

Convergent Development of News Production Transformation in the Big Data Era: A Case Study of The Paper Postprint

Authors: Guo Shen

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Abstract

The transition in data information measurement units from G to Z itself reflects the explosive growth of data volume. Simultaneously, mobile clients have made information interaction more frequent, diversified the manifestations of data information, and continuously unveiled the mining value of data information. Undoubtedly, as a traditional information dissemination mechanism, the original structure of news production will be disrupted and reorganized by big data, forming an entirely new pattern of news production. This paper takes “The Paper” as a case study to explore the connotation of data journalism, analyze how big data influences news production, and subsequently investigate the integrated development of news production transformation in the big data era.

Full Text

Abstract

The shift in data measurement units from gigabytes to zettabytes itself reflects the explosive growth of data volume. Meanwhile, mobile clients have made information interaction more frequent, diversified data representation forms, and continuously revealed the mining value of data information. Undoubtedly, as a traditional information dissemination mechanism, news production will see its original pattern broken and reorganized by big data, forming an entirely new news production landscape. This paper takes “The Paper” (澎湃新闻) as a case study to explore the connotation of data journalism, analyze how big data influences news production, and investigate the integrated development of news production transformation in the big data era.

Keywords: big data era; news production; integrated development

1. News Communication in the Big Data Era

When data penetrates every industry, it has become a crucial production factor. People spend more time mining and applying data, and in this behavioral mechanism, productivity increases while consumer demand gains greater satisfaction. Information in the big data era possesses the following characteristics: large data volume, diverse data types, relatively low value density, faster information transmission speed, and higher operational efficiency.

When big data permeates the news communication industry and is rapidly utilized by it, a new concept emerges: data journalism, or news communication based on big data. Against this backdrop, the methods for obtaining news clues have become more convenient, enabling targeted information that enhances news relevance and timeliness. The news presentation models and evaluation mechanisms under big data have made mobile interaction the dominant feature of social media. People demand more interactive and precise news information—needs that big data technology can help fulfill. In the data journalism landscape, the feedback value of news audiences becomes manifest, which helps news producers better transform news production methods.

2. Transformations in News Production

2.1 Changes in News Production Workflow

Under the data journalism mechanism, scientific data processing methods are used to purify and process data information, allowing the identification of information cores and patterns within increasingly complex data, thereby aligning with actual information demands. This represents how big data changes the news production workflow. Taking “The Paper” as an example, during the news clue discovery phase, editors can search for relevant keyword information in vast news databases, enabling them to more quickly locate required data information, which is valuable for deep-level mining. Regarding news information collection and news element mining, sustained attention can be paid to specific issues, and with the help of computer technology, more linear analysis of corresponding data information can be achieved, allowing actual news elements to be presented more effectively.

During the data dissemination phase, the orientation of data journalism becomes more pronounced because big data has changed the status of news audiences. When audiences provide feedback on specific information, news producers must adjust subsequent news production directions based on such feedback attitudes, reflecting changes in future news production workflows. Thus, big data has completely transformed traditional news production business models, making the news generation process more diversified. The utilization of statistical analysis technology and data mining technology makes news production directions clearer and business efficiency higher.

2.2 Changes in News Presentation Forms

The news presentation forms under the data journalism mechanism are also quietly changing. The impact of big data on news presentation forms is concentrated in several aspects. First, information graphics visualization means that issues cannot be simply explained through text and images alone but require more visual charts for integration. Taking a recent report from “The Paper” current affairs section on China’s regional international talent competitiveness as an example, the headline reads: “2017 China Regional International Talent Competitiveness Report Released, Shanghai, Beijing, and Guangdong Rank Top Three.” To highlight the main points, charts were used for illustration, guiding people to better understand the headline and quickly form a clear impression in their minds. In terms of information visualization, “The Paper” has incorporated videos in some sections and even used live streaming to better reflect news subjects, representing a concentrated manifestation of information visualization.

2.3 Changes in News Media Morphology

Big data also exerts specific influences on news media morphology, which traditional news production processes have not encountered. Within the big data architecture, relying on databases that integrate news events, personal information, and numerous stories, it becomes necessary to accurately identify one’s role, appear as the first reporter, define the value of news events, and become a witness to news events. This process requires more qualitative and quantitative analysis, and the presence of dynamic prediction awareness in such operations will drive media toward socialization. Based on the news data pattern formed by big data, both news participation rights and discourse rights have shifted. In traditional news production, what journalists said and reported determined what information audiences received. Big data has changed this situation, making mass consciousness begin to guide news production within the mass evaluation pattern, thereby gradually changing actual news media morphology.

