Volume 13 Number 8 October 2025

Digital Journalism

DIGITAL JOURNALISM

Routledge

ISSN: 2167-0811 (Print) 2167-082X (Online) Journal homepage: www.tandfonline.com/journals/rdij20

"I Resist". A Study of Individual Attitudes Towards Generative AI in Journalism and Acts of Resistance, Risk Perceptions, Trust and Credibility

Sophie Morosoli, Valeria Resendez, Laurens Naudts, Natali Helberger & Claes de Vreese

To cite this article: Sophie Morosoli, Valeria Resendez, Laurens Naudts, Natali Helberger & Claes de Vreese (12 Jan 2025): "I Resist". A Study of Individual Attitudes Towards Generative AI in Journalism and Acts of Resistance, Risk Perceptions, Trust and Credibility, Digital Journalism, DOI: 10.1080/21670811.2024.2435579

To link to this article: https://doi.org/10.1080/21670811.2024.2435579

DIGITAL JOURNALISM
https://doi.org/10.1080/21670811.2024.2435579

Routledge
Taylor & Francis Group

REVIEW ARTICLE

"I Resist". A Study of Individual Attitudes Towards Generative AI in Journalism and Acts of Resistance, Risk Perceptions, Trust and Credibility

Sophie Morosoli[a], Valeria Resendez[a], Laurens Naudts[b], Natali Helberger[b] and Claes de Vreese[a]

[a]Amsterdam School of Communication Research, University of Amsterdam, Amsterdam, The Netherlands; [b]Department of Information Law, University of Amsterdam, Amsterdam, The Netherlands

ABSTRACT

With the growing proliferation of generative AI, discussions about the societal implications of AI, including opportunities and risks, have intensified. Ultimately, the success of initiatives to integrate (generative) AI into news production and dissemination will depend on the concerns, trust, and willingness of citizens to accept new AI-driven solutions. This study explores attitudes toward the use of AI in journalism, perceptions of generative AI, and how these factors influence trust in and credibility of information. Using a survey on a representative sample of the Dutch population ($N = 1478$), we analyze perceived benefits and concerns about AI and explore individual acts of resistance against the application of AI in journalism (e.g., unwillingness to pay for news that AI produces). With this study, we extend previous research on attitudes towards AI by also considering general attitudes towards generative AI, individuals' risk perceptions towards generative AI, and policy support regarding regulating AI. More importantly, this study also investigates individual follow-up actions in the form of acts of resistance against the use of AI in journalism. The findings of this paper are particularly significant due to the rapid growth of generative AI, its integration into the news cycle, and international policy developments.

KEYWORDS

Artificial intelligence; user perceptions; risk perceptions; trust; journalism; acts of resistance

Introduction

The advent of artificial intelligence (AI) has ushered in an era of unprecedented transformation across different scientific disciplines and society itself, raising critical inquiries that reverberate through the dimensions of trust, risk perceptions, and regulatory frameworks. Among its multiple manifestations, generative AI stands out as an innovation of significance. Generative AI can be defined as "a type of artificial intelligence technology that can create new content, such as text, images, audio,

CONTACT Sophie Morosoli s.v.morosoli@uva.nl
Supplemental data for this article can be accessed online at https://doi.org/10.1080/21670811.2024.2435579

video, or other media, based on the data it has been trained on and according to written prompts provided by users" (Diakopoulos et al. 2024, 4). As generative AI applications flourish, their capacity to engender synthetic content from existing data marks a profound departure from conventional paradigms. With capabilities spanning image generation (e.g., Midjourney and Stable Diffusion), auditory synthesis (e.g., Lovo), video creation (e.g., Synthesia and Make-a-Video), and even the articulation of human-like dialogues (e.g., Copilot, Gemini, and ChatGPT), these tools can have an indelible impact upon domains such as news production and consumption, and society as a whole.

Within the rapidly changing landscape, the delineation between AI-forged content and human-crafted narratives blurs, beckoning critical questions that resonate deeply within communication science. In an era where AI-generated content seamlessly coexists with its human-generated counterpart, and where the digital realm enables the manipulation of information, the questions of trustworthiness and risk arise, rethinking the production and consumption of information (Kreps, McCain, and Brundage 2022; Noain-Sánchez 2022). In the worst case, AI can disrupt the findability and consumption of reliable journalistic content decreasing individuals' trust in news (Newman et al. 2023). The potential for AI-generated content manipulation further underscores the complex relationship between information credibility and AI-generated news, necessitating a comprehensive exploration of the interplay between individuals' attitudes, their perceptions of generative AI, and trust in journalism.

As artificial intelligence is being applied in newsrooms, individuals might now be confronted with news content, that has been supported or entirely produced by AI (Noain-Sánchez 2022). Individuals evaluate news created by AI differently than human written content (e.g., Jung et al. 2017). Thus, also citizens' trust relationship with news outlets will be potentially influenced by the application of AI in content production and generation (Jung et al. 2017; Kreps, McCain, and Brundage 2022; Noain-Sánchez 2022).

So far, the discussion around AI adoption, also in the news, is dominated by tech determinism and the idea that technology "overcomes" citizens (Campolo and Crawford 2020; Dafoe 2015). There has been far less attention, also in the academic debate, for the fact that consumers also have agency and that this agency is particularly decisive for the future of generative AI now, at a point in time where generative AI has left the lab and becomes integrated into individuals' daily routines, like reading and finding the news. People have the choice to trust or not to trust content generated by AI, and, subsequently, to accept or resist the use of AI in news. When making this choice, citizens have the opportunity to help shape the future of AI in society or resist its broader adoption. Resisting the use of generative AI in journalism specifically can take on many different shapes and forms. We formulated six acts of resistance that individuals might display, which can be connected to Hirschman's exit, voice, and loyalty framework (Hirschman 1970). For instance, stopping reading (exit) a certain news outlet if the outlet uses AI to write their articles or the unwillingness to share personal data to receive personalized news generated by AI (voice). Investigating these acts of resistance in detail can also provide us with important information about the concrete information needs of citizens when it comes to the use of generative AI in journalism. Transparency is a vital precondition for users to

be able to decide how they want to respond to the use of generative AI and hold the relevant actors to account. Moreover, with the democratization of access to AI through services like ChatGPT, individuals can be active deployers of AI themselves, thereby co-deciding actively on the role of AI in society. This is why it is essential to understand general attitudes, but also acts of resistance vis-a-vis generative AI.

Next to the generative AI application in newsrooms and the connected audience perceptions, the rapid advances in generative AI tools also raise questions about how individuals cope with these tools. We are not only interested in the awareness or personal use of generative AI tools but more specifically in risk perceptions. Where do individuals see possible risks in the use of generative AI and where are they optimistic about it? For instance, individuals might see misinformation or hallucinations produced by generative AI as a potential threat (Weisz et al. 2023). Further, concerns around privacy and copyright can also play a role in individual risk perceptions (Gal 2023).

