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Deepfakes and Journalism: Normative Considerations and Implications

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ABSTRACT

The possibility of using deepfake technology to create synthetic media content in journalism requires careful ethical deliberations. Being that journalism is a norm-oriented social institution, there should be a commitment to ethical principles, which raises questions about the compatibility of this technology's application with journalistic norms. There is a lack of knowledge on how these challenges can be addressed. This research presents four lenses on the compatibility of deepfakes with journalism, which emerged from a qualitative study involving 26 journalists. First, the understanding of deepfakes shapes how their use is evaluated. Second, judgments depend on what is manipulated in the deepfake and to what extent. Third, journalists need to carefully consider the connection between deepfakes and reality. Finally, specific normative preconditions must be met for the application of deepfakes in journalism. This study argues that the compatibility of deepfake technology with journalistic ethics varies, depending on whether it is used to create or manipulate (1) the presentation, (2) the content, or (3) the subject of the content or the event itself. Although there are numerous possibilities to integrate deepfake technology in journalism, it is imperative that journalism remains resilient in upholding its fundamental norms and ethical standards.

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Deepfakes have risen in prominence as viral videos show people who never existed and events that never took place. Illustrative examples are manipulated videos of prominent people such as Russian President Vladimir Putin and Ukrainian President Volodymyr Zelensky in the Russo-Ukrainian War (Baig 2022) or U.S. Presidential Candidate Kamala Harris during the 2024 election campaign (Tenbark 2024). Due to their increased prominence and distribution in society, deepfakes have also received more attention in research and public communications. Deepfakes are seen as a technological disruption, posing challenges for media organizations and journalistic practices (Seibert 2023). Deepfake

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deception can harm journalists' credibility, damage media-audience trust, and undermine journalism's role in democracy (Citron and Chesney 2018). In academic discourse and in journalism practice, there is a clear emphasis on the risks associated with deepfakes in journalism, but their potential benefits are rarely explored (Godulla, Hoffmann, and Seibert 2021).

As deepfakes are generated using deep learning technology, examinations of the potential impact of deepfakes on journalism tie into research on the role of artificial intelligence (AI) in journalism. The present study focuses on the normative implications of deepfake technology use in media organizations. Previous studies examined the challenges of using AI in journalism, considering journalistic quality and journalistic principles such as journalism's interdependence with big tech companies (Simon 2024), bias in training (Simon and Isaza-Ibarra 2023), and the reinforcement of one-sided argumentations due to algorithmic systems that personalize the access and delivery of content for news audiences (Arguedas and Simon 2023; Simon 2024). Although deepfake technology using AI might be used to generate, illustrate, and therefore enhance and personalize journalistic content (Graßl, Schützeneder, and Meier 2022; Ritchie 2023), their use also raises questions regarding the upholding of journalistic standards such as objectivity, accuracy, and transparency (WDR Innovation Hub, 2021).

Innovative forms of journalism may satisfy the fascination with the "new and next" but may also distract journalism from adhering to its democratic function and risk a "normative failure" (Siegelbaum and Thomas 2016, 400). Hence, in the context of ever-changing media technology, journalism needs to adapt to changing media use habits and user expectations while maintaining its institutional legitimacy by orienting itself toward established norms. Yet, even journalistic norms might become a subject of discussion as the rise of digital journalism has emphasized the need to align with the philosophies, norms, practices, values, and attitudes associated with digitization as they relate to contemporary society (Duffy and Ang 2019). Therefore, it is essential to examine the relationship between journalism and deepfakes through an ethical lens.

This study aims to explore if and how the use of deepfake technology is compatible with the norms of journalism. Interviews with 26 journalists in Germany and Switzerland were conducted between September 2022 and May 2023. The analysis revealed four key themes that shed light on the relationship between deepfakes and journalism from a normative perspective: First, implications depend on how journalists define deepfakes, as their normative considerations vary accordingly. Second, concerns relate to what is manipulated and to what extent—clear boundaries of alteration are essential to assessing appropriateness. Third, the relationship between deepfakes and reality emerged as crucial, with intent playing a central role. Finally, journalists emphasized the need for authenticity, accuracy, trust, transparency, relevance, responsibility, goodwill, and human control as normative preconditions for the application of deepfakes in journalism.

What are Deepfakes?

Deepfake technology allows for the replacement, swapping, and alterations of facial features; the generation of new faces; the manipulation of mouth movements; and the imitation of a person's voice (Centre for Data Ethics and Innovation 2019; Kietzmann et al. 2020; Whittaker et al. 2020). Through the change of individuals' visual characteristics

and the manipulations of audio recordings, deepfake technology enables its users to "create audio and video of real people saying and doing things they never said or did" (Citron and Chesney 2018, 1753). In this context, a distinction can be made to so-called cheap fakes that are created using easily accessible software that allows users to slow down or speed up content or present content in a different context (Paris and Donovan 2019). There are some inconsistencies in how the term deepfake is used both in academic and in public discourse (Altuncu, Franqueira, and Li 2024). While the term "deepfake" is widely adopted (Bateman 2020; Mubarak et al. 2023), it tends to carry negative connotations. The term *deepfake* is derived from the account name of a Reddit user's forum used for spreading pornographic content that was created using deep learning technology (Somers 2020). Due to this origin, public discourse about deepfakes mostly focuses on the use of synthetic media for misleading and manipulative purposes (Westerlund 2019) such as non-consensual pornography, fraud and disinformation (Simonite 2019; Vaccari and Chadwick 2020; Westerlund 2019). The manipulated depictions and actions of deepfakes might contradict an individual's established patterns of opinion and typical behavior, hence being untrue and inauthentic (Ahmed 2023; Dastgeer and Thapaliya 2023; Hameleers, van der Meer, and Dobber 2023). Therefore, deepfakes are often described as malicious in nature (Hameleers and Marquart 2023) that is a form of deception (Hameleers, van der Meer, and Dobber 2023; Vincent 2018) or disinformation (Hameleers, van der Meer, and Dobber 2023; Vaccari and Chadwick 2020; Weikmann and Lecheler 2023).

