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WHAT CAN BE DONE TO COUNTER FAKE NEWS?

ANALYSIS

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Content

Foreword

The internet is a space of freedom. Anybody can publish anything at any time and make it accessible to every other person in the world. This helps strengthen open societies. Don't believe it? Just take a look at China or other places that erect virtual walls in cyberspace. But this enormous freedom of expression and information also has a dark side. It allows hatred and disinformation to be easily disseminated, spreading their corrosive influence throughout the online networks. The 2016 US presidential elections moved the debate about phenomena such as "hate speech" and "fake news" to the centre of public attention.

The Friedrich Naumann Foundation for Freedom therefore commissioned the communication researchers Dr Philipp Müller and Nora Denner to analyse the impact of these phenomena. In their study, they review how fake news affects the way in which citizens form their opinions and then describe various ways of addressing the problem. This is the second edition of the study, which continues to attract a lot of attention and which was therefore updated to include the most recent research findings. One of the more unexpected findings is that the problem might be less widespread than previously thought. For example, fake news appeared to play a marginal role in the 2017 German election campaign.

In the US, too, fake news has declined significantly since the election. Despite the downward trend and just before the elections, the German government introduced a law, the Network Enforcement Act (NetzDG, Netzwerkdurchsetzungsgesetz), that not only fails to address the problem, but also restricts media freedom and freedom of expression.

But aside from this unwelcome development, our focus remains on the important issue of free and unhindered freedom of expression. Freedom of expression needs to be protected both from being manipulated through false digital news and disinformation campaigns, but also from interference by governments, businesses or other societal actors. The authors' recommendations are clear: we have to focus on citizens' individual responsibility, media skills and critical thinking ability. This has to start at school, but also needs to be seen in the overall context of society as a type of competence each individual should possess. There will always be false or fake news, and no-one is in possession of the whole truth. But correcting misinformation and agreeing on how we interact with one another even when we disagree is the responsibility of not only the media, but also civil society and every single user. In the "marketplace of ideas" (John Stuart Mill), it is ultimately responsible usage that will win out in open discourse.

Sabine Leutheusser-Schnarrenberger
Former federal minister
Deputy chairperson of the
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Summary

The fake news phenomenon has been at the epicentre of the socio-political debate about communication on the internet since the 2016 US presidential elections, if not before. But what exactly is fake news? What is its impact? What makes it different in the era of internet-based news communication? And, most importantly: what can be done to counter it?

Although research on this topic is still in its infancy, we can already state that fake news is contributing to a qualitative change in the structure and culture of social discourse: it can have a limited, but measurable impact on how citizens form their opinions. Fake news differs from classical false newspaper stories, the "canards" of the analogue age, in that it is deployed intentionally to achieve certain aims. Thanks to online social networks, it achieves massive reach while circumventing professional journalists who risk damaging their reputations if they spread it too often. Social media have democratised the way news is distributed, but have at the same time made it easy for anyone to spread false reports, too. Media impact studies have shown that among people who are exposed to fake news, those most likely to be affected are users whose worldview aligns with the news item or report. In other words, fake news serves mainly to reinforce existing opinions. Even when users adopt a critical attitude towards a news report, they may still accept its content as a result of certain cognitive effects, and despite assessing the information as being unreliable.

There are no simple answers for dealing with fake news. This paper argues that deleting it from social networks is no quick fix. On the contrary: for populists, deletions lend support to conspiracy theories and add fuel to their criticism of the elites. It is also likely that susceptible users will move to less accessible parts of the internet, further exacerbating social divisions.

The German Network Enforcement Act (Netzwerkdurchsetzungsgesetz, NetzDG) is therefore the wrong approach. Even labelling incorrect stories as "fake" can have unintended consequences: on the one hand, such alerts, when posted on newsfeeds, are quickly forgotten, while the actual information is retained in the user's memory. On the other hand, users may perceive general alerts on their newsfeeds as unwarranted interference in their autonomous decision making and dismiss them with a feeling of annoyance. This is why it is so important to deploy tools that take into account the user's individual responsibility. Freedom of information and expression are fundamental freedoms that are indispensable in democratic societies. Whatever measures are devised have to take this important fact into consideration, no matter whether they are statedirected or developed by the social networks themselves.

This paper therefore recommends that the following measures be introduced:

→ Teach media literacy both at school and outside of school to prevent harmful media influences and to promote a critical attitude to media consumption.

→ Display a warning notice to users before they share fake news. This measure appeals to the user's individual responsibility and can therefore be effective.

→ Promote and enhance respectful social dialogue to prevent anti- and pro-elite polarisation.

→ Support research on media consumption behaviour, as well as on the impact of fake news, to allow for more comprehensive risk assessments and more effective education. Provide platforms to facilitate information exchange between domestic and international researchers.

What can be done to counter fake news?

The term "fake news" has been a recurring feature of the political debate since the US presidential election campaign of 2016, if not before. In Germany, the need to combat the alleged pernicious influence of fake news was used as one of the main reasons to justify the Network Enforcement Act (Netzwerkdurchsetzungsgesetz, NetzDG), which the German Bundestag adopted on 30 June 2017. But what is meant by this term? What is fake news, exactly? How does it spread and how much impact does it actually have? This paper addresses these questions based on the latest findings in communication studies. The resulting insights are used to assess the necessity and effectiveness of various measures to counter fake news, with particular reference to the Network Enforcement Act. At the outset, however, the meaning of the term "fake news" has to be clarified.

What is "fake news", exactly?

"Fake news" is a relatively new collective term that lacks a clear definition and that is used to refer to a variety of phenomena (Tandoc, Lim, & Ling, 2018). Its constituent terms are "fake" – meaning something that is not true, real or genuine – and "news". "Fake news" therefore liter-ally signifies news that is not true, real or genuine. The academic social science literature sees fake news as a specific type of "disinformation" (see Wardle, 2018; Zimmermann & Kohring, 2018). In this context, disinformation means any kind of false information that is intentionally generated or distributed in an environment where a truth claim actually exists. Against this background, fake news can be seen as a type of disinformation characterised by the additional feature that it relates to current events, giving it a news flavour (Zimmermann & Kohring, 2018).

However, the way the term "fake news" is currently used in social discourse – and also in much academic research inspired by the discourse – runs counter to this relatively clear scientific definition. All types of "problematic", media-distributed content are called fake news nowadays. This includes obviously falsified information, but can also refer to inaccurate or vague information that is distributed inadvertently. Fake news can include items published under sensationalistic headlines or using hatefilled and questionable language. Use of the term is not limited to news content: it is also applied to scientific studies or historical information. Clearly, the way the term is being used in the public debate is ill-defined and ambiguous.