Research is still scarce on these dynamics. We therefore collected original survey data from a Dutch sample ($N = 1478$) to approach these questions. The study recognizes the significant influence of generative AI on the production and consumption of news. It aims to tackle crucial issues relating to the trustworthiness and manipulation of information in the age of generative AI. Furthermore, the study underlines individuals' agency in shaping the future adoption of generative AI in newsrooms, emphasizing the importance of exploring acts of resistance against its implementation. Ultimately, these insights shed light on the potential of innovation with AI in journalism and what the responsible use of AI in relation to the audience means. Moreover, gaining a deeper understanding of users' concerns, perceptions of risk, and reactions to AI when they express concern can also inform legislation and policymaking. Specifically, this insight can illuminate the regulatory framework's role in enabling acts of resistance through transparency and providing concrete user rights or forms of empowerment.

Trust and Credibility in AI Application in Journalism

Over the past decade, news organizations have been increasingly adopting AI technologies, from traditional rule-based automation to more recent innovations such as generative AI technologies (Beckett and Yaseen 2023; Simon 2024). The key distinction of generative AI technologies is that generative AI models are trained using extensive datasets, through which they acquire patterns and structures, subsequently generating novel synthetic. Nevertheless, whether it is rule-based automation or generative AI, the adoption of AI in journalism is aimed to enhance content production, dissemination, and engagement with the audience (Beckett and Yaseen 2023; Simon 2024). The advancements of AI can further serve journalists and editors to enhance content production by reducing data errors, and reducing costs for news organizations when generating news (Ahmad, Haque, and Ibahrine 2023; Montal and Reich 2017). In addition, one of the benefits of generative AI for citizens is that it can serve to tailor content according to their news preferences (Diakopoulos et al. 2024), which can subsequently enhance citizens' benefit and trust perception.

Even though generative AI presents numerous benefits for news organizations and citizens, its use in journalism also introduces several risks for the public, such as filter bubbles, threats to editorial independence, algorithmic gatekeeping, and platform dependency (Araujo et al. 2020; Helberger et al. 2022; Simon 2024). The interplay between risks and benefits, as discussed earlier, exerts a profound influence on individuals' perceptions, particularly in matters of trust. For instance, Heim and Chan-Olmsted (2023) demonstrated that citizens' perceptions of AI significantly impact trust in both AI technology and the media. Moreover, Sun, Hu, and Wu (2022) showed that Chinese citizens exclusively see benefits in the usage of AI in journalism, while Araujo et al. (2020) suggest that the Dutch population recognizes both the benefits and risks of AI. In the context of this study, situated within the Netherlands, where the population is aware of the benefits and risks of AI it becomes imperative to gauge the extent to which perceived benefits of AI impact trust in media and the credibility ascribed to AI as an information source. Although media trust has experienced a decline across various nations, including the Netherlands, the extent of this decline within the Dutch landscape appears comparatively moderate (Newman et al. 2023). This highlights the importance of investigating trust and credibility connected to the benefits and risks of the application of AI in journalism in a country with stable levels of trust in the media system.

Although the concepts of trust and credibility are highly related, with some authors using these concepts interchangeably (e.g., Kohring & Matthes, 2007), we make a distinction between these two concepts. Trust is defined as a positive belief in the reliability or confidence in a person, object, or process, while credibility refers to the perceived quality or believability of a specific object (Masullo, Lee, and Riedl 2022, 3; Masullo et al. 2022). Thus, trust encompasses a broader concept, and credibility can be seen as one potential attribute of trust, with this relationship being reciprocal (i.e., more trust leads to more source credibility). In addition, it is important to note that the concept of trust aims to capture the belief of citizens towards the media to fulfill their expectations encompassing elements of risk and uncertainty, whereas credibility focuses on the believability of media sources of content (Coleman 1990; Metzger and Flanagin 2013). In this study, we focus on trust and credibility associated with the usage of AI in journalism. On the one hand, we understand trust as an expectation of how AI will be applied in journalism, and on the other hand, we focus on credibility in the context of AI serving as a primary source for news content. Like this, we aim to comprehensively evaluate the multifaceted dimensions of trust and credibility within the realm of AI-mediated journalism.

Trust and credibility in journalism are necessary since audiences are not able to verify every detail that is being reported (Wölker and Powell 2021). In essence, people make a quick decision about a news organization's credibility based on the content that the outlet produces (Masullo et al. 2022). A way that audiences might evaluate the credibility of AI-generated content and the credibility of the news source is through heuristics or mental shortcuts (Lermann Henestrosa, Greving, and Kimmerle 2023; Tandoc, Yao, and Wu 2020). One important heuristic in relation to AI is the "machine heuristic". Sundar and Kim (2019) defined this as a cognitive shortcut, wherein machines are perceived as objective, accurate, and devoid of ideological

biases. Studies evaluating the effects of machine heuristics in journalism have demonstrated that readers perceive news generated by algorithms as more objective and credible but less emotionally involving than human-written news (Liu and Wei 2019; Wölker and Powell 2021). In this way, if citizens perceive some benefits in AI-generated content, such as increased accuracy and objectivity in news, they are likely to perceive AI-written news as more credible. Similarly, as AI continues to advance in tailoring content for individual citizens audiences may increasingly perceive AI-assisted news as more beneficial and credible. Thus, the use of AI in journalism can enhance citizens' trust in AI for journalism and might lead citizens to perceive AI-generated news as more credible. We therefore ask the following research question: How do the perceived benefits concerning the use of generative AI in journalism impact individuals' trust and credibility in news (RQ1)?

Since the perception of benefits is related to trust and credibility, the more citizens perceive a benefit in the adoption of AI, the more citizens will trust and experience credibility concerning the usage of AI in journalism. Based on these considerations, we proposed the following hypotheses:

H1a: The more benefits people see of the use of AI in journalism, the more trust they have in AI in journalism.

H1b: The more benefits people see in the use of AI in journalism, the more credible they find AI-written news.

The relationship suggested in these hypotheses might not be linear but rather circular. The relationship between perceived benefits and trust might be dynamic, meaning that trust could also influence the perceived benefits. Hence, the more trust individuals have in AI in journalism, the more benefits they see (Bedué and Fritzsche 2022; Schepman and Rodway 2023).

Acts of Resistance towards Generative AI in Journalism

With emerging technologies such as generative AI and its application in different parts of society, not every individual agrees with the implementation in areas such as journalism. On the one hand, the responsible use of AI can help to reinvent the trust relationship between individuals and news outlets. On the other hand, it can even deepen the existing distrust in news organizations. Individuals might show resistance or reluctance and refuse to engage with entities that apply generative AI. Results from healthcare and medical science give important empirical insights into this issue. Studies indicate that people may decline to interact with artificial intelligence in the healthcare domain for a variety of reasons. Longoni, Bonezzi, and Morewedge (2019) observed that consumers generally exhibit reluctance when it comes to embracing AI-provided healthcare services. Meanwhile, other findings reveal that the emotions of family members play a pivotal role in their decision-making process regarding AI's involvement in their parents' healthcare. Anxiety about healthcare monitoring and health outcomes tends to decrease the rejection of AI monitoring, while surveillance anxiety and delegation anxiety tend to increase rejection (Park et al. 2022). Ploug and Holm (2020) argue patients should have the right to opt out

of AI-driven diagnostics and treatment planning. This choice stems from concerns related to the role of physicians in personal decision-making, the biases and lack of transparency inherent in AI systems, and rational apprehensions about the potential societal impacts of introducing AI systems into the healthcare sector. In sum, these studies collectively underscore that citizens' reluctance to embrace AI in healthcare stems from concerns surrounding AI's role in personal decision-making, the biases and opacity associated with AI systems, and the potential societal ramifications of integrating AI into healthcare practices, as well as that citizens should have an active choice whether or not to accept AI.

