

The Development History of Engraving Books in the Ming Dynasty

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ABSTRACT

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Introduction: The development of book printing in the Ming Dynasty went through a long process of accumulation and evolution. During the Song and Yuan dynasties, woodblock printing technology was already quite mature, laying the foundation for the prosperity of woodblock printing in the Ming dynasty. In the early Ming Dynasty, rulers attached great importance to culture and education, advocated the imperial examination system, and greatly stimulated the demand for books. At the same time, the economic recovery and urban prosperity have provided a vast market and sufficient financial support for the book publishing industry. Under the combined influence of these factors, the book printing of the Ming Dynasty ushered in a golden age.

Objectives: This study takes the book carving industry in the Ming Dynasty (1368-1644) as the core research object, comprehensively examining the technological evolution, regional distribution, and social impact of the three major systems of official carving, private carving, and chamber carving. Through the methods of literature review, physical comparison, and interdisciplinary analysis, this study systematically examines the development of Ming Dynasty book carving, and combines existing first-hand materials such as Ming engraved editions, novels, and literati notes to focus on exploring the interactive relationship between the innovation of woodblock printing technology, the formation of commercial publishing networks, and the transformation of knowledge dissemination models.

Methods: Through literature review, physical comparison, and interdisciplinary analysis.

Results: Research has found that the book carving industry in the Ming Dynasty presented a spatial pattern of "prosperity in the south and gradual decline in the north", with Jianyang, Jinling and other places relying on waterway transportation to form a cross regional industrial chain; Although movable type printing did not become mainstream, it promoted the popularization and dissemination of popular literature and imperial examination books; The phenomenon of the convergence of scholars and merchants has given rise to a new publishing model of "nurturing commerce through literature."

Conclusions: This article aims to reveal the historical function of the book carving industry as a carrier of cultural power, and to fill the gap of existing research that focuses on version studies and neglects the dimension of social history. Future research can combine digital humanities technology to construct a database of Ming Dynasty engraved books, deepen the comparative study of technology dissemination paths, and provide a new analytical framework for the history of East Asian Han book circulation.

Keywords: Engraving History, Ming Dynasty, Printing Press, Ancient Engraving.

INTRODUCTION

The study of Ming Dynasty engraved books began with Ye Dehui's "Shulin Qinghua" (1973) in the early 20th century, and after a hundred years of accumulation, three major research paradigms have been formed: the traditional focus of version cataloging on examining the origins of engraved books (Qian Cunxun, 2004); The history of printing technology focuses on material and process innovation (Pan Jixing, 1998); The perspective of socio-economic history focuses on the operational mechanism of bookstores (Chia, 2002). In the past decade, research has shown a polarized

trend: at the micro level, Li Zhizhong (1997) reconstructed the production cycle of Jianyang engraved editions through paper microscopic analysis in "Identification of Ancient Book Versions".

At the macro level, Jing Jingjin (2015) proposed the "Publishing House Forum" emphasizing the reshaping of the scholarly society by the book carving industry. However, existing research still has three limitations: firstly, the excessive focus on the official publishing system has led to fragmented research on private commercial publishing networks; Secondly, the evaluation of movable type printing is limited by technological determinism and ignores the economic rationality behind its cultural choices; Thirdly, regional research focuses on Jiangnan and neglects the particularity of the editions engraved by the border guards.

This study breaks through the traditional disciplinary barriers and introduces theoretical knowledge such as history and version studies, viewing engraved editions as a dual carrier of material practice and cultural representation. Emphasis is placed on examining the historical development and changes of Ming dynasty books, and methodological innovation is reflected in the path of "reverse version studies". The research value lies in the first systematic integration of the material and cultural history of the Ming Dynasty's book carving industry with the dimensions of knowledge sociology, revealing the symbiotic relationship between the 15th century "publishing revolution" and the secularization of Confucianism. From the years of Hongwu to Longqing in the Ming Dynasty (1368-1572), during the Wanli period (1572-1620), and during the Taichang, Tianqi, and Chongzhen dynasties (1620-1644).

This study analyzes the changes in book carving during these three historical stages, analyzes the economic relationship between the book carving, publishing industry, and the development of popular literature, and empirically demonstrates the process of commercial publishing promoting the entry of vernacular literature into the mainstream cultural field. This discovery challenges the traditional narrative of the binary opposition between elegance and vulgarity, providing a new perspective for re evaluating the cultural transformation of the late Ming Dynasty. And lay the foundation for subsequent research on the engraving of popular novels in the Ming Dynasty, and deepen the understanding of the knowledge production mode changes in the early globalization process through comparison with the printing culture of Europe at the same time.

