

Cataloging and the study of ancient Chinese book classification systems

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Abstract. This paper explores the historical development and interrelationship between bibliography and the ancient Chinese book classification system. By systematically sorting out the book classification methods from the pre-Qin period to the Qing Dynasty, it studies the theoretical contribution and practical application of bibliography to book classification in different historical periods, focusing on the formation and evolution of the four-part classification method of “classics, history, philosophy, and collections”. The paper also discusses the impact of the ancient book classification system on modern librarianship and information management, and reveals the reference value of traditional classification methods in the context of digitization and globalization. Through historical analysis and documentary research, this paper summarizes the characteristics of China's ancient book classification system and its role in knowledge management, and looks ahead to future research directions in bibliology.

Keywords: Bibliology; Book Classification System; Four-Part Classification Method; Document Management; Knowledge Inheritance.

1. Introduction

Bibliology, as a discipline that specializes in the compilation, classification and management of bibliographies, has a long history and profound cultural heritage in China. Ancient Chinese literature is vast and there is a growing need for systematic book classification and management as books and documents accumulate. In order to more effectively preserve, retrieve and pass on knowledge, ancient Chinese scholars gradually formed a relatively complete book classification system over a long period of practice, the most representative of which is the four-part classification of “classics, history, philosophy, and collections”. Cataloging is not only a technical means of organizing documents, but also an important component of the ancient Chinese knowledge system. Studying cataloging and the ancient Chinese book classification system not only helps to understand the wisdom of ancient Chinese document management, but also provides an important historical reference for modern librarianship and information management.

This study aims to explore the evolution and interrelationship between cataloging and the ancient Chinese book classification system, with a particular focus on the classification methods from the pre-Qin period to the Qing Dynasty and their impact on later generations [1]. Through the analysis of book classification methods in different historical periods, this study attempts to answer the following questions: first, the specific role and influence of bibliography in the ancient book classification system; second, with the continuous increase of documents and the complexity of knowledge systems, how the ancient book classification system gradually developed from simple to complex and from rough to fine; third, the potential application and value of ancient classification methods in modern information management and digital libraries. In addition, the study will also explore the comparison of Chinese and Western book classification methods, and analyze the unique contribution of the ancient Chinese classification system in the global knowledge management system [2].

To achieve the above research objectives, this paper adopts a research method that combines historical analysis. First, by collating and analyzing important ancient bibliographies such as “Bie Lu,” “Qi Lue,” “Sui Shu·Jing Ji Zhi,” and “Si Ku Quan Shu,” the book classification methods and cataloging theories of each era are examined in detail. Second, the interaction between bibliography and classification practices was analyzed in the context of the ideological background and cultural context

of ancient scholars. In addition, this paper also introduces the theory and technology of modern librarianship into the research framework, and explores the enlightenment and contribution of the ancient Chinese classification system to modern information management by comparing and analyzing the Chinese and Western book classification systems. Through the comprehensive use of these methods, this paper not only sorts out the historical development of ancient Chinese book classification, but also reveals the central role of bibliography in the organization and transmission of knowledge.

2. Basic concepts and development of bibliography

As a discipline, bibliography mainly studies the cataloging, classification, retrieval and management methods of books. Its core lies in how to scientifically organize, categorize and retrieve books and documents. In a broad sense, bibliography is not limited to the compilation of bibliographies itself, but also covers the theory and technology of organizing, sorting and classifying information resources. In a narrow sense, bibliography focuses more on the compilation of specific bibliographies, including the design of bibliographic formats, the formulation of classification standards, and how to manage documents conveniently and efficiently. The object of study in bibliography is not limited to books, but also includes various types of literature, cultural relics and other information carriers. Its role is to provide scholars and readers with accurate ways to search for literature, and to help people acquire and manage knowledge more systematically [3].

The origins of bibliography can be traced back to the early stages of ancient civilizations. With the invention of writing and the accumulation of documents, the need for management of books and documents gradually emerged. Early bibliography was more of a practical need—how to effectively organize and store large amounts of documents so that future generations could easily access and inherit them. For example, in the West, simple methods of classifying documents already began to appear during ancient Egyptian and Greek civilizations [4]. In China, as the number of books gradually increased, especially during the pre-Qin period, simple methods of classifying and managing documents also began to appear. For example, there are scattered records of document organization practices in classic documents such as *Zuo Zhuan*. These early attempts laid the foundation for the formation of bibliographies in later generations.

