

## **How journalists and social media users perceive the usefulness and trustworthiness of online fact-checking and verification services**

Postprintversjonen (accepted version)

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*While services for fact-checking and verification to counter fake news in social media have increased, little research has investigated how journalists and the public perceive such services. This study reflects the outcomes of REVEAL, a three-year EU research project investigating the use and impact of services for fact-checking and verification. Based on interviews with 32 young journalists and content analysis of social media users' online conversations, we contribute new knowledge on how journalists and social media users perceive the usefulness and trustworthiness of online fact-checking and verification services. The findings suggest that, while young journalists were largely unfamiliar with or ambivalent about such services, they judged them as potentially useful in the investigative journalistic process. Yet, they were unwilling to rely exclusively on these tools for fact-checking and verification. A comparison of journalists' perceptions with those of social media users reveals social media users are similarly ambivalent. Some accentuated the usefulness of such services, while others expressed strong distrust. However, the journalists displayed a more nuanced perspective, both seeing these services as potentially useful and being reluctant to blindly trust a single service. Design strategies to make online fact-checking and verification services more useful and trustworthy are suggested.*

**KEYWORDS** fact-checking; trust; social media; misinformation; verification

## Introduction

Social media sites like Facebook, YouTube, Instagram, and Twitter are increasingly used as information sources both by established media outlets and people in general. For example, in the U.S., the percentage of people reporting that they use social media as a source of news rose to 46% in 2016, which is almost double the 2013 figure (Reuters 2016). Simultaneously, the amount of incorrect or manipulated content in social media has been reported as a growing problem (Brandtzaeg et al. 2016; Silverman 2015; Silverman et al. 2016; Thurman 2017). This problem has accentuated the debate on fake news in and after the U.S. elections in 2016. While multiple interpretations of the term *fake news* exist, we understand it as fabricated or unverified content intentionally presented as verified news to mislead readers, often with an ideological, political, or economic motive.

A recent study showed that about two in three U.S. adults experience fake news as a source of confusion (Barthel, Mitchell and Holcomb 2016) and that nearly one in four report to have shared a fabricated news story on social media (Silverman et al. 2016). Similarly, in a Swedish study of adults aged 18 and older, four in ten reported to encounter news on the internet that they believed to be untrue each week. In the same study, eight in ten reported to believe that false news causes confusion (Ahlin and Benzler 2017). Others have found that belief in misperceptions is prevalent (e.g., Ramsay et al. 2010) and plays a significant role in various political and societal issues (Bartels 2002; Kull, Ramsay, and Lewis 2003). Silverman (2015) asserted that the broad uptake of social media, whereby anyone produce and distribute content, causes false and inaccurate content to disseminate faster and wider than previously.

In response to the online information challenge, an increasing number of online services can help identify and correct false or inaccurate content or claims in the public domain made online or through other channels (e.g., by politicians or other public persons). We can group these services into two main categories: (a) *fact-checking services* and (b) *verification services*.

*Fact-checking services* are individuals or organizations that analyze and determine the accuracy of claims and content in the public domain and guide users on the credibility of online content. Examples of fact-checking services include FactCheck.org (<http://www.factcheck.org>), Snopes (<http://snopes.com>), and StopFake (<http://stopfake.org>). Fact-checking services typically have a broader potential user group than verification services as these provide complete analyses and assessments of online claims or content and may thus be useful for internet users.

*Verification services* are tools that may support the process of authenticating online content items such as text, images, and videos. These tools often apply algorithms to make the verification process more efficient and accurate. Verification services are typically useful for specialized user groups such as journalists. TinEye (<http://tineye.com>), for example, supports searches for similar images on the internet, which may be useful for journalists when conducting provenance analyses of online footage.

Clearly, fact-checking and verification services are potentially beneficial to anyone trying to navigate the waters of online information, especially given the threat that online misinformation may represent to a well-functioning democracy (Harman 2014). Yet, little is known about how those working in established media outlets perceive fact-checking and verification services. Addressing this lack of knowledge is critical as it would allow for more in-depth explanations of when and how such services actually serve their purpose.

In this paper, we contribute lessons learned from REVEAL (<https://revealproject.eu>), a three-year EU research project investigating how online fact-checking and verification services can aid news media outlet journalists in evaluating content they find online. We explore how

journalists perceive the trustworthiness and usefulness of fact-checking and verification services and contrast these perceptions to those of regular social media users.

The following research question was explicated: *How do journalists and regular users of social media perceive online fact-checking and verification services?*

The perceptions of journalists, especially young journalists, who increasingly will be working with social media as a news source are crucial to understand. These journalists will need to identify and verify massive amounts of content quickly. It is, therefore, important to explore how verification and fact-checking tools should meet the needs of tomorrow's journalists regarding usefulness and trust. Ultimately, our study will provide answers on the extent to which these tools will enable journalists to better fact-check and verify their information.

It is furthermore interesting to compare the perceptions of journalists to those of social media users. A detailed investigation of how social media users in general perceive fact-checking services has been presented elsewhere (Brandtzaeg and Følstad 2017, forthcoming). Fact-checking services are intended to counter false and inaccurate claims and content for the general public; hence, they are part of the information landscape in which journalists work. Examining the perceptions of these two user groups offers a broader understanding of when and how fact-checking and verification services are useful.

