

Transparency of datafied journalism: Finnish news users' response profiles to an interventionist audience study

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ABSTRACT

The rise of opaque algorithmic systems presents new challenges for journalism, particularly regarding transparency. This includes not only openness about journalistic processes but also about how technologies, like front-page personalisation and audience metrics, shape news production and consumption. Yet, news users' views on these systems remain underexplored. In this study, I investigate how active Finnish news users respond to features of datafied journalism, especially the use of user data. Using a qualitative longitudinal interventionist approach, I engaged 21 participants in quizzes, group interviews, and chat discussions. After 1.5 years, 18 were re-interviewed to reflect on their earlier participation. Inductive analysis revealed varied reactions to the initial information, differing transparency assessments, and changes in engagement with datafied journalism. Three user response profiles emerged: opt-outs, compliants, and vigilants. These profiles offer insight into how understanding datafied journalism influences users' perceptions and news consumption.

KEYWORDS: transparency, datafied journalism, news user, user profiles, interventionism

Introduction

News professionals have expressed a wide and growing interest in their audiences over the last few decades (Costera Meijer, 2020). One of the most prominent indicators of this interest is the use of audience metrics as an everyday practice in newsrooms. News workers are constantly monitoring the articles on which users click and the time it takes to read them. Using this information, journalists determine what kinds of topics or headlines attract online readers. The use of metrics has a significant impact on newsroom practices and production, such as story selection, volume, and rhythm of publishing, as well as the formats and styles of news products (Fürst, 2020). Metrics have brought a cultural and material shift in the field, changing not only news organisations but also the economics and consumption of journalism (Carlson, 2018). Many news organisations describe themselves as “data-driven”, or at least data-informed, suggesting that newsroom management is being heavily informed by (audience) data and impacting individual journalists, work processes, and news products, as well as audiences and their news consumption (Ahva et al., 2024). In addition, the dissemination of news is managed by recommendation and personalisation algorithms, with several news sites employing them to suggest articles or arrange front-page story listings based on users’ past news consumption (Rydenfelt et al., 2022).

Although journalism scholars acknowledge the broad implications of audience data utilisation on journalism and its consumption, the scholarly work on this topic has remained remarkably industry-focused (see Swart et al., 2022). News users’ perspectives on the issue have mainly been studied in relation to personalisation, such as by examining users’ attitudes towards editorial and algorithmic story selection (Thurman et al., 2018), or their reflections and experiences on recommender systems, such as their perceptions of transparency (Mitova et al., 2023) and user control in recommender systems (Storms et al., 2022). Lately, the focus has turned to the users’ experiences and evaluations of AI-driven news recommender systems, such as the role of their own engagement in content recommendations (Einarsson et al., 2025) or how explanations can enhance people’s trust in recommendations (Shin, 2021). Studies have also examined audience perspectives on the datafication of journalism through the lens of trust (Ehrlén et al., 2023), tactics of how people engage and make sense of datafied journalism to which their data contributes (Ovaska, 2024), and folk theories – that is, understandings about the reasoning for and implications of audience data utilisation in journalism (Ovaska, 2025). However, the transparency of journalistic user data practices and the longer-term effects resulting from becoming more aware of those practices have remained less empirically studied.

While news organisations highlight the importance of transparency in their actions, the lack of studies concerning user awareness about these practices is striking. Some scholars have questioned whether users know that data about their news consumption is collected in such detail in the first place, not to mention its implications for the journalism they consume (Heikkilä, 2022; Tandoc, 2019). This issue evokes questions about the realisation of media accountability, that is,

the ethical obligation and efforts of journalism to be transparent about the issues related to the production of journalism. The transparency of datafied journalism is a question not only of whether news outlets are open about their journalistic practices with the public, but also about whether news users understand its (data's) role in the production of contemporary journalism – and what happens when they do.

In this article, I investigate the transparency of journalism at the age of datafication. In particular, I focus on studying news users' reflections on the role of audience data in datafied journalism, for instance, reflections on audience analytics and personalised front pages which run using user data.

The empirical findings are based on qualitative longitudinal interventionist audience research on active Finnish news users. Participants were initially introduced to various aspects of datafied journalism through a quiz survey, group interviews, and instant messaging group chats to guide them to reflect on their own engagement and sensemaking. In my previous studies based on these interviews, I noted that, for instance, participants had varying tactics, from permissive to resistant, depending on the context and the target (Ovaska, 2024). Moreover, participants believed that news organisations' user data utilisation is heavily commercially motivated (Ovaska, 2025), but many of the features of how user data is being deployed in newsrooms were new to them. To further examine their reflections on their introduction to datafied journalism, participants were re-interviewed individually after 1.5 years. The empirical analysis in this article presents the findings of the inductive analysis of the follow-up interviews. These interviews revealed that, in the long run, the participants responded differently from their initial research participation and reflected differently on the transparency of datafied journalism and the research's influence on their engagement with datafied journalism. Based on these observations, three response profiles were detected: opt-outs, compliants, and vigilants.

These findings contribute to the field of studies concerning news users' relation to the datafication of journalism by studying it through the lens of transparency and in a longitudinal research setting. Moreover, the study offers a methodological contribution to the field of transparency studies by introducing the longitudinal interventionist research approach.

Transparency in journalism

Alongside other fields in society, journalism has also started to highlight the importance of transparency in recent decades (Koliska, 2021). Often, transparency means general "openness" (Karlsson, 2021; Koliska, 2021), which aims to increase the public's understanding and knowledge of an issue at hand (Rydenfelt et al., 2021: 17).

Transparency can be understood as an ethical norm and as a practice (Koliska, 2021). As an ethical norm, transparency links closely with journalism's democratic purpose. When citizens rely on the information journalists provide, journalists have an obligation to bolster their trust in the information, and transparency

can be considered a tool for this purpose (Heim & Craft, 2020: 309). Thus, transparency relates to the question of media accountability, and it has been promoted as a way for journalists to show their ethical accountability to the public and convince the audience that they produce relevant, credible, and high-quality information for public discussion (Domingo & Heikkilä, 2012). Researchers agree that journalists should be open about the journalistic process, so the audience understands how the news is made (see Domingo & Heikkilä, 2012; Karlsson, 2021; Koliska, 2021). To enhance accountability, journalists should be 1) open about the journalistic production process, for example, the editorial process; 2) responsive, for instance, being open to feedback and willing to discuss publicly their outputs; and 3) transparent about the actors involved in journalism production, such as who the journalists are and whom they work for, including the media owners (Domingo & Heikkilä, 2012).

