $0.53. In Experiment 1, we recruited 301 participants, and removed two who failed the attention check, leaving 299

participants (154 women, M_{Age} = 33.07, *SD* = 12.26). In Experiment 2, we recruited 303 participants, and removed four who failed the attention check, leaving 299 participants (171 women, M_{Age} = 32.23, *SD* = 11.81). In Experiment 3, we recruited 300 participants, and removed one who failed the attention check, leaving 299 participants (162 women, M_{Age} = 32.77, *SD* = 11.06).

Methods

Materials

In Experiment 1 and Experiment 2, we selected 15 recent fake news stories related to COVID-19 from fact-checking websites such as "Snopes.com" and from a recent study (Pennycook et al., 2020). We selected 15 true news stories related to COVID-19 from reliable mainstream media such as *The New York Times* or *The Wall Street Journal*, and from Pennycook et al. (2020). The news stories were presented in a 'Facebook format' with a headline and a picture, without a source. We did not entirely rely on the news of Pennycook et al. (2020) because some of them were already outdated.

Experiment 3 used a novel set of 15 true news since the ones used in Experiments 1 and 2 were outdated, but relied on the same fake news stories as in Experiments 1 and 2.

Procedure

After having completed a consent form, each participant was presented with five fake news stories and five true news stories in a randomized order. Participants had to answer questions, also presented in a randomized order, about each piece of news. The number of questions per piece of news vary across experiments (three questions in Experiment 1, five questions in Experiment 2, and four questions in Experiment 3).

Before finishing the experiment, participants were presented with a correction of the fake news stories they had read during the experiment, including a link to a fact-checking article. Fact-checking reliably corrects political misinformation and backfires only in rare cases (see, e.g., Walter et al., 2019). Finally, participants completed an attention check that required copying an answer hidden in a short paragraph (see ESM) and provided demographics information. Participants were recruited between the sixth of May 2020 and the the seventh of July 2020.

Design

In Experiment 1, we measured how accurate participants deemed the headlines using the same accuracy question as Pennycook and Rand (2018): “To the best of your knowledge, how accurate is the claim in the above headline?” (1[Not at all accurate], 2[Not very accurate], 3[Somewhat accurate], 4[Very accurate]). We measured news’ interestingness-if-true with the following question: “Imagine that the claim made in the above headline is true, even if you find it implausible. If the claim were true for sure, how interesting would it be?” (1[Not interesting at all], 2[Not very interesting], 3[Slightly interesting], 4[Interesting], 5[Very interesting], 6 [Extremely interesting], 7[One of the most interesting news of the year]). Note that this scale was intentionally inflated to avoid potential ceiling effects (in particular, we expected some fake news to receive very high ratings). We used the following question to measure sharing intentions: “How likely would you be to share this story online (for example, through Facebook or Twitter)?” (1[Extremely unlikely], 2[Moderately unlikely], 3[Slightly unlikely], 4[Slightly likely], 5[Moderately likely], 6[Extremely likely]) (past work has shown a significant correlation between news people declare they want to share and news they actually share, Mosleh et al., 2019).

In Experiment 2, we added one question per news, and an additional question in the demographics. In addition to rating news on accuracy, interestingness-if-true, and willingness to share, participants answered the following question: “Have you read or heard of this news before?” ([Yes], [No], [Maybe], based on Pennycook et al., 2018). In the demographics, we added the following question on trust in mass media used by Gallup Poll or Poynter Media Trust Survey (Guess et al., 2018; Jones, 2018): “In general, how much trust and confidence do you have in the mass media – such as newspapers, TV, and radio – when it comes to reporting the news fully, accurately, and fairly?” (1[Not at all], 2[Not very much], 3[A fair amount], 4 [A great deal]).

In Experiment 3, we added one question per news, three questions at the end of the survey to evaluate how participants felt about the interestingness-if-true question, and an additional question in the demographics (the same as in Experiment 2 regarding trust in the media). In addition to rating news on accuracy, interestingness-if-true, and willingness to share, participants answered the following questions: “How interesting is the claim made in the above headline ?” on the same scale as the interestingness-if-true question, i.e. (1[Not interesting at all], 2[Not very interesting], 3[Slightly interesting], 4[Interesting], 5[Very interesting], 6 [Extremely interesting], 7[One of the most interesting news of the year]). Before the demographics, participants read the following text:

> We thank you for answering questions about all these pieces of news. Before we move on to the demographics, we have a few more questions. For each piece of news, we've asked you: "Imagine that the claim made in the above headline is true, even if you find it implausible. If the claim were true for sure, how interesting would it be?".

And they were asked the three following questions in a randomized order: "Were you able to make sense of that question?", "Did you find it difficult to answer that question?", and "Did you feel that you understood the difference between this question and the question "How interesting is the claim made in the above headline?". For each of these questions, participants had to select "Yes," "No," or "Not sure." The aim of these questions was to test whether participants understood the concept of interestingness-if-true, and were able to answer questions that relied on it.

Results and Discussion

Note on the statistical analyses

All the statistical analyses below are linear mixed effect models with participants as random factor. We initially planned to conduct linear regressions in the first experiment, but realized that it was inappropriate as it would not have allowed us to control for the non-independence of the data points—a linear regression would have treated participants' multiple answers as independent data points. We refer to 'statistically significant' as the p-value being lower than an alpha of 0.05. All the betas reported in this article have been standardized. The Confidence Intervals (CI) reported in square brackets are 95% confidence intervals. All the effects that we refer to as statistically significant hold when controlling for demographics and all other predictors (see Electronic Supplementary Materials (ESM)). All statistical analyses were conducted in R (v.3.6.1), using R Studio (v.1.1.419). On OSF we report a version of the results with two additional research questions, and a clear distinction between confirmatory analyses (main hypotheses and research questions) and exploratory analyses. We do not make this distinction in the present manuscript because it excessively hinders the readability of the results section. Preregistrations, data, materials, ESM, and the scripts used to analyze the data are available on the Open Science Framework at https://osf.io/9ujq6/?view_only=892bb38d2647478f9da5e8e066ef71c1. We report the results of two pre-registered research questions regarding the link between sharing decisions and the estimated percentage of Americans who have already read or heard of the pieces of news in

ESM and on OSF. One experiment was conducted to test the same hypotheses before the three experiments reported here (see ESM and OSF). Unfortunately, its between-participants design proved unsuitable to conduct appropriate statistical tests—allowing us to only compare the mean ratings per news item. Still, the results were qualitatively aligned with those of the two experiments reported here (see ESM and OSF).

Main findings

Validity of the interestingness-if-true measure

We start by establishing the validity of our interestingness-if-true measure, using two broad strategies. First, we use indirect measures, looking at four different ways in which the interestingness-if-true ratings should behave, if our construct is valid. Second, we turn to the questions that have explicitly asked about the participants' understanding of the concept.

We first test whether participants' rating of the news was coherent with our construct of interestingness-if-true, we conducted four different analyses. The first analysis tests whether interestingness-if-true is orthogonal to accuracy, as suggested in the introduction. By contrast, interestingness should partly depend on accuracy (i.e. more plausible news should be deemed more interesting, everything else equal). As a result, we predicted that the (perceived) accuracy of the news would be more strongly correlated with the news' interestingness than with the news' interestingness-if-true, which his what we observed: the perceived accuracy of the news was indeed more strongly correlated with the news' interestingness (*cor* = 0.15, t(2988) = 8.59, p < 0.001) than with the news' interestingness-if-true (*cor* = - 0.04, t(2988) = -2.17, p = 0.03) (Hotelling's t(2987) = 17.40, p < .001).

Second, since interestingness, but not interestingness-if-true, should partly depend on accuracy, and that sharing should also partly depend on accuracy, sharing should be more closely related to interestingness than to interestingness-if-true. In line with this hypothesis, sharing intentions were more strongly correlated with the news' interestingness (*cor* = 0.48, t(2988) = 30.19, *p* < 0.001) than with the news' interestingness-if-true (*cor* = 0.39, t(2988) = 22.91, *p* < 0.001) (Hotelling's t(2987) = 9.33, p < .001).

