

# The Use of Data Journalism in China

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**Abstract**—It is generally believed that data is very important in news reporting, especially in modern news outlets. Data can help people to understand the world better, and with data, the truth is discovered during the news content. In other words, people live in a real world surrounded by data, and now everything can become data. Therefore, people must learn how to use and analyze the data in news reporting. This article discussed the data journalism in China; a qualitative research method was designed to explore the situation among Chinese journalists and journalism students. It is concluded that cooperation between computers and journalists will be a new trend in the field of data journalism.

**Keywords**—journalism; China; importance; reasons

## I. INTRODUCTION

In today's data-driven world, professionals need to know how to express themselves in graphical languages. Data journalism is also known as "data-driven news", it is a troublesome term because it often involves a lot of numbers, which journalists usually reject using it [1]. As it not only takes a lot of time and energy but also requires good technology skills. Compared with data journalism industry in Western countries, China has a lot of good professional data analysis equipment. However, because of the late development of data journalism in China, there are also some problems, such as incomplete data presentations, poor skills and the lack of training for journalists and news organizations. So, this article will first look at the reasons why journalists use data, examine the importance of data news. Then analyze the current situation of data journalism in China, and finally discuss the future of data journalism.

## II. WHY JOURNALISTS USE DATA

It is true that data journalism plays an important role in our society. Data journalism can help people better understand the world. For example, with figures and data, the public can distinguish the false news and the deluge information today especially in the financial field and economic aspects [2]. Secondly, it can help the public get rid of a large number of words, and people can save a lot of time and adapt to the fast-paced modern life. As we know, people now are living in a society which is exchanged constantly, and people prefer to get more information in a short time. Compared with traditional journalism, the writing methods of data journalism have been changed, and the traditional descriptive news has been changed into critical and logical

reasoning writing style. By collecting and analyzing the data, people can know what is happening to the world. In addition, it facilitates people to make decisions, for instance, the college entrance examination in China, if data is used in reporting, the students can clearly understand how many students take part in this exam, and it is really helpful. Data sometimes is regarded as a calculator, which has a great impact on people's lives.

## III. THE IMPORTANCE OF DATA JOURNALISM

News can be more objective and credible. There is much false news in today's society. While by using data in news reporting, much false news can be filtered out. Goldacre pointed out that journalists did not mention the data, because they deliberately ignored them [3]. However, once data is used for reporting, many problems are easily exposed. Through data news, people can see a different perspective of the world, and story news with data is more attractive and easy to catch people's attention. Data can help people discover news stories hidden behind data. In addition, data news can help people to transform the complex, abstract and difficult contents into simple and vivid news reports. Thus, people can be easier to understand the stories. Based on these data, people can think about things from different perspectives rather than journalists telling people what happened.

## IV. THE SITUATION OF DATA JOURNALISM IN CHINA

China's data journalism originated from the Western countries. Between the 1980s and 1990s, Chinese media began to introduce the concept of precision into news reporting. For example, many universities have been offered precision journalism and quantitative analysis lessons for students who were studying in journalism and communication. However, due to the limitations of technology, it has not been widely used in news practice, because data collection relies heavily on scientific surveys, such as questionnaires and public opinion polls, which are usually used in small-scale experiments.

Journalists have poor skills in operating machines and lack training. At the beginning of the 21st century, with the popularization of the internet and computer technology, the application of computer-assisted reporting and data journalism have been gradually increased in China. Most of the data are used to supplement the interpretation of news reports [4]. Like Sohu launched China's earliest data news

column "Digital Way" as early as May 21, 2011. Other online media began to test data news in 2012, such as Netease's "Digital Reading". Subsequently, CCTV Evening News officially launched its "According to" series on January 25, 2014 [5]. However, in the early days of data journalism, the media usually presented data only by making simple static or charts. These problems will be solved in the future. On October 19, 2018, as the largest new media experimental center in Shanghai, the Shanghai New Media Experimental Center of Fudan University opened. In addition, the School of Journalism of Fudan University and Pengmei News co-founded the "Data Future Laboratory" to study visual intelligence. [6].

