ON THE INVENTION OF WOOD BLOCKS FOR PRINTING IN CHINA

Li Zhizhong, Senior Research Librarian and Director of the Library Development and Research Institute in the National Library of China

ABSTRACT

In the discussion among scholars in China and abroad, there are various points of view regarding the invention of the technique of using Chinese wood blocks for printing. There is no conclusion that is convincing to all scholars. The author of this paper tries to put forward some convincing arguments in order to come to a clear conclusion regarding the historical period of this significant invention.

KEYWORDS

Wood blocks for printing
Invention
Printing cultural heritage

In the discussion among scholars in China and abroad, there are various points of view regarding the invention of the technique of using Chinese wood blocks for printing. I have searched many Chinese historical documents and found some remarkable evidence to prove that the invention of using Chinese wood blocks for printing occurred in the early Tang Dynasty (618–713 A.D.). I hope to provide convincing arguments in order to come to a clear conclusion regarding the historical period of this significant invention.

1. SOME STRONG ARGUMENTS AND VALID REASONS THAT SHOULD NOT BE IGNORED

1.1 A paper entitled “On the Origin of Chinese Printing Technique” was written by a Japanese scholar, Mr. Kiichiro Kanda, and it appeared in the monthly periodical, “Imperial Palace Relics,” issue No. 6, 7, 1988 published in Taiwan. In this paper, the author quoted Fa Zang, an eminent monk in the early Tang Dynasty, who made a point of explaining the Buddhist Scripture in the book of “Huayan Wujiao Zhang (Five Chapters of Huayan Scripture)” and “Huayan Jing Tanxuan Ji (A Record on Exploring the Intelligent View on Huayan Scripture).” It put forward a theory that the printing technique was invented in the early Tang Dynasty in China.
“Huayan Wujiao Zhang (Five Chapters of Huayan Scripture)” was written by the eminent monk Fa Zang, and said that: “Before and after the religious sect started popularizing the Buddhist doctrine as usual, all the Buddhist doctrine was merged in the second and seventh day. Sometimes it said the second is before the seventh day, and vice versa. It was something like the printing method in the society. In reading a paper, it was necessary to read sentence by sentence and it happened earlier and later. If we printed something, it can be developed at the same time. It is naturally and not against the truth. We have to understand this theory and try to think it over.”

In the second volume of “Huayan Jing Tanxuan Ji (A Record on Exploring the Intelligent View on Huayan Scripture),” which was written by the eminent monk Fa Zang, it said that: “If you ask the reason of earlier and later, the answer is that like the printing paper, if we read the paper, it has earlier and later, but to print a paper, it is at the same time.”

Here there is a formulation of “Printing Technique” and “Printing-paper.” The eminent monk Fa Zang was a great successor of “Huayan Jing (Huayan Scripture),” and often used a special educational methodology to instruct Buddhist followers. In order to make the broad and profound doctrine vivid in his teaching, he took the difficult matter of the Buddhist doctrine and explained it in a simple and explicit way. For the purpose of helping the audience understand easily, he often drew on ordinary life for supporting metaphors. “In reading an article, it was necessary to read sentence by sentence and it happened earlier and later.” And, “If we print something, it can be developed at the same time. If you ask the reason of earlier and later, the answer is that like the printing article, if we read a paper, there are earlier and later, but to print the paper, it will happen at the same time.” From these two quotations, we can understand that when an eminent monk instructed [others in] the Buddhist doctrine, the content of his teaching happened earlier and later, like reading the paper. [But] if we print the paper, it will happen at the same time. The eminent monk took this well-chosen example and made a broad and profound theory easily understood.

