

ARTIFICIAL INTELLIGENCE AS A TOOL FOR AUTOMATING NEWS PRODUCTION: IMPACT ON THE GENRE SYSTEM OF CONTEMPORARY JOURNALISM

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Summary

This article investigates how artificial intelligence (AI) reshapes the processes and genre system of contemporary journalism. As automated writing tools, natural language generation, and algorithmic curation become integral to newsroom operations, they not only enhance efficiency but also transform professional routines, editorial decision-making, and modes of audience engagement. The study examines how AI facilitates the emergence of new hybrid genres – algorithmic summaries, data-driven narratives, and personalized news digests – that merge computational logic with journalistic storytelling. However, the same mechanisms that increase speed and personalization may simultaneously narrow content diversity, marginalize long-form analytical formats, and reinforce engagement-driven biases. Drawing on interdisciplinary literature in media studies and AI ethics, this research argues that artificial intelligence acts as both a technological and cultural agent, redefining authorship, creativity, and responsibility in journalism. The article concludes that sustainable integration of AI requires maintaining the human core of journalistic practice – interpretation, ethical reasoning, and narrative depth – while adapting professional standards to algorithmic realities. AI should thus be viewed not as a substitute for journalism but as a transformative force demanding the reconfiguration of its functions, values, and genre architecture in the digital era.

Key words: artificial intelligence; news automation; journalistic genres; algorithmic journalism; media transformation; personalization; journalism ethics.

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1. Introduction

The rapid development of artificial intelligence (AI) technologies has become one of the most influential forces shaping the media landscape of the twenty-first century. Newsrooms around the world are increasingly turning to algorithmic tools, natural language generation systems, and machine learning applications to manage growing volumes of information and meet the demand for real-time reporting. These technologies have introduced new opportunities for efficiency, scalability, and accuracy in news production. At the same time, they raise profound questions about the nature of journalism itself and about how algorithmic mediation transforms professional values and communicative functions (*Sonni, 2025*).

Traditionally, journalism has been defined by professional practices of verification, interpretation, and narrative construction, where human authorship played a central role. With the integration of AI, however, the boundaries of authorship, creativity, and editorial responsibility are being redefined. Automated reporting systems are capable of producing financial briefs, weather updates, and sports summaries in seconds, while personalization algorithms adapt news flows to individual reader preferences. Such innovations challenge

the established understanding of what counts as a journalistic text and how genres of reporting evolve in digital environments.

This transformation corresponds to what scholars describe as computational journalism – a stage where algorithms not only assist but also co-produce journalistic content. Editorial decision-making becomes increasingly data-driven, and journalistic authority shifts from the individual reporter to the interaction between human editors, datasets, and algorithmic models (*Diakopoulos, 2019*). At the same time, personalization systems and engagement analytics introduce new dependencies on platform logic, raising ethical questions about transparency, bias, and the erosion of the shared public sphere (*van Dalen, 2024*).

Consequently, AI changes not only newsroom workflows but also the genre system of journalism. Machine-generated briefs and algorithmic summaries support short, factual formats, while investigative and analytical genres rely on AI for pattern detection, data visualization, and large-scale analysis. Hybrid genres – algorithmic explainers, data-driven features, and personalized newsletters – demonstrate how automation expands expressive possibilities yet threatens diversity by favoring speed and emotional engagement over depth (*Hollanek et al., 2025*).

This article explores the impact of AI on the genre system of contemporary journalism, with particular attention to the ways in which automation alters traditional categories of news writing. While much of the scholarly literature has examined the efficiency and economic benefits of automation, less attention has been given to its implications for genre diversity, authorship, and the cultural functions of journalism. By situating AI within the broader framework of media innovation and professional ethics, this study seeks to understand whether artificial intelligence is merely a tool for optimization or a transformative agent reshaping the foundations of journalistic communication.

2. Literature Review

Research on artificial intelligence in journalism highlights both opportunities and challenges. The concept of “algorithmic journalism” is used to describe computational systems that generate and distribute content with limited or no human authorship.

