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# Keeping Watch on Intangible Cultural Heritage: Live Transmission and Sustainable Development of Chinese Lacquer Art

Xiaoting Song <sup>1</sup>, Yongzhong Yang <sup>1,\*</sup>, Ruo Yang <sup>1</sup> and Mohsin Shafi <sup>2</sup>

<sup>1</sup> Business School, Sichuan University, Chengdu 610065, China

<sup>2</sup> School of Economics and Management, Leshan Normal University, Leshan 614000, China

\* Correspondence: yangyongzhong@scu.edu.cn

Received: 19 May 2019; Accepted: 9 July 2019; Published: 16 July 2019



**Abstract:** Countries all over the world have been constantly exploring ways to rescue and protect intangible cultural heritage. While learning from other countries' protection measures, the Chinese government is also constantly exploring ways that conform to China's national conditions. As China's first batch of intangible cultural heritage, lacquer art boasts a brilliant history, but many people are not familiar with it today. Moreover, in the process of modernization, the lacquer art transmission is declining day by day, and it is facing unprecedented major crises such as loss and division of history into periods. Hence, it is essential to verify and reveal the challenges and dilemmas in the lacquer art transmission, and come up with corresponding protection measures around these problems. First of all, this research, through literature review, "horizontally" explores the current research status and the universal problems of lacquer art transmission from the macro level. With a view to make up for the deficiencies of the existing research and further supplement the empirical evidence, the current research, with the transmission of "Chengdu lacquer art" as an example and through in-depth interviews, tracks and investigates the whole process of transmission of Chengdu Lacquer Art Training Institute, and "vertically" analyzes the survival situation of lacquer art transmission and the core problems affecting transmission behaviors from the micro level. In the final conclusion, the research comes up with corresponding countermeasures and suggestions for the identified key problems, which is of significant reference value for facilitating the live transmission and sustainable development of Chinese lacquer art.

**Keywords:** intangible cultural heritage; lacquer art; live transmission; challenges; sustainability

## 1. Introduction

In accordance with UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage, intangible cultural heritage (ICH) refers to all sorts of practices, performances, patterns of manifestation, knowledge systems, and skills, as well as in relation with tools, material objects, handicrafts, and cultural sites considered by various groups, organizations, and sometimes individuals as their cultural heritage [1]. The biggest characteristic of ICH is that it has never been divorced from the special production and life style of the nation, and it is the "living" carrier, "living" specimen, "living" memory of the nation's cultural symbols and aesthetic habits [2–4]. It relies on human beings and exists and develops around people's production and life [5,6], which is a continuous and everlasting "cultural chain". It is precisely because of this that its transmission is more fragile, accidental, and selective than the tangible cultural heritage, and the intergenerational chain of transmission is more easily broken [7,8].

According to figures, there are nearly 870,000 items of intangible cultural heritage resources in China currently entering the national, provincial, municipal, and county levels of intangible culture.

Besides, there are about 70,000 items of intangible cultural heritage resources in the heritage list system, including 39 items of world-class intangible cultural heritage and 1517 items of national intangible cultural heritage [3,9]. Sadly, these cultural heritages are facing the threat of potential extinction. Relevant data demonstrate that one cultural relic is lost every minute and one folk art is disappearing every minute [10]. On how to rescue and protect the intangible cultural heritage, the Chinese government, while learning from other countries' protection measures, is also constantly exploring ways that conform to China's national conditions.

Since the launch of the "China National Folk Culture Protection Project" in 2003, traditional lacquer painting techniques have been included in the first batch of national intangible cultural heritage lists [11,12]. As a significant witness of the customs of past dynasties and a vital carrier of traditional aesthetic concepts, the traditional lacquer art boasts a history of 7000 years and has created a lacquer culture that reached its peak from the Warring States Period to the Qin and Han Dynasties [13]. Nevertheless, many people are still not familiar with it today, and the profound cultural accumulation carried by lacquer art fails to take its due place in the contemporary era. To shine the past glory of Chinese lacquer culture, government departments have adopted a series of measures of "static" and "dynamic" protection [11,12]. Nevertheless, compared with the "museum" static protection of lacquer art by modern scientific and technological means, such as text, audio, and video, the "dynamic" transmission can secure the "freshness" and "sustainability" of lacquer art in a better way [14,15]. However, as far as the overall situation in China is concerned, the live transmission capability of lacquer art industry is worrisome [16]. On the basis of the research data, the political, economic, and social treatment of the practitioners such as the arts and crafts masters, personnel of traditional arts and crafts enterprises, rural social processing personnel, and personnel of other industries is relatively low. People under the age of 40 are unwilling to engage in this industry, less than 1% of the graduates from professional colleges and universities join in the traditional arts and crafts field, and only less than 20% of senior craftsmen are still engaged in this industry [3], which is facing the subsequent "faulting" phenomenon. This is thought-provoking: why is it hard to continue the formerly "sunrise" craft and how can lacquer art be continuously passed on? Hence, it is necessary to verify and reveal a series of challenges and dilemmas faced by live transmission of lacquer art, to explore the causes of these problems, and to come up with relevant countermeasures and suggestions in the current research so as to protect and inherit this heritage.

