Cultural Study on traditional Chinese Papermaking: Problem Awareness and Research Review

Estudo cultural sobre fabricação de papel tradicional na China: reflexão sobre o tema e revisão das pesquisas

Zhuang Liu
Chongqing University of Arts and Sciences
(Shapingba District, Chongqing Shi, China)
lz@cqwu.edu.cn

Yanhua Chen
Chongqing University of Arts and Sciences
(Shapingba District, Chongqing Shi, China)

Recebido: 02.04.2021
Aprovado: 12.04.2021

ABSTRACT

Papermaking is one of the outstanding creations of the Chinese nation, from the “Cai Lun’s Technique” of the Eastern Han Dynasty to the “Four Great Inventions” of modern times and further to the present academic hotspot of “intangible cultural heritage”. The naming and expression of this object reflect the cultural cognition and interpretation of papermaking in different periods of time. It is important to note that, in the context of the intercommunication between Eastern and Western discourses, the study of papermaking is not only about the exploration of the scientific value of a traditional technique, but also is the re-examination of the communication and dissemination of cultures and technologies between the East and the West, in order to form a new understanding of “Sinicized Europe”.

KEYWORDS: papermaking; Chinese history; ethnography of objects; Communication

RESUMO

Fazer papel é uma das mais importantes invenções da cultura chinesa, inicia com a Dinastia Han Oriental com a Técnica de Cai Lun, perdura em tempos modernos titulada como uma das Quatro Grandes Invenções; e atualmente, objeto de estudo acadêmico, encontra-se Patrimônio Cultural Imaterial da Humanidade. Investigar as nomenclaturas e terminologias ligadas ao processo de fabricação do papel propicia a identificação de...
elementos da produção cultural em diferentes períodos históricos. Nesse contexto emerge a intercomunicação presente nos discursos orientais [Chinês] e ocidentais [Europeu]. A pesquisa sobre modo de fabricação do papel além de resgatar o valor da técnica tradicional, vai além pois propicia a exploração da comunicação. O reexame da difusão cultural e da troca de conhecimento tecnológicos estabelece um histórico das relações Oriente e Ocidente resgatando elementos que conduz a uma nova compreensão da *Europa Sinizada*. Sinização ou chinização é a apropriação linguística ou assimilação cultural de termos do idioma e das tradições da China.

**PALAVRAS-CHAVE:** Fabricação de papel; História Chinesa; Etnografia de objetos; comunicação.

1 Introduction

In the narration of Chinese history and civilization, the “Four Great Inventions” - papermaking, printing, gunpowder and compass are regarded as the symbolic achievements of Chinese ancient civilization. Although papermaking is expressed as a component of the four great inventions in the discourse that parades its cultural contribution to the Chinese nation, the study of papermaking itself in cultural studies has long been laid aside. As a result, the “Four Great Inventions”, as a non-Chinese original expression, presents a Eurocentric value judgment of ancient Chinese civilization. Whereas in the actively accepted modern Western discourse, the “Four Great Inventions” seems to have become a fundamental part of the “self-expression” of Chinese culture. Since modern times, this concept has become part of the “general knowledge and thought” in modern China through the textbooks of primary and secondary schools.³

It is worth noting that the term “Four Great Inventions”, entered contemporary China’s “general knowledge and thought” in less than a century, is not unrelated to its Europe origin. As Yuzo Mizoguchi, a Japanese scholar, points out, “the discovery of something European, or even quasi-European, within the range of Asia has long been

³ According to Ge Zhaoguang's explanation, “general knowledge and thought” refers to “the most common explanation of phenomena and things in the universe that can be accepted, grasped and used by people with a certain degree of knowledge”. See *Introduction to the History of Chinese Ideas: The Writing of the History of Ideas*, by Ge Zhaoguang, Shanghai: Fudan University Press. p. 14.

regarded as the 'modern' discovery of Asia”. It is in this historical context that the “Four Great Inventions”, including papermaking, are seen as an important conclusion of the “reassessment” of Chinese culture in terms of European values.

After entering the 21st century, the vigorous rise of the cultural heritage preservation movement has become an increasingly prominent cultural phenomenon. “Heritage” has become one of the most important cultural representations of the time. In such a perspective, the “Four Great Inventions” have been newly stated, expressed and constructed in the context of heritage. Since 2006, there have been 15 items in the category of “papermaking” in the national-level intangible cultural heritage list, and more than 30 items in the provincial-level list. In particular, Chinese rice papermaking technique was inscribed in the Representative List of Intangible Cultural Heritage of Humanity, symbolizing a new expression of papermaking in the context of “heritage”.