In the “Dictionary of Explaining or Illustrated the Buddhist Doctrine,” compiled by the Japanese scholar, Mr. Kyo Yuzuru Matsubara, it said that “The eminent monk Fa Zang wrote the book of “Huayan Jing Tanxuan Ji” when he was 45–50 years old.” In this way, Mr. Kiichiro Kanda believed that this thing happened in the 4th year of the Si Shen Emperor (687 A.D.). Actually, it was in the 3rd year of the Chuigong Emperor to the 3rd year of the Tian Shou Emperor (687–692 A.D.) in the Tang Dynasty. On the other hand, Mr. Satoru Sakae, another Japanese scholar, wrote a book entitled “Teaching Materials of Huayan Wujiao Zhang,” and in it he said that: “The eminent monk Fa Zang wrote the book of “Huayan Wujiao Zhang” before he wrote the book of “Huayan Jing Tanxuan Ji.” According to Mr. Kiichiro Kanda’s estimate, the book of “Huayan Wujiao Zhang” was completed in about the second year of the Tang Gaozong Feng Yi Emperor (677 A.D.), “when the eminent monk Fa Zang was around 30 years old.”
During the period of the Tang Gaozong Emperor (650–683 A.D.), the printing method was cited as an example in the instruction of Buddhist doctrine and helped Buddhist followers (disciples) understand Buddhist theory. It is obvious that the activity of producing books with wood blocks for printing was not rare. If it were seldom seen, it would not have qualified as an example for clearing up doubts. If this is true, I believe that Chinese wood blocks for printing were invented early in the Tang Dynasty. In a word, it is believable that the invention of wood blocks for printing occurred in the mid to later part of the 7th century in China.

1.2 In the book, “Zi Zhi Tong Jian,” vol. 204, “Tang Ji,” vol. 20, the author, Mr. Si Maguang (1019–1086 A.D.), in the Song Dynasty, recorded a story of the Emperor Wu Zetian who sent a printed paper to Mr. Wang Qingzhi on October of the second year of the Tian Shou Emperor (691 A.D.).

“On October of the 2nd year of Tian Shou Emperor (691 A.D.), Qin Changqian, Ge Fuyuan and Wang Tong were all punished to death. Mr. Wang Qingshi paid his respects to the Empress Wu Zetian. The Empress said: ‘The Emperor wanted to inherit my son as his successor, and what’s the reason of this dethrone. (sic) ’ Mr. Qingzhi answered that: ‘God doesn’t enjoy other type of work, the ordinary people doesn't make sacrificial offerings to others. Today, who is the master of the land (China) and why do we have to let Li’s family as successor?’ After the Empress heard his answer, she got angry, and Mr. Wang Qingzhi laid on the ground and cried for his view, hung on and refuse to clear up. The Empress sent him the ‘Printed-paper’ and said: ‘If you want to see me, just show this ‘Printed-paper’ to the palace gate keeper.’ From then on, Mr. Wang Qingzhi paid visits frequently. The Empress got angry and ordered her servant Li Zhaode to give him a punishment.” Here the word of “Printed-paper” appeared again. It seemed this “Printed-paper” was like the certificate for entering the forbidden palace. At that time, it was extremely hard to enter the Emperor’s Forbidden Palace. If there was no certificate, it was extremely difficult to pay a visit to the Empress. This certificate was designed in a certain format, and it was not imitated easily. Therefore, it was necessary to print the paper.

1.3 In a book of “Tang Liu Dian” vol. 20 “Tai Fu Si,” it said that: “your servant, who is in charge of judgement work in the government’s temple. Nobody is allowed to enter the stack room to read anything. If anyone wants to write somebody or something and put into the stack room, it is necessary to write on a notebook. There are four pieces of big printed-paper for every month. Other officers and I will sign and keep one copy in the stack room. It will be collected and delivered to the government departments every season.” Here, the “big printed-paper” meant to carve the letters on a large piece of wooden board and to use the big sheet of paper to print.

1.4 In a book of “Jiu Tang Shu” vol. 50 “Shi Huo Zhi Xia,” it said that: “The intermediary in the market should give the Printed-paper to all the merchants. They
have to take notes about the trading business and must be counted and deliver to the office. If anyone made the trade and did not use the ‘Printed-paper,’ he has to use the private notebook. If there is no private notebook, he will be plaint or indictment. (sic)” This record describes that in the Tang Dynasty, there was an intermediary in the trading market. The intermediary distributed the ‘Printed-paper’ to all the merchants, who had to record the situation or circumstances in his business and should be reckoned up next day. Probably, this “Printed-paper” was the certificate of the trader for paying the commodity-tax. A large quantity of these certificates was needed, and the certificates also required the same format, a format which would be difficult to imitate. Therefore, it was necessary to print them.

