

A READER'S VIEW OF EAST ASIAN CATALOGUE AUTOMATION

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"If they are carved on a woodblock and so put into wide circulation, it will be of the greatest benefit to scholarship." Feng Tao and Li Yü advocating the first officially sanctioned printing of the classics in 10th century China.)

This paper makes no claim to put forward any radically new solution to the problem of catalogue automation for East Asian materials. It is designed to draw together a number of ideas and experiences and stimulate discussion by airing the reader's view. It is a layperson's comment, by one who has more than a passing acquaintance with East Asian library materials in libraries in East Asia and the West, but who is rather confused by computer jargon and is totally reliant on electricians, plumbers, motor mechanics and the like in all matters mechanical.

I wrote this discussion paper as a result of a request for comments on the automation of East Asian cataloguing in the East Asian Librarians' Group of Australia Newsletter no. 4 (June 1980). Material consulted included reports presented at the last EALGA Annual General Meeting, a thesis by Dr. J. D. Anderson, entitled A Comparative Study of Methods of Arranging Chinese Language Author-Title Catalogs in Large American Chinese Language Collections (published Ann Arbor, 1972), a selection from the published papers of the Library Seminars held during the 28th International Congress of Orientalists (edited E. Bishop and J.M. Waller, Canberra, 1972), various papers on traditional Chinese library cataloguing practices and discussions with a colleague who has recently visited libraries in Japan.

The fundamental question which must be asked when facing up to the problems of library automation is whether automation is in fact necessary or desirable. The philosophical question thus raised must take into consideration far wider issues than those encompassed within the fields of librarianship and education. The energy crisis and unemployment immediately spring to mind. However, this discussion paper is written on the premise that automated cataloguing of western language materials is more efficient than manual cataloguing and causes no serious adverse side-effects. The point at issue is whether automated cataloguing can and should be applied to East Asian materials and if so, what are the problems involved and how is automation best achieved.

I shall concentrate my discussion on Chinese materials, since they are most familiar to me and also because they have the longest history and consequently present the most complex problems. However the problems for catalogue automation posed specifically by Chinese characters are shared by Chinese, Japanese and Korean materials alike. Other problems arise out of the different traditions of library practice which have grown up independently in East Asia and the West. I therefore feel some brief comments on the history of library classification and cataloguing in China are not out of place here.

Library classification and cataloguing in China can be traced back to the efforts of Liu Hsiang and Liu Hsin in the Han Dynasty. They began the tradition of the catalogue in book form, divided into a limited number of subject headings. The four-fold division of the library and its catalogue which became standard in traditional China was invented by Hsün Hsü in the Chin Dynasty. The traditional divisions of the Chinese library reflected the preoccupations of the scholarly readership and had to be radically changed in line with western library classification practices early this century to allow for scientific and other "modern" subjects. The problem of new schemes for Chinese library classification is now largely solved and in any case affects libraries in East Asia more than Chinese collections in the West.

In early times in China, the work of the cataloguer and of the scholar overlapped, particularly in the field of textual criticism, but already by the 18th century, a division between mechanical cataloguing and academic work had appeared. It is my hope that among the benefits automated cataloguing will bring will be a new coming together of the librarian and the academic as librarians are released from purely mechanical tasks and can take a more active part in education.

All traditional Chinese catalogues were in book form. The transfer to the card catalogue, with its advantage of easy addition of data, was effected quickly and smoothly in China's modern libraries. Assuming that automation goes ahead, the micro-fiche catalogue or catalogue stored on computer for print-out or display when required will probably rapidly render both the book catalogue and the card catalogue obsolete and will combine the advantages of ease of access of the former and provision for speedy addition of data of the latter.

However, another traditional Chinese library practice did cause and still causes problems in Chinese libraries, especially those containing both Chinese and western material. Almost all traditional Chinese library catalogues were title-based. Title-base has great advantages for the user, particularly the user interested in old Chinese books. Chinese authors in the past, and to some degree also in the present, went under a number of different names for different purposes and at various stages of their lives. If readers remember the book by the author's name as it appears on the book, they do not necessarily associate it with the standard form of the name, which is likely to appear in the catalogue. Complex cross-referencing is therefore essential to locate the relevant entry, causing frustration to all concerned. However, the reader is likely to become even more frustrated, since he or she generally refers to the book by its title, following normal Chinese practice. The author's name is seldom readily recalled.

Certain books present even greater problems for the reader faced with an author-based catalogue and for the cataloguer as well. A Ts'ung shu (Encyclopaedic collection) is always referred to by its title, while the editors of even the most famous Ts'ung shu are obscure or even unknown. Even when dealing with modern Chinese books, reference to title rather than author is frequently more convenient. Collective and institutional authorship/ editorship has become common and especially

during the Cultural Revolution, there was a rash of extremely long-winded author/editor designations designed to make the human cataloguer blanch and the computer malfunction.

