

Exploring the Reasons behind the Negative Impacts of AI Algorithms Empowering News Production

Lina Yang^{1,*}

¹Liaoning Communication University, Shenyang, 110000, China

* Corresponding author

Abstract

In recent years, AI algorithms have been playing a significant role in news production processes and distribution mechanisms with their powerful empowering capabilities. This empowerment has not only enhanced news production efficiency and innovated product forms but also triggered a series of issues such as challenges to news authenticity and ongoing ethical disputes. This article starts with the negative impacts of AI algorithms empowering news production, delves into their specific manifestations, and further explores the underlying reasons, striving to provide insights for the future development of the news industry and its response to technological changes.

Keywords

AI algorithm; News production; Negative impact; Reason.

1. Introduction

AI algorithms, with their powerful capabilities in data mining, processing, storage, and intelligent analysis, have been fully integrated into the field of news production. They have not only brought revolutionary impacts to traditional news production models but also profoundly changed the ecological landscape of the news industry. The application of this technology in news production has far-reaching effects. On the positive side, it can quickly identify hot topics and news leads, generate news that greatly enhances content writing efficiency, diversify product forms to meet more user needs, and personalize content delivery to enhance user engagement and satisfaction. However, there are also negative impacts that must be carefully addressed, such as the marginalization of public issues, the lack of emotion in news content, infringement of privacy rights, and impacts on journalists' professional rights and interests. This article does not discuss the positive aspects mentioned above. Instead, it focuses on exploring the specific manifestations of the negative impacts of AI algorithm technology on news production and analyzes the reasons from the perspectives of technology, industry, policy, and the public, striving to enable the news industry to achieve sustainable development in the wave of the digital era.

2. Manifestations of the Negative Impact of AI Algorithm-enabled News Production

2.1. Changes in Power Relations in the News Industry

Nowadays, AI technology can efficiently complete a large amount of news reporting. To a certain extent, the work of journalists has shifted from content production in the traditional sense to "algorithmic collaboration", causing those who are accustomed to dealing with words to worry about their professional rights and the industry's prospects. The use of AI technology in news production is attempting to take away the dominance of journalists in news production, and may even bring about an impact on the entire news industry and the dilemma of journalist

unemployment. Moreover, the production of news using AI technology relies on algorithm dominance, and in this process, power relations also undergo changes. Because the algorithm is controlled by technology developers, including its design concepts and operational rules, which to some extent influence the logic and direction of news production, the investigative and editorial powers that journalists should have are weakened.

2.2. The "Information Cocoon" Effect Leads to the Marginalization of Public Issues

The personalized recommendation service of AI algorithms in news distribution is based on users' interests and preferences. Moreover, due to the algorithm's bias in selecting sources, the recommended information content often exhibits high traffic characteristics. Under such a mechanism, users are surrounded by "personalized information streams", and the views and information they encounter are relatively narrow, which is not conducive to the formation of comprehensive and objective cognition. Some news media excessively pursue commercial interests, focusing on content that is overly entertaining and vulgar, thereby weakening the public service value and social significance of news, leading to the marginalization of public issues[1].

2.3. Automated News Writing Lacks Depth and Emotion

AI algorithms are the core driving force behind automated news writing. However, the essence of automated news writing lies in its "data-driven" nature. By generating content through structured information and using fixed templates, the output tends to be superficial and struggles to address deep and complex issues. Moreover, news articles produced by this technology lack human emotions, creativity, and critical thinking. This makes it difficult for the reports to delve into the underlying logic and social fabric behind events, thus failing to evoke deep emotional resonance from readers.

2.4. AI Algorithms are Prone to "Misjudgment" or "Missed Judgment"

The AI algorithm review mechanism has certain blind spots. Algorithms rely on the "rule base" formed through data training, but it is difficult to accurately capture metaphors, irony, and context dependence in human language. For some content with complex semantics and special contexts, algorithms may make "misjudgments" or "missed judgments", such as an internet slang phrase with sarcasm may be misjudged as a malicious attack. Some users deliberately circumvent the review rules, and the algorithm's ability to recognize such "variant expressions" is weak, which also leads to missed judgments.