Third, interestingness-if-true is, by definition, how interesting a piece of news would be if it were true. By contrast, the interestingness of a piece of news takes into account its accuracy, which is maximal if the news is deemed true, and can only decrease from there. Thus, for each piece of news, its interestingness should be at most equal to its interestingness-if-true and in many cases—when the news isn't deemed completely certain—lower. In accordance with this hypothesis, for each piece of news, the average interestingness score was

never higher than the average interestingness-if-true score (see the full descriptive statistics in ESM).

Fourth, when a piece of news is deemed true, its interestingness and its interestingness-if-true should converge. By contrast, if the piece of news is deemed implausible, it might be deemed much more interesting-if-true than interesting. Thus the more accurate a piece of news is judged, the more its interestingness and interestingness-if-true should be correlated. In line with this hypothesis, the news' interestingness and interestingness-if-true were more strongly correlated among news perceived as more accurate (ß = 0.08, [0.06, 0.10], $t(2981.79) = 8.15$, $p < .001$) (for a visual representation of the interaction see Figure S2 in ESM).

Turning to the explicit questions asked to test the validity of the interestingness-if-true construct, we found that 98% of participants (293/299) reported having understood the difference between the question on the news' interestingness and the news' interestingness-if-true, 81% of participants (243/299) reported having understood the question on interestingness-if-true, and 90% of participants (269/299) reported that they found it easy to answer the interesting-if-true question.

We thus have solid grounds for relying on the answers to the interestingness-if-true questions, since (i) the answer provided behave as expected in relation with better established constructs such as accuracy and, (ii) the vast majority of participants explicitly said they understood the question.

Having established the validity of the interestingness-if-true questions, we turn to the tests of our hypotheses.

Participants deemed fake news less accurate than true news (H_1)

In all three experiments, participants rated fake news as less accurate than true news (see Figure 1 and Table 1). This effect is large, and confirms previous findings showing that, on average, laypeople are able to discern fake from true news (Allen, Arechar, et al., 2020; Bago et al., 2020; Pennycook et al., 2019, 2020; Pennycook & Rand, 2019).

Participants deemed fake news more interesting-if-true than true news

In all three experiments, participants deemed fake news more interesting-if-true than true news (see Figure 1 and Table 1). The difference between the interestingness-if-true of true and fake news was smaller than their difference in term of accuracy. Note that, as

expected, fake news were particularly over-represented among the news rated as "One of the most interesting news of the year."

Participants were more likely to share true news than fake news

In all three experiments, participants were more likely to share true news than fake news (see Figure 1 and Table 1). In line with previous findings (Pennycook et al., 2019, 2020), participants deemed fake news much less accurate than true news, but were only slightly more likely to share true news compared to fake news.

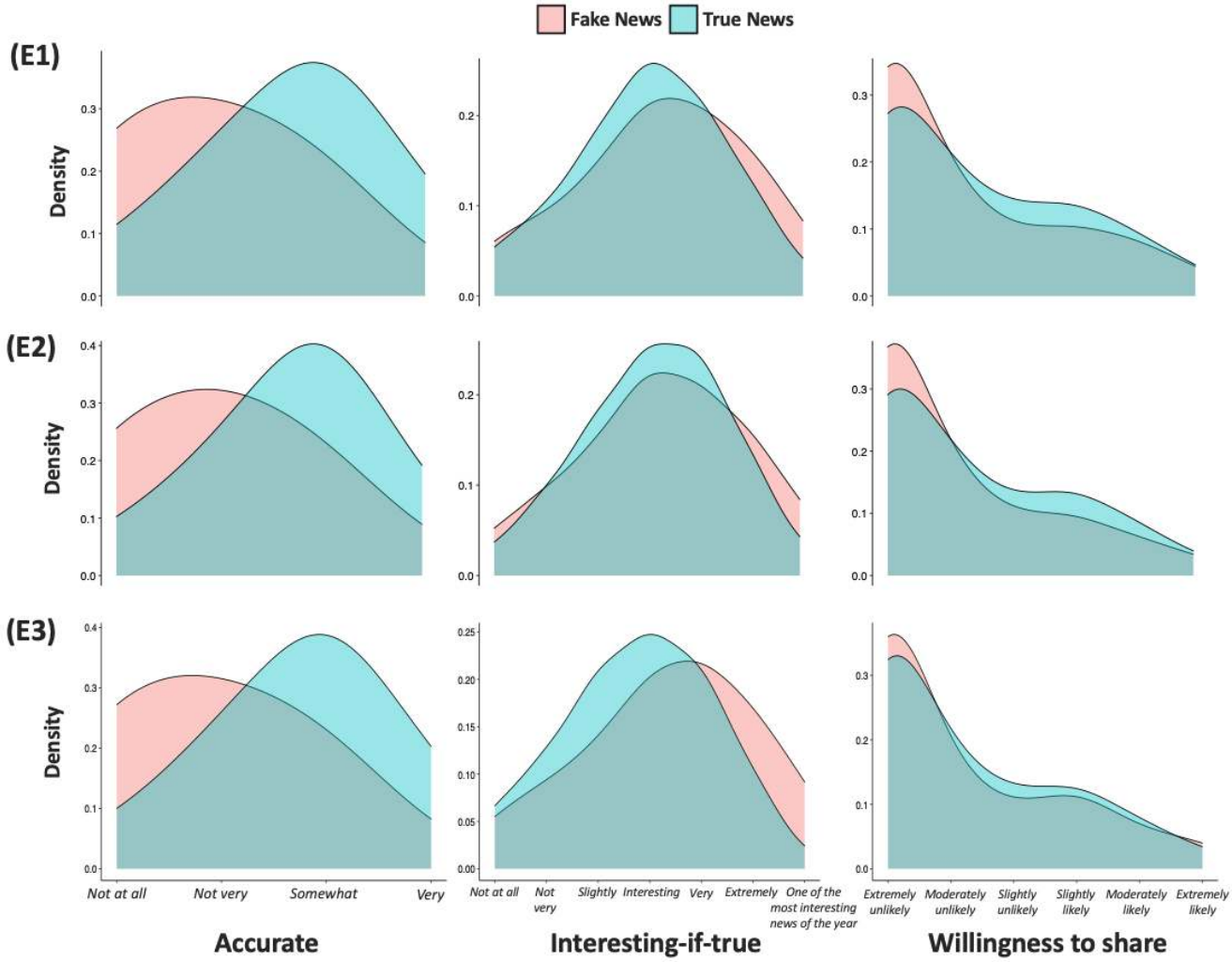

Figure 1. Ratings of fake news and true news in Experiments 1, 2, and 3 (E1, 2, 3) (note that the true news of Experiment 3 were not the same as those of Experiments 1 and 2). Density plots represent the distribution of participants' answers according to the type of news (fake or true) for perceived accuracy, interestingness-if-true, and sharing intentions.

		True News	Fake News	
Accuracy	*Experiment* 1	*M* = 2.71 *SD* = 0.88	*M* = 1.99 *SD* = 0.89	**ß = 0.75** [0.69, 0.81] t(2690) = 23.60
	Experiment 2	*M* = 2.74 *SD* = 0.83	*M* = 2.04 *SD* = 0.88	**ß = 0.75** [0.69, 0.81] t(2690) = 23.18
	Experiment 3	*M* = 2.76 *SD* = 1.99	*M* = 1.98 *SD* = 0.88	**ß = 0.83** [0.77, 0.89] t(2690) = 26.75
Interestingness-if-true	*Experiment* 1	*M* = 4.02 *SD* = 1.45	*M* = 4.27 *SD* = 1.64	**ß = 0.16** [0.10, 0.22] t(2690) = 4.97
	Experiment 2	*M* = 4.17 *SD* = 0.83	*M* = 4.30 *SD* = 1.60	ß = 0.09 ** [0.02, 0.15] t(2690) = 2.71
	Experiment 3	*M* = 3.80 *SD* = 1.42	*M* = 4.36 *SD* = 1.64	**ß = 0.36** [0.30, 0.42] t(2690) = 11.42
Willingness to Share	*Experiment* 1	*M* = 2.51 *SD* = 1.56	*M* = 2.27 *SD* = 1.56	**ß = 0.16** [0.10, 0.21] t(2690) = 5.81
	Experiment 2	*M* = 2.43 *SD* = 1.53	*M* = 2.12 *SD* = 1.47	**ß = 0.20** [0.15, 0.26] t(2690) = 7.41
	Experiment 3	*M* = 2.29 *SD* = 1.49	*M* = 2.20 *SD* = 1.54	ß = 0.07 * [0.01, 0.12] t(2690) = 2.42

Table 1. Ratings of true and fake news in Experiments 1, 2 and 3. The rightmost column correspond to the statistical difference between true and fake news. ß in bold represent p-values below $p < .001$. ** = $p < .01$, * = $p < .05$

Participants were more willing to share news perceived as more accurate (H_2)

In all three experiments, participants were more likely to share news perceived as more accurate (see Figure 2 and Table 2).