The implementation of transparency has created practices to provide information on how news is made, such as by adding information about the author (e.g., byline, biographical details, and contact information) or the journalistic process (e.g., hyperlinks, explanations, and corrections), to disclose the journalistic fact-finding process (Koliska, 2021). However, Koliska (2021) noted that transparency should always be justified: Instead of focusing on the quantity of the disclosed information, the emphasis should be on how the information is represented and how it aims to build “long-lasting and trustworthy relationships with the public”.

Both practitioners and scholars have expressed high hopes for transparency, its positive effects on journalism, and its relationship with the public. In the age of mistrust and fake news, many authors have argued that if journalists are more transparent about their practices, the audience’s misbeliefs and doubts about journalism could be reduced (Karlsson, 2021), which would help to legitimise journalists’ actions (Karlsson, 2010). Some scholars have stated that greater transparency would increase the credibility of news and, therefore, enhance users’ trust in it (Curry & Stroud, 2019). Journalists also understand the significance of transparency. For instance, in Germany, transparency was mentioned as one of the key factors enabling journalists’ trust-building, especially during the Covid-19 pandemic (Uth, 2022).

Nevertheless, scholars have criticised that when pursuing greater transparency, journalists often rely on the help of technical features instead of clearly communicating their practices (Chadha & Koliska, 2015). Such features include linking original documents for the story or using an automated “updated” status without clearly disclosing how the story was edited (Chadha & Koliska, 2015). Despite their popularity, such transparency features are limited in making the journalistic process more transparent for readers or helping users to better understand the journalistic process (Koliska, 2021; Haapanen, 2022).

As the pursuit of greater transparency has become more popular in news media and is often justified by its expected positive effects on users’ evaluation of journalism, scholars have conducted several audience studies to explore the effects of greater transparency. In studying audience perceptions about news

credibility and the role of transparency, studies found mixed results: Some authors concluded that greater transparency increases the credibility of the news from an audience perspective (Curry & Stroud, 2019, 2021), while others found no such effect (Karlsson et al., 2014). Some researchers even stated that non-transparent articles could be evaluated as more credible than those with transparency features, for instance, if a story included a statement about a journalist's personal information about their diet and citizen activity or if it only stated their professional status (Tandoc & Thomas, 2017). Furthermore, studies on the relation between transparency and trust have shown that transparency features might not necessarily increase people's trust in news (Koliska, 2022). However, Fisher and colleagues (2021) noted that the lack of transparency was a crucial factor in promoting low trust. Nevertheless, users can struggle to recognise transparency features (Koliska, 2022), be uninterested in transparency (Karlsson & Clerwall, 2018), and may rarely engage with transparency features (Curry & Stroud, 2019). However, these findings signal that journalists are selective about transparency, choosing to offer technical features rather than meaningful disclosure to the public about the journalistic process that would enhance their accountability.

New opacities in digital journalism

Along with the discussions of greater transparency, in recent decades, new algorithmic systems have started to play a significant role in the production of journalism. Audience metrics, content personalisation and recommendation, automation, and the latest AI-based systems are increasingly employed in the field and are heavily influencing the production, distribution, and consumption of journalism. They also bring new challenges to promoting transparency in journalism. The question arises as to how news organisations should open the functions of new audience-data-driven technologies to be accountable to the public.

Algorithmic systems are widely known to be opaque. Their core functions and rules, or “black box”, are often invisible and difficult for users to understand (Ananny & Crawford, 2018). Furthermore, their opaque nature persists in the context of journalism (Diakopoulos & Koliska, 2017). Studies concerning the opacities of algorithmic systems in news media have discussed their functions, such as how they operate in automated news production and news curation (Diakopoulos & Koliska, 2017), front-page personalisation (Rydenfelt et al., 2022), recommender systems (see, e.g., Mitova et al., 2023), and, lately, how AI technologies transform journalism (e.g., Arguedas, 2024; Simon, 2024). Audience metrics also have obscurities. News users can be unaware of what personal information is collected by news organisations (Ovaska, 2025), and journalists can also have poor knowledge of data and its possibilities, at least according to data specialists (Ahva, 2025).

Studies on users' perspectives on the transparency of algorithmic systems in journalism have prominently focused on recommender systems. Similar to studies

on the transparency of journalism, Mitova and colleagues (2023) evaluated users' wishes for transparency in recommender systems through the lens of trust. They noted that desires for greater transparency were not influenced by respondents' general media trust; however, those who were more aware of and concerned about algorithms and data collection also expressed the need for greater transparency in recommender systems. Nevertheless, the overarching wishes were for news recommender systems to be transparent and for users to have control over their functions (Mitova et al., 2023).

In another study (Storms et al., 2022), news users linked control to transparency. According to Storms and colleagues, while users expressed frustration with not having control over news recommender systems, such as the ability to tune them, having control without transparency was not desired either, as it left room for uncertainty about how these systems work. Thus, news users may feel uneasy when having control (i.e., agency over these recommendations) without actually understanding the rules that shape them. In addition, in terms of US-based academics' and news professionals' attitudes towards algorithmic transparency in news production, participants wanted to know the type and quality of the data used; the model used to process the data, such as the source code; and the algorithmic inferences and how human actors influence them (Diakopoulos & Koliska, 2017). However, they questioned whether the general public would be interested in or understand the possible technical explanations (Diakopoulos & Koliska, 2017).

Recent studies have shown that news users have varying perspectives on the transparency of AI systems involved in journalism production. A study mapping UK-, US-, and Brazil-based news users' stances on AI found that most people wanted news outlets to disclose whether news was produced using AI (Arguedas, 2024). On the other hand, participants in a Danish study had varying attitudes about the need for transparency in AI-driven journalism – some said that it was irrelevant or context-dependent, while others considered it to be essential (Blom et al., 2025). Still, many people reflect negatively on AI-generated news, and news labelled as AI-generated is perceived as less trustworthy (Toff & Simon, 2025). One way to enhance trust and transparency could be using explanations (i.e., statements about why an AI system recommended a news story), which has been seen as a way to enhance news users' trust and accuracy assessments (Shin, 2021).

A key issue in increasing the transparency of algorithmic systems in journalism concerns doubts about whether people are interested in how algorithmic systems work or how news professionals struggle to explain their functions to the audience. For instance, Finnish news professionals questioned whether the public was interested in or aware of personalisation in news media, as they rarely received inquiries about those aspects (Rydenfelt et al., 2022). Furthermore, news organisations may struggle with being open about how, for instance, personalisation works, as a full technical explanation of the topic would be difficult to understand (Rydenfelt et al., 2022). Ananny and Crawford (2018) have also argued that the transparency of algorithms is insufficient if it only

enables seeing into the “black box” of an algorithmic system without offering factual knowledge about how these algorithms work or what sociocultural aspects play a role in their function. In recommendation or personalisation systems, addressing this issue could mean clarifying how news users’ behaviours impact their content exposure or how journalistic evaluation, not only algorithms, play a role in recommender systems.