THE THREE STAGES OF BOOK ENGRAVING IN THE MING DYNASTY

The Ming Dynasty was a critical period in Chinese history, not only holding a significant position in politics, economy, culture, etc., but also reaching unprecedented heights in the publishing industry. According to the data from the Joint Navigation System of Chinese Ancient Books and Rare Books at the National Library of China, as shown in the table below (Liao Xiaoyun, 2008), it can be seen that, especially from the Jiajing period to the Wanli period of the Ming Dynasty, the publication and printing of novels in the Ming Dynasty ushered in a golden age of book printing, while the number of books printed in the late Ming Dynasty gradually showed a downward trend. The art of book engraving in the Ming Dynasty went through a process from its inception to prosperity and then to maturity, forming a unique artistic style. This section will conduct in-depth research on the division of book printing in the Ming Dynasty into three periods to reveal its inherent value and significance.

Table 1. The publication and printing of novels from the Jiajing period to the Wanli period of the Ming Dynasty

Ming · Time Dimension	Quantity of ancient books
From Hongwu to Tianshun (1368-1464), a total of 96 years	456
From Chenghua to Zhengde (1464-1521) a total of 54 years	1499
Jiajing (1522-1567), a total of 45 years	3366
Longqing (1567-1573) a total of 6 years	414
Wanli (1573-1620) a total of 48 years	5738
From Taichang To Tianqi (1620-1627), a total of 8 years	746
Chongzhen (1628-1644) lasted for 17 years	2094
Note: The time dimension refers to the reign titles of emperors in power during different periods of the Ming Dynasty	

Source: Miao Xiaoyun (2008). Research on Jianyang's Novels (Doctoral Dissertation, East China Normal University). P56. Doi.10.3969/j.issn.1005-3492.2008.02.059

BOOK ENGRAVING IN THE EARLY MING DYNASTY (1368-1572)

From Hongwu in the early years of the Ming Dynasty to Longqing (1368-1572), it was the initial stage of book printing in the Ming Dynasty. In the early Ming Dynasty, the book carving industry was not well-developed. However, Ming Taizu Zhu Yuanzhang intended to develop the book carving industry and issued an edict to exempt book taxes and taxes on the production materials of ink, brush, paper, and inkstone books. He also highly valued the bookplates left by previous generations and sent people to transport them to Nanjing, where they were kept at the Nanjing Imperial Academy. In the winter of the 23rd year of the Hongwu reign, Zhu Yuanzhang ordered the Ministry of Rites to send envoys to purchase rare copies of the world's posthumous books and order bookstores to publish them. (Long Wenbin, 1956).

However, due to the factors of war and turmoil during the transition of dynasties in the late Yuan and early Ming dynasties, as well as the strict ideological and political measures adopted in the early days of the Ming dynasty's founding, the calligraphy industry was unable to continue the prosperity of the Yuan dynasty and even became even more depressed.

New changes gradually emerged during the reigns of Chenghua and Zhengde. Lu Rong's "Miscellaneous Records of Shuyuan" was published in the late Chenghua period. The book states: "At the beginning of the country, only the Guozijian had a book edition, and it is suspected that there were none in other prefectures and counties... During the period of Xuande and Zhengtong, the printing plates of books were not yet widespread. Today's book editions are increasing day by day and month by month, and the phenomenon of ancient Chinese literature in the world is becoming more and more prosperous than before.

However, today's scholars are practicing superficially, and few can carve large ancient books to benefit future scholars. All the engravings are useless and annoying" (Lu Rong, 1985). This indicates that although the book publishing situation in the early to mid-Ming Dynasty improved after Chenghua, few good books were engraved, which could not satisfy literati and scholars.

The sentence is: Until the Jiajing year, the printing and engraving of books in the Ming Dynasty gradually turned prosperous, laying a sure foundation for the prosperity of book engraving during the Wanli period. The first extant published edition of a long popular novel from the Ming Dynasty is the "Popular Romance of the Three Kingdoms" (Cao Zhi, 1992) by the Imperial Household Department in the first year of Jiajing (1522), which sparked a craze for the compilation and publication of popular novels.

