Ancient Chinese bamboo and silk manuscripts excavated in recent decades have provided us rare material for the examination of form and format of ancient Chinese books. These excavated manuscripts can be divided into two categories: administrative documents and intellectual or literary texts, many of which are ancient Chinese books that even the greatest bibliographers in ancient China, such as Sima Qian (145–90 B.C.E.) and Liu Xiang (77–6 B.C.E.), etc., had no opportunity to read. It is self-evident that excavated administrative documents are records and files of ancient political or business administrations. From the perspective of textual form, they are usually quite different from the conventional understanding of Chinese books. However, excavated intellectual or literary texts that can be grouped into the four traditional jing (classic), shi (history), zi (masters/philosophers), and ji (literary collections) categories, are close to the conventional understanding of traditional Chinese books or tushu, literally “graph-book.” This essay will focus on this category of excavated manuscripts to examine the layout characteristics and implications of ancient Chinese excavated bamboo and silk books.

**TUSHU AND ANCIENT CHINESE BOOKS**

*Tushu* or “graph-book” is the general name of Chinese books. The meaning of *tushu* can be interpreted in two different ways: one is graphs and books, and the other is graphic books or books with graphs. *Tushu* of “graphs and books” is recorded in transmitted Chinese textual tradition. The *Hanshu*, “History of the Western Han Dynasty (206 B.C. – 25 A.D.),” states that when the Han Dynasty Prime Minister Xiao He entered the Qin (221 – 206 B.C.) capital Xianyang, he quickly collected the Qin Prime Minister’s and other officers’ *tushu*. The reason why the first Emperor of the Han knew the population, the number of the passes, and the strength and weakness of China, etc., is “because of the Qin tushu that (Xiao) He had attained.” Here, “tushu” refers to both graphs and books, including charts, maps and books, etc.

As for the *tushu* of “graphic books” or “books with graphs,” it includes two different types of books with graphs or pictures. The first type is those books with illustrations, and the other type is those with graphic layout designs, i.e., books with their textual arrangements following particular graphic designs. As shown in Figure 1, the Warring States (476 – 221 B.C.) Chu silk manuscript excavated from Zidanku in Hunan Province is a piece of ancient silk book with ample illustrations.
Such early illustrations of an ancient silk book can be as dominant as those shown in the 2nd century B.C. silk manuscript *Bibin*, “military avoidance,” excavated from Mawangdui in Hunan Province, overriding the majority of the silk books as shown in Figure 2.\(^7\) Figures 3 and 4 illustrate examples of the book type with graphic layout designs. Excavated from a Han Dynasty tomb at Yinwan in Donghai, Jiangsu Province, the text of the wood tablet in Figure 3 was arranged by following the TLV designs that were popular in early Chinese bronze mirror inscriptions.\(^7\) In Figure 4, the text inscribed on Qin Dynasty bamboo slips was specifically arranged in a series of concentric squares.\(^6\) It is also worthy of noting that some layout designs in ancient Chinese books belong to both the type with illustrations and the type with graphic layout designs. The Warring States Chu silk manuscript in Figure 1 is such an example.

The textual layout feature of the Warring States Chu silk manuscript in Figure 1 is that the inscriptions of the Chu silk manuscript are an integral part of the graphic textual layout. In ancient Chinese books, texts themselves usually do not constitute of any part of the graphs of layout design. Even in an ancient silk manuscript such as the one in Figure 2, although the illustration is dominant in the layout arrangement, the text itself is not part of a specific graph of the layout design. However, in the Warring States Chu silk manuscript in Figure 1, on the one hand, some texts of the silk book have their illustrations, i.e. the twelve spirits on the four sides of the silk as well as the four trees at the four corners. On the other hand, all those texts themselves constitute the specific graph of the whole layout design of the silk book, as illustrated in Figure 5. That is to say, the “graph” of ancient Chinese “graph-book” is not necessarily drawn or painted illustrations, but also can be specific graphs composed of texts.