The research questions and structure of the paper are as follows. First of all, the paper studies the current research status and universal problems of lacquer art transmission from the macro level by referring to articles, reports, and policy documents published in relevant fields (in Section 2). Afterwards, the gaps of the existing research are found and the case study design is carried out to further supplement the empirical evidence. In the next part, through in-depth interviews, tracks and investigates the transmission origin–transmission process–transmission result of Chengdu Lacquer Art Training Institute, and analyzes the situation of lacquer art transmission and the key problems affecting live transmission from the micro level (in Section 4). Finally, some countermeasures and suggestions are put forward to promote and protect the live transmission of lacquer art (in Section 5).

## 2. Literature Review

### 2.1. Live Transmission

The concept of "live transmission" originates from the protection of intangible cultural heritage, which is a derivative of the laws and regulations on the protection of intangible cultural heritage [17]. In the Convention for the Safeguarding of Intangible Cultural Heritage published by UNESCO, the definition of protection is "to adopt measures to secure the vitality of intangible cultural heritage, including confirmation, filing, research, preservation, protection, publicity, promotion, transmission, education and revitalization of all aspects of such heritage" [1]. Article 3 of the Interim Measures for the Protection and Management of National Intangible Cultural Heritage, which came into effect on 1

December 2006, states that “the protection of national intangible cultural heritage shall follow the policy of ‘protection primary, rescue first, rational utilization, transmission and development’, and adhere to the principles of authenticity and integrity.” In these regulations, special emphasis should be placed on “ensuring the vitality of intangible cultural heritage” and “rational utilization, transmission and development” [10]. Essentially, they all highlight the same theme, “live transmission”.

“Live transmission” does not merely protect the authenticity of intangible cultural heritage, but endows it in the nature of living state, the two permeate each other [18]. The concept of “live transmission” has been interpreted and respected by a number of experts and scholars. For instance, Wang Wenzhang [17] said, “*The basic characteristics of the living rheology of intangible cultural heritage also determine that today’s protection should not be static solidification protection, but protection for development. Without protection, it is hard to develop; and without development, protection will lose its significance.*” Such views all confirm that the concept of “live transmission” is derived from the protection of intangible cultural heritage. Kurin [19], in his capacity as a member of UNESCO’s Intangible Cultural Heritage Review Committee, answered several key questions of “what to protect? Who will protect it? How to protect it? How to implement it?” and pointed out the direction of current protection work. He mentioned that the focus of protecting intangible cultural heritage is to protect the transmitting groups of intangible cultural heritage. Xie Fei [20] selected relevant research results from foreign major source journals of ICH, sorted out them, and found that foreign countries have laid more emphasis on the transmitters in the formulation of policies, shifted from the protection concept of “things” to the protection concept of “people”, and stressed the living state of intangible cultural heritage protection.

“Live transmission”, as its name implies, is to preserve intangible cultural heritage through the dissemination way of “living state” [10], and its existence must progress together with its cultural and social environment. “Live transmission” is relative to “static protection” [4,21]. It is endowed with the significance of sustainable development that can never be replaced by other protection and transmission methods; it is a transmission mode that can give full play to the capability to excavate cultural resources of the project and elaborate and realize cultural attribution of the project from multiple angles [15]; it is different from the way of doing “museum” protection of intangible cultural heritage by modern scientific and technological means and recording all aspects of intangible cultural heritage projects by way of text, audio and video. “Live transmission” is the best measure of intangible cultural heritage protection. All sorts of methods can be considered reasonable as long as they are conducive to the sustainable existence of intangible cultural heritage [14,17]. Meanwhile, the transmission carrier of “live transmission” must also be a “living” thing, which emphasizes that the process of transmission is an interactive process in which the transmitter and the recipient participate together [18,20]. However, the content of transmission is also changing under the big system of project culture, but it always represents the cultural atmosphere of “living state” and the aspiration of the nation. Apart from that, “living state” is also reflected in the existence of “living state” thinking throughout the entire transmission process, which is also a significant factor for the smooth conduct of “live transmission”, and “live transmission” exists by reason of the penetration of “living state” thinking. To sum up, on the one hand, living state refers to the fact that intangible cultural heritage itself needs to exist dynamically [4], and on the other hand, it changes along with the change of transmission environment [9], transmission activities, and transmission subject [7], while its other meaning lies in that intangible cultural heritage “lives” in the contemporary era and “lives” in people’s current cultural life [10,19].

## 2.2. Challenges Faced by Live Transmission of Chinese Lacquer Art

Despite that the significance of lacquer art is well documented in the literature, there are also some challenges and constraints that have caused setbacks to this traditional heritage. After sorting out the articles, reports, and policy documents on the lacquer art transmission, it is found that the most common challenges in the live transmission of lacquer art include the following.