Thus, to increase the transparency of datafied journalism, journalists should consider that transparency about the journalistic process requires being transparent about the technological features involved in the process to maintain accountability. In addition, rather than providing technological explanations, news organisations should untangle sociotechnological concerns and shifts, such as how journalists use audience data to support their decisions. The transparency of datafied journalism is threefold, encompassing questions about the transparency of the journalistic process, technological features, and the audience data involved in that process. On a societal level, studies have noted that greater transparency bolsters legitimacy and users’ trust in algorithmic systems in journalism (Hastuti et al., 2025), which further highlights its importance.

The literature presents a gap in studies, both regarding news users’ awareness of how news organisations utilise audience data (e.g., Heikkilä, 2022; Ovaska, 2025; Tandoc, 2019) and concerning how the lack of awareness influences news users’ engagement with the news. If transparency is seen as an ethical obligation (Heim & Craft, 2020), and audience data is an influential yet less-known factor influencing the journalistic process, it is crucial to examine what happens when active news users are introduced to the various ways in which their data is used in newsrooms. I therefore ask two questions:

1. How do news users assess the transparency of datafied journalism?
2. How do news users respond after being introduced to various journalistic audience-data practices?

Interventionist audience study as a method

When studying users’ understanding of these opaque issues, such as their perceptions of algorithms, Felaco (2024) explained that stimulating participants can be a useful research strategy for unpacking their reflections. A researcher can offer participants information and examples of the topic at hand, such as through visualisations (Taylor et al., 2023), cases (Diakopoulos & Koliska, 2017), or vignettes (Das et al., 2024), that prompt them to reflect on and share their experiences. Previous studies have reported that news professionals, at least, struggle to disclose how datafied journalism works (see, e.g., Diakopoulos & Koliska, 2017; Rydenfelt et al., 2021). Moreover, users can be unaware of how news organisations utilise their data (see, e.g., Tandoc, 2019; Heikkilä, 2022) and how algorithms influence their news exposure (Dogruel, 2021). To tackle these issues, I take methodological inspiration from studies employing a stimulus approach called an interventionist approach.

This article presents a longitudinal qualitative interventionist research approach developed to study news users' perceptions of datafied journalism. In an interventionist research approach, a researcher intervenes in participants' lives, asking them to join a research setting in which they are asked to do something they would not normally do. Additionally, participants are introduced to information and examples and asked to reflect on them. In this study, through the interventionist approach, I aimed to provide participants with a glimpse of information about datafied journalism to identify their evaluations of and experiences with it. Information and tasks were used as prompts to help participants notice features of datafied journalism and untangle their perceptions of and engagement with it when consuming news over a longer time. The study employed quiz surveys, focus group interviews, instant messaging group chats, and follow-up interviews as data collection methods.

The study was conducted in Finland, a Nordic country with 5.5 million inhabitants that is internationally known for its citizens' high trust in news (Reunanen, 2025). It was conducted with active users of the tabloid *Iltaalehti*, an extremely popular tabloid newspaper in Finland; almost half of all Finnish citizens read it weekly, even though Finns tend to trust *Iltaalehti* less (61% reported trusting *Iltaalehti*) than public broadcaster Yle (83%) or national newspaper *Helsingin Sanomat* (78%) (Reunanen, 2025). Beyond celebrity news, *Iltaalehti* covers criminal and political news; in recent years, it launched a "Plus" section for paywalled daily stories (Penttilä, 2024).

Participants were recruited via an online advertisement on *Iltaalehti*'s website. To participate in the study, readers were asked to complete a quick survey about their demographic background and willingness to engage in the study. Although almost 400 people expressed their willingness to participate, many – especially younger participants and people with lower education – declined to join the study when they were contacted again. 21 participants were chosen for the study. The participants' average age was 47 years; seven identified as men and the rest as women. Although the aim was to recruit diverse groups of participants as much as possible, participants with higher educational levels were overrepresented. Nevertheless, the participants represent an informative sample of active *Iltaalehti* readers.

The audience research was conducted in two phases (see Table 1 for the summary of methods), and participants gave their informed consent to participate in the study (according to the Finnish National Board on Research Integrity TENK, if the research project does not touch on sensitive personal information, informed consent is sufficient).

In the first research phase in March–April 2023, all 21 participants completed a quiz of true/false statements about datafication in general and news media more specifically. These statements covered topics including what a cookie is and whether journalists may lower a story's position on the front page if it does not gain enough reads. After completing the quiz, the participants were provided with the correct answers. The aim was to introduce them to the various ways in which news media use audience data.

Participants were then divided into five groups by age and asked to join focus groups via Zoom video calls. In the focus groups, the participants reflected collectively on the survey. To demonstrate how personalisation works, I showed the *Iltaalehti* front page in incognito mode and asked participants to compare their personal *Iltaalehti* front pages. Participants also discussed the list of the most popular articles published on *Iltaalehti*'s front page. The focus group interviews were conducted to allow participants to accumulate knowledge of the issue and further familiarise themselves with the research topic, other group members, and the researcher.

After the focus group interviews, the participants were asked to join an instant-messaging group chat for one week with the same group. Through these group chats, I gave participants daily tasks to pay attention to distinctive features of datafied journalism while consuming the news (including *Iltaalehti* and other sources) and share their encounters with the group. The tasks concerned news topic choices, visual and textual elements such as headlines, A/B-headline and picture testing, paywalls, and front-page personalisation. Based on previous studies (see, e.g., Fürst, 2020; Rydenfelt et al., 2022; Tandoc, 2019), these features were identified as central examples of how audience data are used by news organisations. The participants shared and collectively reflected on their encounters with these features. As the group chat moderator, I participated in the conversation by asking participants to elaborate when, for instance, they shared only a screenshot without a comment and provided further information when asked.

In this first research phase, participants reported employing varying tactics when engaging and making sense of datafied journalism (Ovaska, 2024), and they expressed significant uncertainty and unawareness about datafied journalism (Ovaska, 2025). Many of its features were new to them, but the most prominent were headline testing and front-page personalisation. Although the initial aim was to prompt participants to pay attention to and reflect on the features of datafied journalism, the analysis of the first phase seemed to contribute to the transparency of journalism. Thus, participants were asked for their willingness to participate in a follow-up interview to further examine the long-term influence of the first research phase on their perceptions of and relation to the news. In the follow-up interview, I asked whether they had noted changes in their engagement with or sensemaking of news compared to what they had reported in the first research phase (see Ovaska, 2024, 2025 for findings reported based on the first research phase).

