



Research Paper

On the Development and Changes of Chinese Document Carriers ——From weightier than Mount Tai to Light as a Feather

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ABSTRACT: Literature is an essential source of information for scientific and technological progress, and the literature carrier is an essential medium for knowledge inheritance. There are different ways of literature transmission in each era. This paper summarizes three major evolutions of document carriers, namely non-paper document, paper document and electronic document. This paper analyzes the generation and transmission modes of various document carriers, and reveals and expounds the three evolutions of document transmission modes, which have a great impact on the development of science and technology. It has provided a more convenient platform for scientific research workers to consult literatures, promoted the development of China's science and technology, and played an important role in the progress of human society.

KEY WORDS: literature carrier; Change; The development trend

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I. INTRODUCTION

The material entity that records, preserves and disseminates documents is called the carrier of documents. In the history of Chinese literature, shells and bones, gold and stone, bamboo slips, silk, paper, etc., were used for writing and printing successively, leaving documents on various types of materials for mankind. Due to the different development of science and technology in each era, the form of its carrier is not the same. Silk was developed from simple natural material to complicated materials such as paper, glial, magnetism and light. With the development of human science and technology, the document carrier has changed from bulky to light, its load of information has changed from less to more, and the speed of information transmission has also changed from slow to fast.

The different disciplines of modern science permeate each other, promote each other and develop together, the traditional discipline boundary is broken unceasingly, the discipline is more and more divided, more and more tend to be comprehensive, the interconnection between the discipline is more and more close. Any course of the development of science and technology combined with the overall level of science and technology, with the increasing amount of literature, to meet the workers to study the new knowledge of science and technology, the need of new things and new topic, literature carrier will be constantly updated, to hold more information, more convenient to use, download literature efficiency is accelerated, can grasp the latest technology trends. In the process of dissemination, the document carrier should be conducive to dissemination, collation and long-term period.

1. Early literature carriers

The material of document carrier has been metabolizing in the evolution of human civilization. In the early primitive society, due to the low level of social productivity, the exchange of ideas, dissemination of knowledge and dissemination of experience in the process of life and production depended on language, expression, gesture, action and other natural expressions. Carved by knotting, deed (deed is a number with a certain lines as a symbol, recording tool, inscribed on the bamboo or wood goal mainly is used to record the number) help, such as memory, knotting and moment are not words, they are not linked with fixed word in the language, the same knotting and carved represent not only the time, can also represent a place, true meaning only the parties know that the other people all don't understand. This primitive way of recording is in line with the social situation at that time. It was not until the primitive commune period that Chinese characters came into being. Since then, the Han people began to break away from the era of barbarism and learn to record their own

language in writing to help people remember it. The creation of words does not mean the creation of books, from words to books, there is a period of preparation. Although there were written records of this period, they were far from books, but only real things like books. The earliest document carrier in China can be traced back to the Shang Dynasty more than 3,000 years ago. Some were carved on the bones of tortoiseshell, some on bronze vessels, and some on stone. At that time, rulers often used tortoiseshell bones for divination. Then people will divination content with words engraved on the turtle bones, engraved on the tortoise tortoise bones called inscriptions. These inscribed oracle bone inscriptions are the oldest extant documents in China. It is an important historical document reflecting the social situation of the Shang Dynasty. This part of the literature is our understanding of the social appearance of the Shang Dynasty, the study of the history of the Shang Dynasty is very valuable books. In addition, there are symbols carved on bronze vessels. This kind of writing exists from Yin and Shang Dynasty to Zhou Dynasty, Spring and Autumn Period and Warring States Period, Qin and Han Dynasties.

Brief books are the beginning of formal books in our country. Jane divided into wooden and bamboo slips. Mujian is to split wood into thin slices, and then write on it, record the language, to become a book; Bamboo slip is to remove the green skin of the bamboo, and then write on it, record things. This method began to be used in the Shang Dynasty and continued until the Han Dynasty. Each piece of wood or bamboo can contain not many words, so it often takes a lot of simple materials to complete the recording. These numerous compensations were tied together with silk cords or belts to form pages of books, which were the earliest books in our country. Such simple books are very heavy and inconvenient to carry and read. It is recorded in history that First Emperor of Qin had to read and approve 60Kg of bamboo and wooden slips every day, which really weightier than Mount Tai.

At the end of the Spring and Autumn Period, people began to write with silk on the basis of bamboo and wooden slips. White silk is easy to write and large capacity, easy to read, but also can be rolled up for collection. The text written on the carrier of silk, known as silk, this is a great progress in the development of Chinese books. However, this kind of silk is too expensive for ordinary people to afford.

2. Paper carrier

Paper was invented by Cai Lun in China during the Eastern Han Dynasty in 105 AD. The invention and popularization of paper made it the main writing material since the Jin Dynasty. Paper is light, cheap and suitable for writing and mass production. As a record material, paper provides a solid material foundation for mass production and widespread dissemination of documents. A book made of paper, which can be rolled up or stretched out, is called a scroll. Although books on paper books can be rolled and stretched, it is not convenient for collection and reading. In order to improve this disadvantage, Chinese ancestors invented the method of binding books with thread. This kind of book bound with thread is one by one, easy to display, easy to collect. In the 1140s, a Chinese man named Bi Sheng invented movable type printing in Hangzhou. With movable type, people no longer carved wood. The invention of movable type by Bisheng was about 400 years earlier than that of lead type by the German Zottenber.