It is hard to sustain the transmission pattern. Because of the changes in modern social relations and the impact of the market economy, the traditional workshop-style and family-style “master–apprentice relationship” is easily alienated into a market economy relationship [22]. Moreover, today’s apprentices do not follow their masters from an early age as before, and the time for learning and practicing is limited, which is not conducive to a thorough understanding of the skills [23], thus rendering it difficult for the training mode of “the master teaching apprentices” to produce desired results [24]. Despite that some vocational colleges have set up lacquer art majors or courses [25], by reason of the changeable learning interests of students and the lack of teaching participation of transmitters, the cultivation of talents is seriously divorced from reality [26], resulting in the trained talents not really being able to undertake the responsibility of transmitting lacquer arts. Furthermore, with the exception of a few lacquer art projects with fairly good market benefits, a lot of projects have been neglected by young people, resulting in a lack of successors and a situation of imminent danger [9].

The production cycle is too long and the output is low. Lacquer art is a complicated process [13]; the bottom body will be made after the basic materials are well prepared. It usually takes three to four months to make the bottom body: each process of mounting cloth, scraping paint gray, and painting requires polishing, and should be in line with specific process requirements and standards; the carving of the body and drying of the paint layer take a long time; the painting process of the paint layer, such as mother-of-pearl inlay and gold tracing, requires meticulous work, which cannot be replaced by machinery [27], because this is the core skill that determines the artistic value of lacquerware, the difficulty in the process, as well as the focus of transmission, and can only be improved but not replaced [28]. From design to carving, painting to polishing, and inlaying to decoration, the average production cycle of each piece exceeds several months—even a good piece often takes one to two years—resulting in lower output and correspondingly higher product price [12]. As a result, the lacquerware industry cannot meet the market demand, which hinders its development.

There are hidden dangers in the division of labor in the production process. The contemporary lacquerware industry of lacquer art is dominated by private enterprises [27], with existing lacquer factories, workshops, individual studios, and other modes. With a view to enhance productivity, in large lacquer factories, such as Beijing Carved Lacquer Factory, Fuzhou Bodiless Lacquer Factory, Yangzhou Lacquer Factory, and so on, the production process mostly adopts assembly line production, and the division of labor in design and production has been completed. For instance, the plain workers make the grey base of the lacquer body, the lacquer workers make the lacquer paint, the painting workers make colored drawing, and finally the cleaning workers finish the body. Each craftsman only knows part of the process, and many people do not grasp the complete process flow [29]. The ownership of works produced by small workshops and studios is generally owned by the designer, and the production is jointly completed by one or several designers [30]. Therefore, with the exception of a few transmitters who can independently complete the whole process of lacquer art production, most lacquer art practitioners only know a little about it [29], which is also the reason why the chain of lacquer art transmission has gradually “broken”.

The lacquer art market is highly polarized. As a result of different product positioning, lacquer works of individual studios of masters of arts and crafts are usually oriented to the high-end collection market (including overseas), and their works demonstrate exquisite modeling, exquisite workmanship, and relatively high prices [11]. Workshop products are positioned in the low-end market of tourism commodities, and lacquerware products are relatively single. To conduct small-scale production, the production process is slightly shortened, the products are slightly rough and the price is relatively low [12], resulting in high-end lacquer products only being seen in craft museums and art galleries, as the general public cannot afford them, while the low-end products fall into the conventional, old style design and rough processes, which causes the public to lose their desire to buy [27]. The polarization of lacquer products renders it difficult for the lacquerware industry to thrive and develop continuously.

Transmitters are conservative and lack innovation. The atmosphere in the lacquerware industry is relatively conservative, and the existing lacquerware products are relatively conservative in types and

processes, basically repeating the traditions [28]. Meanwhile the shape, function, patterns, and colors of traditional lacquerware products are all connected with the ancient lifestyle, etiquette system, and religious ideology [11], thus rendering it hard to adapt to the new lifestyle and the new fpaint grayion of the times, or well integrate into the daily life of the masses [29]. Hence, there is no market for lacquerware products now, and without a market, there is undoubtedly no production as well. Besides, most of the transmitters do not have the capability to research and develop new products [15], so it is difficult for them to find space for “utilization” and “sustainable development” in real life [12].

By sorting out the above data, it is not hard to find that the existing studies mostly analyze the plight of live transmission of lacquer art from the aspects of lacquer art creation, production, and sales, and are mostly “result-oriented” discussions, while from the transmission relationship, transmission behavior, and transmission process, there is still a relative lack of studies on exploring the sustainable problems of lacquer art transmission. Considering that the essence of transmission is the imparting and transmitting process between the master and apprentices, which is the key to influence transmission, it is quite necessary to further “vertically” analyze the surviving situation of lacquer art transmission and the “process” problem affecting live transmission from the micro level.

### 3. Methods

The current research, with the live transmission of “Chengdu lacquer art” as a case and through archival records, interviews, participatory observation, and so on, tracks and investigates the whole process of transmission of *Chengdu Lacquer Art Training Institute*, and “vertically” analyzes the survival situation of live transmission of lacquer art and the key problems affecting the live transmission from the micro level.