## **Background**

### *Fact-checking services*

For journalists and social media users alike, fact-checking services of interest are those providing analyses and assessments of claims and content in the public domain, such as FactCheck.org, Snopes, and StopFake. Some services explored in this study (e.g., FactCheck.org) aim to verify claims or statements of relevance to current politics. Others (e.g., Snopes) target online rumors and urban legends. Still others address highly specific controversies; for instance, StopFake attempts to debunk erroneous content regarding the Ukrainian conflict.

An international survey conducted by Duke Reporters Lab in 2017 (Stenichel 2017) counted a total of 114 active fact-checking teams, reflecting a substantial increase from earlier years. Until recently, such fact-checking services did not receive much attention. However, recent years have seen a greater need for online fact-checking (Graves, Nyhan, and Reifler 2016). The debate on fake news associated with the 2016 U.S. presidential election (Silverman et al. 2016) and elections in Europe (e.g., Nardelli and Silverman 2016) has spurred an interest in this topic. Google recently announced its application of a Google News “fact-check tag” (Google 2016) reserved for articles from official fact-checking services such as FactCheck.org. Likewise, Facebook has partnered with fact-checking services to flag fake news (Jamieson and Solon 2016). These recent developments illustrate the growing popularity of such services.

Many fact-checkers are part of the International Fact-Checking Network (IFCN) at Poynter, committed to follow the network's code of principles<sup>1</sup>, such as non-partisanship, transparency in sources, funding, and methodology, as well as openness in corrections. However, not all self-established fact-checkers are non-partisan Rogerson (2013) distinguished between fact-checkers that aim to be objective and non-partisan, such as those mentioned above, and fact-checkers with an overt political agenda. Examples of the latter are Factcheck Armenia and FactChecking Turkey, which reportedly challenge or correct Western media articles that are critical of the state of affairs in these countries.

In line with the IFCN code of principles, we believe that fact-checkers regarded as non-partisan are more relevant. However, as Rogerson (2013) discussed, what is reckoned as fact or truth may often have an element of interpretation. Hence, the aim of fact-checkers to be neutral or non-partisan may potentially be difficult to attain.

### *Verification services*

In addition to regular fact-checking services, other online tools or services may support the fact-checking process (Thurman 2017). We refer to these as verification tools because they may be developed and used for purposes other than fact-checking. These services are typically relevant for more specialized users whose aim is to verify specific pieces (e.g., an image) of online content. For example, TinEye and Google's reverse image search, two services used for searching for similar images, help users identify previously published versions of an image online. Such services can support provenance analysis (i.e., the process of identifying the original version of a piece of content). FotoForensics provides facilities for analyzing whether a digital image has been altered or manipulated. Although such analyses can be time-consuming and the technological support is in its relative infancy (Lyon 2012), these may serve to identify crude manipulations. InformaCam is a solution to add metadata to a photo when it is taken to facilitate subsequent verification. Neither of these services has journalists as their only user group. However, they represent a source of support for users, such as journalists, in need of verifying online content.

### *Changing public opinion through fact-checking*

While addressing misinformation in the public domain is undoubtedly a noble cause, it is also challenging. Existing research has explored whether neutral third parties, such as fact-checking services, are successful in changing or challenging erroneous beliefs (Lawrence, Matthew, and Schafer 2012; Nyhan and Reifler 2010). Fact-checking is typically viewed more favorably by those with high political knowledge (Nyhan and Reifler 2012). Moreover, fact-checked information often fails to reduce prominent misperceptions among susceptible groups and can under some circumstances make them worse (Kuklinski et al. 2000; Nyhan and Reifler 2010; Nyhan, Reifler, and Ubel 2013).

Key to the challenge of changing public misperceptions through fact-checking is the phenomenon of *confirmation bias*, whereby people tend to seek or interpret evidence according to their current beliefs or expectations. This phenomenon is well known (Nickerson 1998) outside the field of fact-checking. Interestingly, confirmation bias occurs not only in untrained subjects but also in high-ranking public officials such as Supreme Court justices (Westen 2008). Confirmation bias may be strong when it comes to controversial issues or political beliefs (Taber and Lodge 2006), which are often the topics of fact-checkers. Consequently, fact-checking services may fail to reduce public misperceptions, and such failure specifically addresses the individuals most likely to believe erroneous online content who are potentially most in need of the information provided by fact-checkers.

Furthermore, the sheer volume and speed in the production and distribution of online misinformation makes it challenging for fact-checkers to keep up. A study on the verification platform Hoaxy suggested that the sharing of fake news typically outpaces the sharing of content that fact-checks the same news (Shao et al. 2016). A recent study by Khaldarova and Pantti (2016) on the attempts of StopFake to combat misinformation pertaining to the Ukrainian conflict

showed how social media users assess misinformation and the effective strategies that StopFake uses to debunk fake news. The study found that Twitter users are largely skeptical about the correctness of media narratives from the Russian media about Ukraine. According to the study, the most powerful debunking method was the contrasting of information sources (e.g., fake or manipulated images compared with real images) or scene visits from StopFake reporters.