2 Question Awareness: Discovering History in China?

The study of papermaking in the age of heritage implies a complex position in itself. As a technique that appeared around the 1st century AD, its basic principle has not changed greatly at the technical level after more than 1,000 years of development. However, in the perspective of specific technical composition, different technical paradigms and heterogeneous technical appearances and products have been presented from the beginning because of the difference of region, environment, ecology and resources. Nowadays, it is still difficult for the modern papermaking industry to completely replace the traditional papermaking even though it has been so well developed. Traditional papermaking will provide new enlightenment under the topic of sustainable development especially in the context of environmental and ecological challenges faced by industrialized paper-making. In contrast to the mass-produced cheap

---


6 Data on intangible cultural heritage is from the official websites of UNESCO, the Ministry of Culture and provincial cultural authorities.
paper products by modern industry, handmade paper, which contains the creation of human body, has the cultural meaning that cannot be replaced by industrial products.

Pre-modern - modern times has become an important boundary dividing human history. A dualistic opposition pattern appeared in many aspects and fields because of this boundary. But paper and papermaking are the exceptions. According to the Eurocentric logic, the invention of paper and printing were the key techniques for the cultural enlightenment in Europe.7 “Gunpowder, compass, printing press (and paper associated with it),” notes Marx, “are the three great inventions that herald the coming of bourgeois society”.8 If papermaking and the printing technique associated with it are so important to the evolution of civilization that it became an important technological foundation for the rise of modernity in Europe, why China, invented papermaking a thousand years earlier than Europe, has been placed in the “barbaric, dark” and “uncivilized society” situation by Europe in the cultural expression since modern times? Is there a discourse rewritten due to the mismatch in economic, military and political forces? As Réne Etiemple notes, after China has long maintained its cultural export to Europe in modern times, it is the 20th century that China moves towards full Europeanization.9 Is it because of this Europeanization of the century, making it difficult for researchers today to see the once sinicized Europe? And viewing from the opposite angle, is there a possibility that the Eurocentric pre-modern world schemata is rewritten in China?

Taking the above-mentioned problems as the starting point, a “problem domain” will be formed, which starts from papermaking technique and comes down to “China”, with “history” as the first key word for the expansion of problems. “History” is a key to self-cognition of Chinese culture. The traditional view is that “China has the most complete history in the world. There is no comparison between the prosperity of Chinese history and that of other nationalities in the world. The only thing in our culture that worth our pride is our history. It is abundant enough to prove the depth and greatness of our

---

7 The English ideologist Bacon first coined the phrase “the Three Great Inventions”. He pointed that “Printing (and the associated technique of papermaking), gunpowder and magnets have changed the whole face and condition of food in the world. See also New Tools, by Francis Bacon, translated by Xu Baogui, Beijing: The Commercial Press, 1984. p. 103.


national culture. We could infer from our history that the future of our nation is infinite.\textsuperscript{10} And even in the process of contemplating academic “modernization”, “among all the disciplines prevailing in western countries today, only the science of history is inherent to China”.\textsuperscript{11} Even so, after the discourse of Western learning has gained hegemony in modern Chinese academic research, the science of history is also facing the situation of decline. As Chen Yinque put it in his poem to Peking University Graduates, “The act of moving to our neighbor in the east to learn our own history makes the literati of China ashamed to death”. Just like the own reflection in the history field in China, the “disciplinary system” transplanted from the West has not only dominated the main forms of academic development in the 20\textsuperscript{th} century, but also completely destroyed our perception of the structure of traditional knowledge. Therefore, at the end of the 20\textsuperscript{th} century, we often unconsciously try to understand ancient “knowledge” of history from the perspective of “discipline”.\textsuperscript{12}

This is true in historiography, and even more so in the writing of history. In the academic discourse since the 20th century, the research done by researchers in the name of “Sinology” and “Chinese Studies” outside of China has become the core source of academic discourse about China. “In the West, knowledge of 'China' expressed by sinologists supports all kinds of theories about the 'world,' So long as these theorists want their discourse to be about the 'world,' They have to cut ray and borrow knowledge of China from the sinologists”.\textsuperscript{13} That is to say, the expression about China is endorsed, to a certain extent, by “Sinology” and “Chinese Studies” in the Western academic circles. Under such a framework of expression, discussion about China in the western academic discourse will inevitably be “distorted” or even rewritten.\textsuperscript{14} For researchers inside China,
the old historical tradition under the impact of Western learning, cannot help but fall into a situation of “historical hunger”.  

