

Audiovisual Communication of Mainstream Media in the Era of Intelligent Media: Examining Challenges and Charting Paths Forward

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ABSTRACT

The rapid advancement of intelligent media technology has reshaped the contemporary audiovisual communication landscape. While enhancing content production efficiency and personalized experiences, it also poses significant challenges to mainstream media. This study focuses on the core challenges mainstream media faces in audiovisual communication during the era of intelligent media. These challenges primarily manifest as the dilemma between production efficiency and upholding values, excessive reliance on platform algorithms in the communication process, and crises of authenticity and authority on the credibility front. Research indicates that mainstream media must proactively seize three strategic opportunities: leveraging technological dividends, reconfiguring connections, and guiding values. By deepening human-machine collaboration, intensifying community engagement, and participating in ecosystem governance, they can transition from passive adaptation to proactive leadership. This study holds significant theoretical and practical implications for mainstream media in consolidating their dominant position in public opinion and achieving high-quality development in the era of intelligent media.

KEYWORDS

Intelligent media; mainstream media; Audiovisual Communication; AIGC; Innovation Pathways

1 Introduction

The information technology revolution, particularly intelligent media technologies centered on generative AI (AIGC), big data, and algorithmic recommendations, is impacting the audiovisual communication sector with unprecedented force, triggering a series of disruptive transformations. Intelligent media has fundamentally reshaped the underlying logic of information production, distribution, and interaction. While providing users with personalized information services and entertainment spaces ^[1], it has also brought about numerous issues that cannot be ignored. As barriers to content creation have significantly lowered, a flood of low-quality content has inundated the dissemination market. With communication channels increasingly algorithm-driven, the direction and reach of information flow are increasingly dictated by technical rules. The blurring of lines between truth and falsehood makes it vastly more difficult for audiences to discern facts amid the deluge of information.

As the “ballast” for disseminating social information and the “main platform” for guiding public opinion, mainstream media bear the crucial responsibilities of propagating mainstream values, fostering social consensus, and safeguarding ideological security. However, within the new audiovisual communication ecosystem driven by intelligent media technologies, mainstream media's traditional production models, distribution channels, and foundational credibility have all faced unprecedented challenges. The effective fulfillment of their functions now confronts severe obstacles. Delving into the transformation of audiovisual communication in the era of intelligent media, analyzing the challenges faced by mainstream media, seizing the opportunities presented by the times, and exploring innovative development paths are crucial for mainstream media to establish a firm foothold and play a meaningful role within the new communication landscape.

2 The profound transformation of audiovisual communication in the era of intelligent media

2.1 Technology empowerment: intelligent manufacturing and efficiency leap

In the era of intelligent media, technological empowerment has become the core driving force behind transformation in the audiovisual communication sector, with particularly remarkable leaps in intelligent production and dissemination efficiency. Generative Artificial Intelligence (AIGC) refers to “the collective term for the production, manipulation, and modification of data or media through artificial intelligence algorithms. [By the end of 2022, the emergence of ChatGPT brought disruptive change to AIGC, while the advent of Sora further demonstrated the unprecedented driving force of artificial intelligence in content production. Leveraging AIGC technology, machines can generate diverse content formats—including text, images, audio, and video—based on simple instructions, significantly boosting content production efficiency.

Big data technology provides robust support for content production. By analyzing vast amounts of user data, media outlets can accurately identify users' interests, reading habits, and other information, thereby producing content that

better meets user needs. For instance, in sports event coverage, big data can collect real-time match statistics and player performance metrics, rapidly generating data visualizations that provide viewers with a more intuitive understanding of the game.

In recent years, intelligent media technology has been applied to every stage of audiovisual communication—from initial planning and filming to production and promotion. LED virtual production technology applied on set has ushered the film industry into a new era beyond green screens. This WYSIWYG filming approach not only delivers more realistic results but also significantly shortens production timelines. Intelligent editing technology automatically filters footage based on content themes, adds transitions and background music, enabling ordinary users to complete video editing in a short time. This significantly lowers the technical barriers to content creation.

2.2 Dissemination dimension: platform dominance and algorithm reconstruction

In the era of mass communication, newspapers, radio, and television function as physical-level media (objects) that can be clearly perceived experientially by people (subjects). The boundaries between subject and object are distinct and clearly delineated ^[2]. Today, social media platforms (WeChat, Weibo), short-video platforms (Douyin, Kuaishou), and content aggregation platforms (Jinri Toutiao) have become the primary channels and traffic gateways for users to access information. This means that whether content gets seen no longer depends on the media outlet's own brand or intentions, but largely hinges on whether it can secure recommendations and visibility under these platforms' rules.

