

CHÊNG CH'IAO, A PIONEER IN LIBRARY METHODS

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Although the history of Chinese libraries can be traced back to a remote antiquity it was not until the twelfth century of our era that an effort was made to record systematically what was necessary to their orderly development. The first Chinese to systematize and popularize library technique was the eminent writer and historian, Chêng Ch'iao (鄭樵—*T. Yü-chung 漁仲*)—who lived in the years A.D. 1104-1162. Before his time there had appeared in old Chinese books casual references to various phases of library economy, but these are fragmentary and in most cases unsuited to our times. Chêng's ideas sound peculiarly modern because he lived when block printing had been in vogue for at least three centuries, and when the stitched book was rapidly displacing the ancient scroll. Though most of Chêng's writings are now lost, a section, entitled *Chiao-Ch'ou Lüeh* (校讎略), incorporated in his great *T'ung-Chih* (通志) or "General History", summarizes a sufficient number of his recommendations to show that he understood well the problems of library science—so well, indeed, that many of his recommendations are as applicable today as they were eight centuries ago. In that chapter he deals with the technique of acquisition, classification and cataloguing, under twenty-one heads. The treatise however is general and is presumably a summary of two earlier more complete treatises now lost, one, entitled *Chiao-Ch'ou Pei-Lun* (校讎備論), "Essentials of Collation", dealing with collation, the other, entitled *Shu-Mu Cheng Ê* (書目正訛), "Correcting Mistakes in Catalogues", dealing with bibliography. Besides the section on the collation of books, Chêng included in the "General History" a bibliography, *I-Wen-Chih* (藝文志), in eight *chüan*, condensed from his exhaustive *Ch'ün-Shu Hui-Chi* (羣書

T'ien Hsia Monthly

會記), "Collected Record of All Books," in 36 *chüan*, which covered all known books under twelve classes. Unfortunately this is now lost. If we had the original treatises, we should know his views in much greater detail.

Notwithstanding Chêng's immense contributions to the scholarly world in general, he has been comparatively neglected, and his life has received but scant attention in Chinese works. In the Sung Dynastic History (960-1279), there is a brief sketch of his life amounting only to some three hundred words. Slightly fuller accounts appeared in the P'u-T'ien Gazetteer of 1705 and also in the General Gazetteer of the Province of Fukien for 1737—both of which are probably based on older sources now lost. It remained for Professor Ku Chieh-kang (顧頡剛), the well-known modern historian, to write a more comprehensive biographical sketch based on these works. He has also reconstructed events gleaned from Chêng's own literary collection as well as from other miscellaneous works.¹ The present article is an attempt to give a brief biographical sketch based primarily on Professor Ku's account, and especially to appraise the principles of library economy which Chêng expounded.

Chêng Ch'iao was a native of P'u-T'ien (莆田), Fukien, and lived in the transitional period between the northern and southern Sung dynasties. His father, himself a scholar of repute, died in 1119, when Chêng was only fifteen years of age. Thereafter Chêng Ch'iao gave up his ambition to participate in the competitive examinations, and devoted all his energy to classical studies.

He and his cousin Chêng Hou (鄭厚—T. Ching-hua 景華: b. 1100)—retreated to a mountain, Chia-Chi Shan (夾漈山), northwest of their home town. At this scenic spot the two built a thatched cottage and secluded themselves from social intercourse in order to devote themselves to serious research. For recreation they wandered in the mountains, enjoying the beauties of nature about them. These ideal surroundings helped Chêng considerably in his studies and in his meditations. Because he led a simple life,

¹ "Chêng Ch'iao," *The Journal of Sinological Studies, Peking*, Vol. I, No. 2, April, 1923.

Chêng Ch'iao, A Pioneer in Library Methods

with his heart set on scholastic attainments, he was ridiculed and branded as a lunatic. In 1126, when Chêng was twenty-two years of age, China suffered a foreign invasion, and the northern part of the country fell into the hands of the Chin Tartars. Chagrined by these events, Chêng and his cousin determined to offer their services for the salvation of the country, but owing to lack of influence they were unable to do so. Disappointed, the two turned their attention with increased earnestness to their studies. They returned to Chia-Chi Shan—this time to live separately—Chêng Hou on the eastern side of a brook and Chêng Ch'iao on the western side. This accounts for the latter's sobriquet *Hsi-Hsi I-Min* (溪西遺民), "Recluse of West of the Brook." There Chêng Ch'iao delved into a variety of subjects including the mysteries of the physical universe. In order to widen his experience he decided to see the world, visiting historical sites and places of interest in the country. Having by nature a scientific bent he emphasized empiricism in all branches of knowledge. To obtain a fuller knowledge of astronomy he observed the planets and the stars at nights, checking celestial phenomena against older texts; to study biology he talked and associated freely with farmers and others versed in these matters; and to inform himself on archaeology he travelled widely to ancient sites. In a letter to the Minister of the Board of Rites he denounced scholars who, when they observe a star, a locality, or a mountain, merely describe these vaguely without adequate elucidation. Chêng demanded that they should go deeper to find out if possible what star, what locality, or what type of mountain was encountered, in order that knowledge of the subject would be enhanced. This accounts for the fact that whenever he found errors in ancient texts he attempted to correct them; when he discovered gaps in knowledge he wanted to bridge them. He detested abstract philosophical disputes, and recommended instead a sound analytical research.