In this second phase, 18 out of the original 21 participants took part in the individual follow-up interviews, which were conducted in the autumn of 2024, 1.5 years after the first research phase. In these interviews, the aim was to further explore participants' evaluations of the transparency or lack thereof of datafied journalism. This data involved their reflections on whether they had noted any changes in their news engagement and if they had connected the possible changes to their initial participation in the study in any way. Individual interviews were conducted to lower the participants' threshold to evaluate their uncertainties, which can be more challenging in a group setting.

Table 1 Summary of the methods

Research phase	Date	Participants ^a	Method	Topics	Dataset
Phase 1	March–April 2023	N = 21 (split into five groups, two to six participants per group)	Quiz survey	True/false statements about datafication in general and in news media with correct answers and explanations (used only as supplementary material)	21 survey responses
		Age ranges of the groups:	Focus group interviews	Reflections about 1) the quiz survey, 2) the list of most-read articles, and 3) the front-page personalisation algorithm	492 minutes (average 99 minutes per group)
		G1: 24–34			
		G2: 42–54			
		G3: 50–64	Instant messaging group chats	Topics of the tasks: topic choices, textual and visual elements, A/B headline and picture testing, front page personalisation, paywalls	421 messages (average 84 messages per group)
Phase 2	September–November 2024	N = 18	Individual follow-up interviews ^b	1. Experiences in the first phase of research	
				2. Changes in journalism consumption and perceptions of news media	944 minutes (average 52)
				3. Experience of (un) awareness	

Comments: ^aThe participants are referred to by pseudonyms to protect their identities, following their original group number to detect their age group. ^bWith the participants’ consent, individual interviews were transcribed automatically with a secure Subtitle Edit program and inspected by a human to ensure the quality of transcriptions.

The findings of this study, as reported in this article, are based on the second research phase. User profiles have been used both in academia and elsewhere to illustrate and differentiate audience segments based on, for example, their news repertoires (Castro et al., 2022); perceptions and stances (Noppari et al., 2019); or motivations, self-perceptions, and behaviour (Picone et al., 2016). Here, profiles are understood as reasonably stable ways of making sense of and engaging with a given issue, which enables distinguishing participants into different categories.

The findings are based on an inductive thematic analysis, which was conducted in several steps (Braun & Clarke, 2006). The analysis started with reviewing the interview data of the responses to the individual follow-up interviews, supported by observations from the first research phase. This method enabled note-taking

of initial ideas. The preliminary notion was that participants would 1) reflect on the unfamiliar features of datafied journalism and 2) report whether they noted any changes in their evaluations of or engagement with news, such as how they consumed news or how trustworthy or credible they found news organisations. These ideas were formed as the two initial codes, which guided the search for potential themes. This search revealed that the participants reflected differently on their engagement with news and changes in their use; furthermore, their transparency assessment had varying targets: Some participants discussed more technological features, some focused on journalism, and some on how algorithms are embedded in journalism. This variance led to the idea of distinct profiles, or themes. Here, the profiles were constructed based on the observation that the factors distinguishing the participants were 1) the change of awareness they experienced resulting from the first research phase and 2) their self-observed changes in their news consumption habits. The analysis continued to refine the specifics of each profile and was based on the participants' reflections regarding change, which were not quantitatively measured. Based on these observations, three response profiles were detected: opt-outs, compliants, and vigilants. The response profiles offered information about how participants responded to the information provided in the first research phase and how it influenced their news engagement. The characteristics of each profile are illustrated in the findings section via examples and citations.

Findings: Three response profiles

When the participants were interviewed for the first time March–April 2023, all of them were generally aware of user data collection in and outside news media. However, some participants were surprised by the precision and detail of user data utilisation in news media, such as in topic and headline decisions. Moreover, participants often experienced features of datafied journalism as opaque; they were unfamiliar with its various features. In particular, front-page personalisation (arranging story listings based on the user's past news consumption) and A/B-headline testing (publishing a story with several headlines and using the most-clicked headline as the final) were new to all the participants.

Therefore, the second research phase aimed to investigate, via follow-up interviews, what happens when people are introduced and asked to pay focused attention to datafied journalism, especially after observing some of its features as opaque. The inductive analysis of the follow-up interviews suggests that the participants had different responses to the glimpses of information the first research phase offered them: Some reported meaningful learning experiences about how audience data is used in journalism, while others perceived it as reaffirming their previous beliefs about how journalism works or how news organisations utilise data and algorithms in their work. Furthermore, some participants discussed more technological features, some focused on journalism, and some on how algorithms are embedded in journalism. Nevertheless, participants reported taking different stances on datafied journalism after the

first research period. For some, engagement with datafied journalism had not changed, while others reported reduced news consumption, which they attributed to their initial research participation. From these observations, three response profiles were identified.

Opt-outs

Opt-outs were one of the most prominent response profiles. A key characteristic of this profile was the participants' experience of learning meaningful new information on how news organisations utilise audience data in the first research phase, which led them to change their engagement with datafied journalism by opting out.

In the follow-up interviews, participants within this profile gained a lot of new information on how datafied journalism works. The first research participation changed their understanding of how audience data was used in news organisations: News production was more "strategic" (Julia, G2) and "industrialised" (Kaisa, G2) than they had previously presumed. Some reflected that learning about the issue was not a "eureka" moment (Elli, G1); rather, it "illuminated the logic" of news media's functions and usage of audience data (Arttu, G2). Nevertheless, even in the follow-up interviews, many participants found datafied journalism opaque. They hesitated to report whether they were still uninformed of some crucial features that played a role in news production or influenced their news consumption and if their current awareness was sufficient:

Then [after the first research phase] I was like, is there something else that they have not told me yet? And is there some other stuff that they are doing... [...] I am sure that I don't know everything, and I never will. (Julia, G2)

I am very sceptical about these issues [...]. I do not know whether I know enough. I do know how data is used and what my rights to privacy are when I read media, such as does someone record that for some purpose or that someone from my IP address clicked something. The less I know, the more suspicious I am. (Elli, G1)

These notions signal that participants were interested in transparency of datafied journalism and it was important to them, which challenges the findings of previous studies about users' uninterested attitude (cf. Diakopoulos & Koliska, 2017; Karlsson & Clerwall, 2018; Rydenfelt et al., 2022). However, becoming more aware of the way that news organisations use audience data did not strengthen participants' engagement with journalism. In the follow-up interviews, participants reported "opting out" from journalism, meaning that they reduced their news consumption. They had started to read fewer news articles, blocked news notifications on their smartphones, and avoided clicking on clickbait headlines. Although none of the participants stopped consuming news altogether, many reported reducing or ending their engagement with certain news outlets, such as tabloids. The result was contrary to the expectation that transparency would increase audience engagement with journalism.