From this point of view, in the evaluation system constructed under the so-called “modern” academic discourse, traditional China has no history. As Eric Wolf reveals in the title of his book: The world merely constructed by Europe holding the power of speech and people described as having “no history”. In the reflection of the self-centeredness in western academic circles, the western-centeredness appeared in Chinese history writing is also criticized. Cohen points out that within American academic circles, for the three ideological frameworks in the writing of Chinese history since modern times. The framework of shock and response, the framework of modernization and the framework of imperialism, “all these models place the starting point of Chinese history in the West and adopt the criteria of the West to measure the importance of history”. He then proposed that Chinese history should be studied “with China as the center”, which would embody four characteristics: a. Studying Chinese history from China rather than from the West and trying to use internal (Chinese) rather than external (western) criteria to determine which phenomena in Chinese history are of historical importance. b. Dividing China into districts, provinces, prefectures, counties and cities in a “horizontal” way in order to study regional and local history; c. Further “vertically” dividing Chinese society into a number of different hierarchies and promoting the writing of the history of the lower ones, including folk and non-folk history; d. Extending a warm welcome to the theories, methods and techniques that have been developed in disciplines other than history (primarily, but not limited to, social sciences) and striving to integrate them with historical analysis.

Second, by Cohen's own admission, it is impossible to completely eliminate Western scholars’ ethnocentric distortions in Chinese studies, and one can only hope to minimize them. Third, the essence of the “China-centered” paradigm proposed by Cohen

---

is similar to the “western-centered” China study he criticized before in that it is also the construction of a system of Chinese expression from the West. The logical premise of “discovering history in China” is either that China itself has no history, or that China has not made any historical expression by itself. Either Way, China still exists as a nation with “people without history”. It should be clearly recognized by contemporary researchers that “the historical concept of nation-state construction in modern Europe cannot be applied to Chinese history, and China's history of nation-state should be written by itself”. Chinese history, first of all, requires Chinese researchers as insiders to make a “self-expression”.

Papermaking, as a basic technology born in China and closely related to human civilization, has been judged in modern times on the basis of the concept of the “Four Great Inventions”, which originated in Europe, thus shows a clear “western-centered” tendency. At the same time, the cognition and research on papermaking are still on the technical level due closely to the influence of the West. The relationship between paper and papermaking and Chinese cultural tradition and local knowledge is not paid enough attention. Therefore, around paper and papermaking, the problem of “self-expression” also exists. In this sense, the reconstruction of the historical discourse on papermaking is the Chinese-based “self-speaking” and “self-writing” in the time of Eurocentric “western study”.

3 Research Status and development trend at home and abroad

In the world of Chinese traditional thoughts, which is made up of Law (Tao), Technique (Shu), Approach (FA) and Tool (Qi), “Law” often becomes the link between the ethereal “Law” and the “Tool” that exists in reality. In Dongguan Han Ji, the earliest document of papermaking, papermaking was named “Cai Lun’s Technique”. In the following historical evolution, Cai Lun has been so repeatedly described as the inventor of paper that he has become a legendary “cultural memory” similar to that of Cangjie and Meng Tian. At the same time, because it is “technique”, in the pursuit of “law” in the “big traditional” discourse system, the records of papermaking technology are very incomplete in the long history. On the contrary, this technology is occasionally recorded in the works on the farming season, climate and phenology and the agricultural production. Until more
than 1,000 years after Cai Lun invented paper, Song Yingxing clearly stated in his book *Tchien-kung Kchaj-wu* that “paper is the foundation of those tens of thousands of masterpieces and their authors” and the technical process of making paper has been fully documented because of Song’s comments. Therefore, in the expression of regional papermaking, the emphasis is often on the deep root that originated from “Cai Lun’s Technique”, whereas the technical process has to be related to *Tchien-kung Kchaj-wu* in technical description.