The focus on potential abuses of the technology, however, disregards harmless applications such as using the technology either for creating new forms of visualizations for serious journalistic content or for journalistic content that may be entertaining and satiric (Godulla, Hoffmann, and Seibert 2021; Habgood-Coote 2023; WDR Innovation Hub, 2021). Some scholars therefore suggest a broader, more neutral use of the term that allows for non-harmful applications, such as for satire or educational content (de Ruiter 2021; Habgood-Coote 2023). As noted, the less frequently used term "synthetic media" is often considered as a broader, more neutral term for AI-generated media (Whittaker et al. 2020).

In sum, negative implications of deepfake technology dominate the public discourse, although the technology is finding increasing application in contexts such as entertainment, commerce, education, and journalism. So far, however, there has been a lack of (definitional) agreement on how deepfakes relate to synthetic media and to what extent risks associated with the harmful uses of deepfakes also apply to synthetic media in general. Due to its popularity, this study focuses on the term "deepfake" to explore journalists' perceptions on this type of media. We apply an understanding of the term that allows for both harmful and non-harmful uses of the technology, so both, risks *and* potentials of applying deepfakes in journalism are considered.

Deepfakes in Journalism

The rise of generative AI technologies and related phenomena such as deepfakes poses new challenges and opportunities for journalism. AI may increase accessibility, personalization, attraction of users, and efficiency (Arguedas and Simon 2023). Yet, little is known about its effects on journalism or how news organizations negotiate continuity and change amid these new technologies (Örnebring 2010; Simon 2024; Zelizer 2019).

While research on deepfakes in journalism is still scarce, a growing body of work discussing AI's broader impacts on journalism and editorial processes (e.g., Graßl, Schützeneder, and Meier 2022; Simon 2024; Simon and Isaza-Ibarra 2023). Studies highlight AI's potential in research, topic identification, content verification, and presentation, as well as in preparing and distributing personalized news (e.g., Arguedas and Simon 2023; Graßl, Schützeneder, and Meier 2022; Plöchinger 2013; Simon 2024).

Discussions about deepfake technology's influences on journalism are shaped by the technology's ambivalent nature. Deepfakes are described as a disruptive technology that might challenge the practices of media organizations and journalism (Seibert 2023; Weikmann and Lecheler 2023; Westerlund 2019). Deepfake technology are often linked to the spread of fake news and disinformation. Hence, the audiences' trust in journalists and media outlets might be damaged if journalists are misled and accidentally spread deepfake content appearing to be authentic—especially during critical events like elections (Citron and Chesney 2018; Gutsche 2019). Therefore, fact-checking and verifying audio and/or visual content are expected to become increasingly important—and more complex (Gutsche 2019; Ritchie 2023).

Yet, deepfakes can also offer opportunities for journalism and many media organizations are using or probing the technology's potential. For instance, the voices of (existing) news anchors are synthesized to read aloud news articles at the Swiss newspaper "Blick" (Ringier 2024) and at German news network ntv.de, in cooperation with Microsoft and RTL Germany (Anisimov and Lazarovic 2022). There are also plans for synthetic news presentations: The German WDR Innovation Hub (2021) discusses the possibility of using avatars and replicas of well-known news anchors to personalize and translate news and the Swiss technology provider "SWISS TXT" is developing an automated sign language translation to enable accessible communication and interaction between deaf and hearing individuals (SWISS TXT n.d.). Deepfake technology could thus enhance the creation of journalistic content, its personalization based on the users' interests and preferences, as well as its automated distribution (Ritchie 2023; WDR Innovation Hub, 2021).

Although mitigating the risks posed by potentially harmful deepfakes is a matter of course, leveraging the opportunities of this technology requires the careful consideration of journalistic norms (e.g., accuracy, transparency, and credibility). Balancing the technology's benefits with these core values of journalism is therefore crucial when discussing its potential implementation in journalistic practice.

Deepfakes and Journalistic Norms

The emergence of new technologies forces journalism to continuously adapt, making innovation essential for the field to adjust, reinvent itself, and remain relevant amid ongoing changes (Meier et al. 2024). In the context of such turbulence, it is important to recognize what journalism is, what it should be, and what it ought to do in the context of new technological affordances.

Views and beliefs what journalism is—and what its norms, values, and practices should be—vary across the world forming various different journalistic cultures (Hanusch and Hanitzsch 2019; Nerone 2013). This study explores how journalists in Germany and Switzerland—two Western democracies—negotiate journalistic norms in the context of deepfakes. Both countries share a similar journalistic culture and offer a relatively supportive

environment for journalism despite ongoing challenges (Raemy, Hellmueller, and Vos 2024). They are often categorized into democratic corporatist (Hallin and Mancini 2004) and monitorial journalistic cultures, typical of highly developed economies with longstanding media freedom (Hanusch and Hanitzsch 2019). Journalists in both countries are similarly well-educated—most of them hold university degrees—and they emphasize technical skills, adaptability to new technologies, and neutral, impartial, and objective reporting and analysis (Seethaler et al. 2019). Consequently, they can be expected to be sensitive to new technological developments such as deepfakes and to face the challenge of negotiating the potential of deepfakes within a shared orientation on journalistic norms.

