

---

AI translation · View original & related papers at  
[chinaxiv.org/items/chinaxiv-202310.00060](https://chinaxiv.org/items/chinaxiv-202310.00060)

---

## The Impact of AI Technology on the Construction of New Mainstream Media Ecosystems: A Case Study of Central Media (Postprint)

**Authors:** Xu Qi, Jiang Yitong

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

### Abstract

**[Purpose]** Currently, China's "media convergence" has entered the deep-water zone, and artificial intelligence technology is increasingly becoming a key force supporting and driving the transformation and upgrading of mainstream media towards smart media. **[Method]** Based on the "media ecology" perspective and "niche" theory, this article reviews the evolution of China's media ecosystem, its current stage and characteristics, while focusing on the intelligent development practices of major central media outlets to analyze the impact of AI technology on media ecosystem construction. **[Results]** **[Conclusion]** Specifically, its impact is manifested in five major aspects: reshaping the intelligent technology foundation to accelerate the iteration of intelligent converged media production and broadcasting technologies; constructing an intelligent production-consumption system to empower the entire content production and consumption chain with efficiency and quality improvements; catalyzing smart media organizational transformation by breaking down internal barriers and strengthening technical support; accelerating industrial convergence and boundary-breaking to facilitate the implementation of the "Media+" strategy and enhance media's self-sustaining capabilities; and through the construction of new mainstream media AI open platforms, continuously promoting mainstream media's participation in smart media ecosystem competition and cooperation.

### Full Text

## AI Technology's Impact on the Construction of New Mainstream Media Ecosystems: A Case Study of Central Media Outlets

**Xu Qi, Jiang Yitong**

State Key Laboratory of Media Convergence and Communication, Communication

tion University of China, Beijing 100024

## Abstract

**[Purpose]** As China’s “media convergence” enters a critical phase, artificial intelligence technology has become a key force supporting and driving the transformation and upgrading of mainstream media toward intelligent media. **[Method]** Based on the perspective of “media ecology” and “ecological niche” theory, this article examines the evolution of China’s media ecosystem, its current stage and characteristics, while focusing on the intelligent development practices of major central media outlets to analyze how AI technology influences media ecosystem construction. **[Results/Conclusion]** Specifically, this impact manifests in five dimensions: reshaping the intelligent technology foundation to accelerate the iteration of intelligent converged media production and broadcasting technologies; constructing an intelligent production-consumption system that empowers the entire content production and consumption chain with improved efficiency and quality; catalyzing organizational transformation in intelligent media by breaking internal barriers and strengthening technical support; accelerating cross-industry integration to facilitate the implementation of the “Media Plus” strategy and enhance media’s self-financing capabilities; and continuously promoting mainstream media’s participation in intelligent media ecosystem competition and cooperation through the construction of new mainstream media AI open platforms.

**Keywords:** artificial intelligence; mainstream media; intelligent media; media ecology

**CLC Number:** G206

**Document Code:** A

**Article ID:** 1671-0134(2023)06-007-05

**DOI:** 10.19483/j.cnki.11-4653/n.2023.06.001

**Citation Format:** Xu Qi, Jiang Yitong. AI Technology’s Impact on the Construction of New Mainstream Media Ecosystems: A Case Study of Central Media Outlets[J]. China Media Technology, 2023(06): 7-11.

## Introduction

Since 2014, when “media convergence” was elevated to a national strategy, China has prioritized the development of “new mainstream media” and the establishment of “new media groups” as the main thread in its communication system construction. The “Proposal of the CPC Central Committee on Formulating the 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives Through the Year 2035” explicitly calls for “implementing omnimedia communication projects and strengthening new mainstream media” [1], advancing the comprehensive implementation of new mainstream media construction. During this period, the deep integration of next-generation information technology with media has not only facilitated production intelli-

gence but also extended media functions through resource integration, deeply integrating with life services, social governance, and other fields, thereby accelerating the rapid upgrade of the media ecosystem toward an “intelligent media” platform ecology.