1.5 In a book of “Tang Hui Yao” vol. 84 “Za Shui,” the following message from the 4th year of the Jian Zhong Period of the De Zhong Emperor in the Tang Dynasty was recorded: “The tax of the trade both public or private in this country should be paid one Guan. If it is counted in the original way, it will be 20 Yi, If it is plus others, and it will be 50 Yi. It could also be repay goods with goods, but it should be counted on the base of money. The intermediary in the market should give the ‘Printed-paper’ to all the merchants. They had to take notes on the trading business. It should also be calculated and delivered to the office. If anyone made trade and did not use the ‘Printed-paper,’ He had to use the private notebook. If there is no private notebook, he had to be plaint or indictment. (sic)” The record of this paragraph is similar to the book of “Juin Tang Shu Shi Huo Zhi.” It is only indicated [in] the particular year of 783 A.D.

1.6 In a book of “Ai Ri Zhai Cong Cao” vol. 1, a record about wood blocks for printing various comprehensive books in Chengdu before the 3rd year of the Zhong He Period of the Tang Xi Zhong Emperor (883 A.D.) was quoted. In a book of “The Preface of Liu’s Family Education,” which was written by Liu Pin (?-894 A.D.) it said that: “in the summer of the 3rd year of Zhong He Period, the Emperor Luan Yu (Xi Zong) had stayed in Sichuan for three years. I was a secretary of the local government. I spent my summer holiday, and went to the Southeast part of Chengdu City to read the books. Most of the books were about the practice divination on the positive and negative principles in nature, the ancient music tone, the legend and the fairy tales, dictionaries, and the Chinese character study etc. All of them were the wood blocks printing paper materials. The paper was contaminated and not easy to read and understand (see “The Si Ku Quan Shu” Zi Section “Ai Ri Zhai Cong Chao” vol. 1.)

The story of “Emperor Luan Yu was in Sichuan” is that: “During the final stage of Tang Dynasty, the peasant Wang Xianzhi and Huang Chao led the peasant uprising and captured the capital city of Dong Jing and Xi Jing. The Emperor Xi Zong had to escape to Chengdu, Sichuang Province. ‘The 3rd year of Zhong He Period’ said that the Emperor Xi Zong had stayed in Chengdu for three years. Therefore, it said that: “Luan Yu was in Sichuan for three years. In this summer,
Mr. Liu Pin spent his holiday in Southeast Chengdu City to read the books. Although these books were not the major administrative documents of the imperial court, they were the wood blocks for printing materials and the Printed-papers were contaminated.” This fact shows that the book market in Chengdu City was full of wood blocks for printing books before 883 A.D. This was also called “Wood Blocks for Printing paper.”

2. SOME ISSUES IN NEED OF CAREFUL STUDY

2.1 Regarding Fa Zang (643–712 A.D.): He was known by many names, Xian Shou, Guoyi Fashi, Xiang Xiang Dashi, Kang Zang Guoshi, etc. His last name was Kang. His ancestors were from Kang Ju (in the North Xinjiang Autonomous Region and Mid-Asia). His grandfather moved his family to the Central Plains (the place comprises the middle and lower reaches of Huanghe River) and settled down in Chang An (now, Xi An City). In his early years, Fa Zang prostrated himself to Zhiyan as Master, and concentrated on the Huayan doctrine and achieved a high level of understanding. After Zhiyan’s death, Zang, at 28 years of age, shaved his head and became a monk. At first, he took part in translation work with an eminent monk, Yi Jing, because he was proficient in different local languages in the western part of China as well as Sanskrit. He translated more than ten titles of scriptures, like the “New Huayan Scriptures,” “Da Cheng Ru Leng Jia Jing,” etc. He was lucky to have an opportunity to explain “The Ten Origins of Huayan Scriptures” to the Empress Wu Zetian. He took the golden lion in the palace as an example and made the Empress suddenly see the light and clearing up (sic). Later on, he wrote a book called “Golden Lion Chapter.” In his whole life, the eminent monk Fa Zang propagandised “Huayan Scriptures,” and wrote the books of “Huayan Wujiao Zhang,” “Huayan Jing Tanxuan Ji,” “Huayan Liaojian,” “Huayan Gangmu,” “Huayan Xuanyi Zhang,” etc., which were all related to the “Huayan Scriptures.” Fa Zang died at 70 years of age in the 1st year of the Tian Yuan Period of Tang Hong Zong (712 A.D.). Here, we can understand that Fa Zang died in the first stage of the Tang Dynasty. Of course, his works of “Huayan Wujiao Jing” and “Huayan Jing Tanxuan Ji” were published in this period. Therefore, the contents of the books took place before this time. When Fa Zang explained the “Huayan Jing” to the Empress Wu Zetian, he used the golden lion as an example and made the Empress clearing up (sic). From this event, we can see that the eminent monk Fa Zang was an expert with figures of speech and made the theoretical easy to understand. Therefore, it is easy to know that the eminent monk used the “Printed-paper” to explain the theory of “Huayan Wujiao Jing” and “Huayan Jing Tanxuan Ji.” He said, “When we explain the scriptures, we have to make sentence by sentence, chapter by chapter, but the conclusion should be at the end. It is like reading an article; we must read sentence by sentence, and it happens earlier and later. But to print paper, it can be completed at the same time.” As everyone
knows, if we make an example for explaining something, this example must be easily understood by all, and accustomed to seeing such things (sic). Such an example must take place frequently in the society. On the other hand, if we make the example one that is rarely known to the common people, it will not achieve the good result. If it is naturally (sic), the book of “Huayan Wujiao Zhang” was published in 677 A.D. The example of ‘Printed-paper’ would have been a popular concept in the social life of the time, and it was commonly used and understood by the common people of the time. ‘Printed-paper’ existed commonly before 677 A.D. This, then, is good evidence for the invention of wood blocks for printing having appeared during the early or middle period of the seven century in the Tang Dynasty in China.