Against this backdrop, the power of communication has shifted. In the era of traditional media, the power of communication was primarily concentrated in the hands of a few mainstream media outlets. Today, platforms have become the core hubs connecting content creators and audiences. Content creators rely on platforms to expand their reach, while audiences depend on platforms to access information. As a result, platforms wield increasing influence over the dissemination process. The algorithmic logic of "traffic supremacy" has become the dominant principle in content dissemination, with quantifiable metrics such as click-through rates, completion rates, and engagement rates serving as the ultimate yardstick for measuring content value. This algorithmic logic profoundly disciplines content production, spawning short, fast-paced, highly stimulating, and emotionally charged audiovisual expressions that vie for users' limited attention. The dissemination model has thus become "decentralized," with each user acting as a node within the communication network. At its core, this disruption represents a shift in communication dominance from content creators to platforms. By controlling algorithms and data, platforms have reshaped the operational rules governing the entire audiovisual communication ecosystem.

2.3 Content ecosystem: multiple actors and information overload

The advent of the era where everything is a medium has seen the internet open its arms to all, giving rise to numerous socialized self-media outlets and communication platforms ^[3]. The barriers to content creation have lowered, leading to an increasing number of entities entering the field of audiovisual production and forming a landscape where diverse creators coexist. Beyond mainstream media, businesses, social organizations, independent content creators, and even ordinary individuals have become significant forces in content production. The participation of diverse entities has enriched the variety and formats of audiovisual content. Businesses and companies promote their brands by producing promotional videos and product presentations; Self-media creators produce a vast array of videos covering lifestyle, food, science popularization, and other topics, enriching the audiovisual communication ecosystem; Driven by technological advancements, new audiovisual formats such as interactive television dramas and VR films have also emerged. The participation of these diverse entities enriches audiovisual content, catering to the personalized needs of different users.

However, as the number of creators increases, information overload has also become a major challenge. With the proliferation of content creators and the rise in production efficiency, a massive volume of audiovisual content is continuously flooding into the media market. Users are bombarded daily with vast amounts of information from various platforms, making it difficult to filter out valuable content. Information overload not only increases the cost of information acquisition for users but also tends to cause anxiety and fatigue. Furthermore, due to information overload, the mixed quality of content can pollute the audiovisual communication ecosystem.

3 The core dilemma of audiovisual communication in mainstream media

The intelligent media, while boosting efficiency, has also erected an invisible wall for mainstream media. Its traditional authority, production models, and dissemination advantages now face severe structural challenges within the new ecosystem, primarily manifesting across three core dimensions: production, dissemination, and credibility.

3.1 Production dilemma: the tug-of-war between efficiency anxiety and value commitment

First, mainstream media production efficiency faces a “dimension-reduction attack.” In the era of intelligent media, UGC (user-generated content) and PGC (professionally generated content) creators collaborate with AIGC tools to respond to trending events, edit footage, add voiceovers, and publish content within minutes, enabling highly efficient, assembly-line style production. In contrast, while the rigorous “reporting, editing, reviewing, and publishing” process of mainstream media ensures quality, it sacrifices a certain degree of speed.

Secondly, in the pursuit of production efficiency, mainstream media also faces challenges in upholding communication values. Mainstream media bears the responsibility of disseminating mainstream values and guiding public opinion, and its content production must adhere to correct political direction, public opinion orientation, and value orientation. However, content that caters to the vulgar tastes of the market and users often garners higher traffic and attention, posing a challenge to mainstream media's commitment to upholding its values.

Finally, new technologies have also given rise to new ethical and copyright risks. While mainstream media leverage AIGC to boost efficiency, they also face a double-edged sword effect. The copyright ownership of AI-generated content is ambiguous, and improper use can easily lead to infringement disputes. Furthermore, AI tools may unknowingly introduce gender and regional biases present in training data, or become accomplices in “deepfakes,” posing significant content security and ethical risks to mainstream media that regard authenticity as their lifeline. How to safely, compliantly, and responsibly utilize new tools in the era of intelligent media is a new challenge mainstream media must confront.