From the perspective of “media ecological niche” competition, mainstream media, commercial media, and self-media all occupy different ecological niches within the current media ecosystem. Faced with limited network resources and attention resources, “ecological niche overlap” is inevitable. In the mobile internet environment, the rise of emerging media has impacted the original media market structure. On one hand, emerging media compete fiercely with mainstream media for user attention, challenging the discourse power of mainstream media. On the other hand, emerging media’s advantages in user resources have gradually transformed into market resources, continuously eroding the advertising market share of mainstream media. Consequently, mainstream media must change the administrative force-dominated approach to media resource allocation and, on the basis of “content is king,” explore media’s functions in government affairs, services, and commerce to develop new ecological niches.

Compared with other mainstream media, central media outlets enjoy prominent status and resource advantages. Currently, they have taken the lead in investing in ecological niche competition in the intelligent media development stage by leveraging technology, capital, and user resources. Among them, People’s Daily, Xinhua News Agency, and China Central Television (CCTV) have nationwide user coverage, more social resources, and greater financial support. Therefore, building a national ecological-level media platform has become an important goal in constructing an omnimedia communication system. In view of this, this article focuses on the intelligent media ecosystem construction practices of these three major central media outlets to explore in depth the impact and changes that AI technology brings to the construction of new mainstream media ecosystems.

## 1. Theoretical Perspective: Media Ecology and Ecological Niche

In 1866, German biologist Haeckel proposed the concept of ecology to study the relationships between organisms and their environment. In the 1960s, scholars in the communication field such as Lewis Mumford, Marshall McLuhan, and Neil Postman began introducing ecological research perspectives, proposing and deepening the concept of “media ecology.” Media ecology refers to “the science that uses ecological perspectives and methods to explore and explain the interrelationships and developmental changes between humans, media, society, and nature, as well as their essence and laws” [2]. “Media ecological niche” is a crucial theoretical perspective within this framework, revealing the unique conditions and specific behaviors for media’s survival and development [3]. It represents a research perspective based on comprehensive analysis of the social ecosystem where media are situated and the interactive relationships between media and

internal and external elements.

## 2. Ecological Evolution: From Omnimedia to Converged Media to Intelligent Media

### 2.1 Main Stages

In China's media convergence process, the media ecosystem has evolved sequentially from "omnimedia" to "converged media" and then to "intelligent media." From an operational perspective, omnimedia focuses on the integration of media business forms, primarily manifested at two levels: multimedia and all-media [4]. Under the omnimedia ecosystem, mainstream media transformed the previously independent business models of newspapers, radio, television, and the internet, integrating them into a unified reporting system. Multi-platform and multi-form media ecosystems have significantly increased content production entities, with new forms such as PGC, UGC, PUGC, OGC, and AIGC rapidly emerging. Media convergence expanded reporting methods, enabling media to comprehensively utilize graphics, text, sound, and video to present content. During the omnimedia period, led by central media and supported by digital technology, mainstream media established portals for digital dissemination of multimedia content, achieving media business integration and content integration on the basis of converged multimedia infrastructure, laying the foundation for internal media ecosystems.

During the converged media stage, the rapid rise of social media and the application of big data technologies enabled mainstream media to further break boundaries between different media forms. Through practices such as "newspaper-network convergence," "broadcast-network convergence," and "TV-network convergence," traditional media transformed toward internet media, achieving channel convergence. Represented by central media, mainstream media underwent organizational mechanism reforms, achieving integration at the levels of organizational structure, personnel allocation, and operational management. A typical example is People's Daily's "Central Kitchen" converged media mechanism, which coordinates media content production resources through "one-time collection, multiple generation, and diversified dissemination" to meet omnimedia communication needs through collaborative production. Similar platform products centered on converged media production provided new paradigms for building production-consumption integrated ecological models. After the "Guiding Opinions on Promoting the Integrated Development of Traditional and Emerging Media" was issued, converged media exploration expanded nationwide.

Since 2016, artificial intelligence technology has begun extending into various industries, with speech recognition, image recognition, and deep neural networks becoming core technological resources in the media ecosystem, driving media's transition from "mass media" to "intelligent media" [5]. Currently, mainstream media as a whole is in the stage of transformation and upgrading from "converged media" to "intelligent media," with an "intelligent media" platform

ecosystem accelerating its formation. Among these, “platformization” serves as an important means for mainstream media development. Internally, AI technology empowers all aspects of content production and consumption, effectively improving information production and reach efficiency. Externally, it relies on an AI technology foundation to build an open ecosystem, forming new connections with users, media, manufacturers, government, and other multiple entities, promoting mutual advancement among diverse subjects and creating a benign ecosystem that continuously expands outward with media at its core.