Participants were more willing to share news perceived as more interesting-if-true (H_3)

In all three experiments, participants were more likely to share news perceived as more interesting-if-true (see Figure 2 and Table 2). Together, accuracy and interestingness-if-true explained 21% of the variance in sharing intentions.

		All News	**True News**	**Fake News**
Effect of news' **accuracy** on participants' willingness to share *(main effect)*	*Experiment* 1	**ß = 0.24** [0.21, 0.26] $t(2794.07) = 18.96$	**ß = 0.15** [0.11, 0.19] $t(1369.06) = 7.84$	**ß = 0.27** [0.23, 0.30] $t(1370.84) = 14.22$
	Experiment 2	**ß = 0.25** [0.23, 0.28] $t(2778.76) = 20.08$	**ß = 0.38** [0.34, 0.42] $t(1376.50) = 19.28$	**ß = 0.24** [0.21, 0.28] $t(1363.63) = 14.22$
	Experiment 3	**ß = 0.24** [0.21, 0.26] $t(2810.27) = 18.43$	**ß = 0.14** [0.11, 0.18] $t(1313.88) = 8.00$	**ß = 0.27** [0.23, 0.31] $t(1416.50) = 13.35$
Effect of news' **interestingness-if-true** on participants' willingness to share *(main effect)*	*Experiment* 1	**ß = 0.37** [0.35, 0.40] $t(2891.11) = 27.47$	**ß = 0.41** [0.38, 0.45] $t(1403.73) = 20.96$	**ß = 0.37** [0.34, 0.41] $t(1424.86) = 19.15$
	Experiment 2	**ß = 0.36** [0.33, 0.38] $t(2871.76) = 25.96$	**ß = 0.17** [0.13, 0.21] $t(1328.08) = 9.06$	**ß = 0.34** [0.30, 0.38] $t(1402.72) = 17.03$
	Experiment 3	**ß = 0.38** [0.36, 0.41] $t(2879.64) = 28.22$	**ß = 0.42** [0.38, 0.46] $t(1400.04) = 21.58$	**ß = 0.37** [0.33, 0.41] $t(1429.49) = 18.35$
Interaction between news' **interestingness-if-true** and **accuracy** on participants' willingness to share	*Experiment* 1	**ß = 0.11** [0.08, 0.13] $t(2798.21) = 9.09$	**ß = 0.08** [0.05, 0.11] $t(1302.44) = 5.22$	**ß = 0.12** [0.09, 0.16] $t(1360.16) = 6.79$
	Experiment 2	**ß = 0.10** [0.08, 0.12] $t(2790.05) = 8.40$	**ß = 0.07** [0.03, 0.10] $t(1333.39) = 3.90$	**ß = 0.11** [0.08, 0.15] $t(1338.33) = 6.18$
	Experiment 3	**ß = 0.14** [0.11, 0.16] $t(2813.17) = 11.28$	**ß = 0.08** [0.05, 0.11] $t(1328.73) = 5.18$	**ß = 0.18** [0.14, 0.21] $t(1391.64) = 9.26$

Table 2. Effect of the accuracy, interestingness-if-true, and interaction between interestingness-if-true and accuracy, on sharing decisions for all news, true news, and fake news. ß in bold represent p-values below $p < .001$.

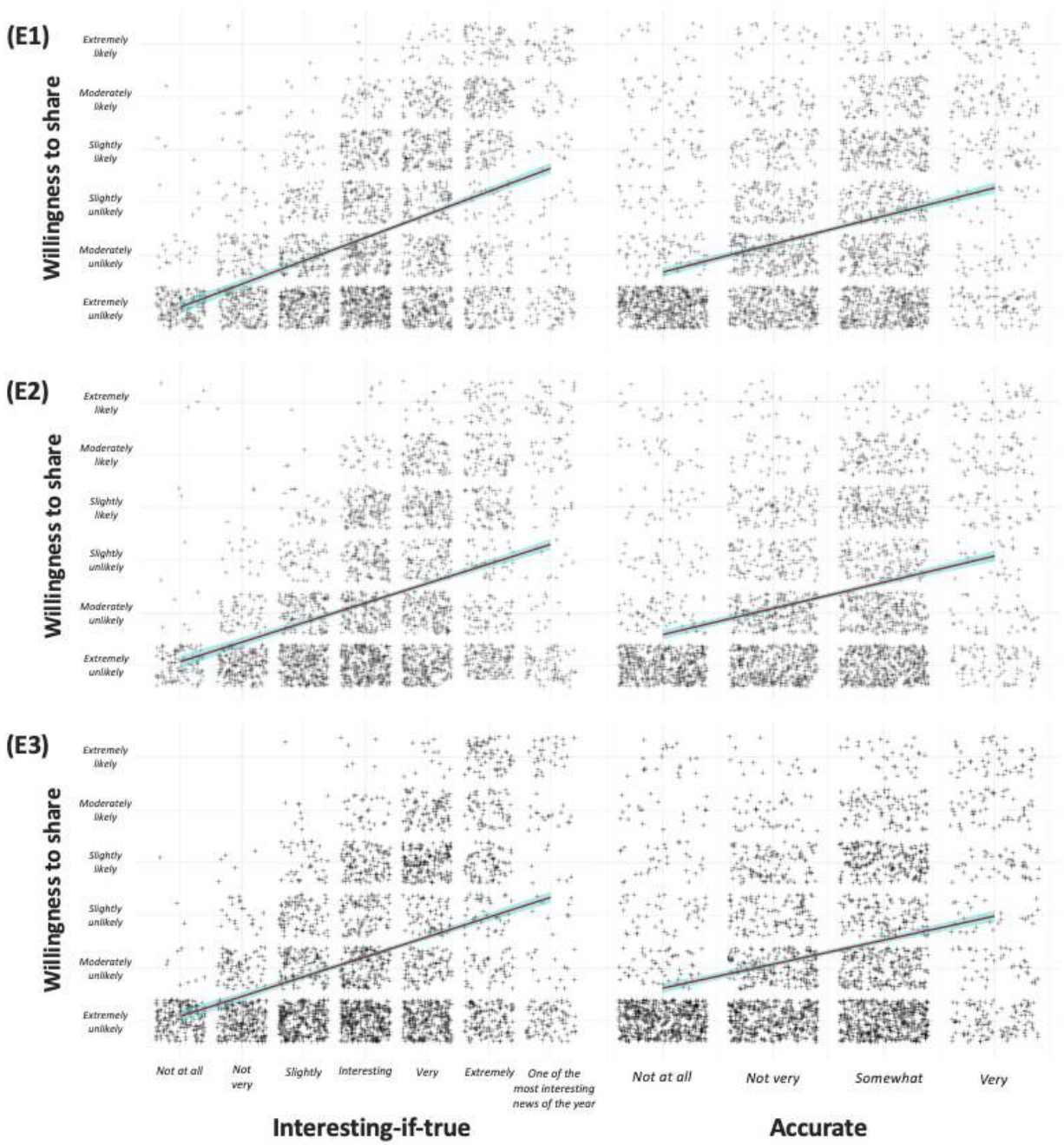

Figure 2. Main effects of interestingness-if-true and accuracy on sharing intentions in Experiments 1, 2, and 3 (E1, 2, 3). Scatter plots represent the distribution of sharing intentions as a function of the pieces of news' interestingness-if-true and accuracy. The red lines represent the regression lines, the shaded area in blue are the 95% confidence intervals.

Participants were more willing to share news perceived as both more interesting-if-true and accurate

In all three experiments, the more a piece of news was deemed both interesting-if-true and accurate, the more likely it was to be shared (See Figure 3 and Table 2). This effect held true for both fake news and true news (see Table 2).