**THE LAYOUT DESIGN OF ANCIENT CHINESE BOOKS**

Bamboo slips and silk manuscripts were major forms of ancient Chinese books before the invention of paper. Due to the particular material feature of ancient bamboo and silk books, these archaeologically excavated bamboo slips and silk manuscripts are usually preserved by museums and archaeological institutions rather than normal libraries. Consequently, common readers and scholars have very limited access to those rare ancient bamboo and silk books. This is why there have been so many mistakes in common knowledge of ancient bamboo and silk books in the field of book design.\(^7\) It is thus important to promote the study of ancient bamboo and silk books so that scholars in different fields, including librarians and book designers, etc., will have proper knowledge and understanding of those excavated rare ancient books, where ancient Chinese book culture was well preserved.

Although the writing/printing media and the binding/folding systems of ancient bamboo and silk books are different from those of paper books that we received
from the transmitted tradition, the layout arrangement of ancient Chinese bamboo and silk books evidently reflects particular ideas of layout design. Such layout design of excavated ancient bamboo and silk books vividly presents the accomplishments of ancient Chinese book culture, in particular, the art and thought of ancient Chinese book design.

That *tushu* became the general name of Chinese books reflects the importance of *tu*, graphs or pictures, in the Chinese book culture. Whenever graphs or pictures become part of a book, the layout design of the book will be more important than that of a text-only book. This is also true in ancient China. According to archaeological discoveries of ancient bamboo and silk books, the achievements and implications of ancient Chinese book design cannot be overstated. No matter what the presentation form or the intellectual thought concerned, ancient Chinese book design does not speak less than modern Chinese book design does.

The basic task that a layout design has to finish is to properly arrange the filled and unfilled spaces for a book in order to effectively establish the connection between the reader and the text, as well as the graphs or illustrations. In this essay, we term the space that text and graphs occupied as “filled space,” and the blank space without any texts or graphs as “unfilled space.” Such “unfilled space” has been called “negative space” by some scholars in the field of graphic design. We argue that in layout design, unfilled space occupies “positive” space in terms of either its form or its function. “Unfilled space” co-exists with “filled space,” and it only exists where “filled space” presents. “Unfilled space” makes no negative effect on “filled space,” but helps “filled space” more efficiently build connections with the reader if it is well designed. This is what Chinese philosophy suggests, emptiness and fullness mutually produces each other. It is thus that we consider the term “negative space” misleading.

The layout design of ancient Chinese books can be best examined from the layouts of excavated ancient bamboo and silk books with graphs or illustrations. According to what is available today, we would like to group the ancient bamboo and silk books in question into two categories, (1) layout arrangement with illustrations, and (2) layout arrangement presenting a graphic pattern. Under the first category, we further divide it into two subcategories, the format of attaching illustrations to the text, and that of attaching texts to the illustrations. These categories can be discussed with the following examples.

The layout arrangement with illustrations is perhaps the earliest and most popular layout design in the world. Both the subcategories of the layout arrangement with illustrations have their ancient examples in Chinese excavated bamboo and silk books. In Figure 1 of the Warring States Chu silk manuscript, the twelve images of spirits on the four sides of the silk manuscript are attached to the twelve sections of the *Yueji* (Monthly Taboo) text. Considered from the perspective of visual effects only, the four illustrations of trees at the four corners are decorative illustrations adjusting the tension of the unfilled space, as seen in Figure 5. Comparing figures 1 and 5, we can see that each section of the “Yueji” text attached by
an image of spirit in Figure 1 consists of one square of the twelve squares on the four sides of the silk manuscript in Figure 5. Clearly, each square is a unit of text attached by illustrations, and this silk manuscript is an example of the format of attaching illustrations to the text.

