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A Comparative Study on the Technical Characteristics of Hubei's "Dabu" (Coarse Cloth)

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Abstract: As outstanding representatives of traditional cotton textile techniques in Hubei Province, the Hong'an Dabu and Zaoyang coarse cloth making techniques carry the genetic code of Jingchu farming civilization. Taking the two "Dabu" techniques as research objects, this paper adopts literature research, field investigation and comparative analysis methods to conduct a systematic comparison from five dimensions: historical origin, technological process, core techniques, artistic expression and inheritance mode. The study finds that Hong'an Dabu technique is characterized by complicated processes and infiltration of revolutionary culture, while Zaoyang coarse cloth is distinguished by streamlined procedures and diverse patterns. Both share the technical foundation of Hubei's cotton textile industry and form unique features due to regional cultural differences. Finally, the paper proposes an inheritance path of "technical mutual learning + cultural empowerment + design innovation", providing theoretical support for the modern transformation of Hubei's traditional textile techniques.

Keywords: Hubei Dabu; Hong'an Dabu; Zaoyang Coarse Cloth; Technical Characteristics; Intangible Cultural Heritage (ICH) Inheritance.

1. Introduction

Located in the middle reaches of the Yangtze River, Hubei has a long history of cotton cultivation, providing unique natural conditions for the birth and development of cotton textile techniques. Hong'an Dabu (a product of China National Geographical Indication) and Zaoyang coarse cloth (a national-level intangible cultural heritage), as the twin gems of Hubei's "Dabu" techniques, are rooted in the Dabie Mountains of eastern Hubei and the Nanyang Basin of northern Hubei respectively, forming distinct technical systems after thousands of years of inheritance.

At present, academic research on single textile techniques is relatively in-depth, but comparative studies on similar techniques within Hubei Province are still weak[1]. Hong'an Dabu is renowned for the exquisite "72 processes" and its revolutionary cultural marks, while Zaoyang coarse cloth has established its position relying on the richness of "1,990 patterns" and its commercial genes[12]. Both face similar modernization impacts in technique inheritance but have taken different innovation paths. By systematically comparing their technical characteristics and exploring the underlying regional cultural logic and design value, this paper not only fills the gap in the research on Hubei's textile ICH but also provides practical references for the living inheritance of traditional techniques[10].

2. Historical Origins and Development Context of Hubei's "Dabu" Techniques

Both Hong'an Dabu and Zaoyang coarse cloth are precious ICH textile treasures in northern Hubei, carrying regional culture and technical inheritance. The history of Hong'an Dabu can be traced back to the Yuan Dynasty, benefiting from Huang Daopo's textile techniques and the cotton-planting tradition in the Dabie Mountains[7]. During the Ming and Qing dynasties, it became the main clothing material in eastern Hubei due to its durability and affordability, and was sold to surrounding areas via Hankou, being listed as a local specialty in Hankou Records[6]. In the revolutionary period, it served as an important military supply, evidenced by the folk song "Men fight enemies... The last foot of cloth is sewn into military uniforms", and the technique also shifted towards simplicity and wear resistance[3]. It was included in Hubei's intangible cultural heritage list in 2015, certified as a national-level ICH in 2021, and made its debut at China Fashion Week in 2024, completing the transformation from "military supply cloth" to "fashion cloth"[9].

The origin of Zaoyang coarse cloth technique can be traced back to the 6,200-year-old Diaolongbei Site, where unearthed pottery spinning wheels witnessed the early germination of textile industry[15]. During the Ming and Qing dynasties, as a node on the "Wanli Tea Road", Zaoyang coarse cloth was sold to northwest China and Central Asia along with merchant caravans. The demand of commercial circulation promoted the enrichment of its colors and patterns and facilitated its transportation[11]. It once declined under the impact of modern textile industry in the 1980s, and then recovered with the protection of intangible cultural heritage, being included in Hubei's ICH list in 2016 and upgraded to national-level ICH in 2021[12]. Today, 4 inheritance centers have been set up in places like Zaoyang Han City, and industry-university-research bases have been established with colleges and universities, growing from a "Tea Road commodity" to a "cultural and creative IP", with inheritance always deeply embedded in commercial genes[8].