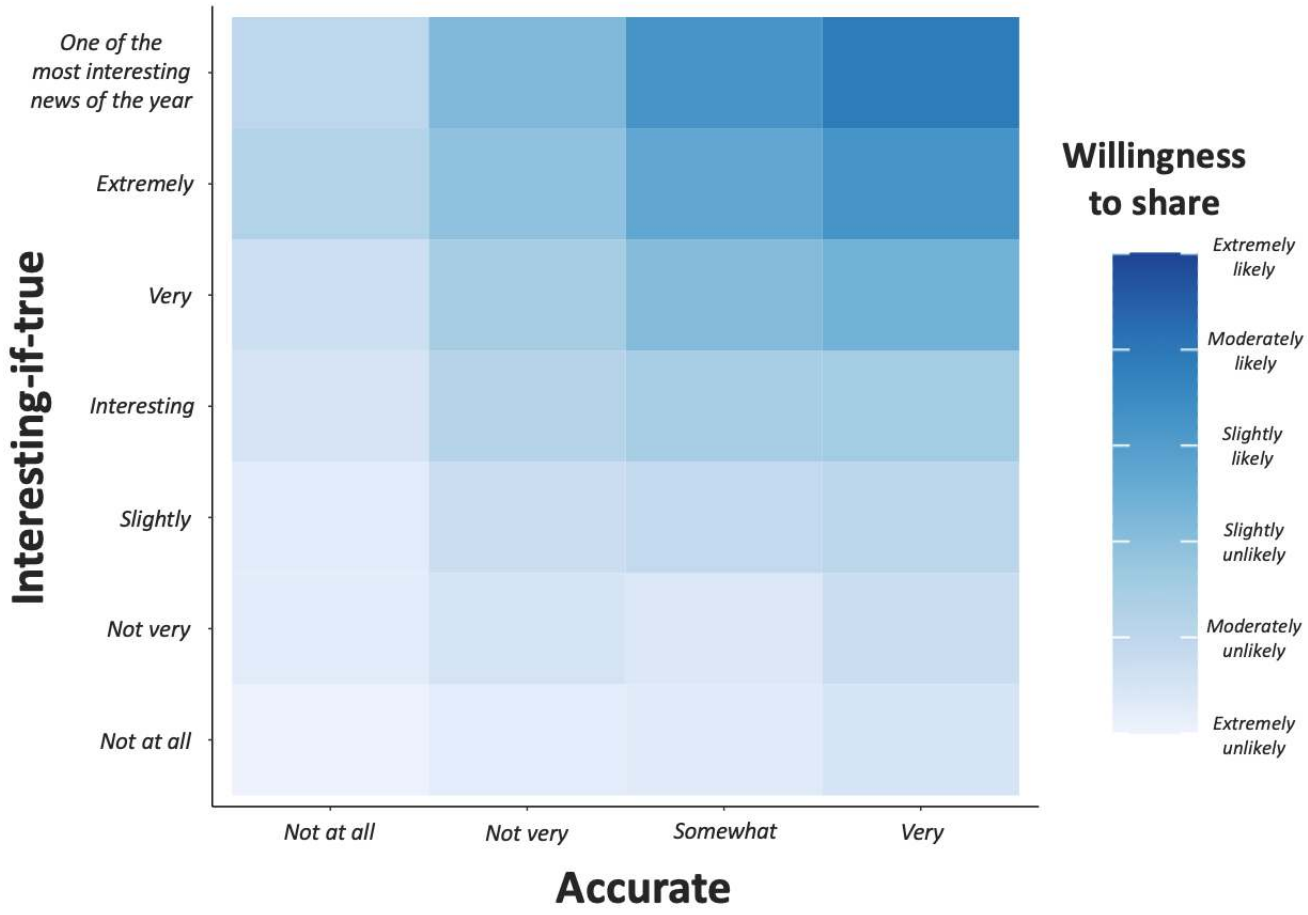

Figure 3. Heatmap representing the relationship between interestingness-if-true, accuracy, and sharing intentions in Experiments 1, 2, and 3 (combined data).

Other findings

In parallel to the main focus of the paper—the relation between interestingness-if-true and news sharing—we investigated three questions often broached in the literature on misinformation: (i) How does trust in mass media relates to fake news detection and fake news sharing? (ii) Does asking people to think about accuracy reduce fake news sharing? (iii) Do people come to believe in fake news because they have been repeatedly exposed to them?

Relation between trust in mass media, fake news detection, and fake news sharing (Experiments 2 and 3)

People with low trust in the media have been found to pay less attention to the media in general, or to seek out alternative media sources (Ladd, 2012; Tsfati, 2003, 2010; Tsfati & Peri, 2006). Maybe as a result of these choices, people with low trust in the media also tend to be less well-informed (Ladd, 2012). We investigated whether lower trust in the media correlates with a poorer capacity to discern fake from true news.

To measure the relation between trust in mass media and the capacity to distinguish fake from true news we tested the interaction between trust in mass media and accuracy ratings for fake and true news. We found that lower trust in mass media was associated with a poorer capacity to distinguish fake from true news (Experiment 2: ß = 0.12, [0.07, 0.17], $t(2689) = 4.41$, $p < .001$; Experiment 3: ß = 0.15, [0.09, 0.22], $t(2689.00) = 4.70$, $p < .001$). Figure 4 offers a visual representation of this interaction.

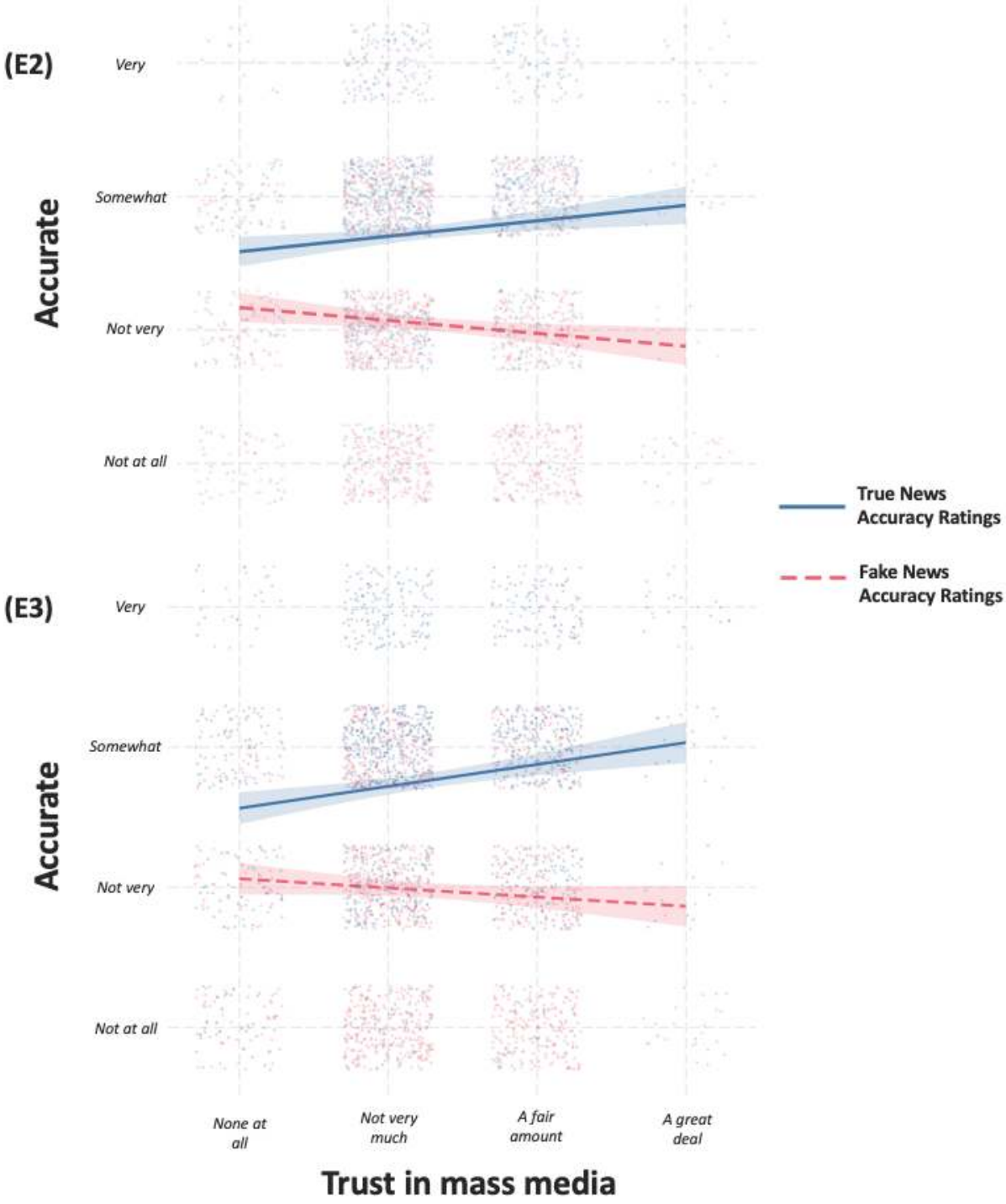

Figure 4. Interaction plot between participants trust in mass media and type of news (True or Fake) on news Accuracy Ratings in Experiments 2 (E2) and 3 (E3).