In Figure 2 of the Mawangdui Bibin silk manuscript, it is evident that the images are dominant and the text seems to be captions that are attached to the images. However, the text is an independent military text and the images are actually illustrations of the text. Due to the dominant role of the illustrations, Rao Zongyi suggests that this silk manuscript is *tushi* (graph-poem) of ancient Chinese *huazan* (painting eulogy) style of writing. Nevertheless, this Mawangdui silk manuscript is an example of the format of attaching texts to the illustrations.

Either the format of attaching illustrations to the text or that of attaching texts to the illustrations is the traditional layout design with illustrations. The images of the illustrations are easy to identify. The layout design presenting a particular graphic pattern is different. Such graphic pattern of layout design is not easy to be identified by an untrained eye. According to the archaeological discoveries, the layout design presenting a particular graphic pattern is an important form of layout design in ancient Chinese bamboo and silk books. Comparing it to the layout design with illustrations, the layout design presenting a particular graphic pattern has the following features: (1) Just like the layout design with illustrations, the layout design presenting a graphic pattern may have illustrations; (2) different from the layout design with illustrations, the layout design presenting a graphic pattern may have no illustrations; and (3) different from most cases of the layout design with illustrations, the layout design presenting a graphic pattern must have its layout arrangement shown as a particular graphic pattern. Take the example of the Warring States Chu silk manuscript in Figure 1 again. We have observed the example of the layout design with illustrations above, and we may also examine the layout design presenting a graphic pattern in this Chu silk manuscript.

The particular graphic pattern of the Chu silk manuscript layout can be traced back to some bronze inscriptions of the Shang (1600–1046 B.C.) and the Zhou (1046–256 B.C.) Dynasties. In *Sandai jijin wencun*, a collection of ancient bronze inscriptions dating back to the Xia (2070 – 1600 B.C.), Shang and Zhou dynasties, Luo Zhenyu included the inscriptions of figures 6 and 7, both of which had been inscribed inside a graphic frame. In Figure 6, the inscriptions were inscribed inside a 亞-shaped design, and in Figure 7, the inscriptions were inscribed inside a -shaped design. The 亞 or -graphs are the graphic patterns that the layouts of the bronze inscriptions follow.

In the Warring States Chu silk manuscript, if we take the four trees at the four corners as pure decorations, the layout of the silk manuscript is shown as Figure 8. It is evident that the layout design of the Chu silk manuscript shares some graphic features of both the 亞 and -shape designs of figures 6 and 7. If we consider the four trees at the four corners as simply decorations that have no connections with the texts of the Chu silk manuscript, the layout design of the Chu silk manuscript...
then presents a shape pattern, as shown in Figure 5. However, we consider the tree images at the four corners still related to the contents of the Chu silk manuscript thus constitute part of the layout of the Chu silk manuscript. That is to say, the layout of the Chu silk manuscript is a well arranged \( \text{亠} \)-shaped design, as shown in Figure 8.

Actually, \( \text{亠} \) or \( \text{貳} \)-shaped layout designs are closely related to each other. As a pattern of layout design, the \( \text{貳} \)-shaped design is a variation of the \( \text{亠} \)-shaped design. This suggests that no matter which design we identify the layout pattern of the Chu silk manuscript as, it is an intentionally arranged graphic pattern that not only has its archaic origins in the Shang and Zhou dynasties bronze inscriptions but also can be found in later excavated textual materials. The inscriptions on the Yinwan wooden tablet from a Han Dynasty tomb in Figure 3 also present such graphic pattern of layout design. As we will briefly discuss its implications below in the next section, the \( \text{貳} \)-shaped layout design is a layout pattern that is quite popular in ancient Chinese texts. Needless to say, it is not the only graphic pattern of layout design.

