Traditional lacquerware craft of Liangshan Yi Nationality part I: manufacturing process and coming crisis

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Abstract. The lacquerware of Liangshan Yi nationality was created by the Yi in their daily life. It has great varieties, exquisite productions and a very long history as the most representative handicraft in Yi region. The traditional manufacturing processes including body making and lacquering craft processes as well as the coming crisis of Yi lacquerware were analyzed in this work, in order to provide reference for the development and inheritance of the traditional lacquerware craft of Liangshan Yi Nationality.

1. Introduction
Liangshan Yi people are industrious, brave, intelligent and creative, in their long history. They have created a rich and colorful Yi culture. Liangshan Yi lacquerware is one of the most representative cultural products. The unique shapes and bright colors carry their reverence for nature and the pursuit for beauty, therefore, the Liangshan Yi lacquerware has become the most powerful heritage of Yi culture. The traditional lacquerware of Liangshan Yi has been developed for more than one thousand years.

In history, Yi nationality was a nomadic society. Those heavy and fragile supplies were not suitable for their migration life. Although many ethnic groups have records on making and using potteries at the beginning of their civilization, it has not yet been discovered in Yi people’s history[1]. On the contrary, woodware has become an indispensable part of their daily life. The vast forest in Liangshan provides them with abundant timber resources. Most of urns, barrels, wine cups used at home, the weapons, and Bimo ritual supplies, are produced from wood, and others are made from leather, horn, bone, bamboo, etc. The major manufacturing process of lacquerware in tradition includes body making and lacquering craft processes, and it was published in this work. The lacquer system consists of color and dermatoglyphic pattern, which will be reported in other article.

2. Manufacturing process

2.1. Body making

2.1.1. Wooden body
The most widely used woods for lacquerware making are Suoma (Rhododendron protistum), Labo
Camellia-Oilfera Abel, Moshu (Cinnamomum camphora), Erni (Betula luminifera), etc. The wood of Suoma (Rhododendron protistum), Labo (Camellia-Oilfera Abel), Moshu (Cinnamomum camphora) are very hard and delicate, and they are often used to make small tablewares, such as wine cup and spoon[2]. Betula luminifera grows at an altitude above 3,000 meters, and it is widely distributed in the Liangshan region[3]. It has a firm texture and a light fragrance that it can be used to make large lacquerwares. Trees are generally cut down in autumn or winter, because the wood contains less water at this time. It is not easy to crack and deform during post-processing.

To make the lacquerware, the first step is to place the freshly cut wood in cow dung or sheep dung for one year, and then it will be dried in a ventilated place or buried under ground. These methods can improve the dimensional stability of wood, making it more durable and harder. Then wood will be shaped using a lathe. As shown in Figure 1, the specific operation is that a person sits directly below and forces pedals to rotate lathe, and the wooden body will be motivated through the cowhide strip between pedals and lathe. The technician manually adjusts the distance between lathe and wooden body, and it can be precisely processed using rotation cutter[2].

**Figure 1. The lathe of the Yi nationality[2].**

2.1.2. Leather body

The traditional leather lacquerware of Liangshan Yi includes armors, helmets, hand guards, arm guards, shields, bridles, leather wine cups, leather bowls, etc[4]. Leather body is made from animal skin (including local cattle leather, buffalo leather and a small amount of yak and wild boar leather). The production process is roughly divided into two steps: the first step is to process the raw hides, removing hair, blood, and oil by alkali treatment; the second step is to fix the soaked raw hides in a mold and then trim the burrs. Compared with woodware and ironware, leather body lacquerwares are more suitable for marching and fighting because of their light weight, tough texture and wear resistance. For example, the leather armor of Liangshan Yi is divided into two parts: a body and a skirt. The body is made of eight to twelve pieces of large buffalo leather in order to protect body chest and back. The skirt part has five to six layers which is composed of several pieces of connected nails, to protect the thighs (Figure 2)[5].
2.1.3. Horn and bony body

Horn bodies are generally made from yak horns, ox horns, pien niu (offspring of a bull and a female yak) horns, and buffalo horns. Bony body are generally made from sheep and goat skulls, etc. It is worth mentioning that most of wine cups in Yi are lacquerwares made from horn and bone, as illustrated from Figure 3. The making process has three steps. The first sept is removing blood and fat by boiling or soaking animal horns, and then scraping and polishing the exterior smooth; the last step is painting the base color, and finally coating lacquer[6]. In the process of boiling skull, it is necessary to add soda for removing meat and fat, and then washing it in hot water, finally drying it naturally. If the skulls are purchased from other places, they need to be bleached, so as to show a better paint effect.