However, contrary to previous findings (e.g., Hopp et al., 2020; see also, Noppari et al., 2019; Ylä-Anttila, 2018) lower trust in mass media was not significantly associated with a greater willingness to share fake news (ß = - 0.02, [-0.11, 0.07], t(297) = 0.48, p = .63).

The 'accuracy nudge' (Experiment 1)

Several studies have found that asking participants to rate how accurate a piece of news is before sharing it reduces the propensity to share fake news (more than true news) (Fazio, 2020; Pennycook et al., 2019, 2020). The small number of questions per news in Experiment 1 (presented in a randomized order), allowed us to measure to effect of this accuracy nudge, whereas in the other experiments there might have been too many questions between the accuracy and the sharing questions.

As expected from previous studies on the accuracy nudge, we found that asking participants to rate how accurate a piece of news is before considering sharing it, in comparison to after, decreased participants' willingness to share the news (before: $M = 2.31$, $SD = 1.53$; after: $M = 2.51$, $SD = 1.61$; ß = -0.12, [- 0.18, -0.06], $t(1986.92) = - 4.10$, $p < .001$). However, contrary to previous findings (Fazio, 2020; Pennycook et al., 2019, 2020), this ordering effect was not significantly stronger for fake news than for true news (interaction term: $p = .90$), nor was it stronger for less accurate compared to more accurate news (interaction term: $p = .39$). The small effect sizes, and the non-specificity to fake news, does not offer strong support for the accuracy nudge.

The illusory truth effect (Experiment 2)

A growing body of research suggests that people may come to believe in fake news because they have been repeatedly exposed to them (Pennycook et al., 2018; Pennycook & Rand, 2018), an effect of repetition on truth judgments known as 'illusory truth,' which had been observed in many contexts before being applied to fake news (for a general review see, Dechêne et al., 2010).

In line with the illusory truth effect, we found that participants deemed more accurate news that they had encountered prior to the experiment (M = 2.84, SD = 1.06), than news that they didn't remember encountering (M = 2.18, SD = 0.84) (ß = 0.30, [0.27, 0.34], t(2653.43) = 16.41, p <.001).

However, the illusory truth effect is only one potential explanation for this finding. Alternatively, the effect of prior exposure could be due to participants having encountered a piece of news in at least one trusted outlet. If the illusory truth explanation is correct, we expect that the effect of prior exposure should be approximatively as strong for true and fake news. By contrast, if the latter explanation is correct, we expect the effect to be much stronger

for true news, since participants are much more likely to have encountered true rather than fake news in trustworthy outlets.

We found that the effect of having already encountered a piece of news was much stronger for true news (encountered: M = 3.36, SD = 0.66; new: M = 2.44, SD = 0.79), than for fake news (encountered: M = 2.16, SD = 1.09; new: M = 1.95, SD = 0.81) (ß = 0.33, t(2548.40) = 10.00, [0.27, 0.39], p<.001) (see Figure 5 for a visual representation of this interaction). This effect thus appears to have been largely due to participants deeming more accurate true news they have already encountered in trusted outlets.

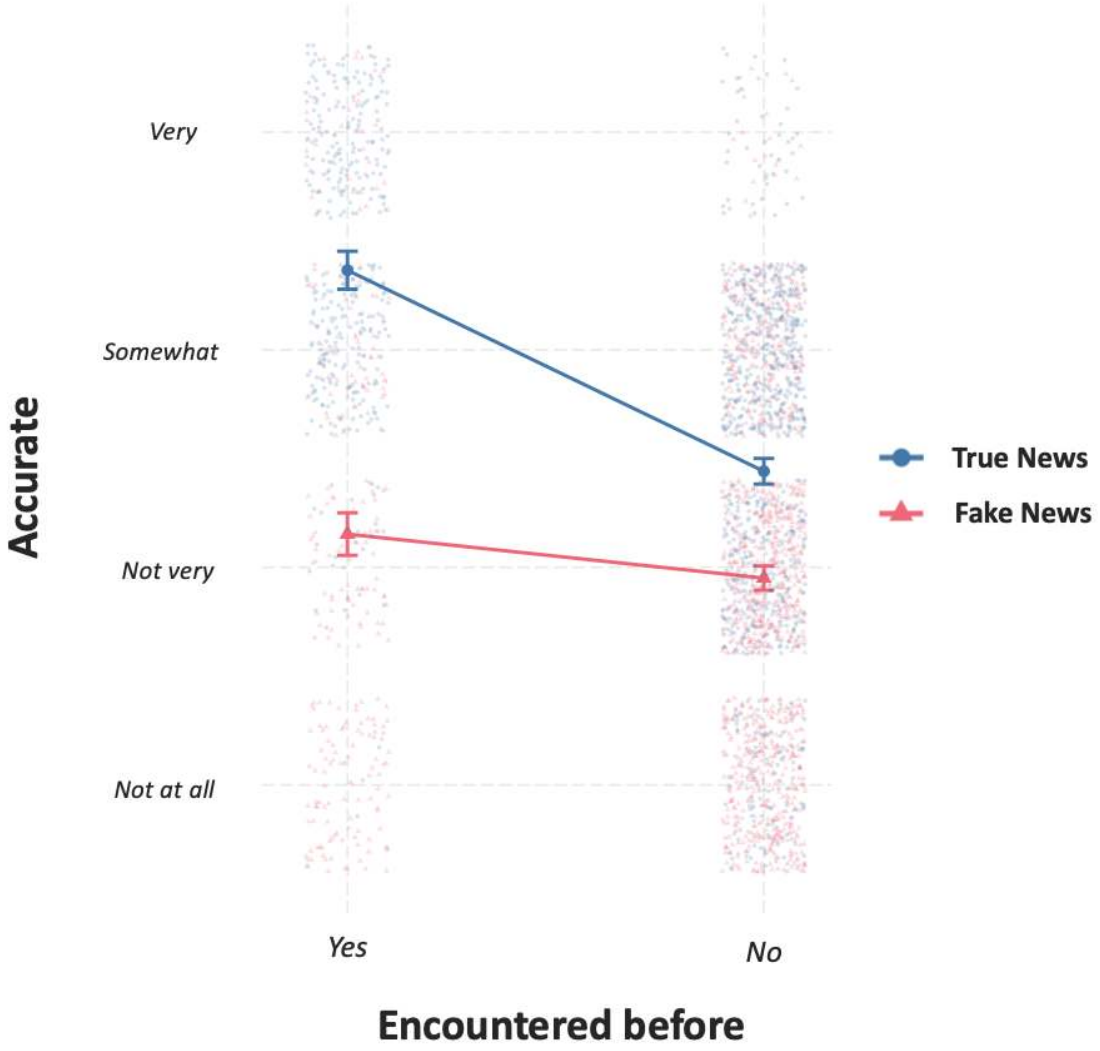

Figure 5. Interaction plot between participants' prior exposure to the news (encountered before or not) and type of news (True or Fake) on news' Accuracy Ratings.