3. Comparative Analysis of the Core Processes of Hubei's "Dabu" Making Techniques

Both Hong'an Dabu and Zaoyang coarse cloth use pure cotton as raw material and are woven with wooden pedal looms, but there are significant differences in the number of processes and the handling of core links, which directly

determine the product characteristics of the two[13].

3.1. Process System: The Divide between Complexity and Streamlining

Hong'an Dabu is famous for its complicated processes, requiring "72 major and minor processes" from cotton picking to cloth formation, with 15 core processes summarized as follows: cotton ginning, cotton fluffing, yarn spinning, yarn sizing, yarn storing, yarn winding, warping, yarn brushing, heald making, reed passing, heald drawing, loom setting, weaving, and loom finishing. This complexity stems from the relatively closed production environment in Hong'an mountainous areas, where technique inheritance is family-based, and each process pursues extreme refinement. For example, during spinning, cotton flocs need to be twisted into 4-5 cm cotton slivers to ensure the yarn has "few breakages and high evenness"[6].

The processes of Zaoyang coarse cloth are more streamlined, with a total of 17 core processes including cotton ginning, cotton fluffing, cotton sliver twisting, yarn spinning, yarn winding, yarn dyeing, yarn sizing, cone winding, warping, heald threading, loom mounting, and weaving[13]. Compared with Hong'an Dabu, Zaoyang coarse cloth eliminates refined links such as "yarn storing" and "yarn brushing", and pays more attention to the continuity and efficiency of processes, which is adapted to its historical demand as a commercial commodity for circulation[12].

3.2. Key Processes: The Concentrated Embodiment of Technical Characteristics

The divide in the process system is further amplified in key links. As the core processes determining the quality and style of Dabu, yarn dyeing, yarn sizing and weaving respectively carry the technical genes of Hong'an Dabu and Zaoyang coarse cloth. Their differences are not only the result of technical choices but also a direct reflection of regional demands, as detailed in the table below:

Table 1. Comparison Table of Key Process Technologies for the Two Major "Dabu" Crafts in Hubei

Key Processes	Hong'an Dabu Technique	Zaoyang Coarse Cloth Technique
Yarn Dyeing	1. Dyes: Mainly plant-based dyes made from local indigo seedlings;	1. Dyes: A combination of traditional plant dyes and modern environmentally friendly dyes;
	2. Color System: Based on blue, black and red, with "General Red" as the iconic color, presenting a restrained and calm overall tone;	2. Color System: Has 22 basic color threads, with rich and bright colors and strong contrasts, which can derive more than 1,990 pattern colors;
	3. Dyeing Procedure: Undergoes three steps of "vat dipping - drying - re-dyeing" to ensure color fastness and non-fading.	3. Dyeing Procedure: Simplifies the re-dyeing link, focusing on the diversity and efficiency of color presentation.
Yarn Sizing	1. Sizing Agent: Uses rice paste as the sizing material;	1. Sizing Agent: Uses starch as the sizing material;
	2. Process Features: "Multiple infiltration" - the warp yarn is repeatedly kneaded in rice paste, and then warped after drying;	2. Process Features: "One-time forming" - simplifies the infiltration steps, focusing on ensuring stable yarn tension during weaving;
	3. Finished Product Effect: The yarn is smooth and strong, not easy to break during weaving, and the sizing agent falls off after washing, making the cloth softer and more breathable.	3. Finished Product Effect: The yarn has uniform tension, and the finished product has a thicker and stiffer hand feel with strong durability.
Weaving	1. Main Weaving Method: Mostly plain weave, with some high-quality products adopting "multi-shuttle box weaving";	1. Main Weaving Method: Good at jacquard weaving, and complex patterns require operating 3-4 shuttles simultaneously;
	2. Pattern Features: Simple and regular patterns, common basic patterns such as "rice pattern" and "meander pattern", and red symbols like "red star pattern" derived during the revolutionary period;	2. Pattern Features: Flexible and diverse patterns, covering folk symbols (Chinese zodiac), natural imagery (plum blossom), and auspicious meanings (double happiness pattern), with "dustpan bottom pattern" as the iconic pattern;
	3. Operation Focus: Coordinate hands and feet to control the loom, focusing on the uniform interweaving of warp and weft yarns. The finished cloth has a width of about 40 cm and needs to be spliced for use.	3. Operation Focus: Realize pattern weaving by controlling the lifting of heald wires, with three-dimensional and layered patterns. The finished cloth has a width of up to 80 cm and does not need splicing.