Early studies emphasized efficiency. Natural language generation has shown strong results in financial, sports, and weather reporting, where repetitive data can be quickly transformed into coherent texts. While such tools free journalists for interpretive work, they also risk narrowing the role of human creativity (*Danzon-Chambaud, 2021: 10*).

Another line of scholarship addresses epistemological concerns. Machine-generated texts can be produced at scale, yet the logic of algorithmic decisions is often opaque. This “black box” effect complicates accountability and raises doubts about whether accuracy and balance can be maintained. Finally, research on personalization systems shows that engagement-driven algorithms favor short and emotionally charged formats, which may weaken long-form investigative and analytical genres. Editorial strategies increasingly adapt to these pressures, influencing the diversity of journalistic output.

In addition to these perspectives, recent scholarship has moved toward a more integrative understanding of computational journalism as both a technological and cultural phenomenon (*Diakopoulos, 2019*). Studies by Dörr (2016) and Haim, M., & Graefe, A. (2017) have demonstrated that automation can enhance newsroom productivity, but they also warn that it introduces new dependencies on data providers and software infrastructures. The Associated Press, Bloomberg, and The Washington Post have been frequently cited as examples of

organizations adopting AI to generate earnings reports, sports recaps, and election updates (Graefe, 2016). While these practices increase output and speed, they simultaneously redefine editorial labor, shifting professional authority from the reporter to the algorithm designer.

Ethical and epistemological debates further complicate this picture. Algorithms trained on biased datasets can reproduce and amplify existing inequalities, a problem increasingly discussed in the context of algorithmic bias and transparency. The call for “explainable AI” in journalism is not merely a technical demand but an ethical one, ensuring that audiences understand how automated systems shape the news they consume. Moreover, scholars such as Thurman et al. (2023) stress that audience personalization, while improving engagement metrics, deepens fragmentation and filter bubbles, potentially undermining journalism’s democratic mission.

Finally, emerging literature highlights the cultural and genre-related consequences of automation. Hollanek et al. (2025) emphasize that the proliferation of AI-generated content contributes to genre hybridization – the blending of factual, interpretive, and algorithmic forms of expression. This trend signifies not only a technical evolution but also a transformation in journalistic aesthetics, authorship, and the relationship between human creativity and computational logic.

Despite extensive discussion of efficiency, economics, and ethics, there is still limited analysis of how automation reshapes genre categories themselves. This article contributes to filling this gap by examining AI’s role in redefining the system of journalistic genres.

3. AI and the Transformation of News Production

Artificial intelligence has become a structural factor in modern newsrooms, transforming workflows and the logic of content creation. Automated reporting, machine learning, and personalization systems are now common tools for handling data, producing real-time updates, and tailoring news to audiences.

Automated reporting is the most visible application. Financial briefs, weather forecasts, and sports updates can be generated instantly, ensuring speed and consistency. This allows broader coverage but also shifts human journalists toward tasks requiring interpretation, narrative, and investigation. The Associated Press was among the first to implement such systems in 2014, automating corporate earnings reports through its partnership with Automated Insights. Similarly, *The Washington Post* used its “Heliograf” system to produce thousands of election updates and sports recaps, while Bloomberg’s “Cyborg” platform generates market reports in real time (Graefe, 2016). These cases illustrate how automation enhances productivity and timeliness but simultaneously redistributes professional authority between humans and algorithms.

AI also affects editorial choices. Machine learning tools track audience behavior and predict which stories will attract attention. While this improves efficiency, it risks narrowing diversity by favoring algorithmic trends over professional judgment (van Dalen, 2024: 567). Editorial analytics dashboards increasingly determine story placement, headline formulation, and even linguistic tone, creating situations in which editorial reasoning becomes secondary to data-driven optimization.

Personalization further changes news consumption by customizing flows to individual users. Engagement rises, but selective exposure and filter bubbles threaten the shared public sphere. Thurman et al. (2023) note that personalization algorithms, though valuable for retaining audiences, fragment the collective experience of news and encourage ideological echo

chambers. Consequently, the informational unity that historically underpinned public discourse becomes dispersed across algorithmically isolated audiences.

