



Research on the Mechanism and Path of Mainstream Media Cultural and Creative Communication Driven by Digital Technology ——Taking "Dingduan News" as an Example

Jinke Hao

School of Journalism Studies, Sichuan University, Chengdu, 610000, China
18234450676@163.com

Abstract. The digital transformation of current mainstream media has entered a deep-water zone, and how to use artificial intelligence and big data to reconstruct the logic of cultural and creative communication has become the key to breaking the situation. This study abandons grand narratives, focuses on integrated media samples such as "Dingduan News," and attempts to deconstruct the deep penetration mechanism of digital technology in the dimensions of communication space-time, narrative paradigm, and industrial form. The study finds that new media technology is not a simple superposition of tools, but through reshaping the connection topology structure of "people-content-scene," it forces mainstream media to complete the ecological leap from "news + advertising" to "news + cultural creativity." This is essentially a stock resource activation movement based on technological affordance (Affordance). The conclusion points out that only by using AIGC and immersive technology as levers can we break the law of diminishing marginal utility of traditional communication and win back core market value for mainstream media through differentiated competition in the digital jungle.

Keywords: Digital Technology, Generative AI, Mainstream Media, Cultural Creativity, Media Convergence.

1 Introduction

1.1 A Subsection Sample

The wild advance of Web 3.0 and artificial intelligence is forcing a fractured paradigm shift in the global media ecosystem. The old order of traditional one-way mass communication has collapsed, and a new situation of algorithm-driven personalized and immersive communication has been established [1]. This change is not only a physical acceleration of the information flow rate, but also a bottom-layer reconstruction of the value creation logic of the media industry. Especially with the entry of Generative Artificial Intelligence (AIGC), the crisis encountered by traditional media has escalated from "channels being hollowed out" to "content production rights falling aside" [2]. For

mainstream media, this is a Sword of Damocles, and also a hammer to break the wall: the lowering of technical thresholds triggers an entropy increase of information overload, but at the same time provides a "negative entropy" possibility for the precise distribution of high-quality content.

The data given by the Reuters Institute for the Study of Journalism's "2024 Digital News Report" is alarming: the audience's preference for video-based and fragmented content shows exponential growth, while the market attention for traditional graphic reports encounters a cliff-like drop [3]. The squeeze of new media on traditional media has no dead angles; if mainstream media wants to break through in the stock game, it must find new growth poles. Thus, in addition to the traditional "mouthpiece" function, Chongqing Daily, Henan Business Daily, Henan Broadcasting System, and others have bet on the cultural and creative industry, attempting to complete the thrilling leap in business models from "selling attention (news + advertising)" to "selling service and experience (news + cultural creativity)."

But this is by no means easy. Although there are many media currently transforming towards "news + cultural creativity," many fall into the trap of mediocrity of "changing the soup without changing the medicine." Existing research mostly stops at macroscopic strategy descriptions and lacks deep analysis of the microscopic granularity of technology empowerment. This article refuses to talk in generalities, aims to pierce the appearance of "news + cultural creativity," and deeply analyzes the deep mechanism of digital technology empowering communication. The article anchors on head integrated media platforms such as "Dingduan News," focuses on reviewing the practical operation paths of AIGC, algorithmic recommendation, and immersive technology in cultural and creative communication, with a view to providing actionable tactical references for mainstream media to improve market bargaining power.

2 The Era Background of Mainstream Media Developing Cultural and Creative Industries

2.1 Media Market Competition Pressure and Digital Transformation

Mainstream media is not only the "heart-connecting bridge" between the Party and the people but also needs to self-generate blood in the market tide. However, under the dimensionality reduction attack of digital native media, the underlying logic of the "secondary selling" business model (that is, reselling audience attention to advertisers) on which mainstream media relies for survival has collapsed [4]. Advertisers have long bypassed media and harvested users directly through programmatic buying, and the privilege of media as the "sole intermediary" has been thoroughly disenchanting. Accompanied by the deep-water zone advancement of the "dual management system" reform of the media industry, new species such as short videos and public accounts are rapidly seizing market share with a trend where one falls and the other rises.