Complicating matters further, some politicians have started redefining the term for their own purposes, none more so than the current president of the United States. They exploit it as an element of populist rhetoric that seeks to accuse traditional or mainstream media of systematic and purposefully misleading reporting (A. Schulz, Wirth, & Müller, 2018). This depresses the epistemic value of the term further. It becomes a polemical battle cry that means different things to different political camps. From an academic perspective, "fake news" is doubtless a relevant term, not least because it plays such an important role in the current political discourse. However, in an academic setting, it is necessary to clarify the terminological understanding at the outset.

"Fake news" includes information that is obviously falsified, but also incorrect or inaccurate information which is spread inadvertently or accidentally.

“Fake news” as a collective term for online content

Although fake news in essence means topical disinformation, we will be using a slightly more restrictive definition in this paper. Here, we narrow our focus to any kind of false information that is intentionally generated or distributed via the internet. In doing so, we are following the currently dominating usage of the term. As mentioned above, fake news has been trending in the public debate since 2016 (see Cunha et al., 2018). It started gaining popularity during the US presidential elections, where the expression was used to refer to topical disinformation distributed online (see Allcott & Gentzkow, 2017). Many arguments put forward in the current social discourse are directly linked to this understanding of the term, including the mention of fake news as an argument in support of the Network Enforcement Act. This paper is positioned within this debate, which is why it appears advisable to focus specifically on topical disinformation spread via the internet. In the following, we therefore define “fake news” to mean any false information related to current political or social matters that is disseminated intentionally on the internet and that creates a journalistic impression, i.e. which appears like a professional media report as judged from its design, layout and writing style.

Such content can be spread via the social networks, blogs, online communities and online news sites, and may on occasion deal with false testimony, such as the case of a 13-year-old girl from Berlin who had supposedly been raped by refugees (Bota, 2016). Reporting on un-substantiated rumours can also be included under the fake news heading when the rumours are presented as being true even though there are justified concerns regarding their veracity. The term also encompasses purposefully misleading stories or articles made to appear like news, such as the story on the Breitbart News website about Muslims who had supposedly set fire to Germany’s oldest church (Hackenbroich, 2017).

Beyond that, commercially motivated false reporting is also referred to as fake news. Such news items are not designed to achieve political objectives primarily, but involve making up sensationalist, attention-grabbing stories to achieve the greatest possible reach. The aim is to generate advertising revenue for the site hosting the content. For instance, Georgian entrepreneurs (Higgins, McIntire, & Dance, 2016) and Macedonian youths (Silverman & Alexander, 2016) set up news sites in connection to the US election campaign. Most of the news items on such sites are falsified or plagiarised. The goal is to generate as many clicks as possible for advertising revenue. This example shows that commercial interests often play a role in online fake news, too.

Fake news – a new phenomenon?

It is important to keep in mind that topical disinformation is not necessarily a new phenome-non. Intentionally disseminating untruths has long formed a part of political communication (e.g. the Watergate scandal, the Lewinsky affair etc., see Marschall, 2017). Since the 19th century, false reports published by the mass media have been known as “canards” (Hollstein, 1991) or, in German, Tatarenmeldung (Walther, 2016). However, we may safely assume that professional journalists who spread classical canards usually did so inadvertently and would correct them immediately upon discovering that the story was untrue. Therefore, they do not fall under the heading of disinformation.

What do we know about how fake news is created and disseminated?

To date only relatively few studies have addressed the reach of fake news in various countries (e.g. Allcott & Gentzkow, 2017; Fletcher et al., 2018; Guess, Nyhan, & Reifler, 2018; Sängerlaub, 2017), and the academic research on the phenomenon is still in its infancy. But it is already becoming clear that fake news only reaches certain segments of the populace, both in the US and in Germany.

Social media as the driver behind the dissemination of fake news

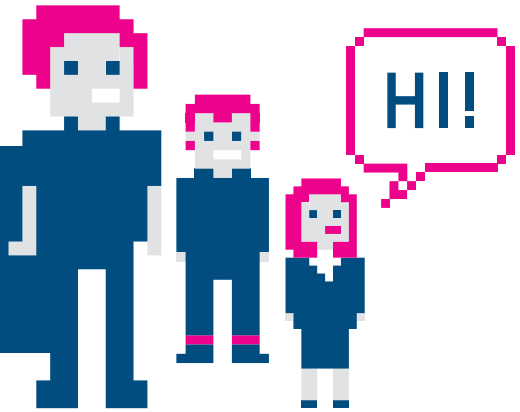
Fake news mostly spreads via social networks such as Facebook and Twitter. Social media multiply the impact of intentional false reports because many people use such media as a source of (political) information (Hölig & Hasebrink, 2018). Producers of fake news can disseminate it at low cost on the social networks (Allcott & Gentzkow, 2017). In this way, social networks represent a communication technology that has democratised the spreading of all forms of news. Before the massive adoption of the internet, the only route to the public sphere was via professional journalists. For a news item to be noticed in public discourse, professional journalists had to report on it. Despite all the valid criticism levelled at professional journalism and its working methods, it is safe to assume that professional journalists and news organisations fundamentally have no interest in disseminating incorrect information because it damages their reputation as trustworthy reporters – and therefore the commercial underpinnings of their existence.

Social networks offer a new way to disseminate news to large audiences without having to go through professional journalists. In principle, anybody can use social media to distribute or even produce fake news. The previously mentioned example of the Macedonian youths (Silverman & Alexander, 2016) who created over 100 websites aimed at generating advertising income during the US elections illustrates this perfectly. They used social media to draw users' attention to the websites. On Facebook, for example, likes, comments and other interactions help ensure that a news item is seen not only by subscribers, but also by the friends or followers of the people who interact with the news item (Costera Meijer & Groot Kormelink, 2015). This vastly increases the reach of a news item: anything that generates interactions and clicks will spread further and more effectively.

A study by Vicario et al. (2016) showed that false information spreads fastest on social net-works like Facebook when it is shared by user circles who have similar attitudes or who hold similar worldviews. The more homogenous the circle of users who share a news item, the greater the probability that it will be shared further, ultimately reaching a large audience. Obvious fake news with a clear political message is an example of news that has a high probability of attracting significant attention. The trustworthiness of the original news source matters less than whether a personally known or trusted user has interacted with the item (American Press Institute, 2017). Individual user interactions are therefore a key success factor for the spread of fake news.

Social media reinforces the spread and viability of fake news.

“Bots” is a term that describes computer programmes which function mostly automatically to perform tasks such as searching websites for specific information or sending messages.