Other graphic patterns of layout design in ancient Chinese books include various forms of graphs. One particular example can be observed in Figure 4, a Qin Dynasty bamboo slip text Zhengshih zhi chang (the constancy of the administrative affairs). As we mentioned above, the inscriptions on the Qin bamboo slips were inscribed in the layout of a concentric square design, which requires a wide area of space for writing. If such layout design applies to bronze vessels or silk, no extra efforts are needed before inscribing. However, as for ancient bamboo books, the bamboo slips have to be pieced up together first in order to create a writing space that is wide enough for square layout design. In Figure 4, the bamboo slips should have been bound up together and the concentric squares should have been drawn before any inscription could be inscribed. This involved more technical difficulties and required more efforts than most regular bamboo books did while producing a bamboo slip book. It is thus clear that such layout design must have carried certain particular meaning that is worthy of such extra efforts.

From the above examples of the layout designs in ancient excavated bamboo and silk books, it is evident that the layout designs in ancient Chinese bamboo and silk books were the results of intentional efforts rather than layout arrangements that came into shape automatically while the texts were copied. Different from the layout arrangements in oracle bones and bronze inscriptions, the layout designs in ancient bamboo and silk books, either layouts with illustrations or those presenting particular graphic patterns, clearly present the ideas and efforts of those ancient bamboo and silk book designers. As the precious early forms of ancient book layout design, the layout designs of excavated bamboo and silk books represent important achievements of ancient Chinese book art and culture. These excavated original archaic bamboo and silk books and their design art are irreplaceable rare primary sources for the study of book art and tradition in early China and the ancient book culture and heritage of the human world.
THE INTELLECTUAL IMPLICATIONS OF ANCIENT CHINESE BOOK LAYOUTS

The implications of layout designs of ancient Chinese books are not limited to the art of book design or ancient Chinese book culture. In traditional China, those ancient Chinese book layout designs are one manifestation of ancient Chinese intellectual thought. As an example, the 亚-shaped pattern of layout contains particular intellectual significance.

Based on her study of archaeological materials with the 亚 shape of the Shang Dynasty, Sarah Allan of Dartmouth College argues that the 亚 shape related to the shape of the turtle in ancient China and reflected the cosmology of Shang Dynasty people. As for the actual meaning of the 亚 scholars, such as Ding Shan, Chen Mengjia, Qu Wanli, Rao Zongyi, and Yu Xingwu, etc., made extensive examinations. No matter what the original meaning of the 亚 is, we argue that the layout design of the 亚 shape and its variations have connections to the thought of 天-dao, the Way of heavens, and the cosmology of ancient China.

The Warring States Chu silk manuscript is an early Chinese silk book that consists of three texts, Sishi (four seasons), Tianxiang (images of heavens), and Yueji (monthly taboo). They all relate to thought of yin and yang, the four seasons, the Five Phases, the monthly ordinances, and early cosmology of ancient China. In the center of the silk manuscript, the texts of the Sishi and the Tianxiang were arranged reversely, i.e., one text starts at the top of the silk while the other starts at the bottom of the silk. Such layout design is quite similar to the pattern of yin and yang of the Taiji symbol and reflects the idea of that yin and yang give birth to each other and continuously restart a new circulation of their energy while the previous circulation ends. As illustrations of the Yueji text, the twelve spirits encircle all the four sides of the silk manuscript (Figure 1) and also imply the idea of endless circulation of the months or the spirits of the months. The images of the trees at the four corners have different colors. They should be related to the ideas of the Five Colors and the Five Phases. Evidently, the Chu silk manuscript with the 亚-shaped (or the 王-shaped) layout design has very close connections with the thought of ancient Chinese cosmology.