In the field of communication science, we can build on findings on how citizens perceive news personalization to develop the concept of acts of resistance towards AI in journalism. Monzer et al. (2020) found that citizens see themselves not simply as passive receivers but as active participants in the process of news personalization, and that through their choices they are able to steer or resist certain technological choices. Two key strategies to exercise agency are technical solutions (e.g., deleting cookies) and restrictive behavior (avoiding certain services) (Monzer et al. 2020). In another study, Volek (2023) discovered that citizens perceive news personalization as diminishing their control over search mechanisms and the delivery of information. They also voiced concerns regarding the credibility of personalization and the management of their personal data. The author measured defense tactics against news personalization, which entails the "protection (a) against personal data abuse (b) from loss of plurality of algorithmically selected news" (Volek 2023, 4). Results show that citizens apply three resistance tactics: "(1) avoiding suggested personalization services; (2) technical interventions, and (3) adaption or acceptance" (Volek 2023, 14). Investigating algorithmic news recommenders, Martens et al. (2023) also observed negative reactions or "contra-productive deviant behavior" from citizens against the system (Martens et al. 2023, 218). For instance, citizens would ignore content they suspected was pushed by the algorithm or reject the system entirely. This study highlights the importance of investigating the perceived role of citizens in interacting with AI systems.

While people's acceptance or resistance towards artificial intelligence is broadly studied in the field of healthcare studies (e.g., Park et al. 2022; Zhou et al. 2022) and regarding news personalization (e.g., Monzer et al. 2020; Volek, 2023), research is still limited on how citizens engage in acts of resistance regarding the use of (generative) AI in journalism. Considering previous findings, we define acts of resistance towards the use of AI in journalism as individual acts to opt out, adjust their behavior, or challenge their contribution to AI-generated news content.

The exit, voice, and loyalty framework introduced in Albert Hirschman's (1970) seminal work can provide valuable and encompassing insights when putting the suggested concept into a larger, theoretically profound context. The framework has been tested across disciplines, for instance, political science, sociology, and economics (Beard, Macher, and Mayo 2015) but has yet to be applied in the context of citizens' relationship with generative AI in journalism. The purpose of Hirschman's framework (1970) is to explain why and when dissatisfied customers exit (e.g., withdraw from the product), use their voice (e.g., proposal for change), or remain loyal to a firm. We

believe that drawing parallels from the exit, voice, and loyalty framework can help explore the complex dynamics surrounding acts of resistance regarding the use of AI in journalism. More concretely, the suggested acts of resistance such as stopping reading and paying for AI-generated news content equals exit within the framework. Whereas not sharing personal data with a news outlet to receive personalized AI-generated news can be considered as voice. It becomes apparent that exit and voice in this context are types of behaviors that we refer to as acts of resistance. Loyalty refers to citizens' sustained support or acceptance of AI-generated news or AI in journalism, despite concerns or criticism. This loyalty may derive from lower risk perceptions or perceived benefits, such as efficiency, novelty, or convenience, offered by AI-generated content.

Studying acts of resistance such as refusing to read news from a certain outlet if they use generative AI to write their articles or the unwillingness to share personal data to receive personalized news created by AI is significant because insights into this behavior could inform the way how news outlets integrate AI technologies and enable the development of policies regarding transparency, accountability, and user rights. Furthermore, we believe that such acts of resistance are closely related to citizens' trust. Hence, we ask the following research question: To what extent do individuals resist the application of (generative) AI in journalism (RQ2)?

If news organizations do not acknowledge citizens' concerns and do not offer them a choice, this can negatively affect trust, which in turn can result in canceling subscriptions to a news outlet that uses AI. Based on this, we propose the following hypothesis:

> **H2:** The more distrusting citizens are in the use of AI in journalism, the more likely citizens are to show acts of resistance regarding the application of AI.

Risk Perceptions About Generative AI

The increased popularity of generative artificial intelligence applications coincides with the emergence of so-called foundation models and generative AI. Designed to perform a wide range of general tasks, foundation models can be built upon and adapted by others for different applications, in a wide variety of contexts, and for a diverse set of purposes (Helberger and Diakopoulos 2023; Jones 2023). Moreover, these applications are often characterized by easy accessibility and use. People's exposure to artificially generated content, including journalistic content, is therefore likely to increase, to both positive and negative effects. Whereas the journalism and media industries highlight the technology's potential for innovation (Beckett and Yaseen 2023; Caswell 2023), generative AI has already been used to rapidly populate websites with unreliable news content to attract ad revenues (Ryan-Mosley 2023), and more generally sped up a debate about the risks of large-scale AI adoption to citizens and society.

From alarmist letters to a growing number of reports that seek to anticipate the risks of generative AI, generative AI has not only democratized access to AI but also popularized the debate about its possible consequences. Analyzing academic literature but also media reporting, and internet portals, Wach et al. (2023) identified a range of

ongoing controversies around generative AI in the present academic and public debate, including the lack of regulation, poor quality, disinformation, job losses, privacy violations, social manipulations, inequalities, and technostress (Wach et al. 2023). Bommasani et al. (2022) describe a broad scale of potential risks from foundational models, ranging from issues around privacy and security to issues of fairness, misuse, lack of compliance with existing laws, economic as well as ecological consequences (Bommasani et al. 2022). Shelby et al. (2023) created a taxonomy of sociotechnical harms from algorithmic systems more generally, including categories of representational, allocative, quality of service related, interpersonal, and systemic or social harms. These are only some of a growing body of reports that seek to anticipate the risks of AI and inform the public discourse on generative AI. At the same time, seeing the nascent nature of the broader popularity and experimentation with generative AI in the media, and the complexity of the value chain (Helberger and Diakopoulos 2023), the risks foundation models, and generative derivatives, threaten to impose on citizens have become equally difficult to predict, a fact that further spurs speculation and public attention.

Against this background, it is crucial to examine how AI is perceived by citizens and if they hold certain risk perceptions. For instance, as described above, generative AI can be a fruitful ground to create mis- and disinforming content and can be a potential risk to citizens' privacy (Attard 2021). However, many taxonomies of risks are expert driven or top-down defined and based on academic literature. Learning more about the actual risk perceptions of citizens is an important reality check and, for policymakers, can help to prioritize or deprioritize risks and better contextualize them. A plethora of questions arises: How many risks do citizens see in generative AI and how strongly do they believe that certain risks are inherent of generative AI? The perception of these risks of (generative) AI can vary with the level of knowledge citizens have (Said et al. 2023). Thus, knowledge can play an important role when investigating citizens' risk perceptions of generative AI. Against this backdrop, we pose the following third research question (RQ3): To what extent do individuals hold risk perceptions towards generative AI?

Knowing about where citizens see the biggest threat of generative AI can inform, for example, media companies and policymakers on how to communicate about and how to address these fears or increase AI literacy. We therefore hypothesize:

H3: The higher the citizens' knowledge about the use of AI in journalism, the more risks they perceive.