But what is it that makes users interact with online news content? Here, research on the fre-quency of comments has shown that user interactions are mainly triggered by negative and controversial news that is easy to understand (Weber, 2012; Ziegele; Breiner & Quiring, 2014). Affective/emotional respon-ses such as indignation or anger play a significant role. Similar mechanisms have been observed in the current debate on fake news. The examples menti-oned previously – of intentional false news, which has generated large amounts of attention in recent years – fulfil these criteria. They belong to thematic areas that are controversial and morally charged, and they often contain negative, but easily acces-sible statements. The topic areas include migrants and refugees, children and abuse, or war and pea-ce. This stimulates user interactions and drives the spread of false information on social networks.

Social bots as accelerants

Real users are not the only ones who interact with news content on social media. So-called “social bots” also contribute to spreading news content on social media platforms (Woolley & Howard, 2016). Bots are com-puter programmes that perform certain tasks largely autonomously, e.g. scanning websites for specified content or sending messages.

On the social networks, social bots create fake ac-counts which look like the accounts of real (i.e. human) users at first glance. Such accounts may share tweets on Twitter or provide likes on Twitter. The main objec-tive of such automated interactions with news items is not to draw the attention of real users,but to ensure that the social media platform’s algorithms rate the news item as being of high interest. News items that receive a lot of user interaction are assigned higher relevance and are therefore more likely to be shown to other users. The purpose of social bots is to manipulate this mechanism. However, gaining empirical insight into the activity of social bots is very difficult.

An early study has shown that social bots played a significant role in disseminating dubious information on Twitter during the 2016 US election campaign (Shao et al., 2018). However, it is almost impossible to generate an accurate assessment of how strongly social bots impact the reach of fake news.

During the 2016 US election campaign, curated websites such as Snopes, Politifact and Buzzfeed reported on fake news.

How much fake news is there on the internet?

Assessing the volume of fake news as a share of total news on the internet is also next to impossible. The amount of information on the internet is constantly growing and hard to as-sess empirically, meaning that only a selection of total news flows can be reviewed. There is very little empirical data on fake news especially, with the previously mentioned study by Allcott and Gentzkow (2017) being the first to attempt to generate an estimate. The authors aimed to capture all important pro-Trump and pro-Clinton fake news that was circulating in the context of the 2016 US election campaign. They reviewed a three-month period in the runup to Election Day and identified fake news through the curated offerings of Snopes, Politifact and Buzzfeed, each of which generated lists of fake news to inform the public. Of course, this type of empirical access is not comprehensive. We may safely assume that there was more fake news in circulation which was not captured on any database. But still, their work helps to give a first impression. The team of researchers identified 41 false pro-Clinton and 115 false pro-Trump news items, which were publicly shared a total of eight (pro-Clinton) and 30 (pro-Trump) times on Facebook. The claim that intentionally deployed false news content played a role in the US election campaign can therefore not be dismissed out of hand.
However, more recent research by the same team of investigators showed that the volume of fake news spread via social media in the USA declined after the election campaign ended (Allcott, Gentzkow & Yu, 2018). On Facebook in particular, far less fake news was spread in 2017 and 2018 than in 2016. At the same time, however, the amount of fake news spread via Twitter increased. This supports the hypothesis that Facebook has been trying – successfully – to reduce the amount of attention users pay to fake news since 2016.

Currently no comparable data exist for Germany. But a study of news content shared via Twitter in the context of the 2017 parliamentary elections in Germany indicates that there was far less exposure to fake news in Germany than in other countries (Neudert, Kollanyi, & How-ard, 2017). Only one in every five news items shared in Germany in September 2017 came from a source other than a professional journalistic news provider, a lower proportion than in the USA and the UK. Both Facebook's counter-measures against fake news – which have plainly had some effect – and the lower interest in such content in Germany suggests that the fake news phenomenon is less dramatic than the political debate would have us believe.

Section summary: fake news as a social phenomenon

To summarise, fake news is inherently a social phenomenon that depended on the creation of the online social networks to establish itself in the form discussed here. Fake news largely circumvents professional journalistic gatekeepers. It spreads through social media, in particular through user interactions, which help ensure that more users see a news item. Correspondingly, successful fake news is identified by certain features that increase the probability of significant user interaction: negativity, a controversial, polarising and morally charged topic, and a high degree of comprehensibility.

What do we know about the impact of fake news?

Research on the impact of false information intentionally spread online is still at the early stages, but has been receiving increasing attention in recent years. Since the beginning of the public debate on fake news in the context of the 2016 US presidential elections, a number of papers on the topic have been published. They link back to a well-established research tradition on the reception and impact of news content. Many of the insights gained before the beginning of the fake news debate are transferable, a fact that is largely confirmed by existing fake news studies. Before turning to the discussion on the potential negative or anti-democratic impact of fake news, it is worth pausing to consider how great the potential harm is when taking into consideration to which extent users are exposed to fake news in the first place and how they assess it.

Current data: users actually encounter fairly little fake news

Most of the research on how intensively users interact with fake news was conducted during election campaign periods. The 2016 US presidential election campaign in particular was the subject of several studies.

Depending on the methodology used, a heterogenous picture emerges. In a standardised survey of a non-representative sample of 1,208 US citizens older than 18 years, Allcott and Gentzkow (2017) showed study participants a series of fake news headlines that were circulated during the 2016 US election campaign. The users were asked whether they could remember having seen the news item before and whether they could recall if they had believed it. In the analysis, the results were weighted according to socio-demographic criteria to approximate the general US population. To correct for skewed responses as a result of false memories, the researchers added some fictitious fake news stories of their own. During data evaluation, the results regarding the actual fake news were reduced by the average recognition of made-up fake news. Based on this estimation procedure, the authors concluded that the average US voter saw 0.92 pro-Trump and 0.23 pro-Clinton fake news items during the 2016 election campaign.

These values appear very low and raise the question of whether the fake news phenomenon plays any relevant role in political information. However, two methodological aspects of the research have to be taken into account when interpreting these values.