## 2.2 Current Characteristics

Compared with other media ecosystems, the intelligent media ecosystem primarily possesses the following distinctive features. First is AI technology empowerment. Machine deep learning, intelligent algorithms, natural language processing, and other AI applications drive the intelligence of mainstream media content industries, forming large-scale processing capabilities for content, users, channels, and other resources, and achieving automation and intensification throughout the content production and dissemination process. More importantly, based on “data + computing power + algorithms,” an intelligent, efficient, and precise decision-making and operation system is constructed to address the complex uncertainty of information communication systems, which will become the underlying logic and new model driving high-quality development of the media industry and ultimately rewrite the operational logic of media ecology.

Second is diversified production. In January 2019, General Secretary Xi Jinping proposed the concept of “four omnimedia” during the 12th collective study session of the Political Bureau, namely full-process media, holographic media, full-staff media, and full-effect media. In the media ecosystem, content production entities have greatly increased, with new content production forms such as PGC, UGC, PUGC, OGC, and AIGC rapidly emerging. Various levels of media, self-media, and personal social media accounts have become important nodes in the media system, highlighting the characteristics of “full-staff” media. Notably, AIGC will become an important content production method in the future, gradually developing from the “assistant stage” to the “collaboration stage” and ultimately entering the “original stage,” exerting a disruptive impact on existing content production models.

Third is functional integration. Against the backdrop of deep media convergence, the deep integration of next-generation information technology with media not only facilitates production intelligence but also extends media functions through resource integration, deeply integrating with life services, social governance, smart cities, government information, party building, and other fields. This extends the practical needs and operational models of “media + government services, services, and commerce,” enabling the functions achievable by intelligent media to be greatly expanded.

Fourth is comprehensive ecosystem openness. Currently, guided by the concept of “openness” and supported by intelligent technology as the underlying foundation, the comprehensive construction of a “cloud-intelligence integration” intelligent media platform ecosystem from dimensions such as content, technology, channels, and services has become an important theme in media ecology development. In terms of technical resources, mainstream media continuously compete and cooperate with commercial media and technology manufacturers, constantly strengthening their own R&D capabilities. In content production, mainstream media strive to build open content production and aggregation platforms to achieve a balance between “social media systems” and “personal media systems.” At the business cooperation level, mainstream media rely on independent open platforms to deepen cooperation with government, culture and tourism, exhibitions, and other fields, providing platform intelligent applications or helping build intelligent application frameworks, offering customized media services, and reconstructing interactive relationships within the media ecosystem.

### **3. Impact Analysis: Interpreting Intelligent Media Ecosystem Transformation Across Five Dimensions**

The balance of media ecology relies on benign interaction between media and various elements of the social system, including internal elements of the media system and external elements such as people, media, and other social components. Through platformization, central mainstream media continuously promote interaction between media and various elements across five dimensions—technology, production, organization, industry, and platform—forming an open and stable intelligent media ecosystem rooted in content construction, supported by advanced technology, and guaranteed by innovative management.

#### **3.1 Reshaping the Intelligent Technology Foundation: Accelerating Intelligent Converged Media Production and Broadcasting Technology Iteration**

In the early stages of media convergence, central mainstream media faced significant technological limitations. In the intelligent media era, central mainstream media have fully integrated technological resources from the social system as the “optimal solution” for media development, with intelligent technology affordance becoming an important basis for supporting media platform transformation. Therefore, media implement parallel strategies of internal technology R&D and external technology cooperation to reshape the underlying intelligent technology support and accelerate the iteration and upgrading of media production and broadcasting technologies.

