

Data Journalism: The Type of Communication, Features and Significance in Mobile News Client

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Keywords: Data journalism, Mobile media, Visualization.

Abstract. Data journalism is an important direction of the current breakthrough in journalism. In the specific journalism practice, there are more front-line reporters and the media began to use the data journalism to explore the news events, so that news reports obtained re-energized. However, with the continuous development of technology and the growing popularity of smart phones, mobile media on the development of data journalism practice cannot be ignored. This paper attempts to sort out the development of data movement practice on the mobile side, so as to explore the innovation path of the development of data journalism communication under the background of big data age.

Introduction

Data journalism is also known as Data-driven journalism. As the world's first book on data journalism business, the *Data journalism Handbook* gives the definition: "Data journalism create a new possibility for the combination of traditional news sensitivity and persuasive narrative ability with the digital information." Baike distinguished it as "data journalism, also known as data-driven news, refers to the new journalism coverage based on crawling, mining, statistics, analysis and visualization of the data. Data journalism is generated in the context of big data." Scholars Fang Jie and Yan Dong of Renmin University of China in the article " Data Journalism of the Global Perspective: Ideas and Practice "put forward, the meaning of data journalism from the narrow sense is "The new journalism coverage based on crawling, mining, statistics, analysis and visualization of the data." [1]. The emergence of data journalism provides a possibility for news, that is, the combination of traditional news-sensitive and massive data journalism, which is an interdisciplinary approach to news production.

At present, it has not yet formed a unified consensus about the definition of mobile news client. iiMedia Research believes that mobile news client is news application for mobile phone users to provide continuous, real-time, and all-round news updates. [2] There are scholars argued that the mobile news client is the news service program in use of digital mobile technology, installed on the mobile client. [3] It can be seen from the researchers' concept of mobile news client definition that mobile news client is a smart phone-based applications (APP). The writer believe that the mobile news client is based on the mobile Internet era under the mobile Internet technology, in order to meet the audience in the mobile state of the news reading needs, which are the applications installed in mobile phones and other mobile devices. This article will take mobile news client data as a research object that refers to the mobile news client as the carrier of the data journalism.

Organization of the Text

The Main Types of Mobile News Client Data Journalism

At present, on the mobile news client, the data journalism practice type can be divided into two main categories: one by the form of presentation, the other according to the information content, respectively, it will explained about the two categories of specific data under the type of news below:

From the Form of Presentations

Static Rendering

The main representative of Static representation is the static information map. Information graph is a way of visualizing and visualizing various kinds of information. It is the most widely used visualization type of data journalism. This kind of graph is presented in the form of static, which is the information picture after processing of the data. One-direction static way will be used to deliver the news information to the audience, and this type of visualization is very changing. The production is relatively simple, with rich design elements, suitable for a wide platform. It is integrated into the designer's creativity, enhancing the visual fun, and not only widely appearing in the Internet Mobile phone clients are often used in paper media as well.

Static data map. This is the combination of big data and maps in the form of static news charts based on news events in the space within the changes in the visual presentation, which is commonly used in the space span of large areas, countries and other topics of the news. Such as NTES "digital reading" produced the "International Sanctions: More and More Popular Non-Armed Way of Confrontation" that is combined with the statistical data and static, for the performance of the static way, and it can be intuitive through the map to express the specific circumstances of each region to show the intrinsic link between indicators.

Static timeline, the timeline is mainly a data service with time attribute. It is often used in the news of the time span, while there are more key nodes. The timeline can make the audience clear by combing and presenting the key time nodes in news events or news topics, which could help the audience to better understand the context of the development of things and development context.

Dynamic Rendering

Plane motion diagram, and the plane interaction diagram is mainly based on the plane image to increase the dynamic rendering effects, such as dynamic elements, display animation, etc., while the audience tapping into the interface can see some of the elements of the picture are dynamic, and some pictures also joined the text display of content information. Compared with the static information map, the plane dynamic map is one-way dynamic, but after adding the dynamic elements to enhance the news of the vivid, interesting and image. In addition to dynamic elements to enhance the information expression, it can stimulate the reader's vision. Such as Sina "graphic news" with the plane dynamic map of the form of the show ten years of changes of Shenzhen landslide in the news interface, and the middle of the description of the text and the map below the three-dimensional map can change, which could visually display the decade change of landslides.

Two-direction interactive map. This type of visualization is mainly H5, and H5 is a shorter form of HTML5 short, that is, the fifth version of HTML protocol. HTML is used to render the language of the page. ^[4] HTML5 has the advantage of sharing convenience, learning costs and low development costs. At present, H5 has become one of the visualization of data journalism, and common in the news client, H5, the advantage of which compared with one-direction dynamic map is that the user can take the initiative to operate the content, hands-on sliding screen to flip and other operations to enhance the user to read news to improve the sense of participation. The disadvantage is that under the network restrictions, it is prone to slow loading, and stop, which is easy to produce a bad user experience. In addition, dynamic data maps, dynamic timelines and other forms are often presented in the form of H5. Such as the Qing Ming topic of Peng Pai news, of which enter the interface will be able to see the rain animation, creating a scene "Rains come down in Qing Ming festival", and the user can slide the page, watching the next interface information content.

