Improvement of News Editorial Operations Through Data Technology Application (Post-print)

Authors: Zhou Fang

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

Abstract

Currently, data journalism is in an ascendant phase, which involves merely applying computers to conduct statistical operations on technology and visualizing them through charts, transforming the editorial mindset and perspective of data journalism, allowing data to speak for itself, producing the most authentic journalism, and exhibiting characteristics of comprehensiveness and authenticity. Within the framework of technological optimism concerning 'data journalism' , data journalism editors must still contemplate how to more closely align with the public, thereby achieving the anticipated social impact.

Full Text

1.3 Improving Information Dissemination Efficiency

Information technology is intimately connected to our daily lives. Traditional forms of news reporting can no longer satisfy the demands of the general public, who increasingly expect higher standards in news coverage. Consequently, we now face elevated requirements for both the substantive value of news content and its appeal to audiences. In this era of rapid information development, news editing has become integrated with data, and we have reached a level where computers can automatically generate and analyze charts. This demonstrates that the news editing industry now cannot function without data technology support. Data journalism editing significantly accelerates information dissemination and enables clear, straightforward handling of news events involving massive datasets. Through concerted organizational efforts, we can search for valuable news information obtained via big data. However, the sheer volume of easily accessible data in public-facing news makes it difficult to accurately grasp situations. Data journalism editing can make data news more vivid and simpler through careful data selection and processing, rendering big-data-based news

reports more readable and comprehensible. By reducing intermediate steps, it allows for faster and more effective understanding of the complete news picture.

1.1 Data Journalism as a Media Product

Data journalism editing is an inevitable product of news media in this era of rapid scientific and technological advancement. In terms of content, it involves using data to complete comprehensive news reports. From the perspective of traditional media, data technology primarily collects and organizes data through computer-assisted methods—a visible approach to data processing. In today' s media industry, news editing involves presenting online operations in data format, making various types of online information potential data sources. Big data technology enables information technology to discover more practically significant news in this new era of data-driven development. From this standpoint, data journalism represents both an innovation and a challenge to the form of news and the journalism industry itself.

1.2 Promoting Simplification in News Editing

The development of data technology profoundly influences the evolution of news editing workflows toward greater convenience. Since vast amounts of information can be found online, data journalism editing can utilize computers as auxiliary tools. In the process of mining big data, news editors can enable information operations to independently complete collection and processing procedures. Data technology has separated from the traditional "integrated" model. The convenience of news editing work is manifested in the operation mode and workflow of editors, reducing unnecessary communication among staff and simplifying traditional news editing tasks. To a certain extent, this helps improve editorial work efficiency.

2.1 Judging News Value

Evaluating news value and establishing news themes constitute the foundation and key to data journalism production, as well as a primary component of editorial competence. For instance, Caixin' s Data Visualization Laboratory typically employs two methods for theme selection: one initiated by the data journalism team, and the other driven by the editorial department. However, neither method can directly finalize a theme; the data team and editorial department require further deliberation. The main task during the topic selection phase is to ensure the theme' s appropriateness. This judgment must consider not only various elements of the news facts themselves but also communication contexts, media attributes and functions, and even the audience, timing, and policies of dissemination. Based on comprehensive information, we can estimate both the potential impact and production costs of the topic. Generally speaking, data journalism editors should maintain the same professional standards as traditional news editors. According to the principle of importance, we can arrange

the order of messages to be published in the media, listing and explaining key news points in order of significance. Additionally, editors must possess knowledge reserves of historically major news events and a macro-level understanding of key knowledge areas and priority fields. Only in this way can data journalism editors acutely and comprehensively assess the value of selected news topics.