Historical documents on paper in Chinese language can be classified into two types. One type belongs to general theory, such records could be found in works like historical books, local gazetteers, anthologies and encyclopaedias. Records on the origin of paper, for example, can be found in *The History of Eastern Han Dynasty* (around 120 AD) and Ban Gu’s *History of the Later Han Dynasty*. The development of paper in different periods can be found in historical books and political classics as *The Six Canon of Tang Dynasty*, *The Atlas of Yuanhe County*, Records of Jiatai Kuaiji and *Records of Jiangxi Province*, etc. Records about paper can also be found in anthologies and notes, such as *Record of Dream in the Eastern Capital* and *Gai Yu Cong Kao*. In addition, records about paper can also be found in encyclopaedias like *Taiping Imperial Encyclopaedia* and *Collection of Ancient and Modern Books*.

The other type is works and articles specialized in paper. The earliest works of this type is *Four Classics of the Study Room*, written by Su Yijian (953-996), which is a comprehensive exposition of the study utensils of literati. One of its volumes is devoted to paper. It preserves some early historical materials about paper, especially the historical materials of Tang Dynasty, which has been scattered and lost. *Records of Commentary of Sichuan*, written by Fei Zhu in the 14th century, introduces the situation of paper making in Ming Dynasty in Sichuan area. The only and most important document that records the technique of paper-making in the early days was Song Yingxing's *Removing Green* in his book *Tchien-kung Kchaj-wu*, which made a detailed record of the paper-making technique with bamboo and bamboo bark.

Compared with other abundant literatures about “Law (Tao)”, the historical documents of paper and papermaking are scarce. At the same time, in the traditional academic framework, paper and papermaking did not enter the mainstream research
domain, but only existed as elegant or knowledgeable objects of literati. This trend was maintained in China until the end of the 19\textsuperscript{th} century.

In 1884, following Bacon's and Marx's concept of the “Three Great Inventions”, Joseph Edkins, a sinologist and once came to China as a missionary, first added papermaking to the concept. When comparing the situation in Japan and China, he pointed out that “we must always remember that they (referring to Japan) have no outstanding inventions like printing, papermaking, compass and gunpowder”. This is the first time that the so-called “Four Great Inventions” are directly related to China. At the same time, it also began the ideological approach of introducing the Western-centered theory into the evaluation of traditional Chinese techniques. Under the influence of western learning, paper and papermaking have gained new research and interpretation space.

In the past 100 years, Chinese and foreign scholars have accumulated rich research results in paper and papermaking in China. From the perspective of research topics, they mainly focus on four aspects: a. the study of the history of papermaking technology; b. Research on the dissemination of Chinese papermaking technique; c. Field work and case study of papermaking technique; d. Research on the history of Anthropology and ethnographic study of objects. The four perspectives are to be analysed in the following parts respectively.

4 Research on the history of papermaking technique

In modern academic discourse, papermaking first existed as a traditional technique. The most traditional perspective of papermaking research is from the study of the history of science and technology. In the past hundred years, the academic discourse competition in this field has mainly focused on two core issues: a. the definition of paper; b. Whether the technique of papermaking was invented by Cai Lun. In the study of the history of papermaking technology, \emph{Paper Making and Printing}, in Volume 5, Section 1, of the book \emph{History of Chinese Science and Technology}, edited by Joseph Needham, written by Qian Cunxun, \emph{Paper Making and Printing in History of Chinese Science and Technology} written by Pan Jixing, and \emph{Paper Making and Printing in Complete Works of Chinese Traditional Crafts} by Zhang Binglun, Fang Xiaoyang and Fan Jialu are recognised as representatives.
As for the definition of paper, the researchers start from the definition of “paper” in *Shuowen Jiezi*: “絮一苫也”, and link paper with the “drifting” in the production process of Chinese traditional silk, and then speculate on the invention process of papermaking. Through textual research on the meaning of words, Lao Gan thinks that the thin slices left on bamboo mats after the ancients floated are “paper” described in *Shuowen*. Qian Cunxun believes that “絮” (floc) is a kind of fabric and “苫” is a mat-shaped mould, “both of which are still the basic material for papermaking till now”. Dai Jiazhang thinks that this statement has no factual basis and cannot be used as evidence.