In turn, the effect of prior exposure might account for a large share of the effect of trust in media on Accuracy Ratings we observed (i.e. the fact that higher trust in mass media was associated with a greater ability to discern true from fake news). This benefit of higher trust in the media could result from prior exposure, with people who trust the mass media having a higher probability of having been exposed either to the true news we used (on the positive relationship between trust in the media and knowledge of the news, see Ladd, 2012). In accordance with this explanation, participants with higher trust in mass media were more likely to have previously encountered true news compared to fake news (interaction term: ß = 0.12, [0.05, 0.20], t(2402.27) = 3.29, p<.001) (see Figure S1 in ESM for a visual representation of the interaction).

Limitations

Our study has several limitations. Three are common to many experimental studies on the determinants of news sharing, the first of these being that we do not record actual sharing decisions, but only sharing intentions. However, past studies have shown that sharing intentions correlate with actual sharing (Mosleh et al., 2019), and that people's rating of the interestingness of pieces of news correlates with their popularity on social media (Bakshy et al., 2011).

The second limitation we share with other studies is that our sampling of true and fake news is somewhat arbitrary, that this sampling is likely to influence our results and that we cannot generalize to all fake news stories and true news stories. For example, we find that a piece of news' interestingness-if-true explained a larger share of the variance in sharing intentions than its perceived accuracy. Had we selected news that were all approximatively equally interesting-if-true, the role of this factor would have dropped. The contrast was clear when we compared true and fake news. True news varies much less in perceived accuracy than fake news. It is thus not surprising that, compared to interestingness-if-true, perceived accuracy played a much larger role in explaining the intention to share fake news than true news. These considerations suggest that past studies asking participants about the interestingness of news from the mass media might have effectively approximated interestingness-if-true, given the overall high Accuracy Ratings of news from the mass media (and thus the little role differences in accuracy judgment would play in evaluating interestingness). Still, even if the exact extent of variation in interestingness-if-true and accuracy in the news people encounter would be difficult to measure, our results clearly

reveal that, provided some variation in either measure, both play a significant role in the intention to share news.

A third limitation concern our within-participants design: by simultaneously asking participants how willing they are to share a piece of news, how accurate it is, and how interesting it would be if true (as well as how interesting it is in Experiment 3), we risk (i) inflating the correlations between the responses and (ii) compromising the ecological validity of the willingness to share measure (e.g. since when making real life sharing decisions, people are not asked to explicitly evaluate the accuracy of the news). Controlling for question order is not enough to fully address these issues; instead, a between-participants design in which participants are asked only how willing they are to share the news is required. The first experiment that we pre-registered in this project but did not report here had a between-participants design (see ESM), which allows us to compute the correlations between the answers in that between-participants experiments and the present Experiments 1 and 2, which were within-participants experiments (Experiment 3 used a different set of news). If the concerns above are genuine, we should observe low correlations between people's decisions in the two designs. Across experimental designs, the mean sharing ($r_{experiment1} = 0.78$, $r_{experiment2} = 0.85$), interestingness-if-true ($r_{experiment1} = 0.77$, $r_{experiment2} = 0.79$) and accuracy ($r_{experiment1} = 0.98$, $r_{experiment2} = 0.96$) scores of news stories were very strongly correlated. The strength of these correlations is similar to the strength of the correlations between Experiment 1 and Experiment 2 ($r_{sharing} = 0.78$, $r_{interestingness\text{-}if\text{-}true} = 0.98$, $r_{accuracy} = 0.95$). These results suggest that our within-participants design did not introduce drastic distortions in the answers.

A fourth limitation is more restricted to our study. If we can expect people to be able to gauge the interestingness of a piece of news, being able to explicitly isolate its interestingness-if-true might be a more cognitively complex task. In particular, it might be difficult for people to imagine a world in which a piece of information they deem very unlikely to be true would be true, and thus to evaluate the interestingness of this piece of information in such a world. People find it easier to create counterfactuals of events that nearly happened (e.g. people are more likely to imagine having caught a flight if they have only missed it by a few minutes, than a few hours, see, Meyers-Levy & Maheswaran, 1992; Roese & Olson, 1996). Similarly, it might be easier for people to understand the full interestingness-if-true of information they think is potentially accurate, than of information they are sure is inaccurate. As a result, interestingness-if-true ratings could be affected by Accuracy Ratings, thereby reducing the explanatory power of the interestingness-if-true

ratings. Our results thus offer only a lower bound on the explanatory power of the interestingness-if-true of news.

Conclusion

Why do people share news of questionable accuracy, such as fake news? Is it because they fail to take accuracy into account? Alternatively, fake news could have other qualities that make up for its questionable accuracy. In particular, fake news could be very interesting if it were true, and this 'interestingness-if-true' could make up for the lack of perceived accuracy in explaining people's decisions to share fake news.

Past studies have already shown that the interestingness of a piece of news plays an important part in people's decision to share it (e.g., Bakshy et al., 2011). However, interestingness encompasses both perceived accuracy (a piece of news perceived as more accurate is, *ceteris paribus*, more interesting), and interestingness-if-true. In this article, we attempt to separate the roles of accuracy and of interestingness-if-true in the decision to share true and false pieces of news. To this end, in three experiments participants were presented with a series of true or false pieces of news, and asked to rate their accuracy, how interesting they would be if they were true (as well as simply how interesting they are in Experiment 3), and to say how likely they would be to share the news.

First, participants deemed true news to be more accurate than fake news (ß = 0.78, [0.74, 0.81], $p < .001$), the type of news explaining 15% of the variance in accuracy judgments. Second, even if participants were more likely to say they would share true news than fake news, the effect was much smaller than the effect of true vs. fake on perceived accuracy (ß = 0.14, [0.11, 0.17], $p < .001$), explaining 0% of the variance in sharing intentions. Moreover, considered on its own, perceived accuracy only explained 6% of the variance in sharing intentions (ß = 0.24, [0.22, 0.25], $p < .001$). These results replicate previous studies (Pennycook et al., 2019, 2020) in showing that perceived accuracy alone is not sufficient to understand sharing decisions.

Second, our measure of interestingness-if-true explained more than twice as much variance in sharing intentions (14%) than accuracy (ß = 0.37, [0.35, 0.38], $p < .001$). Fake news was deemed more interesting-if-true than true news (ß = 0.20, [0.17, 0.24], $p < .001$), which could explain why, even though fake news was rated as much less accurate than true news, people did not intend to share fake news much less than true news.

Our results suggest that people may not always share news of questionable accuracy by mistake. Instead, they might share such news because they deem it interesting-if-true. Several results suggest that participants can have positive reasons of sharing news of questionable accuracy, reasons that might relate to the interestingness-if-true of the news.

For instance, older adults are more prone than younger adults to share fake news (Grinberg et al., 2019; Guess et al., 2019). However, older individuals are also better at discerning fake from true news (Allcott & Gentzkow, 2017; Pennycook & Rand, 2019). As a recent review suggests, this apparent contradiction can be resolved if we think that older individuals "often prioritize interpersonal goals over accuracy" (Brashier & Schacter, 2020, p. 4). Their use of social media is more oriented toward strengthening ties with peers and relatives than gaining new information and, as a result, it is understandable that accuracy should matter less than other traits—such as interestingness-if-true—in their sharing decisions (compared to other populations, who might have other goals) (Sims et al., 2017).

Another motive that might lead people to share news of questionable accuracy is the congruence of the news with people's political views. Politically congruent headlines are only found to be slightly more accurate than politically incongruent headlines, but they are much more likely to be shared than politically incongruent headlines (Pennycook et al., 2019). This does not mean that people necessarily neglect accuracy in their sharing decisions. Instead, other factors might motivate them more to share politically congruent news, even if they aren't deemed more accurate, such as justifying their beliefs, signaling their identity, derogating the out-party, proselytizing, or because they expect that their audience will find them more interesting if they are true (e.g. Brady et al., 2019; Donath & Boyd, 2004; Guess et al., 2019; Hopp et al., 2020; Mourão & Robertson, 2019; Osmundsen et al., 2020; Shin & Thorson, 2017).