From an internal technology structure perspective, central mainstream media adopt outsourcing or strategic partnerships with internet companies to compensate for non-core technology shortcomings [7]. For example, CCTV.com’s AI Editorial Department collaborates with Tencent Cloud, Alibaba Cloud, and

Huawei to jointly build a “cloud, data, and intelligence” media platform. *People’s Daily* has established an open technology cooperation with Baidu, creating a one-stop intelligent creation platform through Baidu’s “cloud + AI.” On the other hand, central mainstream media strengthen their own technology R&D capabilities by introducing technical talent and cooperating with research institutions and technology enterprises. For instance, Xinhua News Agency partnered with Alibaba to establish Xinhua Zhiyun, providing intelligent solutions for media scenarios. Xinhua Zhiyun independently developed and launched “Media Brain,” offering intelligent technical support for media content production, distribution, review, and management. By combining technology cooperation with R&D, central mainstream media enhance platform production efficiency while effectively reducing costs for technology development, facility construction, and technical operations and maintenance, maximizing resource allocation effectiveness and shortening the cycle for media technology ecosystem formation.

From a platform architecture perspective, central mainstream media build an AI technology-centered technology foundation through cooperation and adopt a “large middle platform, small front-end” design to continuously adapt to changes in media business processes and application scenarios, promoting full-cycle upgrades and flexible iteration of media production and broadcasting technologies and applications. For example, CCTV.com uses cloud services to connect media production links and physical spaces, achieving interconnectivity between content data and user data. Its AI middle platform can leverage core AI technologies such as machine learning, NLP semantic analysis, and knowledge graphs to build technical capabilities for CCTV’s app in three aspects: content security, content understanding, and basic capabilities. Based on this, CCTV.com continuously launches product-level front-end applications through the AI middle platform architecture, providing AI tool services for intelligent and automated content production, such as video super-resolution, intelligent tagging, intelligent creation, and intelligent review. By integrating media content resources with massive internet information resources, a powerful data ecosystem is formed, continuously enhancing media production efficiency.

For modular production in specific scenarios, central mainstream media deeply explore production needs in different contexts and create differentiated production modules by integrating platform technology resources. Among these, visual content such as short videos, live streaming, and data charts has become increasingly important in mainstream media creation, prompting central mainstream media to launch corresponding modular products to meet growing content demands. For example, CCTV.com’s AI Editorial Department launched an “intelligent filming” module, using AI image recognition technology to mimic camera techniques such as pushing, pulling, panning, and tilting. In program recording, sports event live streaming, and slow live streaming scenarios, it can automatically select effective footage to generate videos, transmitting and broadcasting in real-time through 5G networks to achieve automatic video filming and broadcasting. Similarly, Xinhua Zhiyun created the “Jianbei” platform for short video creation scenarios, providing video templates, live streaming clipping, online

cloud editing, and multi-terminal collaboration functions. When covering large-scale events, editors can use AI technology to quickly lock onto key quotes and important visuals during live broadcasts, producing large volumes of short video content in the first instance, completing mobile review and one-click distribution on the platform, significantly improving short video production efficiency.

### **3.2 Constructing an Intelligent Production-Consumption System: Empowering the Full Content Production and Consumption Chain**

Regarding internal production factors, central mainstream media rely on rich content resources to build foundational databases and use artificial intelligence technologies and algorithms to create production platforms, enabling media resources to generate value across the full chain of planning, gathering, editing, distribution, and review, thereby driving intelligent media production. In specific scenarios, media recombine material resources and intelligent tools to launch modular platform functions that targetedly meet business needs, forming an intelligent production-consumption system for media.

For full-chain intelligent production, central mainstream media platforms leverage content resources to expand media capabilities in information collection, content understanding, and data analysis, promoting a “human-machine collaboration” production model. In the information collection phase, platforms can extract content features and build tagging systems through AI atomic capabilities such as facial recognition, speech recognition, and text recognition, enabling editors to achieve “search by image” or “search video by image” through multi-modal search, significantly improving material collection efficiency. In the content planning phase, platforms use knowledge graphs to associate content data, helping editors analyze thematic relationships and extract core viewpoints. In the content production phase, numerous tools for collaborative creation, intelligent editing, and intelligent poster generation have emerged. Based on massive graphic, audio, and video resources, these provide editors with templated and automated content production to meet immediate content publishing needs [8]. In the content distribution phase, platforms can not only use intelligent algorithms for personalized content push but also integrate media content channels to achieve one-click publishing, management, and review across multiple terminals on social platforms and third-party media accounts, with real-time feedback on content dissemination data. In the content review phase, central mainstream media have gradually established comprehensive sensitive information identification databases based on information knowledge graphs, conducting high-efficiency, high-precision reviews of politically sensitive, pornographic, and advertising content throughout the entire content production and dissemination process to ensure media information security. Currently, CCTV.com’s AI Editorial Department, Xinhua’s Media Brain, and *People’s Daily’s* omnimedia convergence solution all provide production tools covering the full chain for media content production. By integrating media content resources with massive internet information resources, they form powerful data ecosystems that

continuously enhance media production efficiency.

