Exploration and Enhancement of Tujia Nationality's Original Ecological Packaging Sustainable Design in Western Hube

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Abstract. Original packaging design of Western Hube Tujia is a handmade household item of Tujia people, and it is also a packaging container used to store, protect, and transfer living materials. The original ecological packaging origin, modelling materials, patterns, and colours of the Tujia nationality in western Hube were reconstructed and sorted out under the guidance of sustainable design principles, from the perspective of sustainable design exploration and sustainable design continuation. These local materials were combined, in order to examine and interpret the spiritual significance and material function of the handmade packaging container. The prospects of development brought by the integration of the original ecological packaging of the Tujia family and modern design are explored, so that it further injects new life and energy into sustainable designs. While reflecting the advantages of original ecological packaging shape, material and rich ethnic elements, it focuses on the continuation and innovation of sustainable design of the Tujia native food packaging, promotes the ecological concept, develops sustainable packaging, and provides a creative space for Tujia family packaging design ideas.

1. Introduction

To this day, a large number of Original packaging has been preserved among Western Hube Tujia, which is simple and exquisite in shape and often includes various forms. These locally sourced and handmade household items can be used not only for storing, holding, and wrapping food but even directly as packaging for food sales. For example, we have seen people wrapping food with leaves and using bamboo as packaging containers in the Tujia accumulation areas of Enshi, Xuanen, Lichuan, Changyang, and Wufeng in western Hubei, which are very distinctive cultural characteristics of Tujia in terms of shape and structure, as well as material and handicraft. Based mainly on local specialties. The local packaging design of the Western Hubei Tujia is often handmade with ecological materials such as leaves wrapping, paper bags, small bamboo baskets, bamboo tube wine, bamboo pack basket, tile wine, wine altar, cloth wrapping, etc. With the rebound of traditional culture, especially today when the regional economy drives the prosperity of the tourism market in rural areas, the local culture of Western Hubei Tujia has been able to develop rapidly and expand the imagination space for the continuation of local packaging design. In addition to the continuous improvement and upgrading of the materials, design, production, and processing of the Original packaging, combining with the concept of green design and market demands will help generate new vitality and vigor for the Original packaging industry.
2. The Origin of Original Packaging of Western Hubei Tujia

According to the historical documents, Wulu Zhongli Mountain, located on the bank of Qingjiang River in Changyang Tujia Autonomous County, Yichang City, west of Hubei Province, is one of the birthplaces of the Ba people, the ancestors of the Tujia people. Since the Wei-Jin period, Han Chinese have moved into the Tujia area in almost every dynasty. From the Yuan Dynasty to the Ming and Qing Dynasties, the Tujia gradually built connections with the Han culture of the Central Plains, and the agricultural production of Tujia people started using oxen for plowing, fertilization, and grain seeds, which formed a kind of agriculture-oriented cultural pattern. Later on, the Tujia people also gradually learned agricultural production and household items like umbrella making and weaving from the Han people. The beautiful ecological environment has fostered the birth of the Tujia people and formed their unique production and living habits in the long-developing and evolving process.

With rolling hills, crossed streams and rivers, beaches, caves, deepwater, springs, and fish resources, this specific environment created early water and fishing containers in the Tujia area of Western Hubei. Traces of the ancient gathering, fishing, and hunting life originating from the Tujia people in Enshi have left the descendants with bamboo water pail, small fishing net (Shuowen: "Nets are fishing vessels."), and other containers with packaging itemst—‘Figure 1’. In the Republican period, some Tujia areas retained the phenomenon of using bamboo containers for water-containing and small fishing nets. But with the improvement of fishing technology, this method of fishing is hardly seen today. According to Records of Land and Groud in Jinzhou, "tea produced in Wuling seven counties is the best." Written by Lu Yu, the ancient teas master, the Tea Book described "tea grows from the wood in the south. The wood is usually a foot, two feet, and even dozens of feet in height. In Bashan, Xiazhou, there is a wood of tea allowing two people hugging". Western Hubei Tujia, located in the mountainous areas, has a long history of tea production, with many kinds of tea and snacks, including egg tea, arrowroot teas, pasta tea, rice tea, and mung bean skin tea, melon seeds, and fruit saucer tea, etc., are served in lotus bowls, these can also be used as tourist goods for guests to enjoy[1]. Tea is not only made to treat guests. The locals also use the clay pot to cook tea to worship the gods. A folk song in Kushan, Changyang Tujia area, mentioned: devotedly carrying tea to sell, please do not be picky; such a large and heavy load, you have to carry and go...Tea farmers in Wufeng and Changyang told us that in the early times, tea leaves were wrapped in paper, and then loaded into a wicker basket wrapped in cloth, which was covered with a square towel to prevent tea moisture, processed tea was generally sold in the form of carrying the load.

