

Research on Innovative Design of “Intangible Cultural Heritage” Bamboo Products

Ying-Ying XIAO^{1,a,*}, Juan CHEN^{1,b}

¹City College, Wuhan University of Science and Technology, No.1 Huangjia Grand Bay, East Lake Scenic Area, Wuhan, Hubei Province, China

^a330252871@qq.com, ^b736698639@qq.com

*Corresponding author

Keywords: “Intangible Cultural Heritage”, Bamboo Products, Innovative Design.

Abstract. Based on the in-depth research on the innovative design of China's “intangible cultural heritage” bamboo products (mainly in Hubei), the cultural connotations of national tradition embodied in bamboo art is excavated from perspectives of decoration theme, modeling, texture, material selection and processing; including aesthetic taste, value orientation, material, spiritual and artistic. After that, the comparative analysis of modern aesthetic concept and traditional art is conducted to find the combination point. By means of concrete practice, the application as well as innovation of traditional bamboo art resources in the design of modern bamboo products is discussed, so as to manifest essence of traditional bamboo art through modern design means and forms, integrate it into modern life, and realize the innovation of traditional skills and the inheritance of national culture.

Market Status of “Intangible Cultural Heritage” Bamboo Products

As mentioned in Su Shi's *In Qianseng Lvyun Pavilion*, “Would rather live without bamboo than eat without meat.” This shows that bamboo is indispensable in Chinese national culture since its spirit has been affecting Chinese people. China enjoys abundant bamboo resources, so bamboo products have existed for thousands of years in people's daily life. Considering that the production methods and product performance of “intangible cultural heritage” bamboo products are still remained at a relatively traditional level, so the production quality and quantity of products cannot meet the needs of modern people. Most of China's “intangible cultural heritage” bamboo products are made through bamboo weaving, carving and other production processes, and there is no bamboo brand featuring “intangible cultural heritage” technology in current sales of e-commerce and physical bamboo products. Meanwhile, the survey also found that many consumers have misunderstandings about bamboo products because they believe that bamboo has defects such as deformation, cracking, insects and mold. In fact, such material defects can be solved by the process of cutting, stripping, weaving, splicing, etc.

At present, China's “intangible cultural heritage” bamboo products shall shape the brand image for themselves, master the innovative design of bamboo products, identify market positioning, and change consumers' misunderstanding that “bamboo is inferior to wood”.

Research Significance of Innovative Design of “Intangible Cultural Heritage” Bamboo Products

The 19th National Congress of the Communist Party of China puts forward the grand goal of “accelerating the reform of ecological civilization system and building a beautiful China”, and the guidelines for “promoting green development, focusing on solving outstanding environmental problems, strengthening the protection of ecosystems, and improving the supervision system of ecological environment.” With abundant bamboo resources, China has broad application prospects and market space of taking bamboo as a sustainable development material. Bamboo has been widely used in all aspects of people's lives since ancient times. As the crystallization of labors’

wisdom, bamboo products not only have a variety of artistic forms, but also have produced many excellent products that integrate both practice and aesthetics. At the same time, the craftsmanship of making bamboo products is an intangible cultural heritage, of which the contained cultural heritage is an important part of traditional Chinese bamboo culture. Therefore, the innovative design research of “intangible cultural heritage” bamboo products is of great practical significance in ecological protection, cultural development and economic construction.

Sustainable Development of Environment

As a sustainable material characterized by fast growth, strong regeneration ability and short growth cycle, bamboo can be widely applied to many aspects of product design. China is an important bamboo producing area with world top bamboo species, area and volume, which provides a solid material foundation and a larger material selection space for low-carbon design. Taking moso bamboo as an example, more than 90% of the scattered bamboos around the world are distributed in China. There are more than 3 million hectares of bamboo forests in China, accounting for about two-thirds of state bamboo forest area, and the annual amount of bamboo felling is more than 600 million. All these provide unique conditions for the industrial utilization of bamboo materials in China.

The application form of bamboo materials has undergone great changes as the advancement of technology, which include (a) the application of raw bamboo material. This is a relatively traditional and extensive application method. At the same time, by means of the anti-corrosion, anti-mold, anti-infiltration and anti-drying treatments, the use range of raw bamboo materials can be further expanded; (b) bamboo wood-based panel material. Characterized by fine material, abrasion resistance, straight texture, not easy to deformation, compression resistance and tensile strength, it can be used as product structural or decorative material. Bamboo wood-based panels mainly contain bamboo plywood, bamboo mat plywood, bamboo curtain plywood, bamboo laminated board, bamboo scraping board and bamboo composite board; (c) bamboo fiber composite material. It includes bamboo fiber fabrics and bamboo fiber composite materials with features of anti-bacteria, health care, UV resistance, moisture absorption and release, comfort, aesthetics, environmental protection and tensile strength; (d) bamboo charcoal material. It has effects of strong adsorption, sterilization and bacteriostatic.