Opting out was reported to originate in the first research phase, wherein the participants gained information about the principles of datafied journalism and paid focused attention to news content they encountered and their own use of news. Many participants realised that a large amount of news supply aimed to capture readers' attention without any specific journalistic justification, which led them to opt out.

Reflecting on the decision-making process leading to opting out, Pirjo (G2) said that after becoming more "aware of the fact that they [news outlets] try to influence [her]", she realised that she could "choose" not to consume news or, at least, read the news less. Participants experienced that news organisations use algorithms to manage and control their media habits and use of time, a finding also identified by Ahva and colleagues (2024). Minna (G3) had a similar reflection. The realisation that she was the target of optimisation evoked resistance in her:

Somehow, I do not want to be [a] part of that, like I want to choose for myself what I [click] open. I don't want to bite everything.

Anni (G4) used the same wording, not wanting to be a "part of that". These participants reported gaining more awareness of digital attention logic and realising that news outlets are not immune to it (see also Ovaska, 2025). They also reported that the first research phase altered their views on how data-driven journalism has developed; in other words, the first research phase increased the transparency of datafied journalism. For these participants, the information from the first research phase was meaningful, and they identified a connection between the information they learnt and changes in their news consumption.

Thus, this finding indicates not only that participants' increasing awareness of the principles of datafied journalism increased their usage of resistive tactics (e.g., Ovaska, 2024) but also that the increased transparency or awareness did not strengthen participants' relationship with news, as seen through their trust or credibility evaluation (see also Curry & Stroud, 2019; Tandoc & Thomas, 2017). These participants valued transparency, but the resulting awareness induced a critical response.

Compliants

Although participants gained greater awareness of datafied journalism in the first research phase, it did not necessarily lead to changes in their news engagement. Compliants were the least popular profile. Participants reported that the first interview phase did not significantly alter their perceptions about news outlets or the production of journalism. When learning that news organisations use user data similarly to any other organisation, the participants' attitude in this profile was more compliant than those in the opt-out profile: They did not see that user data utilisation significantly changed how journalism operates. Thus, these participants did not change their engagement with the news.

Compliants had neutral or positive attitudes towards the use of user data by news organisations. For instance, Anja (G5) said, "There is nothing bad in it":

It is just a good thing that people get what they want. It would not make any sense that a paper just publishes what journalists want. Then [without collecting user data] they would not get any feedback on what people really want to read. (Anja, G5)

Moreover, Anja reflected positively on learning how news organisations employ user data: The use of data was not as extensive as she had anticipated, and she trusted that news organisations use it appropriately. Although not all participants in this profile were as positive as Anja, they approved of data collection in general and of how user data is used in news media. Kukka (G1) said that user data utilisation was “natural”, although the level of precision and detail surprised her. Samu (G1) also considered it “normal” for news organisations to collect user data and stated that not knowing how organisations are using his data was “business as usual”. These participants did not expect news organisations to be more transparent than other organisations.

These participants had an understanding attitude towards user data utilisation, and they did not report any changes in their news consumption habits, which distinguished them from doubtful opt-outs. They positively decoded the features of datafied journalism (Lomborg & Kapsch, 2020; Ovaska, 2024), which explains their relaxed relation with the issue. User-data utilisation did not provoke strong feelings in them. This profile aligns with previous findings of other studies showing that people are not passionate about transparency (see Diakopoulos & Koliska, 2017; Karlsson & Clerwall, 2018; Rydenfelt et al., 2022), especially if they approve of the issues that efforts of transparency has revealed. However, it did not significantly strengthen or weaken their relation to journalism, which brings into question the real impact of transparency on audiences’ relation to journalism.

Vigilants

The third profile, vigilants, was another prominent profile. The characteristic experience for the participants in this profile was that the first research phase did not offer them meaningful new information on how journalism works. These participants employed resistive tactics in the first research phase, such as avoiding clicking and curating the news in unconventional ways (see Ovaska, 2024). As they had already reflected on and monitored their engagement with datafied journalism before the first research phase, they did not find it necessary to alter their engagement with news media.

The participants in this profile stated that they were already familiar with user-data utilisation in news media before the first phase of the study. In the follow-up interviews, their reflections focused mainly on whether learning about new technologies in the journalistic process changed their views on how journalism works. Compared to the participants in the other two profiles, who had gained new perspectives or meaningful information, the research intervention only assured vigilants that their presumptions, such as how metrics or algorithms are used in news media, were correct:

The picture and headline testing practices were only new for me. The others I knew. And that was more “oh, okay, this I did not know”, but it did not really shake my world. (Janne, G2)

Even though these features were new for Janne and the other participants in this profile (all participants, regardless of profile, were unfamiliar with front-page personalisation and A/B-headline testing), learning about them only offered them further details of the operations of datafied journalism. These participants had already familiarised themselves with user-data utilisation and had paid attention to it in the media landscape, and they felt well-informed about the issue before and after the first interview phase. For these participants, datafied journalism did not appear as an opaque issue but rather as a technical assemblage that had many nuances.

Although some vigilants reported changes in their news consumption between research phases, they confirmed that these changes did not result from their initial research participation but were due to other reasons, such as concerns about well-being. Ilpo (G4) said that he was reading less news: “It is not good for you to sit down for many hours and just read the news”. These participants had a habit of monitoring their engagement with datafied journalism; they were prepared to make changes to it if necessary and disagreed that this behaviour was linked to their research participation in any way, unlike the opt-outs. Their reflections focused primarily on journalism and its operations, such as whether they were aware of how personalisation worked. In this sense, these participants were similar to the US-based academics and news professionals who had a curious rather than resistive attitude towards the transparency of algorithms and who were eager to know their technological features (Diakopoulos & Koliska, 2017). Transparency itself did not seem to affect their engagement with journalism.

Discussion and conclusion

In this study, I aimed to explore what happens when active news users are introduced to the distinctive features of datafied journalism and how news organisations utilise audience data. The findings suggest that although all participants experienced some extent of opacity regarding datafied journalism – for instance, encountering features such as front-page personalisation and A/B-headline testing for the first time – participants reflected differently on the transparency of datafied journalism. Some reported learning meaningful new information about how datafied journalism works. Others stated that even though they learnt something new about how audience data is used in news organisations, this knowledge did not challenge their pre-existing thoughts on how journalism works. Some participants discussed their awareness of specific technological systems that news organisations employ. Moreover, the analysis showed the participants had different responses to the information that the first research phase offered, sometimes resulting in changes to their engagement with journalism. Despite the simplification and typification of participants’ responses,

these profiles showed that users may have varying reflections on transparency, and increased awareness of news organisations' datafied operations can lead to different responses among participants.

