

# Visual Construction of Intangible Cultural Heritage Paper in Immersive Environment

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## Abstract

To protect and inherit as the goal, to guide the innovative development of rice paper culture. Visualizing means to create the overall atmosphere and environmental details of the theme of rice paper. Determine the theme of the environment's non-cultural heritage of rice paper, and realize the overall construction of the immersive cultural heritage site of rice paper through three visual ways. In terms of environmental details, give play to the characteristics of rice paper to innovate the visual style of the furnishings, and highlight the environmental decorative role of rice paper furnishings, so as to create a cultural environment that lets people immerse themselves in the rice paper.

## Keywords

Intangible Cultural Heritage, Rice paper(Xuan paper), Immersive environment, Visualization.

## 1. Introduction

Located in the south of Anhui Province, Jing County County of Anhui Province is the birthplace and origin of Chinese rice paper. This kind of paper is also produced in Xuan County, Taiping and other places near Jing County. Because these areas were under the jurisdiction of Xuan County in ancient times, the paper produced here is called "Rice paper". In August 2002, Rice paper was successfully approved as a National Geographic Indication protected product title. In September 2009, the traditional production technique of rice paper was included in the list of intangible cultural heritage of humanity.

## 2. Development of the Intangible Cultural Heritage of Rice paper

The production of rice paper closely relies on the unique local landscape climate and plant resources. Without the natural conditions of the origin, the quality of rice paper will be affected. However, with the gradual increase of paper-making practitioners, the phenomenon that hand-made painting and calligraphy paper made of bamboo pulp and wood pulp is posing as rice paper is becoming more and more prominent. In 1999, the state promulgated and implemented the "Regulations on the Protection of the Original Region", and in 2002, Jing County was set as the "origin of rice paper", and later awarded the "Hometown of Chinese rice paper" and other titles, the government's active response greatly protected the enthusiasm of practitioners of rice paper. At this point, the environment of non-genetic inheritance of rice paper and the development of rice paper industry is getting better and better, the volume of rice paper products used by the public is gradually increasing, and more and more places for the public to participate in and use rice paper intangible cultural heritage.

In contemporary times, the public can be not only the users and experiencers of rice paper culture, but also the participants and builders of rice paper culture. The participation of the public in the activities of rice paper culture expands the use environment of rice paper culture. The use environment of Rice paper and its derivatives is a place for the inheritance of Rice paper culture. Due to the participation of the public, the inheritance field extends from Rice paper studios and

enterprises to various fields in social life, such as teahouses, restaurants, bookstores, homestay, commercial streets and other indoor and outdoor environments.

### **3. Immerse Yourself in the Environment of Rice Paper Culture**

#### **3.1. Set the theme of Rice Paper Culture in a Variety of Environments**

At present, the original environment where intangible cultural heritage skills depend on is gradually decreasing in public life, and the places where people can see and feel intangible cultural heritage skills are limited to rice paper workshops and rice paper enterprises. The author visited Jing County Industrial Park and urban districts and found that although there is a special exhibition space of Rice paper theme museum in Jing County, there are few places showing Rice paper culture in other public living areas and commercial districts. Although there are a few rice paper themed hotels near the industrial park, the environmental design does not fully reflect the distinct theme of rice paper culture. In addition to selling rice paper in exhibition cabinets, other environmental details related to rice paper culture are not clearly designed. Other commercial environments, such as rice paper themed bookstores, tea houses, and rice paper themed streets, include: In the social life, there is a larger space for development. In the contemporary social environment, the culture inheritance environment of rice paper can not only be limited to workshops and enterprises, but also needs to be integrated into ordinary life to obtain new growth space. In daily social life, such as drinking tea, accommodation, shopping and other activities, the cultural display inadvertently appeared around and the close-range cultural experience activities can further deepen the cultural identity of the public. In the environmental design of all kinds of life scenes, relying on the top surface, ground, facade and spatial components, the visual and technical expression of rice paper cultural information is carried out to build a strong theme of rice paper, thus forming a contemporary expansion of the heritage field of rice paper culture.

