News Production Transformation in the Smart Media Era: Post-Print

Authors: Miaomiao Li

Date: 2023-10-08T00:00:00+00:00

Abstract

With the further development of emerging technologies such as artificial intelligence, big data, and virtual reality, media will progressively evolve toward intelligence and smartness. Technology-driven smart media has triggered a fundamental transformation: media content producers are shifting from human-only to human-machine co-production; content evaluation criteria are moving from news event value to audience psychological perception value; content forms are evolving from superficial mixing to substantive integration; and user information experience is transforming from sender-perspective dominance to audience virtual presence experience. Confronted with the disruption and transformation of technology in news production, professional communicators must learn to adapt to the situation, recognize their own value, and collaborate with technology to optimize news content production.

Full Text

Abstract

As artificial intelligence, big data, virtual reality, and other emerging technologies continue to develop, media will gradually become more intelligent and smart. Technology-driven intelligent media has triggered a shift in content producers from humans alone to human-machine collaboration, transformed content judgment criteria from news event value to audience psychological perception value, evolved content forms from superficial mixing to substantive integration, and revolutionized user information experiences from sender-perspective dominance to audience virtual presence. Faced with technology's disruption and transformation of news production, professional communicators must learn to adapt to the situation, recognize their own value, and collaborate with technology to optimize news content production.

Introduction: The Dawn of Intelligent Media

At the end of 2016, Tencent jointly held an Intelligent Media Summit with Tsinghua University's Institute for Media Studies. At this summit, Professor Peng Lan from Tsinghua University's School of Journalism and Communication noted that with the further development of mobile internet technology and the advancement of artificial intelligence, big data, IoT, and virtual reality, the media ecosystem would welcome a new round of reshuffling, with media gradually moving toward intelligentization. "Intelligent media refers to a self-strengthening ecosystem based on the sharing economy that fully leverages individual cognitive surplus, built upon mobile internet, big data, virtual reality, human-computer interaction, and other new technologies. It forms diversified and sustainable business models and profit models to achieve intelligent matching between information and user needs." In her report on new media development trends, Professor Peng Lan identified three main characteristics of media intelligentization: "Everything is media: machines and various intelligent objects have the potential to become media; human-machine integration: intelligent machines and objects will merge with human intelligence to jointly construct new media business models; self-evolution: human-machine integrated media possesses self-evolutionary capabilities, with machines' ability to understand human hearts and humans' ability to control machines mutually reinforcing."

1. AI Enters the Newsroom: Machine Participation in Content Production

In the United States, applying artificial intelligence to news reporting is nothing new. As early as early 2006, Thomson Reuters began using AI for financial news reporting, marking the birth of what the world recognizes as robot journalism. During the 2016 Rio Olympics, Tencent's writing robot Dreamwriter remained active in relevant coverage areas, producing over 3,000 event news reports. As technology continues to evolve, an increasing number of news media organizations have begun introducing AI to participate in news reporting content production, conducting news gathering and writing, particularly in financial and sports news coverage. In the news production field, AI can not only help humans write simple, formulaic news drafts but also, through sophisticated big data algorithms and IoT data transmission, analyze and interpret people's information browsing data to help newsrooms gain insights into consumers' information reading needs, preferences, and scenarios, extracting information materials that meet consumer demands and preferences from massive amounts of data for topic planning and targeted content writing and distribution. In the future, as AI continues to evolve, the news production process will no longer follow the traditional editor-centric production and distribution model but will instead focus on intelligent production based on user needs insights. From topic planning, material collection, and content writing to form combination, channel selection, and even communication effect prediction, AI will participate in every aspect of news production.

2. Big Data Precision Push Challenges Classic News Value Criteria

Classic news value selection generally holds that news must possess five elements: timeliness, importance, prominence, proximity, and interest. The criteria for judging news content value are primarily based on the content value dimension of news events, with the judgment authority held by communicators. Unlike traditional media content production that centers on communicators for content selection, production, and distribution, the openness of the internet and the precision of intelligent media emphasize user-centricity, providing users with private, personalized ultimate experience services. Content selection and production standards must increasingly be measured through the market and audience. In an intelligent media environment, machines can directionally calculate each individual's information reading content preferences based on algorithms, thereby conducting personalized information production and distribution according to users' personal interests, pushing news information that users find interesting and appealing. Due to technological empowerment, audiences have a high degree of autonomy in information selection, allowing them to directly judge news value and select content based on their own interests and preferences. The criteria for news selection are no longer primarily based on the value inherent in the news event itself, and the judgment authority has shifted from sender to receiver. Under market selection mechanisms and commercial logic influence, news selection criteria and production logic have undergone certain transformations. When selecting and producing information content, media increasingly focus on audience attention and traffic, with production and distribution dominated by audiences. The information content that audiences psychologically perceive and recognize as "timely, important, prominent, proximal, and interesting" has become paramount, much like Today's Headline's advertising slogan: "What you care about is the headline."