Whenever Chêng had access to a library of note he made efforts to borrow the books, and pored over them. In this way he made the acquaintance of many literary celebrities. Meanwhile his cousin abandoned his scholarly pursuits for politics, leaving Chêng Ch'iao alone to his studies. So absorbed was he that he often went

T'ien Hsia Monthly

without food or sleep. Realizing that no one man can encompass all knowledge, or investigate all fields of learning, he wanted to systematize every branch of knowledge so that individuals might progress in the field of their choice.

In the meantime, Chêng was beset by family misfortunes: his brothers died, as did also his son. From then on he was more determined than ever to commit his findings to writing so that they would not be lost. In the year 1149 he walked over 600 miles to Hangchow, the capital, to present to the Emperor for approval some 140 *chüan* which he had written. This contribution was accepted and placed in the Imperial Library, and as a reward for his enterprise he was given an honorary post. This he declined, and he returned to his cottage to labour on his *magnum opus*—the above-mentioned "General History." At the same time he gave lectures, through which he influenced some two hundred students. In 1157, at the suggestion of two expositors, he was summoned to an imperial audience which took place in the following year. The Emperor expressed great admiration for what Chêng had done, and regretted that he had not met him earlier. Chêng was given the minor official post of a junior secretary in the Board of Rites, but shortly afterwards, for reasons not given, he was censured and released from his official duties. He then devoted himself to copying out the *T'ung-Chih*, which was completed in 1161. It contains twenty treatises covering a wide range of subjects, of which the topic on the collation of books gives the essentials on library methods. We shall return to this in the latter part of this article.

When he presented the *T'ung-Chih* to the Emperor in 1161 Chêng was made an Imperial historiographer. This position would have given him access to many valuable books which he had long desired to read had he not been again impeached by a censor, possibly because many of his views conflicted with traditional concepts. At the same time, he opposed the humiliating peace proposals of the treacherous Ch'in Kuei (秦檜—*T. Tui-chih* 會之: 1090-1155)—with the Chin Tartars. Bitter against fate, he succumbed to illness in the following year at the age of 58. He was

Chêng Ch'iao, A Pioneer in Library Methods

survived by a young son, Chêng Kuei-wêng (鄭歸翁), then only seven years of age.

Chêng himself was an inveterate lover of books. After accumulating several thousands of *chüan*, he wrote for his descendants: "I have acquired for you invaluable property." In view of the chaotic conditions then prevailing, he had a strong feeling that valuable old works should be searched for and preserved. He even offered to catalogue the books in the Imperial Library, and had his services been accepted the Sung Library would doubtless have been more highly developed than it was.

As we might expect, a scholar of Chêng's calibre naturally caused much controversy, for few people understood or appreciated his versatile and clear intellect. Because his mind ranged so widely, he was accused of superficiality; because he was so analytic, he was branded as dogmatic, with little respect for earlier scholarship; because of his persistent attempts to expound his theories—especially in letters to the Emperor, to the Prime Minister, and others—he was charged with bombast and arrogance. It took several centuries before scholars could assess his true greatness, and discount the unfounded charges made against him.

In spite of the fact that Chêng wrote prodigiously, having to his credit over fifty works numbering over 1,000 *chüan* (many of them profusely illustrated with charts and graphs), only a few items have come down to our time. Professor Ku Chieh-kang in another article entitled "On the Writings of Chêng Ch'iao",² is inclined to think that Chêng's output greatly exceeded this number; that he probably produced some eighty or ninety different works. For these, Chêng compiled an annotated bibliography, entitled *Chia-Chi Shu-Mu* (夾漈書目), which unfortunately is lost, and so we have no complete account of all his researches.