#### **3.2. Immersive Construction of Rice Paper Culture in the Environment**

In recent years, the state dynasty culture has gradually risen and been loved by the masses. In daily life environment, the reproduction of traditional culture in the popular dining, shopping and living Spaces can speed up the cultivation of state dynasty culture brand. "Chang 'an Shijing Culture IP" is a Tang style Shijing cultural block based on Xi 'an city culture. A variety of national style elements build an immersive block environment as if returning to the flourishing Tang Dynasty. Good environmental experience allows the public to spontaneously share the experience of punching-in, and the public to spontaneously publicize the cultural brand. Learn Xi 'an environmental construction methods in social life scenes, build rice paper cultural scenes, and form the "state dynasty IP+ brand" model. Excavate the cultural characteristics of rice paper, create the IP image of rice paper, and let people taste the beauty of rice paper culture in the overall atmosphere of the scene.

Specifically, the environmental design of the living scene should be based on the spatial functional requirements to do a good job of positioning and creativity. From content to form, from color, material to lighting, atmosphere, etc., the theme of rice paper culture is repeatedly emphasized, the integration of artistic aesthetics, visual expression and digital interaction is formed by artistic and technical means, and the unified atmosphere of rice paper culture is shaped in the following three ways.

The first type is the static display space created by pictures, images, objects and models. Through reading text and viewing pictures, people can understand and associate, and obtain relevant information of rice paper. The display props on the first floor of Jing County Rice paper Museum take the undulating paper form as the backplane, showing 108 paper making processes on a 2-meter-high format. The working scenes of rice paper workers are arranged in

the same functional area in the form of small sculptures. The four-fold representation of picture and text models is impressive. The static display space is best in the environmental details. The green sandalwood trees planted outside the window and the rice paper doilies in the dining space make the dining experience more cultural. The rice paper curtains used by Wu Zuoren, Li Keran and Han Meilin, seen at the corner, draw people's thoughts back to a certain time and space intersection. The environmental details let people immerse themselves without noticing, and the static display form can also form a good cultural inheritance field.

The second category is the immersive experience space operated in person. In the streets, bookstores, teahouses and other Spaces, there are rice paper technology experience areas, where people can understand the intangible cultural heritage technology of rice paper and its application as a rice paper process processor or user. Some fragments of the process of rice paper are cut off, miniature utensils such as pestle, trough, curtain and paper making container are set up, and people can personally complete the processes of peeling, pulping, paper fishing and paper drying in the space; Follow the video or master to practice the cutting and binding of ancient books in the process of compilation; Under the guidance of calligraphers and painters to complete the artistic creation of rice paper calligraphy and painting; Making xuan fan, xuan lamp and Rice paper works of art, etc. These sensory touches brought by the body make the information of Rice paper culture more long-term and profound retained in the memory, which is the closest inheritance field between Rice paper culture and the audience.

The third category is the immersive experience area under the information visualization technology. As an interdisciplinary subject, information visualization emphasizes the role of information technology and embodies the comprehensive application of computer technology, semiotics, graphic design, cognitive psychology, interactive experience, etc. The scene constructed by technology can form a heterogeneous space that is different from the real world. It is directly related to the audience's perception. When the audience receives its information, they also perceive their own information, and then they may burst out resonance[1] with the space. At present, information visualization technology has been gradually applied to the field of intangible cultural heritage protection, especially in the virtual visualization of cultural heritage. By relying on virtual visualization technology to reproduce cultural relics from multiple angles, people can not only see the original appearance of cultural relics, but also interact with each other. In museums, guest houses, cultural and creative goods stores and other environments, the intangible cultural heritage data of Rice paper is sorted out and formed into a database through information technology, and the data is converted into audio-visual and audio-visual recordings of audio-visual signals, forming a cultural space of Rice paper under the condition of information visualization technology. When people arrive at the fixed point or touch the screen, the information visualization system is activated and starts to work, restoring the technology process of rice paper in the virtual form, displaying the history of rice paper, the industry of rice paper and the artistic works of rice paper. The display under virtual technical conditions eliminates the limitations of space size, climate, manpower and material resources in the actual exhibition. The interactivity in digital immersion art is not a conscious communication between the experient and the work, but a connection[2] with the virtual environment through the capture of their unconscious behavior.