The study is divided into two stages: first, the stage of understanding the basic current situation, from October 2017 to March 2018, the research group visited Chengdu Lacquer Art Training Institute six times for participatory observation and invited the “transmission master of intangible cultural heritage”, who is the director of Chengdu Lacquer Art Training Institute, to deliver a speech at Sichuan University, a total of 240 min of keynote speeches and discussions on lacquer art transmission heritage, which gained a visual understanding of the current situation of chengdu lacquer art live transmission;

Second, the depth interview stage (from June 2018 to December 2018), which consists of a group discussion with Yang Li'erqian, a transmission master of intangible cultural heritage, and his four apprentices in Lacquer studio, which lasted 263 min. This interview aimed to learn about the key, difficult points, and dilemmas in the lacquer art transmissions; furthermore, it wished to master the process and details of recruiting apprentices and imparting skills, and interviewed 15 apprentices and 6 apprentice's apprentices, respectively, each about 40 min per interview; in addition, it interviewed 7 lacquer masters, lacquer research experts, craftsmen, and managers who knew the inside information and had a high level of interpreting the phenomenon of live transmission of lacquer art in the form of group discussion, so as to offer constructive suggestions to live transmission of lacquer art.

The current research adopts semi-structured interviews and questions to secure that the true thoughts of the interviewees are reflected to the greatest extent. The interview mainly focused on the establishment of the relationship between the master and apprentices, the process of transmission, the results of transmission, and the dilemmas and influencing factors in relation with transmission, and the interview was not stopped until the information provided reached theoretical saturation, which could limit the deviation of the interviewees [31] (Bonnie, Dennis, 1988). The interview content was recorded by shorthand and sound recording. Within 24 h after the interview, the colaizzi data analysis method was used; that is, double listened to the same recording content, combined with the recording information, extracted the meaningful part, completed the transcription of the data, and fed back to the interviewee for checking, in order to ensure the authenticity of the extracted information.

## 4. Case Study of Chengdu Lacquer Art

### 4.1. Endangered State of Chengdu Lacquer Art

Chengdu lacquer art is one of the earliest lacquer art in China and one of the four largest lacquerware in China; it was also included in the first batch of national intangible cultural heritage lists in 2006 [11]. As early as 3000 years ago in the ancient Shu period, Chengdu's lacquerware craft reached a high level. During the Warring States Period, Chengdu lacquerware was spread to many parts of China as a cultural and commercial product. From the existing archaeological data, we can witness the superexcellent workmanship and glory of Chengdu lacquerware at that time. Chengdu lacquerware is exquisite in workmanship, and most of the working procedures are handmade. The bottom body is made of fine-texture and dehydrated logs, and the craft involves carving, inlaying, filling, tracing, pushing, painting, pasting, and other methods. The most distinctive one is "three carving and one etching" (carved solder wire halo color, carved flower and filled color, carved and filled hidden flower, broach needle etching). Through the analysis of documentation and interview materials, the following was found:

Influenced by policies, Chengdu lacquer art has experienced several ups and downs since modern times. The first stage: since the founding of the People's Republic of China, all trades and industries were flourished and thriving, and Chengdu lacquer art, a significant component of Chinese lacquer culture, was fully restored and developed. Chengdu Arts and Crafts Shop was established in 1954, and Chengdu Halogen Lacquer Shop was formally established in 1956. The number of skilled workers expanded to 40 and reached 200 in 1960. This period was the most prosperous period of Chengdu lacquer art after liberation.

The second stage: in 1963, the higher authorities decided to abolish Chengdu Halogen Lacquer Shop. The vast majority of skilled workers were transferred from the shop, retaining 49 people engaged in paint processing for buildings and furniture, and only 9 people were left by 1965. From 1966 to 1973, for well-known reasons, the cause of arts and crafts was basically at a standstill. To meet the needs of politics, many arts and crafts with prominent political themes were produced for the sole purpose of "three loyal to" activities. In this way, Chengdu lacquer art was once again in trouble, almost destroying Chengdu lacquer art.

The third stage: in 1975, the Ministry of Light Industry decided to resume the production of lacquerware in Chengdu and set up a factory in Jinhe Street, Chengdu. Upon examination of the competent department and the company, 50 new workers were selected on the basis of merit, and the old artists—Chen Chunhe, Yu Shuyun, and Zhang Fuqing, among others—led the learning workers to learn lacquering techniques, respectively engaging in woodworking, painting, decoration, paint making, and so on. After more than 30 years of hard work, Chengdu lacquerware craft, which had been lost for many years, was fully transmitted and protected.

The fourth stage: in 1999, Chengdu Lacquerware Craft Factory, as one of the first batch of small and medium-sized state-owned enterprises and urban collective enterprises in Chengdu, was transferred to Qingyang District by the head of Chengdu Light Industry Bureau. Now, it is managed by Shaocheng Street Office, pushing Chengdu lacquerware to the top of market economy and letting it run its own course. Because of the fact that traditional crafts are not suitable for market competition, Chengdu Lacquerware Craft Factory ceased production in 1995 and more than 80 technicians were laid off.

The fifth stage: in 2000, out of the sense of historical responsibility for the transmission of Chengdu lacquer art, enterprise employees and masters of arts and crafts worked together with the newly elected factory director and leadership team resumed the production of traditional Chengdu lacquerware. At present, Chengdu lacquer art is still in deep trouble because most of the skilled workers have found another job or retired, and only 20 skilled workers are still engaged in lacquer.