Paper and the invention of printing and promote the use of, make the literature production and propagation of entering a new historical period, not only greatly shorten the production cycle, increase the amount of copy documents and total quantity, and start the literature production by manual work into a new era of mechanization, industrialization, the printing cost dropped substantially, create conditions for literature of mass communication and communication. Paper documents are light, easy to read and copy, low price, soft texture, easy to write and carry and convenient to collect, etc., easy to spread and communicate in the society. Therefore, the second evolution of literature represented by paper carrier has been continued up to now, which is another qualitative leap in human information storage and transmission technology.

3. Electronic carriers

With the progress and development of science and technology, paper documents can no longer meet the requirements of fast information transmission, efficient reference and high-density storage, so documents of other media emerge at the historic moment. These documents mainly include miniatures, audio-visual documents on disk and CD-ROM. Miniature literature in photographic materials as the carrier, replica made of photographic technology literature, the main advantage of miniature literature is small volume, light weight and information storage capacity big, in addition, the miniature literature has a low cost, long shelf life, easy retrieval copy amplified into other forms of literature, the advantages of therefore, miniature literature has been in the library, archives has been widely used.

Microform documents break away from the traditional form of written records. Compared with paper documents, microform documents directly record sound and images, giving people an intuitive feeling, so it is also called direct perceptual materials. The biggest advantage of disk is that it can randomly access the required data, and the access speed is fast, which is suitable for large-capacity retrieval. A floppy disk is a magnetic

recording carrier coated on a soft plastic disc. Its biggest advantage is that it is more convenient to carry, with small volume, light weight, simple structure and low price.

With the rapid development of computers and the arrival of the information age, e-books have become an important way for people to acquire knowledge, and the arrival of digital library makes digital reading become the direction of future development. Digital libraries store information resources of different carriers and different geographical locations with digital technology, so that they can be easily searched and spread across regions. It involves the whole process of information resource processing, storage, retrieval, transmission and utilization.

Electronic document is the inevitable product of the evolution of document carriers in the information society. It is a new type of knowledge and information carrier. With magnetic, optical and electric media, various forms of information such as text, sound and image, animation are stored on magnetic, optical and electric media in digital mode, and read and used by computer devices. Compared with paper documents, electronic documents have the characteristics of large information storage capacity, convenient use, powerful retrieval function, both text, text, sound and image, short publication cycle, high-speed transmission of information through computer network, fast information acquisition and update, etc.

4. Retrieval methods of different literature carriers

Paper literature requires researchers to go to the library to find books, and then select articles according to the required content, and finally select the knowledge and materials they need after reading, which takes a lot of time. Electronic literature review speed is fast, and you can find the required content accurately. Appear in the computer, with its quantity response is fast, convenient access to have started to dominate the literature review, with the development of computer technology and workers to refer to need the requirement of science and technology, computer retrieval more and more important role, computer retrieval mainly experienced the following four stages: the first stage, the offline retrieval phase, it speeds up the searching speed, save time, but the available information is limited. The second stage, on-line retrieval stage, to a certain extent, makes the available information increase, can obtain more relevant information and make up for some shortcomings of offline retrieval. The third stage, CD retrieval stage, CD light weight, simple structure, low price, access speed, easy to use, improve the efficiency and quality of retrieval. In the fourth stage, network retrieval stage, the emergence of the network makes the world suddenly become small, through the network can be obtained at any time around the world's latest information, network retrieval to a certain extent to improve the failure rate of literature, update information fast and convenient. Now all kinds of professional search websites are relatively complete, and it is convenient to consult all kinds of literature. The change of document carrier and the change of access mode are corresponding to the change of document carrier, and the change and improvement of document carrier, the access mode will change accordingly. From the history the history change of the literature carrier as light as a feather, consult way, from the manual retrieval and computer retrieval saw it all, the society advances, the need for information is, the greater the improvement of literature carrier and new discovery will not stop, consult the method remains to be the latest best way to explore, to adapt the demand of the growing development of the new situation.

II. CONCLUSION

From ancient times to modern times, human beings have never stopped exploring the world, and literature has left traces on all of them. From oracle bone inscriptions to silk manuscripts, and then to paper books, and now electronic documents, each development has promoted the renewal of knowledge. Compared with previous literature carriers, electronic literature has greater advantages. Firstly, it is convenient for people to look up literature at home. Secondly, the network has many searching ways, fast searching speed and no time limit. Many people can use the same literature at the same time. Digital library in digital computer can handle stored digital information and network information, has intelligent way of information retrieval and unified retrieval interface, using advanced information processing technology and the Internet, to provide various language compatible multimedia remote digital information, is a new form of the new age literature carrier. The historical change of the document carrier from overwhelming to light as a feather to electronic document has improved the research environment of researchers, improved the research efficiency, and played a positive role in promoting the construction and development of libraries.

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