### *Journalists' use of fact-checking and verification services*

The traditional media and journalists play a central role in the challenge of false and erroneous content. As the fourth estate of a well-functioning democracy, the free press has a responsibility to serve as public watchdog (Eriksson and Östman 2013). As newsrooms over the last century have positioned themselves as non-partisan, the press is now expected to provide non-biased information (Gentzkow, Glaeser, and Goldin 2006). In a recent report from the Reuters Institute for the Study of Journalism, Hofseth (2016) noted that traditional media, in general, and journalists, in particular, must also take on a greater responsibility for online fact-checking: "If content refuses to go through the editor, the editor must come to the content. Pointing out falsehoods is valuable, as no central bodies are policing the internet" (Hofseth 2016, 3).

A study of U.S. journalism indicated that professional motives within journalism, rather than a market demand, are the key driver of the growth in fact-checking seen in the last two to three years (Graves et al. 2016). However, the role of journalists as ardent fact-checkers is not unchallenged. Silverman (2015) discussed how the role of journalists as professional content producers and distributors may play in the dissemination of hoaxes, erroneous claims, or unverified rumors, for example, through uncritically passing on incorrect statements. Lawrence and Schafer (2012) presented a case study of how journalists reported on a widely debunked blog post by Sarah Palin in which a misinterpretation of healthcare reform led her to argue against what she referred to as "death panels." Here, some journalists, in line with the position of main fact-checking services, characterized Palin's position as false, while other journalists passed on the "death panels" claim unchallenged. Schifferes et al. (2014) reviewed episodes in which false content from social media was distributed by traditional media outlets, such as the case of a manipulated image purporting to show the dead body of Osama bin Laden in 2011 and fake photographs claiming to be related to Hurricane Sandy in 2012.

Finally, journalists working with online news publishing often report having insufficient time for verification and fact-checking due to a fast-paced publishing environment (Brandtzaeg et al. 2016; Silverman 2015). This fast-paced publishing environment and shortfall in journalistic resources for fact-checking are potentially problematic as the volume of online information and disinformation increases. Thus, a failure to handle fact-checking efficiently may reduce trust in traditional media outlets, which is already at a historical low across several countries (Gallup, 2016; Reuters 2016; Rifkin 2015). Lowered trust in news media implies changes in patterns of news consumption whereby larger proportions of the public seek news from alternative, low-credibility content channels, potentially leaving the population more vulnerable to online disinformation or fake news (Ladd 2011; Quandt 2012). In light of the increasing use of social media content in news and journalists' time pressure for verification of online sources, an understanding of how journalists perceive fact-checking and verification services is an increasingly important topic. Previous work has indicated that average journalists often lack the knowledge and skills needed to apply online verification tools, while advanced social media journalists do use these (Brandtzaeg et al. 2016). Yet, how journalists use and experience fact-checking services has not been investigated.

*Usefulness, trust, and skepticism as key drivers in perceptions of fact-checking services*

Since existing research suggests that changing public opinion through fact-checking is challenging and that journalists may not apply current fact-checking and verification services to their fullest extent, it is important to understand what drives or motivates perceptions of such services. The usefulness and trustworthiness of such services for those who primarily use them are critical.

Some commentators and researchers have noted skepticism towards fact-checking services. McArdle (2016) rhetorically asked, “Who will fact-check the fact-checkers?” in her discussion of the fact-checking challenge of distinguishing between opinions and facts. Uscinski and Butler (2013) discussed what they referred to as dubious practices in political fact-checking where fact-checkers seem to assume that there cannot be political debate about facts. While such skepticism has been criticized (Amazeen 2016), it nevertheless is relevant for some (Uscinski 2015).

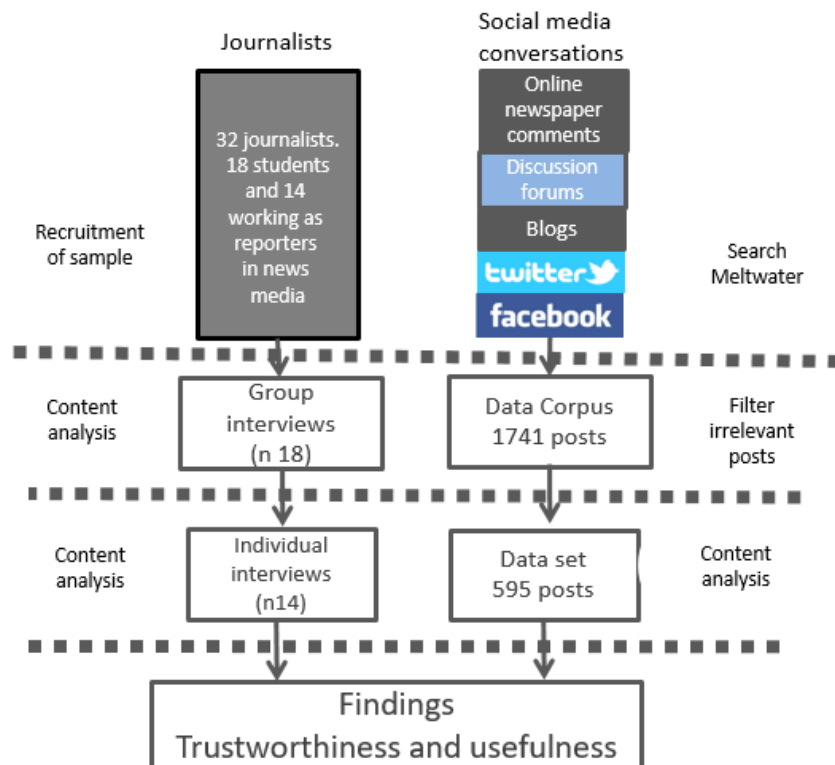
For services to be applied, they must be perceived as useful (Davis 1989; Davis, Bagozzi, and Warshaw 1989). The usefulness construct has been elaborated in information systems theory (Davis 1989). To detail usefulness perceptions for fact-checking and verification services, a construct like that of Tsakonas and Papatheodorou (2008) may be applied, whereby *usefulness* is the degree to which a service or product supports users in reaching their goals. The usefulness of verification and fact-checking services concerns whether users perceive them to be necessary and to increase their job performance or ability to discern factual information from other online content.