1 **The weighting procedure means that the findings are meaningful at the level of the overall US population. Persons who rely extensively on the internet, and particularly on social media, for their information, are likely to have encountered far more fake news than others. As this group predominantly includes younger people (see Bernhard, Dohle, & Vowe, 2014; Hölig & Hasebrink, 2018; Pew Research Center, 2015), the proportion of persons encountering fake news is likely to rise in future – provided that the availability of fake news on social media does not decline overall.**

2 **Although the authors took several measures to minimise measurement errors, the approach they used is problematic. In the study, users were asked about news items weeks or months after they originally appeared. As news is often consumed with little awareness and low attention (Brosius, 1995; Graber, 1988), it is reasonable to assume that consumers will not be able to recall many news items accurately after such a period. But this does not mean that the news reports did not exert any influence on attitudes at the point in time when they were encountered.**

It is therefore advisable for questionnaire-based surveys to inquire about the exposure to fake news at a higher level of abstraction. This was done by Barthel, Mitchell and Holcomb (2016). The authors asked a representative sample of US citizens to estimate how often they came across completely fictitious or not completely accurate political news on the internet. Here, 32% of those surveyed said that they often encountered completely made-up news, with another 39% indicating that they saw such items occasionally. In this self-assessment, 51% of those surveyed said they often came across news that was not completely accurate, while 27% encountered it occasionally. For Germany, there is a similar study by Sängerlaub (2017). In this survey, 61% of the respondents – all of whom were German internet users – said that a lot of fake news had been spread in the context of the 2017 parliamentary elections. But this does not necessarily tell us much about the individual's personal encounters with fake news, who could have formed their impressions based on the clamorous public debate on the topic. With this type of methodology, it is likely that the actual frequency of false information is overstated, especially because it was left to the survey participants' discretion which frequency they meant by "often" vs. "occasionally" or "a lot" or "a little". This means that the responses of individual participants are not really comparable. The findings should be interpreted as an impressionistic overview of prevailing social attitudes rather than as an accurate indicator of actual exposure.

The most reliable observations on the exposure to fake news can be obtained by logging the online behaviour of users. This was what Guess, Nyhan and Reifler (2018) did for the period of the 2016 US election campaign, using a large sample of 2,525 US internet users. After weighting the results, they concluded that 61.4% of US internet users did not visit any web-sites that spread fake news in the runup to the elections. 11.3% had indirect encounters with fake news when they visited the websites of fact-checking services that identify fake news as such. Only 27.3% of users visited actual fake news websites during this period, of whom half also visited a fact-checking website at least once as well. It is worth noting that about 60% of fake news hits were generated by just 10% of users. In other words, there is a hard core of individuals who frequently interact with fake news, a slightly larger group that does so occasionally and a large majority that does not have any interaction with fake news at all.

This impression was confirmed by a further study, by Nelson and Taneja (2019), which also used US internet usage logs generated during the 2016 election year. The study also found that only a small group of internet users is exposed to fake news at all. Moreover, this group of users tended to spend extremely large amounts of time online and on social networks such as Facebook. In Europe, similar analyses have so far only been conducted for Italy and France (Fletcher et al., 2018). A similar picture emerges: the reach of relevant fake news websites, measured at around one to three percent of internet users in the respective country, is significantly lower than that of traditional news providers, who achieve a reach of up to 50 percent. However, it has to be pointed out that all of the studies cited here were only able to track visits at the website level, which do not necessarily consist entirely of fake news, of course. So it is plausible that some of the users whose behaviour was logged did not encounter any fake news at all on the web pages they saw. Additionally, the research method cannot capture fake news exposure on social media platforms like Twitter and Facebook if the re-spective users do not click on a linked website.

Taking all of the studies into account, we may reasonably conclude that the average US inter-net user is not overwhelmed by intentionally spread false news stories, but that users (and especially heavy users) may occasionally encounter fake news, which may play a certain role in their daily news consumption. For Germany, there is far less data than for the US. The only comparative study completed to date showed that German Twitter users tended to spread less fake news than US users (Neudert et al., 2017). From this observation, we may tentatively conclude that German internet users encounter fake news even less frequently than US users. Furthermore, the US studies tracked fake news at the peak phase of the presidential election campaign. Outside of election periods, the phenomenon is probably far less virulent.

Users tend to be critical when it comes to social media content

To assess the dangers of fake news, we also need to understand how users assess the credibility of news content on social media platforms overall. This matters because social media are the main distribution channel for fake news on the internet. Here, current empirical data also give cause to tone down the alarmism. It is true that people, both in Germany and abroad – and especially younger people – are increasingly using social media platforms such as Facebook as a news source. But last year, the Facebook numbers reflected a slight decline for the first time (Hölig & Hasebrink, 2018). In addition, users tend to treat news reports on social media with scepticism. Studies from Germany (Bernhard et al., 2014; Schäfer, Sülflow, & Müller, 2017) and the US (American Press Institute, 2017; Pew Research Center, 2015) show that news disseminated via social media channels is seen as not particularly believable and not considered as a particularly reliable source of information compared to traditional news sources such as TV and the print media. Instead, users see such news items as an entertaining way to pass the time, with the added benefit of keeping up to speed with current events (Schäfer et al., 2017). News items on social media are seen as more trustworthy and important when they are forwarded by private contacts whom the user trusts (American Press Institute, 2017).

This indicates that fake news spread via social media does not pose a particularly great dan-ger as long as users reflect on how credible they consider the news reports to be. This impression was confirmed by early studies on the way users interact with fake news. They show that users who suspect that a news item concerning a topic that matters to them is incorrect tend to take the initiative and do their own research (Tandoc, Ling, et al., 2018; Torres, Gerhart, & Negahban, 2018). User circles consisting of private individuals who supply each other with fake news are the most critical. This constellation reduces the likelihood that news seen as dubious will be checked (Torres et al., 2018). But this grouping is likely to be relatively small, consisting as it does of a hard core of users.

Fake news spread via social media pose less of a threat as long as users reflect on the news report's credibility.

However: news received via social media is often consumed in a stateof low awareness or with littleconscious reflection

However, in the fake news debate, it should be taken into account that news received via social media is often consumed in a low state of user awareness or with little critical reflection. Information processing research has identified two principal ways in which people deal with new information (Chaiken, Liberman & Eagly, 1989). Information can be processed heuristi-cally, meaning that little cognitive effort is expended to absorb its meaning. Alternatively, it can be processed systematically, meaning that all aspects are considered thoroughly and the conclusions drawn from the information are weighed up properly. The second type of pro-cessing is only employed when there is a high degree of personal motivation that justifies the effort involved in systematic processing. This is the case when the user has a high level of interest in the topic or when the news is of personal relevance. Overall, we have to assume that most people tend to process news content heuristically (Brosius, 1995; Graber, 1988). More recent studies indicate that this holds true for fake news: low levels of cognitive reflection increase the risk that false information will be considered credible (Pennycook & Rand, 2018). The danger that fake news is seen as true drops as the recipient invests greater cognitive resources in processing it.