Among works that have survived, aside from the *T'ung-Chih*, is an incomplete commentary on the dictionary *Er-Ya*, entitled *Er-Ya-Chu* (爾雅注), and a literary collection in three *chüan*, entitled *Chia-Chi I-Kao* (夾漈遺稿), which appeared originally in 50 *chüan* under the title *Hsi-Hsi Chi* (谿溪集). Owing to the

² *Ibid.*, Vol. I, No. 1, January 1923, and Vol. I, No. 2, April 1923.

T'ien Hsia Monthly

poverty of Chêng's descendents, most of his works were not printed and thus were lost to posterity.

Having given a brief review of Chêng's life we shall now examine his contribution to library science as embodied in *chüan* 71 of his "General History." He called the section *Chiao-Ch'ou Lüeh*, or "Outlines of Book Collation". The purpose of the section, as he himself states in the preface to the History, was "to eliminate sinecurism in libraries and to prevent the ravages that bookworms make to a collection, so that many more thousands of volumes may be circulated."

To begin with, Chêng corrected a few erroneous impressions on the library history of China. Contrary to popular belief he held that despite the great destruction of books by the First Emperor in 213 B.C., that ruler actually employed many scholars and tolerated a discussion of the classics. This is evidenced by the fact that Lu Chia (陸賈) and Li Shih-ch'i (酈食其) were outstanding men of letters in Ch'in times, and were active in scholarly pursuits. After the downfall of the dynasty, Shu-sun T'ung (叔孫通) brought over to the succeeding Han dynasty more than one hundred of his own pupils. In Chêng's opinion the Ch'in regime objected to only a part of the teachings of earlier times, and not all the existing books were consigned to the flames, for when the vanguard of the Han army entered the Ch'in capital, Hsiao Ho (蕭何: d.193 B.C.) collected all available books on the laws of the Ch'in regime. This shows that books essential to the conduct of the state did survive the Ch'in inquisition. Chêng therefore concluded that many books were lost, not because of the Ch'in proscription, but because of the ignorance and negligence of scholars themselves.

In a section entitled "Attention should be Paid to Exact Classification" (編次必謹類例論), Chêng Ch'iao set forth principles which are surprisingly close to those observed in library economy today. In his opinion, "Scholarship is not exact because the books are not clearly understood. Books are not understood because they are not put into the right classes. When you have specialized books you will have specialized scholarship. When you have specialized scholarship you have the possibility of preserving it for posterity. Men pursue their scholarship and the scholarship is preserved in

Chêng Ch'iao, A Pioneer in Library Methods

books, and books must observe certain classifications. Men live and die but scholarship goes on without ceasing. There may be changes in the world, but what is in the books cannot perish. If modern books are checked against those of ancient times, the chances are that not one in a hundred survives. How shall we account for this? Soldiers are lost because their organization is defective; books are lost because the methods of classification are inadequate. If books are properly classified, the various schools of philosophy and the nine branches of literature will be sufficiently systematized." As illustration, Chêng pointed out that despite the vicissitudes which Buddhism and Taoism underwent, books on those subjects always existed. To acquire a true insight into books it is imperative for one to have a thorough comprehension of their classification.

Chêng maintained that an ideal classification should be concise and sufficiently comprehensive to take in all subjects, and should make ample provision for current books and topics. As to older books they are relatively scarce, and for them the scheme need not be so detailed. A good system should be practical and yet flexible; it should bring to view the scope, source, sequence, and development of the various branches of knowledge. From beginning to end it must speak for itself. The system should not only facilitate scholars in their search for knowledge, but should help them in their search for other books.

Dissatisfied with the systems then prevalent, Chêng characterized the *Ch'i Lüeh* (七略), or "Seven Outlines" of Liu Hsin (劉歆: d. 23 B.C.), as "simple", and the "Fourfold" system originated by Hsün Hsü (荀勗: d. A.D. 289) as "inappropriate". To remedy the situation, he submitted his own classification scheme for general adoption. It was arranged in twelve classes as follows: (1) Classics; (2) Rites and Rituals; (3) Music; (4) Philology; (5) History; (6) Philosophy; (7) Astronomy; (8) The Five Elements; (9) Arts; (10) Medicine; (11) Encyclopedias; (12) Literature. These in turn he sub-divided into 100 sections and 422 sub-sections. He believed that this scheme was sufficient to include all knowledge up to his time, and was capable of differentiating "red from purple." To show its efficacy, he applied it to all of his own bibliographies. Once he remarked: "Classifying books is like commanding an

T'ien Hsia Monthly

army. If there is a system, no matter how large the number, it will still be under control; if there is no system, no matter how small the number, all will be confusion. Classification is not handicapped by greatness of numbers, but by lack of adequate devices to cope with the situation."