Games. Mobile phone interaction type is a two-direction communication mode, mainly in the mobile phone media for the display of information content for the user to select. Entering the operation of mobile phone presentation of the corresponding information content, the audience cannot only see the information content, but also be interested in the content of personalized Interaction, in the process of interaction between the dissemination of information. However this form enhances the exchange of information between the audience and information. Compared with the static information presentation, this type is more vivid, more likely to bring the audience

"immersive" viewing the experience, so as to enhance the dissemination of the effect of visual appearance. This type of visual design is more complex, which not only need to make information content and visual symbols effective unity, but also need to meet the audience's information to accept the habit in addition to the need for visual expression on the innovation. In the case of Xinhua, "2015 hot topic '*I draw, you guess*'", for example, after entering the page, there are information prompts to guide the audience to participate in information interaction in the visual design with the finger of the visual symbols to guide the audience to operate, which is very imaged.

According to the Information Content

Political hotspot. The type is mainly reported with political, social, international, economic news, and hot news included. This type of data journalism often integrate a variety of authoritative background information, full of information, but showing simple concise, it will be able to quickly understand all the information of the hot news through the "one map", timely and authoritative.

Policy analyzing. Policy interpretation data journalism often tries to take data as the core to interpret the current policy measures, and the logic of the abstract policy sort out the audience to the urgent concern of small problems as an entrance of the policy information. "From the part to see the all", using the "graphic" offers the way to solve doubts, with the popular discourse and visual symbols, for the audience about the policy of its related interests.

Social life. The type mainly attempts to use the data to explain the current social phenomenon, putting aside the traditional text narrative, with the public barely touched big data to analyze the current social problems. It is to speak with data combined with the broad masses of people concerned about the diversity of issues that people provides services, such as the map to show the next few days about the most congested city lines, with the data to explain the current people are concerned about the two problems, etc., it is with the service content consultation for the interface to narrow the distance between data and public life, which could improve serviceability.

Knowledge science. This type mainly through the data lies on some cold knowledge, common sense, theory or use of data on the current hot events, rumors and other scientific explanation for the broad masses of universal knowledge, dissemination of science. Data journalism of knowledge science mainly uses data and science to establish the authority, so the data and graphic science is essential, from the authority to collect data and then to the scientific data processing and presentation. Knowledge science data intended for the purpose of a picture for the public fans doubts, and smashing rumors.

Trend forecast. In the analysis of the impact of the era of large-scale information on the news industry, Professor Peng Lan, the School of Journalism, the Renmin University of China, proposed that the future direction of the adjustment of the news business is the trend to predict the trend of predictive news and data-driven in-depth coverage. [5] Data journalism relies on public information, which is possible to quickly aggregate effective data related to news topics, to be more comprehensive in reflecting events or phenomena, and to report more on the point of view. The purpose of this paper is to explore the reason behind the phenomenon through data analysis, to show the logic and law of the event clearly and objectively, and to deduce the development trend of the phenomenon and to provide the basis for the next decision.

Data Journalism Communication Features of Mobile News Client

Mobile news client data journalism for the media - mobile media has its own special communication attributes, so the mobile news client compared with other media carrier on the data journalism has a common personality and different personality characteristics.

Information Dissemination Hyperspace

Browsing news and spreading news unrestricted anytime and anywhere is the typical feature of mobile media, of which the portability mobility gives the news real-time open features. Data journalism is no in the exception, and people can read any news at any time. People could share valuable news in real time on social networks with friends. Compared to the traditional news in the form of a large amount of text, the data of the "one picture" can be more cost-effective to read and

share the cost, while the image reading ability is universally possessive. This “see” form in reading mainly relies on the visual organs, which makes the news of the news with a wider spread, as long as the people living in society, and it will be able to natural and real life that is very close to the image symbols, and do not need to follow the specialized learning and training to master. Anyone can "see" and understand the visual information. People accept news information out of time and place restrictions, coming up with mobile phone reading data journalism anytime, anywhere.

Efficiency of Information Spread

On the one hand, data journalism is usually in the form of images, so that people can read through the "eyes" to mobilize their own emotional experience and visual perception, to enable the recipient easy to read susceptibility. People live in the world, that is, to "see" a picture of the image passed to the brain, and imprinted in minds through the eyes. Image reading will show the intuitive image of things on the surface, which do not rise to abstract thinking while the audience could get "at a glance" effect. Compared with the reading text, image reading can bring more intense and sensitive visual stimulation, so that people in a shorter period of time could make more comprehensive, three-dimensional feedback to the specific information.

