



UvA-DARE (Digital Academic Repository)

How persuasive are political cheapfakes disseminated via social media? The effects of out-of-context visual disinformation on message credibility and issue agreement

Hameleers, M.; van der Meer, T.; Vliegenthart, R.

DOI

[10.1080/1369118X.2024.2388079](https://doi.org/10.1080/1369118X.2024.2388079)

Publication date

2025

Document Version

Final published version

Published in

Information, Communication & Society

License

CC BY

[Link to publication](#)

Citation for published version (APA):

Hameleers, M., van der Meer, T., & Vliegenthart, R. (2025). How persuasive are political cheapfakes disseminated via social media? The effects of out-of-context visual disinformation on message credibility and issue agreement. *Information, Communication & Society*, 28(1), 61-78. <https://doi.org/10.1080/1369118X.2024.2388079>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the Library of the University of Amsterdam (<https://dare.uva.nl>)

How persuasive are political cheapfakes disseminated via social media? The effects of out-of-context visual disinformation on message credibility and issue agreement

Michael Hameleers ^a, Toni van der Meer^a and Rens Vliegenthart^b

^aAmsterdam School of Communication Research ASCoR, University of Amsterdam, Amsterdam, the Netherlands; ^bWageningen Research and University (WUR), Amsterdam, the Netherlands

ABSTRACT

Although extant research offered first insights into the effects of visual disinformation, we know markedly little about the effects of cheapfakes that rely on the deceptive re-contextualization of authentic visual materials disseminated via social media. Against this backdrop, we rely on online experiments ($N = 874$) and ($N = 733$) in which we exposed representative samples of participants to different types of (visual) disinformation in which the out-of-context presentation of visual material was central. Our findings indicate that cheapfakes based on video editing are not more credible than textual or image-only visual disinformation, while disinformation in general can lower support for a delegitimized politician. As a key contribution, we show that when cheapfakes are endorsed by other online users, they can mislead people and therewith succeed in delegitimizing targeted political actors, although richer modalities used in cheapfakes do not amplify deceptive content's impact.

ARTICLE HISTORY


Received 28 September 2023
Accepted 27 June 2024

KEYWORDS

Cheapfakes; deepfakes; disinformation; media effects; misinformation; social media

The affordances of digital media allow malicious actors to manipulate information in increasingly more realistic and cue-rich formats, for example, by creating cheapfakes. Cheapfakes can be regarded as audiovisual disinformation based on the deliberate manipulation or de-contextualization of existing information (Dan et al., 2021; Paris & Donovan, 2020; Qian et al., 2023). Cheapfakes generally consist of unedited and authentic materials that are placed in a deceptive context, for example, by changing subtitles of videos or by adding a deceptive narrative to alter the meaning of existing footage (Qian et al., 2023). In a political context, such forms of visual disinformation can be used to make it seem as if a well-known person has expressed statements that would negatively impact the public's perception of this person. Alternatively, cheapfakes can be used to falsely re-contextualize existing footage (e.g., Brennen et al., 2021). We consider such disinformation as 'cheap' given that no extensive resources,

CONTACT Michael Hameleers  m.hameleers@uva.nl  Amsterdam School of Communication Research ASCoR, University of Amsterdam, Nieuwe Achtergracht 166, 1018 WV, Amsterdam, the Netherlands

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/1369118X.2024.2388079>.

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

such as time or computational means, have to be invested in altering or manipulating content.

Cheapfakes are important to study for various reasons. First, these easy to create forms of visual disinformation are currently highly prevalent in digital information ecologies (e.g., Brennen et al., 2021; Weikmann & Lecheler, 2023). In addition, because real (unaltered or authentic) materials are used and re-contextualized in a deceptive manner, they are difficult to detect and flag as disinformation (e.g., Fazio, 2020). Thus, cheapfakes can offer a credible link to reality considering that the fabrication is difficult to detect by recipients and detection software (i.e., real footage of the depicted actor is shown). Especially in crisis times, such as the war in Gaza or the Russian invasion of Ukraine, cheapfakes allow for the fast-paced dissemination of realistic deceptive visuals that can be used to de-legitimize the 'other' side by showing visual proof of the atrocities they allegedly commit. Because anyone with basic editing skills can construct realistic cheapfakes, it is relevant to assess the credibility of cheapfakes versus other modes of visual disinformation and their potential to delegitimize political actors or de-contextualize visual proof. Even though deepfake techniques are getting more advanced and easy to use, the availability of existing footage that can deceptively be re-contextualized may reduce the motivation to use AI-generated synthetic media. Hence, although deepfakes may become more realistic and easier to produce in the future, the generation of synthetic media is not necessary to deceive media users or change the meaning of real-life events.

Next to the use of low-tech visual manipulation and decontextualization, online disinformation may attempt to mimic the interactions of ordinary citizens by embedding deceptive messages in an artificial social media setting. The fake social endorsement of decontextualized or manipulated images may be considered as an important component of visual disinformation in its own right: The pairing of decontextualized images with misleading and deceptive statements is a key determinant of visual disinformation, where the visual acts as proof for the deceptive textual statements that are communicated (Weikmann & Lecheler, 2023). Considering that visuals and videos are very prevalent in online disinformation (e.g., Dan et al., 2021), whereas they are rarely integrated in empirical research (e.g., Peng et al., 2023; Weikmann & Lecheler, 2023), we argue that it is important to investigate the effects of visual forms of disinformation disseminated via social media. The key question this paper aims to answer is therefore how effective visual forms of disinformation such as cheapfakes are, and which segments of the audience are most likely to believe them.

As a key contribution to the visual disinformation literature, we explore how widely accessible tools used to make disinformation seem authentic can be exploited to de-legitimize political actors. Especially in the context of increasing concerns on the deceptive use of existing footage or the re-contextualization of video evidence in the current digital landscape (Brennen et al., 2021), we explore the credibility of cheapfakes in particular. Hence, although concerns on AI-powered disinformation are voiced loudly in the public domain, most examples of visual disinformation and information warfare today are based on the deceptive re-contextualization or low-effort editing of visual materials. Given that these forms of disinformation are relatively easy to make and disseminate, whereas their direct index of reality and reliance on unmanipulated input material can make them credible and difficult to detect, it is crucial to explore how credible these forms of disinformation are perceived by citizens.

Disinformation and cheapfakes as low-resource disinformation

Disinformation can be defined as the intentional creation or spread of misleading information to achieve political goals (e.g., Bennett & Livingston, 2018; Freelon & Wells, 2020). We specifically focus on visual disinformation in this paper, which can come in the form of image-only disinformation or video-based disinformation. In this paper, visual disinformation is understood as an umbrella term that includes deepfakes, cheapfakes, and other modes of visual fabrication and decontextualization (Weikmann & Lecheler, 2023). We regard cheapfakes as a specific mode of (audio)visual disinformation, in which low-effort techniques of doctoring and cropping are used to decontextualize existing video materials (e.g., Dan et al., 2021). Different from deepfakes, cheapfakes are not based on AI-driven synthetic media but comprise the deliberate out-of-context presentation of existing multimodal materials (e.g., Aneja et al., 2022).