The "participatory culture" proposed by scholar Jenkins has fundamentally deconstructed the one-way communication authority of mainstream media—users are no longer silent receivers, but noisy producers [5]. In this decentralized new cultural

ecology, mainstream media must find new value anchors. The cultural and creative industry, with its high added value and strong extensibility, has become the "Noah's Ark" for mainstream media to break through. Deng Yan's research points out that the cross-border cooperation between the news publishing industry and the cultural and creative industry is not a simple addition, but a multiplication of complementary values [6]. But this is not just a cross-border crossover, but a "gene recombination" based on technological logic.

2.2 Deepening of Media Convergence and Technology Drive

The "Guiding Opinions on Promoting the Integrated Development of Traditional Media and Emerging Media" in 2014 sounded the charge. Reviewing the practices of recent years, we find that convergence has moved from "addition" at the physical level to "fusion" at the chemical level. This is no longer as simple as moving newspaper PDFs to APPs, but using the technological scalpel to completely transform the production process and forms of expression. Cheng Jian, based on the perspective of the digital economy, explored the path of integrated development [7]; Wang Ji regarded regional cultural and creative design as a key grip for enhancing communication power [8]. The current media convergence presents a distinct characteristic of "technology-driven cultural reconstruction": whether it is VR/AR activating sleeping traditional culture, or digital twins restoring historical sites, technology is no longer an auxiliary tool, but has become the cultural creativity itself.

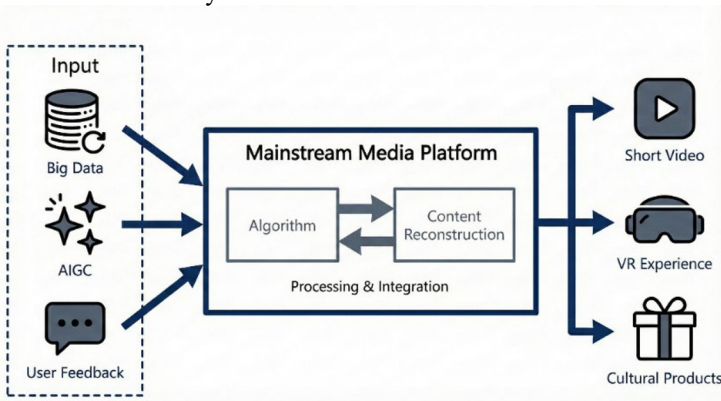


Fig. 1. Schematic Diagram of the Mechanism Framework of Digital Technology Empowering Media Cultural and Creative Communication.

3 Mechanism Analysis of New Media Technology Empowering Media Cultural and Creative Communication

The empowerment of cultural and creative communication by new media technology is by no means a linear tool upgrade, but triggers a chain reaction in the three

dimensions of ecology, product, and value by reshaping the affordance (Affordance) of information. Only by penetrating this deep mechanism (as shown in Figure 1) can blind strategy formulation be avoided.

3.1 Ecological Reconstruction: From One-way Transmission to Full-domain Connection

The application of new media technology to mainstream media cultural and creative communication is essentially an ice-breaking action to break the dimensional wall between new and old media. Technology has endowed the communication ecology with unprecedented strong connectivity—this connection abandons traditional linear logic and instead builds a complex mesh topology structure. Mainstream media uses this to layout a new ecology, and through multi-terminal tentacles such as Weibo, WeChat, and live streaming, extends the communication path infinitely.

The Long Tail Theory has been perfectly verified here: technology has significantly reduced the marginal cost of distribution, allowing "niche cultural creativity" such as local opera and intangible cultural heritage skills, which were originally ignored by the mainstream vision due to scattered audiences, to be precisely locked to their specific audiences through algorithm radars. Taking the 2024 Shandong TV "Opera Universe" Cultural Tourism Season as an example, its secret to success lies in using the algorithm distribution mechanism to directly penetrate circle barriers and reach young groups, setting a new benchmark for opera variety shows. This ecological reconstruction allows mainstream media to evolve from a single content "loudspeaker" to a "super router" connecting users, content, and scenes.