Chinese bibliographies really took shape and developed during the Han Dynasty, especially during the Western Han Dynasty. The compilation of the *Bi Lu* and *Qi Lue* by Liu Xiang and Liu Xin marked the initial establishment of the Chinese bibliographic system. As the first systematic bibliography in ancient China, the *Qi Lue* not only classified and organized the literature of the time, but also provided a theoretical basis for the classification of future literature and the development of bibliographies. Subsequently, during the Wei, Jin, Southern and Northern Dynasties, with the gradual improvement of the national book collection system, the classification standards for books were further developed, and the theoretical system of bibliography gradually improved [5]. During the Sui and Tang Dynasties, with the publication of the *Sui Shu Jing Ji Zhi*, the ancient Chinese book classification system gradually matured, and the four-part classification method of classics, history, philosophy and collections was officially established and passed down to future generations. During this period, the status of bibliography in China began to stabilize, and it became an important part of book management and knowledge system construction.

By the Song Dynasty, bibliographical science had continued to evolve in China and was showing new signs of development. Both official and private Song bibliographies began to pay more attention to the refinement of classification. The appearance of bibliographies such as *Chongwen Zongmu* marked an innovation in bibliographical science in terms of classification techniques and cataloguing methods. The *Yongle Encyclopedia* and *Siku Quanshu* of the Ming and Qing Dynasties further systematically summarised and improved bibliographical science. Bibliographical science reached its peak in ancient China during this period, laying a solid foundation for the collation of documents and the transmission of knowledge in later generations [6].

In short, the development of bibliography is inseparable from the evolution of Chinese culture and knowledge system. From the early demand for organizing documents, to the systematization of the Han and Tang dynasties, and then to the refinement of the Song, Ming and Qing dynasties, Chinese bibliography is not only a technical system of book management, but also a core tool for the inheritance of Chinese culture and knowledge. It not only reflects the wisdom of ancient document management, but also provides valuable experience and inspiration for the development of modern bibliography.

3. Historical development of the ancient Chinese book classification system

The development of the ancient Chinese book classification system can be traced back to the pre-Qin period. Although the amount of literature during this period was limited, the sorting and management of literature had already begun to take shape. In pre-Qin society, books mainly existed in the form of bamboo slips or silk books, and the sorting methods were relatively simple. The preservation of various types of literature mostly relied on the official or aristocratic collections, and the classification and organization of literature was often not systematic. It was mainly based on a preliminary division according to the nature of the content, such as the books “Shangshu” and “Zuozhuan” belonging to the categories of history or classics, but a complete classification system had not yet been formed. However, the preliminary practice of organizing literature during this period laid the foundation for the classification of books in later generations and provided the conditions for the emergence of a systematic classification method.

The Han Dynasty was an important stage in the development of China's book classification system. The father and son Liu Xiang and Liu Xin were important representatives of book collation and classification during this period. Liu Xiang was ordered to collate the imperial collection of books. In the process of collation, he not only collated the content, but also classified the books according to their content and nature, and wrote “Bie Lu”. “Bie lu” (Separate records) is one of the earliest Chinese bibliographical works [7]. Although it has not been completely preserved, Liu Xin's expansion and supplement of it formed ‘Qi lue’ (Seven approaches). This book is not only the prototype of ancient book classification, but also divides documents into ‘Liu yi lue’ (Six arts), ‘Zhu zi lue’ (Various philosophers), ‘Shi fu lue’ (Poetry and prose), ‘Bing shu lue’ (Military books), ‘Shu shu lue’ (Mathematics and astronomy) and ‘Fang ji lue’ (Practical skills), etc., initially establishing systematic book classification standards. This classification method laid the foundation for ancient Chinese book classification and had a profound impact on later generations. By the Sui and Tang dynasties, with the rapid increase in the number of books, the book classification system was further improved. The Sui Shu Jing Ji Zhi of the Tang dynasty became one of the most important achievements in book classification at the time. Jing Ji Zhi adopted the four-part classification method of “classics, history, philosophy, and collections” to systematically organize historical documents. This classification method not only reflects the structure of social culture and academic thought at the time, but also became a classic model for the classification of ancient Chinese books, which was used for a long time by later generations.

The Song and Yuan dynasties innovated and developed the book classification system based on previous work, with the Chongwen Zongmu and Tongzhi Yiwenzhuan in particular. The Chongwen Zongmu of the Northern Song dynasty was a catalogue of the official library at the time. It refined the classification of books, further subdividing the four categories of classics, history, philosophy and collections, and improved the way the catalogue was arranged, making the content of the bibliography more systematic and organized. Zheng Qiao's “Tongzhi · Yiwenzhuan” (Comprehensive Records, Brief on Literature and Art) from the Southern Song Dynasty added annotations and analysis to the bibliographic records on the basis of the traditional classification method, proposed more detailed classification standards, and contributed important theoretical support for the development of bibliography [8]. Innovations during this period were not only reflected in the refinement of classification, but also in the improvement of the cataloging system, providing an important example for the organization of books in later generations.