In the extant literature, cheapfakes are mainly understood as forms of visual disinformation for which existing authentic images or videos are taken out of their original context deliberately in order to deceive (Dan et al., 2021; Qian et al., 2023). Cheapfakes mostly involve the combination of authentic visual materials with a deceptive (textual) narrative to alter the meaning of existing materials in a goal-directed way (e.g., Weikmann & Lecheler, 2023). This also means that they are cost-efficient to generate, both regarding time and financial resources: As there is no need to alter or fabricate visual media, malicious actors can quickly re-contextualize existing videos or photos by changing subtitles, voice-overs, or textual interpretations. In this paper, we regard cheapfakes as a specific form of video-based disinformation in which existing political video material is deceptively re-contextualized. As an important contribution, we explore the effects of cheapfakes across two different applications: The editing and cropping of a political speech and the re-contextualization of existing footage to offer ‘proof’ for radical right-wing interpretations of reality.

Cheapfakes are especially relevant to consider as (1) internet users with less advanced editing skills or resources can quickly create and disseminate deceptive videos (e.g., Paris & Donovan, 2020); (2) different from deepfakes, the generated video does not rely on artificial speech or lip sync that can be detected algorithmically or by close scrutiny (e.g., Aneja et al., 2022). For these reasons, cheapfakes are presumably used more frequently than deepfakes (also see Brennen et al., 2021), and also potentially less vulnerable to (automated) detection.

As cheapfakes offer a realism heuristic by showing real footage of a real (political) actor, the systematic processing of incorrect arguments and inauthentic viewpoints may be circumvented (e.g., Sundar, 2008; 2021). Cheapfakes offer a close representation of reality by directly depicting a (political) speech or event (e.g., Powell et al., 2018). In addition, considering that videos require more processing resources than textual information due to the richer mode of presentation used, visual disinformation is more likely to be processed heuristically (Lang, 2000). Especially in the context of an overburdened information environment, recipients of videos may base their judgements about trustworthiness and authenticity on heuristic cues – of which the ‘seeing is believing’ (Sundar, 2008) cue offered by visual disinformation is crucial to consider. As such, the heuristic processing promoted by video-based disinformation may sidestep suspicion, and increases the likelihood that people evaluate cheapfakes and other forms of visual disinformation as truthful.

In this paper, we focus on cheapfakes related to anti-immigration or radical right-wing viewpoints. Considering that immigration is a salient issue in political disinformation (e.g., Bennett & Livingston, 2018), it is essential to direct our focus to this politicized issue. Moreover, as many right-wing populist movements in Europe are associated with anti-immigration disinformation narratives, this issue offers an externally valid assessment of disinformation's reality in the context of this study (the Netherlands).

The impact of disinformation on perceived message credibility

In a communication setting characterized by the abundance of counter-factual narratives, conspiracies, and confusion or fragmentation regarding factual beliefs (e.g., Van Aelst et al., 2017), it can be argued that true and false information are difficult to distinguish. Especially when false information is presented as seemingly real footage (in the case of cheapfakes), citizens may find it difficult to detect deception. Thus, even though disinformation may be perceived as less credible than factually accurate information when the statements are implausible (Hameleers et al., 2023), manipulating content in a more plausible and cue-rich manner – as is the case in this study – may sidestep suspected manipulation (Levine, 2014).

Against this backdrop, we first of all investigate the relative levels of credibility or 'truth value' (also see Schaewitz et al., 2020) of disinformation versus authentic and unmanipulated information. Furthermore, considering that disinformation may strategically aim to delegitimize opposed political actors by making them look bad, incompetent, or inconsistent (Dobber et al., 2021), we assess to what extent exposure to disinformation (versus factually accurate information) affects the evaluation of the political actor attacked in disinformation. Given the complexity of the task to discern true from false information, the corresponding high levels of uncertainty related to truth discernment (e.g., Newman et al., 2022), and the lack of evidence on a clear difference in credibility, candidate evaluations, and issue agreement as a consequence of exposure to disinformation versus factually accurate information, we propose an exploratory research question to map the direct effects of disinformation exposure:

RQ₁: To what extent are credibility, issue agreement with immigration-related statements and evaluations of the depicted politician differently or similarly affected by exposure to disinformation versus factually accurate information?

Are cheapfakes more credible than image-based and textual disinformation?

In this paper, we are specifically interested in the persuasiveness of cheapfakes in comparison to other low-effort forms of disinformation such as textual or visual disinformation based on images (also see Weikmann & Lecheler, 2023 for a typology). Although cheapfakes and image-based disinformation are both subtypes of low-tech visual disinformation, we expect that cheapfakes that offer a richer modality and a seemingly more direct representation of reality are most likely to circumvent the detection of deception. According to the Modality – Agency – Interactivity – Navigability (MAIN) model (Sundar, 2008), adding richness to the mode of presenting deceptive information will result in a more realistic approximation of an event or phenomenon. More concretely,

the MAIN model presumes that digital media are characterized by technological affordances that can promote heuristics or processing shortcuts that make it easier for users to arrive at quick decisions on the credibility of the content they encounter (Sundar, 2008). Accordingly, modality represents an important and central heuristic cue: People are more likely to find audio-visual content credible as the content more strongly resembles the real world compared to textual information that requires more decoding and interpretation. This effect of signaling realism via richer modes of multimodal disinformation can be explained as a consequence of the heuristic processing stimulated by the affordances of (audio)visual content: Higher modalities and cue-richness may motivate heuristic processing through the realism heuristic (Sundar, 2008) which also sidesteps the recognition of suspicious information by demotivating the in-depth processing of the content of message arguments (Levine, 2014).

The processing of videos that combine different modalities can result in cognitive overload, as many cognitive resources are devoted to encoding. This comes at the cost of systematically processing substantial arguments of the message (Sundar et al., 2021). For this reason, especially when confronted with cue-rich cheapfakes and other visual modes of disinformation, people may be motivated to process the message heuristically. As cheapfakes in particular signal credibility by offering a direct index of reality, people may use the realism heuristic offered by the video presentation to evaluate trustworthiness, which lowers the likelihood of detecting deception. In addition, although deception may likely to be detected when textual information is scrutinized, rich modalities may circumvent the activation of suspicion as the discrepancy between reality and communication is not perceived as such (Levine, 2014). We therefore hypothesize:

Hypothesis 1: Image-plus-text disinformation (H1a) and cheapfakes (H1b) are perceived as more credible than text-only disinformation.