Method

Procedure

To investigate citizens' attitudes towards the use of AI in journalism and generative AI, we conducted a survey among the Dutch population. The polling company Bilendi recruited a sample based on country-specific census data and specific quotas on age, gender, and education. Bilendi recruited until quotas were full and participants were declined if their quotas were already complete. The data was collected via an online survey over four weeks during July and August 2023, and the participants were given

an incentive by Bilendi. The polling company invited 27,033 citizens, from which 1600 completed the survey, the response rate was 8%.

Sample

After removing straightliners and other outliers based on response time, age limit, and missing values we collected a sample of 1484 respondents (quotas for age: $M = 48.24$, SD = 17.46; gender: female = 49, 6% male = 50%, education: lower = 28.2%, moderate = 40.2%, higher = 31.2%). Outliers were removed if the response time was under four minutes and only complete surveys were considered. The median response time among our sample was 13.1 min. Additionally, we removed outliers from each construct based on the cutoff value of ± 3 SDs from the mean. For transparency purposes, we included all the analysis steps in an OSF link. It includes an exploratory factor analysis, principal component analysis, regression analysis, and assumption testing. Table 1 provides the census data of the sample used in this study.

Variables

The central dependent variables in this study are trust, credibility, acts of resistance, and risk perceptions of generative AI. We measured trust and credibility through four items (e.g., "I trust news that is produced by AI" or "I think news articles written by AI and a human journalist together are credible") on a 7-point scale, Cronbach's $\alpha_{trust} = 0.89$, $M = 3.73$, SD = 1.63 and Cronbach's $\alpha_{credibility} = 0.77$, $M = 4.41$, SD = 1.37. The measurements for trust regarding the use of AI in journalism are based on Newman et al. (Newman et al. 2016). The original items focus on journalism, and we adapted them to the context of AI. Similarly, our credibility measurement is inspired by the source credibility measure used by Dobber et al. (2023). To test whether these two constructs can be kept separately in the context of this article, we performed a principal components analysis (PCA) using the promax rotation. The first factor, named "trust in AI", explained 51% of the variance and the second factor, called "credibility in AI", accounting for 37% of the variance. Overall, the analysis identified two factors

Table 1. Census data.

	Actual participants %	Census data %
Gender		
Men	50.4	49.7
Women	49.6	50.3
Age (years)		
20–40	37.4	26.0
40–65	40.9	33.0
65–80	20.6	15.0
80–99	1.1	5.0
Education		
Primary	28.4	19.0
Secondary	40.4	44.0
Tertiary	31.2	37.0

Note: In the survey, we used a string variable for age. Certain age group frequencies might be slightly higher or lower than the quota since respondents had to be excluded if they indicated their age incorrectly. The census data was retrieved from Statistics Netherlands (CBS): https://www.cbs.nl/en-gb.

explaining a cumulative variance of 88%. The model displays a good fit with an RMSR of 0.07. These findings suggest that trust in AI and credibility represent related but distinct concepts in the dataset[1].

Acts of resistance against the use of AI in journalism were measured with five statements and participants had to indicate whether they agree or disagree with these statements (1 = strongly disagree, 7 = strongly agree). The items include statements like "I would not be willing to pay for news that is produced by AI" or "I would not be willing to share personal data to receive personalized news created by AI, Cronbach's $\alpha = 0.85$, $M = 4.42$, SD = 1.43. To the best of our knowledge, this is a novel concept that we introduce in this study. The last dependent variable—risk perceptions of generative AI—was also measured through six items on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) based on a previous study (Cui and Wu, 2021). For example, we presented the participants with the following statements: "Generative AI is abused to create mis- and disinformation" and "Generative AI poses a risk to privacy because of the data it's trained on" Cronbach's $\alpha = 0.82$, $M = 4.712$, SD = 1.26. This question battery was created based on an article by Attard (2021) describing generative AI risks. Attard (2021) lists possible risks in a comprehensive manner, which have yet to be studied.

The independent variables consist of the perceived benefits of AI for journalism and citizens' general knowledge about artificial intelligence. To measure what *benefits* citizens see in AI, we relied on a study by Sun, Hu, and Wu (2022). We asked the participants if they think that AI can improve the objectivity, accuracy, and authenticity of news content and whether AI can reveal false content or offer more relevant/personalized content (1 = strongly disagree, 7 = strongly agree), Cronbach's $\alpha = 0.92$, $M = 4.07$, SD = 1.45. Based on previous research (Sun, Hu, and Wu 2022), we selected five items on knowledge about the use of AI in journalism. Knowledge was measured on a 7-point Likert scale with six statements (e.g., "I know how AI is applied in journalism and the media" and "I already encountered AI in journalism and media"), Cronbach's $\alpha = 0.94$, $M = 3.34$, SD = 1.69. All scales used in this study can be found in Appendix B and the correlation plots for all variables can be found in Appendix C.

Results

To answer the first research question on how the perceived benefits concerning the use of generative AI in journalism impact individuals' trust and credibility in news, we test two hypotheses (H1a & H1b). Testing the first hypothesis, we regress citizens' trust and credibility in the use of AI in journalism on possible benefits of AI, controlling for socio-demographic characteristics, trust in news on different social media platforms, and trust in different actors (Tables 2 and 3)[2]. Firstly, the analysis shows that the perceived benefits of the use of AI in journalism are associated with a higher trust in AI [$b = 0.74$, 95% CI [0.70, 0.78], $p < 001$]. In other words, citizens who see benefits in the application of artificial intelligence in the newsroom, also display more trust toward AI-produced news. Table 2 also shows that this effect is quite substantial. By moving from the lower end of the scale to the top, citizens' trust goes up by three points. Secondly, Table 3 displays the same relationship with a slightly weaker effect. The more benefits people see in the use of AI in journalism, the higher their perceived

credibility of AI-produced content [$b = 0.46$, 95% CI [0.42, 0.51], $p < 001$]. This finding supports our first hypothesis.

Next, we turn to our assumption that citizens who are distrustful of the use of AI in journalism also display a higher willingness to show resistance towards those news outlets. This hypothesis helps us answer to what extent individuals resist the application of (generative) AI in journalism. We do find empirical evidence that citizens who distrust the application of AI in news production are more likely to show acts of resistance [$b = -0.14$, 95% CI [−0.20, −0.09], $p < 001$] (Table 4). This means that lower trust in the use of AI in the newsroom does explain why citizens would refuse to engage with AI in any shape or form.

Finally, we were interested in the question of to what extent individuals hold risk perceptions toward generative AI. As a final analysis, and to explore the hypothesis that a higher knowledge about AI leads to more risk perceptions being

Table 2. OLS regression on trust in AI.

Trust in AI	*B* (SE)	*t*-Values	95% CI
Benefits AI in journalism	0.74*** (0.19)	37.90	[0.70, 0.78]
Age	−0.00** (0.00)	−2.61	[−0.00, −0.00]
Gender	−0.03 (0.04)	−0.73	[−0.13, 0.06]
Education	−0.03*(0.01)	−2.56	[−0.06, −0.00]
Trust in actors	0.08* (0.03)	2.38	[0.01, 0.15]
Trust in news on social media	0.31*** (0.02)	10.82	[0.26, 0.37]
Constant	−0.04 (0.20)	−0.19	[-0.44, 0.36]
N	1471		
Adjusted R^2	0.66		

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 3. OLS regression on credibility.