In Western democracies like Germany and Switzerland, journalism plays a crucial role in fostering society and democracy, with its practices justified by their societal impact relative to other systems (Benson 2008; Christians et al. 2009). Journalism is often defined by its foundational norms such as orientation to public service, objectivity, independence, immediacy, and ethics (Deuze 2005). In democratic systems, journalism informs citizens, fosters political discours, and acts as a watchdog (Christians et al. 2009). These enduring roles and norms are central to journalism's identity and its function as a pillar of democracy. Adhering to journalistic norms is not only essential for democratic societies but for journalism's own legitimacy within them. Journalism relies on a "social contract" with the public, that grants autonomy, authority, freedom of expression, and agenda-setting power in exchange for ethical conduct (Sjøvaag 2010). This contract is upheld as long as journalists responsibly inform citizens truthfully and maintain public trust. Hence, unlike other forms of communication, journalism bears a democratic mandate: to verify facts, validate information, and uphold truth (Porlezza 2019). Failure to meet these expectations can erode public confidence (van Dalen 2020). Hence, the adoption of new technologies in journalism should be carefully negotiated in terms of their impact on this contract and its norms. Deepfakes pose a challenge to journalism's norms and democratic role. By using AI to create hyper-realistic but potentially false images, videos, or audio, deepfakes undermine objectivity, accuracy, and ethics. As they become increasingly difficult to detect, deepfakes risk eroding public trust, bluring fact and fiction, and disrupting journalism's democratic function (Citron and Chesney 2018; Godulla, Hoffmann, and Seibert 2021; Vaccari and Chadwick 2020).

New technologie bring both risks and opportunities. Innovation require continuous adaptation in journalistic practices and newsroom structures (e.g., Plöchinger 2013) and may shift emphasis on certain norms. While objectivity has long been central to journalism, it became even more important to distinguish journalistic content from other information (Koliska and Chadha 2018). With the rise of deepfakes, transparency becomes increasingly important for proving objectivity and building audience trust. This is especially relevant as journalism's role as a trustworthy institution—and journalists as objective "truth tellers"—faces growing scrutiny (Canella 2023; van Dalen 2020). To address these challenges, journalism must embrace innovation while upholding its foundational norms (Meier et al. 2024; Porlezza 2019), especially trust, as its most valuable asset (Fink 2019). It is therefore crucial to explore how journalists negotiate norms, expectations, and practices amid new technological possibilities (Raemy, Hellmueller, and Vos 2024). So far, there is limited understanding of how journalists negotiate the emerging deepfake technology with journalistic norms. The negative connotation of "deepfake" and its association with fake news and disinformation might distort discussions about

the more beneficial uses of the technology in journalism. This study aims to address this research gap by examining journalists' understanding of the technology as well as normative and ethical implications for journalism and journalistic practice.

Methodological Design

This study is based on 26 qualitative interviews conducted between September 2022 and May 2023 with journalists working at major German and Swiss media organizations. In Germany, the sampling of journalists was based on an analysis of German public and private media reporting on deepfakes, with journalists covering deepfakes identified as potential interview partners. The search term of "deepfake" resulted in finding 23 websites of leading German public and private media. Furthermore, additional experts with a professional background in journalism (e.g., former journalists, freelancers) were contacted based on recommendations by the interviewees In Switzerland, which is a smaller media market, the nine largest news outlets of the six largest media organizations were contacted directly and asked to provide representatives who are able to discuss the opportunities and challenges of deepfakes for journalistic practice considered within the media organization (see Appendix A).

The objective of the interview guidelines[1] was to assess the participants' comprehension of deepfakes in light of their potential harmful and beneficial applications. The interview guidelines first established the interviewee's professional background as well as their understanding of the deepfake technology. Second, participants were asked about potential opportunities of the implementation and use of deepfakes in journalism. Specifically, the interviews focused on journalists' perceptions about using deepfake technology for the creation and visualization of journalistic content, for supporting journalistic work, and for personalizing and automating journalistic content. Third, the interview guidelines addressed the assessment of potential risks of deepfakes for journalism. In this context, the verification of audiovisual content and challenges and risks for implementing the technology in journalistic production processes for beneficial purposes were addressed.

Each interview lasted about 60 to 70 min. All interviews were recorded and transcribed, with selected illustrative quotes translated into English. The interviews were analyzed using a qualitative content analysis (Mayring 2022). The analysis focused on journalists' understanding of the technology, its applications in journalism, and the technology's normative implications. Using the MAXQDA software, the textual materials were assigned categories and a thematic comparison was conducted to interpret the data. For each country, one coder initially conducted a preliminary coding based on the interview guide themes. A single coder then performed detailed coding. Transcripts were analyzed until no new codes emerged and thematic saturation was reached. Categories were discussed collaboratively and continuously compared with existing studies and theory. The findings and the model resulted from an iterative process between the literature and interview data, enriched by collective discussions to deepen insights and achieve meaning saturation.

Results

Journalists' narrations revealed how the term *deepfake* elicited different opinions, evaluations, emotions, and perspectives. When journalists were asked to evaluate the

normative impact of deepfakes on journalism and journalistic work, they focused on distinct aspects of the technology and differentiated among various aspects of the deepfakes phenomenon. The interviews revealed four major aspects that shape journalists' normative considerations: (1) what journalists understand by "deepfakes," (2) the degree of manipulation in deepfakes, (3) deepfakes' relationship to reality, and (4) the normative preconditions of using deepfakes in journalism.

Journalists' Understanding of Deepfakes

The interviews revealed that when journalists pondered the potential positive impacts of deepfakes on journalism, they tended to focus on AI as the technology behind deepfakes. They also oscillated between the terms "deepfakes" and the more neutral-sounding "synthetic media." Interviewees tended to speak of "synthetic media" when discussing the beneficial uses of the technology in practice. They spoke about "deepfake" as a synonym to "synthetic media" or categorized "deepfake" as within the wider field of synthetic media. Hence, it becomes evident that a divergent understanding of the terms "deepfake" and "synthetic media" prevails not only in research but also in practice (Altuncu, Franqueira, and Li 2024; Bateman 2020; de Ruiter 2021). Further, results show that it was easier for journalists to weigh the potential benefits and risks of the deepfake phenomenon, or even to consider its opportunities for journalism at all, when the discussion was focused on AI or used the term "synthetic media."