3. Big Data Drives Further Integration of Media Product Content Forms

In the traditional media era, media product content forms were primarily text-based reporting, supplemented by corresponding news photos or graphics. In the converged media era, producers vigorously pursued media content integration, mixing original single-form text, images, audio, and video together in production. However, this integration often remained superficial, failing to achieve substantive integration between content and content or between user needs and content forms. With the explosive growth of information, users urgently need to obtain rich, comfortable, and valuable information content from massive fragmented data, yet single media content forms or simple mixing of different forms cannot satisfy users' information experience needs. With the arrival of intelligent media, especially the continuous development of big data, technology's ability to collect, analyze, and mine data has increasingly strengthened. Product production across various industries is increasingly based on data calculation and analysis, which in the media field specifically manifests as media content

production centered on data, closely revolving around data for content selection, product form organization, and news reporting. This is reflected in two aspects: on one hand, data is given an important position in news content reporting; on the other hand, producers select and combine content based on data analysis and mining. Through big data, producers can calculate each user's specific information needs and content reading preferences. Applied to the content production process, big data can targetedly capture useful information material content and forms through data collection, analysis, and mining of news event materials, matching user needs and reading preferences, and finally relying on technology to fuse filtered data, presenting content forms according to each individual user's preferences. Data-driven content production is no longer limited to single forms or simple mixing of multiple forms but fully utilizes data analysis and mining to report information with rich and diverse content forms, achieving true integration between user needs, preferences, and media content forms.

4. Virtual Reality Technology Fundamentally Transforms User Information Perception

Bringing readers to the scene has always been a goal pursued by news communicators. Obtaining an immersive sense of presence can help audiences intuitively and comprehensively experience news events, which is particularly important for audience news reading experiences and serves as a key reference indicator for audiences when selecting news information content. In the print media era, communicators strived to bring readers into the scene constructed through detailed descriptive writing. After television's invention, audiences could directly watch the scene two-dimensionally through live or broadcast screens. With the development of virtual reality technology, this on-site experience has been further optimized. Compared to the past methods of imaginatively constructing scenes through reading text or experiencing two-dimensional planes through TV screens, VR technology directly "brings" users into three-dimensional event scenes through immersive environment construction, allowing users to watch and perceive news events from the perspective of news participants. This direct "entry" into events through 360-degree immersive viewing not only helps users clearly, intuitively, and comprehensively understand news events but, most importantly, transfers the perspective of news event viewing from communicators to users, breaking the limitations of sender-perspective news content selection. In the past, whether through reading text to imaginatively construct scenes or watching through two-dimensional screens, the perspective for viewing scenes always remained in communicators' hands, and audiences could only watch scenes along the communicators' perspective. So-called on-site viewing was merely watching scenes after communicators' selection. VR technology directly "brings" users to the scene, allowing them to completely choose their viewing perspective based on personal interest points with minimal influence from traditional newspaper reporters or TV directors, fundamentally transforming users' news information perception methods.

5. Conclusion

McLuhan proposed in his media theory that "the medium is the message," arguing that the truly meaningful and valuable message is not the content disseminated in each era but the nature of the communication tools used in that era, the possibilities they create, and the social changes they bring. The emergence of each new media technology brings new media forms, triggers new media content production transformations, and creates new media content production practices. Artificial intelligence, big data, and virtual reality are all new media technologies that have emerged and developed in recent years. Their appearance has not only changed producer roles, content production standards, and media production forms from the content production end but also proposed new requirements for the innovation of software and hardware in media content production. Their future impact and disruption on the entire media industry will be as profound as the internet's disruption of traditional media. While intelligent media development still has many imperfections—such as AI technology immaturity leading to homogeneous information lacking depth and warmth, big data personalized information push potentially creating "information cocoons," and VR technology immersive viewing raising "ethical" issues—the trend of intelligent media is unstoppable. As media professionals facing these technological transformations, besides contemplating problems caused by technological development, we should more importantly consider how to comprehensively improve ourselves, enhancing our professionalism, technical skills, creativity, imagination, and ethical literacy to do what machines cannot, responding to the transformations and challenges brought by technology and collaborating with machines to better optimize media content production.

References

[1] Guo Quanzhong. Characteristics and Construction of Intelligent Media[J]. News and Writing, 2016(3): 59-62.

[2] Peng Lan. Intelligent Media: The Wave of Future Media—New Media Development Trends Report (2016)[J]. International Press, 2016(11): 6-24.

[3] Gao Chang. Artificial Intelligence and Journalism[J]. News and Writing, 2017(4).

[4] Guo Qingguang. Communication Studies Tutorial[M]. Beijing: China Renmin University Press, 2011: 118.

(Author: Guangdong Jiaying University)

Note: Figure translations are in progress. See original paper for figures.