The participants profiled as opt-outs still lacked a comprehensive picture of datafied journalism, which news organisations have not yet provided. Their response to the learning experience was opting out, which shows that greater awareness does not always strengthen news users' relationship with journalism: On the contrary, it can distance them from news. This finding poses a challenge for news organisations that wish to strengthen their users' trust and utilise audience data at the same time. Although opting out and news avoidance have become more common in recent years, participants still connected the change to their participation in the first research phase. In this longitudinal research setting, the resistance that appeared in the first research phase was no longer shimmering (see also Ovaska, 2024) but fully realised: Compared to the findings of the first research phase, participants seemed to employ more resistive tactics than before. On the one hand, these findings not only show the importance of studying greater transparency and its possible influence but also do so in a temporally extensive way to reveal longer-term implications. On the other hand, this study opens up discussions in the field of audience studies to acknowledge and further explore transparency beyond trust and credibility assessments.

Moreover, these profiles showed that introducing participants to the principles of datafied journalism does not necessarily result in opting out, but it can have no influence on news engagement at all or can even evoke positive reflections. For instance, participants profiled as compliants did not change their news engagement, even when they experienced learning outcomes about how audience data is used in news organisations. Nevertheless, this finding did not alter their understanding of how journalism works. An explanation for this observation is the lack of interest in the issue (see also Diakopoulos & Koliska, 2017; Rydenfelt et al., 2022) and contentment: Journalism continued to work as these participants had expected. Vigilants, however, had already taken a critical stance on datafied journalism, and their participation in the research did not alter their views on how news organisations use user data and algorithms. Thus, their responses signalled preparedness for the issue.

Therefore, users had varying responses to and reflections on the research questions (How do news users assess the transparency of datafied journalism? How do news users respond after being introduced to various journalistic audience-data practices?). Differing reflections of transparency showed that datafied journalism includes many features that need to be and could be disclosed, such as the journalistic process itself, technology, and also the entanglement of the two. Likewise, participants in different profiles tended to discuss different aspects of datafied journalism, such as journalism, technology, and the entanglement of technology and journalism in datafied journalism. As a result, this study recorded varying responses. Participants reported both continuity and changes in the ways they engaged with journalism and differing reflections on the learning outcomes of the first phase of the study. To sum up, this article contributes to

the field of studies concerning audience relations to datafied journalism and its transparency and offers a methodological contribution to the field of transparency in two distinct ways.

First, opacity regarding datafied journalism is a question of accountability. As the commonly used features of datafied journalism were unknown to active news users, it is evident that news organisations have not actively revealed their user-data-related practices to their audiences. This finding questions the legitimisation of these practices. Although user data has been widely employed in newsrooms, and news organisations pride themselves on becoming “data-led” or, at least, “data-informed” – meaning that audience data is actively used in newsroom management (Ahva et al., 2024) – this information has not been openly communicated to audiences. News users’ lack of awareness that they contribute to datafied journalism, and resistance to it after learning about it, undermines the legitimisation of these actions. Furthermore, it creates a dilemma for making these practices known: If enhancing transparency can result in resistance, it can limit news organisations’ willingness to be transparent. These issues present challenges to the demand for transparency that would help news organisations legitimise their actions and strengthen users’ relation to news (Karlsson, 2010, 2021). The transparency of datafied journalism also seems to remain contested in the field of journalism.

Second, by drawing inspiration from audience studies, this study provides a qualitative and temporally extensive methodological approach to the field, which often relies on singular and quantitative studies. The interventionist approach in this study helped participants reflect on their engagement with datafied journalism features and identify whether they already knew about them. Compared to quantitative studies, this study offered a more nuanced picture of users’ reflections on the transparency or its lack thereof. In addition, the collective setting of the first research phase enabled conversational discussion with the participants and researcher to grasp the opaque features of datafied journalism and participants’ collective sensemaking of them. Moreover, the individual follow-up interviews enabled the detection of participants’ reflections on the long-term influence of the first research phase (i.e., greater transparency). Thus, for the field of transparency studies, this research highlights the importance of studying the effects of enhanced transparency in a longitudinal and qualitative setting.

Third, this study questions the expected positive effects of transparency on news users’ relationship to journalism. Although this study did not examine trust or credibility assessments directly, the findings signal that increased transparency of newsroom operations does not always lead to positive reflections or have a tangible impact at all on users’ relationship with journalism. Nevertheless, special attention should be paid to participants in the opt-out profile, whose responses resulted from a sense of disappointment regarding how news outlets utilise audience data. Even if greater transparency will not change all news users’ relation to journalism, the current situation, where datafied journalism is experienced as opaque and learning about it results in users opting out, signals

that in greater transparency could be important. If news organisations were more transparent, offered the audience the reasoning for data utilisation beyond commercial reasons, and showed the societal benefits of such utilisation, audience responses may be more accepting.

These methodological decisions also had limitations. In this qualitative approach, the findings were based on the participants' self-reported reflections. Thus, the reported changes relating to their awareness and variations in news consumption could have differed depending on the participant: One could have experienced that their news consumption had not altered in any significant way, while another could have highlighted its significance. The change should, therefore, not be considered as a measured fact but as a self-reflection, which offers valuable and novel information on the reasons and sensemaking behind their experiences and decisions. Furthermore, some participants found it hard to reflect on whether the first interview phase altered their awareness or changed their news consumption habits. Consequently, this article does not present causal results but rather analyses and discussions of the participants' self-reflections about their changed behaviour.

As the study was based on a small-scale interventionist approach, the participants were not a representative sample of Finnish news users but an informative sample of eager news consumers who were introduced to the topic and asked to pay attention to datafied journalism and their own news consumption. Creating a "sensitised" group of news users complemented the study's understanding of transparency in journalism and news users' relation to datafied journalism. In addition, all participants were from Finland, a small Nordic country whose citizens have high trust in the news and society. Similar findings may also be found in other Nordic countries or other countries with high trust in news. In addition, previous studies have shown that neither the transparency of journalistic practices (Manninen, 2020) nor the functions of algorithms (Oeldorf-Hirsch et al., 2025) necessarily result in higher trust, but quite opposite, they can create distrust (Manninen, 2020) or criticism (Oeldorf-Hirsch et al., 2025), though not necessarily leading to opting out. Studies have shown that even though people can be critical of, for instance, social media platforms, the lack of trust does not result to reducing engagement with those platforms (e.g., Mathieu & Møller Hartley, 2021). Thus, when this study found that some people can opt out when learning how news organisations utilise audience data, it can signal that they perceive it easier to find alternative options to consume news even if they resist one outlet. So, compared to social media platforms, people have multiple news sites to choose from, at least in a Nordic context.

Future studies could further develop the understanding that the effects of transparency are not limited to trust credibility; studying transparency from the users' perspective could deepen the understanding of audience legitimacy assessments. While previous studies have found users' views on transparency to be complex, this study lays the foundation for examining news users' perceptions about the transparency of datafied journalism in other cultural contexts with different methodological settings.