2.2 Presenting News Stories Through Data

News reporting centers on the main narrative thread of the "news story." Data storytelling cannot rely entirely on software or programming technology; it also requires editors' ability to "tell stories." The goal of visual narrative is to achieve audience understanding and aesthetically pleasing reading. To help audiences comprehend news events and read visual stories, editors must possess fundamental visual narrative skills. However, traditional journalists typically focus more on textual expression. To develop visual storytelling, we need to pay attention to classic examples of data journalism, separately integrate these data in visualized contexts, summarize different graphical presentation forms applicable to various situations, and gradually explore characteristic data narrative styles. To make data narratives more accessible, they must demonstrate certain aesthetic qualities in visual presentation. The artistic literacy required for data journalism editing manifests in two forms: first, visual thinking can express complex and abstract information elements in reality through image symbols, demonstrating relationships through aesthetic techniques such as composition, color, and line; second, creative imagination can be used to understand the scenes, characters, and plots involved in news events, continuously developing mental images and specific pictures of news events. Visual data narrative represents a perfect integration of presented news reports, reflective storytelling, technology, and art.

2.3 Disseminating News Products

Viewing news reporting as a commodity produced by journalism means that editors should capture the preferences of the masses and understand what audiences favor. Data journalism editors should pay attention to why audiences like data and present viewer satisfaction through visual means. In modern information-based societies, audiences no longer want to stop at superficial understanding of news facts; they are also eager to know the truth behind the news. Therefore, data journalism editors need to more deeply and comprehensively excavate news themes across spatial and temporal dimensions. Through analysis of event backgrounds, causes, impacts, and development trends, audiences can understand the full picture and significance of events from a comprehensive, three-dimensional, and multi-angle perspective. Additionally, editors should possess awareness of information dissemination. After completing data journalism production, editors must also consider the release of the report, including not only distribution via computers and mobile communications but also social network channels such as WeChat public accounts and official Weibo accounts.

In the Internet era, the principle of "content is king" is shifting toward "channel is king." News reporting must consider not only what works to produce but also focus on channel integration and distribution to continuously expand its user base and visibility. With new forms of network-based news reporting, data communication places higher demands on news editors' network communication capabilities. If editors have sufficient time and energy, computer and mobile products should be produced simultaneously to achieve comprehensive network communication. If time and energy are limited, the "mobile-first" principle can be adopted. For example, many excellent interactive works in the 2017 "Two Sessions" reports employed a "mobile-first" strategy.

3.1 Richer Sources of Data Journalism Leads

With the rapid updating of the national economy and continuous improvement of media technology, the channels through which people obtain information are emerging endlessly, while newspapers, magazines, and television networks continue to promote various information for public access. Faced with complex information, people waste considerable time and experience significant impacts on their lives. This transformation has propelled data journalism to emerge as a new industry within the news field. The information in data journalism is more accessible to people than that in traditional news, allowing them to read news in fragmented time regardless of location, which greatly saves time and expands people' s understanding of news. While enriching news information, data journalism also becomes more humanized and targeted, as it can select information through data analysis and provide popular content in ways that people easily accept. For example, people more readily accept information with images and manuscripts, so news editors can insert pictures and charts based on data analysis. In summary, data journalism is the primary driving force of news development, fundamentally changing the means by which people access news. News editors must reconstruct their personal capabilities to provide better information and more meaningful news for the public.

3.2 Diverse Presentation Styles of Data Journalism

The characteristics of data journalism lie in its specificity, simplicity, and style. The development of Internet technology provides various presentation platforms for data information. Data journalism aims to simplify problems and clearly present them to audiences, enabling them to readily accept the content—a situation that poses a challenge for news editors. To help people understand and complete complex and difficult-to-comprehend data, and to make data visualizable, news editors must be able to analyze data. Only by exposing data information at deeper levels can we obtain the benefits of data resources and increase the utilization rate of existing data resources. Reconstructing the capabilities of news editors is an objective requirement for news presentation in the era of big data transformation. Only by consciously reconstructing news editing capabilities to keep pace with the times can editors secure an irreplaceable

position in the highly competitive news media field.