### **3.3 Catalyzing Intelligent Media Organizational Transformation: Breaking Internal Barriers and Strengthening Technical Support**

The construction of an intelligent production-consumption system by central mainstream media has shortened production cycles and integrated production workflows, catalyzing organizational structure transformation. On one hand, relying on intelligent production-consumption platforms, the traditional editorial department organizational model has been broken, forming a more “flattened” operational model centered on content production links. On the other hand, based on the intelligent needs of media business, technical elements have become prominent within media organizations, becoming an organizational factor that cannot be ignored.

In terms of organizational structure, central mainstream media have established organizational operation models adapted to intelligent media production processes through “intelligent editorial departments.” Focusing on production-consumption workflows and relying on intelligent platforms and applications, “intelligent editorial departments” form content and project-centered organizational structures that break down barriers between traditional media departments, creating organizational operation models such as “project systems” and “group responsibility systems.” For “project system” content production, “intelligent editorial departments” reorganize original editorial departments, coordinating internal technology, creativity, information, and channel resources to achieve complementary advantages. Especially in major events and special project reporting, “intelligent editorial departments” can flexibly respond to mobile and immediate gathering and editing needs, optimize personnel allocation, and improve work efficiency. For example, CCTV.com’s AI Editorial Department divides production areas according to the “five intelligences” process, providing intelligent tools for the entire platform workflow, enabling editors to complete multimodal content collection, editing, review, and distribution through platform products.

In terms of technical support, central mainstream media attach great importance to technology investment, placing technical elements on an equal footing with content as a key factor for mainstream media to win ecological niche competition. They continuously strengthen their technical pillars by improving technical teams, strengthening R&D cooperation, and establishing technology companies. For example, *People’s Daily* established a media technology company focusing on R&D and promotion of intelligent spatial platforms, technology platforms, business platforms, and capital platforms for media convergence. Xinhua News Agency and Alibaba jointly invested in establishing Xinhua Zhiyun, focusing on the development and technical services of intelligent media applications such as Media Brain. Relying on their own needs and resource advantages, central mainstream media build technology ecosystems, expanding technical outreach beyond traditional organizational structures to provide foundational

support for intelligent content production. Simultaneously, media technology departments and technology companies possess a certain degree of independence and can export technical capabilities externally, providing momentum for media industry boundary-breaking.

### **3.4 Accelerating Cross-Industry Integration: Promoting “Media Plus” and Enhancing Self-Financing Capabilities**

Centered on the functional integration characteristics of intelligent media, the platform ecosystem of central mainstream media has not only achieved internal system technology iteration, production-consumption reconstruction, and structural adjustment but also extended products and services through AI technology to build connections with other industries. The blurring of industry boundaries enables media organizations to break away from the “crowded” media ecosystem, find their own advantages in segmented ecological niches through “Media Plus,” create business value through value synergy, and achieve media ecosystem expansion.

In the government affairs domain, as an organic connection and energy exchange platform in social structure, media should play diversified roles in social participation, communication, and supervision, continuously promoting innovation in social governance methods. Based on their government service experience, central mainstream media can deeply explore government service demands and provide full-process, diversified services to government departments through platform technology applications. For example, CCTV.com’s AI Editorial Department launched an “intelligent government affairs” solution, providing services such as online exhibitions, public opinion analysis, and platform construction. In 2021, CCTV.com built a “grassroots governance big data platform” that can provide data support for power supervision, public opinion monitoring, and people’s livelihood data collection, achieving interconnectivity of resident data within jurisdictions. The platform can be “deployed in one day, launched in one week, and effective in one month,” efficiently meeting the government service needs of provinces, cities, counties, and towns. Based on artificial intelligence and big data technology, central mainstream media can mine, aggregate, and analyze government data to provide support for government decision-making, integrating themselves as participants in social governance into the social ecosystem.