2.5. AI-generated News Raises Numerous Ethical Issues

Firstly, the dilemma of tracing the source of AI-generated content is shaking the foundation of news authenticity[2]. The rapid generation of AI technology can greatly enhance timeliness, but it may also lead to inaccuracies in data, deviations in facts, and omissions in logic. When AI technology is abused to forge news videos and generate "black drafts" in bulk, it not only shakes the gatekeeping power of media practitioners but also interferes with public perception. Secondly, excessive collection of information by algorithms can also lead to violations of users' privacy rights. To deliver more targeted information, algorithms collect a large amount of users' browsing history, interest preferences, and other content. If such information is excessively collected or misused and sold to third-party advertisers, it may violate users' privacy rights. Furthermore, the inability to effectively hold entities accountable can easily lead to disputes and controversies over copyright issues. AI is trained on existing news works based on massive historical data, and the information used in the production process may be unauthorized, which can also easily lead to copyright disputes. Moreover, in the process of algorithmic news production, multiple entities are involved, including data providers, algorithm developers,

news media, content users, and publishers. When AI-generated news content contains errors, it is difficult to determine responsibility. In July 2023, the "Interim Measures for the Administration of Generative Artificial Intelligence Services" jointly issued by seven departments, including the National Internet Information Office, stipulated that organizations and individuals using generative AI products to provide services shall bear the responsibility of the producers of the content generated by such products[3].

3. Exploring the Reasons for the Negative Impact of AI Algorithms on News Production

3.1. Technology Leads to Algorithmic "Black Boxes" and Data Bias

The autonomous learning and recommendation process of AI algorithms in news production is not transparent, which can easily lead to unfair information filtering and selection. This traps the public in an information cocoon when browsing the recommended content, missing out on more diverse and exciting content, and further exacerbating cognitive rigidity. This technical "black box" issue also makes it easier for false information and misleading content to spread. Furthermore, the learning process of algorithms is also affected by data bias, as the accuracy and reliability of AI algorithm recommendations highly depend on data quality. However, the databases used to train algorithm models lack a strict quality control mechanism. If the data contains biases, errors, omissions, or incompleteness, the decisions made will inevitably produce erroneous results.

3.2. Some Media Rely Excessively on AI Technology

The original purpose of introducing AI technology into the field of news production was to facilitate media professionals and reduce work pressure. However, the current usage scenarios of AI technology are relatively chaotic, and news media and journalists have not fully grasped the usage methods and scope of this technology, leading to issues of over-reliance and insufficient technical understanding. The use of AI technology for automated news writing, coupled with the absence of a quality control system in news production, has resulted in problems such as false news, a lack of subjectivity among news producers, and a deficiency in media publicity and social responsibility. Furthermore, under immense commercial and industry competition pressures, some media outlets prioritize economic benefits and unilaterally pursue efficiency in news publishing, excessively relying on AI technology for news gathering and editing. They report directly without thorough verification, neglecting the authenticity, objectivity, and social responsibility of news.

3.3. The Governance and Law Enforcement System is not Sufficiently Robust

With the rapid development of artificial intelligence technology, the laws and regulations governing the management of the Internet system lag behind the emergence of new network technologies. There are issues such as insufficient legislative strength, low legal effect, insufficient refinement of legal provisions, lack of effective means for evidence collection and identification, and the absence of legal basis in some cases. On the one hand, the untimely and imperfect legal supervision poses a potential risk of public privacy being abused. On the other hand, regulatory lag also poses challenges to the development direction of AI technology. It breeds deepfake technology, making false news information more likely to reach the public.

3.4. The Public's Own Needs Need to be Met, and Media Literacy Varies Greatly

With the advent of the information age, people's access to news has exhibited characteristics of personalization, immediacy, and diversification. These characteristics inevitably incorporate the most primitive desires for novelty-seeking and voyeurism. The personalized recommendation capabilities of AI algorithms can greatly satisfy these needs of people. The

public can quickly obtain information of interest through news clients, and this change in the public's need to have their own needs met has driven the widespread application of AI algorithms in news production. Additionally, due to the uneven media literacy of the public and their lack of critical thinking and discernment towards news information, under the influence of factors such as public cognition, psychology, and habits, they find themselves in an "information cocoon" with greater inertia, easily influenced by algorithm recommendations, and blindly accepting and spreading news content pushed by algorithms.

4. Summary

As an important technological means in the era of artificial intelligence, AI algorithms have brought positive impacts to news production while also causing numerous negative impacts. These impacts are the result of various factors such as technology, industry, policy, and the public. In order to address the challenges brought by AI algorithms empowering news production and promote the healthy development of the news industry, we should strengthen the supervision and review of algorithms, adhere to the professional values of the news industry, accelerate the establishment of new technological laws and regulations, improve the governance and law enforcement system and accountability mechanism, and enhance the public's media literacy and algorithm literacy. Only in this way can AI algorithms be more closely integrated with news production and better assist the news industry in achieving public value and social significance.

References

- [1] Zhang, P., Guo, B., & Li, J. (2026). Challenges and governance of AI algorithm recommendations on news ethics. *Journal of Journalists*, (06), 129–131.
- [2] Zhang, Y. (2025). Data science in news communication in the era of big data-Recommend "News communication industry driven by new technologies: Theory and practice". *Journalist*, (01), 121.
- [3] Jiang, Y., & Yu, Z. (2025). The integration of AI-generated news and pre-produced news: Ethical challenges and response paths. *Southeast Communication*, (06), 150–152.