#### 4.2. The Living Transmission of Chengdu Lacquer Art Training Institute

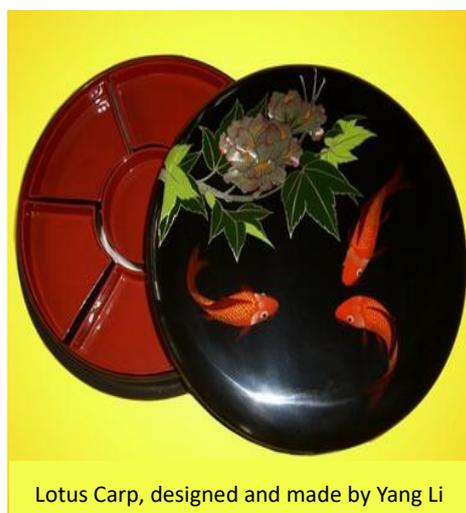
Established in 1995, Chengdu Lacquer Art Training Institute was an outstanding representative of the transmission and development of Chengdu lacquer art. Its director, Yang Li (also known as Irgen Gioro-Erqian), born in 1949, Manchu, is the transmitter of “Chengdu Lacquer Art”, China’s first batch of intangible cultural heritage. She has been engaged in lacquer art for 43 years and is renowned as a lacquer artist and a master of Chinese arts and crafts. Her works have won a dozen national-level and provincial-level awards such as China’s Hundred Flowers Award for Arts and Crafts and China’s First Lacquer Painting Exhibition Award for Arts and Crafts. She has produced large-scale lacquer paintings “Hongtong White Crane”, “Lotus Carp”, and many other works for the Sichuan Hall of the Great Hall of the People, which have been collected by Chinese and foreign museums, or given to foreign distinguished guests as state gifts. Moreover, her artistic achievements have been recorded in ancient books such as “Dictionary of Chinese Contemporary Literary Celebrities”, “Complete Works of Chinese Modern Art, Lacquerware”, and “Excellent Collection of Chinese Masters of Arts and Crafts”. According to the interviews, since she officially started the first lacquer art class in 2004, she has recruited apprentices every three years and has successfully trained more than 30 apprentices so far. The apprentices learned the main processes of design and creation, lacquering, decoration, cleaning, and polishing of lacquer art, as well as more than 30 traditional decoration techniques, and their works won more than 20 awards at or above the provincial level (part of the lacquer works is shown in Figure 1). Now, some outstanding apprentices, such as Lv Xingzhen, Huang Jinhong, Wu Xungui, and so on, have also begun to recruit their own apprentices and continue to impart lacquer art skills. Through interviews, they learned about the whole process of live transmission of Chengdu Lacquer Art Training Institute, as well as some challenges in its transmission.

Viewing from the origin, the transmission behavior of lacquer art originated from the recognition of skill value by the master and apprentices. The transmission path is transferred by the master, the main body of knowledge transmission, and guided by wishes, motives, incentives, and so on, to select appropriate transmission methods to transmit knowledge and skills to the recipients, thus completing the process of “transmission” [22,30,32]. However, it was mentioned in the interview that, “at present, the skilled workers are relatively old and their energy, physical strength and eyesight are not as good as before. Among the existing artists, 5 of the 8 masters of arts and crafts in Sichuan Province have retired and 3 are on the job; all of them are over 50 years old; there are 23 outstanding skilled workers, only 10 are on the job now, and most of them have not recruited apprentices in the past 20 years. Furthermore, some masters in the industry are rather “conservative” and unwilling to recruit apprentices, and they may always let their apprentices do some odd jobs after recruitment. Faced with the demand of “inlaying artifacts by means of chasing with hundreds of skills and thousands of workers”, Chengdu lacquer art, which has been praised as “a unique skill throughout the country”, is really on the verge of death. If it is not rescued and protected, it will be deserted”. Meanwhile, prospective recipients will decide whether to conduct knowledge survival after multiple considerations [5,33]. Some interviewees said, “many people are not willing to engage in lacquer art industry because of the many basic processes, complex production processes, great labor intensity, high technical content and low labor remuneration in lacquerware production”.

Thus, only when both parties have the willingness to transmit can the transmission relationship be truly established, and then the transmission behavior can occur with the mutual cooperation and guidance of the transmission parties. Moreover, whether the master and apprentices have their own “bright spots” to attract each other to choose and recognize themselves is also the key to the establishment of the transmission relationship [25]. Just as the master intends to select the students with “good painting skills and good moral character” from the many students visiting the master as apprentices, the apprentices will also find those boasting “great reputation and excellent works” among the many lacquer art masters as teachers. Hence, skill transmission is the matching and collection of master and apprentice’s transmission capability and will. To some extent, the first stage of skill transmission is a process of mutual identification and mutual exploration between the initiator and the successor.



Carved lacquer bottle & silver plate (dragon and Phoenix two-piece set), designed and made by Yang Li



Lotus Carp, designed and made by Yang Li



Figure 1. Some lacquer works by Yang Li (Erqian).