3.2 Product Reconstruction: From Single Content to Service Matrix

Under the "news + cultural creativity" paradigm, product boundaries are infinitely widened, growing wildly from pure information to "service + experience." Digital technology endows cultural and creative products with the dual attributes of "programmable" and "interactive." Xue Xi's research covers various variants such as "news + technology/business/culture" [9], but there is only one core logic: use technology to make products "come alive."

Imagine, a traditional newspaper column only provides reading value; once AR technology is embedded, this page instantly alienates into a traffic entrance for purchasing cultural and creative products or booking exhibitions. The three major clients created by Xinhua Daily Media Group, such as "Ziniu News," use big data as a "scalpel" to dissect user portraits, realizing the differentiated cutting of product functions, thereby significantly improving monetization capabilities. From passively "reading news" to actively "playing news" and "using news," this is precisely the most thorough reshaping of product form by technology.

3.3 Value Reconstruction: From Attention Economy to Trust Economy

In the pre-Internet era, what media harvested was "attention"; but in the red ocean of algorithmic recommendation, attention has been reduced to the cheapest consumable. Cultural and creative communication empowered by new media technology is reconstructing a scarcer resource—"trust." Whether it is using blockchain to confirm rights to digital collections, or deeply cultivating private domain traffic through community operations, mainstream media is grafting its gold-signboard-like credibility with the transparency of technology, building a brand new "trust economy" closed loop. At this time, cultural and creative products are no longer cold commodities, but alienate into hard currency for users to project identity and engage in circle socialization.

4 Innovation Strategies Based on Cases: Taking "Dingduan News" as an Example

Based on the theoretical deduction of the aforementioned mechanisms, this paper takes "Dingduan News" as the core sample to review how it uses digital technology to build a closed loop of cultural and creative communication. As the "special forces" of the Henan Daily Press Group's digital transformation, Dingduan News did not choose the traditional "newspaper moving house" model, but built a decentralized content ecosystem through the "China Top Creator MCN" project.

4.1 Intelligent Technology Reconstructs Communication Space-Time: Immersive Experience and Fragmented Distribution

"Fragmentation" is the fate of this era, while "immersion" is a scarce luxury. Scharlach and Hallinan pointed out that the "immediacy" of social media has completely tamed users' consumption habits [10]. The way for Dingduan News to break the situation lies in using technology to exert force in two dimensions: "extremely short" and "extremely deep" simultaneously.

First, use AIGC and VR technology to implement "dimensionality reduction attacks" and break physical space shackles. Dingduan News uses "cloud" technology to "liquefy" the heavy historical and cultural resources of the Central Plains into interactive digital assets. A typical case is its digital presentation of the "Yellow River Culture Month." The platform did not stop at simple graphic live broadcasting but used 3D modeling and AR technology to replicate cultural landmarks along the Yellow River. Users only need to pass through the mobile phone screen to "travel" back to the Song Dynasty street scenes of a thousand years ago, and even interact instantly with virtual NPCs. This experience transcends the limitations of physical presence, using space-time folding technology to transform static museum exhibits into dynamic cultural experience fields.

Second, use algorithmic recommendation to "cut" time. Facing massive information overload, Dingduan News relies on its all-media matrix and introduces NLP technology to disassemble long content into "atoms." In the communication campaign of the

"Nanyang Fireworks Show," the AI algorithm acted like an experienced editor, precisely capturing the highlights in the event, and automatically generating 15-second "poisonous" slices adapted to platforms like Douyin and Kuaishou. These slices are not randomly generated but based on deep learning of user visual dwell time. Data proves that this fragmented content not only achieved three-dimensional bombing from the scene to the cloud but also greatly improved the penetration of content distribution, effectively solving the technical pain point of low completion rates for traditional long videos.

4.2 Data-Driven Reconstruction of Communication Channels: Precise Portraits and Social Interaction

Diakopoulos believes that algorithms have usurped the throne to become the new "gate-keepers" of news distribution [11]. This means that if mainstream media continues to "cast a wide net," it can only catch "dead fish"; only "precision drip irrigation" can cultivate users. The MCN strategy of Dingduan News is the master of this data thinking.