Finally, newsroom culture adapts to hybrid work between editors and technologists. Journalists require new skills in data literacy, coding, and algorithmic awareness, blurring traditional professional boundaries. As Diakopoulos (2019) emphasizes, this shift demands a reconceptualization of *editorial authority* – from individual expertise toward human–machine collaboration. Newsrooms now employ “data journalists,” “AI editors,” and “automation specialists,” forming cross-disciplinary teams responsible for both production and oversight. These evolving structures redefine not only workflows but also the epistemology of journalistic knowledge, where algorithmic reasoning becomes an integral part of the editorial process.

In this environment, artificial intelligence emerges not merely as a technical aid but as a transformative force reshaping production, distribution, and audience relations in journalism. It introduces new hierarchies of decision-making, redistributes creative agency, and alters the ethical foundations of media work. Understanding this transformation is therefore essential for evaluating how AI mediates not only the speed and scale of news but also its authenticity, diversity, and democratic value.

4. Impact on Journalistic Genres

The use of artificial intelligence in newsrooms significantly reshapes the genre system of journalism. Genres once defined by fixed conventions are now influenced by automation and algorithmic logic, leading to both reinforcement of traditional categories and the rise of hybrid forms.

Automated reporting primarily supports short, factual formats. Financial briefs, sports updates, and weather reports are easily generated from structured data, prioritizing speed and consistency. In these genres, the role of human authorship diminishes, while oversight and contextualization gain importance.

Investigative and analytical genres remain resistant to full automation, yet AI assists by detecting patterns in large datasets, supporting research, and summarizing content. This strengthens the scope of complex reporting but preserves the centrality of interpretation, creativity, and ethical judgment.

Hybrid genres such as algorithmic summaries, data-driven reports, and personalized newsletters reflect new intersections between computation and communication. Designed for fragmented digital audiences, they illustrate the fluidity of contemporary genre systems (Hollanek et al., 2025).

Recent scholarship describes this phenomenon as genre hybridization – the blending of stylistic and structural features from traditional journalistic categories with computational procedures and data visualization techniques. For example, automated *live-blogs* merge real-time algorithmic updates with human commentary, while interactive explainers combine textual narration, AI-generated graphics, and dynamic statistics. These formats demonstrate that AI not only affects how journalists write but also how audiences experience and interpret journalistic narratives.

Furthermore, the concept of algorithmic authorship challenges the notion of the reporter as a single creative agent. In AI-mediated genres, authorship becomes distributed among multiple actors: journalists, software developers, and the algorithmic models that generate or rank content. This reconfiguration blurs professional boundaries and redefines the ethical responsibility for accuracy and bias in hybrid outputs.

Another significant effect is the platformization of journalistic genres. As algorithmic tools increasingly tailor news for search engines and social-media distribution, genre conventions adapt to platform logic – favoring brevity, emotional appeal, and clickability. Consequently, long-form investigative formats risk marginalization, while visual-narrative and audio-assisted genres (such as AI-generated podcasts or summaries for smart assistants) expand their reach.

Still, this transformation is not purely reductive. AI also enables innovative genres that extend journalistic storytelling: automated explainers contextualize complex data; machine-learning-based visualizations create immersive experiences; and recommendation systems personalize editorial narratives to user interests. These developments suggest that journalism's genre system is evolving toward a multi-layered ecology where human creativity and computational intelligence coexist.

The challenge lies in maintaining the ethical and epistemic integrity of genres while experimenting with form. Without transparency and critical oversight, hybrid formats risk eroding trust and informational diversity. Therefore, the future of journalistic genres depends on achieving balance – leveraging automation to enhance accessibility and engagement while preserving depth, accountability, and the interpretive role that defines journalism as a cultural institution.

5. Conclusion

The integration of artificial intelligence into journalism marks a turning point in both professional practice and cultural production. While automation brings efficiency and scalability to newsrooms, its influence extends far beyond technical optimization. By privileging certain formats and enabling new hybrid genres, AI reshapes the genre system of journalism itself and redefines the relationship between technology, creativity, and editorial responsibility.