3.2 Communication dilemma: the conundrum of channel dependency and diminished influence

In the era of mass media, mainstream media outlets possess their own communication channels, such as television stations, newspapers, and radio stations. Through these channels, information can be delivered directly to the audience, with the communication channels possessing a high degree of autonomy and controlled accessibility. However, in the intelligent media era, communication channels have undergone significant changes. Various social platforms and media platforms have become the primary battlegrounds for information dissemination. To a certain extent, mainstream media's audiovisual communication relies on platform media, and the effectiveness of such communication largely depends on the platforms' algorithmic recommendations and content moderation mechanisms. If a platform's recommendation mechanism hinders the dissemination of mainstream media content or imposes unreasonable restrictions on such content, it will adversely affect the dissemination effectiveness of mainstream media. Moreover, due to the commercial nature of platforms, they often prioritize recommending content that generates high traffic and revenue in pursuit of commercial interests. Consequently, some content from mainstream media that holds significant social value but attracts lower traffic may be marginalized. This makes it difficult for mainstream media to fully leverage their role in disseminating mainstream values and guiding public opinion.

Beyond the platform's inherent mechanisms, information overload during the dissemination process has also contributed to the weakening of mainstream media's influence. In the era of intelligent media, the digital narrative ecosystem shaped by digital and intelligent technologies is rife with vast amounts of fragmented information of varying quality. The constant clamor of public opinion continues to ferment, inevitably polluting the narrative space of mainstream ideologies with complex “information noise.”^[4] First, amid the vast sea of audiovisual content, the voices of mainstream media can easily be drowned out and may struggle to capture audience attention due to the fragmentation of information channels. Second, emerging content creators and self-media platforms can rapidly build followings and expand their influence through these platforms, posing strong competition to mainstream media. Some audiences increasingly prefer to obtain content through channels that are more relatable and engaging, leading to a decline in their interest in mainstream media content.

3.3 The public trust dilemma: authenticity crises and the challenge to authoritative recognition

Truth is the lifeblood of journalism and the cornerstone of mainstream media's credibility. However, in the intelligent media era, the speed of information dissemination has accelerated dramatically. False information and rumors can spread rapidly through intelligent media technologies, posing a threat to the truthful reporting of mainstream media. On the one hand, some self-media accounts and unscrupulous content creators deliberately fabricate and spread false information in pursuit of traffic and profit. This misinformation is often highly deceptive, capable of attracting significant user attention and sharing, thereby damaging social order and public interests. On the other hand, the advancement of intelligent media technology has also facilitated the spread of misinformation. AI-generated images, audio, and video are highly deceptive, easily misleading audiences and undermining the authenticity of information dissemination.

The outbreak of genuine crises also prompts audiences to question the authority of mainstream media. Compared to the era of traditional media, mainstream outlets have established a high level of authority in the public eye through their

professional editorial teams, rigorous reporting processes, and extensive distribution channels. However, in the intelligent media era, audiences have access to more diverse information channels and have developed greater discernment, no longer blindly trusting mainstream media reports.

4 Three innovation pathways for mainstream media in the era of intelligent media

Facing severe challenges, the path to breaking through for mainstream media lies in proactively seeking change and systematically advancing innovation across three dimensions: values, technology, and mechanisms. This approach transforms challenges into opportunities for transformation and upgrading.

4.1 "Efficiency Booster": Unleashing Innovation Potential Amidst Technological Dividends

Mainstream media must shift from "passive adaptation" to "proactive mastery," transforming intelligent media technology from a challenge into the most powerful engine for enhancing their effectiveness and strengthening their core competitiveness.

First, deepen human-machine collaboration by leveraging new technologies to assist in creative processes, thereby producing more compelling audiovisual content. For example, in data journalism, AIGC technology can rapidly process and analyze massive datasets to generate drafts of data visualizations and news articles. Journalists can then refine and enhance these drafts, significantly boosting the efficiency of news production. At the same time, AIGC technology can also be used to create new content formats such as virtual anchors and animated videos, enriching the ways mainstream media presents content. For instance, Zhejiang TV's virtual host "Gu Xiaoyu" integrated with Deepseek. This innovation combining 'AI' and "virtual IP" further strengthened Gu Xiaoyu's role as a "promoter of Song Dynasty cultural heritage," achieving a win-win outcome in both content and form.

Second, leverage intelligent technologies to fortify content security defenses. While pursuing efficiency, we must also maintain clear boundaries. Leveraging AI image recognition and audio-visual fingerprinting technologies, we rapidly scan vast amounts of content—particularly UGC and AIGC—to accurately identify deepfake traces and known disinformation patterns, thereby mitigating risks at their source. Simultaneously, leveraging big data public sentiment monitoring systems enables real-time detection of social moods and potential risk points, providing data support for precise and rapid public opinion guidance. This shifts the approach from "reactive debunking" to "proactive early warning."