But even people with strong cognitive abilities are unlikely to invest their capabilities into critically assessing every potentially false notification they encounter online. The way news content is presented on social media makes it more susceptible to heuristic processing. Here, users tend to encounter news teasers, i.e. headlines with short news summaries. Teasers can be understood quickly and processed with little cognitive effort ("news snacking"; Costera Meijer & Groot Kormelink, 2015; Schäfer et al., 2017). Only people who are highly motivated to undertake systematic processing will click on the links usually included with news teasers to get to the complete story. Even so, the mere presence of news teasers on social media newsfeeds means that users think they are well informed, independent of whether they actually read the complete stories (Müller, Schneiders & Schäfer, 2016). In addition, few users use social media for the purpose of obtaining news.

Usually, their main motivation is to pass the time or keep in touch with acquaintances. News content tends to be perceived in passing (Fletcher & Nielsen, 2018; Valeriani & Vaccari, 2016). Such incidental encounters with news can have positive effects on participation in political processes (Kim, Chen, & Gil de Zúñiga, 2013), but in the case of false information negative consequences are possible.

Fake news placed in such a context, in which users tend to be in a less critical and less aware processing mode, certainly poses a risk for the formation of opinion. This is true even for users who are aware that information on these platforms does not necessarily meet high quality standards and could turn out to be false. This is because this knowledge is not always activated when news is received in passing on platforms such as Facebook. A recent experiment by Hunt (2016) provides some evidence in support.

People tend to perceive information – including news content – in a way that aligns with their preconceptions.

The author asked study participants to review a fictitious social media newsfeed which contained either correct or false information on a topic. Afterwards, the participants took a knowledge test on the topic. Inde-pendently of whether or not the information they had received was correct, the participants made use of what they'd read previously when answering the test. Many even thought they had known the corresponding information for a long time. This supports the hypothesis that fake news is usually processed heuristically on social media platforms.

The filter bubble is created in the mind

This is where one of the most important heuristic decision rules of human information pro-cessing is activated: the so-called "confirmation bias" (Nickerson, 1998) or "motivated reasoning" (Kunda, 1990). A range of studies has shown that people have a strong tendency to perceive information – including news content – in a way that aligns with their existing preconceptions. This begins at the point where a user decides which news to read ("selective exposure") and continues through interpretation and explanation ("selective perception") to how the received content is remembered ("selective retention") (Frey, 1986; Zillmann & Bryant, 1985). This method of processing new information represents a cognitive shortcut and is therefore closely linked to the heuristic method of information processing (D'Alessio & Allen, 2002). Against this background, it can be said that news reception via social media platforms may contribute to the emergence of a so-called filter bubble (Pariser, 2011), meaning that individuals prefer to receive information which confirms their existing worldviews, or, alternatively, that most of the information they receive is interpreted in a way that conforms to their worldview. However, the main reason for the emergence of the filter bubble is not that the social media algorithms purposefully hide information when displaying news content, as Pariser (2011) suggests in his acclaimed popular-science book, but rather that users predominantly seek out content and information sources which align with their worldviews. The algorithms merely take into account user behaviour and mirror it. This reinforces the filter bubble effect, which has its origins in the individual user's cognitive structures.

This selective mode of news reception is what makes fake news a potentially dangerous tool for political communication because it implies that when fake news content matches the recipient's existing worldview, it is likely to be believed without being questioned. This was also shown in a recent US study carried out in the runup to the 2016 presidential election (Swire, Berinsky, Lewandowsky, & Ecker, 2017). In two experiments, the authors showed that false information attributed to Donald Trump was more likely to be believed by Republican supporters than when it was presented without a source. For Democrat supporters, the opposite was true: they were more likely to believe false information when it was presented without a source than when it was attributed to Donald Trump. A study from Germany confirms this finding (Arendt, Haim, & Beck, 2019). Here, recipients were exposed to a series of news items with a xenophobic slant.

As expected, persons leaning towards the right on the political spectrum were more likely to consider the news credible. Other studies made similar findings (Kahne & Bowyer, 2017; Schaffner & Roche, 2017): false information which favours the positions of a specific party or candidate, or which is sourced directly from such a party or person, tends to be believed by supporters of the political camp in question, while supporters of the opposing camp tend to view it critically. However, the same applies to correct information which clearly favours a specific position of political camp. Distorted information processing is therefore not a unique feature of fake news.

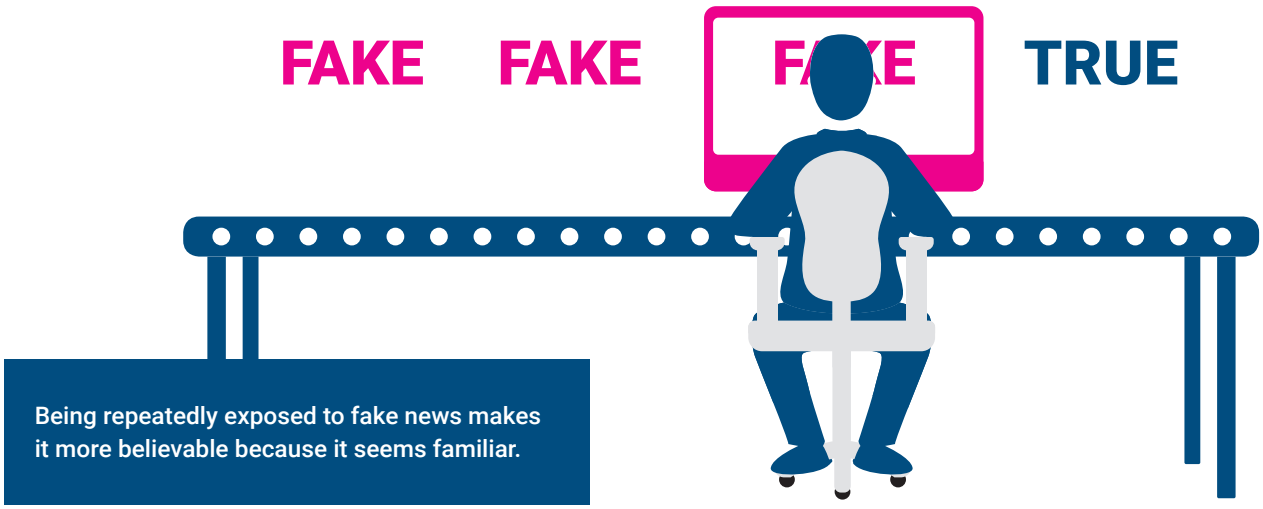
Repeated exposure can reinforce the impact of fake news

Adopting a critical position towards the content of a fake news item does not confer perfect immunity against being influenced by the information. Two long-established phenomena from persuasion research support this contention:

1 Persons who disbelieve fake news because they do not consider its source trustworthy can still be influenced by the message. This happens because information about the source of the information is forgotten over time. A series of studies in recent decades re-peatedly confirmed such a "sleeper effect" (Kumkale & Albarracín, 2004). Over time, recipients tend to forget from which source they originally obtained information – including whether they considered the source credible or not. In contrast, the information itself may well be remembered. However, this works best when it aligns with the person's pre-existing knowledge. Such sleeper effects are most likely to occur when recipients are confronted with fake news that matches their expectations and worldview. In such cases, the person may distrust the source at first, but forget about it over time and ultimately only remember the messa-ge, which was first considered to be false, but is later believed to be correct. Researchers have already been able to prove that the sleeper effect generally applies to news posts on social media (Heinbach, Ziegele, & Quiring, 2018), but this has not yet been investigated for fake news specifically.