Similarly, trust is important because fact-checking and verification sites claim to produce and check “facts” and “verify” content. Trust is particularly relevant for circumstances characterized by perceived risk; that is, trust is deemed important in situations in which something of value is at stake (Mayer, Davis, and Schoorman 1995). For trust in verification and fact-checking services, the perceived risk is related to the relationship between the fact-check consumer (trustor) and the fact-checker (trustee). The greater the risk, or the more important it is to get a correct understanding of facts, the higher the stakes between the trustor and the trustee. Following from Mayer et al. (1995), trust perceptions flow from experiences of services’ or service providers’ ability, benevolence, and integrity.

The current body of research shows that the perceived trustworthiness of verification and fact-checking services may depend on factors such as service origin and ownership (Rogerson 2013) as well as the character of the fact-checking process, especially its degree of transparency (Harman 2014). However, to our knowledge, no research has examined how journalists perceive fact-checking services in terms of usefulness and trust or how these perceptions compare to those of regular social media users.

## **Methods**

This study is based on a multimethod research approach, as outlined in Figure 1. The data derived from: (a) group interviews of students in journalism and individual in-depth interviews of young journalists aimed at capturing their experience with and perceptions of fact-checking and verification services and (b) analyses of social media conversations in which social media users express their experiences with and perceptions of fact-checking services.



**Figure 1. Outline of the multimethod research approach**

*Interviews with young journalists*

To investigate journalists’ perceptions of fact-checking and verification services, we used group and individual interviews. The ability to verify and fact-check social media content in a fast-paced environment is a critical skill for tomorrow’s journalists. Therefore, it is crucial to see how journalist students and young journalists experience emerging verification and fact-checking services in newsgathering processes. Hence, our participants were young journalists and journalism students with professional experience. This sample represents tomorrow’s journalists and editors.

<b>Sample characteristics</b>	<i>Group interviews</i>	<i>Individual interviews</i>
<b><i>Gender</i></b>		
Male	5	6
Female	13	8
<b><i>Country</i></b>		

Spain	0	7
Norway	18	7
<b><u>Education</u></b>		
Autodidact in journalism	0	1
Graduated in journalism	0	12
Student	18	1
<b><u>Employment level</u></b>		
Part time (student)	18	1
Working full time as journalist	0	13
<b><u>Work experience</u></b>		
Several years	6	12
One year	7	1
Some months	5	1
<b><u>Social media used for professional purposes</u></b>		
Twitter	14	15
Facebook	17	14
Instagram	13	11

**Table 1. Sample description (n = 32)**

Three group interviews were conducted involving 18 journalism students (in groups of 5, 7, and 6, respectively) from Norway (mean age 25 years). They were recruited following an announcement on the internal webpage of their university college in June 2015. The individual interviews were conducted with 14 journalists in 2015. Participants were recruited by asking major news organizations in Norway and Spain to appoint young journalists. Table 1 provides sample characteristics of both groups of interviewees.

The group and individual interviews covered similar topics: exploring journalists' experiences of verification and fact-checking issues (e.g., How do you verify content and sources on social media? What kinds of tools do you use? Do you find verification on social media difficult?). All interviews were audio-recorded and transcribed. The individual interviews lasted between one and two hours, while the group interviews lasted two hours.

As the journalists in this study had limited experience with fact-checking and verification services (see Table 2), all participants were presented with newsgathering examples of fact-checking and verification services for consideration, including a walkthrough of the prototype of a comprehensive verification service developed in the REVEAL project.

## *2. Social media conversations*

For the social media users, we applied an exploratory research approach designed to take advantage of unstructured social media conversations. In such conversations, social media users present and motivate their attitudes and beliefs in a raw and authentic manner. When shared, these expressions influence a broader range of social media users (see Silverman et al. 2016). This research approach based on “raw” data may also safeguard against the social desirability bias (Nederhof 1985) that challenges the validity of, for example, questionnaire-based studies.



The data on social media conversations were collected through the Meltwater Buzz social media monitoring tool. This tool crawls all open Facebook pages with more than 3,500 likes, all open Facebook groups with more than 500 members, all Twitter posts, and a large set of blogs, discussion forums, and online newspapers. These data sources are defined by Meltwater clients and, hence, may be considered a large convenience sample.

To enable sufficiently in-depth analyses, we scoped the analysis for social media users' conversations about three prominent fact-checking services: FactCheck.org, Snopes, and StopFake. These services were chosen because they are all highly profiled, well known, and included in the Duke Reporters' Lab online overview of fact-checkers (Stenchel 2017). The three services also cover three different areas of concern of fact-checking.