Finally, explore cutting-edge formats and innovate content delivery. Boldly experiment with new technologies such as VR/AR, interactive storytelling, and digital avatars to transcend the limitations of traditional audiovisual language, creating immersive and interactive news products. For instance, in major thematic coverage, VR technology enables users to "experience" historical events firsthand; in science popularization reporting, interactive games break down complex principles. This is not merely an application of technology, but a revolution in narrative approach, designed to deliver users a deeper, more memorable cognitive experience.

4.2 "Connection reconstructor": deep cultivation of communities under the logic of platforms

Mainstream media need to reshape their relationship with users from a one-way "communicator" to a two-way "connector" to re-establish communication dominance.

As an important link between content creators and audiences, platforms have huge user communities. Mainstream media can leverage the power of platforms to reconfigure the way they connect with their audiences, deeply explore the value of communities, and increase audience engagement and loyalty. Many mainstream media have registered official accounts on popular platforms to attract users' attention and join the community by publishing quality content and conducting interactive activities. For example, starting from New Year's Eve 2024, CCTV launched a series of integrated media products, "One Moment of News Broadcast", in the form of short videos with innovative and youthful perspectives to dig deeper into the content of that day's "News Broadcast". The short video was released on multiple platforms such as video number and Shake Tone, attracting young audiences and achieving the effect of "breaking the circle of communication".

It should be noted that in the operation of the third-party platform, the mainstream media should change "blindly laying the number" to "meticulous cultivation". In-depth study of the algorithmic rules and user preferences of different platforms for vertical and niche operations. Instead of simply distributing the same content through multiple channels, we will "genetically modify" the content according to the characteristics of the platform and produce content that meets the tone of the platform without losing the mainstream values. At the same time, we actively use the interactive functions of the platform, such as topic challenges and comment interactions, to establish a warm and highly viscous emotional connection with users, and turn "fans" into real identifiers.

4.3 "Value beacon": ecological leadership in the information deluge

In the noisy flood of information, the mainstream media has the most irreplaceable value of authority and social responsibility. This core advantage should be strengthened to become a "lighthouse of value" leading a healthy ecology.

In the era of intelligent media, the proliferation of communication entities has led to a proliferation of audiovisual works of varying quality saturating cyberspace. The devaluation of values inherent in the pervasive entertainment culture has plunged users into a predicament of spiritual nihilism. There is an urgent need to integrate core socialist values into the production processes of short videos, online films, and television programs^[5]. On the one hand, it focuses on real issues and returns to the world of life to enhance the appeal of mainstream values to practice and life; on the other hand, it upholds the values in the online world, tells China's story well, and creates a new type of mainstream media in the age of intelligent media.

At the same time, mainstream media, as authoritative media organisations, should participate in the ecological governance of cyberspace and reshape industry standards. By virtue of its authoritative position, it has actively led or participated in the formulation of ethical guidelines, industry standards and codes of practice on the application of intelligent media technologies in the field of audiovisual communication. Active dialogue with platforms to promote transparency and diversification of algorithmic mechanisms and advocate the integration of mainstream value orientation and social benefit assessment in algorithm design. Through publishing social responsibility reports and hosting media open days, it consistently conveys its professionalism and sense of responsibility to the public, thereby continually consolidating and enhancing its trust capital.

5 Conclusions

Today, the changes in audiovisual communication driven by intelligent media technology have irreversibly reshaped the information ecology. Mainstream media, as social consensus builders and value leaders, are at a critical junction of transformation and breakthrough. We cannot ignore the structural challenges it encounters in the three dimensions of production, dissemination and credibility. These challenges point to a central question: how can mainstream media re-establish their irreplaceable value in an era when the logic of technology is increasingly overriding the logic of professionalism?

The study shows that the path to breakthrough is not a mere resistance or pandering to intelligent media technologies, but a deep innovation that cuts across values, technologies and mechanisms. Firstly, mainstream media should become "efficiency booster", proactively integrating tools such as AIGC, big data and intelligent content moderation into production workflows to achieve a balance between efficiency and quality through human-machine collaboration. Secondly, it must transform itself into a "connection reconstructor" and gradually get rid of its over-reliance on third-party channels by carrying out intensive community-based cultivation to rebuild a direct connection with users. Ultimately, its fundamental mission is to become a "Value Beacon", to guard values in the midst of all the noise, to strengthen its ability to guide public opinion, and to actively participate in the formulation of rules and ecological governance in the era of intelligent media, so as to reshape a healthy and clear audiovisual order on the Internet. In the era of intelligent media, only through continuous exploration and active evolution can the mainstream media keep its original intention and fulfil its mission in the wave of technology, and truly realize the "dilemma breakthrough" and value leadership in the era of intelligent media.

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