

Evaluating the Past, Present and Future of Chinese Library Classification (CLC)

Introduction

China is one of the few countries worldwide to have had a relatively sophisticated, unbroken tradition of library classification for nearly two thousand years (Zhang, 2003). This may be considered a crowning achievement in the history of library and information services; yet paradoxically, China's adherence to its literary traditions led to stagnation and a lack of progress that, by the end of the nineteenth century, had left them far behind the West.

The twentieth century was characterised by great upheaval in China, and this is reflected in the changes its library and information services underwent during this time. Zhang, Liu and Wang (1996) cite no fewer than 8 library classification systems which were developed between 1953 and 1978 alone. Through the tumult, the Chinese Library Classification (hereafter referred to as CLC) has emerged as China's national classification system. This paper discusses the history of the CLC, describes its current form and present usage, and evaluates its strengths and weaknesses.

The History of Chinese Library Classification (CLC)¹

The history of Chinese library classification began about two thousand years ago, when a court historian named Liu Xin (c. 50 BCE – 23 CE), arranged the imperial catalogue into seven classes known as the *Qi Lüe*, or 'Seven Epitomes' – general summaries, the (Confucian) Classics, philosophy, poetry, military science, mathematics and medicine (Xie, 1987). This laid the groundwork for further classification systems, which were later perfected by Xu Xun (231-289) in his 'Four-fold Scheme'. This divided works into four classes – classics, philosophy, history and belles letters (Lin, 1998). For the next 17 centuries or so, this scheme would come to dominate Chinese libraries, and despite modifications, it essentially remained the basis of all literary classification in imperial China.

¹ It is also variously known as the Book Classification for Chinese Libraries (BCCL) and the Classification for Chinese Libraries (CCL). For the sake of clarity, the standard form, Chinese Library Classification (CLC), is used in this paper.

In 1912 the Emperor Puyi was overthrown under the tidal wave of revolution, and intellectuals sought the modernisation of China in earnest, inspired by the introduction of Western civilisation. Over the next couple of decades, with the aid of American missionaries and the American Library Association, the New Library Movement was formed, and much headway was made (Cheng, 1991). Library schools opened throughout the country, and many modern classification schemes (mostly based on the Dewey Decimal Classification, which had been first introduced in the previous century) appeared. However, these achievements were curtailed when the Japanese invaded China in 1937.

This was followed by a long period of confusion in the development of Chinese library and information services. Whilst some headway was made during the early years of the People's Republic, this was unravelled by the chaos of the Cultural Revolution, when many libraries ceased functioning except as propaganda machines, or were simply closed. With the death of Chairman Mao in 1976, China realised its backwardness and pushed for scientific progress. Library Science was an essential part of that great drive forward (Ting, 1981).

The birth of the Chinese Library Classification began in the 1960's, before the Cultural Revolution, when a concerted effort began to build a national classification system. At the time, there was a proliferation of systems created by individual institutions which were inadequate for national requirements. The Administrative Bureau of Cultural Affairs and the National Library of China drafted in library and information scientists and subject experts from thirty-six libraries all over the country to contribute to a new, uniquely Chinese system. Due to the upheavals of the time, work was slow; eventually, a trial version was released in 1974, with the first official edition published in 1975 (Lin, 1998). Updated editions followed in 1980, 1990, 1999 and 2010.

Today, the fifth edition of CLC is used in over 94% of libraries and institutions across China. Due to its hybrid nature, which aims to incorporate the best elements of traditional and Western classification systems, and its 43,000 plus classes, it is now considered one of the world's most comprehensive library classifications (Zhang, 2003).

The Form and Structure of CLC

The CLC is a hierarchical and enumerative system by nature, with 'the principle of designing classes being infinitely expandable for further subdivision of any existing class' (Gong and Gorman, 2000, p.141). This gives it a great amount of flexibility and hospitality.

Zhang (2003), cites two guiding principles to CLC's design. The first was ideological, the second scientific. Thus, the system was designed to: -

- use Marxism, Leninism and Maoist thought as an ideological guideline in the structure and editing of CLC and;
- use science to promote a logical structure of the general to the specific.

These guidelines were to shape the structure of the CLC to an almost literal degree. Figure 1 shows the main classes of the CLC as it stands today.