Regarding the debate about the definition of “paper” starting from *Shuowen*, Ling Chunsheng thinks that “paper” existed long before Cai Lun, and “Cai Lun only mixed the use of the ancient silk paper and the supplementary paper, and the used plant fiber instead of animal fiber as the raw material”. Qian Cunxun thinks that Ling’s theory and viewpoint are “not new” and his conclusion is “rather suspicious”. Pan Jixing also believes that bark cloth “has nothing to do with the origin of paper”. Through the investigation of ancient paper excavated, combined with the definitions of paper since modern times, Pan Jixing thinks that “floc” can only be plant fiber, and then put forward the definition of “paper” on the basis of integrating statements of paper in ancient and modern times: “Traditionally, the so-called paper means that plant fiber raw materials are made into dispersed fibers with high purity by mechanical and chemical action, and then mixed with water to make the slurry flow through the porous mold curtain to filter water,

---

and the fibers form a wet thin layer on the surface of the curtain. After drying, a sheet with certain strength is formed”. 26

The statements of Cai Lun inventing papermaking originated from Dongguan Han Ji. It is the earliest documentary record about Cai Lun and papermaking, and also the direct documentary support of the proposition of Cai Lun's invention of papermaking in later generations. A long-lasting academic dispute was raised around the authenticity of this historical material, as well as related problems such as whether Cai Lun invented papermaking and when the earliest paper was produced.

Although the earliest doubts of Cai Lun's invention of papermaking could dates back to Su Yijian's Four Classics of the Study Room, they are only conjecture because of the lack of objective evidence. Carter (1925), an American, also believes that “it is uncertain whether Cai Lun is really the inventor of papermaking or is the sponsor of papermaking”. He also pointed out that “in the eyes of Chinese people, Cai Lun and papermaking have become inseparable. He was even regarded as the god of papermaking afterwards”. 27

The most important breakthrough in humanities research methods in the 20th century should be considered to be the starting with “double evidence law”. For the study of papermaking history, the real impact comes after archaeological discovery. Since 1933, there have been seven reports of archaeological activities that found papers from the Western Han Dynasty. 28 The archaeological test and dating results show that the age of these papers is far before the time when Cai Lun invented paper in the Eastern Han

---

Cultural Study on traditional Chinese Papermaking: Problem Awareness and Research Review

Dynasty recorded in documents. Therefore, some researchers put forward that Cai Lun did not invent papermaking, he perfected it.

During the “Cultural Revolution”, the idea that “Cai Lun invented papermaking” was considered as a continuation of the “historical view of emperors and princes”. Only the people were the creators of history, and so people were the inventors of papermaking. After the “Cultural Revolution”, the idea that Cai Lun didn’t invent papermaking continued to be put forward, but the supporting arguments changed from the so-called “struggle between Confucianism and Law” and “mass historical view” during the “Cultural Revolution” to archaeological discoveries. In the process of denying the “Cultural Revolution”, the academic view that Cai Lun did not invent papermaking was also included in the denial. The same academic viewpoint, even the same person, had completely different arguments and argumentation paths during and after the Cultural Revolution, which led to the discussion of this viewpoint falling into a dilemma. Then, both of the two different academic viewpoints are attributed to non-academic conclusions under the influence of “Left”.

Since 1980s, with the normalization of academic atmosphere, the debate about whether Cai Lun invented papermaking has been further expanded. Supporters’ arguments mainly include historical documents, conclusions of international conferences, and the custom of offering sacrifices to Cai Lun. Furthermore, researchers like Wang Juhua and Li Yuhua think that the so-called paper discovered in the Western Han Dynasty

---


is not paper, and can't overthrow the conclusion that Cai Lun invented papermaking.\(^{34}\) The researchers represented by Pan Jixing insists that archaeological discoveries support the view that paper existed in the Western Han Dynasty.\(^{35}\) These two viewpoints finally focus on the different identification and dating conclusions of the same batch of archaeological unearthed objects, which have not met an agreement until now.\(^{36}\)

**5 Research on the transmission of papermaking in China**

Regardless of whether Cai Lun invented papermaking or not, the whole academic world including Ling Chunsheng, who believes papermaking should be associated with bark cloth, agree that papermaking is an invention of China. The spread of papermaking in the world has also become an important academic path to support this viewpoint. The idea that European papermaking is introduced from China was initiated by Carter, and was verified in detail by Dard Hunter, an American paper history expert.\(^{37}\) It has become a common sense conclusion in the study of paper history. Joseph Needham listed the 26 most important technologies that China introduced into Europe, among which papermaking was ranked.\(^{38}\)

Ji Xianlin made a detailed textual research on the time and process when Chinese paper and papermaking were introduced into India.\(^{39}\) Zhang Wende combed and verified the path of Chinese papermaking introduced into Europe through Arabia. Ge Shuang made an in-depth study on the role played by women in the process of spreading papermaking to the west based on the textual research of ancient Arabic books.\(^{40}\)

---


Shan discussed the propagation course and path of Chinese papermaking from the Eastern Han Dynasty to the Ming and Qing Dynasties in East Asian cultural circles including Japan, Korea and Vietnam. On the basis of previous studies, Su Rongyu made a panoramic study on Korea and Japan (the path of Chinese papermaking to the est); southeast Asia (the path to the south); west, central Asia, Arabia and Europe in the far west (the path to the west).