The characteristics of engraving during this period are mainly reflected in the inheritance and development of calligraphy from previous generations. Before the reign of Emperor Jiajing, the characteristics of engraved editions were basically inherited from the Yuan Dynasty, and the fonts were mostly soft Zhao characters. The layout is mostly surrounded by thick black borders on both sides. The binding is mostly a backpack. The paper used for printing books is mostly yellow cotton paper and bamboo paper, with less white paper and less yellow hemp paper. (Ye Shusheng, 2000). Due to the influence of Zhao Mengfu's background, status, and superb calligraphy skills, many books from the early Ming Dynasty to the Zhengde period were engraved in Zhao style, with a beautiful and elegant calligraphy style.

During the Jiajing period, the binding of books was mostly done in back packaging, but during the Wanli period, it was changed to thread packaging, and white cotton paper was commonly used for printing books. During the Jiajing period, there was a trend of flipping through the Song Dynasty, imitating the Song Dynasty, and depicting the Song Dynasty in the region. He tried his best to imitate the Song people in terms of font. His calligraphy and paintings were mostly horizontal and vertical, with straight strokes and lines, neat and rigorous, and square and upright, becoming the true Song style "block characters." This font was neat, simple, lively, and smooth but lacked a sense of rigidity (Ye Shusheng, 2000).

In addition, the early Ming Dynasty's engraving also demonstrated the inheritance and development of the engraving art of the Yuan Dynasty, such as the use of layout elements such as frame, middle seam, and bookplate, which reflected the characteristics of Yuan Dynasty engraving.

BOOK ENGRAVING IN THE MID MING DYNASTY - WANLI PERIOD (1572-1620)

From the Wanli period of the Ming Dynasty (1572-1620), there was a prosperous stage of book printing in the Ming Dynasty. This period was an important stage in the development of ancient Chinese book engraving art. With the further development of the paper industry and printing technology, the art of book engraving has also reached a new height. This is reflected in the considerable number of book publications and in font, layout, paper, and artistic style. This section will provide a detailed discussion of these topics.

From the Wanli era to Chongzhen, the Song typeface was comprehensively revived and innovated during the mid-to-late Ming Dynasty. The fonts used in engraved editions were mostly long Song typefaces or new fonts that resembled Song typefaces but had unique characteristics. The layout has more white characters and fewer black characters, with both sides and one side. Binding is wire binding. Bamboo paper is commonly used for printing books, while white paper is gradually becoming less common.

Occasionally, some use flannel paper and Mao Tai paper, and a few use Kai paper. During this period, private calligraphy in the region mostly used regular script, with thin strokes horizontally and thick strokes vertically, and the shape changed from square to rectangular, known as the "Changsong style." This font is slightly stiff and dull, not very aesthetically pleasing.

During this period, the layout of book printing also presented unique characteristics. During this period, the layout mostly adopted a white lettering layout, with left and right sides and sparse grids appearing clear. In addition, the layout of books is also more flexible and varied, with different layout designs adopted according to the content and length of the books. This flexible and versatile layout not only makes the book more beautiful and elegant but also enhances the reading experience for readers. Printing technology has developed rapidly, with the emergence of new printing techniques such as printing plates and arches, making the decoration of book layouts more diverse and rich. At the same time, movable type printing was also applied, and wooden movable type books, copper movable type books, etc., became a characteristic of printing in the mid-Ming Dynasty. In terms of layout, there were more innovations in book engraving during the mid-Ming Dynasty, such as single and double fishtail designs in the middle seam, as well as diversified forms of book labels.

These innovations not only enhance the artistic value of books but also promote the development of the publishing industry. The mid-Ming Dynasty was the peak period of the paper industry, with the emergence of high-quality white cotton paper. This type of paper is as bright as jade and as tough as silk, providing a high-quality material foundation for book printing. Using white cotton paper for engraving enhances the texture of books and improves their shelf life. Therefore, book engravings were mainly made of white cotton paper, the primary material during this period.

The artistic style of book engraving in the mid-Ming Dynasty was mainly characterized by delicacy, freshness, and detachment. During this period, calligraphers paid attention to the coordination and unity of detail portrayal and overall layout, resulting in a fresh and refined aesthetic in book engravings. At the same time, they are also skilled in using various artistic techniques, such as carving, painting, etc., to make book engravings more diverse and colorful. This exquisite, delicate, fresh, and refined artistic style not only reflects the technical level of book engraving in the mid-Ming Dynasty but also reflects the cultural trend and aesthetic taste of the society at that time.