The core of the strategy lies in building "living" user portraits. Dingduan News, through the "China Top Creator MCN" project, has aggregated about 20,000 high-quality creators including Xiakedao, Zhenghedao, and Yi Gongzi. This is not just an aggregation of content, but an aggregation of data. The platform uses big data mining technology to conduct CT scan-style analysis on the fan groups behind different creators. For example, the system can precisely identify that users following "Yi Gongzi" are mostly "cultural aesthetic" crowds, while users following "Xiakedao" have distinct "political hardcore" tags. Based on this, Dingduan News was able to implement A/B testing logic in subsequent cultural and creative product promotions—pushing copy with different focuses to different tag crowds for the same cultural product (such as Yangshao Liquor Industry's tens of billions target communication), realizing the maximization of conversion rates. Data shows that in 2023 alone, the daily active creators and daily active users of Dingduan News achieved year-on-year growth of 61.8% and 80.7% respectively, which is the direct dividend of data-driven channel reconstruction.

In addition, social interaction is the adhesive. Dingduan News did not limit itself to being a "publisher," but through strong interaction sections like "Dingduan Help," transformed the audience from indifferent "bystanders" into fanatical "participants." This "politics + service" model is essentially a high-frequency social interaction. Every user question and complaint precipitates priceless first-party behavioral data for the platform, and this data in turn feeds back the precision of content production, forming a benign closed loop of "data feeding content."

4.3 Intelligent Narrative Reconstructs Expression Methods: Human-Machine Collaboration and Emotional Resonance

Pavlik points out that technology should serve the emotional penetration of narrative [12]. In the practice of Dingduan News, the intervention of new media technology essentially triggered the transfer of rights of the narrative subject and the dimensional upgrade of the narrative.

On one hand, introduce "Platform + IP" co-creation narrative. Mainstream media no longer monopolizes the microphone but becomes a "narrative platform." By introducing head cultural bloggers like "Yi Gongzi," Dingdian News successfully transformed rigid official propaganda into personalized narratives with humanistic temperature. These creators are good at using AI-generated visual spectacles to assist storytelling; for example, when explaining "A Thousand Li of Rivers and Mountains," cooperating with AI-generated dynamic blue-green landscape backgrounds allows the audience to generate strong emotional resonance in sensory immersion. This "human-machine collaboration" narrative method has more impact than pure text reporting.

On the other hand, adopt non-linear narrative logic. Return the right of choice to the user. Taking the "Visiting Chongqing with the Spring Festival Gala" of No. 1 Eye TV - Hualong Net as an example, its first-person perspective VR roaming logic was also borrowed by Dingdian News [13]. When promoting Henan cultural tourism, Dingdian News encouraged users to upload their own perspectives, and the AI system automatically stitched these UGC (User Generated Content) into a panoramic urban memory. This decentralized narrative dissolved the physical barrier of the screen, making the "Henan Story" no longer a one-man show of the official, but a chorus of thousands of users.

4.4 Cross-border Convergence Reconstructs Industrial Form: The Ecological Extension of "News +"

For mainstream media, technology empowerment should not stop at "minor repairs" at the communication level, but should be "expanding territories" at the industrial boundary. This confirms the "mediatization" theory: media logic is penetrating into every corner of society like capillaries [14]. The practical cases of Dingdian News prove that the "News +" model has infinite scalability.

In the "News + Cultural Tourism" track, the "Jiyuan Cultural Tourism" project operated by Dingdian News is a textbook example. The platform uses LBS (Location Based Services) and AR technology to precisely import online traffic to offline scenic spots. When users browse short videos of Jiyuan scenery, they can get AR guides and special discount tickets with one click. This "virtual-real symbiosis" experience opened up the Ren and Du meridians of online traffic and offline consumption, enabling the media to find the "golden key" to monetization by selling value-added services, getting rid of single dependence on financial subsidies.

In the "News + Business" track, Dingdian News uses the computing power and influence of its MCN to deeply intervene in corporate brand building. In the case of serving "Yangshao Liquor Industry" to attack the market of tens of billions, Dingdian News did not simply publish advertisements, but used its think tank resources and data analysis capabilities to customize a full-cycle brand communication strategy for the enterprise. This marks that mainstream media has transformed from a pure information publisher to an industrial service provider providing comprehensive solutions of "think tank + communication + technology." As Zhai and Wu stated, this cross-border convergence can drive the vertical extension of the industrial chain [15], building a true "News +" ecological closed loop.