Pan Jixing is the representative of the comprehensive research on the external communication of Chinese papermaking. His book, *Four Great Inventions of ancient China: Origin, Spread and World Influence*, is the authoritative work to discuss the origin and transmission of the four great inventions from the perspective of the history of science and technology. In the study of the external transmission of papermaking, from the perspective of technological history, it has basically become the consensus of Chinese and foreign academic circles to sort out the communication context and process from all directions with China as the center, and to support the judgment on the invention of papermaking in China on a deeper and broader level.

### 6 Field investigation and case study of papermaking technique

Although papermaking was invented by Cai Lun according to documentary records, there is no relevant record about its specific technological process. The only complete and detailed record of the technical process of making paper with bamboo and bamboo bark is in *Tchien-kung Kchaj-wu* after almost 1,000 years later, which is the first time of this kind. Based on historical documents, Huang Zhenhe introduced the classification of traditional ancient paper, expounded the characteristics of ancient paper in different dynasties and the methods of making paper by hand in ancient times.

---

In recent studies, based on field investigation, the recording and describing of regional and ethnic papermaking processes has become the mainstream paradigm of current papermaking research. In the investigation of paper-making technology, *The Complete Works of Chinese Traditional Technology Paper Printing* can be called the representative of a comprehensive collection, which completely includes nearly ten representative paper-making technologies in the whole country.\(^{45}\) Li Xiaocen's field investigation on the manual paper-making process of Naxi ethnic group in Lijiang, Yunnan Province shows that Naxi's manual paper-making is influenced by both the fixed paper curtain papermaking method in Tibet and the movable paper curtain papermaking method commonly used in inland China. Chen Biao and Zhang Yi faithfully inspected the producing technique of handmade leather paper in Katang Village, Pu'an County, Guizhou Province, and analyzed its technological characteristics, sales status, economic benefits, inheritance and protection condition.\(^{46}\)

Zhu Xia investigated the handmade papermaking of Zhuang ethnic group in Gongchuan Town, Dahua County, Guangxi Province from two aspects of technology and folk customs. She believed that Zhuang's papermaking in Gongchuan Town, Dahua County, Guangxi was a traditional papermaking method, and the handmade paper—"gauze paper" had many characteristics, which was of great value in local Zhuang's daily life, etiquette and customs.\(^{47}\) Zhu Xia also made a field investigation on papermaking in Bai ethnic group.\(^{48}\) Xu Jing's investigation on traditional papermaking in Fujian mountainous area shows that manual papermaking is an important driving force in the development of western Fujian mountainous area, which has brought great influence on local economic, social and cultural development.\(^{49}\) Luo Maobin, Tong Yanfeng and Li Zhongyu made a field investigation on the traditional Tibetan paper manufacturing technology in

---


Qiangduo Village, Nixi Town, Shangri-La, Yunnan Province, and compared this technology with the Naxi papermaking technology. On the basis of on-the-spot investigation, Deng Wentong described the papermaking process and production process of Yao ethnic group, and analyzed the reasons why papermaking technology was lost in Landianyao area. Fang Xiaoyang and others made a field investigation on the production technology of Lianshi paper in Yanshan, Jiangxi Province, and focused on the unique weak alkali cooking and natural bleaching of the paper. They considered these traditional techniques as a good role in improving paper durability and key technical links with scientific value.

After the rise of intangible cultural heritage protection, the case study on papermaking is influenced by the project-based intangible cultural heritage protection mode, and the locality and ethnicity of papermaking have been focused to a certain extent. Among the intangible cultural heritage projects at or above the provincial level, there are nearly 30 project-based investigations and descriptions of papermaking techniques. It also provides good data for further research.

