

# THE CHINESE BOOK : ITS EVOLUTION AND DEVELOPMENT

By K. T. Wu (吳 光 清)

The physical make-up of the Chinese book has undergone many interesting and drastic changes since remote antiquity, if by the word "book" is meant any written or printed material put together in a convenient and portable form so as to compose a material whole for the purpose of recording thought or action and of transmitting ideas or knowledge. In the Shang and early Chou Dynasties writings were inscribed on oracle bones and tortoise shells, or cast in bronze. Owing to the small surface offered by these materials and to the laborious technique of Chinese writing in early days, naturally brevity was imperative. With the introduction of the stylus and ink in the form of lacquer made of tree sap, bamboo strips and wooden tablets were employed as writing materials, followed by silk fabrics, in the same way that such materials as clay tablets, bark, leaves, papyrus, parchment, etc., were used in other parts of the world prior to the general use of paper. Likewise the form of the Chinese book changed from the bundle to the scroll, and from the scroll to the codex. The purpose of this article, as its caption implies, is to trace briefly the development and evolution of the material and appearance of the Chinese book, from its rudimentary beginning to its present form. Only its physical structure is included in the survey. As to the invention of block printing and the development of typography, which are very complicated subjects warranting a longer article, we hope to take them up later on.

After the period of oracle bones and shells, the use of bamboo and wood, which provided a more liberal space for writing, came into vogue. The exact origin of the use of these two materials for

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writing cannot be ascertained, but their partial use, especially for official purposes, lasted until the third or fourth century after Christ. Extant specimens dating from the Christian era, now in European museums, were found by Sir Aurel Stein, M. Paul Pelliot, and Dr. Sven Hedin in the provinces of Kansu and Chinese Turkestan. Writings on single bamboo strips were known as *chien* (簡), which, perforated and tied together by means of silken cords of various colours or leather thongs, formed a bundle called *tsé* (策), from which the modern Chinese word for volume (冊) was derived. Those strips held together by leather were known as *wei pien* (韋編), while those held together by silk were known as *sze pien* (絲編). Although this is as far from our present notion of book-binding as the bamboo strips are from our conception of books, nevertheless the *chien* and *tsé* mark the beginning of Chinese book-making.

Since bamboo was abundantly found in China, it became a very handy and natural medium for writing. It was cut, and its green surface scraped and cured. Then it was dried over the fire and split into strips of various sizes. Before the Han Dynasty (206 B.C.-A.D. 220) bamboo strips employed for books were of three different lengths, namely 2 feet 4 inches, 1 foot 2 inches, and 8 inches. (Computation by Friedrich Hirth showed that a foot in the Chou Dynasty was equivalent to 23 cm.; in the Ch'in and Han Dynasties, 17 3/10 cm.; and in the later Han Dynasty, 29 1/3 cm.).

The size of a book was determined by the nature of its contents. The more a book was esteemed, the greater was its size. Thus the *Book of Changes* (易), *Book of Odes* (詩), *Book of History* (書), *Book of Rites* (禮), *Book of Music* (樂), and the *Spring and Autumn Annals* (春秋) were on strips of 2 feet 4 inches; the *Book of Filial Piety* (孝經), 1 foot 2 inches; and the *Analects of Confucius* (論語), 8 inches. So much for the length of the bamboo strips. As for their width, they were invariably narrow, bearing only one column of characters. However, there are references which mention two columns, but only in very rare instances. It will be readily seen that the space available necessitated laconic writing. Generally, the number of words on each piece ranged from eight to forty, depending, of course, upon the size of the strips.

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Prior to or at the same time as the use of bamboo strips was the use of wooden tablets known as *fang* (方) or *tu* (牘), meaning square. Thus it can be inferred that most of the wooden boards used for writing were square, and in some cases, rectangular in shape. They were primarily intended for official documents, ordinances, and short messages, whereas bamboo strips were intended for longer writings and books. Unlike bamboo strips, wooden tablets were not strung together: each one of them formed a distinct unit. Strictly speaking, therefore, wooden tablets, like bones and shells, cannot be called books.