OVERVIEW OF BOOK ENGRAVING IN THE LATE MING DYNASTY: TAICHANG, TIANQI, AND CHONGZHEN DYNASTIES (1620-1644)

The late Ming Dynasty, from the Wanli era to the Chongzhen era, was the mature stage of book printing in the Ming Dynasty. During this period, the art of printmaking reached another peak in both technology and art. Although the number of printmaking illustrations and book prints for novels, operas, and other works was slightly lower than that of the Wanli period, it was still an important stage in Chinese history. The fonts used in book printing during the late Ming Dynasty were mainly characterized by the inheritance and development of earlier styles. On the one hand, it inherits the retro and innovative style of Song typeface in the early stage, with fine strokes and rigorous structure, demonstrating a high degree of artistic value. On the other hand, innovation was also carried out on the basis of Song-style characters. During this period, a trend of retro imitation of the Song style emerged, with exquisite books and fonts turning towards European style (Ouyang Xiu Style), Yan style (Yan Zhenqing style), and other variants, creating more fonts with personal styles, such as Jigu Ge engraved editions. These fonts not only reflected the personal skills of the engravers but also reflected the aesthetic trends of the society at that time. The layout of late book engravings

inherited the design style of leaving white space and left and right sides in the early stage, making the layout clear and elegant and providing a comfortable reading experience. On the other hand, more innovations have also been made in the layout of the book, such as adopting more diverse layout designs, adding more illustrations and annotations, etc., making the content of the book more rich and diverse, and also increasing the artistic and exciting value of the book.

The binding art of book engraving in the late Ming Dynasty reached a high level. On the one hand, the binding forms of books are more diverse, such as butterfly binding, backpack binding, thread binding, etc., and each has its unique artistic charm. On the other hand, the binding materials for books are also more abundant, such as using high-quality paper, exquisite silk, etc., which makes the appearance of books more beautiful and elegant and enhances the preservation value of books. Regarding technology, the late Ming dynasty further improved printing techniques such as woodblock printing and arch flower printing, making the layout decoration of books more exquisite and detailed. At the same time, many reprints and illustrated books have emerged, enriching the content and form of books. In terms of art, the late Ming dynasty's engraving formed a unique artistic style, such as smooth lines, rigorous composition, and rich colors. In addition, book printing in the late Ming Dynasty also emphasized the artistic expression of calligraphy. After the Wanli period, the font eventually transformed into the horizontally light and vertically heavy "Song characters, white characters were popular, and yellow paper was often used. Although the quality of the books was far inferior to before, the precision of Wu Xingmin's overprinting and other printmaking was unparalleled." This combination of calligraphy and printing art reached a new height.

CONCLUSION

In summary, by studying the three periods of book engraving in the Ming Dynasty, we can see the richness and complexity of the art of engraving in the Ming Dynasty. From start-up to prosperity and then to maturity, each period has unique engraving characteristics and artistic style. In summary, the book printing of the mid-Ming Dynasty presented unique characteristics in terms of font, layout, paper, and artistic style. These characteristics reflect the technical level of book engraving in the mid-Ming Dynasty and the cultural trends and aesthetic tastes of the society at that time. The characteristics of book printing in the Ming Dynasty significantly impacted the illustrations of the novel "Romance of the Three Kingdoms." In terms of font, the text in illustrations often adopts a font style that matches the engraved work. Regarding layout, illustrations also pay attention to coordination and unity with the engraved works, such as using the same layout design and leaving a white space layout so that illustrations and text form a harmonious whole visually. The multi-color overlay technology, high-quality paper such as white cotton paper, and rich binding forms used in mid - and late-stage printing have been applied to the production of illustrations, making them more exquisite and rich in color expression, paper texture, and binding forms. These characteristics are reflected in the novel "Romance of the Three Kingdoms" and have influenced the illustrations' artistic style and expression techniques. By studying and analyzing the characteristics of book printing in the Ming Dynasty, we can gain a deeper understanding of the social and cultural changes in the Ming Dynasty, as well as the dissemination of illustration works and the development of illustration art in the Three Kingdoms period.

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