2.2 After the word, Printed-paper, appeared in the book of “Huayan Wujiao Zhang” another event happened: the Empress Wu Zetian sent her ‘Printed-paper’ to Mr. Wang Qingzhi, and said: “If you want to see me, just show this ‘Printed-paper’ to the palace gate keeper in the 2rd year of Tian Shou (691 A.D.).” The story goes like this. Mr. Wang Qingzhi, who was from Luo Yang, and was incited by Mr. Zhang Jiafu, an officer in the government secretary office, and mustered hundreds of young ruffians to file the suit to dethrone the prince and to propose naming Mr. Wu Cheng, who was the Empress Wu Zetian’s nephew, as the new prince. At first, the Empress Wu Zetian asked the Right Prime Minister, Qin Changqian, the 3rd grade government officer, who was in charge of the cultural and the government’s secretary department. Changqian said: “The prince is in the East Palace, and it is better not to discuss this proposal, and hope to criticize Mr. Wang Qingzhi.” Then, the Empress asked another Prime Minister Ge Fuyuan, who was in charge of the country’s land and the office discussion of the government’s policies. Fuyuan denied Mr. Wang Qingzhi’s proposal. Both Qin Changqian and Ge Fuyuan ran counter to the Empress’s wish. Together with other criminals, Mr. Qin Changqian, Ge Fuyuan and Wang Tong were punished to capital offence (sic). Therefore, Mr. Wang Qingzhi paid his respects to the Empress and lay down on the ground; he persisted in this and refused to get up. The Empress sent him the ‘Printed-paper’ and said: “If you want to see me, just show this ‘Printed-paper’ to the doorkeeper.” Obviously, since the Empress sent this ‘Printed-paper’ it must be the certificate for entering the palace. This printed certificate was called ‘Printed-paper’ by people during the Tang Dynasty. It is clear that this ‘Printed-paper’ must have had a special format with printed characters on it. When the palace guard saw it, it would be understood that this was the certificate for entrance. This certificate must have been specially designed with a uniform format which would be very difficult to imitate. It was special printed material used in the palace for security.