There is a lack of evidence on the framing effects of videos as compared to other (visual) modalities (but see Powell et al., 2018). Powell et al. (2018) did not find support for their expectation that videos have a stronger persuasive impact than news articles. However, it could be argued that the combination of visuals, audio, and moving images in cheapfakes offers a richer mode of presentation than image-only disinformation, which should result in stronger effects of deceptive videos compared to still images (Sundar et al., 2021). As we lack empirical evidence on the relative power of videos compared to visuals in the political context, we raise the following research question:

RQ₂: When easy to produce disinformation is based on audio-visual modality (cheap fake) rather than image-only disinformation is it perceived as more credible and likely to affect attitudes towards immigration and the targeted politician?

The interaction of political disinformation with prior beliefs

The processing of false information is likely to be motivated by a confirmation bias (e.g., Hameleers et al., 2024): People are more likely to uncritically accept information when it reassures their worldviews and political attitudes, and critically scrutinize information when it does not confirm their existing worldviews (e.g., Kunda, 1990). Disinformation's deviation from facticity, then, is more likely to be detected by people who disagree with its attitudinal stance. In other words, they are more motivated to find the discrepancy

between familiar statements voiced by the depicted actor and the disinformation narrative, and herewith deviate from the truth-default of (heuristically) accepting the honesty of information (Levine, 2014). People whose prior beliefs align with false statements, however, are more likely to be motivated by a confirmation than an accuracy bias (e.g., Shin & Thorson, 2017). We therefore introduce the following hypotheses:

Hypothesis 2: The differences in perceived credibility (H2a) issue agreement (H2b) and evaluations of the depicted politician (H2c) after exposure to disinformation versus truthful information are more pronounced for participants with congruent anti-immigration beliefs.

The role of ordinary source cues in embedding disinformation

We focus on both the effectiveness of visual disinformation (cheapfakes and image-based disinformation) and the use of inauthentic citizen cues as they are both low-effort forms of decontextualization. Together, we regard both elements as central features of low-effort online disinformation that can enhance the perceived authenticity of online disinformation. This conceptualization is in line with the occurrence and nature of visual disinformation online (Brennen et al., 2021; Weikmann & Lecheler, 2023). More specifically, in visual disinformation, the decontextualized image often acts as a proof for deceptive claims that are communicated through text. Mimicking this pairing of deceptive textual interpretations with deceptive visuals, we explore how the social endorsement of visual disinformation through inauthentic citizens' online communication enhances the effects of cheapfakes and other forms of disinformation.

The specific direction of the embedding offered by fake ordinary citizen cues is expected to play a role for the effect of disinformation on political evaluations. Cultivating support for the false statements in disinformation should amplify disinformation's effects, whereas negative reinforcement (i.e., a discrediting cue on social media) should lower its impact. This effect is driven by a confirmation bias (e.g., Knobloch-Westerwick et al., 2020): For people already agreeing with the attitudinal stance of disinformation, the textual pairing containing an endorsement act as an additional confirmation of their identity-based beliefs. Likewise, the disapproval of the disinformation's message resonates with people who oppose the attitudinal stance of disinformation. We therefore distinguish between disinformation embedded with an endorsement message that claims support for the deceptive message and disinformation embedded with a discrediting message that disapproves of the deceptive message. We hypothesize:

Hypothesis 3: Endorsed disinformation has stronger effects for participants who agree with the disinformation's message (H3a) and discredited disinformation has stronger negative effects for participants who disagree with the disinformation's message (H3b).

Context of the study

We first study the effects of multimodal disinformation through a cheapfake in which the former Dutch party leader of the Christian-Democrats, Sybrand Buma, is depicted making (radical) right-wing populist claims. Although the values of this politician may be regarded as conservative and right-wing, Buma has not communicated similar claims as used in our experiment. As a robustness check, we rely on another data collection

in which a cheapfake was made that de-contextualized existing footage of a missile attack to make the deceptive claim that the MH370 disappearance was in fact ‘a terrorist attack.’ Although we focus on specific case studies, this setting is ought to be transferable to many disinformation campaigns in which radical right-wing issue positions (i.e., anti-immigration narratives) are cultivated through online channels (e.g., Marwick & Lewis, 2017).

Method

To test our hypotheses, we rely on a survey-embedded online experiment with a 3 (Type of disinformation: textual versus text-plus-image versus cheapfake) \times 3 (social endorsement of disinformation: no embedding versus endorsement versus discrediting cues of ordinary citizen) + 3 (Control conditions: Authentic textual versus text-plus-image versus video speech) between-subjects factorial design (See Table 1 for an overview of all conditions). In the experiment, participants were exposed to a cover story that emphasized that the text they were exposed to came from an interview with the political actor – including the dates also explicated in the social media post. Participants were randomly assigned to the conditions, and three control groups closely matching the nine disinformation treatments were used (the set-up followed the approach of a real experiment). The topic of the disinformation message was immigration – a salient topic that was subject to deception and manipulation at the time of data collection. We use a single message design as a first exploration of the impact of cheapfakes and rely on a second data collection to assess the robustness of the conclusions (presented after the main study). Although the hypotheses and analysis strategy were determined before collecting the data, we did not officially pre-register the study.

Sample

For this survey-embedded experiment, a diverse sample of Dutch participants was recruited via Kantar (a large international research agency collecting data from voluntarily opt-in panels) during the first week of December 2020. Soft quotas were enforced to ensure a distribution of age ($M = 51.30$, $SD = 16.84$), gender (49.0% female) and

Table 1. Graphical depiction of the experimental design.

Condition	Type and modality disinformation	Embedding	N
1	Authentic textual information	Absent	76
2	Authentic text + image information	Absent	71
3	Authentic video speech	Absent	67
4	Textual disinformation	Absent	73
5	Textual disinformation	Discredited	75
6	Textual disinformation	Endorsed	74
7	(text + image) disinformation	Absent	75
8	(text + image) disinformation	Discredited	78
9	(text + image) disinformation	Endorsed	70
10	Cheap fake	Absent	71
11	Cheap fake	Discredited	71
12	Cheap fake	Endorsed	73

Note. Three different types of disinformation were presented in different embeddings (absent, endorsed, discredited). These disinformation treatments were contrasted to control conditions that reflected the same modality as the disinformation manipulations. Conditions 1–3 contain truthful and unmanipulated messages and conditions 4–12 show manipulated stimuli either via text, image or video (cheapfake)

education (26.0% lower, 44.7% moderate, 29.4% higher level of attainment) that approached the demographic composition of the Dutch population. Regarding ideology, 36.4% identified mostly as left-wing (50.7% right-wing, 12.9% don't know) – this reflects the Dutch political landscape at the time of data collection. Out of 1,267 responses to the survey link, we achieved 874 completed responses (69.0%) that fulfilled quota requirements and a basic attention check question.