During the Ming and Qing dynasties, the ancient Chinese book classification system reached a high degree of maturity and perfection. In particular, the Qing dynasty's Siku Quanshu was a landmark in summarizing and improving the book classification system. The Siku Quanshu not only inherited the four-part classification method of “classics, history, philosophy, and collections,” but also conducted a more detailed division of disciplines and entries for various types of documents, greatly enriching the hierarchical nature of book classification. This magnum opus systematically classified a large number of ancient books and was accompanied by detailed catalog annotations, making document management and retrieval more convenient [9]. The Siku Quanshu's classification method had a profound impact on later library science and bibliography, and it became the pinnacle of ancient book classification. Through the efforts of this period, the ancient Chinese book classification system not only became more complete in form, but also achieved a high degree of systematization and standardization in an academic sense.

In summary, the development of the ancient Chinese book classification system gradually evolved from its embryonic form in the pre-Qin period to systematization in the Han and Tang dynasties, and then to innovation in the Song and Yuan dynasties, before finally reaching perfection in the Ming and Qing dynasties. The classification methods and practices of each historical period not only reflect the cultural background and academic needs of the time, but also laid an important foundation for the development of modern library management and cataloging.

4. Main types and characteristics of the ancient Chinese book classification system

The most representative and influential classification system in ancient Chinese libraries is the four-part classification system of “classics, history, philosophy, and collections”. The four-part classification system can be traced back to the classification standards of Liu Xiang and Liu Xin in the Han Dynasty, such as the Six Arts and the Masters, but it was not until the Sui and Tang Dynasties that it was truly systematized and established its canonical status, especially in the compilation of the Sui Shu Jing Ji Zhi. This classification system divides literature into four categories based on the nature of the content: the “classics” category includes Confucian classics such as the Five Classics and the Thirteen Classics; the “history” category includes historical documents and annalistic history books; the “philosophy” category includes the academic thoughts of the Hundred Schools of Thought, such as Taoism and Legalism; and the “collections” category includes literary collections, poems, and other literary works. This classification standard not only reflects the main schools and systems of thought in ancient scholarship and culture, but also provides a systematic framework for easy retrieval and management for future generations.

The four-part classification system was widely used in ancient Chinese book classification, but its limitations should not be ignored. First, although the four-part classification system can cover a large number of documents, as the content of documents becomes more complex and diverse, this system becomes less flexible when it comes to detailed classification. For example, it is difficult to simply categorize emerging or interdisciplinary content into the four categories of classics, history, philosophy, and collections, which has led to the need for subsequent classifiers to constantly adjust and expand the original system. Second, the four-part classification system reflects the status of “classics” as the center of ancient scholarship. Documents in other categories, such as science and technology and natural sciences, are often classified under “zizi”, which makes it difficult to find a more independent and refined classification standard for these fields. In addition, with the development of literature, art and other fields, the number of anthologies has skyrocketed, which also poses a challenge to the subdivision of the “collection” category [10].

In addition to the four-part classification system, there were other ways of classifying books in ancient China, in particular the classification of schools of thought and the classification by subject. The classification of schools of thought focuses more on the distinction between different schools of thought and academic disciplines, and divides documents into different categories such as Taoism, Legalism, and Mohism according to their ideological content and school characteristics [11]. This

classification method is more in line with the historical background of the Warring States period, when there were hundreds of schools of thought contending with each other, and reflects the diversity of thought and culture. Subject classification and content classification start with the external form and theme of the literature, and categorize books according to genre, purpose, subject, etc., such as poetry, prose, essays, history books, etc. Subject classification is relatively flexible and is suitable for the management of literary works and art books. However, it may lack clear disciplinary boundaries in the classification of academic literature. In contrast, content classification focuses more on the nature of the discipline, and categorizes documents according to the field and research direction they cover, such as natural sciences, medicine, military strategy, etc., and is suitable for the management of highly specialized documents.

In different historical periods, the book classification system has also evolved with changes in cultural needs and the accumulation of documents. The Han Dynasty's classification system focused on the tradition of Confucian classics, with other schools of thought relatively subordinate. By the Tang Dynasty, the four-part classification method had gradually matured, but the classification of documents was not yet very detailed. During the Song and Yuan dynasties, with the widespread dissemination of knowledge and the rapid increase in the number of documents, the classification of books began to develop in a more refined and systematic direction. For example, the Chongwen Zongmu further enriched the content of the four-part classification method. During the Ming and Qing dynasties, the book classification system reached its peak in ancient times [12]. The Siku Quanshu refined the subdivisions on the basis of the four-part classification method, striving to comprehensively cover all the categories of documents at the time, and added detailed annotations and comments to make the classification of documents clearer and more explicit.