In the service domain, central mainstream media use intelligent platforms to provide media solutions for people’s livelihood service areas such as education and healthcare. In the post-pandemic era, mainstream media services have exhibited “social public welfare characteristics” [9], meeting the massive online service demands catalyzed during the COVID-19 pandemic and solving users’ actual life problems. By establishing new connections between media resources and social needs, central mainstream media have seized new resources in the social system, injecting new momentum into new media construction. For example, CCTV.com’s AI Editorial Department launched a “smart education”

service. Based on the structuring of massive knowledge-based video data, the platform provides customized learning products for different disciplines through knowledge graphs and other intelligent technologies, including teaching production tools and online-offline integrated live/on-demand services, fully meeting “cloud” teaching needs.

In the commerce domain, central mainstream media combine their communication advantages with industry-specific resources to promote the digital and intelligent transformation of traditional industries and the visual presentation of content. Through specific scenarios of “media + industry,” central mainstream media achieve ecological niche separation, extend industrial boundaries into different fields, and explore diversified business models. For example, Xinhua’s “Media Brain” has obvious advantages in the culture and tourism industry, launching an “intelligent culture and tourism communication platform.” The platform centers on tourists, applies artificial intelligence technology, and provides scenic spots with short-video-based intelligent interaction methods, achieving second-level short video generation, intelligent selection, intelligent distribution, and other personalized intelligent production and dissemination. In the financial field, the “Creation Brain” also provides products such as intelligent market monitoring, automatic short video production, financial public opinion analysis, and intelligent interactive robots, meeting the diverse and high-efficiency content production and dissemination needs of the financial sector.

### **3.5 Promoting Intelligent Media Ecosystem Competition and Cooperation: Building Open Platforms to Consolidate Mainstream Status**

Through intelligent media platform construction, central mainstream media bring themselves and media at all levels into a shared value chain. In terms of content, leveraging the AI capabilities of central mainstream media platforms enables content resource and channel resource sharing in converged media creation. In terms of platforms, central mainstream media provide open and shared technology platforms based on their technical resource advantages, helping media at all levels build application platforms adapted to their own production needs and establishing specialized intelligent media teams. Content and technology cooperation among media creates an interconnected, shared, and open platform ecosystem. With first-mover advantages, central media break down barriers between media, allowing advantageous resources within the media ecosystem to flow and shifting media ecological niche competition toward ecological niche co-opetition, thereby consolidating the mainstream status of central media.

In content cooperation, the formation of the internet media ecosystem has made organizational forms of “independent operation and vertical integration” unable to meet the massive demands of the content market. Central mainstream media promote the formation of effective resource exchange between media at all levels through converged media matrix built by content aggregation platforms. Central media provide full-chain creation services supported by technology middle platforms, conduct unified intelligent management and review of

media content within the matrix, and perform intelligent distribution across all network channels. The participation of media organizations at all levels brings rich content resources to central mainstream media, creating more high-quality content closely connected with people's daily lives to enhance user stickiness. For example, Xinhua News Agency has built "Xinhua Account" into an infrastructure platform for the content ecosystem. Media can conduct intelligent content production and management through the "Creation Brain," achieving content interaction, data sharing, and integrated dissemination through Xinhua Account's "terminal-network-cloud-account" system, linking up dissemination channels across the entire network [10]. When facing major topics and hot news, Xinhua can fully mobilize mainstream media through Xinhua Account to form broad influence. During major reports such as the National Two Sessions, the 14th Five-Year Plan, and poverty alleviation, Xinhua Account has organized hundreds of media outlets for joint planning, achieving effective integration of content and dissemination channels across media levels. Additionally, CCTV's AI Editorial Department launched "Media Account" and provides full-process intelligent solutions for content management. *People's Daily's* Creation Brain opens a "content partner" ecosystem, aggregating material resources and news resources from the media industry.