Credibility	*B* (SE)	*t*-Values	95% CI
Benefits AI in journalism	0.46*** (0.02)	21.00	[0.42, 0.51]
Age	0.00 (0.00)	0.89	[0.00, 0.01]
Gender	0.04 (0.05)	0.86	[−0.06, 0.16]
Education	0.04* (0.01)	2.55	[0.01, 0.08]
Trust in actors	0.43*** (0.04)	10.70	[0.36, 0.52]
Trust in news on social media	0.10** (0.03)	3.22	[0.04, 0.17]
Constant	0.29 (0.25)	1.24	[−0.17, 0.75]
N	1471		
Adjusted R^2	0.41		

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 4. OLS regression on acts of resistance.

Acts of resistance against AI	*B* (SE)	*t*-Values	95% CI
Trust in AI	−0.14*** (0.02)	−5.24	[−0.20, −0.09]
Age	0.00 (0.00)	1.38	[0.00, 0.01]
Gender	−0.28*** (0.07)	−3.84	[−0.43, −0.14]
Education	−0.01 (0.05)	−0.62	[−0.06, 0.03]
Trust in actors	0.01(0.05)	0.26	[−0.09, 0.12]
Trust in news on social media	0.10* (0.04)	2.35	[0.032 0.20]
Constant	4.87*** (0.30)	16.09	[4.35, 5.55]
N	1471		
Adjusted R^2	0.02		

Note: * $p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 5. OLS regression on risk perceptions.

Risk perceptions	B(SE)	*t*-Values	95% CI
Knowledge AI	0.00 (0.02)	0.41	[−0.04, 0.06]
Age	0.00*** (0.00)	4.15	[0.00, 0.01]
Gender	−0.22*** (0.06)	−3.39	[−0.36, −0.10]
Education	−0.01 (0.01)	−0.87	[−0.06, 0.02]
Trust in actors	0.01 (0.04)	0.80	[−0.05, 0.13]
Trust in news on social media	0.03 (0.04)	0.33	[−0.07, 0.09]
Constant	4.48*** (0.28)	15.92	[3.93, 5.04]
N	1471		
Adjusted R^2	0.01		

Note: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

held by citizens, Table 5 presents the corresponding OLS regression. We do not find an effect of knowledge about AI in journalism on the perceived risks of generative AI.

Discussion

With the rapid spread of (generative) AI and its implementation in newsrooms, questions about citizens' perceptions of this development arise. Does the trust relationship between citizens and news change? Where do citizens see possible risks of generative AI? The main purpose of this study was to better understand how the application of AI in journalism impacts citizens' relationship with news and their acceptance of the use of AI in newsrooms. Secondly, we explored how citizens perceive generative AI. More concretely, this study aimed to explain how the journalistic use of AI affects citizens' trust in news. We further were interested in possible reluctance or refusal towards AI-produced or supported news content. Do citizens show resistance towards the use of AI and what does this resistance look like? Finally, we tapped into citizens' risk perceptions about generative AI.

First and foremost, our findings demonstrate that the more benefits (i.e., AI improving objectivity of news content) citizens see regarding the application of AI in journalism, the more trust they have in AI-produced content and journalists who use AI. Related to this, we also found that AI-produced content is perceived as more credible the more its benefits regarding the use of AI are recognized by citizens. This insight can inform news media about the way they should be transparent about the use of AI—not only that they use AI but why and where exactly, and to what end. We believe that part of the responsible use of artificial intelligence entails reflecting and explicating how AI can actually benefit citizens, as opposed to a merely opportunity-driven approach. This also includes that the use and implementation of AI is driven by an actual vision of the potential benefits, something that could be communicated, for example, in an editorial mission statement.

Trust in information is key in democracies. However, with declining trust in news across countries (Newman et al. 2023), we need to take a more nuanced look at how distrust influences how individuals treat journalistic output. We find empirical support that more distrusting citizens are more likely to show resistance or reluctance regarding AI-produced news. This suggests that (dis-)trust in the use of AI in journalism can

be connected to acts of resistance towards AI-produced news content. In other words: if people do distrust the use of AI in journalism, it does seem that such distrust can be translated into action. Put simply, people are suspicious of AI-generated news and would actively avoid it. Based on our results, resistance is mostly linked to the unwillingness to pay for AI-generated news content and the refusal to share personal data to receive personalized news created by AI. Hence, we observe an overall reluctance to engage with AI-generated news. Viewing this finding through the lens of Albert Hirschman's Exit, Voice, and Loyalty framework (Hirschman 1970), it suggests that when distrust is present, citizens are either less likely to use their "voice" or more likely to choose to "exit" by, for example, avoiding AI-produced news entirely or by refusing to pay for this type of content. This is bad news for media organizations in the sense that there will not be room for experimentation and winning back the trust of citizens if they exit. This finding also sheds a critical light on recent policy proposals, such as the AI Act. For instance, beyond transparency regarding the use of generative AI, the aforementioned AI Act offers little to no actionable rights that enable citizens to exercise control over their informational environment and the interactions they have therein. We argue that gaining insight into the acts of resistance citizens would likely perform or exercise, could aid us in defining (though not exclusively) what those rights could look like and empower citizens. And this in turn, could help shape regulatory information requirements, where citizens are informed about the existence of AI-generated news content and informed as to the way they can exercise acts of resistance to minimize perceived risks while maximizing the benefits they might derive.

Lastly, we do not find evidence that a higher knowledge about the application of AI in news production is related to more risk perceptions about generative AI. Thus, knowledge cannot explain the propensity of citizens to maintain risk perceptions concerning generative AI. However, it is important to mention that we are working with perceived knowledge about AI, unlike Said et al. (2023), who measured AI knowledge objectively. We believe that knowledge and the connected risk perceptions might partially be informed by how news frames artificial intelligence. It is undisputed that news plays a crucial role in knowledge acquisition or learning and opinion formation (e.g., Chaffee and Kanihan 1997; Gross, 2008). Recent findings from the U.S. suggest that news coverage on AI is mostly associated with benefits and not with risks (Chuan, Tsai, and Cho 2019). Thus, if citizens learn from this news coverage, they will ultimately acquire knowledge about AI which might skewed towards benefits compared to risks, which they then consciously or unconsciously apply to the use of generative AI in journalism. We suggest that further research should investigate the concept of knowledge about AI to avoid conceptual blurriness. What do we measure when we talk about knowledge about AI? The technological aspects, the way it's being used, or the risks? These questions and remaining questions suggest that a shared definition of knowledge about generative AI should be strived for within the academic community.

