

Opportunities, Challenges and Countermeasures of News Communication in the Era of Artificial Intelligence

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Abstract

With the continuous update and iteration of media technology, information dissemination based on artificial intelligence technology gradually enters the field of vision. Artificial intelligence brings new opportunities for news dissemination in news production, news dissemination, and media interaction. At the same time, the news dissemination field is also facing new challenges, including information solidification, ethical anomie, and the decline of traditional media. Therefore, it is necessary to continuously improve the artificial intelligence technology, strengthen the control of human intelligence and the supervision of the legal system, in order to better promote the application of artificial intelligence in the field of news communication.

Keywords

Artificial Intelligence; News Dissemination; Algorithm; Data.

1. Introduction

With the continuous update and iteration of media technology, information dissemination based on artificial intelligence technology has gradually entered people's daily lives and scholars' vision. At present, artificial intelligence has penetrated into all aspects of news dissemination and has had a significant impact in the news dissemination industry. Artificial intelligence has not only changed the communication methods of traditional media, but has greatly improved the efficiency of information dissemination; it has also produced a series of intelligent news technologies, which have changed the development direction of the communication industry. At the same time, with the continuous and in-depth application of artificial intelligence in the field of news communication, news communication is also facing severe challenges, and it is urgent to find new strategies to promote the innovative development of artificial intelligence in the field of news communication.

2. News Dissemination in the Era of Artificial Intelligence Welcomes New Opportunities

In the era of artificial intelligence, news communication has ushered in new opportunities for development due to the application of new technologies. Artificial intelligence plays an active role in news production, information dissemination, and media interaction, bringing new development momentum to news dissemination.

2.1. Innovating the Process of News Production and Helping to Liberate the Productive Forces

The most prominent practical application of artificial intelligence in the field of news communication is to serve the production of news. First, the news gathering revolution. In the era of artificial intelligence, changes in the field of news gathering are more prominent: the use of intelligent gathering and editing systems improves the efficiency of data gathering and

processing, and enhances the diversification of news gathering. For example, the Associated Press releases Apple's financial reports efficiently and accurately through the Wordsmith system. The use of intelligent robots overcomes the limitations of humans in collecting news and broadens the space for information collection. Such as the physical robots and virtual robots used during the National Two Sessions in 2017. In addition, the use of drones and other equipment has also improved the efficiency of news gathering. Secondly, news writing innovation. The replacement of manual writing by intelligent machine writers is also a major innovation in the era of artificial intelligence. With the use of intelligent machine writing, journalists completely get rid of the traditional time-consuming and laborious process of manuscript writing and editing, and hand over the manuscript to smart writers. Intelligent machine writers analyze the manuscripts they need to write through built-in algorithms and data, and automatically generate news that meets the requirements. For example, in 2017, the "Earthquake Information Broadcasting Robot" of China Earthquake Station quickly "written" the first earthquake report in more than 20 seconds.

2.2. Innovating the Form of Information Dissemination and Realizing the Individuation of Users

In the process of news dissemination, the use of artificial intelligence has effectively promoted the efficiency of news dissemination, and enriched the forms of dissemination, highlighting the individuality and diversification of news dissemination. First, the diversity of media. Traditional news dissemination is mainly based on newspapers, periodicals, TV broadcasting and traditional network media, and its dissemination scope and dissemination effect have limitations. With the introduction of artificial intelligence, news media has become more diverse and flexible, and has long been free from traditional shackles. For example, with the emergence of mobile terminals represented by self-media and short videos, the content of news dissemination has gradually become fragmented and diversified, and the timeliness of news dissemination has become more prominent. Second, the target of communication is specific. In the traditional news era, users often find information on their own when they obtain information, that is, "people find information", and news dissemination is in a passive position. In the era of artificial intelligence, the news media has become an active position, becoming "information looking for people." For example, the Toutiao App uses big data analysis to recommend algorithms to integrate user interests and preferences, and push users targeted to make specific information correspond to specific individuals.

2.3. Update Media Interaction Platform to Promote Content Ecology

Artificial intelligence provides a new communication platform for the media, promotes the innovation and integration of media in the new era, and helps the construction and development of the media ecology. One is to promote the deep integration of media. The in-depth application of artificial intelligence has promoted the arrival of the era of integrated media and all-media. Media fusion is mainly embodied in three aspects: data fusion, information fusion and knowledge fusion. The in-depth integration and integration of media resources, the strengthening of data integration, and the sharing of information promote the integration and innovation of news dissemination. For example, Baidu recognizes pictures and integrates pictures, videos, news and other content. When users search for a picture, other information behind the picture will be generated, including news events, video clips, etc., and even cross-platform search can be realized. The second is to promote the development of media ecology. Artificial intelligence empowers media and multiple industries to connect across borders by liberating media productivity. News media is not only a traditional single news dissemination, the platform is not only a single release of news information, but through media interaction, open up platform barriers, improve media productivity, making news dissemination a content ecosystem. For example, the establishment of Interface Media in 2015

is a realistic example of Sichuan Daily and Alibaba through cross-border content cooperation to create an ecological platform.