2 While the sleeper effect mainly affects persons who distrust a fake news item because of its source, but who find the content credible, there is a further effect that can help boost the persuasiveness of fake news even for people who have fundamental reservations regarding the content itself. A range of studies has shown that statements shown to recipients repeatedly – and if possible from various sources – eventually start becoming believable, even if they were considered false at first ("illusory truth effect", Dechêne, Stahl, Hansen, & Wänke, 2010). This effect has already been shown to apply to fake news, too (Polage, 2012). Study participants were shown the same false news twice within five weeks. As the information seemed familiar to them the second time around, the participants were more likely to perceive it as true than a control group which only saw the respective informa-tion once. In general terms, this means that seeing a "fake news" item repeatedly makes it more likely to be believed, as it will appear familiar. This was also shown in an initial experiment which tested the illusory truth effect by using fake news from the 2016 US election campaign (Pennycook, Cannon, & Rand, 2017).

However, it has to be pointed out that the opposite effect may also occur. Being repeatedly confronted with the same persuasive message can make people question what the intention behind the message is (Koch & Zerback, 2013). The awareness that a message is designed to manipulate can generate re-actance (Brehm, 1966) against the attempted persuasion and cause the message to be dismissed. In other words, massively spreading the same fake news through various channels may corrupt its credi-bility if a certain contact frequency threshold, which may vary from person to person, is exceeded.



Being repeatedly exposed to fake news makes it more believable because it seems familiar.

Section summary: the limited potential impact of fake news

Taking into account the phenomena described above, we conclude that the potential impact of fake news is limited, but non-zero. It is questionable whether the average consumer of news even sees much fake news, especially in Germany. People are most likely to encounter fake news on social media, while they are in the heuristic information processing mode. The critical question therefore becomes whether the fake news content matches the person's preexisting worldview and convictions. If it does, then the likelihood is great that the fake news will be believed – even if the source is at first considered to be untrustworthy. However, even people who doubt that a given fake news item is true can be made to believe it through repeated exposure. As long as this occurs in the unthinking, heuristic processing mode, there is a risk that fake news may influence even recipients who are fundamentally less susceptible to its content. But as soon such persons start questioning the persuasive intention behind the fake news item – and this probability increases with repeated exposure – then the impact potential fizzles out. Overall, the harmful impact of fake news is therefore rather limited, but the actual extent of the risk can only be assessed by studying how often media users in Germany are confronted with fake news.

What is the effect of fake news alerts?

Against the background of the limited, but non-zero impact potential of fake news, we have to ask how effective educating and informing people about such news can be. As such clarification means that the false information has to be repeated, doing so is associated with a certain level of risk. The problem of so-called "debunking" messages has been the subject of research for some time. A meta-analysis of the research (Chan, Jones, Hall Jamieson, & Albarracín, 2017) comes to the sobering conclusion that proactively debunking false information tends to be harmful because it usually causes the information to be recalled instead of effectively combating its presence in the user's mind. Even when people who have arrived at a conclusion about the information are explicitly told that it was in fact incorrect, many do not revise their judgment (de Keersmaecker & Roets, 2017).

In the context of the fake news debate, the option of labelling fake news on social media to let users know that it could be incorrect is a recurring topic of discussion. An initial study on the impact of such alerts came to some sobering conclusions (Arendt et al., 2019). When the content of the fake news matches the recipient's political convictions, any warning labels or alerts displayed at the same time have absolutely no influence on the perceived credibility of the news just read. Alerts only had an effect on people holding contrary views. Facebook in particular experimented with showing alerts for a while, but has now distanced itself from this approach. Taking into account recent research findings, this appears to be a sensible decision. Such alerts only have a very limited potential to educate a message's core target group. Worse, just like other forms of educating people about fake news, they may actually do more harm than good.

Warning labels on the newsfeed are likely to be forgotten

Based on the sleeper effect discussed above, the potential impact of warning labels is likely limited. The main factor influencing whether news content will be remembered in the long term and therefore have an impact is not the trustworthiness of the source. It matters far more whether or not the content of the message aligns

The operators of social network sites, especially Facebook, are currently developing and implementing warning labels for fake news.

with the recipient's worldview. Warning la-bels applied to news posts are source information. They tell the user that the message is untrustworthy. But it is precisely this type of information that is not retained in memory, as the sleeper effect shows. Persons who do not belie-ve a fake news item in any case do not need a warning label. Conversely, those who are inclined to believe the message based on their worldview and preconceptions may be deterred at first by a warning label, but over time, they are likely to recall the content while forgetting the warning label.

Warning labels can trigger anger and defiance

Plus: warning labels can create reactance. There are empirical findings that suggest that correcting misin-formation originating from a politician can reinforce belief in the message among the supporters of that politician ("backfire effect"; Nyhan & Reifler, 2010). The presumed mechanism is that supporters perceive the correction as an illegitimate attempt at persuasion and therefore as unwarranted interference in their freedom of choice. This makes them angry. Ultimately, the correction means that the false information is believed more strongly. Deleting fake news on social media platforms can have a similar effect. Here, too, individu-als who feel an affinity for the fake news content may respond with reactance.

Nonetheless: displaying warning notifications before fake news is shared is sensible

However, displaying a warning message to users when they are about to share (and thereby spread) fake news does make sense. The illusory truth effect addressed above indicates that any further spreading of fake news makes it more likely that it will have an impact on peop-le who at first reject it or are sceptical. The finding that news content shared on social media by personal cont-acts is considered highly credible further reinforces the effect (American Press Institute, 2017). In other words, sharing fake news is particularly harmful. Furthermore, shar-ing news is not a form of passive reception, but an active action towards the social environ-ment, i.e. the potential readers of the shared post. The likelihood that individuals will consciously reflect on such an action before performing it is significantly greater than when they are merely scrolling through the newsfeed of an online news site. This means that in this instance, the drawbacks/risks of warning labels apply to a lesser extent. Instead, it may be assumed that in this case, warning labels are consciously noted and reflected on, in contrast to what happens when news is consumed in passing, as it were. Accordingly, the sleeper effect – which reduces the effectiveness of warning messages – is less likely to occur.

