

Further Study on Huang Dao-Po

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Abstract. Research on Huang Daopo is mainly focused on three main problems: hers native place, where did on earth she learn the advanced technology on cotton textile and how to implement hers pick-weaving and brocading technology. Academic circles have a lot of answers of these three questions, but they are not regulated until now, we hold opinion that, It's hard to determine Huang Daopo's native place, but she spread the advanced technology on cotton textile to Shanghai area throughout her old age, and brought benefits to this region; Huang Daopo learned the technology from Lingao people of Hainan, hers pick-weaving and brocading technology was implemented in the original waist machine.

Introduction

Research on Huang Daopo, academic circles have lots of and brilliant conclusion, however, there are also somewhere confused. For these issues we can not use the ostrich tactics, ignore its existence, instead, we should face, analyse and find out the solution, only in this way, we can actually respect the history. Based on analysis of the relevant historical data, we suggest that, for the study of Huang Daopo, we need to start with three directions: her native place, where did she learn from and how to implement hers pick-weaving and brocading technology.

Discussions and Analyses

Discussion and Analysis about Native Place and Carrier of Huang Daopo

Native place of Huang Daopo, there is a battle between Shanghai and Sanya in Hainan province, we consider that these two statements are both conjectures of those scholars. Because the earliest books record of Huang Daopo are not history books by the official revision, but from the Yuan Dynasty scholar Tao Zongyi's book *The Legend of Farming* (formal publication in AD1366) and Wang Feng's book *Wuxi collection* (publication in Hong Wu years of the Ming Dynasty, AD1368-AD1398).In *The Legend of Farming*, it said that:"There was an old woman named Huang Daopo, came from Yazhou.....", it is the basis of theory that Huang Daopo comes from Sanya in Hainan province. However, in *Wuxi collection*:"Huang Daopo, people in Wu Nijing town of Songjiang", it is the basis of theory that Huang Daopo comes from Shanghai. We hold, it is apparent deficiencies that only from "came from Yazhou....." do judge her native place, Sanya in Hainan province, it can be countered. Besides, the view that Huang Daopo's native place is Shanghai is also be countered with some questions: *The Legend of Farming* final composition was much earlier than *Wuxi collection*. This is obvious contradiction, "came from Yazhou.....", this words can't tell that Huang Daopo's native place is Wu Nijing town, Shanghai, Songjiang. The earliest official record said about Huang Daopo was the historical book *Vol. 6 of Songjiang Government Record* in Chong Zhen years of Ming Dynasty, it said: "There was an old woman named Huang Po, came from Yazhou.....",the words are very similar with *The Legend of Farming*, only there are difference between "Huang Daopo" and "Huang Po". Local chronicles objectively record local events generally, *Songjiang Government Record*'s credibility is much higher than *Wuxi collection* which is regard as poems, meanwhile, *Songjiang Government Record* final composition was later than *Wuxi collection*,

which just goes to show that people who were writing *Songjiang Government Record* did not admit Huang Daopo's native place in Wang Feng's *Wuxi collection*, so Huang Daopo's native place is complicated and confused.

For Huang Daopo's carrier, we hold that it is worthy to be careful scrutiny. Perspective of historical is that Huang Daopo as a child bride fled to Sanya in Hainan province, we consider that it is a literary and artistic works which emphasis on class struggle in particular history ages. It is not the real history, the literary and artistic works tried to show a class struggle theory which the most humble person is the most wisdom by Huang Daopo. There is also a legend recently, Huang Daopo was wife of a man who had been banished, when she arrived in Sanya, Hainan, her husband died. For survival, she got along with Li nationality and learned cotton textile technology -- this is remarkable. In addition, some views think in the name of Huang Daopo's "Dao" reflects her Taoist nun identity, these words are quite applicable.

Regardless how fierce competition between hers native place and carrer, one thing is clear, Huang Daopo finally settled in Shanghai and lived the last years of her life, left hers historical merits on this land.