These long designations notwithstanding, I feel the problem of integrating modern Chinese books into an author-based catalogue is not insurmountable. In any case, a title-based catalogue is normally available in the library in addition to the author-based one, should the reader have no information regarding authorship. However, the undoubted advantages of title-base for older (pre-1911) Chinese books, in my opinion, are among a number of reasons for treating these materials and possible all East Asian materials, separately, where they exist in a library in significant numbers. Other reasons are the physical properties of the books themselves, the fact that only a few specialists consult them and are able to browse more easily in a separate collection, and the need to persuade institutions that it is imperative to employ a specialist to look after these materials and readers' needs. I am familiar with such a specialist East Asian collection with its own title-based catalogue in the Far Eastern Section of the University Library at Cambridge and will be interested to see what if any effects automated cataloguing developments now in hand at Cambridge will have on the Far Eastern Section. However, my suggestion of a separate collection begs the question of how to treat old Chinese books reproduced in micro-form, not to mention the whole vexed question of whether libraries should maintain separate collections.

Anderson, in his survey of cataloguing methods in major American collections of Chinese materials, concludes that the romanised catalogue arranged in alphabetical order is the most efficient system for Chinese libraries in an English-speaking country. I heartily agree with his conclusion and would suggest that, besides the advantages which he lists, namely ease of use by library staff with or without Chinese language training and readers from the most elementary to the most advanced students of Chinese, the catalogue arranged alphabetically is most suited to automation, at least at the present state of the science. Alphabetical cataloguing of Chinese books is most suited to integrated shelving and cataloguing of Chinese and western books, which although not always most convenient for the reader, is best suited to libraries with only limited Chinese holdings.

However, one serious problem associated with the romanised catalogue arranged in alphabetical order is that it may inhibit use by native speakers of Chinese. Chinese people, even when they are familiar with romanisations, often find them confusing and prefer to use characters exclusively. Perhaps more serious in its implications is the fact that the romanised catalogue cuts off speakers of Japanese and Korean, not to mention non-standard dialects of Chinese, from access to library material altogether. I remember my own frustrations on first arriving in Japan as an advanced student of Chinese with only minimal Japanese when faced with catalogues of Chinese books arranged in kana order according to the Japanese readings of the Chinese characters. However, since the majority of users of Chinese library collections in Australia are likely to remain students whose native language is English or another European language and their Standard Chinese-speaking instructors, who must necessarily be familiar with the romanisation used for teaching purposes, I feel that the disadvantages of the romanised catalogue are minimal in our situation. As the teaching of Standard Chinese in Chinese

communities increases and integrated automated cataloguing systems, presenting data in romanised and character form, are developed these problems will be lessened. Maintaining a separate East Asian collection with a supplementary character-based catalogue in libraries with large East Asian holdings would solve the problems of the reader more familiar with characters than with romanisation and of different pronunciations in different languages and dialects.

The choice of the romanised catalogue leads to another vexed question facing Chinese libraries in particular: that of which romanisation to use. Anderson favours the universal adoption of Pinyin, because it provides a wider range of initials than Wade-Giles and so makes for speedier location of items and also because it has been adopted as standard in the People's Republic of China. I agree that Pinyin should become the standard romanisation for us in Australia, as certain indications suggest it will in America. Gwoyeu Romatzyh (Kuo-yü lo-ma tzu) would appear preferable in that it provides more differentiation of individual sounds in Chinese, by separating the four tones without the need for diacritical marks. However, political considerations make it most unlikely that Gwoyeu Romatzyh could ever be accepted as the standard romanisation of Chinese. Moreover, Anderson has proved that ease and efficiency in using the catalogue is not necessarily related to the number of criteria used to isolate and arrange morphemes within the catalogue. If Pinyin was adopted and differentiation by tone was considered desirable, tone marks could be used. Non-Chinese speakers would quickly learn the sequence of the tone marks and they would have the added advantage of keeping all morphemes with the same sound together in the catalogue in the correct tone sequence, which would not be the case in an alphabetical arrangement of Gwoyeu Romatzyh. In general, however, for the sake of simplicity, I consider a system which require diacritical marks and the mixing of criteria for sorting derived from the roman alphabet and from Chinese practice undesirable. One outstanding problem in the use of Pinyin is that no standard convention has been agreed upon with regard to separating or joining morphemes, especially in romanising classical and literary Chinese. Clearly until a standard exists, alphabetical arrangement by Pinyin romanisation will be confused and inconsistent between libraries and even within one library and readers will have difficulty in locating items where their views do not coincide with those of the cataloguer.