The extensive application of raw bamboo and bamboo composite materials helps fully exert the resource advantages, ecological value and utilization efficiency of bamboo materials, which plays practical significance for realizing low carbon environmental protection of modern product design.

Protection and Inheritance of “Intangible Cultural Heritage” Craft of Bamboo Products

As an important part of traditional folk art, bamboo craft is a traditional Chinese handicraft with long history and fine craftsmanship. China's bamboo craft is widespread throughout the southern provinces, among which Sichuan, Zhejiang, Jiangxi, Fujian and Hubei province are the most famous. According to the different forms of art carrier and expression techniques, bamboo craft can be divided into two categories: bamboo weaving and bamboo carving, both of which have their unique national and local art characteristics. However, with the rapid development of economic society and the invasion of Western dominant culture, many traditional handicrafts are gradually fading out of people's views. With the in-depth development of the protection of intangible cultural heritage, many traditional techniques have been incorporated in the “intangible cultural heritage” list at the national, provincial, city and county levels, and the guideline of “protection-oriented, rescue first, rational use, inheritance and development” is established. For this reason, bamboo products, the traditional craftsmanship closely related to people's production and life, have also received widespread attentions. For example, Zhangshuiquan bamboo weaving in Wuxue, Hubei Province, Xiaoyu bamboo craft in Yiyang, Hunan Province, Liuqing bamboo carving in Changzhou and porcelain bamboo craft in Sichuan are all included in the “intangible cultural heritage” protection list. On the one hand, the “intangible cultural heritage” bamboo products shall keep making creative efforts based on traditional handicraft forms. On the other hand, to draw on the nutrition from traditional bamboo techniques, find the combination point with the design of modern

bamboo products and meet the aesthetic needs of modern people are the important means of protecting bamboo art and achieving inheritance as well as development.

Inheritance and Development of Traditional Chinese Bamboo Culture

Bamboo products are the better reflection of the harmonious unity of function, artistry and culture, so they manifest people's material production skills, cultural character and aesthetic pursuit. The formal innovation of bamboo products not only enriches the performance carrier, material and expression technique of Chinese bamboo art, but also enhances the influence of Chinese bamboo art in the world and develops it into one of the representative symbols of Chinese culture. Except for being integrated into Chinese food, clothing and housing, bamboo has become a carrier of Chinese cultural heritage and communication thanks to the application of bamboo slip, bamboo paper and writing brush. Meanwhile, it has also developed into an important member of Chinese applied arts and music. Throughout the thousands of years of cultural development, bamboo culture has penetrated into many cultural fields such as Chinese literature, painting and garden, and has influenced people's aesthetics as well as ethics. Therefore, bamboo has formed a relatively fixed aesthetic image, and the combination of bamboo natural characteristics with Chinese ethical value has gradually created many spiritual symbols. For these reasons, the research of this subject will inevitably involve in the analysis and interpretation of bamboo cultural connotation, which means to realize the innovation of bamboo product form and aesthetic function while embodying the culture, and then achieve the inheritance and development of traditional Chinese bamboo culture.

Promoting Development of Bamboo Industry in Hubei Region

The geographical location and climatic conditions suitable for growth of bamboo resources in Hubei have provided a firm raw material foundation for the development of bamboo art. According to the survey, there are 163 species, 20 genera of bamboo resources distributed throughout the province, including moso bamboo, henon bamboo, mottled bamboo, fishscale bamboo, Makino bamboo and henonis bamboo. Among them, moso bamboo is the most important scattered bamboo resource in Hubei with area of 9.1 million hm² and 217.9 billion bamboo plants. The area of other bamboos is 1.16 million hm² with the number of bamboo plants of 314.1 billion. As the main producing area of bamboo in Hubei Province, Xianning City in southern Hubei has 7.13 million hm² of moso bamboo and 210 billion bamboo plants, accounting for 82% and 72% of the province respectively. "Wuxue Bamboo Weaving", selected as the second batch of national intangible cultural heritage protection list, is Hubei's most representative bamboo craft, and it was approved as China Protected Geographical Indication product in 2013. With a history of more than 100 years, Wuxue Bamboo Craft combines practicality and appreciation, which is "solid but compact, exquisite but firm, rich in decoration but complicated". By virtue of elaborate design and unique artistic expression, it is well known both at home and abroad. The in-depth research and innovative application of bamboo products are conducive to enhancing product added value as well as artistry, which help highlight local cultural characteristics and promote the upgrading of bamboo product industry.

Development Direction of Design of "Intangible Cultural Heritage" Bamboo Products

After conducting a variety of surveys on "intangible cultural heritage" bamboo products, some development directions for the design of "intangible cultural heritage" bamboo products are proposed to respond to market demands.