Although the question of what makes people read or share a piece of news has received a lot of attention in media studies (Kümpel et al., 2015), these investigations have remained largely detached from work in cognitive science (for some exceptions, see Acerbi, 2019; Berriche & Altay, 2020). We suggested that Relevance Theory, which draws on cognitive science to illuminate the field of pragmatics, can be a useful theoretical framework to make sense of why people are more or less interested in reading or sharing a piece of news. To the best of our knowledge, very little work has applied Relevance Theory to such questions, even though it has become a major analytical tool in other domains, such as literature (for a recent exception, see Chernij, 2020). As a first step, we wanted to highlight a basic distinction between two factors that should contribute to the relevance of a piece of

news: its plausibility, and its interestingness-if-true, defining the latter as the cognitive effects the piece of news would have if it were deemed true.

Future work might attempt to use the tools of Relevance Theory to integrate diverse literatures, such as work in social psychology on the cues people use to assess accuracy (see, e.g., Mercier, 2020; Petty & Wegener, 1998), work in media studies on what makes people decide to read or share news (Bright, 2016; Kümpel et al., 2015), and work bearing on related issues within cognitive science and linguistics. Relevance Theory also draws attention to sometimes neglected information processing factors, such as the effort involved in accessing or reading a news article (see, Chernij, 2020). Drawing attention to the construct of interestingness-if-true in particular might allow bridges to be built between the numerous characterizations of what makes a piece of news interesting in media studies (e.g. Kormelink & Meijer, 2018) to work in cognitive science regarding what type of information is likely to elicit cognitive effects, and how people assess these cognitive effects when a piece of information is only entertained provisionally or hypothetically (see, e.g., Evans, 2019; Harris, 2000).

To conclude, we would like to relate our findings to broad observations about the media environment. As we mentioned in the introduction, fake news only represents a minute portion of people's media diet. It has previously been suggested that people mostly avoid sharing fake news because doing so would jeopardize their epistemic reputation (Altay et al., 2020, see also: Duffy et al., 2019; Waruwu et al., 2020). However, these reputational checks cannot entirely explain the rarity of fake news: in many experiments—such as ours—participants declare a willingness to share fake news that is barely inferior to their willingness to share true news. Reputational checks on individuals thus cannot explain why even fake news that is deemed sufficiently accurate and interesting-if-true largely fails to spread.

Given the weak preference for sharing true news rather than fake news participants have evinced in several experiments (besides the present experiments, see Pennycook et al., 2019, 2020), the quasi complete absence of fake news in people's media diets is unlikely to stem directly from people's ability to discriminate true from fake news, and to share more the former than the latter. Instead, the rarity of fake news is likely driven by a combination of (i) people's massive reliance on mainstream media for their media diets (Allen, Howland, et al., 2020; Grinberg et al., 2019) and, (ii) the rarity of fake news in the mainstream media (e.g. Cardon et al., 2019). In turn, the rarity of fake news in the mainstream media is likely driven by many factors, such as the values journalists bring to the task (e.g. Deuze, 2005), but also fear of negative judgments by their audience. In this case, what would matter most isn't

people's ability to identify fake news on the spot, but, more simply, their ability to hold a media accountable if it is later identified as having spread fake news (Knight Foundation, 2018; The Media Insight Project, 2016). More generally, we hope that future studies will keep trying to integrate the psychological mechanisms which make people likely to share fake news with considerations about the broad media ecosystem in which they make these decisions.

References

Acerbi, A. (2019). Cognitive attraction and online misinformation. *Palgrave Communications*, *5*(1), 15.

Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, *31*(2), 211–36.

Allen, J., Arechar, A. A., Pennycook, G., & Rand, D. (2020). *Scaling up fact-checking using the wisdom of crowds*.

Allen, J., Howland, B., Mobius, M., Rothschild, D., & Watts, D. J. (2020). Evaluating the fake news problem at the scale of the information ecosystem. *Science Advances*, *6*(14), eaay3539.

Altay, S., Hacquin, A.-S., & Mercier, H. (2020). Why do so few people share fake news? It hurts their reputation. *New Media & Society*, 1461444820969893.

Bago, B., Rand, D. G., & Pennycook, G. (2020). Fake news, fast and slow: Deliberation reduces belief in false (but not true) news headlines. *Journal of Experimental Psychology: General*.

Bakshy, E., Hofman, J. M., Mason, W. A., & Watts, D. J. (2011). Everyone's an influencer: Quantifying influence on twitter. *Proceedings of the Fourth ACM International Conference on Web Search and Data Mining.*, 65–74.

Berger, J. (2014). Word of mouth and interpersonal communication: A review and directions for future research. *Journal of Consumer Psychology*, *24*(4), 586–607.

Berger, J., & Milkman, K. L. (2012). What makes online content viral? *Journal of Marketing Research*, *49*(2), 192–205.

Berger, J., & Schwartz, E. M. (2011). What drives immediate and ongoing word of mouth? *Journal of Marketing Research*, *48*(5), 869–880.

Berriche, M., & Altay, S. (2020). Internet Users Engage More With Phatic Posts Than With Health Misinformation On Facebook. *Palgrave Communications*.

Bobkowski, P. S. (2015). Sharing the news: Effects of informational utility and opinion leadership on online news sharing. *Journalism & Mass Communication Quarterly*, *92*(2), 320–345.

Brady, W. J., Crockett, M., & Van Bavel, J. J. (2019). *The MAD Model of Moral Contagion: The role of motivation, attention and design in the spread of moralized content online*.

Brashier, N. M., & Schacter, D. L. (2020). Aging in an Era of Fake News. *Current Directions in Psychological Science*, 0963721420915872.

Bright, J. (2016). The social news gap: How news reading and news sharing diverge. *Journal of Communication*, *66*(3), 343–365.

Burrus, J., Kruger, J., & Jurgens, A. (2006). The truth never stands in the way of a good story: The distortion of stories in the service of entertainment. *Available at SSRN 946212*.

Cardon, D., Cointet, J.-P., Ooghe, B., & Plique, G. (2019). *Unfolding the Multi-Layered Structure of the French Mediascape*.

Carston, R., & Uchida, S. (1998). *Relevance theory: Applications and implications* (Vol. 37). John Benjamins Publishing.
Chernij, C. (2020). *On the value of pageviews as proxies for audience interest in news: A Relevance Theory approach*.
Clark, B. (2013). *Relevance theory*. Cambridge University Press.
Dechêne, A., Stahl, C., Hansen, J., & Wänke, M. (2010). The Truth About the Truth: A Meta-Analytic Review of the Truth Effect. *Personality and Social Psychology Review*, *14*(2), 238–257. https://doi.org/10.1177/1088868309352251
Deuze, M. (2005). What is journalism? Professional identity and ideology of journalists reconsidered. *Journalism*, *6*(4), 442–464.
Donath, J., & Boyd, D. (2004). Public displays of connection. *Bt Technology Journal*, *22*(4), 71–82.
Duffy, A., & Ling, R. (2020). The Gift of News: Phatic News Sharing on Social Media for Social Cohesion. *Journalism Studies*, *21*(1), 72–87.
Duffy, A., Tandoc, E., & Ling, R. (2019). Too good to be true, too good not to share: The social utility of fake news. *Information, Communication & Society*, 1–15.
Evans, J. S. B. (2019). *Hypothetical thinking: Dual processes in reasoning and judgement*. Psychology Press.
Fazio, L. (2020). Pausing to consider why a headline is true or false can help reduce the sharing of false news. *Harvard Kennedy School Misinformation Review*, *1*(2).
Fisher, M., Cox, J. W., & Hermann, P. (2016). Pizzagate: From rumor, to hashtag, to gunfire in DC. *Washington Post*, *6*.
Goodman, M. (2010). *The Sun and the moon: The remarkable true account of hoaxers, showmen, dueling journalists, and lunar man-bats in nineteenth-century New York*. Basic Books.
Grinberg, N., Joseph, K., Friedland, L., Swire-Thompson, B., & Lazer, D. (2019). Fake news on twitter during the 2016 US Presidential election. *Science*, *363*(6425), 374–378.
Guess, A., Lockett, D., Lyons, B., Montgomery, J. M., Nyhan, B., & Reifler, J. (2020). "Fake news" may have limited effects beyond increasing beliefs in false claims. *Harvard Kennedy School Misinformation Review*, *1*(1).
Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. *Science Advances*, *5*(1), eaau4586.
Guess, A., Nyhan, B., & Reifler, J. (2020). Exposure to untrustworthy websites in the 2016 US election. *Nature Human Behaviour*.
Guess, A., Nyhan, B., Reifler, J., Guess, A., Nyhan, B., & Reifler, J. (2018). All media trust is local? Findings from the 2018 Poynter Media Trust Survey. *Www-Personal. Umich. Edu/~ Bnyhan/Media-Trust-Report-2018. Pdf (Accessed 30 September 2018)*.
Harris, P. (2000). *The Work of the Imagination*. Blackwell.
Heath, C., Bell, C., & Sternberg, E. (2001). Emotional selection in memes: The case of urban legends. *Journal of Personality and Social Psychology*, *81*(6), 1028.
Hopp, T., Ferrucci, P., & Vargo, C. J. (2020). Why Do People Share Ideologically Extreme, False, and Misleading Content on Social Media? A Self-Report and Trace Data–Based Analysis of Countermedia Content Dissemination on Facebook and Twitter. *Human Communication Research*.
Ihm, J., & Kim, E. (2018). The hidden side of news diffusion: Understanding online news sharing as an interpersonal behavior. *New Media & Society*, *20*(11), 4346–4365.
Jensen, T. (2016). Trump Remains Unpopular; Voters Prefer Obama on SCOTUS Pick. *Public Policy Polling. December*, *9*, 2016.
Jones, J. M. (2018). US media trust continues to recover from 2016 low. *Gallup. Retrieved from Https://News. Gallup. Com/Poll/243665/Media-Trust-Continues-Recover-2016-Low.*