When employed responsibly, (generative) AI can enhance journalistic capabilities by facilitating content creation and personalization (Diakopoulos 2019). The advantages offered by AI could enable newsrooms to offer more personalized content or increase accuracy—benefits that are also identified by citizens. Using AI to benefit citizens, in

turn, can foster greater trust in information among citizens, which is of high relevance in public opinion formation. Additionally, as AI technologies become increasingly useful and accessible, they are likely to gain even more public trust. However, in a broader context, it is important for citizens to remain vigilant about the potential risks, such as the generation of unreliable content such as misinformation (Ryan-Mosley 2023). The findings of this article point toward distrust in the application of generative AI in the news production and individuals' desire to take action, such as rejection, when confronted with AI generated news. It is therefore increasingly relevant to distinguish the different sources (i.e., layers) and stakeholders (i.e., third-party technologies) in content production (e.g., journalists, sections where AI is utilized, news organizations, and channels of distribution) also because more intermediaries get involved in the development of news production (Sundar and Liao 2023). Hence, it is important for future research to evaluate the extent to which citizens attribute AI as the source of communication (i.e., source orientation), and the extent to which they place trust in the different layers of the news production process. In addition, as AI capabilities increase, it will become harder for citizens to detect the differences between AI-generated and non-AI-generated content (Haim and Graefe 2017). Therefore, it is critical to further examine mechanisms that could help citizens to critically evaluate and resist the content generated by AI. In this sense, we encourage future research to evaluate the extent to which labeling content as AI and non-AI-generated content could affect citizens' perceptions of trust.

Despite our contributions, this study does not come without limitations. Firstly, the sample is geographically focused on the Netherlands, which may limit the generalizability of our findings to broader international contexts. Also, further research should include specific groups that might be underrepresented in our sample. For instance, lower-income households or citizens with a migration background. Second, the geographical scope could introduce cultural and regulatory biases that are not applicable in other settings such as the United States or emerging economies such as Latin America. Third, our research methodology primarily relies on self-reporting measures, particularly in relation to questions about knowledge and awareness. This approach could result in skewed results, as participants may overestimate or underestimate their actual knowledge, thereby affecting the validity of our conclusions. Finally, the study employed survey methods, which, while valuable, could be complemented by experimental designs for more in-depth insights. Future research could benefit from expanding the geographical scope, employing mixed methods that include experimental designs, and utilizing more objective measures to assess knowledge and awareness.

As generative AI gains traction across various sectors, including journalism, our research sheds light on citizens' perceptions of AI-generated content. Specifically, we find that the more benefits citizens perceive, the higher their trust is in AI. Interestingly, a lack of trust in AI does not seem to lead to active resistance against the use of AI within news production. Instead, citizens' level of AI knowledge appears to be a factor in their ability to critically assess—and resist, if necessary—AI-generated content. These findings offer valuable perspectives for shaping strategies by the media sector to implement AI and constructively involve citizens in experimentation and initiatives to give citizens more agency—by design or by law.

Notes

1. See OSF link for full PCA.
2. As a control, we also tested these relationship in the other direction. Thus, the higher the trust and credibility in news written by AI, the more benefits people see for the use of AI in newsrooms. See Appendix A. We find that higher trust and credibility perceptions also lead to more benefits seen. We conclude that this is not a linear relationship between the variables but a circular one.

Ethical approval

Ethical approval for the study was granted by the Ethics Review Board (FMG-UvA), University of Amsterdam, The Netherlands (reference FMG-3994).

Disclosure Statement

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

ORCID

Claes de Vreese http://orcid.org/0000-0002-4962-1698

References

Ahmad, Norita, Sabir Haque, and Mohammed Ibahrine. 2023. "The News Ecosystem in the Age of AI: Evidence from the UAE." *Journal of Broadcasting & Electronic Media* 67 (3): 323–352. https://doi.org/10.1080/08838151.2023.2173197

Araujo, Theo, Natali Helberger, Sanne Kruikemeier, and Claes H. de Vreese. 2020. "In AI We Trust? Perceptions about Automated Decision-Making by Artificial Intelligence." *AI & Society* 35 (3): 611–623. https://doi.org/10.1007/s00146-019-00931-w

Attard, Simon. 2021. "Generative AI Risks." *Medium.Com* (blog), January 3, 2021. https://medium.com/@simon_attard/realistic-generative-ai-risks-a47d7c451921

Beard, T. Randolph, Jeffrey T. Macher, and John W. Mayo. 2015. "Can You Hear Me Now?' Exit, Voice, and Loyalty under Increasing Competition." *The Journal of Law and Economics* 58 (3): 717–745. https://doi.org/10.1086/684232

Beckett, Charlie, and Mira Yaseen. 2023. *Generating Change – A Global Survey of What News Organisations Are Doing with AI*. London, UK: LSE.

Bedué, Patrick, and Albrecht Fritzsche. 2022. "Can We Trust AI? An Empirical Investigation of Trust Requirements and Guide to Successful AI Adoption." *Journal of Enterprise Information Management* 35 (2): 530–549. https://doi.org/10.1108/JEIM-06-2020-0233

Bommasani, Rishi, Drew A. Hudson, Ehsan Adeli, Russ Altman, Simran Arora, Sydney von Arx, Michael S. Bernstein, et al. 2022. "On the Opportunities and Risks of Foundation Models." arXiv. http://arxiv.org/abs/2108.07258

Campolo, Alexander, and Kate Crawford. 2020. "Enchanted Determinism: Power without Responsibility in Artificial Intelligence." *Engaging Science, Technology, and Society* 6 (January): 1–19. https://doi.org/10.17351/ests2020.277

Caswell, David. 2023. "Medium. https://Generative-Ai-Newsroom.Com/Ai-and-News-Whats-next-154fbeb6a646." September 18, 2023. https://generative-ai-newsroom.com/ai-and-news-whats-next-154fbeb6a646

Chaffee, Steven H., and Stacey Frank Kanihan. 1997. "Learning about Politics from the Mass Media." *Political Communication* 14 (4): 421–430. https://doi.org/10.1080/105846097199218

Chuan, Ching-Hua, Wan-Hsiu Sunny Tsai, and Su Yeon Cho. 2019. "Framing Artificial Intelligence in American Newspapers." In Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society, 339–344. Honolulu, HI, USA: ACM. https://doi.org/10.1145/3306618.3314285

Coleman, James S. 1990. *Foundations of social theory*. Massachusetts, and London, England Cambridge: The Belknap Press of Harvard University Press.

Cui, Di, and Fang Wu. 2021. "The Influence of Media Use on Public Perceptions of Artificial Intelligence in China: Evidence from an Online Survey." *Information Development* 37 (1): 45–57. 10.1177/0266666919893411.

Dafoe, Allan. 2015. "On Technological Determinism: A Typology, Scope Conditions, and a Mechanism." *Science, Technology, & Human Values* 40 (6): 1047–1076. https://doi.org/10.1177/0162243915579283

Diakopoulos, Nicholas. 2019. *Automating the News: How Algorithms Are Rewriting the Media*. Massachusetts, and London, England Cambridge: Harvard University Press.