Such cosmological implications associated with the 亚 or the 王-shaped layout designs can be attested not only in the ancient excavated bamboo and silk books but also in the transmitted traditional Chinese books. In Figure 9, we see the 王-shaped layout design of a section in the Guanzi (Master Guan). The center of the text is actually a concentric arrangement, which is somehow similar to the layout arrangement of the Qin bamboo book, Zhengshi zhi chang (Figure 4). However, the entire layout of the Guanzi section is clearly a 王-shaped pattern. Reading the text of the section, we know that it is a section of writing discussing qi, the Four Seasons, the Five Phases, and the four directions, etc., thus it closely relates to ancient Chinese cosmology.
A much later example further proves such connection between the layout design and ancient Chinese cosmology. In Figure 10, we read a text explaining the connections between the sixty-four hexagrams of the *Book of Changes* and the hexagram spirits. The whole text forms a particular graph, which is another Φ-shaped pattern of layout design. The theory of the hexagram spirits is a hypothesis of the relationships between the hexagram lines and hexagrams of the *Book of Changes* and the Twenty-four Solar Terms in the traditional Chinese lunar system. In Figure 10, the layout design is actually a concentric Φ-shaped pattern: the innermost center is a Φ-shaped text of the four hexagrams Kan, Li, Zhen and Dui; the hexagram pictures of the four hexagrams form the next outer Φ-shaped text; the names of the Twenty-four Solar Terms form the next outer level of the Φ-shaped text; so do the twelve Monique hexagrams, the explanations of the Twenty-four Solar Terms and the Monthly Ordinances, and the seventy-two hexagram lines of the twelve Monique hexagrams. Following the pattern of the Φ-shaped layout design, the text elaborates the connections between the ancient Chinese cosmology and the hexagram names, hexagram pictures, and the Twenty-four Solar Terms, etc.

The Φ or Φ-shaped pattern is only one representative layout design in ancient Chinese books. Other related patterns of layout design are also available in both excavated and transmitted textual traditions in China. We have to acknowledge that scholars in the field have never paid enough attention to the issue of layout design in ancient Chinese books. Even less attention has been paid to the excavated ancient bamboo and silk books. As concluding remarks, we argue that the layout design in ancient Chinese books is not simply an issue of graphic art, as perhaps most people think. From what we have discussed above, it can be concluded that the layout design of ancient Chinese books has close connections with particular intellectual thought. This is an important characteristic of ancient Chinese book design, as well as one significant aspect of ancient Chinese book culture. The art of ancient Chinese book design has its long tradition as well as its own characteristic – the presentations of layout design in ancient China are not limited to the presentations of visual art; they have the functions to transmit particular intellectual thought, and they are also the presentations of particular intellectual thought, and thus are of important intellectual significance.

NOTES

1. Li Xueqin, *Li Xueqin wenji* (Shanghai: Shanghai cishu chubanshe, 2005), 5.
3. Noel Barnard, *Studies on the Ch’u Silk Manuscript* Part I: *Scientific Examination of an Ancient Chinese Document as a Prelude to Decipherment, Translation, and Historical Assessment – The Ch’u Silk Manuscript* (Canberra: The Australia National University, 1972); Noel Barnard, *Studies on the Ch’u Silk Manuscript* Part II: *The Ch’u Silk Manuscript – Translation and Commentary*
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(Canberra: The Australia National University, 1973); Li Ling, Changsha Zidanku Zhan’guo Chu boshu (Beijing: Zhonghua shuju, 1985).


15. For a more detailed discussion, please see Xing Wen, Boshu Zhouyi yanjiu (Beijing: Renmin chubanshe, 1997), 142-183.

16. Xing, Wen, “Reading through Graphs: Textual Layout and Divinatory Schools in Early China,” conference presentation, Association for Asian Studies 57th Annual Meeting, Chicago, 2005

ABOUT THE AUTHORS

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ILLUSTRATIONS

Figure 1: The Warring States Chu Silk Manuscript

Figure 2: The Mawangdui Silk Manuscript Bibin
Figure 3: The Yinwan Wooden Tablet Boju zhan

Figure 4: The Wangjiatai Qin Bamboo Slip Zhengshi zhi chang
Figure 5: The Trees at the Four Corners of the Chu Silk Manuscript

Figure 6: The 亚-shaped Bronze Inscription

Figure 7: The 亖-shaped Bronze Inscription
Figure 8: The Layout Design of the Warring States Chu Silk Manuscript

Figure 9: The Layout Design of “Youguan” of the Guanzi

Figure 10: The Seasonal Hexagram Spirits