For the power analysis that we conducted to inform sample size before commencing fieldwork, we relied on the G*Power 3.1 tool (Faul et al., 2009). We took into account previous effect studies on visual disinformation, indicating that the mean difference in perceived credibility between disinformation and authentic information is about .50 on a 7-point scale, and that the standard deviation of perceived credibility ranges between 1.20 and 1.50. Based on existing experimental research on the effects of (visual) disinformation, we also expected moderate or small effect sizes ($b < .20$) in this study. Relying on one-tailed (i.e., for the hypotheses) and two-tailed tests (RQs), pre-study power analyses indicated that we would need around 900 completes to achieve sufficient power (.80) to detect significant differences ($\alpha = .05$). That being said, for the test of moderators, a larger sample size would be preferred. Yet, due to practical limitations in availability of panelists and budget for data collection, we aimed to achieve a total number of 1000 complete responses. More information on the sampling procedures and quota can be found in Appendix B.

Independent variables and stimuli

In all conditions, we exposed participants to a screenshot of an item allegedly presented on social media. However, different from real interactive digital settings, participants were not able to engage with this post. Participants overall rated the messages as credible and similar to the social media content they come across in their daily lives ($M = 4.60$, $SD = 1.85$, with no significant differences between any of the conditions).

Types of disinformation. To create the disinformation stimuli, we used an authentic political speech of former Dutch politician Sybrand Buma (from the Dutch Christian-democratic party CDA). In the disinformation conditions, this information was altered to make it reflect a right-wing populist agenda. More specifically, the disinformation conditions stated that 'we' should defend Dutch traditions against foreign influence, and that 'criminal' fortune-seekers should not be given access to the country (Stimuli included in Appendix A). Since the politician was from a conservative, right-wing party, the radical right-wing disinformation claim about immigration was something the politician could have plausibly said, although it is unlikely that he would do so in such a harsh or direct way.

This deceptive narrative was presented in different forms and modalities. First of all, we used textual disinformation that simply reported the (false) speech of the depicted politician using an online format without explicit source cues, presenting the quote as if it came from an interview with the depicted politician. The text-plus-image disinformation conditions paired this text with the image of the depicted politician. Finally, the cheapfake condition used an interview setting with the depicted politician in which the interviewer was hidden. The interviewer repeated the (alleged) words of the depicted politician, emphasized that these statements were voiced by this political

actor, and the politician replied with a confirmation: ‘Yes, that’s exactly it.’ The manipulation was straightforward: The video was cropped and the authentic audio of the interviewer (whose face was not in the video) was replaced by a recorded audio-fragment with the disinformation’s text.

All modes of disinformation used exactly the same speech, quoted the depicted politician indirectly (i.e., the statements were said to come from an interview) and included a confirmation from the depicted actor. The key difference was the mode of presentation. Yet, a main challenge when comparing treatments that use a different format is to completely isolate one independent variable – such as modality. The video is not only different from the text in the sense that audiovisual cues are used, but it, for example, also has a different background, tone, and processing speed. These differences notwithstanding, our manipulations aimed to simulate prominent ways of communicating and presenting deceptive narratives in digital settings as close as possible – using low-resource and non-AI driven manipulations prominently used in actual campaigns (e.g., Brennen et al., 2021).

Social endorsement. For the social endorsement conditions, fake Twitter profiles were made, which followed the logic of troll-armies often used in the (automated) dissemination of disinformation on social media. The website <https://randomuser.me/photos> was used to generate random profile pictures of non-existing people. The profile of a mid-aged white male was used in the created Twitter profile. In the endorsement conditions, this fake person re-tweeted the different disinformation conditions created for this experiment and used the following text to endorse the message: ‘You can say a lot about the man and his political viewpoints, but finally someone has the guts to say what we are all thinking for quite some time now. Strong statement! Time for action!’ The discrediting conditions followed the same logic but used a different embedding message: ‘Unbelievable. A mainstream politician who is seduced to spread this kind of fact-free radical-right wing hate mongering. Weak statement! This has to stop!’

Dependent variables

Issue agreement. In the first step, participants were asked to indicate their agreement with eight statements that were also present as arguments of the (dis)information message (all measured on 7-point completely disagree-completely agree scales). Item wordings as ‘We need to protect our country from foreign influences’ and ‘The traditions of people coming from other cultures are backwards’ were included ($M = 4.27$, $SD = 1.86$, Cronbach’s $\alpha = .971$). We based these items on earlier work on the impact of anti-immigration framing and right-wing populism (e.g., Aalberg et al., 2017) as well as studies that mapped the impact of disinformation with an alt-right agenda on people’s agreement with the manipulated message (e.g., Hameleers et al., 2023).

Message credibility. Using both reverse-coded ‘Fake News’ statements e.g., ‘This message is Fake News’ and accuracy perceptions e.g., ‘This message is authentic’, we measured participants’ credibility ratings. All seven items were measured on 7-point (completely disagree-completely agree scales) ($M = 3.88$, $SD = 1.18$, Cronbach’s $\alpha = .839$). The message credibility items were developed for this study, but they are in line with earlier experimental research mapping the credibility and perceived authenticity of disinformation (e.g., Schaewitz et al., 2020).

Rating of the depicted politician. Using eight statements that contained both positive ‘Buma is a competent politician’ and negative traits ‘Buma is selling out his principles’ we computed an average scale measuring the positive evaluations of the depicted politician ($M = 4.49$, $SD = 1.10$, Cronbach’s $\alpha = .885$). We based the development of these items on experimental research that mapped the effects of deepfakes on the evaluations of depicted political actors (Dobber et al., 2021). In addition, the evaluations were formulated to resonate with support for populist ideas. We controlled for pre-treatment liking and prior beliefs related to immigration as a robustness check – which did not change the results (these factors were also equally distributed across groups, following a randomization check).

Moderator: attitudinal congruence

We measured participants’ existing beliefs related to the issue of immigration and national values in the pre-treatment block and made sure to rely on a different battery of items than the post-treatment measure of issue agreement (which corresponded directly to the statements voiced in the false speech). More specifically, we asked participants to indicate their agreement with six items on the ‘state of our country’ – which included statements on crime ‘I do not feel safe in my own country’, immigration ‘We should close our border for immigrants’ and traditions ‘Our culture and traditions are threatened by immigration’ ($M = 4.40$, $SD = 1.59$, Cronbach’s $\alpha = .917$). These items aim to map a more general existing tendency to support populist right-wing issue positions (also see e.g., Aalberg et al., 2017), and thus serve as a proxy for attitudinal congruence with the disinformation message that cultivates a similar political agenda.

Procedures

All procedures, manipulations, sampling and recruitment strategies were approved by the University’s ethical committee. Responding to guidelines for ethical online research (i.e., AoIR), we, for example, included a very detailed debriefing and informed consent procedure. Participants entered the survey through a link provided to them by the survey company. Upon entering, the set-up of the survey was briefly discussed. The first battery of survey items contained measures for demographics, moderating variables, and potential controls. In the next experimental block, participants were randomly assigned to one of the experimental conditions or control groups.