Warning notifications that flag an item on the news-feed as fake news are therefore not recommended because they are likely to be forgotten, while the news content is remembered. They can also cause reactan-ce. Conversely, displaying a warning before fake news is shared would appear to make sense. Such notifica-tions may also trigger reactance, but this is likely only the case with users who find the content of the messa-ge highly convincing. Many others could probably be prevented from spreading fake news by being shown an alert.

However, in both instances there has not been enough empirical research with reliable findings yet. The con-clusions reached here are speculative and are based on existing findings of persuasion research. More research is needed on the effect of fake news warning labels.

What is the impact of deleting fake news?

The Network Enforcement Act (Netzwerkdurchsetzungsgesetz, NetzDG), which was adopted by the Bundestag on 30 June 2017 and entered into force on 1 October 2017, makes provision for the rapid deletion of fake news by the operators of social media platforms. To enable this, the operators of online social networks are obliged to empower their users to report problematic content with reference to the Act, which the website operators then have to check for accuracy and delete if required. Legal experts have studied the statute's civil law and constitutional law impact on freedom of communication and have identified several critical aspects (Müller-Franken, 2018; Papier, 2018; Peifer, 2018; W. Schulz, 2018): for instance, the law limits freedom of expression, one of the highest and most important values of a democratic state. This is because it obliges platform operators to delete content as a precaution, even when there is only a suspicion that it may contain falsehoods under criminal law. Furthermore, it transfers sovereign functions to the private sector and its selfregulation. From a communication perspective, there are three further arguments against deleting fake news:

Argument I: The extent of the problem is not clear

As this report shows, the current state of the research is insufficient to determine the extent of the fake news problem in Germany. There is no research to quantify the amount of fake news in Germany or how often various user groups encounter it. At the same time, existing studies from the US paint a nuanced picture: although there was a considerable amount of fake news in the context of the 2016 US presidential campaign, which certainly had some impact on opin-ion formation, the effect was likely quite limited. Not all citizens use the internet intensively as an information source. In all likelihood, those that do saw more accurate news than fake news, even during the hot phase of the election campaign. Only about one-third of US internet users were likely to have encountered any fake news during the critical phase of the election campaign. Outside of the election campaign, this group is presumably even smaller. This contention is supported by the fact that the number of fake news items with US relevance has been dropping since 2016. In Germany, the problem is even less acute than in the US because above-average amounts of news content are sourced from traditional news providers, even on the social media platforms. The significance of "fake news" is therefore likely to be low. Considering that fake news is currently an unquantified phenomenon, it cannot be taken as given that it represents a risk to democratic opinion formation. Against this background, it is questionable whether additional legal measures targeting fake news, which go further than the criminal law provisions that already existed prior to the adoption of the Network Enforcement Act, are even necessary.

In addition, existing research findings on news reception indicate that the potential of fake news to change opinions is limited, even when it is widely spread. This report has highlighted that people always assess and integrate new information against the backdrop of their existing preconceptions and worldview. Fake news often references a worldview that is conspiracist and critical of elites. It appears unlikely that individuals who reject such a worldview can be persuaded to change their minds just because they are exposed to fake news that promotes criticism of elites and conspiracy theories. For this to happen, they would have to receive similarly worded false information multiple times from different sources – but not too often, because otherwise their response could flip into reactance. However, considerably more research is needed because these conclusions mainly rest on studies that did not explicitly focus on fake news. Still: based on the current state of the research, the most probable interpretation is that there is a low risk for the vast majority of the population that their opinions can be manipulated through fake news, mainly because their worldviews do not align with one that is based on conspiracy theories.

Argument II: Deleting fake news drives people to alternative platforms

People who already subscribe to a worldview that aligns with fake news will probably find their views confirmed by such messages. But the reverse conclusion – that deleting fake news will make such individuals question their worldview – is unwarranted. In the age of the internet, information is stored in many different places and can never be completely erased. It is almost impossible for the legal system of any given state to gain access to all of the website opera-tors that host information marked for deletion. This means that people who subscribe to conspiracy theories can always find places on the internet that provide information which confirms their worldview. If not on the major platforms like Facebook and Twitter, then on less prominent alternative platforms. Presumably, deleting fake news will drive people who are specifically looking for such information away from the large social networks and into more remote corners of the internet, which are better able to evade laws such as the Network Enforcement Act.

Such an exodus of user groups (and therefore population groups) from the large social networks is not in the interests of a functioning democracy. Democracy depends on enabling exchange and encounters between different groups and political camps. Such encounters are more frequent when all population groups and opinions use the same communication platforms. Pushing users who subscribe to certain political views out of the major social networks by deleting fake news reinforces societal polarisation, a process that is already underway in any case (Iyengar, Sood, & Lelkes, 2012). This reduces opportunities for (virtual) encounters and exchanges between different societal groups, and strengthens filter bubble effects.

Argument III: Deleting fake news strengthens populists

The conspiracist and anti-elite worldview expressed in much of today's fake news closely matches the populist ideology currently espoused by many political actors throughout the world (see Mudde, 2004). The populist message also includes criticism of established journalistic media channels, which are represented as being complicit in elite conspiracy (A. Schulz et al., 2018). Populist political leaders are likely to interpret the state-sponsored deletion of social media content under threat of severe sanctions for the platform operators in a similar vein. Deleting fake news could therefore be leveraged as a further argument supporting the populists' criticism of elites, thereby strengthening their position.

At the individual level, reactance should be expected. This has already been addressed above: individuals who believe the content of fake news and do not think it is falsified will probably be annoyed both by warning notifications pointing out that the message is untrue and by the deletion of the message. Restrictive deletion at the behest of the state would be seen as a limitation of individual freedom of information. The resulting annoyance would only reinforce the person's anti-elite, conspiracist worldview rather than unsettling it. Populists could exploit this annoyance and further strengthen their support base.

Correcting fake news can increase the credibility of the disinformation. Deleting fake news from social networks may have a similar effect.