Still, the interviews revealed that some journalists generally negate any potential of the technology for journalistic practice. On one hand, this may be because deepfakes are mostly considered as manipulation and harmful imitation of a real person. On the other hand, deepfakes are often perceived as a form of deception that is associated with disinformation. Finally, in addition to a lack of understanding of deepfakes, the term is negatively connotated due to its origin in the creation of pornographic content. Hence, the results show that the negative connotation of the term "deepfake" makes it difficult to think about the potential of the underlying technology (Vaccari and Chadwick 2020). Ultimately, deepfakes are ascribed a harmful intention, while the technology itself is not considered malicious per se when described in more neutral terms.

A journalist argued that most people spontaneously associate deepfakes with something "creepy and super dangerous" and that they "don't necessarily think about what it actually means" (I-6). A focus on the term "fake" in "deepfake" also risks hiding opportunities:

> I think we probably shouldn't really talk about deepfakes, right? Not everything generated with these technologies is a fake. And deepfakes, as I said, carry that tag of being fake. "Deepfakes will ruin everything; we won't be able to believe anything anymore"—that's kind of the narrative that prevails in many editorial offices and media houses, which I find a bit unfortunate. (I-11)

Hence, using the term *synthetic media* might be more beneficial to discuss deepfakes applications in journalism: "I prefer to talk about synthetic media. As a journalist, I don't think I'd discuss the potential uses of deepfakes. It would be akin to capabilities through deception or similar" (I-10).

Degrees of Manipulation

A second important theme emerging in the interviews were the aspects and the degrees of manipulation presented in deepfakes. All interviewees considered the issue of manipulation important. However, there were greater differences in how deepfakes were negotiated in relation to journalistic norms—particularly concerning which aspects of information were manipulated and to what extent. When speaking about deepfakes, some journalists focused on the manipulated aspects of the depicted motif and the content, highlighting features such as the manipulation of people, their actions, appearances, faces, and voices in deepfakes "that look very much as if they would depict real people" (I-12). One journalist argued that a deepfake includes more than just the manipulation of certain elements: "I'd say a deepfake is a different level of complexity than just a cheap face-swap thing" (I-7). Hence, the interviews indicated a degree of manipulation in deepfakes that ranged from manipulating specific aspects (e.g., face swap, voice) to synthetically creating a whole new personality. There are also hybrid forms of personalities such as avatars of real people. One journalist mentioned, "CodeMiko on YouTube. She's a persona who acts not as a human or individual, as a woman, but as a gaming character, as an avatar, and only rarely appears as real, as herself" (I-16). Hence, deepfakes can range from partially true to completely fictional and to something in between. Journalists highlighted the "high degree of authenticity or the semblance of authenticity" (I-13) of deepfakes as a specifically problematic degree of manipulation.

Journalists differed on whether it is ethically appropriate to depict synthetic persons in deepfakes. For example, one journalist mentioned opportunities for the personalization of news via "synthetic personalities, once trust [in them] has been established" (I-13). However, another journalist expressed concerns that trust could be jeopardized by such manipulations: "News is always linked with the credibility of the people involved, and it's a slippery slope when you start delivering news with deepfakes. We have trained journalists in our media house; why should we write stories or use podcasts with deepfakes?" (I-20).

Journalists discussed not just the generation or manipulation of people but also other elements of a news story. For example, one journalist indicated concerns regarding the lack of information during investigative reporting or undercover reporting. "They [journalists] might have plenty of off-the-record information, but they don't have quotes or visual material. Should they then create a deepfake?" (I-19). This quote highlights a challenge that is likely to become more relevant in journalism due to the availability of deepfakes and AI: How can objective reporting be ensured in the context of the possibilities to create synthetic media and to manipulate certain aspects of news content and presentation? Journalists might be tempted to take the easy route by simply having missing content generated for them or by manipulating certain aspects, thereby deviating from the standard of objectivity. Journalistic standards could thus be violated not only when people are manipulated or generated but also when contexts, backgrounds, and additional information are manipulated.

The interviews revealed that it might be important to define how deepfakes might fit into the news production cycle. Journalists discussed whether AI-generated content, which is then edited and verified by human journalists, should be considered as a deepfake. For one journalist, this is "a good use of algorithms to generate accurate texts. Yet,

it's about the people who use these algorithms, the users, and whether they use the algorithms responsibly to create content" (I-14).

In discussing the quality of depiction, journalists not only focused on what is depicted in deepfakes but also how these deepfakes are depicted. The interviews revealed that deepfakes are often understood as a high-quality and authentic media product "that is hard to identify" (I-1) and "difficult to distinguish from reality" (I-8). Yet, in contrast to the assumption of deepfakes being high-quality manipulations, journalists also discussed that the quality of many deepfakes is in fact not that good: "In the last 12 months, most suspicious videos were cheapfakes. Right now, the damage from cheapfakes is worlds apart from that caused by deepfakes" (I-10). Hence, perceptions of deepfakes' impact on journalism may depend on their quality—the more sophisticated they are, the harder they are to detect. As the production of advanced deepfakes becomes easier, some journalists fear that society might be flooded with manipulated information. Additionally, some interviewees mentioned that not only sophisticated deepfakes might cause unrest: Simpler media manipulations such as cheap fakes (Paris and Donovan 2019) might also deceive its recipients if they appear authentic.

Reality and Realism

When discussing the implementation of deepfakes in journalism, journalists emphasized the importance of clarifying deepfakes' relationship to reality. There was broad consensus that the synthetic creation of information can generate a kind of new reality, making it even more important not to violate the norm of objectivity. However, greater differences emerged when it came to the old questions of what reality is and whether objective reporting can be achieved (or if all information is merely a construction of reality). Journalists' discussions about the impact of deepfakes in journalism are coupled to this theme in various aspects.