From the process details, it can be seen that the key techniques of Hong'an Dabu have always centered on "durability" and "culture" - the military supply background in the revolutionary era required the cloth to be colorfast and wear-resistant, and the use scenario of farming families pursued softness and comfort, thus forming a "refined and complicated" technical path[3]; while Zaoyang coarse cloth has focused on "circulation" and "aesthetics", and the commercial demand of the Wanli Tea Road has promoted it to simplify processes and enrich colors and patterns to meet the needs of consumers in different regions, ultimately creating the "efficient and diversified" technical characteristics[11]. This difference has laid a technical foundation for their subsequent artistic expression and cultural connotation.

4. Comparison of Artistic Characteristics and Cultural Connotations of Hubei's "Dabu" Techniques

The differences in technical characteristics are directly reflected in artistic expression, which in turn carries respective regional cultural connotations, forming a complete logical chain of "technique - art - culture".

4.1. Artistic Expression: Regional Divide in Aesthetic Orientation

The artistic style of Hong'an Dabu can be summarized as "simple and solemn, with profound implication". Its colors

are mainly low-saturation blue, red and black, forming a calm and introverted visual effect, which is in line with the aesthetic orientation of "pragmatism and frugality" of the people in the Dabie Mountains[3]. The pattern design follows the principle of "function first, simplicity and regularity". The common "rice pattern" symbolizes "abundant grain harvest", the "meander pattern" implies "endless life", and the "red star pattern" derived during the revolutionary period has become a visual symbol of red culture[9]. The finished cloth has a narrow width (about 40 cm) and needs to be spliced, and this "splicing beauty" has instead become its unique artistic mark.

The artistic style of Zaoyang coarse cloth is characterized by "bold and bright, vivid and lively". The interweaving of 22 basic color threads forms strong color contrasts, such as red with green and yellow with purple, showing the "enthusiastic and unrestrained" character traits of the people in northern Hubei[15]. The pattern themes are rich and diverse, covering folk symbols (such as Chinese zodiac, lantern flower), natural imagery (such as plum blossom, wheat wave) and auspicious meanings, among which the "dustpan bottom pattern" has become an iconic pattern due to its practicality and decoration. The cloth has a width of up to 80 cm, does not need splicing, and is more suitable for making complete home textiles and clothing products.

4.2. Cultural Connotation: Technical Carrier of Regional Spirit

The cultural connotation of Hong'an Dabu is centered on "revolutionary spirit and farming ethics". During the revolutionary era, Hong'an women "weaved Dabu day and night to support the front line and make military uniforms", making Dabu a symbol of "military-civilian unity", and the touching story of "the last foot of cloth is sewn into military uniforms" has been passed down[3]. In the context of farming civilization, Dabu weaving is an important embodiment of women's "hardworking housekeeping". The process of mothers passing on techniques to daughters is also a process of conveying the family tradition of "perseverance and pragmatism". This cultural connotation has made Hong'an Dabu surpass the category of practical products and become a cultural symbol carrying red memories and local emotions[9].

The cultural connotation of Zaoyang coarse cloth focuses on "commercial genes and folk feelings". As an important commodity on the "Wanli Tea Road", the technical development of Zaoyang coarse cloth has always integrated the commercial ethics of "honest operation", and its characteristics of "rich colors, durability and affordability" are the response to commercial demands. At the folk level, coarse cloth is an important dowry in local weddings, and patterns such as "double happiness pattern" and "dragon and phoenix pattern" carry good wishes for newlyweds. The custom of mothers weaving dowry cloth for daughters has been preserved to this day. This dual connotation of "commerce + folk custom" has made Zaoyang coarse cloth a cultural link connecting production and life, tradition and modernity[11].