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References

- Ahva, L. (2025). The positions of data-related peripheral actors in journalism practice. *International Journal of Communication*, 19, 1291–1310. <https://ijoc.org/index.php/ijoc/article/view/23371>
- Ahva, L., Salonen, M., Ovaska, L., & Talvitie-Lamberg, K. (2024). The managerial and future-oriented role of audience data in data-informed news organisations. *Journalism*, 27(1), 3–21. <https://doi.org/10.1177/14648849241285721>
- Ananny, M., & Crawford, K. (2018). Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability. *New Media & Society*, 20(3), 973–989. <https://doi.org/10.1177/1461444816676645>
- Arguedas, A. R. (2024). Public attitudes towards the use of AI in journalism. In N. Newman, R. Fletcher, C. T. Robertson, A. R. Arguedas, & R. K. Nielsen (Eds.), *Reuters Institute digital news report 2024* (pp. 39–43). Reuters Institute for the Study of Journalism, University of Oxford. <https://doi.org/10.60625/risj-vy6n-4v57>
- Blom, J. N., Heiselberg, L., van Dalen, A., & Andersen, I. (2025). “I think it’s exciting and frightening at the same time”: Audience sentiments toward the use and labeling of generative AI in journalism. *Journalism & Mass Communication Quarterly*. OnlineFirst. <https://doi.org/10.1177/10776990251385943>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Carlson, M. (2018). Confronting measurable journalism. *Digital Journalism*, 6(4), 406–417. <https://doi.org/10.1080/21670811.2018.1445003>
- Castro, L., Strömbäck, J., Esser, F., Van Aelst, P., de Vreese, C., Aalberg, T., Cardenal, A. S., Corbu, N., Hopmann, D. N. Koc-Michalska K., Matthes, J., Schemer, C., Sheaffer, T., Splendore, S., Stanyer, J., Stępińska, A., Štětka, V., & Theocharis, Y. (2022). Navigating high-choice European political information environments: A comparative analysis of news user profiles and political knowledge. *The International Journal of Press/Politics*, 27(4), 827–859. <https://doi.org/10.1177/19401612211012572>
- Chadha, K., & Koliska, M. (2015). Newsrooms and transparency in the digital age. *Journalism Practice*, 9(2), 215–229. <https://doi.org/10.1080/17512786.2014.924737>
- Costera Meijer, I. (2020). Understanding the audience turn in journalism: From quality discourse to innovation discourse as anchoring practices 1995–2020. *Journalism Studies*, 21(16), 2326–2342. <https://doi.org/10.1080/1461670X.2020.1847681>
- Curry, A. L., & Stroud, N. J. (2019). The effects of journalistic transparency on credibility assessments and engagement intentions. *Journalism*, 22(4), 901–918. <https://doi.org/10.1177/1464884919850387>
- Curry, A. L., & Stroud, N. J. (2021). The effects of journalistic transparency on credibility assessments and engagement intentions. *Journalism*, 22(4), 901–918. <https://doi.org/10.1177/1464884919850387>
- Das, R., Wong, Y. N., Jones, R., & Jackson, P. J. (2024). How do we speak about algorithms and algorithmic media futures? Using vignettes and scenarios in a citizen council on data-driven media personalisation. *New Media & Society*, 27(7), 3931–3949. <https://doi.org/10.1177/14614448241232589>
- Diakopoulos, N., & Koliska, M. (2017). Algorithmic transparency in the news media. *Digital Journalism*, 5(7), 809–828. <https://doi.org/10.1080/21670811.2016.1208053>
- Dogruel, L. (2021). Folk theories of algorithmic operations during internet use: A mixed methods study. *The Information Society*, 37(5), 287–298. <https://doi.org/10.1080/01972243.2021.1949768>
- Domingo, D., & Heikkilä, H. (2012). Media accountability practices in online news media. In E. Siaperä, & A. Veglis (Eds.), *Handbook of global online journalism* (pp. 272–289). John Wiley & Sons. <https://doi.org/10.1002/9781118313978>