Figure 1. Bamboo water bucket and small fishing jar in Enshi Sancha Town

The historical document records that the people in Western Hubei Tujia "ate rice, but the bulk of their food are corns, and they also use them to make wine" (Guangxu. Record of Qianjiang County -- General Discussion of Local Customs). This shows that the crops of the Western Hubei Tujia people not only include rice, but also corns, which are adapted to the mountainous areas and provide the necessary material basis for the brewing industry. Western Hubei Tujia is famous for mash, smack wine, kudzu wine, and prepared wine, among which smack wine has the most representative
characteristics of Tujia. "Smack wine" was once named "hit Beng" in ancient times—‘Figure 2’. Beng is a pottery container with a small neck and Bocksbeutel-like shape. "Smack wine" is not a type of wine but a drinking custom[2]. Such as Record of Changle County Zhi --Customs on the: "Corn wine in Yihuai, on the so-called pile of flowers wine"; a section in Volume 16 of Record of Changle County --Miscellaneous Chronicle Volume 16 section recorded the whole process of drinking smack wine: "Someone is holding a guest banquet, you have to wipe altar for respect after drinking smack wine. The person who wipes the altar after drinking smack wine asked the former guests to use a pole to drink the wine; wipe the pole when finished, guests please also follow the lines. "From the way the Tuji people produce and drink wine, we can find that the wine is sealed in the altar, and people use poles to absorb wine, which shows that pottery jars and bamboo tubes are indispensable as packaging materials for Tujia wine.

![Figure 2. Tujia Minority in Enshi drink wine with the bamboo joint as the pole](image)

3. The Shape, and Material of the Original Packaging of Western Hubei Tujia

3.1. Packaging of Baogu Baba(corn cake) and Matchstick Pastry

The leaves of plants have always been the most accessible packaging materials to the Western Hubei Tujia people. In addition to wrapping white rice dumplings with indocalamus, the locals also use tung leaves and banana leaves to wrap the Juweibi baba, pumpkin baba, baogu baba, silver baba, sour paste baba. The leaves are wrapped in triangular shapes and are steamed in a pot. During New Year's Eve, children will pay their respects to their elders while chanting: "New Year's greetings! New Year’s greeting! Baba comes up!!" This means that it is time to pay new year respect and eat sesame cakes. Whenever the bridal chamber is decorated, people will put cakes in each of the four corners of the wedding bed, chanting: "putting cakes in the four corners will make you give birth to a son with a collar." It means that the child will become an official in the future. Today's kraft paper wrapped Tujia sauce cakes and Tujia matchstick pastry use sesame seeds as raw materials, whose packaging are presented by patterns of traditional food production process and plates. Kraft paper packaging, using non-polluting materials, has a low cost of producing and printing. As paper-folding being the sealing of the packaging, it is easy and cheap to process. The packaging is presented in the form of a cylinder, bag, and parcel.

3.2. Bamboo, Wood Packaging Containers

China has a long history of the use of bamboo ware. Wangzhen Agricultural Book contains: "no ties on the basket and bamboo ware; there is a system for the basket pack. As large as the amount of the bucket, farmers use to pick mulberry hedge, take sparse (vegetables) fruit, and other things, easy to carry or to hold". Because bamboo is tough, durable, easy to clean, and has a fast growth cycle, with the characteristics of renewable resources, it has been widely used by the Western Hubei Tujia people to compile into a variety of household items, or processing bamboo and wood into packaging containers, especially the most used bamboo basket pack (like flower pack basket, often used to carry
children or pick tea; or three bucket pack, five bucket pack, foot backpack for production and life). Tujia people in Xuanen, Laifeng, Changyang, Badong, and other prefectures in west China carry bamboo basket packs to purchase daily supplies. Some stalls sell dried Qingjiang fish, native eggs, and oranges directly in the bamboo basket packs. There are many packaging containers made of bamboo, such as bamboo baskets, bamboo bumps, bamboo baskets, bamboo boxes, bamboo sieves, bamboo chopsticks cages, bamboo fish baskets, bamboo vegetable covers, etc. They are used by the Tujia people to store goods and as food containers, which shows how "containers" are household items that also belong to the category of packaging products.