In platform cooperation, the platform transformation of central mainstream media has accumulated substantial technical resources and experience, providing typical demonstrations for the converged media platform construction of local media. On one hand, central mainstream media provide software and hardware technology support through open platforms to help local media build platform systems with their own characteristics. For example, CCTV's AI Editorial Department launched a "smart media" solution, providing technical services covering the full process for media. With the help of "smart media," the Wenshui Converged Media Center built an omnimedia convergence platform integrating topic planning, command and dispatch, media asset management, multi-channel distribution, and communication effect analysis. Similarly, Xinhua's "Media Brain" has cooperated with Jiangxi Converged Media Center, Zhejiang Radio and Television Group, Mango TV, and Youku to provide intelligent technology solutions. On the other hand, while providing platform technical services, central mainstream media also provide corresponding business guidance to help local media establish talent structures adapted to intelligent media development. For example, CCTV.com, in collaboration with universities, research institutions, and leading internet enterprises, established a "Smart Media Academy." Relying on core resources from the "AI Editorial Department," it offers courses on AI editorial departments and AI information services. *People's Daily's* Creation Brain builds an internet-wide media community, providing content on omnimedia operation skills, gathering and editing skills, classic cases, and practical training tutorials, building a bridge for communication and learning among media practitioners.

Driven by artificial intelligence technology, central mainstream media have taken the lead in entering the intelligent media ecosystem stage, establishing

new connections between internal and external media resources through “platformization.” For the internal ecosystem, central mainstream media accelerate the iteration of media technology products by strengthening technology R&D and building an AI-centered technology middle platform, achieving intelligence across the full content production and consumption chain and fully tapping the value of media resources. On this basis, media organizational resources are re-configured, breaking internal barriers with technical support. For the external ecosystem, the role transformation brought by central media platformization equips them with the ability to export media technology and services externally. On one hand, they achieve cross-industry integration through “Media Plus,” using industrial integration to feed back into the media content industry. On the other hand, relying on the openness of AI platforms, new mainstream media promote ecological competition and cooperation with media at all levels through content, platform, technology, and talent cooperation, establishing their mainstream ecological niche in the media ecosystem and forming a stable, open, and sustainably operating media ecosystem.

## References

- [1] People’ s Daily Online. Implementing Omnimedia Communication Projects to Accelerate In-Depth Media Convergence Development [EB/OL]. <http://theory.people.com.cn/n1/2021/0519/c49157-32108028.html>. 2021-05-19/2023-02-23.
- [2] Shao Peiren. Media Ecology: Media as Green Ecology Research [M]. Beijing: Communication University of China Press, 2008: 5.
- [3] Wang Haigang, Zhao Yiyang. Analysis of Self-Media Communication Strategies from the Perspective of Media Ecology [J]. Modern Communication (Journal of Communication University of China), 2017(11): 48-50, 55.
- [4] Yao Junxi, Liu Chunjuan. Conceptual Analysis of “Omnimedia” [J]. Contemporary Communication, 2010(6): 13-16.
- [5] Xie Guoming. Artificial Intelligence: Opportunities and Risks for Media [J]. News Front, 2017(13): 2-3.
- [6] Xu Qi, Zhao Zizhong. China’ s Intelligent Media Ecosystem Structure, Application Innovation, and Key Trends [J]. News and Writing, 2020(8).
- [7] Liao Bingyi, Xie Xueting. Core Issues and Innovation Paths in Platform-Based Intelligent Media Construction [J]. Chinese Editors, 2020(5): 68-73.
- [8] Xu Qi, Han Bing. Video Media Intelligence: Key Technologies, Full-Chain Applications, and Breakthrough Directions [J]. TV Research, 2021(3): 39-42.
- [9] Zeng Xiangmin, Liu Riliang. “Ecological Construction” : The In-Depth Path for Media Convergence Development [J]. Modern Publishing, 2022(1): 50-63.
- [10] Cai Wen, Wang Huiyi. Resource Sharing and Boundary Reconstruction

in Modern Communication System Construction [J]. Media Observer, 2021(11): 5-12.

### Author Biographies

**Xu Qi (1982-)** is a female associate researcher and master's supervisor from Wuhan, Hubei. Her research focuses on intelligent media, media convergence, digital humanities, and new media. **Jiang Yitong (1999-)** is a female master's student from Baishan, Jilin. Her research focuses on intelligent media.

*(Editor in charge: Li Jing)*

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

*Source: ChinaXiv – Machine translation. Verify with original.*