Expanding Application Field of Bamboo Products

Bamboo furniture currently is the main body of bamboo products, which has higher recognition of in the market than other bamboo products. Especially, some small indoor furniture that does not bear load for a long time is very popular because it is not easy to be deformed or cracked and more economical than other materials.

The interviews found that the defects of bamboo materials can be improved through the treatment

of production process. Thus, it is totally possible to strive to extend the application of bamboo materials from indoor furniture to public space, such as restaurants, shopping malls, bars, clubs, office spaces, etc. The transformation of space will also make types of furniture required more diverse. There is still no bamboo furniture brand exclusively for the public space in the market, so the furniture category of “intangible cultural heritage” bamboo products needs to be effectively developed and utilized directing at this market gap. (Fig. 1 and 2)



Fig.1



Fig.2

Expanding Application Fields of Bamboo Products

In addition to bamboo furniture, “intangible cultural heritage” bamboo products also contain bamboo tableware, bamboo baskets, brides’ flower pots, fine mats, bamboo pen holders, and tea boxes. However, due to the development of history, these bamboo products have been replaced by products of other materials.

As the world is changing, the “intangible cultural heritage” bamboo products shall conform to the trend of the times and broaden their application fields to occupy the market, including bamboo children's toys, bamboo tourist souvenirs, and bamboo-based cultural and creative products.

Adding Combination of Bamboo and Various Materials

In the production of “intangible cultural heritage” bamboo products, designers often stick to the natural characteristics of bamboo itself, comply with traditional product styles, put emphasis on traditional bamboo culture, and are restricted by traditional Chinese style, which is not in line with modern people’s diversified aesthetic needs.

By matching with other materials during the production of “intangible cultural heritage” bamboo products, such as glass, ceramics, plastics, metals and concrete, the collision of the texture and color between different materials and bamboo will change the traditional and old-fashioned impressions on “intangible cultural heritage” bamboo products people, so as to further present their unique artistic charm.

Summary

Considering the combination of innovative design of bamboo products with the protection of “intangible cultural heritage”, the concept that “intangible cultural heritage” productive protection and industrialization of modern bamboo products shall be in independent development and mutual learning is proposed. This helps avoid the destruction of the authenticity and integrity of “intangible cultural heritage” crafts caused by the blind overdevelopment of the intangible cultural heritage of bamboo products.

Based on the comprehensive and systematic summary of the artistic form of “intangible cultural heritage” bamboo products, the point to be combined with design of modern bamboo products is explored. This helps realize the transformation from manufacturing of bamboo products to high value-added creation of bamboo products. In this way, the products created are not only the innovation of art form, but also the inheritance as well as development of China's outstanding folk culture.

Acknowledgement

This article is the open fund youth project of Hubei Cultural Creativity Industrialized Design & Study Center. The project number: HBCY1810; project name: Research on Innovative Design of “Intangible Cultural Heritage” Bamboo Products

References

- [1] He Ming and Liao Guoqiang, China Bamboo Culture [M]. 1st edition, Beijing: People’s Publishing House, 2007.
- [2] Qu Xiaoqiang, Reveal of Bashu Bamboo Culture [M]. 1st edition, Chengdu: Bashu Publishing House, 2006.
- [3] Pan Jialai, Traditional Chinese Bamboo Carving [M]. 1st edition, Beijing: People’s Fine Arts Publishing House, 2006.
- [4] Chen Zujian, Design and Product Development and Bamboo-Wooden Furniture [M]. 1st edition, Beijing: Chemical Industry Press, 2012.
- [5] Yu Jiangfan, Images of Jiangxi Bamboo Resources and Products [M]. 1st edition, Beijing: China Forestry Press, 2012.
- [6] Shanghai Museum, Bamboo Carving, Engraving of Bamboo [M]. 1st edition, Beijing: Peking University press, 2012.
- [7] Xu Huacheng, China Bamboo Weaving Art [M]. 1st edition, Beijing: China Forestry Press, 2010.
- [8] Liu Chenlu, Research on Hunan Bamboo Craft [D]. Changsha: Hunan University, 2011.
- [9] Fu Di, Application and Study of Traditional Chinese Bamboo Culture in Design of Modern Products [D]. Shanghai: Shanghai Jiaotong University, 2007.
- [10] Wang Fenghu, Shi Di, Reflection on Design of China Bamboo Furniture—Thoughts on Three Years’ Exhibition of Beijing International Design [J]. Decoration, 2012 (01).
- [11] Zhang Duoduo, “Bamboo Breakage” and “Bamboo Continuity”: Design and Innovation of Contemporary China’s Bamboo Products [J]. Decoration, 2010 (s1).
- [12] Liu Yingwu, The Fading Yiyang Xiaoyu Bamboo Craft [J]. Hundred Schools in Arts, 2012 (08).