2.3 The sentence, “There were four pieces of big printed-paper for every month as the counted book,” was quoted from the book of “Tang Liu Dian – Tai Fu Si.”
This account book would be filled out by the officers in the central government temple. This account book must have had a table, which was carved on a wood block and printed and was called ‘Printed-paper.’ According to the record in the book of “Tang Liu Dian” vol. 30, Tang Xuan Zong ordered Lu Xiu to write this book during the 10th year of the Kai Yuan Period (722 A.D.). The Emperor wrote six words about classics, religion, politics, rites, criminal law, and affairs on white hemp paper and told Mr. Lu Jian to write in accordance to these subjects. Then, it was entrusted to Xu Jian with this matter. After one year’s preparation, he still could not make a decision. Later on, Mr. Fu Xiong, Yu Qing and Wei Shu were asked to write this book, and six other departments were also asked to take notes on the course of change and development. Later, the Minister of Culture and Education, Zhang Jiuling, also got involved in this work. This book was completed in the 23rd year of the Kai Yuan Period (735 A.D.) in the period of the Tang Xuan Zong Emperor. Li Linpu (Minister of Rites) was ordered to write notes and delivered them to the Emperor in his own name in the 27th year of the Kai Yuan Period (739 A.D.). From this fact, we can understand that the completion of this book of “Tang Liu Dian” was not later than the 27th year of the Kai Yuan Period. The sentence, “There were four pieces of big ‘Printed-paper’ as registration book every month,’ was in the book of “Tang Liu Dian.” It is clear that the functional government department used the ‘Printed-paper’ of Table (sic) to report their work and to put it into the stack (sic) room. This kind of register book was called ‘Printed-paper’ at that time.

2.4 The sentence, “The intermediary in the market should gave the ‘Printed-paper’ to all the merchants” was quoted from the books of “Jiu Tang Shu Shi Huo Zhi” and “Tang Hui Yao.” This event happened in the 4th year of the Jian Zhong Peroid of the Tang De Zong Emperor (783 A.D.). Obviously, this ‘Printed-paper’ was a registry paper used by the intermediary in the market. In the trading market, the trading records should be registered everyday, and the items recorded should be consistent. Therefore, it was necessary to print a table in the same form. This kind of printed record in the form of a table was called ‘Printed-paper’ by the Tang people. So, we can deduce the invention of wood blocks for printing, which had happened during this period of time, and there is no doubt about it. Perhaps some people will put forward questions regarding printed-paper or press-paper and how we formed a judgment regarding wood blocks for printing. This question can be answered in the following paragraph from the book of “The Preface of Liu’s Family Education” by Mr. Liu Pin written during the Tang Dynasty.

2.5 Mr. Liu Pin (?-894 A.D.) came from Hua Yuan (now the Yao County in Shan Xi Province). His father was liu Zhongying. He was proficient in classics and was given the title of Ji Di (a title of passing the Imperial Examiniation), and he held the concurrent post of goverment secretary. At the beginning of the Zhong De Period (881–885 A.D.), he went to Chengdu City and got a post as the local govern-
ment secretary. During the 3rd year of the Zhong De Period, he spent his summer holiday going to the southeast part of Chengdu City to read books. All of the books were on paper printed from wood blocks. The ‘Printed-papers’ were contaminated and not of a high quality. Here, the ‘Printed-paper’ was not a certificate for entrance through the Palace Gate, not business trading records in the market, and also not the registry book for the stack room. It is exactly wood blocks for printing books. From this fact, we can understand that to print one piece of paper, like the certificate or to print the registry book, all of them were called ‘Printed-paper’ by the people of the Tang Dynasty. Therefore, the word, ‘Printed-paper,’ can be an important piece of evidence in discussing the historical period of the invention of wood blocks for printing.

In a word, we hold that the invention of wood blocks for printing happened in the early mid-seventh century or at the beginning of the Tang Dynasty. I hope that it is not a strained interpretation.

2.6 Earlier, we discussed the technique of using wood blocks for printing being accepted by the central government and happening in the 3rd year of the Chang Xing Period of the Later Lang Ming Zong Emperor (932 A.D.). The book of “Jiu Jing” was printed in Guo Zi Jian (The Imperial College) at that time. Actually, the Imperial College used the technique of wood blocks for printing books, which was started in the 2nd year of the Tian Cheng Period of the Later Tang Ming Zong Emperor. There was an article in the book, “Wen Ding Ji” vol. 10, “The Postscript of the Important Planks in Government Platform in Zhen Guan Emperor Period of Tang Dynasty (627–649 A.D.)” by Wang Ying Cheng in the Song Dynasty from the “Si Ku Quan Shu.” It said that: “This book is the edition of wood blocks for printing in Wuzhou local government printing workshop. There were many mistakes in this book because it was produced in the local printing workshop, and there were no other similar book for collation. On August 32nd year of Shao Xing Emperor (1162 A.D.), occasionally I paid a visit to Mr. Liu Ziju’s house in the West Lake, he showed me this book, which had passed five generations. I considered that it is the edition of the Guo Zi Jian (The Imperial College) printed in the 2nd year of Tian Cheng Period of Later Tang Ming Zong Emperor. After I made comparison, the conclusion was that each has its own merits. I made some correction and leave the question open, and hoped the other day to find the rare books, reference books, the substantial evidence, or the historical books for correction. This message was written in Aug. 21/1162.”