After exposure, participants were forwarded to the post-treatment survey block with measures for the dependent variables and manipulation checks (see Appendix C for details). After these checks, participants were carefully debriefed. Here, we made sure that all factually incorrect claims were refuted with empirical evidence – also offering participants links to additional information on how to recognize disinformation.

Results

Credibility, issue agreement and candidate evaluations in response to disinformation

To test RQ₁, we first of all used (independent samples) t-tests for which we compared mean scores on our three dependent variables for participants exposed to the authentic

information versus disinformation treatments. Figure 1 depicts the difference in the three dependent variables across the two conditions. The results indicate that there is a significant (and substantial) difference in perceived credibility for participants exposed to disinformation ($M = 3.65$, $SD = 1.16$) compared to real information ($M = 4.88$, $SD = .93$); $t(872) = 10.69$, $p < 0.001$, 95% CI [.76, 1.10].

Further answering RQ₁, the results indicate that participants exposed to authentic information report similar levels of issue agreement ($M = 4.31$, $SD = 1.89$) compared to participants who saw disinformation ($M = 4.25$, $SD = 1.84$); $t(872) = .37$, $p = .716$, 95% CI [-.23, .34]. The non-significant and small difference indicates that disinformation and factually accurate information result in similar levels of issue agreement. However, participants exposed to authentic information are slightly more supportive of the politician ($M = 4.64$, $SD = 1.03$) than participants exposed to disinformation ($M = 4.45$, $SD = 1.11$); $t(872) = 2.18$, $p = .030$, 95% CI [.02, .36]. Similarly, the regression model (see Tables in Appendix D) indicates that there is a significant (small), negative effect of disinformation on candidate evaluations ($B = -.26$, $SE = .11$, $p = .014$).

Are cheapfakes more persuasive than textual and visual cues?

To test H1, we rely on a one-way ANOVA for which we compared mean scores between (1) textual disinformation; (2) image-only disinformation and (3) cheapfakes (audiovisual disinformation) contrasted with authentic information as reference group. Figure 2 shows the mean score differences across the three dependent variables. The findings of the model ($F(3, 870) = 38.21$, $p < .001$) point to significant (Bonferroni corrected) mean differences between authentic information and all three modalities of disinformation. However, our findings do not offer any support for H1. Hence, there are no significant mean score differences between textual and image-only disinformation ($\Delta M = .06$, $SE = .11$, $p = 1.00$), textual disinformation and cheapfakes ($\Delta M = -.01$, $SE = .11$, $p = 1.00$) or image-only disinformation and cheapfakes ($\Delta M = -.07$, $SE = .11$, $p = 1.00$). H1a and H1b are thus both not supported by the data: Multimodal (visual-and-text) and audiovisual (cheapfakes) modes of disinformation are not perceived as more credible than textual disinformation.

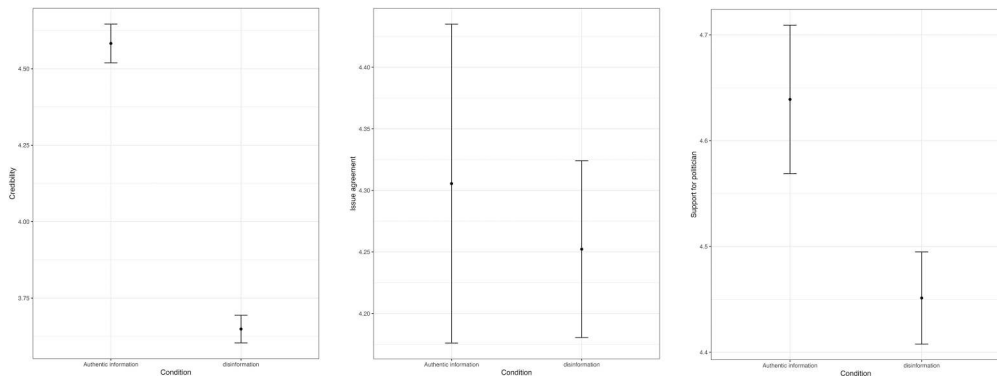


Figure 1. Mean scores depicting the difference between exposure to authentic information and disinformation on all three dependent variables

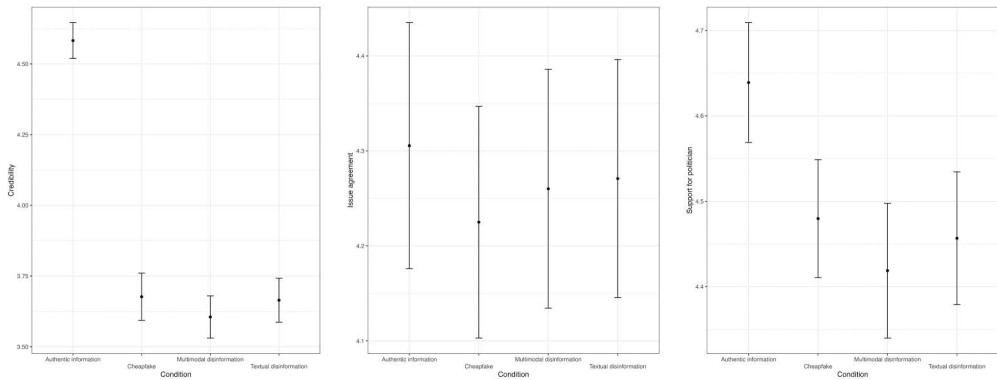


Figure 2. Mean scores depicting the difference between exposure to different modalities of (dis)information for all three dependent variables.

We additionally included an item that indirectly offers insight into the acceptance of the ‘realism’ heuristic, in the sense that it measured the perception whether the message was close to reality. Here, we do see that the cheapfake message was perceived as more directly reflecting reality ($M = 4.56$, $SD = 2.10$) than the textual disinformation ($M = 4.01$, $SD = 1.96$, $p = .034$). This suggests that although a cheapfake may not be regarded as more credible than textual disinformation, people may perceive it as a more direct representation of reality.

Attitudinal congruence and disinformation’s effects

In the next steps, we ran OLS-regression models to assess the moderated effects of (multi-modal) disinformation’s impact on credibility, issue agreement and candidate evaluations (Tables in Appendix D). We first of all expected that the effects of disinformation on perceived credibility are strongest for participants who are more aligned with the (anti-immigration) arguments presented in disinformation (H2a). The interaction effects are plotted in Figure 3. As can be seen in Model III of Table 2, there is a significant, positive two-way interaction effect between exposure to disinformation and prior issue attitudes on perceived message credibility. This supports H2a: The more people’s prior attitudes resonate with disinformation, the stronger disinformation’s (compared to authentic information) effect on message credibility.