On the other hand, from the mobile phone characteristics, the efficiency means that the rapid touch, mobile news client reminder, behavior of the data notification can be low-cost and efficient and unlimited time to pass to the audience. The information of the active push is increasing the likelihood of the audience of getting data.

Data journalism Dissemination Significance From Mobile News Client

With the development of mobile Internet technology, mobile media has given data to explore the possibility of more space for development, openness and privacy with mass communication and personality expression. The conflicts between one-direction communication and two-direction interaction rely on the combination of mobile media and data journalism with more collisions, the meaning of which dissemination is mainly reflected in the following areas:

In the Era of Fragmentation to Acquire Efficient, Pleasant News Reading Experience

First of all, the traditional news is mostly narrative as the main form, but the presentation by the text cannot completely replace people in the "see" to obtain the sensibility experience. Visual information can be divided into three categories: the first category is direct, which is to obtain from the eye to the real world directly; the second category is indirect, which is through the media indirect visualization of visual information; the third is fictional visual information from the brain. [6] It can be seen from this classification that the data obtained by the current audience of the visual information is indirect, which is different from people's eyes directly to see the reality of the scene information that is processed by the media presented visual information, and traditional text compared to the visualization of visual information in line with people's rapid access to information needs. It is more emotional, figurative, and easier to spread. The emergence of data journalism allows people to obtain abstract, logical text information to turn to obtain emotional and to concrete image of information. This visual information is conducive to attracting the reader's attention.

Second, with the "reading time" and the accelerated development of mobile Internet, people's reading has been developed to change, while the fragmented reading transmitted into the mainstream. People's reading time is divided by the diversity of information, and their attention is dispersed, from the depth, rational reading to the short, sensual reading. What kind of information could meet the fast, efficient, concise reading needs of the audience, what kind of information will be able to grasp the initiative, data journalism to reshape the way people read the news,. It adapts to the audience rational cognitive and emotional cognitive integration needs, jumping out of the rational expression of the inherent model. It is based on rational data and the premise of the use of vivid images of the form to tell stories for people, while the role of mobile phones offers the audience with immediate and accurate sense. Audience will take “at a glance "to obtain valuable information on their own possible, which is for people with different backgrounds, knowledge and experience to provide a highly efficient way to access information.

“Direct Interaction” to Improve the Sense of Participation of Audience

At present, interactive, dynamic visualization has been explored on the network side, while the performance of data journalism can be dynamically displayed. The audience can be a simple dynamic operation with which could be interacted with. And further performance for the audience to participate in the news, achieve real-time interaction. At present, with the html, Javascript and the progress of the label, the mobile side of the data journalism has different characteristics with the network, one of which is the data map, connecting mobile phone positioning and the news content with the readers' geographic positions, through the display of news topics and the audience's contact for real-time interaction to provide knowledge or social services; the second is the form of html5, the news produced into H5 to spread. This form contains the multimedia content. The characteristics of the phone are more likely given to the audience "participation", the audience "click", "touch", "slide", "zoom" and other finger operation behavior, so that reading the news is not just "see", but the audible sense of touch. This interaction is different from the majority of the network using the mouse tool for the "indirect interaction", but the audience "direct interaction", and this interaction is more likely to enhance the audience perception and participation, but also prone to a sense of immersion.

Conclusion

Canadian scholar McLuhan talking in the status of the media in the development of human society and role of the proposed "media that message", that the media itself is really meaningful message, and the media's most important role is "affect our understanding and thinking habit". From the evolution of news information carrier, audience can see the emergence of new media on the impact of journalism and change. Data journalism is in the context of the era of large data generated, and with the continuous development of technology and the growing popularity of smart phones, so that the carrier of data journalism transmitted from the newspaper, television, network and other media to the mobile phone with this new media evolution. Although the mobile side of the data journalism is still in the trial stage, but the intuitive, fun, simple expression has been the initial results. Mobile data began to become an important entry, more and more mobile phone news will appear.

References

- [1] Fang Jie, Yan Dong. "Data journalism" Under Global Perspective: Ideas and Practice [J]. International Press, 2013 (06): 73-83.
- [2]iiMedia. 2015-2016 China Mobile News Client Market Research Report [R]. 2016 (01).
- [3] Zhang Yongqin. 2012 Mobile New Media News Client Influence Research [J]. News Practice, 2012 (09): 4-8.
- [4] Zhang Xu-quan, Sang Rong. Study on Visualization of Data in Large Data Age [J]. News World, 2015 (04): 99-100.
- [5] Peng Lan. "Big Data" Era: The News Industry is Facing a New Shock [J]. Friends of the Editor. 2013 (01).
- [6] Ren Yue. Introduction of Visual Communication [M]. Beijing: Renmin University Press, 2008.