Discussion and Analysis about the Origin of Huang Daopo's the Technology of Cotton Textile

All the time, most of the literature believes that Huang Daopo learned the technology of cotton textile from Li nationality. We have some questions about the view. When we sorted out image information on the textile technology in ancient China, from *Ting-Xuan Deng painted QiongLi genre painting* in Ming Dynasty (Fig.1), saw that Li nationality was still use spinning wheel to spin and original waist machine to weave, it turns out that Li nationality's the technology of cotton textile in Ming Dynasty lagged behind Huang Daopo's technology of cotton textile passed on to people in Songjiang hers in Yuan Dynasty, moreover, the German ethnologist H·Stubel in his book *ethnography of Hainan Island* (Published in AD1937) wrote that textile technology of Li nationality was quite primeval even in the modern times. He described that: "...kapok trees (the authors note: Kapok tree refers to the cotton) almost everywhere in Hainan Island. The Han nationality in Hainan Island call it 'ceiba'. Spindle (Li language call it Woi) which is a thin stick about 22 cm long, two or three apertured copper coins and a little waxy on one side regard as pendant, it was use the thick hair from porcupine (Li language call it Min-dai) to be wind around.", "loom (Li language call it blum-lin) is extremely simple, But it has beautiful sculpture, women kept legs straight when they were weaving, sat on the palm leaf or mat which were left on the floor". The Deng Tingxuan's paintings and H·Stubel's data of folk custom, there are strong evidence that Huang Daopo could not learn cotton textile technology from Li nationality.

There is the reason why most of the literatures thought Huang Daopo learned advanced the technology of cotton textile from Li nationality, they didn't distinguish the relationship between Lingao people and Li nationality. Lingao people used to be considered as Li nationality in Hainan, in fact they are one branch of Yue people who arrived Hainan Island later than Li nationality in the Warring States period, *Geography Section of History in Han Dynasty* recorded specifically that Lingao people engaged in silk production, their wide cloth was appreciated by the emperor as early as the period of Emperor Wu Di of the Han Dynasty, thus it can be seen that Lingao people had advanced textile technology. From above we see that, Huang Daopo's technology of cotton textile only learned from Lingao people in Hainan because there is no technical foundation in Li nationality.



Fig.1. Qiongli genre painting painted by Ting-Xuan Deng

Discussion and Analysis about the Facticity of Huang Daopo'S Technolgy

For Huang Daopo's technical reform of cotton textile, it is unable to get direct evidence from the related historical documents. The earliest historical documents is the book *The Legend of Farming* by Tao Zongyi in Yuan Dynasty, only one sentence preliminary recorded related stories of Huang Daopo: "In the early yuan dynasty, there was an old woman named Huang Daopo, came from Yazhou, taught others how to use these tools for cotton ginning, cotton fluffing, spin and weave. And Huang Daopo could use the technique of Li nationality's pick-weaving to weave the bright and cascading texture.....Not last too long time, Huang Daopo died, everyone was sad and grateful to her and buried her together... ..".[1] After that, Wang Feng recorded related events of Huang Daopo in his book *Wuxi collection* told that:"In Yuan Zhen years, Huang Daopo came back to Shanghai, and tought the knowledge and skills of cotton textile to people in WuNijing of Shanghai. Shortly afterwards, WuNijing was famous all over the country and thousands of families were fed by Huang Daopo's contribution. After her death, Ru-Gui Zhao, head of the township, built temple for her but it was collapsed after years."

According to *Wuxi collection*, academic inferred that, the time when Huang Daopo innovated the technology of cotton textile was in Yuan Zhen years(AD1295-AD1297) of Yuan Dynasty. According to *Wang Zhen's Agricultural Book* (finished in AD1302-AD1303,first published in AD1313), academic thought that they could know related events about Huang Daopo's technology of cotton textile. But there is some doubt in the above view. Firstly, there is no related stories of Huang Daopo in *Wang Zhen's Agricultural Book*. Secondly, according to *Wuxi collection*, the time, when Huang Daopo innovated the technology of cotton textile, was in Yuan Zhen years of Yuan Dynasty, however, Wang Zhen already finished *Wang Zhen's Agricultural Book* nearly at the same time and he was also working as a county magistrate in Anhui so that he couldn't go to WuNijing for his exploration. Therefore, that's why Dieter·Kuhn, a German historian of science and technology, considered that Huang Daopo maybe not a textile expert for innovation. What's more, "Huang Daopo play a major role in spreading technique of cotton textile", which showed in Wang Feng's *Wuxi collection*. We hold that, if *Wuxi collection* is credible, maybe the real historical merits of Huang Daopo were not innovated cotton textile technology, but also got hold of the advanced technology of cotton textile and impartially spread in the folk.