Observations after the first year of the Network Enforcement Act

The impact of the Network Enforcement Act has to be taken into account to arrive at an over-all assessment of fake news in the German context. To do this, we can review the reports which social media operators are compelled to submit at half-yearly intervals and which are published in Germany's Federal Gazette (accessible at http://www.bundesanzeiger.de, section „Verschiedene Bekanntmachungen/Berichte Anbieter sozialer Netzwerke"). The first thing that stands out is how inconsistently the different social networks have implemented the NetzDG notification form. Far more NetzDG-related user complaints were received by YouTube (312,403) and Twitter (480,386) in 2018 than by Facebook (1,181), where user complaints are apparently mainly processed through pre-existing complaint management systems rather than being captured in accordance with the Act's provisions. This is somewhat unexpected because Facebook was often mentioned as the greatest danger while the Act was being prepared and justified. Until 2017, Facebook was also the social media channel that spread the most fake news. It appears that the Act has had very little impact on its most important target.

The bare figures do not show whether the content reported by users really constitutes instances of fake news. Only Twitter includes a category in its published statistics that corresponds to fake news: 879 out of the 49,116 measures taken in response to user complaints (i.e., under two percent) resulted from "a statement of fact being untrue or discernibly deriving from other actual circumstances [than those stated]." For all three service providers, by far the majority of content reported related to allegations of incitement, verbal abuse, defamation or slander – meaning statements belonging to the much-discussed category of hate speech, but not fake news. This reveals the claim that the Network Enforcement Act works to combat fake news to be highly dubious.

In response to the complaints, the networks carry out deletions or block users with different levels of severity. The rate is 18.9 percent of reported content for Facebook, 10.2 percent for Twitter and 26.0 percent for YouTube. The numbers cannot really be used to assess whether there has been "overblocking", i.e. the preemptive deletion of content. Different observers interpret the same numbers to mean completely different things: For instance, Patrick Beuth (2018), a journalist who writes for the German Spiegel magazine, interprets the proportion of deleted content during the first half-year of 2018 as being low and therefore does not perceive overblocking, whereas the NGO Reporters Without Borders (2018) uses the same figures to conclude that there probably has been overblocking. To answer the question, the content deleted in response to NetzDG's requirements would have to be analysed and legally reviewed. But the website operators are not required to store the required data and are unlikely to make it available voluntarily.

In addition, such an analysis would only permit conclusions about how operators have applied the Act to date. It is not implausible that changes in the political landscape will lead to over-blocking becoming a greater problem in future than it may be at present. In any case, the Act provides social network operators with legal cover – supposedly beyond their control – to justify future overblocking if doing so appears politically opportune. In times of growing authoritarianism across the world, this looks like a credible and problematic scenario. Calls for an independent supervisory agency and a transparent complaint mechanism (e.g. Leutheusser-Schnarrenberger, 2018; Reporter ohne Grenzen, 2018) are therefore not unreasonable. These measures should make deletions reviewable at any time and thereby also give users whose posts have been deleted the opportunity to appeal the deletion through an orderly process. The ombud agency should include representatives of the operators as well as of the judiciary, civil society stakeholders and users. The measures should help to allay fears that it is mainly politically undesirable or bothersome posts that are targeted for deletion.

Which other measures are necessary and indicated?

If deleting fake news on social media offers limited prospects of success and the impact of warning labels for false information is similarly limited, then what measures are advisable? There is a range of measures which the state could and should implement or promote:

- Various authors have pointed out that promoting media literacy both at school and in other educational settings should form one of the main public countermeasures against fake news (Kahne & Bowyer, 2017; Mihailidis & Viotty, 2017). Here, the focus of classical mdia literacy training, which mainly focused on the use of sources, should be expanded to promote information literacy, which adds knowledge about information processing and media impact, as described in this paper. Media users who are aware of the cognitive and affective mechanisms of their own media reception should be more resistant to harmful media influences by being in a position to critically assess their own consumption behaviour.

- In addition, social dialogue should be promoted, including with population groups that no longer identify with the "centre" of society and who are therefore more receptive to the conspiracist messaging of fake news. Fake news has to be seen in the context of populist movements which are gaining strength and which are contributing to a new affective polarisation of society: a division into anti- and pro-elite segments of society (Müller et al., 2017). Appropriate measures should therefore be devised to facilitate dialogue between these two political camps. This has to be done in a way that allows both sides to see that their position is being taken seriously and that they are respected.

- Similarly, fake news should not be corrected from a position of superiority, but rather in a way that signals openness to dialogue and an attitude that is not fundamentally dismissive. Else, there is a risk that there will be a backfire effect which will make the content of fake news items even more believable for certain people.

- In addition, the societal discourse on fake news should be toned down. The agitated debate of recent years provided rich pickings for populists who reinterpreted the fake news term and turned it against established media outlets (A. Schulz et al., 2018). An experiment from the US showed that the fake news debate fundamentally weakens users' trust in the media (van Duyn & Collier, 2018). In addition, it creates a sense of insecurity when it comes to evaluating news reports. Users who previously read an article about the fake news problem from the perspective of a social elite di course found it more difficult to distinguish between false and real news. Consequently, the fake news term should be used with far more restraint in public debate than is currently the case. The fact that the various political and societal camps accuse each other of spreading untruths ultimately damages trust in political institutions and established media, contributing to the erosion of democratic culture. Recklessly making such a cusations should be avoided. Instead, a political culture should be promoted which takes contrasting viewpoints seriously. They should be responded to factually rather than by discrediting the other party.

Further research is required

There is clearly a need for further research into the fake news phenomenon. As has been apparent throughout this paper, the current state of the research into fake news and its impact is not yet sufficient to assess its risks comprehensively. The following items urgently require further study:

- Although there are a few studies from the US that assess the volume of fake news, such data is only available in rudimentary form for Germany. There is a need to establish how much fake news is in circulation in Germany, both during election campaigns and at other times.

- Fake news content should be analysed to determine which topics such news items ad-dress in Germany and what arguments they put forward.

- It also needs to be established how intensively German media users engage with fake news. On this question, too, the only data currently available is from the US, and it specifically deals with the 2016 presidential election campaign.

- Furthermore, the impact of fake news on opinion formation should be investigated experi-mentally. Many of the processes described in this paper have not yet been studied sufficiently in connection with fake news and how it is presented on social media.

- In this context, the effects of various types of warning notification and educational measures regarding the incorrectness of messages are deserving of further study. Here, attention should specifically be dedicated to determining the differences between displaying warning notifications before sharing fake news versus showing such notices when fake news is being interacted with.

- Finally, researchers should view the fake news debate as a discourse phenomenon and study the use of the fake news accusation in the political debate. The public debate around intentionally deployed false information and the “post-truth era” could have a greater impact than fake news itself, and may exert a lasting influence on political attitudes, voter behaviour, political disenchantment as well as on political information behaviour. Based on the current state of the research, it is reasonable to conclude that the fake news debate mainly aids populist political actors and so-called “alternative media”, while contributing to societal polarisation both politically and in terms of media usage.

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