3. Integrated Development of News Production Reform in the Big Data Era

The influence of big data on news production models is profound. If journalists remain accustomed to traditional news production mechanisms, they will struggle to identify news demand points, find editorial entry points, and secure a position in the new media news production landscape. Therefore, it is essential to correctly understand the current state of news production transformation in the big data era, identify corresponding strategies, and achieve better survival and development. The author believes the following aspects should be actively addressed:

3.1 Breaking the Shackles of Traditional News Production Thinking

Data journalism has changed not only news audiences but also news entities. The new media environment created by big data technology continuously permeates our lives and work while reshaping individual and social relationships, thereby fundamentally transforming the architecture of news production. What changes is people's media usage behavior—the audience is no longer the passive recipient of traditional news patterns. For current journalists, it is necessary to face big data technology correctly, examine the relationship between big data and news production, and actively utilize big data technology to find effective channels within news demands rather than rigidly adhering to traditional news production methods. To this end, several issues must be correctly understood:

First, the center of news communication is no longer traditional material but a massive database built upon big data. During the interaction process of media platforms, the value of the communication center can be realized—this point must be correctly recognized. Second, the relationship between socialization and personalization must be correctly understood. In emphasizing personalization, it must be built upon universal massification. Relying on big data technology makes data journalism mining more precise, and only on the basis of better understanding audience behavior patterns can the value of news information services be better realized. Third, the value of big data in news production must be correctly recognized. With the help of big data, unstructured information can be comprehensively understood regarding event issues through social media technology, thereby expanding the depth of news reporting. Fourth, the effectiveness of big data in news production must be faced correctly, utilizing this technology rationally but under the guidance of compliance awareness to avoid personal privacy and information security issues, enabling the use of this double-edged sword to maximize benefits and minimize harms.

3.2 Establishing Correct Data Journalism Awareness

Establishing correct data journalism awareness requires news producers to accomplish several tasks. First, there are inconsistencies between the technical logic of big data and the basic concepts of journalism. While big data technology can create a technical framework for information socialization development and guide us to mine news events more clearly and comprehensively, journalists must exercise discretion when applying big data technology to ensure the realization of journalistic value. Second, news information within big data structures must guarantee authenticity and cannot deviate from values. Data information is objective—blaming data technology for human distortion is unacceptable.

3.3 Guiding the Integrated Development of Traditional and Data Journalism

From the current development status of data journalism, it remains dominated by traditional forms, and the influence of big data on traditional media con-

tinues to spread. This requires us to correctly guide the integration between traditional journalism and data journalism to create more ideal development space for data journalism. To this end, we must focus on the following issues: First, we must examine news production transformation from a big data thinking perspective. Big data information is uncertain, and data thinking must be supported by the spiritual pursuit of traditional journalists, thereby leveraging each other's strengths and weaknesses to become intimate partners. Second, we must attach great importance to building a user-centered information system. When integrating traditional journalism and data journalism, user needs can serve as a benchmark to achieve comprehensive adjustments in news production models, news feedback models, news content presentation models, and news operation models, thereby guiding data integration toward deeper development and progress.

4. Conclusion

In summary, news production models will inevitably change in the big data era. People's information needs will be better satisfied against this backdrop. To achieve this goal, news producers in the big data era must establish correct data journalism values, know how to skillfully apply big data technology, and establish customer values—only then can they become leaders in future data journalism development.

References

- [1] Zhu Xingping. Big Data and the Disruption and Reconstruction of Economic News Production Methods[J]. China Publishing, 2014, (04): 3-6.
- [2] Su Linsen, Ma Huijuan, Zhang Dongyue. The Impact of Big Data on News Production[J]. e-Science Technology & Application, 2014, 5(03): 11-18.
- [3] Liu Yikun. Data Journalism Production in the Big Data Era: Current Status, Impact, and Reflection[J]. Modern Communication (Journal of Communication University of China), 2014, 36(11):
- [4] Zhang Yanan. Transformation of News Production in the Big Data Era[D]. Henan University,
- [5] Xiao Xiaoqi. A New Reporting Method for Print Media: Data Journalism[D]. Anhui University, 2016.
- [6] Shi Lin. Data Journalism: A New Model of News Production in the Big Data Era[D]. Yunnan University, 2015.
- [7] Fang Qiuling. Research on Data Journalism Visualization Supported by Big Data[D]. Southwest University, 2015.
- [8] Gao Xinxin. Research on Data Journalism in the Context of the Big Data Era[D]. Southwest University, 2015.

(Author's affiliation: Inner Mongolia University Manzhouli College)

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

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