Overall, the ancient Chinese book classification system is diverse and unique. The four-part classification method is undoubtedly one of the most representative, systematizing the classification of documents and influencing the way documents were managed for centuries to come. However, as the content of documents continued to expand, the classification methods of the Hundred Schools of Thought and subject classification provided more diverse ideas and methods for organizing ancient documents. The combined effect of various classification methods has promoted the continuous evolution and improvement of the ancient Chinese book classification system.

5. The influence of the ancient Chinese book classification system on modern book classification

The ancient Chinese book classification system has had a significant influence on the development of modern book classification and librarianship. The core concept of ancient book classification, i.e. the method of classifying books according to content and subject area, is still an important foundation of modern librarianship. In particular, the systematic and practical nature of the four-part classification system of the classics, history, philosophy and collections has set an example for modern book classification. In modern library classification systems, many classification principles, such as subject classification according to theme and content, can actually be traced back to ancient Chinese classification practices. In addition, the hierarchical and systematic nature of the ancient book classification system also provides a reference for modern book cataloging and information retrieval, making information management more scientific and efficient. Ancient book classification is not only the organization of documents, but also the combing of knowledge structures. This idea has been widely used in modern librarianship.

However, with the development of the times and the rapid growth of the amount of literature, the ancient book classification system is also facing the problem of convergence and innovation with modern needs. In modern librarianship, the classification system pays more attention to widely adapting to the diversity and complexity of different disciplines. Although the traditional four-part classification method is classic, it has certain limitations in terms of detailed classification. For example, the development of modern science and technology has given rise to a large number of

interdisciplinary emerging fields, and it is difficult to simply classify the literature in these fields into traditional classification frameworks. Therefore, modern book classification systems must innovate on the basis of tradition. Modern classification methods such as Dewey Decimal Classification and the International Book Classification have absorbed and adapted ancient classification systems. These classification methods are not only more refined, but also able to adapt to the needs of global academic exchanges, making information management and document retrieval more accurate and efficient.

In comparing and drawing on Chinese and Western book classification methods, we can see that they have both commonalities and significant differences in terms of their underlying concepts. The ancient Chinese book classification system was based on the four categories of “classics, history, philosophy, and collected works”, which reflected the academic and cultural structure of ancient China centered on Confucian classics. In contrast, modern Western book classification systems such as the Dewey Decimal Classification rely more on the subdivided structure of subject areas such as natural sciences and social sciences. Although the two differ in their specific divisions, they both follow the basic principle of categorizing according to the nature of the content. Therefore, in the design and implementation of modern book classification methods, Chinese and Western classification systems can complement and learn from each other. For example, the macro framework and rationality of the ancient Chinese classification method provides ideas for the Western classification method, while the refinement and standardization of the Western classification method has injected new vitality into the development of modern librarianship in China. In the globalized information age, integrating and innovating by combining the advantages of Chinese and Western classification methods can help build a document management system that is more adaptable to the needs of modern society.

Overall, the ancient Chinese book classification system not only laid the foundation for the theory and practice of modern librarianship, but also promoted the development of modern document management through convergence and innovation with modern classification methods. The comparison and reference of Chinese and Western book classification methods has further enriched the theoretical system of librarianship and provided useful experience for building a global information management platform. In this process, ancient wisdom and modern technology have combined to promote the effective organization and dissemination of knowledge.

6. The role of bibliology in the ancient Chinese book classification system

The role of bibliology in the ancient Chinese book classification system cannot be ignored. It formed a close interactive relationship with book classification. Bibliology, as a study of bibliographic compilation, classification and management, directly serves the needs of book classification. Early book classification was often intended to better manage and preserve documents. Bibliology made the book classification system more systematic and organized by providing classification standards and operating guidelines. For example, when Liu Xiang and Liu Xin compiled the *Bi Lu* and *Qi Lue* during the Han Dynasty, they organized and catalogued the imperial collection according to categories based on the principles of bibliographic science. This not only helped preserve and retrieve documents, but also laid the basic framework for book classification in later generations. Therefore, the theory of bibliographic science directly influenced the construction of the classification system, and the two promoted each other, driving progress in document management.