We do not find support for this confirmation bias when we focus on disinformation’s impact on issue agreement (Table 3, Model III). Hence, as shown in Table 3 (Model III), there is no significant two-way interaction effect between disinformation exposure and attitudinal congruence. We can tentatively explain this as a ceiling effect, further indicated by the very strong contribution of issue congruence to the regression models (Table 3, Model II). More specifically, there is a strong relationship between participants’ prior issue attitudes related to crime and immigration and agreement with the arguments made in the congruent message ($B = 1.04$, $SE = .02$, $\beta = .89$, $p < .001$), which arguably leaves little room for further activation by exposure to disinformation itself. H2b is thus not supported.

We further expected that the resonance between disinformation’s claims and prior attitudes would result in a stronger impact on support for the source that made the

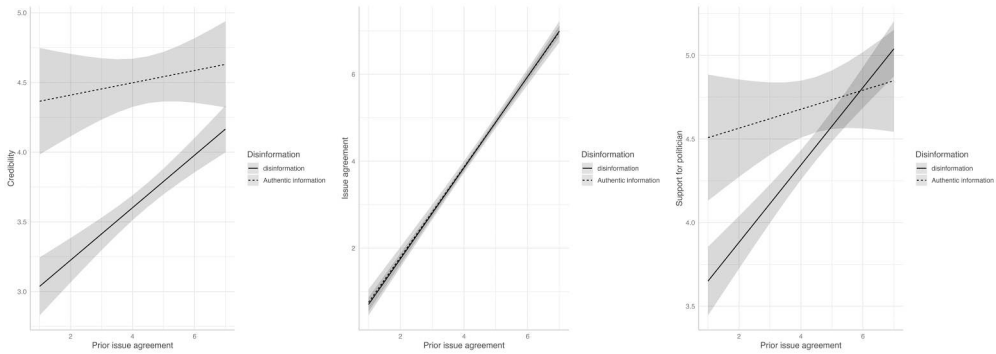


Figure 3. Interaction effects between prior issue position and disinformation exposure on all three dependent variables.

(false) claims (H2c). As can be seen in Table 4 (Model III), we find support for this hypothesis: There is a significant and positive two-way interaction effect between exposure to disinformation and prior issue attitudes on the positive evaluation of the political source. This means that participants with issue-congruent attitudes are more likely to be positive about the source when exposed to disinformation versus authentic information than participants who are aligned less with the arguments of the message.

The role of endorsing and discrediting disinformation

We expected that the embedding of disinformation on social media matters for its effectiveness, and that this effect is contingent upon issue agreement (H3). We turn our attention to the interaction effect plots depicted in Figure 4 and the OLS-regression models in Tables 2–4 (Model III) in Appendix D. H3a postulated that endorsed conditions have stronger effects on issue agreement and positive source evaluations for participants who agree with the disinformation’s message. First of all, the significant two-way interaction effect between endorsement and prior beliefs on perceived credibility offers support for the hypothesized mechanisms (see Table 3, Model III): The more pronounced participants’ anti-immigration beliefs are, the stronger the impact of endorsed information on perceived credibility is. The significant interaction effect between endorsement and prior issue beliefs on issue agreement (Table 3, Model III) lends support for H3a: Participants at higher levels of prior issue agreement are more likely to agree with disinformation compared to authentic information when the message is endorsed than participants at lower levels of issue agreement. Endorsement thus only seems to augment the persuasiveness of the message when this information resonates with people’s prior worldviews on the issue. However, this effect was not found for source evaluations (Table 4, Model III). Yet, H3a is partially supported: For perceived credibility and post-treatment issue agreement, endorsed messages have stronger effects for participants whose prior beliefs resonate with the disinformation’s message.

Finally, our findings offer no support for H3b: As can be seen in Model III of Tables 2–4, there are no significant interaction effects between discrediting cues and prior issue beliefs on message credibility, post-treatment issue agreement or source evaluations.

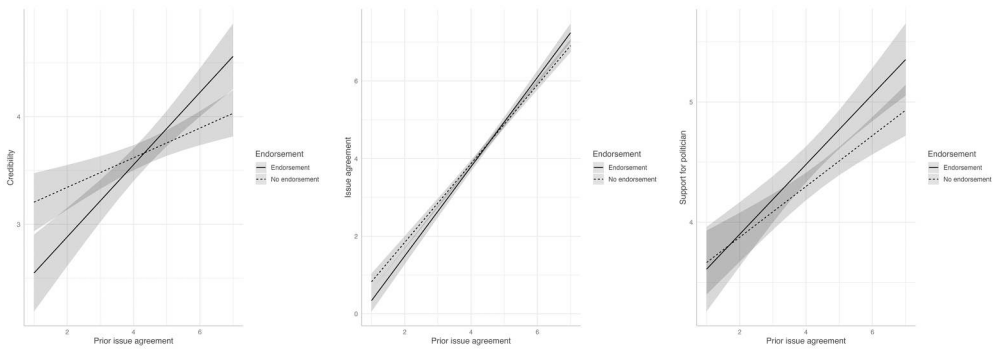


Figure 4. Interaction effect between prior issue positions and endorsement of disinformation on all three dependent variables.

Cheapfakes in the context of re-contextualized visuals

To assess the transferability of these findings to another setting of cheapfakes – the deceptive re-contextualization of existing footage – we rely on additional data as a robustness check. Here, we focus on an experiment manipulating disinformation on the disappearance of flight MH370 in which three between-subjects conditions are compared: Exposure to a control condition with authentic footage of a missile strike ($n = 250$); exposure to textual disinformation in which the missile strike was said to prove that flight MH370 disappeared as the consequence of a terrorist attack ($n = 254$); and exposure to a cheapfake in which authentic footage on a missile strike was re-contextualized to deceptively present it as evidence that the disappearance of the MH370 flight was in fact a terrorist attack ($n = 229$) (see Appendix E for more details on the study).

We compared credibility perceptions in response to the cheapfake versus the authentic footage and the textual disinformation condition using an ANOVA ($F(2, 730) = 4.97, p = .007$). Bonferroni corrected mean score comparisons indicate that the cheapfake ($M = 3.49, SD = 1.39$) was perceived as equally credible as textual disinformation ($M = 3.36, SD = 1.27$). However, there was a small but significant difference between the real footage and the textual disinformation: The real footage ($M = 3.71, SD = 1.12$) was seen as slightly more credible than textual disinformation ($\Delta M = .35, SE = .11, p = .006$). Based on these findings, the main conclusion of the main study is corroborated in the different context of re-contextualized footage: Such cheapfakes are not perceived as significantly more credible than textual disinformation.