Short, standardized formats such as briefs and updates have become the domain of machines, while more complex genres – investigations, features, and commentary – retain their reliance on human creativity and judgment. At the same time, algorithmically generated summaries and personalized outputs point to new forms of journalistic expression that align with the dynamics of digital media consumption. These hybrid forms demonstrate that journalism is no longer a purely human enterprise but a human-machine collaboration embedded in computational infrastructures.

The risks are equally clear. Algorithmic incentives may erode diversity by privileging brevity, emotional engagement, and audience predictability over depth and context. Such trends threaten the pluralism and critical dialogue on which democratic journalism depends. Therefore, maintaining editorial autonomy and genre diversity becomes a key challenge for the future. Journalists must cultivate algorithmic literacy – an understanding of how automated systems process data, rank stories, and shape public perception – to ensure that technological progress supports rather than distorts journalistic integrity.

To navigate this transformation responsibly, media organizations should embed ethical frameworks that guarantee transparency, inclusivity, and accountability. International initiatives such as the UNESCO Ethical Guidelines on Artificial Intelligence and Journalism (2023) and the European Broadcasting Union Principles for Trustworthy AI (2023) emphasize human oversight, fairness, and respect for public interest as essential safeguards. These principles underline that technological advancement must serve the broader social mission of journalism, not replace it.

Ultimately, AI should not be seen as a replacement for journalism but as a force demanding a redefinition of its functions and values. The resilience of the profession will depend on its ability to integrate algorithmic tools while preserving human interpretation, ethical reasoning, and narrative depth. In this balance – between automation and authorship, data and meaning – lies the sustainable future of journalism as both an industry and a cultural practice.

References

1. Danzon-Chambaud S. (2021). *A systematic review of automated journalism scholarship: guidelines and suggestions for future research*. *Open research Europe*, 1, 4. <https://doi.org/10.12688/openreseurope.13096.1>
2. Diakopoulos, N. (2019). *Automating the news: How algorithms are rewriting the media*. Harvard University Press.
3. Diakopoulos, N., & Koliska, M. (2016). *Algorithmic Transparency in the News Media*. *Digital Journalism*, 5(7), 809–828. <https://doi.org/10.1080/21670811.2016.1208053>
4. Dörr, K. N. (2015). *Mapping the field of Algorithmic Journalism*. *Digital Journalism*, 4(6), 700–722. <https://doi.org/10.1080/21670811.2015.1096748>
5. Graefe, A. (2016). *Guide to automated journalism*. Tow Center for Digital Journalism, Columbia Journalism School. https://www.researchgate.net/publication/289529155_Guide_to_Automated_Journalism
6. Haim, M., & Graefe, A. (2017). *Automated News: Better than expected?* *Digital Journalism*, 5(8), 1044–1059. <https://doi.org/10.1080/21670811.2017.1345643>
7. Hollanek, T., Peters, D., Drage, E. et al. *AI, journalism, and critical AI literacy: exploring journalists' perspectives on AI and responsible reporting*. *AI & Soc* (2025). <https://doi.org/10.1007/s00146-025-02407-6>
8. Sonni, A. F. (2025). *Digital transformation in journalism: Mini review on the impact of AI on journalistic practices*. *Frontiers in Communication*, 10, 1535156. <https://doi.org/10.3389/fcomm.2025.1535156>
9. Thurman, N., Lewis, S. C., & Kunert, J. (2019). *Algorithms, Automation, and News*. *Digital Journalism*, 7(8), 980–992. <https://doi.org/10.1080/21670811.2019.1685395>
10. UNESCO. (2023). *Ethical guidelines on artificial intelligence and journalism*. United Nations Educational, Scientific and Cultural Organization. <https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>
11. van Dalen, A. (2024). *Revisiting the Algorithms Behind the Headlines. How Journalists Respond to Professional Competition of Generative AI*. *Journalism Practice*, 1–18. <https://doi.org/10.1080/17512786.2024.2389209>
12. European Broadcasting Union (EBU). (2023). *AI and Public Service Media: Principles for ethical and trustworthy AI in journalism*. Geneva: EBU Media Department. <https://www.ebu.ch/research/membersonly/report/artificial-intelligence---public-service-media-leveraging-ai>