3. News Communication in the Era of Artificial Intelligence Faces New Challenges

Artificial intelligence has brought gratifying opportunities and developments for news communication, and at the same time new challenges have also followed. The widespread use of artificial intelligence in the field of news dissemination has caused a series of practical problems in news dissemination and even social life.

3.1. Algorithm Recommendation Leads to Information Solidification

Algorithms are a key element of artificial intelligence. Platforms such as Toutiao and Tik Tok accurately capture user behavior and interest data in a very short period of time, and at the same time actively push information that users may need accordingly. Although this method of dissemination is fast and time-sensitive, it also causes the solidification of information dissemination. First, the algorithm recommends to solidify the preferences of the audience. At present, more and more platforms use algorithmic recommendation. As users receive the homogeneous information they are interested in for a long time, their attention is limited, and they gradually lose the ability to receive other different information, which eventually leads to the rigidity of cognitive value. For example, the survey shows that most of the information sources of WeChat users are WeChat subscription numbers, Moments of Friends, and Take a Look. This limits the reading range of users and causes them to accept information recommendations from the platform and friends. Over time, their reading preferences will become solidified. Second, the algorithm recommends filtering user groups. Although algorithmic recommendation pushes information selectively to solve the burden of information, it also virtualizes social relationships, causing users to self-close and isolate themselves, and isolate the audience in their own conceptual cage. At the same time, it also causes users and friends to be in a "bubble" of the same interest, which in turn forms value differentiation with the outside world, causing a gap between social groups.

3.2. Data Mining Leads to Loss of Ethics

Media ethics is a self-discipline and normative value standard for journalists formed to restrain the ever-expanding media power.[1] Loss of ethics norms has always been a focus issue. The loss of norms of ethics in the field of news communication in the era of artificial intelligence has a greater impact than the era of traditional media. First, there is a crisis of user privacy and security. With the continuous advancement of artificial intelligence, the scope of application in the field of news dissemination has become wider and the form of expression has become more and more concealed, and the privacy of users has become increasingly prominent. Data is the core of news dissemination, and data is used throughout. In the process of data manipulation, the user's personal privacy is often exposed: smart news recommendation needs to obtain the privacy of users' hobbies, reading habits, and value bias; smart machine writing can only do things according to preset procedures, work in accordance with algorithms, and use data. There may be a risk of unintentionally exploring user privacy. Second, the function of public opinion supervision is lacking. News media is not only the producer and dissemination of news, but also the guide and supervisor of public opinion. News dissemination often shoulders the important responsibility of social public opinion supervision, and uses its own powerful influence to prompt relevant subjects to correct bad and improper behaviors and lead the healthy development of society. However, the use of artificial intelligence will eliminate the social supervision of the media in some ways. For example, intelligent machine writers do not have political or social awareness, and the manuscripts they write often do not have social functions.

3.3. Dissemination Advantage Weakens Traditional Media

Timeliness is an important feature of news dissemination. New media is supported by artificial intelligence and will inevitably have advantages over traditional media in terms of dissemination ability and dissemination effect. At the same time, coupled with the new communication evaluation system shaped by artificial intelligence, traditional media faces the risk of marginalization. First, technological innovation has led to the weakening of traditional media. New media uses artificial intelligence technology to have an absolute advantage in algorithm recommendation, intelligent networks, mobile terminals, etc., so it has a greater communication advantage. The characteristics of fast dissemination of news in new media, new information, and multiple functions have caused the loss of traditional media users and the flow to new media. In addition, new media also have social functions that traditional media do not have, such as "social + information" platforms such as Weibo and WeChat, to enhance user loyalty and stickiness through social interaction. Second, the evaluation system has marginalized traditional media. In the communication effect evaluation system shaped by artificial intelligence, the overall dominant factor is user interest bias, which leads to the disadvantage of traditional serious news content in evaluation. New media is different from traditional media's peer evaluation, industry awards and other evaluation forms. It is based on algorithmic dissemination and uses the advantages of big data. The dissemination effect can be presented in accurate numbers, such as the number of WeChat official accounts and the number of views. This transparent form undoubtedly has a huge impact on the closed evaluation methods of traditional media.

4. News Dissemination in the Era of Artificial Intelligence Seeks New Strategies

Correctly handling the problems and challenges that artificial intelligence brings to news communication is an inevitable requirement to ensure the healthy development of artificial intelligence in the field of news communication. Although artificial intelligence is still in the "weak artificial intelligence" stage, if it is not addressed, the harm to news dissemination is self-evident.