The barrel utensil used by the Tujia people in the past (still has been used by now) consists of a lid, a body, and a bottom. The body of the cauldron is shaped like a barrel, and the cauldron body is made of wood, which is tightened with bamboo gabions on the outside. Four square wooden blocks are nailed at three-sevenths of the height of the inner wall to support the cauldron grates. The grates are made of bamboo gabions in the shape of cones with the spikes upward to prevent the boiling water from wetting the rice, resulting in the efficiency and delicacy of cooking rice. There are two kinds of barrel utensil lids: one is a three-pronged cone-shaped bamboo utensil made by gomer with bamboo gabions, and the other is a round wooden lid made of sand trees. The barrel utensil is commonly called "barrel rice steamer", with large (can drink 30-50 catties of rice) and small sizes (6-10 catties of rice). Whenever there are celebrations and gatherings, the Tujia people will use a large barrel utensil. In addition to being used for steaming gold and silver rice (rice mixed with cornflour), the barrel utensil can also be used as a container for storing other foods, and old rice pots are usually used as bee cages for recycling.

3.3. Crockery Wine and Bamboo Tube Wine

What is a "crockery jar"? The Modern Chinese Dictionary explains: It means a thick-walled pot or bottle and refers to a pot made of pottery in general. Tujia crockery wine is made by boiling rice or grain and adding wine of secret recipe to a jar containing more than 100 pounds of wine for fermentation (the heat of the back of the hand is the standard), after which the fermented wine jar is distilled to extract the wine. The extracted wine is put into small crockery jars (earthenware jars) for packaging and sealing and is kept for personal use or sale. The packaging of Tujia crockery wine sold sporadically in the market includes a red cloth wine cover, a diamond-shaped red paper printed with the word "wine", and also red fabric and yellow satin tied in the mouth of the jar. There are also 2-3 pounds of crockery wine with red paper labeled on the jar and wooden lids to seal the packaging. Bamboo tube wine is more common in Enshi, and its packaging is not subject to any reproduction, sealing process, or any preservative and outer packaging treatment, which allows the wine to naturally emit the fragrance of wine and bamboo—‘Figure 3’. The bamboo wine we saw in Xuanen Shadaogou Town was made by injecting home-brewed 60-degree or higher bush wine into the bamboo tube with a needle, and the wine only has a shelf life of 6 months after it is incorporated into the bamboo tube. And expired wine needs to be returned to the factory for re-injection. Environmentally friendly bottles with caps are also used and stored in bamboo tubes. The wine is poured into the bamboo tube and wrapped in a transparent environmentally friendly plastic on the surface of the tube. Because of its fresh, original, and ethnic characteristics, bamboo tube wine is known as the breathing wine produced by nature.
4. The Pattern and Color of Original Packaging in Western Hubei Tujia

4.1. Tujia Brocade and Paper Cutting

The Tujia people are good at weaving, "mulberry silkworms and hemp" in ancient times were used as tribute, so there once had been "Yu meeting lords in Huiji, many of them holding the jade and silk ten thousand countries, traveling to Bashu" (Record of Huayang – Record of Ba). Jade and silk in ancient times are the vassals gathered as a gift of silk woven products, at that time appeared to be very valuable. Today’s flowery Tujia brocade is a continuation of the jade brocade. Tujia brocade weaving was spread all over the places where Tujia families inhabit. From the documents in the middle of the Qing Dynasty, it was produced in Laifeng County of Enshi, and then gradually spread to the whole Western Hubei Tujia areas. When the Tujia girls started to learn brocade weaving, the finished products were mostly ornaments or covers for marriages, as well as for giving valuable gifts. It is easy to find that brocade weaving originates from Tujia costumes and has a variety of patterns (brocade) with the intersection of warp and weft threads. There are two main characteristics of traditional brocade weaving: one is geometric, using lines to outline common animal and plant shapes; the other is balanced symmetry, arranged in a symmetrical form, with a very neat composition[4]. Brocade refers to the dresses, quilt tops, covers, wraps, cloaks, and beddings of the Tujia people. Brocade patterns were also used as decoration on bags, satchels, backpacks, embroidered shoes, incense bags, cushions, and pillows. As for the use of brocade for early packaging, the authors have not found any documentary records or excavated objects.