7 Ethnography of objects and anthropological technical research

“Objects” has always been an important aspect of anthropological research. Morgan took the material and its production level as the important criteria for dividing social forms in the anthropology classic *Primitive Society*. After Marx's elaboration, the criteria formed a historical narrative paradigm of dividing social forms by material production level, which had a great impact on Chinese humanistic expression since the 20th century. From the mid-19th century, “material culture” is the ancient culture or

---

other civilizations in the eyes of Westerners, it is other lifestyles and ethnical cultures.\textsuperscript{54} Peng Zhaorong points out that the anthropological study of “objects” focuses on materiality, which mainly includes five aspects: as a sign, as a classification principle, the overall shape of “things”, as a symbolic expression and exchange value.\textsuperscript{55}

There are two ways to study material culture in anthropology. One is to study “objects” as life center, and the other is to study scientific and modeling techniques of “objects”. Since it is a material form changed and created by cultural behavior, material has the features similar to words, symbols, narratives and even history.\textsuperscript{56} Jean Baudrillard pointed out that in the post-modern society, we live in the age of objects: in all previous civilizations, what can survive after generations is objects: enduring tools or buildings. But today, it is ourselves who see the production, perfection and extinction of objects.\textsuperscript{57} For this reason, the description of objects in ethnographic studies focuses on how human beings attach their unique “cultural narrative” materially, and the core lies in discovering the exclusive symbol system formed by “symbolic objects” and “material expression”.\textsuperscript{58}

Technology is a cultural content closely related to objects, and tools are regarded as an important means of material production. “Tools are indicators of cultural existence”\textsuperscript{59}. In our broad understanding of science and technology today, we can say that early anthropologists have paid attention to them, Fraser's \textit{The Golden Bough} and Malinowski's \textit{Magic, Science and Religion} could be take as typical representatives. From the perspective of knowledge pedigree, anthropological research on technology can be traced back to the research of Durkheim and Marcel Mauss, the representatives of French Annales School. Moss, in particular, believes that all kinds of instruments (tools,}

\begin{thebibliography}{9}
\bibitem{55} Peng Zhaorong and Wu Xingqi, \textit{The Exchange of Objects in Ethnographic Representations}, Journal of South-Central University for Nationalities(Humanities and Social Sciences), 2009 (1). p. 1-5.
\end{thebibliography}
weapons, clothes, utensils, etc.) used by human beings are the products of collective activities. Various tools usually show the established state of civilization, and there is a very definite relationship between civilization and tools, and between social essence and tools.

These decisive relations thus constitute a sociological problem. From this perspective, technology is a branch of sociology. He foresees forward-looking, “just like the science, industry and art shared between countries,” difference “itself is slowly degenerating into the heritage of a small group, or a shared exclusive of a big nation; Similarly, the outstanding characteristics of these civilizations will become the common property of more and more social groups. In the ethnography of objects, the classic is the ethnography of American anthropologist Sidney W.Mintz - *Sweetness and Power*. Based on the observation of Caribbean and Europe, the anthropologist outlines a cross-regional cultural history with a unique perspective along the production, circulation, exchange and consumption of sugar.

In the study of China, Craig Clunas comprehensively combs the material culture of Ming Dynasty from the aspects of literature, language and cultural relics in his book *Material Culture and Social Status in Early Modern China*. Francesca Bray made a unique research on the relationship between technology and gender in Ming and Qing Dynasties from the perspective of feminism. With “food” as the breakthrough point, Anderson reveals the complex relationship between food and tradition, food and etiquette, food and resource utilization, and then reveals, behind food, the survival wisdom and world outlook of Chinese people. Compared with traditional

---

Chinese studies on the history of material culture and technology, by combing and presenting the relationship between specific materials and technology and culture, society and tradition, the studies above show the complex cultural implications contained in materials and technology. It is by continuing this logic that the study of traditional Chinese techniques should go beyond the technical category and enter a deeper and broader cultural field. “The craft culture, which is inherited from the original Chinese art of creation, has a close relationship with people’s social life from its very beginning. The harmonious space of the relationship between objects and objects and between people and objects is formed by the skills and scales embodied in concrete objects, which constantly regulates and adjusts people’s behavior and thinking mode. The Chinese folk knowledge system is gradually built on the basis of such material social life”.

As far as Chinese civilization is concerned, printed material (with paper) was once the product with the largest quantity ever manufactured in China. If one book is taken as the unit of measurement, the number of books printed in China exceeds the total number of bronzes and buildings. If one page of a book is taken as a unit and take religious talisman, bank notes, stamps, etc. as supplement, the total number far exceeds the sum of textiles and porcelain tableware together. In this sense, paper can be regarded as the most important type of Chinese material culture. But the problem is that researchers usually only paid attention to the literature content with paper as the material carrier in the past research but paid little attention to paper as the “object” itself. Even in the study of the history of technology, researchers paid attention to the technology of papermaking rather than paper itself.