First, journalists discussed the question of how close deepfakes are to reality. Although deepfakes are created by using existing, real material for training AI technology, the final product is a modification of the source material and hence a synthetic reality. An interviewee highlighted this aspect as an important difference to "videos that might just have been cut, speed up or slowed down" (I-6). Since deepfakes are created from snippets of existing material, it seems relevant to discuss to what degree they are presenting new and fictional content or something that is "based on a true story." Hence, for some journalists, deepfakes refer to new content that did not originally exist, whereas others see it more as enhancements of reality. This question has relevance for journalism, especially through the lens of objective reporting: "I believe there have been debates at photography awards about how distorted or edited a picture can be before it is no longer considered authentic […] But I think there isn't as much concern about the authenticity of videos yet" (I-4).

In good journalism, there is a commitment to transparency and to the pursuit of objectivity. Especially in this context, the question of whether deepfakes should be understood as a "type of copy" or be seen as fictional creations becomes highly relevant. Some see the starting point of deepfakes in copies of reality that are then altered so that it becomes new computer-generated content. One journalist saw similarities to comics and forms of satire as obvious reconstructions of an aspect of reality:

> With deepfakes, one could reconstruct certain scenes, too. The problem, then, is that if we journalists use deepfakes and are supposed to be telling the truth, we move outside of our boundaries. Even if we can prove that something happened as shown in the deepfake —if we create or invent images, we are creating something false. (I-19)

Hence, deepfakes are often seen as an imitation to create an alternate reality. One journalist highlighted the importance of providing transparency and context when using deepfakes as depictions of reality:

> If a deceased person is speaking in a video, it's important to show the context and a reason for it: "This was recorded by person XY before they died" or "this is how he would have said it" or "we took his biography and created a deepfake of him speaking about it." (I-20)

Most of the interviewed journalists understood deepfakes as something fictional. Fiction can be distinguished from nonfiction by its use of invention, creativity, and its focus on storytelling (Carroll 2012). Using fictional content requires that both the author and the user share the intent of the fiction, such as entertainment (Kalsnes 2018). The relationship of journalism to fiction is full of tensions: "Journalism is committed to credibility; otherwise, it's fiction" (I-20). From this perspective, journalists struggle to find opportunities for deepfake applications in journalism. When deepfakes are seen as an "alienation from reality" (I-14), it is difficult for journalists to see how this technology should be integrated into journalism: " … the primary principle in journalism is that it's about a real representation of what is or has been, and in my opinion, this must generally be presented credibly, and I believe that can really only be done by humans" (I-14).

The interviews revealed an important question about boundaries between "just" enhancing content about real circumstances or events and creating fictional content. As one journalist mentioned,

> For me, as soon as we want to use it to add value and make something more interactive, that's great. But we really need to distinguish between what is fact and reality and what is "just a bit of fun." Fun can be true and then it works. But if the fun is not true, the reader must immediately realize that it's not true. Otherwise, it's no longer journalism. It becomes fake news, propaganda, etc. (I-21)

The topic encouraged journalists to reflect on the nature of reality itself:

> If we were to produce deepfakes ourselves, we would be straying far from our journalistic mission to report on what is constituted as social reality by consensus. This collective, intersubjective construction of social reality isn't entirely arbitrary and should not be subordinate to any voluntaristic objectives. It's a construction rooted in our perception. If we were to use deepfakes journalistically, we'd turn the creation of journalistic products into mere constructs, thus creating an illusory world that has nothing to do with the shared reality in which we live. (I-3)

As mentioned before, entertainment was the area where journalists saw most opportunities to integrate fictitious deepfakes. However, they differed on whether entertainment should be seen as a purpose of journalism.

A final theme in the discussion about deepfakes' relationship to reality was the aspect of *fake* rooted in the term *deepfake*. Although fiction can be used for entertainment purposes with good intentions, "fake" implies an intention to deceive (Kalsnes 2018), which most journalists understand as fundamentally incompatible with journalistic goals:

> If we want to use deepfakes for entertainment purposes, it has to be very clear and transparent. The risk is that it leads to the point where the readers can no longer distinguish between reality and fake. That could end up promoting a loss of trust in the media. (I-17)

Because many journalists see verification of information as a core function of journalism, they see deepfakes mostly as forgeries that need to be detected. Hence, for journalists, it is important to not create fake content and to uphold transparency. Another journalist added, "I believe the potential of deepfakes for journalism contradicts journalism itself, because fakes wouldn't be journalism, except perhaps producing them to then analyze, describe, or make them tangible and understandable" (I-15). This note of caution was echoed by many journalists, even for applications outside the core mission of journalism. If deepfakes are understood as something fake, it is difficult to find opportunities for journalism, as it contradicts its very principles.

Normative Preconditions for Deepfake Applications

A final aspect discussed by the interviewed journalists was the question of normative preconditions required to implement deepfakes technology in journalism. The findings revealed basic normative questions about what journalism should be and ought to do in the context of deepfake technology. There was broad consensus about which norms are important for journalism and that the use of deepfakes should not violate these norms. However, views differed on how a legitimate use of deepfakes might look like.

Authenticity was echoed by many journalists as an important precondition for the use of synthetic media products in journalism: "We always have to ensure that what we publish is absolutely authentic, and of course, there are challenges with synthetic media in that regard" (I-10). In the interviews, the journalists contrasted technology-generated content with human-created content. This led to a fundamental discussion about whether journalism is committed to being created by humans with human skills, intellect, and authenticity: "One should consider five times more whether to publish something when you can't be sure if it's authentic or not. […] If the creator is authentic, in most cases, the content is also authentic" (I-10). Hence, for most journalists, authenticity has the highest priority and must not be compromised.