By means of a sharp stylus, writing was done on bamboo strips and wooden boards with ink of lacquer made from tree sap. Yeh Teh-hwei (葉德輝) in his *Shu Lin Ch'ing Hua* (書林清話) held that a knife was also used for inscription in addition to the stylus, whereas Wang Kuo-wei (王國維) in his *Chien Tu Chien Shu K'ao* (簡牘檢署考) contended that the knife was merely used to scrape off errors and not for writing purposes. The researches of many scholars all favour the latter explanation.

The silken cords and leather thongs with which the strips were held together often broke; to string them together was by no means an easy task. Confusion in the order of the text naturally resulted. The bulkiness of the bamboo strips together with the limited space on each strip available for writing was a sufficient reason for their discontinuance as writing materials. (They were weighed in units of 120 catties during the time of Ch'in Shih Huang.)

Silk, which came into use in the third century before Christ or thereabouts, gradually displaced bamboo and wood as writing material. The first step was a sort of near-paper made of raw and crude silk or satin. It must be noted that the use of these materials overlapped each other and that no line of demarcation can be drawn as to the period which marked the termination of the use of one kind of material and the exclusive use of the other. Evidences can be adduced to prove that wood, bamboo and silk were employed in the Chou Dynasty, and the use of bamboo and wood was continued right up to the Han Dynasty. In the *Han Shu I Wen Chih* (漢書藝文志) books noted therein were listed both as *tsê* and *chüan*, thus indicating the simultaneous use of these

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materials during the Western Han Dynasty (206 B.C.-24 B.C.), with the predominance of bamboo and wood over silk. In the Eastern Han Dynasty (25 B.C.-A.D. 220), the use of silk became very prevalent; and during the last years of Hsien Ti (獻帝), when the country was embroiled in civil strife, many of the books in silk rolls were destroyed by the combatants.

The silk employed for writing was about one foot broad and its length was determined by the contents of a book. Cut into pieces to suit the writing space required, silk was undoubtedly more convenient than wood or bamboo. It necessitated, however, the use of a different kind of pen from that used for bamboo and wood. Instead of a bamboo stylus, hair brushes came into use. The honour of inventing the pen brush of animal hair for writing was attributed to General Meng T'ien (蒙恬) of the third century before Christ, (the Ch'in soldier who helped to build the Great Wall to forestall the invasion of the northern barbarians), although according to historical references its use was prevalent before his time. Lacquer had given way to ink made of lamp-black which proved to be more suitable for the hair brush.

After the use of silk which came in long pieces and narrow breadth, it was possible to write a lengthy passage on one piece of silk. Being soft and light, silk could be easily made into a roll more or less similar to that of papyrus and vellum. As distinguished from the bundle or *tsé*, a book thus composed was known as *chüan* (卷) or roll (卷子本). Written on one side only, the scrolls were unrolled sideways. The rods around which the silk was wound projected at both ends and were made of various materials often beautifully ornamented. In the bibliography of the Sui Dynasty (581-618), it is stated that upon the accession of the Emperor Sui Yang Ti (隋煬帝), 50 copies of the books in the Imperial Library were made, and the books were divided into three different classes. For the best books, red glazed rods were used; for books of the second class, dark blue glazed rods were used; and for common books, lacquer rods were used.

In appearance the scroll was like a modern map, and the text was written in ruled columns from top to bottom and from right to left. Tied up with a cord, the scroll had a tag attached to it in order that

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its contents might be immediately revealed without the trouble of unrolling it. The scrolls were protected by a wrapper called *chih* (帙 or 褰), known also as "book clothes", with both ends of the rods exposed. Generally each wrapper contained five to ten scrolls. Labels indicating the titles and volume numbers were used for identification purposes.