Upon establishment of the transmission relationship, the formal process of skill transmission will also begin. Through participatory observation, it is found that in the process of working together, apprentices will try to understand the master's thinking process, observe and imitate master's behavioral style, and gradually master and internalize the external behavior through continuous practice [34]. The master will offer appropriate guidance and help to his apprentices, helping them to understand and grasp the basic principles and know-how of their experience and skills through personal demonstrations and lectures, among others [30]. As for the whole process of skill formation, it has certain stage characteristics based on participation observation and interviews [16]. First of all, the master imparts some basic knowledge of lacquer art to his apprentices, such as introducing the materials and tools, processes and flows needed for lacquerware making, and displaying some typical

techniques (See Figure 2). This is the reserving stage of skill formation, requiring apprentices to form visual representations and rough perceptions in relation with knowledge and skills in their brains. There will be some difficulties in this process, for instance, the interviewee mentioned the following:



**Figure 2.** The Live Transmission Process of Chengdu Lacquer Art.

*“Since Chengdu lacquer art is mainly a handmade craft, which needs to be constantly adjusted in line with the conditions of raw materials, body shape and climate, the technical know-how discovered and summarized by artists in practice can only be applied under specific conditions, thus it is hard to summarize in modern technical language. Besides, most artists are old and have different cultural levels and expressive capabilities, so systematic summary must be carried out in practice, which will be a time-consuming and labor-consuming systematic project. Moreover, master and apprentices have their own creative ideas, which needs to be constantly coordinated”.*

Next, the organization and coordination of cognitive turning action, static knowledge turning to dynamic operation, and turning action of individual action are needed to form a coherent preliminary action system [22,30]. In practice, *“the master taught a skill once a week, and apprentices first learned lacquer making at that time. Chengdu lacquer art was mainly characterized by natural wood and raw lacquer as the main raw materials, but raw lacquer was expensive and it is difficult to find resources. Furthermore, some people are allergic to raw lacquer and have blisters on their bodies, so they have to give up the study of making lacquer. The body skeleton of lacquerware is the foundation of lacquered ware, which is crucial to the shaping and function of lacquer ware. In specific artifacts, transmitters often adopt different body skeletons and manufacturing methods based on the shape and function of the artifacts. After the body skeleton has been made, the next process is the cutting and making of the lacquer body and the paint gray. The quality of the paint gray affects whether the refined art works can be well preserved, whether they will crack in the later stage, whether the pits will be formed by reason of the wet paint in the polishing process, etc.”.* Therefore, the master’s willingness to teach and the extent to which he teaches his apprentices, as well as the extent to which the apprentices put into practice, exert a significant impact on the quality of lacquer art works, and are also in relation with the transmission of lacquer art.

Another interviewee mentioned that, *“the tools used in the process of making lacquerware are mainly hand tools, which are often made by artists based on their needs in the process of making the craft and are not of complete universal property”* (See Figure 3). However, by reason of the industry’s low efficiency in recent years, these unique tools and instruments have worn down by the years without repair and many special tools are now facing the crisis of extinction and disappearance. Take the human hair

paint brush as an example. In the past, the old master made the brushes himself and distributed them to his apprentices. Now there are only a handful of technicians who can make human hair brushes. Because of the scarcity of human hair resources, it is hard to use human hair paint brushes now. It is also pretty hard to find manufacturers or individuals of ox horn shovels.



**Figure 3.** Lacquer tool, taken by the author.

After long-term study, repeated operation, and practice, various independent, partial, and fragmentary skills are gradually connected into a complete, comprehensive, and automatic skill system [22]. Disciples began to form their own styles of creation and were able to create independently. For instance, some were good at making daily necessities such as vases, plates, and combs, and others were specialized in making fashion supplies such as lacquer paintings, jewelry, and bags . . . Respondents generally expressed the following:

*“There are as many as hundreds of manufacturing processes from paint making to body making, paint gray application, painting, polishing and refining, as well as 20 or 30 simple ones. For example, it takes years of experience to master the thickness of paint gray applied each time, not in one day or in a few months. While only Chengdu Lacquerware Craft Factory can manufacture exquisite lacquerware in full accordance with the traditional Chengdu lacquerware art, and only a few dozen people really master the traditional craft”.*

Viewing from the transmission results, the apprentices interviewed said that *“if we can make more than 30 vases a year now, we can exchange for a year’s worth of materials by selling a fine one”*, while some other apprentices *“opened a studio in Landing Youth Art Village to make lacquer vases, tea sets, and some accessories, such as bracelets, necklaces and combs, to feed themselves”*. Despite that the Wenshu Temple, where lacquer arts are taught, has a special store (See Figure 4) to sell lacquer art products, the products are mainly consumed by acquaintances or privately ordered, so the sales volume is not particularly large. Because of long working hours and expensive materials, the price of lacquerware is relatively high, but it is not easy for people to recognize this value. Apart from that, as the traditional products of folk lacquer art workshops and transmitters of traditional skills cannot enter the popular consumer market, the traditional lacquer art has declined in the era of industrialization and modernization; besides, as they do not have the ability to create new products for the aesthetic tastes of the new era, the traditional skills they have mastered are difficult to find space for *“application”* and *“sustainable”* development in real life, and even have been forced to the brink of extinction.