2.1.4. Bamboo body

The bamboo bodies are made from bamboo with painting. They are often made into bows, quivers, or Bimo ritual supplies. However, as compared to other lacquerwares, it is rare now[7].
2.1.5. Other bodies
The other bodies include leather-wooden bodies, bamboo-wooden bodies, etc. The four main types of lacquerware bodies of Liangshan Yi are wood, leather, bamboo, and horn. Bamboo-wooden bodies and leather-wooden bodies appeared later with the development of society [8]. The Bamboo-wooden body is made by bonding bamboo and wood, such as the "Fashan" of Bimo tool, which is called “Chinke” by Yi people, shown in Figure 4. The handle of the “Fashan” is made from wood, and the surface of “Fashan” is made from bamboo strips. Leather-wooden bodies are made from leather-covered wood, for example, shield. The back center is lined with a thin wooden board and stitched with thin leather strips to enhance defense capabilities[6].

![Figure 4. Chink, Bimo(Collection in Liangshan Yi Nationality Slave Society Museum).](image)

2.2. Lacquer craft process
The traditional lacquer craft process of Liangshan Yi is very complicated. The basic processes are as follows: The first step is apply primer. The specific operation is to roughly brush body with raw lacquer in order to make the raw lacquer penetrate directly after removing the burrs with emery cloth. Second, replenish ash by using a uniform mixture of raw lacquer and granite powder to fill up cracks and deformations. Third, sand. Making smooth body by coarse sand after drying in the shade for 2-3 days, and then washing and drying again in the shade. Next, repeating the second and third steps. Then, applying rouge paint which is composed of raw lacquer, carbon black and light oil. Finally, top coat. The raw Chinese lacquer is boiled to mature lacquer, and then the mature lacquer, raw lacquer, light oil, etc. are mixed to form a new paint. Finally brushing this paint on the body with a wool brush [9-11]. It also contains the "inlaid lacquer", "drawing", "covering", "quality color", "golden lacquer", "invisible flower" and other processes inherited from the Qing Dynasty [12]. Most of lacquer craft processes have more than 70 steps to reach a wonderful resulting lacquerware.

3. Coming crisis of Yi lacquerware
3.1. Inheritance of traditional lacquer skills endangered
During the slave period of Yi people, the inheritance of lacquer craftsmanship had a rule of "passing sons and daughters-in-law rather than others". Therefore, the traditional craftsmanship of lacquerware has not been vigorously developed. Moreover, the learning process on the craft is boring, and the income is so low that many young people are unwilling to do it. As the age of the craftsmen is getting older, the age gap is getting much wider. Currently, even the traditional Liangshan Yi lacquerware families are facing the crisis of inheritance.
3.2. Low technical levels of technicians
In the Yi nationality lacquerware making industry, the technical and cultural background of relevant professionals are generally not high, and most of them only get started after simple training. Therefore, the quality of the lacquerware is not good. As a result, Liangshan Yi lacquerware is only common in local families, and it is not attractive and competitive in a big market.

3.3. Fake lacquer materials
Since the high cost of traditional painting natural lacquer (Chinese lacquer) and mineral dyes, as well as the time-consuming painting process, some of companies replace traditional materials with cheap chemical paints in order to seek a higher profit. It reduces the customer trust due the disordered lacquerware markets.

3.4. Suggestions for coming crisis
There are some suggestions for coming crisis. Firstly, Liangshan Yi nationality lacquerware should be promoted and popularized as a traditional culture, because people will realize its value when they know it. Secondly, the local governments should strengthen the inheritance before the lacquerware disappear. Finally, the country should introduce some powerful support mechanisms and economic guarantees to attract more talents to engage in related industries, so that this national intangible cultural heritage can be continuously inherited and developed.

4. Conclusion
In order to adapt to the nomadic life, Liangshan Yi ancestors used local materials such as wood, bamboo, animal horns and skins to make lightweight and portable supplies, and Yi people decorated them with natural lacquer, thus creating Liangshan Yi lacquerware. The traditional Liangshan Yi lacquerware has obvious national colors and cultural characteristics in terms of raw materials, lacquer shape, lacquer craftsmanship, and functional design, reflecting the natural geographical environment and production methods of local people. It not only meets the daily needs of the Yi people for eating, drinking, and wearing, but also contains the rich cultural connotations. However, with the change of time, the inheritance of the traditional craftsmanship is facing many challenges and crises. Therefore, we need to pay more attention to the inheritance of traditional crafts, so that we can continue to develop and innovate, and maintain its vigor.

Acknowledgments
This work was supported by Key Research and Development Project of Sichuan Science and Technology Plan Projects (Grant No. 2020YFS0357) and Ministry of Education Humanities and Social Sciences Research Project of China (Grant No. 19YJC760009).

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