

Practice Status Quo and Development Limits of Data Journalism Based on Mobile News Client

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Abstract. With the development of mobile internet and popularity of smart phones, the smart phone has become a new battlefield for data journalism innovative practice that witnesses the evolution processes from traditional newspaper, TV, Internet to current mobile news client. What is the practice status quo of date journalism practice based on mobile news client, what are the opportunities and challenges it faces have become a topic of concern in the scope of data journalism. In this paper, we carry out case studies of data journalism during 2015 and 2016 of five news clients, i.e. Sohu, Sina, Netease, Xinhua Xuanwen, the Paper to explore the practice characteristics and development limits of data journalism based on mobile news client, thus expecting to make constructive contribution to the practice development of data journalism based on the prevailing mobile news client.

1 Introduction

Data Journalism is a newly emerging way of news production explored by the journalism industry for constantly adapting to media environmental changes under the era of Bigdata. ^[1]"Data Journalism" was firstly proposed by Adrian Holova-ty, the founder of Every Block in 2006. ^[2]The open data, rigorous narrative logic and proper visual presentation form the basis of data journalism. ^[3] The data journalism practice has been under a mature stage in foreign countries. The Guardian and New York Times are cases in point. Let's get back to domestic market, since 2011, domestic medias have started trying to practice data journalism and the localization development of data journalism has kicked off from network media (such as, "News Lab" of Sina.com, "Data Blog" of Netease, "The way of Data" of Sohu.com and "Pic Hot Now" of Xinhua Net), TV media (such as "Data Decade" series approaching 60 editions co-released by CCTV integrated channel and news channel in 2012) to print media (such as the data journalism practice of "Beijing Evening News" launched in 2012 and "iKnow" column of Foshan Department of Information, Southern Urban Daily created in 2012).

The development of mobile internet enables the mobile phone, as a mass media communication, to show its powerful trait of news communication and mobile phone has become an important media for people to secure information and conduct interpersonal connection. And the rapid development of mobile phone makes it a undeniably important platform for data journalism innovation. ^[4]Mobile media is endowed with unique communication attribute which lay a foundation for further evolution of data journalism carrier. And the practices based on mobile phone



is doomed to be different from those of traditional medias.

2 Status Quo: Visualization Characteristic of Data Journalism Based on Mobile News Client

In terms of the subject nature of medias practiced, this paper investigated the data journalism writings of business portal news client, represented by Netease, Sohu and Sina as well as those of traditional mainstream media news client represented by Xinhua Xuanwen and the Paper. After the integration and classification, we found that the features of visualization characteristic of data journalism based on mobile news client are as follows:

2.1 Update Frequency: the outputs are varied with different time intervals

The traditional news reports require the timeliness and text writing of the news. The data journalism, originating from accurate news, is a new way of news production. The data journalism is based on the "data", so it needs to collect a masses of data before data news report. After collection, the data will be sorted out, integrated and some irrelevant data will be deleted to keep the valuable ones based on the subject. The data will be visually presented with visualization technologies. Therefore, the final presentation of data journalism writings takes some time for preparation compared with the traditional news report. As for output frequency of current data journalism reports based on mobile news client, the "data news" of Xinhua Xuanwen ranks top among five news clients with one article each day. While, the data news columns of most of other mobile news clients are upgraded once every two to three days or even four to five days without fixed-term renewal and is in low frequency.

2.2 Topic Choice: Politics and Economic News, Social Livelihood News Prevail

According to the statistical and classification processing, the topics of data news based on mobile news client are majorly involved in politics and economic news and social livelihood news. It takes the politics-related topicsas first priority, however, the predictive data news takes few share among data journalism reports. The data news are more of information presentation in a graphic manner. The news are more easily understood and more generally accepted by users credited to the application of diversified visual signs and colloquial expressions. But in the practical sense, the topics for data news have few options. In most cases, the data news are just more of shallow and superficial narration with visualized signs but less of in-depth exploration into the information behind the news. Moreover, there are limited data journalism works in terms of culture, technology, etc..