Relying on the cases of Chengdu Lacquer Art Training Institute, the current research has a relatively profound understanding of the whole process of live transmission of lacquer art. From the analysis of *“the establishment of transmission relationship”*, *“the process of skill formation”* to *“the result of transmission”*, we have found the survival situation of lacquer art transmission and the key problems affecting live transmission, which can be summarized as follows:

**Problem 1.** *As for masters, most of them are older and have less energy, physical strength, and eyesight than before; their knowledge level is rather limited and it is hard for them to provide the necessary conditions and places for the transmission of skills. Either they cannot recruit apprentices or their own transmission willingness is not high.*

**Problem 2.** *On the part of apprentices, they may be allergic to raw lacquer and have limited time and energy. Apart from that, the complex production process, great labor intensity, high technical content, and low labor remuneration make them unwilling to engage in the lacquerware industry.*

**Problem 3.** *In terms of transmission relationship, the time and energy input of the master and his apprentices are not exactly the same either, and there is a certain generation gap between the new and old transmitters. The interaction and relationship between the two sides need to be continuously run-in and further improved.*

**Problem 4.** *With respect to materials/artifacts, raw lacquer is expensive and it is hard to find the resources. Special tools such as traditional paint brushes and ox horn shovels are now facing the danger of extinction and disappearance. To a certain extent, it hinders the efficient and large-scale production of lacquer art.*

**Problem 5.** *In terms of the inheritance idea, the old artists attach importance to “skills”, while the young transmitters attach importance to “arts”. Most of the inheritors’ creation tends to be traditional and conservative, which renders it difficult to create new products considering the aesthetic taste of the new era.*

**Problem 6.** *After the transmission is over, the lacquerware products produced are mainly sold through acquaintances or stores, lacking systematic marketing promotion strategies, and the sales volume is not high and the products cannot enter the popular consumer market.*



Figure 4. Lacquer art studio of Chengdu Lacquer Art Training Institute.

## 5. Conclusions

Through the above analysis, it is found that live transmission of lacquer art is facing numerous difficulties and challenges, and the factors affecting live transmission of lacquer art are the combined effect of objective external factors and subjective internal factors. From the practice of live transmission of lacquer art, there are three remarkable characteristics. One is the individuality of the carrier of skill transmission. Lacquer art is not an explicit knowledge that can be easily acquired, but a highly personalized tacit knowledge [16] expressed in the form of individual direct experience. Besides, it relies on individual experience, intuition, and insight and is deeply rooted in behavior itself. Once it is separated from cognitive subject and becomes pure public and objective knowledge, tacit knowledge itself will disappear. The second is the practicality of the transmission process of skills. Lacquer art, as a kind of skills, is different from instinctive behavior. It originated from long-term painstaking practice and accumulated experience, so it can only be presented in the “living state” of practice. The third

is the situationality of the time and space for the transmission of skills. The acquisition of lacquer art is always linked to special problems or task situations. If it leaves the original situation where technical skills are formed, the transfer will inevitably face the result of failure. Hence, considering the macro “result-oriented” problem of lacquer art transmission and the micro “process-oriented” problem of master-apprentice transmission, and referring to the relevant suggestions of lacquer art experts, the current research believes that the following points should be focused in terms of the live, continuous, and effective transmission and development of lacquer art.

One is to attach significance to and support the transmitters. Transmitters are the significant carriers and transmitters of intangible cultural heritage. Strengthening the protection of transmitters is the key to the protection of intangible cultural heritage [6,23]. Therefore, we should consider the personal transmission capability, transmission motivation, and transmission willingness of the representative transmitters of lacquer art, and then offer necessary transmission places to subsidize them to conduct activities such as teaching apprentices and imparting skills, teaching, and communication, and commend and reward the representative transmitters who have made outstanding contributions to the transmission work. Meanwhile, young lacquer enthusiasts should be called on to join the ranks of lacquer art inheritance, and we should also pay attention to the learning motivation and achievement orientation of art seekers to distinguish the transmission enthusiasm and creativity of apprentices, and then help and award students in their studies to cultivate more subsequent talents.

The second is to launch the candidate “inheritor” plan. As many young people are reluctant to engage in the lacquer industry, old artists cannot even find new apprentices. At this time, the government and all sectors of society are required to help to build a platform for communication between the two generations of transmitters. They are suggested to cooperate with the education department to promote lacquer art into classrooms, textbooks, and schools. In the meantime, they should entrust relevant colleges and universities or research institutions to train a group of high-level professionals in lacquer art protection. Alternatively, they can make use of public cultural facilities or hold lectures, training, and other activities to conduct social education on intangible cultural heritage for the public, so as to attract reserve talents for lacquer art transmission. The “enterprise + university” education model, as well as the “Internet + transmission of intangible cultural heritage” and the “training program for the group of transmitters of intangible cultural heritage” models set up by the government are all “bridges” connecting the transmitters.