To access social media users' conversations of FactCheck.org and Snopes, we applied the following search term: “[service name] is” (i.e., “Snopes is”, “FactCheck.org is”, “FactCheck is”). These search terms were chosen as they reflect how people often formulate a sentence containing opinions about a phenomenon. Compared to Snopes and FactCheck.org, StopFake is a smaller, less known service. We therefore selected a broader search string (i.e., “StopFake”) to get enough relevant opinions.

The search resulted in 1,741 hits (see Figure 1), counting the six-month period from October 2014 to March 2015. We filtered out duplicate posts and false positives not concerning the fact-checking services. The remaining data set consisted of 595 posts. The posts were mainly gathered from online discussion fora and blogs (336), Facebook (159), and Twitter (100).

Most of the posts (385) concerned Snopes, the U.S.-based service addressing online rumors and urban myths. StopFake, the Ukrainian-based service addressing misinformation in the Ukraine conflict, had 130 posts. FactCheck.org, the U.S.-based service concerning fact-checking in politics, had 80.

We conducted content analysis of these 595 (Ezzy 2013) with respect to the overarching themes of usefulness and trust. Posts were also coded according to sentiment: *positive* or *negative*. Negative sentiments addressed aspects of the services that were seen as problematic or undesirable, often with a distinct emotional character. Positive sentiments addressed the beneficial or useful aspects of the services.

A detailed analysis of the dataset on social media conversations has previously been presented elsewhere (Brandtzaeg and Følstad 2017, forthcoming). In the present study, we provide an overview of findings from this dataset that resonate with the key topics discussed by the participating journalists to allow comparison between these two potential user groups for fact-checking services.

## Results

The results section is divided into two parts. The first presents the analysis of the group and individual interviews of the journalists, and the second presents the analysis of the social media conversations.

### *Journalists' experiences of fact-checking*

In the interviews, we first asked participants to detail their views on fact-checking and verification in social media and then asked about their experiences and perceptions of fact-checking services.

First, most interviewees regarded fact-checking and verification in social media as challenging. The participants claimed that journalists must be mindful of these challenges, especially as false claims may go viral. They argued that false claims going viral may be an issue when individuals make erroneous judgment calls or participate in propaganda wars.

Participants reported fact-checking in social media to be potentially challenging when social media is used for journalistic research purposes. They viewed visual data, such as images and video content, as imposing challenges because such content can easily misrepresent a claim when the context is not properly explained. Videos on YouTube were exemplified as a typical challenge to verify:

YouTube is a challenge because you don't know the source of the video. It's very challenging to know how to identify the people behind the video (...) so you can't just take a video and use it and hope it will be okay. (Individual interview, 24 years)

However, several participants noted that it may be acceptable to post unverified textual content if one has made the proper reservations, such as stating that the content has not yet been verified.

Fact-checking has always been at the heart of journalistic practice. With the fact-checking and verification challenges implied by social media, one would expect that journalists would readily embrace supporting tools and services. However, the interviewees were hardly aware of any dedicated services or tools that may support fact-checking and verification in social media (e.g., Storyful, Snopes, FactCheck.org, TinEye, FotoForensics).

Table 2 shows that 10 out of 32 journalists in this study knew about Google's reverse image search, while the rest of the services were unknown to the majority. This is not to say that the participants did not use online services for verification. They reported on how they cross-checked information across social media services, for example, by looking up a source from Twitter on Facebook or LinkedIn.

Service name	Service type	Count (%)
Snopes	Fact-checking	3 (9%)
Storyful	Fact-checking	2 (6%)
Factcheck.org	Fact-checking	2 (6%)
Hoax-Slayer	Fact-checking	2 (6%)
Politifact	Fact-checking	1 (3%)
Google Image	Verification	10 (31%)
TinEye	Verification	1 (3%)
FotoForensics	Verification	1 (3%)
InformaCam	Verification	0 (0%)
None		10 (31%)

**Table 2. Use and knowledge about verification and fact-checking services (n = 32)**

Upon being asked to speculate on the possible usefulness of such fact-checking and verification services, the participants in one of the group interviews assumed that finding a story flagged in such a service would sensitize them to possible issues and spark further verification or fact-checking efforts. In another group interview, they questioned the services:

How reliable are these?

Are they completely reliable?

Do they have a description of the method used, and how can we trust this method?

A fair proportion of those from the individual interviews also reported skepticism about fact-checking and verification services. They stated that they would never take information verified from them for granted without engaging in further investigations themselves. The trustworthiness of automatic verification services was considered weak. Such services often lack a thorough description of the verification process. The interviewees thus argued that they would not rely exclusively on the outcome from a verification service. They would also like to ensure that the verification service was recommended by their own newsroom. As one journalist phrased it:

I must know that some professional actors are endorsing this verification service, not only me, and it should also be used and certified by my own newsroom. I am very skeptical about such things because new tools like these are popping up on the Internet all the time. (Individual interview, 25 years)

Another explained this by describing her view of Wikipedia. She spoke of the possibility of using Wikipedia or Snopes as a service to support her research, though never as a source:

Wikipedia is widely used, but as a journalist, I can't use it. I never use Wikipedia as a source. It is too much work to verify the different statements on Wikipedia, where they come from. The same counts for Snopes. I would rather make a phone to an expert and use her as a source. (Individual interview, 23 years)

With these quotes in mind, the journalists described verification as a process requiring their active participation in calling and checking sources. They found such services as a useful starting point for further verification. They typically saw fact-checking services as insufficiently trustworthy to be used as a single source, requiring them to be accompanied by a thorough fact-checking process.