In short, the form presented by intangible cultural heritage is a living one, which needs to be solidified in material form and used in a variety of environments, which requires the cross-border integration of rice paper culture and artistic design. The environmental design adopts the immersive design method, whether it is the layout arrangement of the static area of graphic model, the design of the hands-on experience area, or the setting of the interaction area of scientific and technological means, which can reduce the cognitive load of the audience and improve the audience's enthusiasm and acceptance of exploring traditional culture, which not only conforms to the cognitive law, but also caters to the phenomenon of contemporary fast

food cultural experience. The environmental design of the theme of rice paper culture in various life scenes has opened up the inheritance field of rice paper culture in the new era through the organic integration of artistry, culture and science and technology.

#### **4. Visual Construction of Rice Paper Products as Environmental Details**

##### **4.1. Visual exploration of rice paper products as painting and calligraphy paper**

People infiltrate in the environment to feel the space, need to be able to see a lot of environmental details, which is inseparable from the furnishings in the environment. By exploring the sellers of rice paper in the industrial park and browsing the online broadcast rooms of rice paper such as Douyin, you can find that almost all of the best-selling rice paper products are used for writing and painting. In the process of exploring the development of new rice paper products, China Rice paper Group has repeatedly issued a series of "commemorative propaganda" products, such as the Olympic Games (2008), the 60th anniversary of the founding of the People's Republic of China (2009), the Xinhai Revolution (2011), the 70th anniversary of the victory of the Anti-Japanese War (2015) and so on. The commemorative Rice paper gift box is decorated with the words "Commemorative Rice paper" and other major historical events in society. This new form of Rice paper links Rice paper with specific historical events in China, increasing the cultural added value of Rice paper, but it is still not out of the use of calligraphy and painting paper. In the process of exploring a variety of innovative products of rice paper, China Rice Paper Group Company and Beijing Stamp Factory have also jointly developed rice paper stamps, and launched "Chinese calligraphy · Running Script", "Chinese Calligraphy · Cursive Script" and "Chinese calligraphy · Song Ci" rice paper stamps for three consecutive years. Although it has opened up the application field of rice paper, it has caused no small shock in the collection circle. But because the collection group is small, it has not been sustainable development. In the first place, as a painting and calligraphy paper, the rice paper is mainly in three forms: couplet, album and commemorative rice paper. In the environment, pasting rice paper couplets on the door, placing rice paper albums on the desktop, and displaying commemorative rice paper on the bookshelf are all finishing touches to increase the atmosphere of rice paper.[3]

##### **4.2. Visual Innovation of Rice Paper Products as Furnishings**

There is no paradox between rescuing endangered intangible cultural heritage skills and promoting the transformation of intangible cultural heritage through commercial development.[4] The Guiding Opinions on Strengthening the Productive Protection of Intangible Cultural Heritage issued by the Ministry of Culture in 2012 emphasized the role and significance of the productive protection of intangible cultural heritage. Although the art of rice paper is an intangible cultural form, it can achieve productive protection by attaching the content and related elements that embody the art to the material and transforming them into a materialized form. In the environment, in order to better highlight the theme of rice paper and make the environment more cultural, it is necessary to display more quantity and higher quality rice paper decorations. Gao Yanfang et al pointed out that integrating intangible cultural heritage into contemporary life, restoring and activating its daily energy, emphasizing the essential source of intangible cultural heritage in daily life, and stressing that daily needs are also a concept of protection, so as to realize the vision of intangible cultural heritage protection in parallel with production and life.[5] Rice paper has many high quality characteristics, which is suitable for making interior decoration. As environmental details, Rice paper decorations are used to decorate the room or for People's Daily use or appreciation, which plays the effect of deepening the theme of Rice paper.