2.3 Visualization Type: Static Infographic Is the Major Visualization Presentation Type

The present data news based on mobile news client is majorly presented by singular static infographic and the written messages are converted into visual signs in the form of graphic news.the data news aims to attract the readers to concern about and reflect on the information by visualized presentation. The data news via statis infographic is easier to make and upload with the infographic presentation form in the mobile terminal. Furthermore, it's more fluent when opened by the users. However, the interactive data journalism encouraging users participation are few nowadays which is mainly presented in a form of game. Compared to domestic data journalism, the expression forms of overseas data journalism are more diversified, the interactive data news report is also common apart from the typical presentation forms, such as map and diagram, etc..

2.4 Visual Element: Singular

According to comparison analysis, most of the visual element of data journalism based on mobile news client are flat designs and the colors and styles are of homogeneity which mainly manifest as similar visual elements seen among different data journalism works in different mobile news clients and among the same kind of data journalism works in different mobile news client. Furthermore, with regard to sign expression, the designs, such as shape, line, composition and color, are characterized with few differences, thus lowering the overall discrimination.



3 Reflection: Practice Limits of Data Journalism Based on Mobile News Client

With the emergence of "Age of Screen" and "Age of Context", domestic mainstream medias have radically carried out the data journalism practices. The news client, WeChat official accounts and other mobile medias have taken initiative to probe into data journalism. However, from the perspective of practice status quo, the data journalism based on mobile client is still in a immature stage of exploration and development. The problems for this stage are as follows:

3.1 Limited Output, Narrow Range of Topic

The outputs of data journalism works based on mobile news client are limited with low daily upgrade frequency and fails to become the dominate news report form. Most of the data journalism columns based on mobile news client upgrade their contents every few days with large time interval and low outputs which makes it hard for users to form the reading habits. As for topic choice, the political and social news, instead of other topics, are given first priority in the data journalism works based on the mobile news client. Compared with the traditional news report, the visualized presentation of data journalism is endowed with inherent advantages but fails to give a full play to its function due to the limitations of traditional reporting thinking. When it comes to the practice status quo, the visualization of data journalism based on mobile news client still needs to be further improved and optimized in terms of upgrade frequency and topic choice scope.

3.2 Visualized Presentation Focuses More on Form

The data journalism, as the newly emerging news reporting form, is still a kind of news in nature. And the news contents should still be the most important part. The data journalism works based on mobile client available now focus most on the static infographic that makes them lack of individualism and creativity. A majority of infographics are composed of words and data and presented in a static manner. The aesthetic form, visualized elements and interactive degree of data journalism are three important aspects of visualization. And the ways for visualization presentation is based on the news contents, in other words, the visualized presentation serves for the news contents. The visual design, element selection, interactive form of data journalism should be planned on the strength of news and story narration. The data journalism will lose its meaning and values if the visualization production of it partially emphasizes on the color selection, sign beautification instead of the in-depth exploration and analysis of the news contents.

3.3 Low Interaction, Limited Data Exploration

Under the support of information technology, the interactive design makes data journalism easier to attract users.^[5]The improvement of interaction enables the in-depth interactions between human beings and information. The interactive design is now in its mature stage, mobile is more convenient for interaction compared with the traditional newspaper and TV. The traditional news report requires the integrated presentation of elements and refined journalism narration. However, the arrival of data journalism enables the data to reveal and demonstrate news facts without words. From logical expression of words to logical expression of data, the logical presentation thoughts of data journalism will be absolutely different from those of traditional news. Besides, the visualized presentation simplifies the complex contents, visualizes the abstract elements as well. The data makes the news facts more understandable, the interactive presentation transforms the one-way communication of traditional news into the interactive and sharing communication with user involvements. But, the data journalism works based on mobile news client are more of statically presented and one-way communicated with few interactive works. The weaknesses of one-way communication are still pending issues. Moreover, the data journalism works based on mobile news client are limited in deeply exploring the data but secondary packaging the news with data. The failure of substantive changes to news narration and analysis thinking have been the main obstacles for data journalism development.



4 Conclusion

The changes of presentation carrier of data journalism implies that the communication of data journalism should be in line with the features of mobile terminal and the attention should be paid to the professionalism of data journalism while enriching the expression forms to strengthen the report depth, improve professional standards as well as expand application scope. User demand is the major driving force for data journalism development and as the advancement of mobile technologies, the presentation patterns of data journalism products will be increasingly diversified that will produce more specialized, customized and game-based data journalism products. Furthermore, under the age of rapid development of mobile internet, it's a new breakthrough for data journalism development to make the mobile data journalism cater to the user using habits.

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