5 Conclusion

This article has used "Dingdian News" as a slice to deeply describe the innovation landscape of new media technology empowering mainstream media cultural and creative communication. Research shows that digital transformation is by no means a pure technology upgrade show, but a two-way mutual construction and game between technology and cultural creativity. Mainstream media can only complete the identity transformation from "porter" to "symbiote" by skillfully mastering AIGC, big data, and immersive technology, and completely reconstructing in the four dimensions of communication space-time, channels, narrative, and industrial form. Looking to the future, we should be more vigilant against the black box of algorithmic bias and data privacy, ensuring that while technology empowers communication, it does not alienate into a monster that swallows public interests.

References

1. Huang, J.S., Heider, D.: Media convergence: A case study of a cable news station. *International Journal on Media Management* 9(3), 105–115 (2007). <https://doi.org/10.1080/14241270701521717>
2. Munoriyarwa, A., de-Lima-Santos, M.F.: Generative AI and the future of news: Examining AI's agency, power, and authority. *Journalism Practice* 19(10), 2177–2188 (2025). <https://doi.org/10.1080/17512786.2025.2545448>
3. Newman, N., Fletcher, R., Robertson, C.T., Eddy, K., Nielsen, R.K.: Reuters Institute Digital News Report 2025. Reuters Institute for the Study of Journalism (2025). <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2025/dnr-executive-summary>
4. Van Dijck, J., Poell, T., De Waal, M.: *The Platform Society*. Oxford University Press, New York (2018). <https://doi.org/10.1093/oso/9780190889760.001.0001>
5. Jenkins, H.: *Convergence Culture: Where Old and New Media Collide*. NYU Press, New York (2006). ISBN-13: 978-0-8147-4281-5
6. Deng, Y.: Cross-border cooperation between cultural and creative industries and the news and publishing industry. *Cultural Industries* (2), 31–33 (2024)
7. Cheng, J.: Discussion on strategies for the integrated development of traditional media in the digital economy era. *News Culture Construction* (18), 148–150 (2023). <https://doi.org/10.20253/j.cnki.cn10-1677/g.2023.18.049>
8. Wang, J.: Improving the communication influence of mainstream media through expression innovation: A discussion on the reform practice of Ziyang Media Center. *Research on Urban Party Newspapers* (9), 41–46 (2023).
9. Xue, X.: Research on the application of the "News+" model in mainstream media. *Henan Economic Newspaper*, 010 (2024). <https://doi.org/10.28362/n.cnki.nhncx.2024.000352>
10. Scharlach, R., Hallinan, B.: The value affordances of social media engagement features. *Journal of Computer-Mediated Communication* 28(6), zmad040 (2023). <https://doi.org/10.1093/jcmc/zmad040>.
11. Diakopoulos, N.: *Automating the News: How Algorithms are Rewriting the Media*. Harvard University Press, Cambridge (2019).
12. Pavlik, J.V.: Collaborating with ChatGPT: Considering the implications of generative artificial intelligence for journalism and media education. *Journalism & Mass Communication Educator* 78(1), 84–93 (2023). <https://doi.org/10.1177/10776958221149577>.

13. Liu, Y., Cao, Y.: Practical exploration of mainstream media leveraging multicultural events to expand city image communication: Taking the city communication strategy of “The 1st Eye TV - Hualong Net” as an example. *Media Review* (3), 20–22 (2025).
14. Hjarvard, S.: The mediatization of society: A theory of the media as agents of social and cultural change. *Nordicom Review* 29, 105–134 (2008). <https://doi.org/10.1515/nor-2017-0181>.
15. Zhai, Y., Wu, T.: Discussion on new outlets for the development of traditional culture under the influence of modern media communication: Taking Huaxian shadow puppetry as an example. *China Media Science and Technology* (5), 77–81 (2025). <https://doi.org/10.19483/j.cnki.11-4653/n.2025.05.016>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