It is worth noting that German scholar Jacob Eyferth, by investigating the production technology and inheritance of Jiajiang handmade paper, thinks that in the inheritance of Jiajiang papermaking technology, the reproduction of technological knowledge is embedded in the special natural, social and symbolic environment. It is difficult and unnecessary to transform it into writing knowledge. The texts recording

---

technological knowledge pay more attention to the propaganda of moral values than the transmission of technology.  

Based on that, through the challenges and changes encountered by the “embodiment” of techniques themselves under the administrative framework of modern countries, the process of how manual paper industry is rebuilt by local people in the period of de-skilling and how social organizations is repaired on the basis of technological reproduction have been investigated. Xiao Kunbing and Yang Zhengwen, taking the paper flow in Jiajiang area of Sichuan Province as the breakthrough point, discussed the localization significance of state power hidden behind the resource competition of “objects” (paper) through the perspective of the appearance of the paper flow. They thus made a regional understanding and historical explanation of the interaction process of multiple factors of regional social changes.

8 Preliminary conclusions

Papermaking is a great discovery and outstanding creation of the Chinese nation in the course of civilization, which plays an irreplaceable role in the recording, dissemination and inheritance of human culture and civilization. Paper has a special position and unique value in Chinese culture. It is the most important material carrier of Chinese culture, recording and preserving the memory of the nation. It is widely used in all aspects of the life Chinese and is an important implement of the lifestyle of Chinese people. It is closely related to the world of belief of the Chinese nation and is the material carrier of cultural symbols. Therefore, in a sense, paper is the most important “object” of Chinese culture. In its development and evolution, papermaking is closely combined with the lifestyles and resources of various regions and ethnic groups, forming diversified


technical characteristics based on Cai Lun’s technique, which hold the same view with the “integrated multiple pattern of the Chinese nation” proposed by Mr. Fei Xiaotong, and becomes an important approach to understand the cultural structure of the Chinese nation.

Paper and papermaking, as outstanding creations made by the Chinese nation in the process of human civilization, have been neglected in Chinese tradition for a long time because of the thinking paradigm of Law (Tao), Technique (Shu), Approach (FA) and Tool (Qi) of Taoism. Under the influence of Western academic discourse, the “four great inventions”, which are judged by Western values, have become one of the “common knowledge” in modern China, and together with symbols of the descendants of the Yellow River and the Yangtze River, they together play an important role in the construction and recognition of the contemporary nation-state. Since the 20th century, the research on paper and papermaking has long been entangled in such issues as “what is paper” and “whether Cai Lun invented papermaking”. On the contrary, more important issues, such why the definition of paper of formed in this way in China and why such papermaking technique is formed in various places and ethnic groups in China have not been paid enough attention. In particular, research like putting paper and papermaking technique into the research field of anthropology, paper's special position and value in Chinese culture and its function as a carrier connecting “big tradition” and “small tradition” in traditional culture have just stated.

References


Cultural Study on traditional Chinese Papermaking: Problem Awareness and Research Review


Cultural Study on traditional Chinese Papermaking: Problem Awareness and Research Review


Zhuang Liu & Yanhua Chen


Estudio cultural sobre la fabricación tradicional de papel en China: reflexión sobre el tema y revisión de la investigación

RESUMEN
La fabricación de papel es uno de los inventos más importantes de la cultura china, se inicia con la Dinastía Han del Este con la Técnica Cai Lun, perdura en los tiempos modernos como uno de los Cuatro Grandes Invenciones; y actualmente, objeto de estudio académico, se encuentra Patrimonio Cultural Inmaterial de la Humanidad. Investigar las nomenclaturas y terminologías vinculadas al proceso de fabricación de papel permite identificar elementos de producción cultural en diferentes períodos históricos. En este contexto, surge la intercomunicación presente en los discursos del Este [chino] y del Oeste [europeo]. La investigación sobre cómo fabricar papel, además de recuperar el valor de la técnica tradicional, va más allá porque promueve la exploración de la comunicación. El reexamen de la difusión cultural y el intercambio de conocimientos tecnológicos establece una historia de relaciones entre Oriente y Occidente, rescatando elementos que conducen a una nueva comprensión de la Europa sinizada. La sinización o chinización es la apropiación lingüística o asimilación cultural de los términos y tradiciones del idioma chino.

PALABRAS CLAVE: Fabricación de papel; Historia china; Etnografía de objetos; Comunicación.