Categories	Notations	Main Classes
Marxism, Leninism, Maoism and Deng Xiaoping Thought	A	Marxism, Leninism, Maoism and Deng Xiaoping Thought
Philosophy & Religion	B	Philosophy and Religion
Social Sciences	C	Social Sciences – General Works
	D	Politics, Law
	E	Military
	F	Economics
	G	Culture, Science, Education and Sports
	H	Languages
	I	Literature
	J	Arts
Natural Sciences	K	History, Geography
	N	Natural Sciences – General Works
	O	Mathematics, Physics and Chemistry
	P	Astronomy, Earth Sciences
	Q	Biology
	R	Medicine, Health
	S	Agricultural Science
	T	Industrial Technology
	U	Communications and Transport
	V	Aeronautics and Space Flight
X	Environmental Science and Safety Care	
Generalia	Z	Generalia

Fig 1 – The main classes of the CLC

Ideology being the first guideline, Marxism, Leninism, Maoism and Deng Xiaoping thought comprises the first class, being a class of its own. Philosophy comes second, as 'it was the generalisation and summation of the social and natural sciences' (Zhang, 2003, p. 8)². Social sciences followed, the reason for this being that it was closely related to Marxist and Leninist thought; arrangement of subclasses was formed according to Stalin's theory of economic structures. Natural Sciences followed according to the 'forms of movement of matter advocated by Engels' (Gong and Gorman, p.114). A Generalia class for books too general to be placed into an individual class came last. Altogether there are 5 categories and 22 subclasses, with over 3,000 sub-divisions. Placeholders are kept for future additions, and notations are mixed, using both the Latin alphabet and Arabic numbers (Ting, 1983). The notations express the logical relationships between subjects. For example, an entry on the Youth League of Chinese Communists is expressed as such³: -

D	Politics
0	Political Theory
1	International Communist Movements
2	Chinese Communist Party
29	Youth League of Chinese Communists

Therefore the class for the Youth League of Chinese Communists in D29. For the sake of clarity, every three digits in a class number is grouped together, with each group separated by a decimal (e.g. G254.11, the class number for Classification Theory and Methods).

CLC also makes extensive use of cross-referencing. Zhang (2003, p.10) cites another example of this, where Mao's thought on the national economy, listed as A466, was cross-referenced with Fa, the class for Economics (here, the 'a' in Fa denotes an auxiliary symbol for works recommended by Mao and other Communist leaders). A class index was also developed in and published in 1984, and also maintains auxiliary tables for recurrent features, such as geographical places, historical eras, nationalities, etc.

² Deng Xiaoping thought and Religion were class additions made to the fourth edition of the CLC in 1999.

³ This example is given in Zhang (2003, p. 9). For further reading, Zhang's paper gives a comprehensive description of CLC.

Revision of the system is conducted by the National Library of China. As cited by Lin (1998, p. 116), revision guidelines are:

- to keep pace with the development of knowledge
- to maintain the same structure as previous editions
- to ensure that the designated classes will be occupied by documents
- to ensure convenience of use

As such, Chinese Library Classification has continued to be developed, and has evolved from 'a systematic classification to a faceted one' (Lin, p.116).

Current Usage

Since its first edition, the CLC has been recommended as a national standard. In December 1980, a conference was held promoting the system; subsequently, work on catalogue revisions was begun in earnest as libraries across the country heeded the call (Ting, 1983). In 2003, Zhang quoted more than 94% of Chinese libraries having adopted CLC. Its use includes nearly all academic, school and university libraries, and it is also used by publishers to classify all books published in China (Jahns, 2012). Its application has extended to Japanese and Korean works as well as those in Chinese.

CLC was developed essentially for large-scale libraries, although abridged versions were created in order to facilitate its use in medium to small-scale institutions. Apart from this, its abridged version has also been translated into Uyghur, Mongolian and Japanese.

CLC has now become the crux of a series of related classifications, subsequently spawning several specialist systems such as the Chinese Classification for Monographs and Materials (an enlarged edition mainly adopted by Chinese information research institutions), and the Chinese Classification for Grade Schools and Children's Libraries. Its fifth edition has been released as a web version, electronic version and journal version, as well as the abridged version.

In 1994, CLC was also integrated with the Chinese Thesaurus to create the Chinese Classified Subject Thesaurus (CCST), a tool for increased efficiency in subject indexing that links class numbers and terms (Zhang, Liu and Wang, 1996).