4.1 Correctly Grasping the Applicability of Data Journalism

In addition to Internet news and general text, video, and audio editing capabilities, digital news editors must comprehensively master knowledge across various disciplines with broad expertise, such as computer data mining and processing, data value analysis, and graphic design. Regarding current domestic news practices, "data journalism often covers public affairs closely related to national economy and people' s livelihood, areas not easily clarified by traditional means such as text or charts." Examples include political elections, finance, energy, environment, sports, and other domains. In terms of comprehensiveness and macro-level issues, the digital authority of news, descriptive completeness, and visual readability of data journalism offer reliability. However, their advantages in comprehensiveness and intuitiveness are not suitable for all news reporting; similarly, not all news needs to be presented in data form. Big data journalism aims to establish interconnections, attempting to construct complex information into an information system and trying to abandon the "storification" trend. Although online news users browsing news will quickly grasp the full picture and reflect on how news inspires their lives, they will consider what has already happened following traditional reading patterns. In contrast, the thinking of big data news editors is comprehensive and holistic, whereas traditional news editing thinking reflects partial and localized perspectives.

4.2 Integrating Data Technology with News Planning

Collecting and mining data reflects the ability to use computer technology, while integrating data and logical data connections to discover valuable news represents the fundamental quality of professional journalists with unique news sensitivity. News sensitivity is manifested not only in technical application but also in the observation and understanding of social life by professional journalists. Data journalism editors' works ultimately target audiences. Among vast amounts of data, what themes and data fields might be more likely to win audience favor? This is not merely a technical issue but also a matter of news planning. Searching for information and asking questions of data represent one approach; relying on selected topics to excavate data represents another mode of thinking. The latter tests the news sensitivity of data journalism editors. Data journalism editors should also pay attention to news theme planning, consistently focusing on social hotspots, social development trends, and audience interests. For certain special topics, they should actively excavate and organize useful data to form data journalism reports, enabling more targeted efforts and improving news dissemination efficiency. For example, data journalism planning in NetEase' s "Data News" often combines current hot topics, operates on a weekly cycle, actively sets the agenda, and presents recent social hotspots through data visualization. Data journalism editing may appear to be a me-

chanical data workflow, but every aspect of this process reflects higher demands placed on news editors, such as standards for news sensitivity, news value, and news planning.

4.3 Multi-party Collaboration in Data Journalism Editing

The Internet era is one of continuous exchange and sharing. The popularization of big data means data journalism editors may not need to organize data themselves. Currently, many institutions—including government and commercial entities—as well as individuals known as data enthusiasts participate enthusiastically in data operations. Under the premise of ensuring data sources and verifying their reliability, data journalism editors can use other auxiliary materials and tools, reference existing data, obtain data authorization, and clearly explain the data sources. Data is organized for secondary dissemination according to certain communication logics. The advantages of this approach include simplifying work procedures for data journalism editors, minimizing risks associated with data collection in certain situations or fields, and stimulating public interest in production, dissemination, and curiosity about reading and sharing data. Additionally, data journalism editors can learn from the packet model and crowdfunding model of online news production, launch data analysis on specific topics from different data collectors, combine social hotspots and audience interests, and create a more authoritative and professional data journalism platform. Establishing exclusive media databases is equally important. For example, Xinhua News Agency' s multimedia database—the largest comprehensive multimedia and diversified news information database in China—has been open to the public since its establishment in 2004, including both media and non-media users, officials, and enterprises, as well as various types of information provided by universities and private entities, such as news products, information products, and documentation. They have established mutual connections with these institutions and individuals.

References

[1] Liu Meiqiong. Research on the Reconstruction of News Editing Capabilities in the Big Data Era[J]. Youth Era, 2016(3): 28.

[2] Han Jiwen. Discussion on the Innovation of News Editing Concepts in the Big Data Environment[J]. New Media Research, 2016(19): 122-123.

[3] Xu Xiangdong. Data Journalism: A New Model of News Reporting[M]. Beijing: China Renmin University Press, 2017: 247-258.

[4] Zhang Jiong. Data Journalism and the Reconstruction of News Editing Capabilities[J]. Editorial Friend, 2014(3): 45-48.

[5] Hou Yi. Discussion on the Innovation of Editing Concepts and Capabilities —From the Perspective of Data Journalism[J]. Writing and Editing, 2018(1): 45-46.

[6] Mao Desheng. Improvement of News Editing Business Based on Data Technology Applications[J]. Editorial Friend, 2016(6): 87-90.

(Author' s Affiliation: Hubei Shiyan Radio and Television Station)

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