- Ehrlén, V., Talvitie-Lamberg, K., Salonen, M., Koivula, M., Villi, M., & Uskali, T. (2023). Confusing content, platforms, and data: Young adults and trust in news media. *Media and Communication*, 11(4), 320–331. <https://doi.org/10.17645/mac.v11i4.7104>
- Einarsson, Á. M., Petrucci, E., Möller Hartley, J., Lomborg, S., & Kruse, J. (2025). “I must have clicked on something” – Users’ experiences and evaluations of news recommender systems. *Journalism Practice*, 1–20. <https://doi.org/10.1080/17512786.2025.2572972>
- Felaco, C. (2024). Researching algorithm awareness: Methodological approaches to investigate how people perceive, know, and interact with algorithms. *Mathematical Population Studies*, 31(4), 267–288. <https://doi.org/10.1080/08898480.2024.2389779>
- Fisher, C., Flew, T., Park, S., Lee, J. Y., & Dulleck, U. (2021). Improving trust in news: Audience solutions. *Journalism Practice*, 15(10), 1497–1515. <https://doi.org/10.1080/17512786.2020.1787859>
- Fürst, S. (2020). In the service of good journalism and audience interests? How audience metrics affect news quality. *Media and Communication*, 8(3), 270–280. <https://doi.org/10.17645/mac.v8i3.3228>
- Haapanen, L. (2022). Problematising the restoration of trust through transparency: Focusing on quoting. *Journalism*, 23(4), 875–891. <https://doi.org/10.1177/1464884920934236>
- Hastuti, H., Maulana, H. F., Lawelai, H., & Suherman, A. (2025). Algorithmic influence and media legitimacy: A systematic review of social media’s impact on news production. *Frontiers in Communication*, 10, Article 1667471. <https://doi.org/10.3389/fcomm.2025.1667471>
- Heikkilä, H. (2022). Ethical pitfalls of audience metrics. In V. J. E. Manninen, M. K. Niemi, & A. Ridge-Newman (Eds.), *Futures of journalism: Technology-stimulated evolution in the audience–news media relationship* (pp. 113–125). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-95073-6_8
- Heim, K., & Craft, S. (2020). Transparency in journalism: Meanings, merits, and risks. In L. Wilkins, & C. G. Christians (Eds.), *The Routledge handbook of mass media ethics* (2nd ed.) (pp. 308–320). Routledge. <https://doi.org/10.4324/9781315545929>
- Karlsson, M. (2010). Rituals of transparency: Evaluating online news outlets’ uses of transparency rituals in the United States, United Kingdom, and Sweden. *Journalism Studies*, 11(4), 535–545. <https://doi.org/10.1080/14616701003638400>
- Karlsson, M. (2021). *Transparency and journalism: A critical appraisal of a disruptive norm*. Routledge. <https://doi.org/10.4324/9780429340642>
- Karlsson, M., & Clerwall, C. (2018). Transparency to the rescue? *Journalism Studies*, 19(13), 1923–1933. <https://doi.org/10.1080/1461670X.2018.1492882>
- Karlsson, M., Clerwall, C., & Nord, L. (2014). You ain’t seen nothing yet. *Journalism Studies*, 15(5), 668–678. <https://doi.org/10.1080/1461670X.2014.886837>
- Koliska, M. (2021). Transparency in journalism. In M. Powers (Ed.), *Oxford Research Encyclopedia of Communication* (Online ed.). Oxford Academic. <https://doi.org/10.1093/acrefore/9780190228613.013.883>
- Koliska, M. (2022). Trust and journalistic transparency online. *Journalism Studies*, 23(12), 1488–1509. <https://doi.org/10.1080/1461670X.2022.2102532>
- Lomborg, S., & Kapsch, P. H. (2020). Decoding algorithms. *Media, Culture & Society*, 42(5), 745–761. <https://doi.org/10.1177/0163443719855301>
- Manninen, V. J. E. (2020). If only they knew: Audience expectations and actual sourcing practices in online journalism. *Journalism Practice*, 14(4), 412–428. <https://doi.org/10.1080/17512786.2019.1625719>
- Mitova, E., Blassnig, S., Strikovic, E., Urman, A., de Vreese, C., & Esser, F. (2023). Exploring users’ desire for transparency and control in news recommender systems: A five-nation study. *Journalism*, 25(10), 2001–2021. <https://doi.org/10.1177/14648849231222099>
- Mathieu, D., & Möller Hartley, J. (2021). Low on trust, high on use: Datafied media, trust and everyday life. *Big Data & Society*, 8(2), 1–13. <https://doi.org/10.1177/20539517211059480>
- Noppari, E., Hiltunen, I., & Ahva, L. (2019). User profiles for populist counter-media websites in Finland. *Journal of Alternative & Community Media*, 4(1), 23–37. https://doi.org/10.1386/joacm_00041_1
- Oeldorf-Hirsch, A., Romann, L. R., Witkovich, I., & Chen, J. (2025). Exploring social media users’ experiences with algorithmic transparency cues. *New Media & Society*. OnlineFirst. <https://doi.org/10.1177/14614448251339493>
- Ovaska, L. (2024). From permissive to resistive tactics: How audience members engage with and make sense of datafied journalism. *Convergence*, 30(6), 2008–2024. <https://doi.org/10.1177/13548565241283434>

- Ovaska, L. (2025). 'It's all about money' – News users' folk theory of audience data utilisation in journalism. *Digital Journalism*, 1–19. <https://doi.org/10.1080/21670811.2025.2567342>
- Penttilä, P. (2024). Autonomy behind the paywall: Subscription-chasing and journalistic freedom at the level of practice. *Journalism Practice*, 20(3), 1092–1109. <https://doi.org/10.1080/17512786.2024.2389204>
- Picone, I., De Wolf, R., & Robijt, S. (2016). Who shares what with whom and why? News sharing profiles amongst Flemish news users. *Digital Journalism*, 4(7), 921–932. <https://doi.org/10.1080/21670811.2016.1168708>
- Reunanen, E. (2025). Finland. In N. Newman, A. R. Arguedas, C. T. Robertson, R. K. Nielsen, & R. Fletcher (Eds.), *Reuters institute digital news report 2025* (pp. 80–81). Reuters Institute for the Study of Journalism, University of Oxford. <https://doi.org/10.60625/risj-8qqf-jt36>
- Rydenfelt, H., Haapanen, L., & Lehtiniemi, T. (2021). Dataa näkyvissä: Läpinäkyvyys algoritmien ja datan journalistisessa hyödyntämisessä [Data in the spotlight: Transparency in the journalistic use of algorithms and data]. *Media & Viestintä*, 44(2), 1–22. <https://doi.org/10.23983/mv.109857>
- Rydenfelt, H., Haapanen, L., Haapoja, J., & Lehtiniemi, T. (2022). Personalisation in journalism: Ethical insights and blindspots in Finnish legacy media. *Journalism*, 25(2), 313–333. <https://doi.org/10.1177/14648849221138424>
- Shin, D. (2021). Why does explainability matter in news analytic systems? Proposing explainable analytic journalism. *Journalism Studies*, 22(8), 1047–1065. <https://doi.org/10.1080/1461670X.2021.1916984>
- Simon, F. (2024). Artificial intelligence in the news: How AI retools, rationalizes, and reshapes journalism and the public arena. Tow Center for Digital Journalism, Columbia University. https://www.cjr.org/tow_center_reports/artificial-intelligence-in-the-news.php
- Storms, E., Alvarado, O., & Monteiro-Krebs, L. (2022). “Transparency is meant for control” and vice versa: Learning from co-designing and evaluating algorithmic news recommenders. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW2), 1–24.
- Swart, J., Groot Kormelink, T., Costera Meijer, I., & Broersma, M. (2022). Advancing a radical audience turn in journalism: Fundamental dilemmas for journalism studies. *Digital Journalism*, 10(1), 8–22. <https://doi.org/10.1080/21670811.2021.2024764>
- Tandoc, E. Jr. (2019). *Analyzing analytics: Disrupting journalism one click at a time*. Routledge. <https://doi.org/10.4324/9781138496538>
- Tandoc, E. C., & Thomas, R. J. (2017). Readers value objectivity over transparency. *Newspaper Research Journal*, 38(1), 32–45. <https://doi.org/10.1177/0739532917698446>
- Taylor, M., Kennedy, H., & Oman, S. (2023). Challenging assumptions about the relationship between awareness of and attitudes to data uses amongst the UK public. *The Information Society*, 40(1), 32–53. <https://doi.org/10.1080/01972243.2023.2283729>
- Thurman, N., Moeller, J., Helberger, N., & Trilling, D. (2018). My friends, editors, algorithms, and I: Examining audience attitudes to news selection. *Digital Journalism*, 7(4), 447–469. <https://doi.org/10.1080/21670811.2018.1493936>
- Toff, B., & Simon, F. M. (2025). “Or they could just not use it?” The dilemma of AI disclosure for audience trust in news. *The International Journal of Press/Politics*, 30(4), 881–903. <https://doi.org/10.1177/19401612241308697>
- Uth, B. (2022). The quality oriented, the audience engagers, the transparent: Types of editorial trust-building in German news outlets. *Journalism*, 25(2), 391–408. <https://doi.org/10.1177/14648849221141522>