Regarding usefulness, the journalists generally described the fact-checkers as a good starting point for further investigation. On the question of trustworthiness, they reported a lack of ability in technology-based verification (e.g., supported by Google's reverse image search) and in fact-checking conducted by a team of other co-workers (e.g., Storyful, FactCheck.org, Snopes). Most participants reported a need to play an active role in the fact-checking and verification process.

However, some journalists from the group interviews also reported the necessity of trusting such technology to cope with the information overload in social media. Hence, the huge amount of false information shared online represents a problem difficult to deal with without help from technology. Yet, they also reported some ambivalence toward relying exclusively on these tools. This parallels findings from a recent study by Thurman (2017), where journalists warned that an over-reliance on technology and third-party services could develop and hamper critical literacy among journalists. In addition, journalists in our sample possessed limited knowledge of how technology and different algorithms work, as one journalist explained:

[...] if you are going to manage to produce anything at all, then you have to trust it [Google's reverse image search]. Otherwise, in a way, you cannot use it as a tool. (Group interview)

All group interview participants were asked about the degree to which their education prepared them for verification issues in social media and whether they had learned about fact-checking services. They argued that verification of social media content was not a priority in their college curriculum. They reported that teachers encouraged students to use social media to generate engagement for content but that they focused less on investigative usage and verification. The participants typically argued that their lack of education on social media was due to a lack in competency among teachers. They also discussed whether outdated textbooks were to blame for the lack in updates on social media. These issues were further validated and confirmed by the individual interviews.

### *Social media users' perceptions*

The gathered social media posts reflected the users' opinions on Snopes, FactCheck.org, and StopFake. While the volume of posts and the proportion of associated positive and negative sentiments differed, the users' motivations for their positive or negative sentiments were remarkably similar across the three services. Like the journalists, the social media users displayed substantial skepticism towards the fact-checking services. The social media users who expressed skepticism towards fact-checking services typically addressed trust issues, as in this example quote:

FactCheck.org is not a nonpartisan, nonprofit "consumer advocate" for voters and really aims to increase the level of deception and confusion in U.S. politics<sup>1</sup>.

While the fact-checkers typically aim to be objective, negatively inclined social media users did not see them as such. Rather, they suggested the fact-checking services to be biased, as the following quote indicates:

Snopes is a liberal/Democrat outfit. Thus, their observations in many regards are suspect.

In the case of StopFake, some comments challenged its claims of being non-partisan:

Why should I give any credence in Stopfake.org? Does it ever criticize the Kiev regime in favor of the Donbass position?

A substantial proportion of the comments on trust issues went as far as to question the benevolence of the fact-checking services, suggesting that they purposely misrepresent information, take part in fraud or propaganda, or are part of some larger conspiracy:

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<sup>1</sup> In the examples from the posts, we have changed some of the original content to avoid the posts being searchable online due to privacy issues.

George Soros and FactCheck.org are funded by UBER PROGRESSIVE LIBERALS AND COMMUNISTS! So don't look to find the truth about anyone on the left or their agendas or policies from Snopes.com or FactCheck.org. You will only find LIES, DECEIT AND SPIN on the left!

Finally, some of the negative posts also questioned the fact-checkers' ability. These posts typically included statements indicating a lack of expertise or suggested that the services were of low credibility:

Snopes IS? A husband and wife, without any scientific background, without any investigatory experience. They get their info from Google. They are a joke.

Going beyond mere trust issues, some social media users' skepticism of fact-checking services indicated some form of powerlessness or distrust in online information in general. These posts reflected what seems to be an emerging phenomenon, which we refer to as *informational disbelief*, that is, a general tendency in individuals or social groups to be skeptical towards any information online, including information from societal institutions such as government bodies or the news media. An important driver of informational disbelief may be the ease with which social media allows for the creation and sharing of user-generated content, as pointed out by one user:

I can create hundreds of fake Twitter accounts and post loads of bullshit in a very short time.

This ease of sharing, which ironically the social media users in our study took advantage of, may have led to a public sphere in which misinformation is so rife that it is almost impossible to distinguish truth from fiction. Silverman (2015) also pinpointed this tendency of the spread of misinformation through social media.

Such a state of informational disbelief may explain the voiced skepticism of online fact-checking services. In an environment in which media authorities are not trusted, users largely depend on their gut feeling when sifting through online content.

Not all social media users commenting on the three fact-checking services voiced negative sentiment. As with the journalists, the positive posts typically concerned the usefulness of online fact-checking services. For example, social media users commenting on Snopes highlighted that the service was useful for debunking internet misinformation and urban legends.

Snopes is a website you should check out. Click the link. Don't be scared to learn the truth - that your conspiracy theories aren't true. It's okay to come out of the dark!