In addition, if according to Tao Zongyi's *The Legend of Farming*, Huang Daopo surely innovated the technology of cotton textile, which described in *Wang Zhen 's Agricultural Book*, so that we should redefine the time when Huang Daopo went back to WuNijing. "In the early years of the country"by Tao Zongyi in *The Legend of Farming*, demonstrate that he should live in the Jiangnan area in Yuan Dynasty, "the early years of the country"defined by Tao Zongyi is different from the early years of Yuan Dynasty defined by modern historians. We think that, "the early years of the country"defined by Tao Zongyi refers the time when Yuan united the whole country, around the year AD1271. Only in this way can explain Wang Zhen recorded these technology after 30 years.

Moreover, maybe the household registration system in Yuan Dynasty was so strict that Huang Daopo must go back to her hometown.

Furthermore, in *The Legend of Farming*, what kind of tools did Huang Daopo use to implement her pick-weaving and brocading technology? Academic circles did not give a clear explanation currently, almost everybody is committed to the view that Huang Daopo used advanced weaving tools in the Silk weave and linen weave at that time, draw loom. We consider that it is impossible for Huang Daopo to operate it, this is due to her commoner identity and draw loom needed to two persons to operate it: Based on Huang Daopo's related research and legends, it is unclear that she had craftsman identity, instead, indirect prove her commoner identity. According to "came from Yazhou", it proves that Huang Daopo wasn't craftsman because it was almost impossible to free migration for craftsman in Yuan Dynasty. The Yuan government exercised strict supervision on registered craftsman, prevented the craftsman expatriation to escaped, they arrested and punished the craftsman who had escaped. Production management of government-run manual workshop is very strict in Yuan Dynasty in order to monopolize advanced technology.[2] Huang Daopo also could not grasp weaving technology of draw loom (Fig.2) in private workshop because the owners of private workshop were all skilled craftsmen. In order to survive and develop in the market competitions, the owners put a high premium on the skill of secrecy, rarely demonstrated skills to public unless their own male offspring to keep their industry. As a commoner, Huang Daopo never had opportunity and time to grasp draw loom. Thus, it was also impossible for her to guide the people in Wu Nijing of Songjiang to make this kind of weaving tools.

We hold that Huang Daopo's "pick-weaving and brocading" technology only can operate in the original waist machine (Fig.3). The warps in original waist machine was arranged regularly according to certain colors, in fact this was an original process of colour misdraw. While "Colour matching" refers to make the colored wefts in small basket picking and beating according to the layout plan in advance. Because each colored weft was basis of the patterns. "Heddle" from ground weave and figuring weave complete the fabric pattern. Essentially, "Heddle" underscores that each time when the figure cycles, the sequence of the warps which have been lifted up. Because this kind of original waist machine has less lifting rods, so cycle of weft is also within 30. If someone wants to weave complex patterns, this method is obviously insufficient. However, Lingao women in Hainan invented a kind of draw technology by cross-stitch, the figure cycles can reach hundreds of wefts. Although the production efficiency of the draw technology by cross-stitch was low, but Lingao women in Hainan summarized a set of rules during long time operation by cross-stitch, so they made the complex process simply. We think that cross-stitch in waist loom is the most primitive brocading technology. It can weave design patterns which looks like "bright and cascading".[3] Huang Daopo's "came from Yazhou....." explained she had lived a long time in Lingao of Hainan, and mastered the draw technology by cross-stitch.



Fig.2. draw loom Farming and Weaving Painting in Southern Song Dynasty.



Fig.3. pick-weaving and brocading technology by waist machine.

Summary

Through the analysis above, We believe that firstly Huang Daopo's native place is hard to determine, but she had finally settled in Shanghai and lived the last years of her life, spread the technology of cotton textile to Shanghai area and brought benefits to this regions. Secondly, she learned the technology of cotton textile from Lingao people in Hainan, not from Li nationality in Hainan. Finally, Huang Daopo's pick-weaving and brocading technology was implemented in the original waist machine.

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