4.1. Improve the Design Mechanism of Smart News

The problems caused by technology naturally have to go back to the technology itself to explore the source of the problem. Improving the technical logic of artificial intelligence in the field of news communication is not only the only way to be challenged, but also the key means to solve the problem. First, optimize algorithm technology to enhance the effectiveness of algorithm recommendation. The inherent shortcomings of artificial intelligence technology are mainly due to the uncertainty of the algorithm in each link. [2] To strengthen the innovation of algorithm technology, innovative recommendation logic is particularly critical. First, develop a technology that can be used to measure preferences independently, through the autonomous measurement system to enable users to self-correct after receiving preference information. Second, improve the algorithm's ability to recognize user interests and expand the channels of high-quality content dissemination, so that users can receive high-quality information in multiple ways. Finally, strengthen algorithm source filtering, check news information, filter out false and harmful information, and ensure that news is true and effective. Second, establish an interactive bridge between technology developers and journalists. The purpose of technology development is to apply it to practical purposes, and the current integration of artificial intelligence and news dissemination is still too mechanical, and technology developers and journalists still have a little understanding of each other. Therefore, it is imperative to strengthen the connection between the two and optimize the news dissemination mechanism.

On the one hand, it allows technology developers to understand the mechanisms and concepts of news dissemination, and to implant the value of news dissemination in early technology development; on the other hand, it enables journalists to understand the logic of artificial intelligence technology and make better use of technology to carry out news dissemination work.

4.2. Strengthen the External Control of Human Intelligence

Technological evolution is a process of constantly being selected, developed, and strengthened. It is people who play a decisive role and master the direction of evolution.[3] Although relying on technology can improve the problems caused by artificial intelligence to a greater extent, the reasonable application of artificial intelligence in news dissemination is inseparable from human external controls. The basis of artificial intelligence is algorithms and data. Artificial intelligence cannot understand the causal logic behind news in journalism, and intelligent machines cannot write news content that is humanistic and socially aware. Therefore, it is crucial to strengthen the participation and control of journalists in the application of artificial intelligence and promote the integration of man and machine. Journalists must pay attention to the source reliability, content authenticity, timeliness of dissemination, news value and other content of artificial intelligence news, to ensure a comprehensive review of the whole process of news, and to effectively guard the bottom line of news. In addition, strengthen man-machine cooperation to realize man-machine symbiosis and complementary advantages. The artificial intelligence machine is responsible for news writing, realizing rapid and efficient production of news, and journalists are responsible for the modification of deep content and the injection of news awareness. Combining the advantages of man and machine, working collaboratively with each other, to achieve positive growth in work results.

4.3. Promote the Restriction and Supervision of Laws and Regulations

The rapid development of artificial intelligence in the field of news communication inevitably faces legal problems. It is the key to improve relevant laws and regulations to fill the legal gaps in artificial intelligence in news dissemination, and to promote the orderly development of artificial intelligence news dissemination. First, improve artificial intelligence laws and regulations to ensure that there are laws to follow. Laws and regulations should specifically involve all aspects of artificial intelligence, and legislate the use of artificial intelligence in the field of news communication, including laws and regulations on algorithm recommendation and application, laws and regulations on data capture and use, and relevant regulations on the use of intelligent robots, etc. . One thing that needs to be paid attention to is user privacy. Legislation should be made to ensure privacy and security, and it should be specific to the scope of use of user data by artificial intelligence and the punishment of privacy violations. Second, increase platform media supervision to promote the sound development of artificial intelligence. Platform media is the terminal used by artificial intelligence, and the quality of platform content determines the effect of news dissemination. On the one hand, the credit of the platform is restricted through laws to encourage the platform to comply with relevant regulations. For example, the regulatory authority evaluates the feedback and complaints of platform users in accordance with laws and regulations, and incorporates compliant platforms into the revenue acquisition permission, forcing the platform to comply with regulations. On the other hand, the punishment of unhealthy platforms has been increased to form a legal warning effect. Severe punishments and public announcements will be made on platforms that spread bad information and promote spam, thereby forming a legal deterrent.

5. Conclusion

In the era of artificial intelligence, news communication ushered in new development opportunities, and the media industry was reshaped. At the same time, the use of artificial intelligence also brings a series of new challenges. Algorithm recommendation leads to preference consolidation and community separation, data capture threatens user privacy, and the development of platform media has led to the marginalization of traditional media. Therefore, entering the era of artificial intelligence, it is necessary to continuously improve artificial intelligence technology, strengthen the gatekeeper of human intelligence and the supervision of the legal system, in order to better promote the application of artificial intelligence in the field of news communication.

References

- [1] X.D. Chen, J.Y. Zhu: The Construction of Media Ethics in the Self-Media Era, *Journal of News Research*, Vol.8 (2017) No.17, p.34-35.
- [2] J.L. Lin: The Ethical Dilemma of News Communication under the Evolution of Algorithm Technology, *Youth Journalist*, Vol.26 (2019) No.24, p. 15-17.
- [3] C.F. Chen, J. Huo: Power Transfer and Humanistic Spirit: the Technical Ethics of Algorithmic News Distribution, *News and Writing*, Vol.35 (2018) No.01, p. 63-66.