Interestingly, opposed to the negatively voiced posts, the descriptions regarding the usefulness of online fact-checking services typically had an analytical and unemotional character, sometimes being mere objective descriptions of what the fact-checking services do. For example, in posts on FactCheck.org, users often copied descriptions of the service straight from the FactCheck.org webpage:

I hate propaganda bc it works with the majority of people. [...] Separate propaganda from truth. Learn something. FactCheck.org is a project of the Annenberg Public Policy Center at the University of Pennsylvania [...]

Some were more expressive or emotional in their positive descriptions, describing the fact-checking service as “great” or relating something the user really liked or loved, exemplified by this post:

Snopes is a wonderful website to verify things you see online. At least, use it as a starting point on your research.

## **Discussion**

Fact-checking services such as FactCheck.org, Snopes, and StopFake and automated verification services such as TinEye and FotoForensics, are examples of services that may aid journalists and the general public in navigating the flow of online information. Our exploratory study finds, however, that social media users and journalists have mixed opinions about fact-checking and verification services.

That journalists express both skeptical and positive views of such services is in line with recent research (e.g., Brandtzaeg et al. 2016). The findings suggest that journalists are not as aware of the existing breadth in fact-checking and verification services as might be expected, and that they often rely on manual and individual processes to verify and fact-check. For example, the journalists reported combining traditional journalistic methods with cross-checking information using Google search, Facebook, and Twitter accounts for verification.

Journalists in the study viewed the use of online services and tools that may support verification (e.g., Google’s reverse image search) as potentially promising. However, the journalists said that they would seldom trust these exclusively because of the need to have a high degree of control in the verification process, something that may be difficult to attain with third-party services. Yet, some realized that they would be dependent on fact-checking and verification services in the future to cope with the increasing volume of online content.

Like the journalists, the social media users in this study reflected a mix of skepticism and positive views on fact-checking services. That is, each post typically reflected either a positive or negative sentiment. Hence, while the social media users seemed to represent a more polarized population, the journalists were more nuanced in their individual reflections.

In the following, we compare the perceptions of these two user groups and provide recommendations for verification and fact-checking services.

### *The usefulness of verification and fact-checking services*

The journalists typically reported verification and fact-checking of social media to be challenging. This should be a good starting point for acknowledging the usefulness of services supporting this part of the journalistic work. Though fact-checking has always been part of the journalistic practice, several participating journalists saw this as increasingly challenging due to factors such as increased volume, variation and turnover in online content.

When considering the usefulness of verification and fact-checking services, some journalists noted the sensitizing role of such services. That is, when such services flag potentially relevant content, journalists may put more effort into verification. Furthermore, the journalists

viewed such services as a good starting point for further verification. This perception of the usefulness of verification and fact-checking services is in line with the intention of flagging content as disputed in social networking services, as Facebook is currently testing. Journalists viewed fact-checkers as being useful in identifying potentially non-credible content rather than being the ultimate arbiters of truth.

The social media users' positive posts regarding fact-checking services typically addressed the services' usefulness. Interestingly, while journalists argued that they could use fact-checking services as a starting point for their own research rather than as a source to be quoted, social media users often used references to the fact-checking services as a way of proving their point of view. Hence, social media users with a positive view of fact-checking services seemed to use and rely on these more unconditionally than the journalists intended to do. Possibly, these social media users could be said to hold a more naïve view on fact-checking services as arbiters of truth than that held by journalists. Even when discussing the possible benefits of fact-checking services, the journalists were reluctant to rely on these to separate truth from fiction, indicating they would rather check multiple sources.

### *Caution towards fact-checking services*

The participating journalists typically displayed a cautious stance towards verification and fact-checking services. Most voiced a fair amount of skepticism concerning both the reliability of such services and the potential problem of leaving the control of the verification and fact-checking process to others. Some journalists acknowledged that this caution towards verification and fact-checking services may be due to these being relatively new, and reported that they would require the use of such services as recommended by their own newsroom. It seems as if the risk associated with handing over partial responsibility for verification or fact-checking to third-party services would require a substantial amount of trust on the side of the journalists—more trust some journalists could see themselves giving, at least for now.

Like for the journalists, substantial skepticism towards verification and fact-checking services was found in the social media users' posts. Social media users often argued that such services were not to be trusted and criticized the expertise of the services or their integrity. Some saw services FactCheck.org and Snopes as being politically biased. Other users argued that StopFake favored one party in the Ukraine conflict. Some even saw these services as part of larger conspiracies in an ongoing information war.

Granted, the voices to be heard in the underwood of social media are hardly representative of the population at large. Nevertheless, it is interesting that when users who are unfavorable to fact-checking services air their doubts concerning their trustworthiness, these doubts are often not countered. This in spite the claims being rather unnuanced and potentially easy to challenge. Rather, users voicing positive sentiment tended only to point to the usefulness of these services.

Contrary to many social media users, the journalists in our study were not concerned about fact-checkers being politically biased. Rather, they reported a general concern with respect to trusting a fact-checking process that they did not control. The journalists reported that they would hardly rely on fact-checking services alone and that they would need full access to their method and original sources. In other words, a fact and the process behind the development of that fact should be linked to a reliable process and method that can be replicated.

