

# The Dissemination and Development of Data Journalism in the Context of the New Media Era: Postprint

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## Abstract

Data journalism differs from traditional news models in its distinctive visualization characteristics. This emerging news paradigm compensates for content deficiencies inherent in conventional models, rendering journalistic presentation techniques more vivid and garnering widespread audience appreciation. To achieve timeliness in the data journalism model, it is imperative to focus on foundational news content, establish a comprehensive data journalism team, implement rational team planning, expand the domain of data journalism to the greatest extent possible, and facilitate the rapid development of new media.

## Full Text

### Abstract

Data journalism, distinct from traditional news models, is characterized by its vivid visualization features. This innovative journalistic form addresses content limitations inherent in conventional approaches, rendering news presentation more engaging and accessible, thereby garnering widespread audience appeal. To ensure the timeliness of data journalism, it is essential to strengthen foundational content, establish well-structured data journalism teams, implement rational organizational planning, broaden the scope of data journalism, and facilitate the accelerated development of new media platforms.

**Keywords:** new media; data journalism; communication practice

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## 1.2 Introduction to Data Journalism in the New Media Context

New media has created vast opportunities for data journalism development, providing unique dissemination channels that accelerate the speed of information

spread. First, new media offers interactive platforms. Convenient platforms such as WeChat, QQ, and Weibo facilitate seamless data exchange among news entities, while professional commentary enhances transparency, enabling audiences to grasp the true substance of news through public discourse. Second, new media serves as a primary channel for news acquisition. With its distinctive characteristics, new media encompasses multiple databases such as Baidu and Google, whose comments and entries become conduits for news gathering. Massive click-through rates further enable rapid information propagation. For instance, Google platforms can disseminate crime information to combat criminal activities, while Weibo and QQ can monitor online public opinion to control its overall trajectory. Third, new media's tendency toward shallow reading necessitates that news dissemination adhere to principles of clarity, capturing audience attention to effectively convey information.

## 2.1 Current Status of Domestic Data Journalism

Although domestic data journalism started relatively late, it has developed rapidly under the influence of market economy forces and exhibits distinct regional characteristics. Despite its short introduction period, data journalism has become mainstream on portal websites, occupying a significant position in the media landscape. Data acquisition channels are diverse: official portals primarily rely on first-hand materials from sources like Xinhua News Agency, while ordinary portals mainly utilize second-hand information published online by government entities and various media outlets.

Data journalism content spans multiple domains, including economic development, social dynamics, political trends, and cultural advancement, though these fields receive varying levels of emphasis depending on current hot topics. For example, Xinhua has established a dedicated column called "Study Room" for data journalism, regularly introducing Xi Jinping's grand blueprint and analyzing temporal trends.

News data takes various forms, with the most common being a combination of charts supplemented by data. People's Daily frequently employs chart-based models in its data analysis, while NetEase favors visual perspectives to create novel visual experiences for audiences. Xinhua's data analysis process integrates both chart-based models and visual perspectives, forming a unique news genre. Chart-based models offer low barriers to entry, whereas visual perspectives involve greater complexity, requiring collaboration among designers, journalists, and programmers. The drawback of visual models lies in their long production cycles and high costs, representing a critical challenge that requires resolution.

## 2.2 Problems Facing Data Journalism

Despite rapid development and numerous awards, domestic data journalism still faces several underlying issues requiring continued effort from experts across various fields.

First, data acquisition remains difficult. As time progresses, online information continues to proliferate, yet under government regulation, much of it holds limited value. The U.S. government created the Data.gov website to ensure network information stability, providing detailed statistics on recent urban crime rates and population planning to effectively predict future urban development trends. China promulgated and implemented the “Regulations on Open Government Information” in 2007, clarifying the importance of data information and ensuring network information accuracy, though data development remains incomplete.

Second, data journalism formats lack standardization and exhibit excessive diversity. For instance, PDF formats offer poor editing capabilities, easily resulting in content redundancy and imposing substantial workload pressures on staff while increasing production costs. In contrast, using Excel for statistical processing allows for easy data export, enhancing work efficiency and deepening the meaning of data journalism.

Third, infrastructure development remains inadequate. Most data journalism staff graduate from liberal arts programs and possess weak data processing capabilities. However, genuine data journalism work requires interdisciplinary talent proficient in both fundamental literary knowledge and complex data programming.

### **3.1 Implementing Personalized News Themes**

Personalized news themes can effectively capture audience attention and enhance the overall influence of data journalism. Therefore, in practical implementation, it is essential to emphasize thematic importance by developing appropriate news themes based on environmental conditions and client requirements to strengthen their significance. For example, The Paper model created independent client channels, enabling each channel to operate separately and improving overall efficiency across channels. This approach aligns with thematic direction while satisfying broader audience needs, establishing itself as a current mainstream news model.

Furthermore, data journalism must strengthen communication with customers, promptly understand their dynamic information and specific needs, and subsequently deliver excellent news content accordingly. This method achieves both rapid data journalism dissemination and satisfaction of diverse customer needs, enabling selective information acquisition.

### **3.2 Creating Efficient Data Journalism Teams**

Analysis of data journalism team members reveals that most originate from editorial teams with proficient data collection and processing capabilities. However, their singular work patterns gradually solidify their thinking, hindering innovative conceptualization and causing overall team capabilities to decline. At this juncture, it becomes necessary to select highly capable talent from other fields to introduce new thinking into data journalism and promote model innovation.

The news collection stage represents the initial and one of the most critical phases of data journalism, as sufficient material is essential for news editing and enhancing readability and comprehension. The new data era has elevated requirements for collectors, who must simultaneously ensure information timeliness and value. This demands that collection personnel possess solid literary foundation and innovative capacity. Additionally, information collectors must maintain certain news sensitivity to perceive news authenticity and make accurate judgments. Therefore, building an excellent data journalism team must begin with talent cultivation to enhance members' comprehensive capabilities for news broadcasting on network platforms.

### 3.3 Rational Division of Team Labor

Data journalism team members possess specialized expertise that can play significant roles within the team, promoting collective progress and development and helping the team establish a position in the journalism field. Consequently, division of labor arrangements become particularly important, requiring full utilization of team members' strengths and reasonable position assignments based on their advantages. Moreover, team members require cultivation of solidarity to achieve information integration across various stages of data journalism.

First, select data journalism-sensitive professionals to deeply mine news essence and development trends, enhancing news uniqueness to attract public attention and garner positive audience feedback. Second, through data analysis by analytical talent, identify effective news resources to substantially increase news influence. Third, rational arrangement of design positions helps enhance data journalism effectiveness, and combined with multiple presentation forms such as tables and videos, ultimately presents a visual feast to the public.

### 3.4 Achieving Multi-stage Collaboration in Data Journalism

Data journalism presentation involves multiple stages with vastly different conditions. For instance, during the data collection stage, relying solely on workers for data collection is insufficient; employees across various stages must collaborate to increase news data volume and achieve information sharing. For influential government departments, it is particularly necessary to strengthen the depth and breadth of news content, improve data journalism information accuracy, become exemplars of social data journalism, and chart the course for data journalism development.

The information age has promoted networked advancement, creating prosperity across industries. However, to ensure stable progress in new media technology, we must address fundamental issues by creating efficient, stable interdisciplinary teams. Effective interdisciplinary teams can improve overall efficiency, create journalistic models with aesthetic value for the public, and maximize the utility of new media platforms.

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

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