Authenticity is coupled with *trust*, which emerges as another key precondition:

> Journalism relies a lot on trust, and as soon as you start producing non-authentic content, of course, you must inform the audience. I believe any reputable media would do so, but even then, from the moment the audience feels that the news is not being read by a real person, but by an AI-generated voice, something gets lost, I believe. (I-4)

Another journalist mentioned that "journalism is about people, and I don't think you can replace trust with a machine" (I-20). Normative considerations of media production should take into account societal change and a possible shift in people's perceptions of technology and communication. This might include the handling of information, trust, and acceptance of new technology as well as the relevance of journalistic media products for society, as one journalist said: "We want to hear the news from people, not from chatbots or artificial intelligence. All our decisions are based on trust in people. But I also see how everyone is so dependent on technology nowadays. Maybe something is changing" (I-20).

Related to trust is *human control* as a precondition of deepfake applications. Journalists highlighted the need for synergy between technology and human agency, where humans should ultimately maintain control. The technological evolution is fast paced, and many journalists might be overwhelmed by the increasing penetration of AI in many aspects of society, including journalism: "They change the way studios are built, the way movies have been made, and the way reporting works" (I-16). Journalists criticized some news organizations' actions and managerial decisions in the context of the rise of generative AI: "Some private broadcasters reacted quite quickly like, "Well, we could actually save on news anchors and just have the news texts created by such a neural network." But these are precisely the dangers and credibility problems that arise from such reactions" (I-3). Thus, journalists highlighted the need of human beings in charge of the technology: "Journalism thrives on the creativity and trust people have in us, which cannot simply be replaced by technology. But technology can help in the daily routine of journalism" (I-24). One journalist suggested that "synthetic media" should be understood as a human product and highlighted the need of placing humans at the center of discussion. Journalism, in this view, should consider how the technology might assist journalists "in good faith and, above all, with the best intentions" (I-13).

Journalists further mentioned *transparency* as a precondition to ethically legitimize the use of deepfake technology in journalism. Labeling content has been discussed as a strategy to ensure authenticity: "A Heidi Klum who criticizes her own show, where it's obvious that it's not really her but perhaps a form of satire. That would have to be clearly marked with a banner" (I-22). Journalists also expressed their concerns with labeling content: "Even if we would label it as such "created with artificial voice and deepfake" … . This is where I struggle, because it's always a "could have been", but not actually the truth" (I-12). Another journalist added, "But if we would label content indicating that something is a deepfake … then people might start wondering whether the unlabeled content could be deepfakes" (I-2). Therefore, most journalists were concerned about how deepfakes would negatively affect the authenticity and truthfulness of journalism. A fear echoed by many journalists is that different sorts of media content, even when labeled, would lead to confusion and skepticism in society: "What's real, what's not, what comes from a journalist, what comes from a deepfake, […] I think it would just confuse everything" (I-20). Hence, journalists generally agreed that it might be difficult to avoid fueling public skepticism when implementing deepfakes in journalism.

Another precondition was *accuracy*, which was discussed especially in relation to deepfakes' possibilities to enhance media content. In times of increasing competitive pressures between journalistic and non-journalistic information in the context of social media, journalists are considering how to present journalistic content attractively across different media channels and platforms. Journalists identified new possibilities to make news more attractive and immersive with deepfakes, but they also emphasized the importance of carefully balancing the enhancement of news with the accurate representation of reality. One journalist noted how the goal of journalism is to find truth but that this technology makes it possible to modify reality and create an alternative truth: "Rather than making use of deepfakes, the media should stand up as defenders of the truth, of truth seeking, of the accuracy of facts" (I-19).

Relevance was another precondition for the application of deepfakes. Journalists see potentials in implementing deepfakes in entertainment content; however, it must be

noted that entertainment is not a function of journalism (e.g., see Christians et al. 2009; Schudson 2008). Yet, journalists began to question whether their skepticism toward deepfakes might also be shutting them off from the needs of a new generation: "Finally, there's also the question of how much authenticity is valued. How much do the important user groups, especially younger ones, already spend their free time in virtual worlds and wouldn't mind if news content would be part of it, too?" (I-13).

A final important precondition to implement deepfakes in journalism was *responsibility*. To deceive would be in complete opposition to journalism's goal of pursuing truth. Hence, journalists were highlighting the need for good intentions when they were discussing possibilities of implementing deepfakes in journalistic work: "I still believe in the good intent and careful work of us journalists; otherwise, I wouldn't be in this profession" (I-21). Hence, good intention would mean to make a stance against fake content by positioning themselves "as safeguards of truth, fact-finding, and accuracy of facts" (I-19) and by "exposing fake news, not producing it ourselves" (I-24). Responsibility is also needed to balance a possible manipulation of public interest for the purposes of enhancing news or for documenting: "The question is, how much do you want to alter information? Especially with a deepfake video, the degree of deception is obviously much higher, and therefore, the public interest must also be significantly greater for its application" (I-17). Hence, the relevance of deepfake application is linked to producers' intentions, users' needs and expectations, and to journalistic norms.

Discussion and Conclusion

This study set out to explore the compatibility or contradiction of deepfake technology with the mission and norms of journalism. So far, research has focused primarily on the audiences and their perception of media content created and manipulated using deepfake technologies (e.g., Dobber et al. 2021; Vaccari and Chadwick 2020), while journalists' perceptions of the topic have received less attention. This research gap can be addressed through three lenses on the ethics of deepfake technology in journalism, which are relevant for assessing to what degree deepfakes are compatible with ethical journalistic practices (see Figure 1).