Discussion

Although practices such as astroturfing and visual disinformation (see e.g., Dobber et al., 2021; Weikmann & Lecheler, 2023) are assumed to be dangerous forms of disinformation as they signal authenticity, social support and realism, we know little about whether they exert a strong influence on political evaluations. Against this backdrop, we rely on an

online experiment in which we exposed Dutch participants to different types of visual disinformation embedded in a social media setting, with a specific focus on the credibility of cheapfakes compared to other modes of disinformation. Contrary to our expectations, we do not find that cheapfakes and image-based visual disinformation are more effective than textual disinformation. This is not in line with the theoretical framework of multi-modal framing effects (e.g., Geise & Baden, 2015; Powell et al., 2015), which postulates that the combination of images and text would yield higher levels of credibility and persuasiveness as images are more attention-grabbing, emotionally engaging and offering a closer index of reality than texts. It also contradicts research finding that visual disinformation is slightly more credible than textual disinformation (e.g., Hameleers et al., 2020; Lee & Shin, 2022).

However, our findings are in line with research suggesting that video-based disinformation messages, such as deepfakes, are not more persuasive or deceptive than other modes of disinformation (e.g., Barari et al., 2021; Dobber et al., 2021; Ternovski et al., 2022; Vaccari & Chadwick, 2020). Barari et al. (2021), for example, indicate that video-based disinformation such as deepfakes may deceive recipients, but they are not more deceptive than lower modalities of disinformation (i.e., text-based disinformation). Even more so, as suggested by Ternovski et al. (2022), the real harm of video-based disinformation may be its weaponized use in (political) discourse: Although deepfakes are not persuasive (also see Vaccari & Chadwick, 2020), emphasizing the harms of deepfakes may cause declining trust in all information, including true content (also see Van der Meer et al., 2023).

One explanation could be that, when images and text are combined, textual information is more likely to affect cognitions and attitudes, whereas the visual component is more likely to affect behavioral intentions and emotions (Powell et al., 2015). As we assessed the impact of disinformation on message credibility, issue agreement and candidate evaluations, it is likely that the textual component of disinformation carried the framing effects, and that the visual component affected emotions and behavioral intentions. Another explanation is that the credibility of video-based disinformation comprises of more than the perceived authenticity or realism of the message (also see Hameleers et al., 2024). Given that we made a mainstream political actor voice rather extreme and implausible statements on immigration, it could be that the content of the message was discredited and believed to be incompatible with the profile of the well-known political actor. Future research therefore needs to more precisely map the reasons for either lower or higher levels of credibility across different modalities of disinformation.

We did, however, find that the social media endorsement of disinformation's arguments contributes to its effectiveness among participants that were more aligned with the message. This finding confirms literature stressing the influence of astroturfing and the reliance on trolls and bots in real-life, such as the 2016 U.S. elections (Bessi & Ferrara, 2016). Contributing to this literature, we show that inauthentic social media accounts can be used by disinformation agents to enhance polarized divides and amplify existing issue positions: Creating the false illusion of social support by endorsing disinformation only has an amplification impact on the political attitudes of people already inclined to support disinformation's claims – which indicates that such deceptive practices may strengthen polarized divides in society.

Pairing disinformation with visuals or videos does not amplify its impact, whereas the social endorsement of false narratives helps disinformation agents to achieve their goals of sowing discord and strengthen societal divides. In light of these findings, interventions – such as fact-checking and media literacy interventions – may particularly focus on helping news users to recognize inauthentic social media accounts mimicking ordinary people, which should especially be targeted at citizens who tend to support the delegitimizing claims of disinformation campaigns.

This study is not without limitations. First of all, although we aimed to keep the information offered as similar as possible across the three modalities, the text, visual and video differed on a number of factors that are hard to account for. The experimental manipulation of stimuli into different modalities implies that different cues are present for a video (i.e., the speech of an actor, moving images with a background) compared to the other modalities. Second, we focused on a single (right-wing) issue in a single country, which may harm the transferability of our findings to other settings. Future research needs to further assess and compare the impact of disinformation applied to different topics (i.e., health disinformation) across most-different country clusters to enhance the generalizability of our claims.

Although we extended our main findings with a robustness check, we relied on an experimental design presenting participants with only one disinformation treatment. We suggest future research to rely on more extensive disinformation treatments that expose participants to multiple manipulated messages. Yet, as we used a likely case of political disinformation for which an established political actors was made to express delegitimizing and conflict-centered statements, we believe that our findings also apply to disinformation campaigns driven by similar political agendas. Hence, throughout the globe, many polarizing actors in domestic and foreign politics disseminate similar messages in which a hostile message delegitimizing the established order is spread through ‘fake’ social media accounts. Yet, it can be argued that other salient issues, such as left-wing claims on climate change or social justice, are also surrounded by delegitimizing disinformation claims. In addition, the level of content plausibility may also greatly vary across disinformation messages, which we suggest future research to factor into the experimental design.

Note on contributors

Author information: Dr. Michael Hameleers (PhD, University of Amsterdam) is an Assistant Professor of Political Communication at the Amsterdam School of Communication Research (ASCoR). His research interests include (right-wing) populism, disinformation, and selective exposure [email: m.hameleers@uva.nl]

Dr. Toni G. L. A. van der Meer is an assistant professor at the Department of Corporate Communication of ASCoR, University of Amsterdam. His research interests include crisis communication, (negativity) biases in the news, media literacy and misinformation [email: G.L.A.vandermeer@uva.nl]

Professor Rens Vliegenthart is Chair of the Strategic Communication group at Wageningen University. His research interests media-politics relations, media coverage of social movements and businesses, election campaigns, European integration, soccer hooliganism and time series analysis [email:R.vliegenthart@wur.nl].

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Michael Hameleers  <http://orcid.org/0000-0002-8038-5005>