Inasmuch as bamboo was cumbersome and silk expensive, the invention of paper marked the beginning of the end in their use as writing materials. Ts'ai Lun (蔡倫), chamberlain of the Emperor Ho Ti (和帝, 89 to 105 A.D.) is generally credited as being the inventor of paper. According to Ts'ai Lun's biography in the official history of the later Han Dynasty, in 105 A.D. he perfected a process for manufacturing paper fabricated from tree bark, hemp, rags and fishing nets. The finished product was known as the paper of Marquis Ts'ai, named in his honour. It must be added that the present Chinese word for paper is *chih* (紙), with the silk radical on the left, thus indicating its connection with the latter. Literally *chih* means clan-silk, but it is now used exclusively to denote paper.

Some later writers contended that paper was known before Ts'ai Lun's time, and that it was through him that the discovery was made public and gained rapid headway; but it was not until the period of the Five Dynasties (907-960) that paper entirely supplanted silk as writing material.

Despite the gradual increase in the use of paper from the second century after Christ, the form of the book did not materially change from scrolls until a later date. As paper did not come in long pieces like silk, it was pasted together to form one long strip like the Egyptian papyrus. Being thicker than the usual modern Chinese paper, it could be rolled in the same way as silk was rolled. It will be seen that a book thus disposed did not lend itself to convenient reading. That a new method of arrangement was necessary in order to facilitate easy handling was apparent, and folded books subsequently came into existence. This was done by folding the long strip of paper backwards and forwards like an accordion pleating, known as "whirlwind binding" (旋風裝), suggesting the spiral motion of a vortex of air current. Many of the Buddhist sutras

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were and still are found in this form, known otherwise as "sutra binding" (經摺裝). Although this was a marked improvement over the scroll form, yet it did not prove very satisfactory; it was gradually superseded by a bound volume of separate sheets (葉子本). It must be noted parenthetically here that although scrolls were displaced by other forms of binding, the term *ch'uan* is retained and used today to indicate a unit or section of a typical Chinese book. Thus we say that a book has so many *chüan* in so many volumes.

The separate leaves of paper were not pasted together to form a long strip, but were book-sized sheets bound together. This originated in the T'ang Dynasty and flourished in the Sung Dynasty after block printing became prevalent. Until the introduction of foreign paper, paper used for printing Chinese books was invariably thin and transparent so that only one side could be used. There were different kinds of binding of this type, the earliest of which was known as "butterfly binding" (蝴蝶裝), that flourished in the Sung Dynasty. Like the wings of a butterfly, the thin leaves, with text on one side of the paper, were folded at the back. As the text faced each other after folding, it necessitated the placing of two printed pages and two blank pages alternately. At the middle of the text where the leaves are folded were the running title and pagination. Placed one upon another, the folded leaves were pasted together at the inner fold, and a hard paste-board covered with silk was supplied to form a volume. Books of "butterfly binding" of the Sung Dynasty were big in size and were placed on their edges with their backs up. It is evident that reading such a kind of book was laborious, since pagination was supplied at the middle of the book. To overcome this difficulty, a thumb index was furnished by means of a small piece of silk pasted on the margin to indicate the different parts of a book. Books in "butterfly binding" of the Sung Dynasty are distinguished for their superior and artistic workmanship, and are highly treasured today.

Later on in the Yuan Dynasty "wrapped back binding" (包背裝) displaced the "butterfly binding". Externally there was no difference between the garbs except that the cover was not necessarily stiff, but internally the folding was reversed so that the

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running title and pagination, specially marked as a guide to the binder in folding, could be easily seen as one turned over the pages. The place of folding of a typical Chinese binding is known today as the "mouth of the book" (書口) and the place where the separate sheets or leaves are held together, regardless of methods, is called the "back of the book" (書背). Hence we have the name "wrapped back binding", for a piece of cloth or paper is wrapped around the back of the book as its cover. The famous *Yung Lo Ta Tien* (永樂大典) and the *Sze K'u Ch'uan Shu* (四庫全書), for instance, are bound with beautiful satin in this way.