The author of the book of “Wen Ding Ji” was Wang Yingcheng (1118–1176 A.D.); his style name was Shen Xi, and he came from Yushan Country, Xinzhou (now Shangrao City, Jiangxi Province). At first, his first name was Yang. After he achieved Number One Jin Shi (title of passing the imperial examination) in the 5th year of the Shaoxing Emperor in the South Song Dynasty, Gao Zong Emperor made a suggestion to change his name to Yingcheng. At the beginning, he was assigned to do recruiting work in the Zhen Dong Army. Then he worked in the sec-
retary department. In the 32nd year of the Shaoxing Emperor (1162 A.D.), he was assigned as the magistrate of Fuzhou Prefecture. At last, he became the Minister of Interior (who was in charge of appointment, promotion, and dismissal of government officials) and sub-chancellor of the highest literary degree in the central government college of literature in the capitol. He died at 59 years of age in the 3rd year of the Chun Xi Emperor (1176 A.D.).

In the postscript of the book of “Zhen Guan Zheng Yao (The Important Planks in Government Platform in Zhen Guan Emperor Period of Tang Dynasty 627–649 A.D.),” it said that: “This books is the edition of wood blocks for printing in Wuzhou (now Jinhua City in Zhenjiang Province) Local Government Printing Workshop.” Anyway, there were many mistakes in this book, and there was no other similar book for collation. On August 32nd year of Shaoxing Emperor, I paid a visit to Mr. Liu Ziju’s house in the West Lake. He showed me a book, which had passed on five generations. I considered that it is the edition of Guo Zi Jian (The Imperial College) printed in 2nd year of Tian Cheng Period of Late Tang Ming Zong (927 A.D.). That is what we know that this book is the earliest record of the four titles of wood blocks for printing book published in Guo Zi Jian (The Imperial College of the Central Government (sic)).”

3. CONCLUSION

Above we have discussed the different citations of the use of ‘Printed-paper.’ Whether we look at the Empress Wu Zetian’s palace entrance certificate of ‘Printed-paper’ of August, 691, or the large sheet of ‘Printed-paper” used as a registry book in “Tang Liu Dian” in 739, or the distribution by middlemen (intermediaries) of ‘Printed-paper’ to all the merchants as trading business records in the text of “Jiu Tang Shu” in 783, all of them are practical and important evidence of the technique of printing with wood blocks adopted by the central government of the Tang Dynasty. On the other hand, the eminent monk Fa Zang completed his work of “Huayan Wujiao Zhang” at about 30 years of age (ca. 677 A.D.), and he used ‘Printed-paper’ as a metaphor to teach the profound “Huayan Jing” in simple terms, etc. The author of this paper is convinced that in the course of the development of wood blocks for printing the technology moved from simple to complex, from small to large quantity, and expanded to every aspect of society. The author also believes that this technology progressed toward completion step by step from the beginning of the Tang Dynasty to the Song Dynasty. Of course, this great invention of human civilization can not be expected to provide results overnight. Until the government adopted the technique of wood blocks for printing books on a large scale, human civilization did not make the leap to a new historical stage.
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ABOUT THE AUTHOR

Li Zhizhong, Research Librarian, is the Dean of the Development Research Academy of the National Library of China, and a member of the National Committee of CPPCC (Chinese People’s Political Consultative Conference). He is a member of the China National Relics Identification Committee, and good at ancient book collation, textual criticism, cataloging, book history studying and library operation management, and also has published successively more than 170 papers and above ten monographs, such as “The Book History of Ancient China,” “The History Talks on Book History of Ancient China,” “The Classical Books Gazetters,” “General Survey of Ancient Wood Blocks for Printing,” and “Jian Pu Ji,” etc. Mr. Li has a good name in the fields of edition, cataloging, and Chinese book history at home and abroad.