References

- Aalberg, T., Esser, F., Reinemann, C., Strömbäck, J., & de Vreese, C. H. (2017). *Populist political communication in Europe*. Routledge.
- Aneja, S., Midoglu, C., Dang-Nguyen, D. T., Khan, S. A., Riegler, M., Halvorsen, P., ... Adsumilli, B. (2022). ACM Multimedia grand challenge on detecting cheapfakes. *arXiv preprint arXiv:2207.14534*.
- Barari, S., Lucas, C., & Munger, K. (2021). Political deepfake videos misinform the public, but no more than other fake media. *OSF Preprints*, 13, 1–16.
- Bennett, L. W., & Livingston, S. (2018). The disinformation order: Disruptive communication and the decline of democratic institutions. *European Journal of Communication*, 33, 122–139. <https://doi.org/10.1177/0267323118760317>
- Bessi, A., & Ferrara, E. (2016). *Social bots distort the 2016 US presidential election: Online discussion*. Retrieved 7 October 2021, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2982233
- Brennen, J. S., Simon, F. M., & Nielsen, R. K. (2021). Beyond (mis)representation: Visuals in COVID-19 misinformation. *The International Journal of Press/Politics*, 26(1), 277–299. <https://doi.org/10.1177/1940161220964780>
- Dan, V., Paris, B., Donovan, J., Hameleers, M., Roozenbeek, J., van der Linden, S., & von Sikorski, C. (2021). Visual mis- and disinformation, social media, and democracy. *Journalism & Mass Communication Quarterly*, 98(3), 641–664. <https://doi.org/10.1177/10776990211035395>
- Dobber, T., Metoui, N., Trilling, D., Helberger, N., & de Vreese, C. H. (2021). Do (microtargeted) deepfakes have real effects on political attitudes? *International Journal of Press/Politics*, 26(1), 69–91. <https://doi.org/10.1177/1940161220944364>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160.
- Fazio, L. (2020). Pausing to consider why a headline is true or false can help reduce the sharing of false news. *Harvard Kennedy School Misinformation Review*, 1(2), 1–8.
- Freelon, D., & Wells, C. (2020). Disinformation as political communication. *Political Communication*, 37(2), 145–156. <https://doi.org/10.1080/10584609.2020.1723755>
- Geise, S., & Baden, C. (2015). Putting the image back into the frame: Modeling the linkage between visual communication and frame-processing theory. *Communication Theory*, 25(1), 46–69. <https://doi.org/10.1111/comt.12048>
- Hameleers, M., Humprecht, E., Möller, J., & Lühring, J. (2023). Degrees of deception: The effects of different types of COVID-19 misinformation and the effectiveness of corrective information in crisis times. *Information, Communication and Society*, 26(9), 1699–1715.
- Hameleers, M., Powell, T. E., van der Meer, T. G., & Bos, L. (2020). A picture paints a thousand lies? The effects and mechanisms of multimodal disinformation and rebuttals disseminated via social media. *Political communication*, 37(2), 281–301.
- Hameleers, M., van der Meer, T. G., & Dobber, T. (2024). They would never say anything like this! Reasons to doubt political deepfakes. *European Journal of Communication*, 39(1), 56–70.
- Knobloch-Westerwick, S., Mothes, C., & Polavin, N. (2020). Confirmation bias, ingroup bias, and negativity bias in selective exposure to political information. *Communication Research*, 47(1), 104–124. <https://doi.org/10.1177/0093650217719596>
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108(3), 480–498. <https://doi.org/10.1037/0033-2909.108.3.480>

- Lang, A. (2000). The limited capacity model of mediated message processing. *Journal of Communication*, 50(1), 46–70. <https://doi.org/10.1111/j.1460-2466.2000.tb02833.x>
- Lee, J., & Shin, S. Y. (2022). Something that they never said: Multimodal disinformation and source vividness in understanding the power of AI-enabled deepfake news. *Media Psychology*, 25(4), 531–546. <https://doi.org/10.1080/15213269.2021.2007489>
- Levine, T. R. (2014). Truth-Default Theory (TDT): A theory of human deception and deception detection. *Journal of Language and Social Psychology*, 33(4), 378–392. <https://doi.org/10.1177/0261927X14535916>
- Marwick, A., & Lewis, R. (2017). *Media manipulation and disinformation online*. Data & Society Research Institute. <https://datasociety.net/output/media-manipulation-and-disinfo-online/>
- Newman, N., Fletcher, R., Robertson, C. T., Nielsen, R. K., & Eddy, K. (2022). *Reuters institute digital news report 2022*. Reuters Institute for the Study of Journalism. <https://reutersinstitute.politics.ox.ac.uk/digitalnews-report/2022>
- Paris, B., & Donovan, J. (2020). *Deepfakes and cheapfakes: The manipulation of audio and visual evidence*. Data & Society Report. <https://datasociety.net/library/deepfakes-and-cheap-fakes/>
- Peng, Y., Lu, Y., & Shen, C. (2023). An agenda for studying credibility perceptions of visual misinformation. *Political Communication*, 225–237. <https://doi.org/10.1080/10584609.2023.2175398>
- Powell, T. E., Boomgaarden, H. G., De Swert, K., & de Vreese, C. H. (2015). A clearer picture: The contribution of visuals and text to framing effects. *Journal of Communication*, 65(6), 997–1017. <https://doi.org/10.1111/jcom.12184>
- Powell, T. E., Boomgaarden, H. G., De Swert, K., & de Vreese, C. H. (2018). Video killed the news article? Comparing multimodal framing effects in news videos and articles. *Journal of Broadcasting & Electronic Media*, 62(4), 578–596. <https://doi.org/10.1080/08838151.2018.1483935>
- Qian, S., Shen, C., & Zhang, J. (2023). Fighting cheapfakes: Using a digital media literacy intervention to motivate reverse search of out-of-context visual misinformation. *Journal of Computer-Mediated Communication*, 28, 1–12. <https://doi.org/10.1093/jcmc/zmac024>
- Schaewitz, L., Kluck, J. P., Klösters, L., & Krämer, N. C. (2020). When is disinformation (in)credible? Experimental findings on message characteristics and individual differences. *Mass Communication and Society*, 23(4), 484–509. <https://doi.org/10.1080/15205436.2020.1716983>
- Shin, J., & Thorson, K. (2017). Partisan selective sharing: The biased diffusion of fact-checking messages on social media. *Journal of Communication*, 67(2), 233–255.
- Sundar, S. S. (2008). *The MAIN model: A heuristic approach to understanding technology effects on credibility*. MacArthur Foundation Digital Media and Learning Initiative.
- Sundar, S. S., Molina, M. D., & Cho, E. (2021). Seeing is believing: Is video modality more powerful in spreading fake news via online messaging apps? *Journal of Computer-Mediated Communication*, 26(6), 301–319. <https://doi.org/10.1093/jcmc/zmab010>
- Ternovski, J., Kalla, J., & Aronow, P. (2022). The negative consequences of informing voters about deepfakes: Evidence from two survey experiments. *Journal of Online Trust and Safety*, 1(2), 1–16. <https://doi.org/10.54501/jots.v1i2.28>
- Vaccari, C., & Chadwick, A. (2020). Deepfakes and disinformation: Exploring the impact of synthetic political video on deception, uncertainty, and trust in news. *Social Media + Society*, 6(1), 205630512090340–13. <https://doi.org/10.1177/2056305120903408>
- Van Aelst, P., Strömbäck, J., Aalberg, T., Esser, F., De Vreese, C., Matthes, J., Hopmann, D., Salgado, S., Hubé, N., Stepińska, A., Papathanassopoulos, S., Berganza, R., Legnante, G., Reinemann, C., Sheafer, T., & Stanyer, J. (2017). Political communication in a high-choice media environment: A challenge for democracy? *Annals of the International Communication Association*, 41(1), 3–27.
- Van der Meer, T. G., Hameleers, M., & Ohme, J. (2023). Can fighting misinformation have a negative spillover effect? How warnings for the threat of misinformation can decrease general news credibility. *Journalism Studies*, 24(6), 803–823.
- Weikmann, T., & Lecheler, S. (2023). Visual disinformation in a digital age: A literature synthesis and research agenda. *New Media & Society*.