For actual practice, Chêng offered a number of helpful suggestions which modern librarians would do well to keep in mind. He believed that in classifying books it is folly to depend on titles alone, for many of these are misleading. He charged many cataloguers with neglect: some failing to make a careful study of the text, others scanning the first part of a book and making no effort to examine the whole. The classifier should thoroughly examine the contents in order to ascertain the exact position a work should occupy in the general scheme.

Contrary to the practice of some modern libraries, Chêng disapproved of placing a book under two headings—he believed that its position should be specific, not relative. However, the extensive introduction of cross-reference entries into modern catalogues has now proved itself so useful that this suggestion can now be disregarded.

Another point raised by Chêng in connection with classification was that books should be grouped together according to the nature of their contents, not according to the form in which they were written. He cites encyclopedias as an illustration. Except those of a general nature, special encyclopedias should be classified according to their subject-matter. Thus, an encyclopedia on astronomy should be placed with books on that subject, not with encyclopedias of a different nature. This point is especially appropriate because it has been woefully neglected even in modern Chinese libraries. He remarked on the fallacious practice of some of the older catalogues in grouping all the various writings of a person under his name irrespective of their nature. To this practice Chêng took exception, for it was his contention that books on different subjects should be relegated to the place they belong, and should not be haphazardly put together under one author. Thus, the historical writings of one man should be classified under history and his literary works

Chêng Ch'iao, A Pioneer in Library Methods

under literature, regardless of the fact that they were written by one person.

On the related topic of the cataloguing of books and the compilation of bibliographies, Chêng offered many pertinent suggestions which in many cases overlap his views on classification. It was his conviction that if a book is not properly entered in its rightful place, there is a good chance of its being irrevocably lost. Books of the same class should not be separated by the insertion of books of another class; their position should be specific and should be clearly defined. Order and sequence were for him absolutely essential. This can be best achieved by arranging books of the same class in the chronological order in which they were written. One can thus obtain a clear notion of the logical development of the subject.

In case of ambiguity Chêng advised that annotations should be added in order to clarify the point in question—a method that was successfully used in the bibliographical section of the *Sui Dynastic History* (A.D. 589-618). On the other hand, Chêng warned that one should be on guard against a too liberal use of explanatory notes in entries that are in reality self-explanatory. In the bibliographical section of the *T'ang Dynastic History* (A.D. 618-907) annotations were omitted when they were most needed, thus making it too concise; whereas in the *Tsung-Wen Catalogue* (崇文總目) of the Sung Dynasty, unnecessary annotations were added, thus rendering it redundant. In the case of biographies, the biographer and the subject of the biography should be clearly differentiated.

In addition to exercising a sound judgment, meticulous care should be taken when cataloguing books, for "books are easily lost because the persons responsible for their collation were not equal to their task. In the process of cataloguing, many books are overlooked. If titles are omitted, how can books be kept from being lost?" Owing to the negligence of the cataloguers the above-mentioned *Tsung-Wen Catalogue*, while including books on "wind, clouds, and weather", omitted books on "the sun and the moon", although books on this phase of astronomy did exist in Sung times. According to Chêng they were simply lost in the process of cataloguing.

In the making of catalogues even lost books should be recorded,

T'ien Hsia Monthly

as was done in some old catalogues before the T'ang dynasty. If that is done, a further search can be made for the book and this may lead to its recovery. Many books which are supposed to have been lost were thus recovered at least in part if not in whole. Furthermore, if no reference is made to lost books, private individuals will be unaware of the fact when they are in possession of them. A catalogue of desiderata will inspire private collectors to make their rarities available to the public for transcription purposes. Chêng reproved compilers of the Sung Bibliography not only for their failure to include lost books, but because they ignored contemporary documents. In a practical application of these principles he compiled a work entitled *Ch'iu-Shu Ch'üeh-Chi* (求書闕記), "The Search for Missing Books," and a supplement to it entitled *Ch'iu-Shu Wai-Chi* (求書外記), in which he recorded the titles of works that might still be recovered. Chêng observed that many missing parts of books were recovered in later periods, and such editions appeared afterwards in complete form. Similarly books which could not be obtained at a previous period were later found in the hands of private collectors, who handed them down to their descendents. He called attention to the fact that many books were lost in name only, since they survived under a different title. He suggested, therefore, that indirect aids to references be employed, and cited many examples to illustrate how this might be done. These suggestions were particularly applicable to Chinese books.