Rice paper product innovation needs to be carried out according to the characteristics and advantages of rice paper itself. Rice paper can be clustered into points, cut into lines, combined into surfaces and bodies. The combination of points, lines and surfaces can create a strong sense of form. Combining the toughness of the sheet surface material and the strong plasticizing property of the pulp can create a product structure that ADAPTS to specific functions; Through the different ratio of pulp raw materials, to meet the requirements of cultural and creative products in soft and flexible process. Combined with the special texture formed by sandalwood and straw, a variety of patterns and textures are formed through secondary texture printing, which is suitable for wallpaper and other product patterns; The use of rice paper good ink dizzy performance, the formation of rich color matching, suitable for screen, oil paper umbrella, wallpaper and other products of paper decoration requirements. In the indoor environment, using the rice paper screen as a component to separate the space, or using the oil paper umbrella as the top surface decoration of the indoor roof, and using the rice paper wallpaper for the wall, it can create a strong theme style of rice paper in the space pattern.

The characteristics of rice paper are also suitable for the production of small furnishings. These excellent characteristics such as no crease after repeated kneading of rice paper, flexibility formed over the years, white and non-reflective luster characteristics, thick and light are suitable for fainting and so on. Through cutting, pasting, pasting and other technological means, the rice paper becomes three-dimensional and colorful from the plane. Give full play to the texture, color, texture, pattern and other plane symbol language, the rice paper into door curtains, lamps, pyrographs, hats, bags and paper art ornaments and other small items for people to use or decorate, many aspects of the display and development of space visual focus. Bookstores, guest houses, restaurants and other Spaces have their own functional requirements, through the selection of a variety of matching rice paper creative products, in detail to create an immersive environment of intangible cultural heritage Rice paper culture.

Cao Tiansheng, a famous researcher on rice paper, believes that "Chinese rice paper culture is an outstanding creative culture that combines both elegance and custom with the integration of object culture and spiritual culture." [6] The creative products of rice paper contain the wisdom of making things according to local conditions, the character of hard work, and the spirit of diligent thinking, which drive the inner emotions of people watching in the environment. The furnishings shaped by rice paper make the viewers in the environment not only familiar with the expression form of rice paper technology, but also increase their love for aesthetic art and recognition of cultural value. The non-material culture of rice paper presents its skills, aesthetics and culture as visually visible paper products through innovative means, which makes people's inner experience in the deep environment more intense.

## 5. Conclusion

In recent years, the government has issued relevant policies to encourage the combination of rice paper culture with art design, tourism, exhibition and sales, forming a growing environment for the dissemination of rice paper culture, strengthening the public's contact with rice paper techniques, and forming a strong intangible cultural atmosphere. Integrating the theme of Rice paper culture into hotels, bookstores, stores and other environments is the contemporary protection and inheritance of the intangible cultural heritage of Rice paper, and the expansion of the inheritance places of the intangible cultural heritage of Rice paper in the new era.

When designing the environment, through setting up the theme of rice paper, the static display space created by pictures, images, objects and models, the immersive experience space that the audience can operate by themselves, and the high-tech immersive experience space with the help of visualization technology are important forms of the theme of the environment. In the

design of environmental details, as painting and calligraphy paper and as decorative rice paper products, deepen people's feelings from the visual sense and the heart. For a long time to come, the non-relic works of Rice paper are outstanding intangible cultural heritage of mankind, which deserves more exploration and expansion of its expression forms to promote the wider dissemination of Rice paper culture.

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