Strengths and Weaknesses

Chinese Library Classification is one of the last in a long line of classification systems developed in China. Like the Library of Congress Classification, it was the product of a concerted effort between library professionals. As such CLC is one of the most refined and complete of those systems, distilled from many decades' worth of knowledge and experience. This is reflected in its winning the National Award for the Advancement of Science and Technology in 1985 (Zhang, Liu and Wang, 1996).

CLC's main strengths, as with LCC, lie in its 'faceted structure and largely expressive notations' (Gong and Gorman, 2000, p.116). It has far greater hospitality than other decimal based systems such as the Dewey Decimal Classification, as it uses the English alphabet instead of Arabic numerals. Zhang also cites its 'logical structure' and 'its relatively short length of call numbers' (p.9). This means that CLC is easy and intuitive to use, which in turn has also led to its high adoption rate.

Although there are many similarities between CLC and LCC, CLC is far more 'compact'. This is because CLC lacks the enumeration of more than one concept in compound subjects. This means that in LCC, common divisions are recorded individually; CLC lacks such redundancies.

As noted above, CLC has a very high adoption rate. This means that one of its great strengths is that it has quickly come to standardise the language of Chinese library and information services, as well as information retrieval (Zhang, 2003). This has helped immensely in moving China into a networked computer age.

As for weaknesses, there is great difficulty in converting CLC into other standard classification systems. The major classes and sub-divisions of CLC are widely different from that of, say, DDC (Hu and Chen, 2007). This necessitates cataloguers having a good working knowledge of both systems. As Niu opines:

It is apparent that finding the corresponding DDC number for every CLC number is difficult not only for the cataloguer, but also for automatic mapping programs. Also, classifying a book is more than just assigning a number to a book; it is a complicated process involving title and subject analyses before making final decisions (2002, p. 182).

This becomes critical when one considers that the OCLC requires that records be entered in either DDC or LCC (Niu, 2002). Since automatic mapping is well-nigh impossible for CLC, librarians must

use increased man-hours not only manually creating entries, but also learning foreign classifications in order to ensure sound judgements.

In terms of content, Zhang notes the artificiality of its first main class, Marxism, Leninism, Maoism and Deng Xiaoping Thought, which has no scientific or logical basis and mirrors the draft Soviet classification of 1955. Indeed, much criticism has been made of CLC, mainly because during its inception it was influenced by the extremist ideas of the Gang of Four, the apparent force behind the Cultural Revolution (Ting, 1981). In its early days, it seems that CLC was more a propaganda than library management tool. It was only after Mao's death that a revision meeting was held in 1979. It was decided:

...in view of the fact that thousands of libraries had already adopted the system, the main classes and notation system will be kept, but necessary revisions will be made to purge the influence of the Gang of Four (Ting, 1981, p. 429).

These revisions certainly made improvements – for example, originally individual works were to be classified according to their political stance, and this was abandoned in the 1980 revision (Zhang, 2003). However, CLC's original ideological influences are still evident in its continued ideological structure, including an entire class still being devoted to Communist thought.

Conclusion

CLC is the child of a unique legacy, distilling China's two thousand year old experience in library classification, as well as the channelling the influence of those foreign classification systems that entered China during the nineteenth and twentieth centuries. It was over 10 years in the making, the collective effort of over a thousand Chinese library and information professionals. Bearing this in mind, it is little wonder that it is regarded as one of the most perfected classification systems in the world. Nevertheless it is not free from flaws – its birth during one of China's most turbulent periods is reflected in its clear ideological and political bent. Despite several revisions, this is an imperfection that still remains, yet seems unlikely to be removed completely.

The reason for this is that CLC has been so widely adopted throughout China that further major changes would require the monumental task of each library revising its catalogue extensively. Despite

this, CLC continues to be regularly updated, its revision being driven by current advances in science and knowledge.

Future challenges still remain. CLC's most significant stumbling block remains the difficulty in applying it to electronic processing. In a networked information age where tools like the OCLC WorldCat are now readily available online, CLC will need to work hard to fit into the future of such an international framework, as automatic mapping between CLC and other classification systems has still not been refined. As Gong and Gorman noted in 2000, a more faceted scheme is required for greater synthesis in order to meet the 'present needs of information processing and the future needs of virtual libraries' (p.121). This appears to be work that is still in progress today (Zhang, Peng, Huang and Li, 2011).

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