Finally, the supremacy which "wrapped back binding" established waned, and our present day binding for old Chinese literature began in the Ch'ing Dynasty and has continued even to the present time. This arrangement of sheets is essentially the same as "wrapped back binding", but the way of holding them together is decidedly different. After the leaves folded at the middle are placed one upon the other, two pieces of paper or cloth cover, one at the top and one at the bottom, are supplied. The leaves are held together by a piece of thread laced through holes, four, six, or eight in number according to the size of the volume, pierced sideways right through the entire thickness of the back of the book. Obviously this can only be applied to thin volumes. This is known as "thread binding" (綫裝).

As volumes of "thread binding" are thin and pliable and cannot stand upright on the shelves, they have to lie flat instead. Furthermore, the book does not last long if subject to wear and tear. When placed in piles, the title and volume number of the books are usually written at the lower end of the books. To remedy these handicaps, there are devices to protect and to hold together many volumes. And with the aid of a wrapper known as *han* (函), the books can be made to stand on their ends like Western books. Another way is to use as covers two pieces of wooden boards of the same size as the books tied together by means of a cord. A third way no longer popular today is to encase the books in small wooden boxes with sliding covers. The most scientific and convenient way perhaps is to have cardboard boxes covered with cloth, each holding a number of volumes. The boxes stand on their ends and the

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title and volume numbers are written on the back of the boxes. This method has been widely adopted in modern libraries in China, and is so far the most practical way of handling Chinese books.

After the introduction of Western books and printing presses, Chinese books on modern topics began to appear in modern commercial paper and cloth bindings like their prototypes in the West. Generally speaking, there are three kinds of bindings in China today, namely, the stitched or stabbed binding for books printed only on one side of soft paper, the paper binding and the cloth binding, the last two being more or less a kind of advanced "wrapped back binding" with paper and cloth covers respectively. Then there are also semi-flexible and parti-cloth covers. Fabrikoid, however, is becoming quite popular for library binding today. In contrast to books of thread binding not held together by wrappers or boxes, all these can be placed upright on the shelf with titles and authors' names on their backs so as to facilitate easy identification. Machine binding, or casing, is being adopted by some publishers. As a matter of fact, in large establishments such as the Commercial Press, the Chung Hwa Book Co., etc., the production of books by machinery has become the rule.

In recent years there have been attempts to produce photolithographic reprints of valuable old works by leading publishers in China. Printed on fine hand-made paper, the books appear in stabbed binding and are an excellent testimony to the skill of the art of book-making in China. Likewise, some publishing houses as well as individuals are bringing out many finely made books on a smaller scale.

While we do not have today very many bindings which approach the *édition de luxe* in the West, yet there are not a few exquisitely printed books, with their symmetrical Chinese characters in jet black ink on clear, unblemished white paper and with elegant, embroidered silk covers in brocade cases or in carved wooden boxes. Not a few scholars like to see their literary works printed and bound in the old ways.

Many a connoisseur of fine books frowns upon cheap publications and deplores the passing away of superbly artistic books in which every detail of paper, type, form, and arrangement are in wonderful

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harmony, obtained before the introduction of modern printing and mass book production. Moreover, the quick disintegration of modern commercial paper as compared with the excellent and durable hand-made paper of ancient books, is another cause for complaint. It goes without saying that such faults incidental to machine production are due primarily to economic and practical considerations dictated by the desire of publishers to produce books at a low cost with a view to increasing their circulation and usefulness. Hence the scarcity of artistically got-up books. While we do not advocate reverting to antiquated methods of book production, we hope as time goes on, taking advantage of the economies made possible by the mechanical process of mass production, we shall be able to attain a high standard of book-making. At the same time, it is hoped that the characteristic features of the physical make-up of the Chinese book can be retained. Whatever appearance a book may have, it should be consonant in spirit and form with its character and purpose. Good taste and sound judgment, after all, are of paramount importance in the production of books, in China as elsewhere.