The development of cataloging has played an important role in improving the book classification system. As the amount of literature increases and the field of knowledge expands, simple classification methods can no longer meet the needs. Cataloging has continued to develop and innovate in this process, injecting new ideas and technologies into the classification system. The *Sui Shu Jing Ji Zhi* of the Sui and Tang dynasties, the *Chongwen Zongmu* of the Song dynasty, and the *Siku Quanshu* of the Ming and Qing dynasties are all outstanding achievements of the combination of cataloging and classification practices. Cataloging not only provides the theoretical basis for the classification of these bibliographies, but also promotes the evolution of the classification system

through continuous summarization and improvement. For example, in the research process, cataloging analyzes documents by category and classifies them into a systematic classification method. This process not only deepens the theory, but also guides the practice of classification. As the theory of cataloging matures, the hierarchical and detailed levels of the book classification system also gradually improve, which can better cope with the complexity of documents.

The combination of bibliographic theory and practice is the key to its role in the ancient Chinese book classification system. Bibliographic science is not just a theoretical discipline; it is always closely linked to practical operations. Theoretically, bibliographic science studies how to effectively classify, search and manage documents; in practice, it provides operational standards and methods for specific book classification and cataloging work. For example, the establishment and improvement of the four-part classification system is a typical case of the combination of bibliographic theory and practice. In actual operation, bibliographers can accurately and efficiently complete bibliographic compilation work through an in-depth understanding of the content of the literature and the application of classification principles. At the same time, the theory of bibliographic science is also tested and revised through practical operation, making the classification method more scientific and reasonable. Bibliographic science not only enabled the ancient vast literature system to be effectively managed and passed down, but also left valuable theories and experiences for future generations.

In general, the role of bibliography in the ancient Chinese book classification system is reflected both in its theoretical guidance and its practical operability. By providing classification standards and methods, it has promoted the development and improvement of the classification system, making the management of ancient documents more systematic and refined. Bibliography is not only the theoretical cornerstone of ancient book classification, but also an important tool for the inheritance of Chinese culture. In the interaction between theory and practice, bibliography and book classification have jointly promoted the organization of documents and the dissemination of knowledge.

7. Conclusion

In-depth research into the history of cataloging and the ancient Chinese book classification system has led to the following important conclusions. First, the ancient Chinese book classification system gradually developed over a long period of historical development into a four-part classification system with “classics, history, philosophy, and collections” as its core. This classification system not only met the needs of ancient knowledge structures and academic inheritance, but also provided a clear framework and guidance for the collation of later documents, laying the foundation for Chinese cataloging. As a theoretical discipline, bibliology directly serves the practical work of book classification. The two are interdependent and mutually reinforcing, and together they have promoted the progress of document management. Whether it is Liu Xiang and Liu Xin's “Seven Strategies” in the Han Dynasty, the “Suishu Jingji Zhi” in the Sui and Tang Dynasties, or the “Siku Quanshu” in the Ming and Qing Dynasties, they all fully demonstrate the combination of bibliology and book classification practices, demonstrating the unique wisdom of ancient China in document management and knowledge system construction.

Secondly, the development of bibliography not only provided theoretical support for the evolution of the ancient document classification system, but also continuously promoted the innovation and improvement of the classification system with the changing times. As the types and quantity of documents gradually increased, bibliography gradually constructed a more systematic and scientific classification method, from the initial simple classification to the later detailed subdivisions. This classification system not only met the needs of book management at the time, but also provided valuable reference for modern librarianship. Although the ancient four-part classification system has limitations in terms of the degree of refinement and scope of application, it laid a solid foundation for the subsequent modern book classification system and had a profound impact on later generations.

Looking to the future, there is still plenty of room for the development of cataloging and book classification systems. With the rapid development of information technology, digital document management has become an important trend in the future. How to combine ancient book classification methods with modern information technology is a direction worth exploring in depth. Future research can further explore how to apply traditional classification concepts to the classification and management of modern digital resources. For example, in the context of big data, how to draw on the knowledge framework of the four-part classification to effectively organize and classify massive information resources is an important challenge facing cataloging. Meanwhile, the integration and borrowing of Chinese and Western classification systems also provides new perspectives for research. By absorbing the refined methods of modern Western classification systems and introducing artificial intelligence technology, the book classification method can be further optimized and innovated to better serve knowledge management and dissemination.

In short, the study of cataloging and ancient Chinese book classification systems not only has important historical significance, but also provides theoretical basis and practical experience for contemporary document management and book classification. Future research should focus on the combination of tradition and modernity, and through innovation and development, enable cataloging to continue to play a greater role in knowledge management and cultural heritage.

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