The First Lens of Deepfakes: The Three Types of Usage

Based on the findings of this study, we argue that it is important to differentiate among three types of deepfake usage in journalistic practice: (1) Deepfaking the *presentation*, which is using deepfakes for conveying, disseminating, portraying, and communicating content; (2) deepfaking the *content*, which is using deepfakes for enhancing and complementing content; and (3) deepfaking the *event and subject of the content*, which is using deepfakes for creating and altering the subject of a content or event.

Deepfakes seem to be most compatible with journalism when they are used solely as a form of *presentation* to convey, disseminate, and communicate real events. For example, many journalists see potential in personalized news or news presented by synthetic news anchors, provided that the content is verified and meets journalistic standards. Automatically translated news is also more readily accepted. However, even here, questions arise about the extent to which journalism must remain a human endeavor. Maintaining the

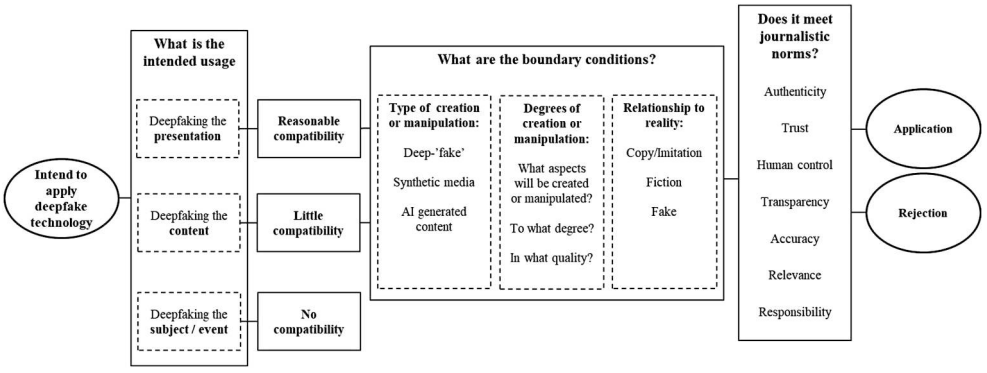

Figure 1. Decision model for the application of deepfakes in journalistic practice.

Note. This model represents the sequence of lenses journalists consider when evaluating deepfake technology in journalistic practice. First, they assess the intended use—what is to be synthetically created or manipulated. Second, they determine the criteria, circumstances, and limitations of manipulating or synthetically creating media content. Third, they evaluate whether the use aligns with journalistic norms. Considering all three lenses consecutively helps to decide whether to apply or reject deepfakes in journalism.

audience's trust is crucial, and according to the findings, this trust may be linked to the human relationships between journalists and their audience. Yet, the widespread use of AI tools in many aspects of life could lead to a shift in the acceptance of and trust in technology, potentially making deepfakes a more acceptable medium or tool for presenting real events in journalism.

The compatibility of deepfakes with journalism seems to decrease significantly when they are used within the *content* itself or for enhancing and complementing content, meaning that the content is synthetic but based on a real event. This might include enhancements of news stories, supplements to real events, or simplified and clearer representations of an event. Deepfakes could also be used for anonymizing endangered individuals in documentaries or for manipulating certain elements, as long as these manipulations maintain a clear connection to a real event. However, this raises the fundamental question: Does journalism really need to generate new, synthetic information? Given the abundance of existing information, data, and images, it seems unnecessary for journalists to create synthetic content. According to findings, this might be more of a niche product (e.g., for the depiction of historical events) for representing something for which no images or recordings exist, or for places that are otherwise not visible to the public (e.g., space.). The journalists in this study can also envision using deepfakes to visualize data, provided that the data are credible.

There seems to be no compatibility between deepfakes and journalism when deepfakes are used for creating and altering the subject of a content or the event itself, such as in scenarios that depict hypothetical events (e.g., if leaders of conflict were to negotiate peacefully with one another or if historical personalities were to assess current situations or events). Although such content could be valuable for educational purposes and offer interesting insights into how conversations between certain people might have occurred, it remains fictitious—even when based on available data—and risks being in conflict with the fundamental norms of journalism by not reflecting reality.

The Second Lens of Deepfakes: Boundary Conditions

The second lens focuses on the boundary conditions of deepfakes—specifically, how journalists negotiate criteria and constraints of the compatibility of deepfakes when considering and negotiating their compatibility with journalistic practice. This lens includes three questions about (a) what is meant by a deepfake; (b) what has been manipulated, to what degree, and in what quality; and (c) what the relationship of deepfakes are to reality.

To facilitate a meaningful dialogue on the ethical compatibility of deepfakes in journalism, it is important to clarify journalists' interpretations of the term *deepfakes*. The findings reveal that the ambiguity of this term complicates the debate in journalism. Due to the negative connotations of the term and its strong association with "fake," deepfakes appear inherently contradictory to journalism. Therefore, it may be more beneficial to emphasize *synthetic media* when discussing its compatibility with journalism. Concentrating specifically on the potential and concerns related to synthetic media and the broader use of generative AI could foster a discussion that aligns with journalism's norms and ethics. Future studies should aim to develop a typology for categorizing deepfakes that would help create a clearer definitional distinction (or classification) between the term *synthetic media* and the broader concept of *generative AI*.

The findings indicate that it is crucial to specify both the aspects that have been manipulated and the depicted motive and content. In journalism, the significance of a deepfake varies depending on whether it involves a simple, low-quality face swap or a more complex, high-quality alteration, potentially creating entirely synthetic personalities that blur the line between reality and fiction. While there may be an acceptable range of manipulations (e.g., the enhancement and personalization of news) that could serve journalism's mission to inform the public and draw attention to important issues, the manipulation of content conflicts with the principle of objective reporting.

