



## EDITORIAL

# Guest Editorial: AI and the news

In a time of rising populism and strategic disinformation, quality journalism has become more important than ever. Trusted and high-quality media outlets are needed to provide accurate information to the public in order to protect public safety and wellbeing while supporting the information needs of citizens in order to promote healthy liberal democracies. But quality journalism is also under pressure due to competition for attention from new information channels, declining trust in institutions, and dwindling resources to support the information needs of local communities while there are simultaneously new resource demands to mitigate the impacts of mis- and disinformation. Given this challenging context, how can Artificial Intelligence (AI) support the provision of quality information for society?

This special issue therefore examines how ongoing advances in AI, including Machine Learning (ML), and generative AI such as Large Language Models (LLMs), can be harnessed to support efficient production and distribution of high-quality news. It takes a broad outlook on the area, including articles that deal with uses and implications of AI in all stages of news production and dissemination, from gathering and analyzing information to creating, presenting, or recommending news content, while also dealing with an onslaught of mis- and disinformation in the broader online information ecosystem. It also discusses AI on different levels, from individual news production tasks, through organizational transformations and ramifications, to societal and economic conditions and consequences. A common red thread throughout the articles is that AI has great transformational potential, also in the media sector, but the factors driving and enabling such transformations are not only technological. Such factors also very much pertain to the broader organizational, infrastructure and economic context, and successful alignment of the different actors along the value chain, including media users.

The articles presented here offer an optimistic picture of how quality information and the media ecosystem might evolve in positive ways in light of the technological change

driven by AI. And while critical approaches and research are by all means warranted such that professional ethical commitments are maintained, we hope this collection at least provides some ideas and inspiration for technologists and other stakeholders to engage further with how to orient their work towards addressing problems, seeking fruitful cooperations with the different stakeholders along the value chain and providing benefits to support quality media production.

Next, we outline the six articles in the collection providing a brief summary of each to orient the reader.

LLMs and other generative AI technologies are ushering in a new phase of disruption in the news industry that may affect news production and consumption as well as distribution. David Caswell, in his paper *Audiences, Automation and AI: From Structured News to Language Models*, argues that a large news organization like the British Broadcasting Corporation (BBC) is prepared for this shift due to previous innovations in automating workflows for personalized content using structured techniques. Such earlier innovations have not only advanced the integration of LLMs but also spurred the development of flexible infrastructures that are resilient in the face of uncertain audience behaviors and editorial processes in AI-driven news environments.

In the financial news domain, AI is reshaping journalism and fostering a new era of AI-assisted news processes that must be underpinned by trust and accuracy. Claudia Quinonez and Edgar Meij's paper *A New Era of AI-Assisted Journalism at Bloomberg* provides examples of how Bloomberg has explored AI models for tasks like updated headline generation and controllable text summarization. The authors also discuss automation in Bloomberg's newsroom, where software bots automate story creation for speedier and deeper financial reporting. The paper also examines the broader implications of generative AI in journalism, emphasizing that rigorous standards of accuracy are essential for financial audiences.

Many local news organizations are exploring uses of AI to address economic pressures and enhance value

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creation in the face of declining advertising and audience revenues. In their paper *Transforming the Value Chain of Local Journalism with Artificial Intelligence*, Bartosz Wilczek, Mario Haim, and Neil Thurman present an overview of AI's potential in local news, identifying areas where AI can be most beneficial. They also discuss implementation challenges along the entire value creation chain that are specific to local newsrooms, including resource limitations, and suggest strategies for overcoming them.


Personalized news recommender systems have become influential in shaping public opinions and decisions. Nava Tintarev, Martijn Willemsen, and Bart P Knijnenburg's paper *Measuring the Benefit of Increased Transparency and Control in News Recommendation* explains how providing explanations to users can help them understand why certain news items are recommended and enable them to align their reading habits with personal goals, such as knowledge expansion and viewpoint diversity. The authors argue that more realistic evaluations in live recommendation environments are needed to assess the real-world impact of explanatory interventions on user behavior.

Correcting misinformation involves complex challenges due to psychological, social, and technical factors. In their paper *Exploring the Impact of Automated Correction of Misinformation in Social Media*, Gregoire Burel, Mohammadali Tavakoli, and Harith Alani argue that the effectiveness of AI-driven corrective methods in real-world settings is under-researched. They examine how misinformation-sharing users have reacted to different types of bot-generated corrective social-media messages, offering new understanding of how corrective messages should be formulated and which types of users to target.

On the societal level, AI is changing the economic structure and financing of news organizations. In the final paper of this special issue, *The Business of News in the AI Economy*, Helle Sjøvaag examines the impact of AI on competition, mergers, acquisitions, and IT capabilities in the news industry and discusses how AI influences journalism's traditional business models. The aim is to provide a vocabulary for understanding the economic future of journalism in a data-driven and AI-powered platform economy.

#### CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict.

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**Nicholas Diakopoulos** is a professor in Communication Studies and Computer Science at Northwestern University where he is director of the Computational Journalism Lab (CJL). His research is broadly oriented around topics related to Computational Journalism and AI, Ethics, & Society. He is the author of the award-winning book *Automating the News: How Algorithms are Rewriting the Media* from Harvard University Press.

**Natali Helberger** is a distinguished university professor of Law & Digital Technology, with a special focus on AI, at the Institute for Information Law (IViR), University of Amsterdam, and co-director of the AI, Media & Democracy Lab. Her research explores how the role of the user of information is changing under the influence of information technology, and social and economic conditions.

**Andreas L. Opdahl** is a professor in Information Science at the University of Bergen where he leads the Intelligent Information Systems (I2S) research group. His research revolves around Knowledge Representation and related AI techniques like Knowledge Graphs and Ontologies, often with applications in the news domain.