5. Comparison of Inheritance Status and Modern Transformation of Hubei's "Dabu" Techniques

In the new era, both Hong'an Dabu and Zaoyang coarse cloth techniques face the challenges of "inheritance gap" and "insufficient innovation", but combining their own characteristics, they have taken differentiated inheritance and transformation paths[1].

In terms of inheritance mode, the two have different focuses. With red culture as the link, Hong'an Dabu has formed the characteristic mode of "government-led + school-enterprise collaboration"[2]. Inheritors such as Zhong Xianmei have trained more than 100 left-behind women and over 2,000 students through "family inheritance + inheritance center training" and set up an internship base at Hong'an Vocational Education Center. The local government has integrated it into red tourism, built an ICH experience area on Changsheng Street in Qiliping, allowing tourists to personally experience the charm of weaving; at the same time, it has collaborated with Wuhan Textile University to inject modern design concepts, helping it appear at China Fashion Week.

Guided by market demand, Zaoyang coarse cloth has built a core mode of "enterprise-led + university empowerment". Inheritors such as Liu Hailun founded "Baibu Hall" and driven surrounding farmers to participate in production through the "company + farmer + inheritance center" model. The enterprise has established school-enterprise studios with colleges and universities such as Xiangyang Polytechnic, where teachers and students participate in design and research and development, and launch younger products such as Chinese zodiac cultural and creative products[14]. Its products have been recognized at home and abroad at the Shenzhen Cultural Expo and Canton Fair, realizing a positive cycle of "ICH + market".

In modern transformation, the two have distinct paths. Hong'an Dabu focuses on red culture empowerment, developing "General Red" home textiles and revolutionary-themed clothing, combining elements such as "red star pattern" with modern tailoring, which not only retains the characteristics of breathability and wear resistance but also strengthens the commemorative value[3]. Publicized by CCTV and other media, it has become a red cultural card of Hong'an.

Zaoyang coarse cloth has made a breakthrough with fashion innovation, breaking out of traditional categories and developing cultural and creative products such as handbags and decorative paintings[5]. Teachers and students from Wuchang Shouyi University integrated elements such as the treasure collections of Hubei Provincial Museum and wedding customs, and their designed works such as "dragon and phoenix auspicious" home textiles won the silver award in the "Internet +" competition. At the same time, small looms have been improved to lower the experience threshold, forming a closed loop of "technique inheritance - product innovation - market expansion", realizing the leap from practical products to cultural symbols.

6. Conclusion and Prospect

As major branches of Hubei's "Dabu" techniques, Hong'an Dabu and Zaoyang coarse cloth form a complete Jingchu traditional cotton textile system. Their differences lie in regional environment, history and culture: Hong'an Dabu, featuring complex processes, red heritage and simplicity, carries farming civilization and revolutionary spirit; Zaoyang coarse cloth, with streamlined processes, commercial genes and vigor, integrates folk culture and market demands[1].

Facing the impact of modern society, the inheritance and development of the two techniques not only have common problems but also provide differentiated solutions. In the

future, the inheritance of Hubei's "Dabu" techniques should adhere to the principle of "upholding integrity and promoting innovation" and achieve breakthroughs at three levels: first, technical mutual learning - Hong'an Dabu can learn from Zaoyang coarse cloth's experience in pattern innovation to enrich artistic expression; Zaoyang coarse cloth can absorb Hong'an Dabu's refined craftsmanship to improve product quality[13]. Second, in-depth cultural excavation - deeply bind the techniques with Hubei's regional culture (such as Chu culture, red culture, and folk culture) to create cultural IPs with distinct recognition. Third, design empowerment - further strengthen school-enterprise cooperation, combine modern design concepts and material technology with traditional techniques, and develop products that better meet the needs of contemporary consumers.

These techniques are both traditional treasures and living cultural carriers[10]. In-depth comparative study of their characteristics and value can offer theoretical support for their modern transformation, enabling Jingchu's ancestral wisdom to glow with new vitality.

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