The folk art of Western Hubei Tujia, in addition to Tujia brocade, includes carving, paper-cutting, batik, and painting. Paper-cutting uses a variety of tools such as scissors, carving knives, chisels, and stencils, and uses materials such as colored paper, leather paper, and a cotton cloth to create a variety of forms such as flat paper-cutting and three-dimensional paper-cutting. It is mostly seen in traditional Tujia festivals, weddings, and household decoration. The patterns of paper-cutting include magpie plum, butterfly playing flowers, the double phoenix rising, two dragons grabbing treasure, carp jumping door, etc. The shapes are vivid, simple, bold, and exaggerated, expressing the wonderful life and ethnicity of Western Hubei Tujia. In particular, the unique elements of subject matter, composition, color, symbolism, and culture have largely provided a good reference for the concept and practice of modern graphic design and have produced a great promotion effect[5]. With the development of the economy and tourism, modern culture and vernacular culture continue to evolve, and new patterns like the modern life episodes of Tujia people have started appearing in Tujia paper-cutting. Tujia paper-cutting as a pattern is not only integrated into cross-stitching, embroidery, flower picking, and dressmaking but also gradually applied to tourism packaging and food packaging design.
4.2. Folkloric Customs of Tujia Color Concept
During the Song and Yuan dynasties, there was the saying that "the Tujia people adore 'xuan' color". "Xuan" means "black with red". A Brief History of the Western Hubei Tujia records that "Tujia turbans are generally green (i.e. black), 2-3 feet long, with a herringbone path". The Ethnic History of Laifeng County contains that "the clothing material is generally self-woven and self-dyed native cloth, which is called 'xibu' and 'dongbu' in the historical texts, mostly in green and blue". The same content is also recorded in Xuan'en County Records, Jiansi County Ethnic Records, and Hefeng County Ethnic Records. Because of the strong contrast between black and white, with black giving a sense of solemnity and composure, and white representing a symbol of purity and sanctity, it has long been the exclusive color of Tujia clothing. Both men and women, the elderly and children, all dress in the "magpie coat" attire, that is, the white lining, black undershirt jacket clothing style, with a bamboo basket pestle, which brings a very bright and robust look. The admiration for costumes that are white inside and black outside may be related to the Taoist beliefs within the Tujia family. The Taoist principle, "five colors make the one blind" has a greater impact on the formation of the Tujia people. In terms of color matching, there is a folk song about Tujia brocade: "where to get black with white; cannot choose red with green; shining bright in blue with yellow", which reflects the application of diversified color. Red and green, orange and orchid, yellow and purple, and other color combinations can be seen not only in the brocade costumes and decorations but also in the red and white wedding and mysterious Nuo opera mask to show. Such as red pavement, sashes, straps, children's hats, shawls, sedan chairs, covers, cabinets, chairs, plates, jar lids, etc.; red, green, yellow, and black Nuo opera masks and wood carvings with lacquer mixed gold, etc., these simple and rugged colors are very "folkloric costumes" and have been long loved by the Tujia people.

5. The continuation of Original packaging design of Western Hubei Tujia

5.1. The current situation of Tujia's packaging market
At present, in addition to the traditional pottery jar, bamboo, wooden products and plastic bags (including foam boxes) are most common as simple packaging for local specialties. Vendors often handhold or use stretchers to pick up two bamboo baskets, selling them with scales in a flexible manner. There are also rudimentary wooden boxes, wooden buckets, and wooden frames sold to store local specialties. Of course, there are dried goods and precious herbs in plastic bags, bacon hanging below the store or in a foam box, and Lingzhi placed in plastic boxes for sale. Neither there is brand, manufacturer, label or packaging. The direct use of existing plastic materials and unpackaged goods look rough and messy, both unhygienic and environmentally unfriendly. From the perspective of ecological and environmental protection and to show the characteristics of the Tujia native food packaging, it is obvious that the Tujia native packaging materials do not give full play to the advantages of ecological and environmental protection and diverse shapes. With the development of the economy and the prosperity of the tourism market, as well as the changing needs of the market, in recent years, the design of Tujia native food packaging has gradually received the attention of some businessmen and design education institutions, and the material, production, processing and practical aspects of Tujia native food packaging design have been improved and enhanced.

5.2. Modeling and Materials
The traditional way of life of the Tujia family is to process natural materials into daily necessities, which are convenient, green and biodegradable, and at the same time can reflect the characteristics of Tujia local special food packaging. For example, the red cloth with the wine text printed on it is tied with yellow silk at the mouth of the bottle, and then the wine is put into a bamboo gabion-shaped bottle, with a double hemp rope tied at the gabion for easy carrying—‘Figure 4’. The same brand of "mellow foo elegant" liquor packaging, like an antique gourd pottery bottle packaging shape. The can is labeled, printed with a commodity tag. Ordinary wooden box has four concave partitions at the bottom lining the pot, playing a protective role. Antique frosted ceramic wine bottle shape is unique.
Its small and delicate cap and bottle seal are to facilitate the extension of wine storage time. Wavy pattern and antique clay glaze of the bottle body give people a simple and elegant visual experience. Coupled with the wooden gift box packaging overall simplicity and generosity, it is a good choice for gifts. There is also the use of modern materials intentionally imitating the rustic package design, or treated with special production processes, so that it has the characteristics of ethnic rustic texture. Enshu rustic cake packaging design employs sack cloth paper for the packaging of the outer paper bag, with the name written on a diamond-shaped red paper, and the logo hanging on the seal of the linen thread, wishing for a bumper harvest celebration. Whether the production technology techniques, or the external connotation of the food, the above cases show the processing and production of ecological materials, all have distinctive local characteristics.