Many journalists and news departments provide inaccurate data. Although many experimental centers have been built in China, there are still many problems. Like the misuse of data, incomplete data in news reporting, and the lack of efforts to repair them. These are normal things in news reporting [7]. Incomplete data is usually used by journalists, such as the lack of standardization in the spelling of names and places as well as inaccuracy record or layouts. This directly results in the poor understanding of the public for data and statistics presented by journalists [8]. Many journalists do not know how to access the data, and the data are usually used in a wrong place where is no meaning at all. The reason is the journalists are lacked training in this field, and they have the poor skills in analyzing and using the data by the machine.

Journalists are easy to get the data in our society, which can lead to many moral problems. Unlike traditional journalists, citizens may not know when they will contribute the public events [9]. For example, social media posts can be identified publicly in context and without their knowledge or consent, which can lead to privacy violations and uncomfortable feelings. In addition, when people use social media, it's easy to get phone numbers, accounts and ages through media platforms, and people do not know when their data will be used for commercial or public purposes, which is very dangerous. Therefore, it is very important to the public and journalists to raise their awareness when using these data.

## V. THE FUTURE OF DATA JOURNALISM

Generally speaking, data news is a mainstream trend in the field of news all over the world, especially in China. With the development of the computer and science technology, the relationship between data news and the digital world must be more and closer. Chicago has established a special data news studio to merge programmers and journalists into a single department in an effort to make digital news more and more professional [10]. The demand for data news visualization is increasing. It not only requires traditional tables making or presentations but also needs a higher requirement for visual effects. In the era of data journalism, People not only require news to be a simple statement and an objective one, but also they want to dig deeply through data. What is more, it provides a new model for news data. People prefer to use charts rather than lengthy

text, use colors to increase the diversity of news, and discover the relationship between data and news in the world.

In order to study the application status of data news in China, a research method was designed below. Quantitative research method was involved, and the subjects all are professional journalists who worked in this area for at least five years. A depth interview was used by We chat, and the conversations were taken down by hand. The research questions were how they think of data journalism and how they used data in reporting.

TABLE I. THE BACKGROUND INFORMATION OF PARTICIPANTS

Education level	Age (years)	Gender	Working Experience (years)
Postgraduate	29	Female	5
Undergraduate	28	Male	6
Postgraduate	33	Male	6
Undergraduate	28	Male	5
Undergraduate	33	Female	9
Undergraduate	30	Female	8
Postgraduate	29	Female	5
Undergraduate	30	Male	6
Undergraduate	36	Female	12
Undergraduate	35	Female	11

"Table I" shows clearly that 10 journalists are all with high experience in the field of data journalism. All of them thought that data journalism was really important in news reporting. The five journalists said that they knew the data journalism, while they just understood theories. Even the types of devices like data laboratory had been built, they did not know how to operate the machine and how to use the software to analyze those data. The other five journalists told me, they thought the computers were hard to use, and they did not like numbers and data, which made them crazy. Furthermore, they said nobody told them how to use and analyze data both in universities and workplaces. More importantly, they rejected figures and data. In addition, they lacked relative learning and training. People who work in social media apartments mentioned that they were trying to use data in the news, but they found it really wastes a large amount of time and energy. So, until now, the data news has not been widely used in news practice in China.

## VI. CONCLUSION

In conclusion, data journalism is becoming more and more important all over the world. It can help people understand the authenticity and objectivity of news reports. However, China's data news still faces many challenges, and the traditional model of journalists and news organizations will need to be greatly changed. With the development of the news industry, numbers and data will occupy a very important position. Data journalists need to master certain processing capabilities. People have become increasingly aware of the importance of data news, but data news needs higher logical reasoning ability and scientific computing ability. Journalists not only need to learn professional subjects, but also they have to understand the subjects of science, computer as well as statistics. Of course, this is almost impossible for one person, so the future data news

must be teamwork. Therefore, computer engineers will also play a greater potential in this field, and cooperation between journalists and programmers is also a major trend. So, professional news organizations require programmers and journalists to work together to make more precise data news. In addition, various kinds of software are being developed to show people good visualization effect.

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