Aspx.
Kim, J. W., & Kim, E. (2019). Identifying the effect of political rumor diffusion using variations in survey timing. *Quarterly Journal of Political Science*, *14*(3), 293–311.
Knight Foundation. (2018). *Indicators of news media trust*.
Kormelink, T. G., & Meijer, I. C. (2018). What clicks actually mean: Exploring digital news user practices. *Journalism*, *19*(5), 668–683.
Kümpel, A. S., Karnowski, V., & Keyling, T. (2015). News sharing in social media: A review of current research on news sharing users, content, and networks. *Social Media+ Society*, *1*(2), 2056305115610141.
Ladd, J. M. (2012). *Why Americans hate the news media and how it matters*. Princeton University Press.
Lazer, D. M., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., Metzger, M. J., Nyhan, B., Pennycook, G., & Rothschild, D. (2018). The science of fake news. *Science*, *359*(6380), 1094–1096.
Lee, C. S., & Ma, L. (2012). News sharing in social media: The effect of gratifications and prior experience. *Computers in Human Behavior*, *28*(2), 331–339.
Ma Long, Sian Lee Chei, & Hoe-Lian Goh Dion. (2014). Understanding news sharing in social media: An explanation from the diffusion of innovations theory. *Online Information Review*, *38*(5), 598–615. https://doi.org/10.1108/OIR-10-2013-0239
Mercier, H. (2020). *Not Born Yesterday: The Science of Who We Trust and What We Believe*. Princeton University Press.
Meyers-Levy, J., & Maheswaran, D. (1992). When timing matters: The influence of temporal distance on consumers' affective and persuasive responses. *Journal of Consumer Research*, *19*(3), 424–433.
Mosleh, M., Pennycook, G., & Rand, D. (2019). Self-reported willingness to share political news articles in online surveys correlates with actual sharing on Twitter. *PLoS One*.
Mourão, R. R., & Robertson, C. T. (2019). Fake news as discursive integration: An analysis of sites that publish false, misleading, hyperpartisan and sensational information. *Journalism Studies*, *20*(14), 2077–2095.
Nelson, J. L., & Taneja, H. (2018). The small, disloyal fake news audience: The role of audience availability in fake news consumption. *New Media & Society*, *20*(10), 3720–3737.
Noppari, E., Hiltunen, I., & Ahva, L. (2019). User profiles for populist counter-media websites in Finland. *Journal of Alternative and Community Media*, *4*, 24.
Osmundsen, M., Bor, A., Bjerregaard Vahlstrup, P., Bechmann, A., & Bang Petersen, M. (2020). *Partisan polarization is the primary psychological motivation behind "fake news" sharing on Twitter*. https://psyarxiv.com/v45bk/
Pennycook, G., Cannon, T. D., & Rand, D. G. (2018). Prior exposure increases perceived accuracy of fake news. *Journal of Experimental Psychology: General*, *147*(12), 1865.
Pennycook, G., Epstein, Z., Mosleh, M., Arechar, A., Eckles, D., & Rand, D. (2019). *Understanding and reducing the spread of misinformation online*.
Pennycook, G., McPhetres, J., Zhang, Y., & Rand, D. (2020). *Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy nudge intervention*.
Pennycook, G., & Rand, D. G. (2018). Who falls for fake news? The roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking. *Journal of Personality*.
Pennycook, G., & Rand, D. G. (2019). Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*, *188*, 39–50.
Petersen, M. B., Osmundsen, M., & Arceneaux, K. (2018). *A "Need for Chaos" and the Sharing of Hostile Political Rumors in Advanced Democracies*.
Petty, R. E., & Wegener, D. T. (1998). Attitude change: Multiple roles for persuasion

variables. In D. T. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (pp. 323–390). McGraw-Hill.
Roese, N. J., & Olson, J. M. (1996). Counterfactuals, causal attributions, and the hindsight bias: A conceptual integration. *Journal of Experimental Social Psychology*, *32*(3), 197–227.
Shin, J., & Thorson, K. (2017). Partisan selective sharing: The biased diffusion of fact-checking messages on social media. *Journal of Communication*, *67*(2), 233–255.
Sims, T., Reed, A. E., & Carr, D. C. (2017). Information and communication technology use is related to higher well-being among the oldest-old. *The Journals of Gerontology: Series B*, *72*(5), 761–770.
Sperber, D., & Wilson, D. (1995). *Relevance: Communication and cognition*. Wiley-Blackwell.
Tandoc Jr, E. C., Lim, Z. W., & Ling, R. (2018). Defining "fake news" A typology of scholarly definitions. *Digital Journalism*, *6*(2), 137–153.
Tandoc Jr, E. C., Ling, R., Westlund, O., Duffy, A., Goh, D., & Zheng Wei, L. (2018). Audiences' acts of authentication in the age of fake news: A conceptual framework. *New Media & Society*, *20*(8), 2745–2763.
Tsfati, Y. (2003). Media skepticism and climate of opinion perception. *International Journal of Public Opinion Research*, *15*(1), 65–82.
Tsfati, Y. (2010). Online news exposure and trust in the mainstream media: Exploring possible associations. *American Behavioral Scientist*, *54*(1), 22–42.
Tsfati, Y., Boomgaarden, H., Strömbäck, J., Vliegenthart, R., Damstra, A., & Lindgren, E. (2020). Causes and consequences of mainstream media dissemination of fake news: Literature review and synthesis. *Annals of the International Communication Association*, 1–17.
Tsfati, Y., & Cappella, J. N. (2005). Why Do People Watch News They Do Not Trust? The Need for Cognition as a Moderator in the Association Between News Media Skepticism and Exposure. *Media Psychology*, *7*(3), 251–271. https://doi.org/10.1207/S1532785XMEP0703_2
Tsfati, Y., & Peri, Y. (2006). Mainstream media skepticism and exposure to sectorial and extranational news media: The case of Israel. *Mass Communication & Society*, *9*(2), 165–187.
Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*, *359*(6380), 1146–1151.
Walter, N., Cohen, J., Holbert, R. L., & Morag, Y. (2019). Fact-Checking: A Meta-Analysis of What Works and for Whom. *Political Communication*, 1–26.
Waruwu, B. K., Tandoc Jr, E. C., Duffy, A., Kim, N., & Ling, R. (2020). Telling lies together? Sharing news as a form of social authentication. *New Media & Society*, 1461444820931017.
Wilson, D., & Sperber, D. (2012). *Meaning and relevance*. Cambridge University Press.
Ylä-Anttila, T. (2018). Populist knowledge:'Post-truth'repertoires of contesting epistemic authorities. *European Journal of Cultural and Political Sociology*, *5*(4), 356–388.