![Figure 4. Wufeng Mayandun Tujia crock wine](image)

In addition to the choice of materials focusing on environmental protection, the native packaging of the Western Hubei Tujia also focuses on the aesthetic and practical functions of packaging modeling. In terms of the gift packaging of Tujia dumplings made of bamboo, it draws on the sparseness of traditional bamboo weaving to create a hexagonal bamboo box, bamboo tube, square box or rowing dragon boat style. The four packaging design are novel in shape. Adapting the texture of bamboo leaves or bamboo pattern process, combined with paper labels, the designs highlight the brand. At the same time, full consideration is given to the convenience of carrying and opening with the ropes, which enhances the fashion sense of Tujia zongzi. Its packaging shape has a strong local flavor and exudes a strong sensation of zongzi culture. The packaging can be reused as a storage case, or as a decorative item afterwards.

5.3. Reconstruction and application of ethnic elements

As a specific conceptual meaning symbol, ethnic elements have a wide range of subject matter, rich content, diverse forms and a long history. They are associated with the concept of the people, carry a certain moral meaning or connotation, reflect a certain relationship between people and nature, and society, and have an emotional color beyond the original meaning of sensual images. Trademark, pattern, design, text, color, etc. are indispensable elements of packaging design, and the elements that can be applied to reflect the Tujia native food packaging design are tiger totem, brocade and pattern, carving, paper-cutting, batik, painting, Nuo opera mask, window flower, embroidery, silk rope thread, ethnic text, ethnic color, etc. The application of these ethnic elements, first of all, is the conversion of the basic form, based on the original form, the use of modern design style to create new imagery patterns; secondly, deconstruction and reorganization, breaking up, dividing the original elements to add a new reconstruction of the graphics; finally, there is a combination in the division, focusing on the whole, the elements echo each other and thus harmonious unity. Such as the market sales of a red "Qingjiang Yi red tea" packaging design, the Wuling Qingjiang Gallery landscape as a pattern concept (to show the growth environment of black tea), the use of reconstructed and divided into a combination of semi-arc pattern, both the ancient tea road, the nine-headed bird, tea picker, Hanyang Bridge, fire phoenix, characters and other elements of flat reconstruction, white brand The white brand text and logo are eye-catching, and it can be seen that the packaging design has well refined and changed the elements of Chu culture and Tujia culture, and combined with the geographical features
of Qingjiang attractions through the symbolic display of patterns. The packaging design of "Qingjiang Yixiong tea" is borrowed from the symbolic technique, and the package as a whole is simple, with a sense of national and modern fusion design.

The combination of ethnic elements and calligraphy is also a common expression of packaging design, aiming at the symbolic treatment of the packaging’s display, which plays a subtle effect in showing the ethnic style. The packaging of Qingjiang's "Za Yi Xi" wine uses a small glass bottle with a black background and a red brocade pattern, with the local "dialect" as the product’s name. The combination of calligraphic characters and patterns of Tujia marries up the current fashion and the local color, not only enhancing the grade of Tujia wine packaging design, but also meeting the aesthetic requirements of modern consumption. The packaging of Wufeng Gaga sausage takes the Tujia dialect as the starting point. Gaga means grandmother in Chinese. The black color is the basic tone of the package, highlighting the red name, while the "pig" form is cleverly formed by the Tujia brocade pattern and modern flower pattern, implying the food properties.

**6. Conclusion**

With its beauty and elegance, earthy but not vulgar temperament, as well as rugged and simple, natural and ecological, warm and relatable feeling, the native packaging of Western Hubei Tujia family cannot be replaced by the modern plastic (foam) packaging. Whether it is packaging shape and material, pattern and color reconstruction and application, its connotation is always throughout all aspects of the life of the Tujia family. Original packaging has the value of both cultural heritage and skillful style, and also contains a large number of active factors that need to be tapped and organized. Recognizing the advantages and shortcomings of original packaging, broadening the usage and value of original packaging of the Tujia family can stimulate and strengthen the inheritance of Tujia culture and original packaging skills, increase the use and development of ecological packaging, and enhance the appreciation value of Tujia original packaging design.

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