Diakopoulos, Nicholas, Hannes Cools, Charlotte Li, Natali Helberger, Ernest Kung, Aimee Rinehart, and Lisa Gibbs. 2024. "Generative AI in Journalism: The Evolution of Newswork and Ethics in a Generative Information Ecosystem." https://doi.org/10.13140/RG.2.2.31540.05765

Dobber, Tom, Sanne Kruikemeier, Fabio Votta, Natali Helberger, and Ellen P. Goodman. 2023. "The Effect of Traffic Light Veracity Labels on Perceptions of Political Advertising Source and Message Credibility on Social Media." *Journal of Information Technology & Politics* 1–16. https://doi.org/10.1080/19331681.2023.2224316

Gal, Uri. 2023. "ChatGPT Is a Data Privacy Nightmare. If You've Ever Posted Online, You Ought to Be Concerned." *The Conversation* (blog), 2023. https://theconversation.com/chatgpt-is-a-data-privacy-nightmare-if-youve-ever-posted-online-you-ought-to-be-concerned-199283

Gross, Kimberly. 2008. "Framing Persuasive Appeals: Episodic and Thematic Framing, Emotional Response, and Policy Opinion." *Political Psychology* 29 (2): 169–192. https://doi.org/10.1111/j.1467-9221.2008.00622.x

Haim, Mario, and Andreas Graefe. 2017. "Automated News: Better than Expected?" *Digital Journalism* 5 (8): 1044–1059. https://doi.org/10.1080/21670811.2017.1345643

Heim, Steffen, and Sylvia Chan-Olmsted. 2023. "Consumer Trust in AI–Human News Collaborative Continuum: Preferences and Influencing Factors by News Production Phases." *Journalism and Media* 4 (3): 946–965. https://doi.org/10.3390/journalmedia4030061

Helberger, Natali, and Nicholas Diakopoulos. 2023. "ChatGPT and the AI Act." *Internet Policy Review* 12 (1): 1–6. https://doi.org/10.14763/2023.1.1682

Helberger, Natali, Max Van Drunen, Judith Moeller, Sanne Vrijenhoek, and Sarah Eskens. 2022. "Towards a Normative Perspective on Journalistic AI: Embracing the Messy Reality of Normative Ideals." *Digital Journalism* 10 (10): 1605–1626. https://doi.org/10.1080/21670811.2022.2152195

Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge: Harvard University Press.

Jones, Elliot. 2023. "Explainer: What Is a Foundation Model?" July 17, 2023. https://www.adalovelaceinstitute.org/resource/foundation-models-explainer/

Jung, Jaemin, Haeyeop Song, Youngju Kim, Hyunsuk Im, and Sewook Oh. 2017. "Intrusion of Software Robots into Journalism: The Public's and Journalists' Perceptions of News Written by Algorithms and Human Journalists." *Computers in Human Behavior* 71 (June): 291–298. https://doi.org/10.1016/j.chb.2017.02.022

Kohring, Matthias, and Jörg Matthes. 2007. "Trust in News Media: Development and Validation of a Multidimensional Scale." *Communication Research* 34 (2): 231–252. https://doi.org/10.1177/0093650206298071

Kreps, Sarah, R. Miles McCain, and Miles Brundage. 2022. "All the News That's Fit to Fabricate: AI-Generated Text as a Tool of Media Misinformation." *Journal of Experimental Political Science* 9 (1): 104–117. https://doi.org/10.1017/XPS.2020.37

Lermann Henestrosa, Angelica, Hannah Greving, and Joachim Kimmerle. 2023. "Automated Journalism: The Effects of AI Authorship and Evaluative Information on the Perception of a Science Journalism Article." *Computers in Human Behavior* 138 (January): 107445. https://doi.org/10.1016/j.chb.2022.107445

Liu, Bingjie, and Lewen Wei. 2019. "Machine Authorship *In Situ*: Effect of News Organization and News Genre on News Credibility." *Digital Journalism* 7 (5): 635–657. https://doi.org/10.1080/21670811.2018.1510740

Longoni, Chiara, Andrea Bonezzi, and Carey K. Morewedge. 2019. "Resistance to Medical Artificial Intelligence." *Journal of Consumer Research* 46 (4): 629–650. https://doi.org/10.1093/jcr/ucz013

Martens, Marijn, Ralf De Wolf, Bettina Berendt, and Lieven De Marez. 2023. "Decoding Algorithms: Exploring End-Users' Mental Models of the Inner Workings of Algorithmic News Recommenders." *Digital Journalism* 11 (1): 203–225. https://doi.org/10.1080/21670811.2022.2129402

Masullo, Gina M., Alexander L. Curry, Kelsey N. Whipple, and Caroline Murray. 2022. "The Story Behind the Story: Examining Transparency About the Journalistic Process and News Outlet Credibility." *Journalism Practice* 16 (7): 1287–1305. https://doi.org/10.1080/17512786.2020.1870529

Masullo, Gina M., Taeyoung Lee, and Martin J. Riedl. 2022. "Signaling News Outlet Credibility in a Google Search." *Journalism & Mass Communication Quarterly* 99 (4): 1148–1168. https://doi.org/10.1177/10776990211047964

Metzger, Miriam J., and Andrew J. Flanagin. 2013. "Credibility and Trust of Information in Online Environments: The Use of Cognitive Heuristics." *Journal of Pragmatics, Biases and Constraints in Communication: Argumentation, Persuasion and Manipulation* 59 (December): 210–220. https://doi.org/10.1016/j.pragma.2013.07.012

Montal, Tal, and Zvi Reich. 2017. "I, Robot. You, Journalist. Who Is the Author?: Authorship, Bylines and Full Disclosure in Automated Journalism." *Digital Journalism* 5 (7): 829–849. https://doi.org/10.1080/21670811.2016.1209083

Monzer, Cristina, Judith Moeller, Natali Helberger, and Sarah Eskens. 2020. "User Perspectives on the News Personalisation Process: Agency, Trust and Utility as Building Blocks." *Digital Journalism* 8 (9): 1142–1162. https://doi.org/10.1080/21670811.2020.1773291

Newman, Nic, Richard Fletcher, Kirsten Eddy, Craig T. Robertson, and Rasmus Kleis Nielsen. 2023. "Reuters Institute Digital News Report 2023." Oxford: Reuters Institute for the Study of Journalism.

Newman, Nic, Richard Fletcher, David A. L. Levy, and Rasmus Kleis Nielsen. 2016. "Reuters Institute Digital News Report 2016." Oxford: Reuters Institute for the Study of Journalism. https://doi.org/10.60625/RISJ-YGCH-7N59.

Noain-Sánchez, Amaya. 2022. "Addressing the Impact of Artificial Intelligence on Journalism: The Perception of Experts, Journalists and Academics." *Communication & Society* 35 (3): 105–121. https://doi.org/10.15581/003.35.3.105-121

Park, Eun Hee., Karl Werder, Lan Cao, and Balasubramaniam Ramesh. 2022. "Why Do Family Members Reject AI in Health Care? Competing Effects of Emotions." *Journal of Management Information Systems* 39 (3): 765–792. https://doi.org/10.1080/07421222.2022.2096550

Ploug, Thomas, and Søren Holm. 2020. "The Right to Refuse Diagnostics and Treatment Planning by Artificial Intelligence." *Medicine, Health Care, and Philosophy* 23 (1): 107–114. https://doi.org/10.1007/s11019-019-09912-8

Ryan-Mosley, Tate. 2023. "Junk Websites Filled with AI-Generated Text Are Pulling in Money from Programmatic Ads." June 26, 2023. https://www.technologyreview.com/2023/06/26/1075504/junk-websites-filled-with-ai-generated-text-are-pulling-in-money-from-programmatic-ads/

Said, Nadia, Andreea E. Potinteu, Irina Brich, Jürgen Buder, Hanna Schumm, and Markus Huff. 2023. "An Artificial Intelligence Perspective: How Knowledge and Confidence Shape Risk and Benefit Perception." *Computers in Human Behavior* 149 (December): 107855. https://doi.org/10.1016/j.chb.2023.107855

Schepman, Astrid, and Paul Rodway. 2023. "The General Attitudes towards Artificial Intelligence Scale (GAAIS): Confirmatory Validation and Associations with Personality, Corporate Distrust, and General Trust." *International Journal of Human–Computer Interaction* 39 (13): 2724–2741. https://doi.org/10.1080/10447318.2022.2085400

Shelby, Renee, Shalaleh Rismani, Kathryn Henne, AJung Moon, Negar Rostamzadeh, Paul Nicholas, N'Mah Yilla, et al. 2023. "Sociotechnical Harms of Algorithmic Systems: Scoping a Taxonomy for Harm Reduction." arXiv. http://arxiv.org/abs/2210.05791. https://doi.org/10.1145/3600211.3604673

Simon, Felix. 2024. "Artificial Intelligence in the News: How AI Retools, Rationalizes, and Reshapes Journalism and the Public Arena." Tow Center for Digital Journalism, Columbia University.