The third is to deconstruct the transmission relationship anew. There is a certain generation gap between the older generation and the new generation of transmitters. The old artists have a relatively high level of skills, but they accept traditional transmission teaching and lack professional knowledge in design, market, and management, while the younger generation of transmitters has a lot of new ideas, although their skills are not mature enough. Therefore, master-apprentice matching, interactive communication, communication relationship, and mutual recognition will bring an impact on the transmission results [22,32]. In addition, the master and apprentices do not exactly have the same needs for each other at different stages of transmission. For example, in the cognitive link of skill formation, apprentices wish to learn relevant theoretical knowledge of skills from their master, while the master needs to understand the determination and courage of apprentices to study. In the connecting link of skill formation, the master and apprentices wish to devote a lot of time and energy to each other and jointly complete the teaching and learning of good skills. In the automatic link of skill formation, the apprentice’s personal creativity becomes increasingly significant, while the master mainly acts as a consultant to answer questions in the apprentice’s skill creation. Understanding the interaction between the master and apprentices and distinguishing the phased characteristics of the transmission process are beneficial to the enhancement of master-apprentice relationship and the promotion of transmission effect.

The fourth is to encourage the adoption of new materials, new technologies, new processes, and new equipment to meet the requirements of modern industrial mass production. We can consider using new technologies to improve the utilization rate of raw materials, such as updating the blending

and proportioning technology of raw lacquer, or extracting the effective components of raw lacquer to develop new materials, which can not merely effectively ensure the supply of raw materials for lacquerware, but reduce the production cost of lacquerware [13]. In the production process, some new tools and equipment, such as UV digital inkjet printing, “inkjet” printing, UV curing, and so on, are selected to replace the original utensils to improve the efficiency of lacquer production.

The fifth is the organic combination of the traditional art and the modern aesthetic. The key to the protection of intangible cultural heritage is to transmit traditional core skills, but this does not mean to return to the ancients in the whole process. As intangible cultural heritage cannot be separated from the realistic needs of the people in the contemporary society for production and life, it is impossible to continue production entirely separated from the realistic needs, which may, in that case, lose the significance of protection. Attaching equal significance to protecting tradition and making reform and innovation are the true essence of live transmission [25]. In the production link, we can select some new tools to enhance the production efficiency of lacquer art. Apart from that, in order to solve the problems of old style and old category in the inheritance of lacquer art, we should adapt to the changes in today’s aesthetic needs, endow lacquerware with more artistic expressions, and expand the category of modern lacquerware products to modern household goods, decorative objects, high-end collections, and so on, instead of being confined to traditional tableware and stationery. While for traditional decorative techniques such as gilding platinum, gilding mother-of-pearl inlay, painting sand inkstone, painting gauze cap, and so on, we can also flexibly apply them to modern electronic products such as mice, mobile phone shells, and mobile storage, among others.

The sixth is to conduct productive protection of lacquer arts. Productive protection of intangible cultural heritage projects is to make them pass on and develop better through production on the premise of conforming to the law of protection [14,35]. Therefore, on the one hand, through productive protection, we should enable lacquer art to survive in the commodity market and acquire economic benefits, thus mobilizing the enthusiasm of employees and attracting more talents to learn and pass on this project [30]; on the other hand, we should make lacquer products enter thousands of households through production and become a part of people’s daily life [23]. Specifically, it is necessary for us to guide the lacquerware industry to accurately locate the target market, enhance the production efficiency of lacquerware, and adopt “online + offline” publicity and promotion in order to change the current difficult problems of lacquer art sales channels, narrow market, and small audience. Only in this way can the transmission and development of lacquer art establish a virtuous circle, become a complete system with hematopoietic function, and realize live transmission.

The emergence of intangible cultural heritage projects results from the comprehensive environment of history, geography, economy, and humanities [7,9]. To protect these intangible cultural heritage projects, it is necessary to conduct dynamic and integrated protection of intangible cultural heritage projects and their cultural ecological environment [29], protecting not merely the main manifestations of each intangible cultural heritage list project, but the natural environment and the humanistic and social environment in relation with it. As a result, we should not only protect the raw materials of lacquer art and their places of origin, for example, Geographic Information System and spatial data management can be a useful tool to identify natural environments that need to be protected from pollution, but adapt to the spiritual and cultural needs of the contemporary masses. Where conditions permit, we can explore ways of cultural and ecological protection, so that lacquer art can be comprehensively protected in a large environment of cultural and ecological protection. Apart from that, we should strengthen the historical origin and value of lacquer art; let the broad masses realize the significance of protecting lacquer art; correct the attitude of the broad masses towards protecting folk lacquer art; and strive to form a fairly good atmosphere for the whole society to pay attention to, support, and protect folk lacquer art.

**Author Contributions:** X.S. conceived and designed the study, and wrote the paper; Y.Y. contributed to developing practical implications and reviewed relevant literature; R.Y. participated in the interview and collated the interview materials; M.S. revised and improved the quality of the manuscript.

**Funding:** We gratefully acknowledge the research funding received from the Key Project of the National Social Science Fund (18AGL024), the Fundamental Research Funds for the Central Universities (2012017yjsy220), the Fundamental Research Funds for the Central Universities (skgszd-16), and “Cultural Industry Development Research Center”, a key research base for social sciences in Sichuan Province (WHCY2019B06).

**Conflicts of Interest:** The authors declare no conflict of interest.

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