Although deepfakes are based on real materials, they ultimately create synthetic, altered realities. This raises ethical questions about whether deepfake content can be considered a legitimate form of journalistic content. The use of deepfake technology, particularly when lacking clear transparency, risks blurring the lines between reality and fiction or even leading to deception. While some journalists see potential applications for deepfakes in entertaining content, this argument appears weak when considering that normative theories of journalism do not define entertainment as a core journalistic value (e.g., Benson 2008; Christians et al. 2009). In summary, journalists expressed widespread caution about integrating deepfakes into journalism, fearing they could distort the truth and compromise journalism's commitment to accurate, credible, and trustworthy reporting.

The Third Lens of Deepfakes: Journalistic Norms

The third lens focuses on the normative preconditions of using deepfakes in journalism. In today's competitive media landscape, capturing audience attention is crucial (Nixon 2020). This study revealed that there is interest among journalists in using deepfake technology to enhance news content. As AI tools become increasingly prevalent in daily life and synthetic media might also be normalized, journalists recognize the need to adapt to a digital culture where hybrid realities coexist. However, this raises concerns about

upholding core journalistic values like authenticity, accuracy, trust, and transparency. A value that is becoming increasingly important, *transparency* is defined as the "visibility and insight into the system" (de Vries 2020, 2119), with users needing to understand what is altered or synthetic (Canella 2023; Koliska and Chadha 2018). The debate over deepfake technology revives Figdor's (2010) point that objective news depends on journalists' motivation, training, resources, and incentives. There is tension between making news more engaging through deepfakes and maintaining objectivity, accuracy, and truth.

The proper labeling of deepfakes is essential, but many journalists worry that deepfakes could erode public trust and blur the lines of reality. This study's findings revealed a consensus that deepfakes should remain under human control to preserve the human element in journalism that is crucial for trustworthiness. Journalism is a social construct committed to fulfilling its normative mission (Vos 2019), which is tied to responsibility, relevance, and goodwill, demanding a careful and ethical approach to new technologies. Journalists emphasize using deepfakes responsibly and with good intent to serve the public interest without compromising core values. Ultimately, while acknowledging the potential benefits of deepfake technology, most journalists advocate for maintaining authenticity and trustworthiness to ensure that innovation does not undermine journalism's commitment to truth.

Concluding Remarks

This study's exploratory nature allowed for capturing statements from selected experts from German and Swiss news organizations, thereby illustrating the normative considerations surrounding the implementation of deepfakes in journalistic practice. The significance of the findings is, however, limited to our selection of cases. The focus was on journalism in Germany and Switzerland and while the findings may offer valuable insights for journalism in many Western democratic contexts, journalists' negotiations should be understood within this specific journalistic-cultural context. Future studies could expand on these results in other national contexts, with other news organizations, and with different research methods. Although relying on news organizations to provide interviewees is a reasonable strategy for selecting experts, it may have introduced some degree of selection bias compared to researcher-led selection. Another limitation of this study is that since deepfakes are a rather new phenomenon, the participants' prior knowledge of it varied considerably at the time of the study, which may have influenced their perspectives and responses. Still, although the technology and its applications are rapidly evolving, the present findings provide valuable insights relevant to the current state of deepfakes and their implications.

This study highlighted potential ways for journalism to navigate the challenges posed by deepfake technology. It may help evaluate how emerging technologies can remain compatible with journalism and how the use of deepfakes can be evaluated from multiple perspectives: Are they simply "fakes," or should they be considered neutral synthetic media? What is the intention behind their use? Journalism, which should always operate with integrity, must ensure that fakes and deception through deepfakes have no place in its practice. While fiction can sometimes be well intentioned, it is not always aligned with the core functions of journalism. Navigating the extent and nature of altering content in journalism requires a delicate balance, as some forms of synthetic

media may be more acceptable than others. There are vast possibilities to integrate deepfake technology in journalism, yet, it is imperative that journalism remains resilient in upholding its fundamental norms and ethical standards.

Note

1. The interview guidelines used in this study are openly available in OSF at http://doi.org/10.17605/OSF.IO/S6EX9, reference number S6EX9.

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Appendices

Appendix A. Overview of the interviewees: their position and expertise

Interviewee	Position and Expertise
I-1	Journalist, digital expert, and part of a tech development team at a German media company
I-2	Freelance (tech) journalist with expertise in software development
I-3	Freelance (tech) journalist working at the intersection of politics and information technology; working in journalistic education
I-4	Fact-checking journalist; freelance journalist
I-5	Freelance journalist, partially working in format and product development at a German media company; partially in journalistic tech education
I-6	Journalist at a German media company, previous experience in developing deepfakes
I-7	Editor-in-chief and editor at German media company; experience trying to debunk deepfakes
I-8	Tech journalist
I-9	Lead editor at a German education and journalism platform, with focus on technology and digital transformation
I-10	Head of verification at a German news agency; partially working in journalistic education with a focus on handling synthetic media
I-11	Freelance tech journalist; part of tech company founder team
I-12	Former freelance tech journalist; founder and partner of a German storytelling and communication consulting company
I-13	Former data journalist and journalistic product developer; professor of digital journalism and data journalism
I-14	Former journalist; postdoctoral researcher in computer science, with a focus on textual generative algorithms
I-15	Head of data journalism and data visualization team at a German media company; product development
I-16	Head of Information Technology department at a German media company
I-17	Head of Investigation at a Swiss news organization
I-18	Head of Editorial Department at a Swiss news organization
I-19	Digital News Coordination Manager at a Swiss news organization
I-20	Open Source und Visual Investigations at a Swiss news organization
I-21	Head of Editorial Department at a Swiss news organization
I-22	Knowledge Editorial Department at a Swiss news organization
I-23	Head of the Video Editorial Department at a Swiss news organization
I-24	Product Manager of Artificial Intelligence at a Swiss news organization
I-25	Editorial Department in Science and Technology at a Swiss news organization
I-26	Head of Fact-Checking at a Swiss news organization