Sun, Mengru, Wencai Hu, and Yun Wu. 2022. "Public Perceptions and Attitudes Towards the Application of Artificial Intelligence in Journalism: From a China-Based Survey." *Journalism Practice* 18 (3): 548–570. https://doi.org/10.1080/17512786.2022.2055621

Sundar, S. Shyam, and Jinyoung Kim. 2019. "Machine Heuristic: When We Trust Computers More than Humans with Our Personal Information." In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 1–9. Glasgow, Scotland, UK: ACM.

Sundar, S. Shyam, and Mengqi Liao. 2023. "Calling BS on ChatGPT: Reflections on AI as a Communication Source." *Journalism & Communication Monographs* 25 (2): 165–180. https://doi.org/10.1177/15226379231167135

Tandoc, Edson C., Jr., Lim Jia Yao, and Shangyuan Wu. 2020. "Man vs. Machine? The Impact of Algorithm Authorship on News Credibility." *Digital Journalism* 8 (4): 548–562. https://doi.org/10.1080/21670811.2020.1762102

Volek, Jaromír. 2023. "Between Benefits and Threats of the Algorithmic News Personalization." *Observatorio (OBS*)* 17(1).

Wach, Krzysztof, Cong Doanh Duong, Joanna Ejdys, Rūta Kazlauskaitė, Pawel Korzynski, Grzegorz Mazurek, Joanna Paliszkiewicz, and Ewa Ziemba. 2023. "The Dark Side of Generative Artificial Intelligence: A Critical Analysis of Controversies and Risks of ChatGPT." *Entrepreneurial Business and Economics Review* 11 (2): 7–30. https://doi.org/10.15678/EBER.2023.110201

Weisz, Justin D., Michael Muller, Jessica He, and Stephanie Houde. 2023. "Toward General Design Principles for Generative AI Applications." arXiv. http://arxiv.org/abs/2301.05578

Wölker, Anja, and Thomas E. Powell. 2021. "Algorithms in the Newsroom? News Readers' Perceived Credibility and Selection of Automated Journalism." *Journalism* 22 (1): 86–103. https://doi.org/10.1177/1464884918757072

Zhou, Yuwei, Yichuan Shi, Wei Lu, and Fang Wan. 2022. "Did Artificial Intelligence Invade Humans? The Study on the Mechanism of Patients' Willingness to Accept Artificial Intelligence Medical Care: From the Perspective of Intergroup Threat Theory." *Frontiers in Psychology* 13 (May): 866124. https://doi.org/10.3389/fpsyg.2022.866124

Appendix A

Table A1. OLS regression on AI benefits connected to trust.

Benefits AI in journalism	*B* (SE)	*t*-Values	95% CI
Trust in AI	0.66*** (0.01)	38.03	[0.63, 0.70]
Age	−0.00*** (0.00)	−3.62	[−0.01, 0.00]
Gender	−0.03 (0.04)	−0.84	[−0.13, 0.05]
Education	0.04**(0.01)	3.12	[0.02, 0.07]
Trust in actors	0.19*** (0.03)	5.70	[0.13, 0.26]
Trust in news on social media	−0.01 (0.02)	−0.38	[−0.07, 0.05]
Constant	1.04*** (0.19)	5.43	[0.67, 1.42]
N	1477		
Adjusted R^2	0.63		

*Note:*p, **p, ***p < 0.01.

Table A2. OLS regression on AI benefits connected to credibility.

Benefits AI in journalism	*B* (SE)	*t*-Values	95% CI
Credibility in AI	0.50*** (0.02)	21.10	[0.45, 0.54]
Age	−0.01*** (0.00)	−7.30	[−0.02, −0.01]
Gender	−0.12* (0.06)	−2.08	[−0.23, −0.01]
Education	0.01 (0.01)	0.39	[−0.03, 0.04]
Trust in actors	0.16*** (0.04)	3.73	[0.08, 0.25]
Trust in news on social media	0.25*** (0.03)	7.52	[0.19, 0.32]
Constant	1.41*** (0.23)	5.94	[0.94, 1.88]
N	1477		
Adjusted R^2	0.44		

Note: *p, **p, ***p < 0.01.

Appendix B

Scale for Trust

Please indicate to what extent you agree or disagree with the following statements (1 = totally disagree to 7= completely agree).

- I trust news that is produced by AI
- I trust journalists who use AI

Scale for Credibility

Please indicate to what extent you agree or disagree with the following statements (1 = totally disagree to 7= completely agree).

- I think news articles written by AI and a human journalist together are credible
- I think news articles written by a human journalist are credible

Scale for Acts of Resistance

Please indicate to what extent you agree or disagree with the following statements. (1 = totally disagree to 7= completely agree)

- I would not be willing to pay for news that is produced by AI
- I would stop reading a certain newspaper if I knew they use AI to write their articles
- I would subscribe to a news outlet which does not use AI
- I would not share news that is created by AI
- I would not be willing to share personal data to receive personalized news created by AI

Scale for Risk Perceptions Generative AI

Please indicate to what extent you agree or disagree with the following statements about generative AI. (1 = completely disagree; 7= completely agree)

- Generative AI is abused to create mis- and disinformation (manipulated content)
- It is unfair that generative AI is trained on content that belongs to others, even if it is publicly available online
- Because of the emergent capabilities of generative AI, developers are losing control over it
- Generative AI poses a risk to privacy because of the data it's trained on
- Generative AI can be used to make people think that they interact with a human
- It is dangerous if everyone, including non-experts, has access to generative AI tools

Scale for Benefits of AI in Journalism

We would like you to think about the application of artificial intelligence in journalism. Please indicate to what extent you agree or disagree with the following statements (1 = totally disagree to 7= completely agree)

- AI could improve the *accuracy* of the news content
- AI could improve the *objectivity* of news content

- AI could make the news content more *interesting*
- AI could improve the *authenticity* of the news content
- AI could *debunk* the false news and rumors
- AI could provide me with more *personally relevant* news content

Scale for Perceived Knowledge of AI in Journalism

AI is used in many different contexts, also in journalism. Next, we would like to know more about what you know about the use of AI in journalism (1 = totally disagree to 7= completely agree).

- I know how the AI is applied in the journalism and media
- I understand the basic logic for the application of AI in the journalism and media
- I know the main way for the application of AI in the journalism and media
- I already encountered AI in journalism and media
- I can enumerate some ways in which the media use AI.

Appendix C. Correlation plot