No matter what system of cataloguing or romanisation is adopted, or whether the Chinese collection is maintained separately or integrated with other holdings, it is essential that reference be made to Chinese characters (preferably typed or printed) in the catalogue. Titles in modern Chinese and more especially in classical Chinese are often hard to understand or even totally incomprehensible if rendered only in romanisation because of the large number of homophones in Chinese. The absolute necessity for the inclusion of characters in catalogue data is one of the most difficult problems in East Asian catalogue automation and is no less a problem for Japanese and Korean books.

Perhaps the major problem inhibiting the use of automation in East Asian cataloguing is cost. I consider that it is essential for libraries, in consultation with readers and technicians possessing special expertise,

to plan carefully for automation in order to reduce costs, cut out wastage and eliminate other related problems. Standardisation, I feel, holds the key to efficient and cost-effective automation both in the East Asian area and in general. The widest possible cooperation and lack of duplication to maximise use of resources on a nation-wide and ultimately world-wide basis is desirable, regardless of whether automated or manual systems of cataloguing are adopted. I believe that the main justification for automated cataloguing is that it will greatly facilitate such cooperation and so, in the long run, will save money and increase efficiency. But in the meantime, careful planning and a number of well thought out adjustments are required, particularly in the East field, to prevent disasters on the way. The road to Hell was never more truly paved with good intentions than in an ill-planned venture into new technology, be it of whatever kind.

Future projections suggest that in a few years' time, the library as we know it today will be an anachronism. All literary material will be stored in a central "data-bank" in micro-form and will be available on screens in institutions and the home, linked to the central computer. The reactions of present-day scholars to this future projection are mixed. On the one hand, the world's books will be at our finger-tips, but on the other, our social life will be non-existent and we will lose an excuse for overseas leave. My answer to these questions is that the human mind is infinitely adaptable and in any case, these questions lead me somewhat off the point.

Since East Asian library cataloguing presents special problems for readers and librarians alike and is costly in terms of manpower if it remains manual or is only semi-automated, or in terms of hardware if fully automated, I suggest that we hold back until an integrated system which can cope with both romanised and character data at a reasonable cost is developed. We should then go for a centralised cataloguing system for all East Asian materials throughout Australia, possibly based on the National Library of Australia, but with input from all libraries which are collecting East Asian materials. All these libraries should be linked by computer terminals so that they function as one integrated system. Data would be retrievable in romanised (Pinyin) and/or character machine-readable form and could be stored in the computer for retrieval as individual items or processed in printed card or micro-form for storage by individual libraries according to alphabetical or character-based systems as desired. Integrated and/or separate catalogues of East Asian materials in individual libraries would thus be catered for without modification of the system.

A centralised system would have the added advantage of providing easy access to information needed for inter-library loans and would in effect create a union catalogue without any extra effort.

Any staff made redundant in the participating libraries should be redirected to Reader Services, a field which requires expansion in order to meet student needs and closer cooperation with academic staff. God forbid that the library should ever become a forbidding soulless abode of computers and screens without a friendly face to reassure the reader.

Indeed I see human relations as far more important in the automation of East Asian cataloguing than machines. Success depends on our ability to plan carefully and select an efficient and cost effective system without upsetting too many sensibilities and vested interests, and to "sell" the idea to the powers that be, in order to obtain the necessary finance. It is here that I believe that East Asian Librarians' Group of Australia can and should take the lead.

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Future projections suggest that in a few years' time, the library as we know it today will be an anachronism. All literary material will be stored in a central "data-bank" in the form of magnetic tape and will be available on screens in institutions and the user will be able to access the material directly. The reactions of present-day scholars to this future projection are mixed. On the one hand, the world's books, the world's knowledge, will be available to all. On the other, our social life will be drastically altered and we will lose an excuse for overseas leave. My own reaction to these questions is that the human mind is infinitely adaptable. In most cases, these questions lead me somewhat off the point.

Since East Asian library cataloguing is a complex task, it is essential for readers and librarians alike and as a result, the manual of the system remains manual or is only semi-automated. I suggest that we should develop a fully automated system which can cope with both manual and automated systems. We should then cost is developed. We should then possibly based on the National Library of Australia. East Asian materials should be linked by computer terminals so that they can be retrieved by machine-readable form and could be stored in a form for storage as individual items or processed in a form for storage. Integrated systems as desired. Integrated and computer-based systems of East Asian materials in individual libraries would be a major step towards the modification of the system.

A centralized system would have the advantage of providing easy access to information needed for research and would in effect create a common catalogue. Any redundancy in the existing catalogues should be redirected to Reader Services, which requires expansion in order to meet student needs and close cooperation with academic staff. God forbid that the library should ever become a forbidding soulless abode of computers and screens without a friendly face to reassure the reader.

