



УДК 002.2(510)"03

## RESEARCH TECHNIQUES OF TRADITIONAL CHINESE BOOKBINDING

DUAN Yuqing<sup>1</sup>, VASYLIEVA Olena<sup>2</sup>

<sup>1</sup> Kyiv National University of Technologies and Design, Kyiv, Ukraine

<sup>2</sup> Kyiv Institute at Qilu University of Technology, Jinan,  
People's Republic of China  
**245177159@qq.com**

*Traditional bookbinding has evolved considerably, from the manuscript scrolls of early times to modern bookbinding practices. This research study examines the historical evolution and practice of Chinese bookbinding, focusing more on structural aspects than cultural symbolism. It explores some of the most recognized bookbinding techniques, such as thread binding, butterfly binding, and stitched binding, and their impact on the durability and usability of books. Through a morphological analysis of these methods, this study aims to gain insight into the functional and visual properties of bookbinding design beyond the influence of cultural motifs*

**Key words:** Bookbinding, traditional techniques, design.

### INTRODUCTION

Bookbinding has been the foundation of knowledge preservation and transmission over the path of human civilization. Technological binding development primarily relies on available material, technical innovation, and social demand. The bookbinding technology took hundreds of years to develop and is distinctive in its constructive and aesthetical character [1]. Chinese bookbinding differed from Western bookbinding techniques of making rigid and mechanized bindings since traditional Chinese bookbinding was supposed to be flexible and easy to handle [2]. This study focuses on Chinese bookbinding morphology together with its different binding methods that drove its development. The book analyses design components of such techniques to present a bookbinding method which transcends Chinese culture.

### PURPOSE

The study investigates traditional Chinese bookbinding structure evolution through cultural morphology analysis without cultural restrictions. The present research evaluates the mechanisms used for book binding processes which transformed books into practical durable beautiful artifacts [3]. The research detects ways to enhance book design along with book conservation practices through investigating binding material structures. The study identifies hidden axioms designers can use for contemporary bookbinding operations while providing historical religious elements that could inspire contemporary solutions in modern



design [4]. Knowledge of these principles would enable modern bookbinding systems to become more efficient and sustainable within restoration centers and archives. Finally, through inquiry into ancient binding evolution, the study unfolds the manner in which tradition in the past has an impact on design choices. The results can be helpful to book conservators, designers, and publishers who want to balance tradition with practicality in modern times.

## RESULTS AND DISCUSSION

The development of bookbinding in China is traced backward from bamboo and silk manuscripts, the ancestors of cover-bound books. Before the invention of paper, books were written on wooden slips held together with strings and curved into an earlier scroll form [5]. When paper was first introduced in the Eastern Han Dynasty (circa 105 CE), it revolutionized the book-making process so that books could evolve to use improved techniques for binding [1]. The butterfly binding method emerged during the Tang Dynasty (618-907 CE). This involved folding papers in two and gluing them together along the spine to create a delicate yet light book form [3]. During the Song Dynasty (960-1279 CE), stitched binding techniques were developed, which were more robust and convenient. In the Ming and Qing dynasties, thread binding had become the conventional form, employing sewn spines and faced reinforced ones [2]. This shift reflects an ongoing effort to make books more durable and usable.

The first Chinese bookbinding was the scroll, which consisted of long pieces of paper or silk rolled around a wooden rod. While handy for long texts, the scroll form was cumbersome regarding ease of reference and portability—the transition from scroll to folded and stitched forms significantly advanced book morphology [5]. Butterfly binding, which emerged in the Tang Dynasty, folded the sheets in half and glued their folded edges together to form the spine. The books would then open flat due to this arrangement, making them convenient for reading [1]. However, butterfly-bound books would deteriorate with time due to the adhesive-only binding.

Thread binding was the most substantial and widely used method in early Chinese bookbinding. Thread binding involves sewing sections of folded paper together using silk or cotton thread, reinforcing the spine without applying glue [3]. The thread binding technique provided books with flexibility without sacrificing strength, and hence, it is one of the longest-existing binding methods.

Stitched binding, in some cases a form of thread binding, entailed sewing the pages around the margin of the folded section. Various stitches, like the four-hole and six-hole stitches, were employed to make the book durable. The application of stitched binding was the Chinese book standard until the modern era [2].

While traditional Chinese bookbinding was interested in flexibility and use, Western bookbinding evolved in the Western tradition towards more permanent and more durable forms [1]. Western binding techniques, such as case binding and perfect binding, utilized adhesive-backed spines and reinforced covers. The two traditions differ primarily in their understanding of longevity: The Western technique aimed towards durability, while the Chinese technique aimed towards convenience and cost-effectiveness [5].



Materials also significantly influenced Chinese bookbinding techniques. Bamboo slips were initially used in earlier manuscripts, requiring string to be bound. Paper development made folded and stitched types more possible, and these were less labor-intensive on a large scale [4]. Silk thread and wooden covers helped future binding techniques to become more refined. Unlike Western leather-bound books, Chinese books took a light and flexible shape and thus were easier to carry around and store [3]. Today, modern printing and binding technologies, such as adhesive and spiral stitching, have supplanted traditional methods, but the structural and aesthetic principles of classical Chinese binding are still relevant.

### CONCLUSIONS

The results of the study showed and allowed to distinguish four traditional Chinese techniques of binding: a scroll, a butterfly binding, interweaving with a thread and a sewn binding. Each of the stages of the development of Chinese binding was aimed at creating more convenient, lighter and at the same time durable books. The basic materials that were used at different times and their replacement in the production of, respectively, the development of binding - from bamboo plates to paper and silk threads - have been determined.

### REFERENCES

1. Bois H. P. Historical Essay on the Art of Bookbinding. BoD–Books on Demand, 2024.
2. Hanks P. The Bookbinder and Historical Invisibility: Bookbinding and the Staffordshire Book Trade 1750-1850., 2024.
3. Shen Z., Yu R., Liu P. "The Technique of 'Book Beating' in Traditional Chinese Book Conservation." Restaurator. International Journal for the Preservation of Library and Archival Material, 2023, 44(2), pp. 87-107. DOI: 10.1515/res-2022-0019.
4. Yuanyao M. "Traditional Paper-Making in the Zhuang Villages of Southwest China." Vernacular Chinese-Character Manuscripts from East and Southeast Asia, 2024, pp. 281-300. DOI: 10.1515/9783111382746-010.
5. Johnson D., Nathan A. J., Rawski, E. S. (Eds.). Popular Culture in Late Imperial China. Univ of California Press, 2023. DOI: 10.2307/jj.8501387.

### **ДУАНЬ Юйцін, ВАСИЛЬСВА О. ДОСЛІДЖЕННЯ ТЕХНІК ТРАДИЦІЙНОГО КИТАЙСЬКОГО ПАЛІТУРНИЦТВА**

*Результати дослідження показали та дозволили виокремити чотири традиційні китайські техніки палітурництва: сувій, палітурка метелик, переплетення ниткою та зшита палітурка. Кожен з етапів розвитку китайського палітурництва був спрямований на створення зручніших, легших і водночас довговічних книг. Визначено основні матеріали, що використовувались у різні часи та їх заміна у виробництві відповідно розвитку палітурницької справи – від бамбукових пластин до паперу та шовкових ниток.*

**Ключові слова:** палітурництво, традиційні техніки, дизайн.