Because of the flagrant disregard of fundamental principles in classification and cataloguing, Chêng pointed out how many inadvertent mistakes were committed in old bibliographies, even in the great bibliographical section of the *Sui Dynastic History*, which, on the whole, he apparently approved. The inconsistencies of a number of leading bibliographies prompted him to compile a corrigenda, entitled *Shu-Mu Chêng-Wu*. It should be explained that indexes which are now so essential in catalogues, bibliographies, or in books of reference, were then largely non-existent owing to the absence of an alphabetic system. Otherwise many difficulties which Chêng had in mind would have been automatically obviated, or at least minimized.

Chêng Ch'iao, A Pioneer in Library Methods

On the administrative side Chêng insisted that to achieve the best results in classification and cataloguing, the persons in charge should have permanent appointments, and specialists should be engaged to work on books in their particular fields.

If system is essential in classifying and cataloguing, it is equally important in the acquisition of books. Chêng observed that a diligent search by many individuals often enabled them to acquire sizeable collections. A Taoist monk, for instance, succeeded in accumulating a complete collection of literary works of T'ang authors, and a Buddhist monk succeeded in acquiring a vast library of the original correspondence of outstanding statesmen and monks of the Sung period. Similarly emperors of the past succeeded in accumulating vast collections by dint of conscientious effort. Because of the lack of systematic search for books on the part of the government, valuable items held by individuals were found to be lacking in public collections. This deplorable situation could, in his opinion, be improved by a systematic and properly organized search. It was therefore necessary that special commissions be appointed for that purpose.

According to Chêng, there are eight principles governing the acquisition of books. First, they should be acquired by class: for books on astronomy one should go to the place which is concerned with that science, namely, the national observatory. Failing this, one should consult the astronomers themselves. Second, by schools of knowledge: for books on Taoism go to the Taoists; for books on philology go to the people who specialize in this branch of knowledge. Third, by place: for the gazetteer or local history of a given place one should go to that particular locality to acquire it. Fourth, by family connections: to obtain the genealogy of a given family, one should go to persons connected with that family. Fifth, by public office: to obtain the documents of a governmental department one should seek them from that particular branch of government. Sixth, from private sources: for books which cannot be obtained from the public offices, one should turn to those private individuals who may possess them. Seventh, by persons: by making inquiries concerning the interests of given individuals one may be able to obtain books on the particular fields in which they have specialized

or have made collections. Finally, by time: before acquiring a book one should pay special attention to the period in which it was written. Contemporary books, however voluminous, can be easily obtained; but those that are published in previous periods are harder to obtain; the remoter the period, the more difficult to obtain books of that period.

In order to prove his points Chêng took great pains to adduce appropriate examples. The latter part of the treatise on collation of books (*Chiao-Ch'ou Lüeh*) is devoted exclusively to anomalies which he found in many well-known bibliographies, and which are in direct conflict with the theories he formulated.

Until comparatively recently very few people appreciated Chêng's analytic approach to the subjects he treated, much less his contribution to library methods. It was not until the time of the great historian, Chang Hsüeh-ch'eng (章學誠—*T. Shih-chai* 實齋, *H. Shao-yen* 少巖: 1738-1801)—that Chêng was partially vindicated. Although Chang took exception to some of Chêng's generalizations, he nevertheless agreed with him in most of the important issues relating to library science. In his *Chiao-Ch'ou T'ung-I* (校讎通義), a series of essays on the collation of books and the philosophy of history, Chang especially commended Chêng's principles of acquisition and collation, characterizing them as both detailed and comprehensive. He regarded Chêng's contribution to library economy as superior to anything undertaken in that field since the Han dynasty. As a matter of fact, Chang's treatise might well be used as a companion volume to Chêng's, supplementing his work by adding many helpful suggestions. In particular he stressed the importance of "see" and "see also" references which are of special use in treating Chinese books and authors with their multifarious names.

However platitudinous the principles of Chêng Ch'iao may appear to modern librarians it must be borne in mind that they were set forth eight centuries ago. When so regarded we cannot but admire his sagacity and his clear apprehension of the accepted techniques of modern library practice. He inaugurated a discipline which came to fruition several centuries after his day. In the seventeenth and eighteenth centuries many illustrious scholars added their con-

Chêng Ch'iao, A Pioneer in Library Methods

tributions to the subject. Prominent among these were Ch'i Ch'êng-yeh (祁承燦—T. Er-kuang 爾光), early 17th century; Sun Ch'ing-tsêng (孫慶增—T. Ts'ung-t'ien 從添) and Shih-chih (石芝); Chang Hsüeh-ch'eng (already referred to); and a host of others too numerous to dwell upon in detail in this brief account.