Kovach and Rosenstiel (2007) view verification and fact-checking as a scientific-like approach in which *transparency* refers to a verification process presented in a way that allows the audience or readers to decide for themselves why they should trust or distrust it. The audience

should be offered what the service knows and/or does not know about the topic or case so as to allow the audience to judge the validity of the information and the fact-checking process. As shown in the introduction, a method of comparison of evidence has also proven to be efficient (Khaldarova and Pantti 2016).

A lack of transparency might explain why both journalists and skeptical social media users want insight into the process of fact-checking and verification services. Clearly, fact-checking services that are insufficiently transparent in their processes put their perceived trustworthiness at risk. Nevertheless, transparency may also be resource demanding, and providing a sufficient level of detail for any fact-checking process may have implications for the speed with which the fact-checking process can be conducted. Thus, sufficient transparency may represent a tradeoff in terms of the requirement of efficiency in journalistic processes in today's fast-moving information society.

### *Fact-checking as a collaborative process.*

We found that discussions about fact-checking services are distributed across different social media platforms and social media users eagerly discuss facts online. This finding indicates that it might be useful for a fact-checking service to join the conversation across different media outlets and social media platforms. A recent study found that most commenters and readers would find it useful if journalists clarified factual questions in the comments section (Stroud, van Duyne, and Peacock 2016). More options for transparency and interactivity in the user context may also entail the added benefit of giving users a sense of participation in the fact-checking process, potentially influencing the outcome. Recently (September 2016), Snopes initiated an official Facebook group for the Snopes.com website and related topics. In March 2017, this group reached 81,770 members. Such involvement is in line with what Hermida (2012) discussed as collaboration in fact-checking.

Following up on the previous from a journalistic point of view, journalists argued that the collaborative verification process requires that the journalists trust their colleagues to do adequate verification. If all users are considered equal in terms of doing verification, the trust in the verification process may be challenged. Though not suggested by the participants, one possible way to mitigate this issue would be to clearly indicate who conducted the verification

### *Towards cautious enthusiasm?*

Comparing the findings from journalists and social media users, it is noteworthy that the two groups held mixed opinions about verification and fact-checking services but differed in the level of nuance they held in their opinions. While the journalists displayed a quite nuanced perception of verification and fact-checking services, arguing that these services may be a useful starting point and supplement in verification and fact-checking, the social media users were more inclined to take extreme positions, often arguing in favor of such services or arguing emotionally and strongly against them. In particular, the social media users skeptical towards fact-checking services arguably displayed the least nuanced position, sometimes even associated with a position of informational disbelief where any online information is seen as potentially untrustworthy.

While those trapped in a state of informational disbelief may represent only a small minority, their voices are clearly heard in the conversations on fact-checking services. While a substantial portion of social media conversations accentuate beneficial aspects of fact-checking



services, the perceptions of the skeptical few may negatively affect the trust beliefs of a larger proportion of the public. The stickiness of misinformation increases as it goes unchallenged (Lawrence and Schafer 2012; Nyhan and Reifler 2010), which also relates to misinformation concerning fact-checking services. Thus, there may be a need to reconsider how fact-checking services are designed to avoid spreading mistrust of these services.

The position of journalists towards verification and fact-checking services may serve as a potential guide for other users of such services. Rather than taking polarized positions either in favor of or disfavor of verification and fact-checking services, such services should be seen as a starting point for one's own research and opinion formation, preferably through investigating multiple sources.

## Conclusion

This study reflects some lessons learned from a three-year European research project (REVEAL) investigating the use and impact of services for fact-checking and verification. When comparing the journalists' perceptions of such services with those of social media users, we find that both user groups hold a similar ambivalence: Some accentuated the usefulness of such services, while others expressed strong distrust. On this basis, we identified three implications for the design of online fact-checking and verification services to make them more useful and more trusted, as described below.

- 1. Acknowledge limitations.** A key challenge for verification and fact-checking services is that some social media users and journalists see these as limited in terms of expertise and integrity. Though such services are expected to keep with high standards, no fact-checking approach will always return a correct verdict on the veracity of online content. Hence, the services benefit from highlighting the arguments on which they base their conclusion rather than presenting the conclusion alone.
- 2. Transparency.** As acknowledged in the IFCN code of principles, the transparency of verification and fact-checking services is critical, both in terms of ownership and financing and in terms of method. Both the process of selecting claims or content for fact-checking and the process of verification and fact-checking itself should be transparent so that users not only understand the conclusion but also are empowered to assess the veracity of the content themselves. The latter may be useful for automatic verification services where users should understand the basis for the assessment. Hence, transparency can support the usefulness of and trustworthiness of both fact-checking and verification services.
- 3. Collaborative fact-checking.** Verification and fact-checking services may benefit from involving both professional and lay users. Users could participate in suggesting content for fact-checking or verification, as is currently an option in some of the fact-checking services. Additionally, users could be involved in suggesting additional arguments pro or contra the conclusions of the fact-checker so as to allow for a more collaborative approach in reaching verdicts concerning what is fact or not in more complex questions. This would be an instance of co-fact-checking creation *with* users instead of fact-checking creation *for* users.

To support a broader uptake and application of fact-checking and verification services, future research should focus on the development on design factors that make fact-checking and verification services more trusted and useful among a diverse set of user groups.

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<sup>i</sup> Poynter code of principles: <http://www.poynter.org/fact-checkers-code-of-principles>