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Research on the Application of Interaction Design with Aesthetic Experience in Folk Art-Take the Craftsmanship of New Year's Picture of Mianzhu of China as an Example

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Abstract

Nowadays, the traditional handicrafts in folk art are gradually faded out in the memory of modern people in the development of digital age, since the Internet has made it possible for people to travel around the world without leaving home. As a unique expression of traditional handicrafts, folk art reflects the true portrayal and spiritual outlook of the laboring people in different ages under the social production environment. Folk art is an intangible cultural heritage, and its inheritance and development are the effective measure to protect regional culture and strengthen national confidence. With the rapid development of computers, the protection and inheritance of folk art not only lie in interview research and literature research, but also focus on digitized technology developed by scholars, which takes art ontology as the research object, and then combines the innovation of science and technology. Although exerting a certain effect on the protection of folk art, it is still based on the epistemology of the subject-object Dichotomy, lacking the aesthetic experience of the blending of sentiment and natural scenery. Therefore, it takes the craftsmanship of New Year's Picture of Mianzhu as the research object in this paper, which on one hand recognized the guiding role of subjective images in the visual aesthetic appreciation of New Year's Picture, and on the other hand supplements the imagery aesthetic among objective existences by the use of interactive design, so as to make New Year's Picture and other folk arts accepted and loved by modern people.

Keywords: Aesthetics, Interactive Design, Folk Arts, Craftsmanship, New Year's Picture, Innovative Application

Introduction

There is a variety of forms in Chinese folk art, including paper cutting, clay sculpture, shadow puppets or New Year's Picture, which all reflect the yearning for better life and lofty spiritual pursuit of the laboring people in the social folk culture. Taking New Year's Picture of Mianzhu in Southwest of China as an example, its exaggerated characters and gorgeous colors are distinctive in artistic aesthetic from the New Year's Picture in other regions.

Eventually, it has been widely spread since the Ming and Qing Dynasties. As the symbol of the New Year Culture, New Year's Pictures are posted on the doors for the purpose of blessing and welcoming the new year upon the Spring Festival. No matter New Year's Picture or other types of folk art, are artistic forms with great aesthetic value and cultural connotation created by the laboring people in long life practice.

They are people's aesthetic activities of subjective intention under the objective entity, with real and simple emotion, and integration the most primitive artistic thinking in the practice of human labor life (Zhu, 2017). Therefore, with rich cultural resources, folk art has provided a fertile soil for regional characteristics and folk customs (Long, 2019), thus vigorously promoting the innovative cooperation between intangible cultural heritage culture and commercial culture and tourism, especially playing a significant role in cultural heritage and national confidence for teenagers, tourists and local people.

However, under the impact of the Internet and new technology, the benefits of commercial promotion for folk art are barely satisfactory. As intangible cultural heritage, folk art is in urgent need of inheritance and development. Therefore, scholars mainly focus on new digital technologies and carry out innovative research on folk art in recent years. For example, Zhu (2017); Long (2019); Zhang (2021) are making contributions to the interdisciplinary innovation research of traditional folk culture in combination with animation technology, aiming to change the aesthetic perception of traditional folk art through technology, and to make modern people accept, inherit and develop traditional folk art. Although digital technology has a certain significance in promoting the development of folk art, it brings little effect. Most intangible cultural heritages are about to disappear, mainly because their low application value in the commercial field and separation from modern aesthetic.

People are more willing to spend their time in aesthetic activities that are entertaining, interesting and of visually impact. And researchers also focus on the effectiveness and convenience brought by new technology, and have no concern on whether the cultural innovation of new technology and folk art can be accepted by people, ignoring the aesthetic experience in the subjective image of the receiver between the aesthetic objects and activities. It puts forward in this paper that the innovation and development of folk art should be obtained in the aesthetic experience of interactive design.

According to this new research method, the author elaborates the importance of using interactive animation technology for the aesthetic experience of New Year's Picture craftsmanship, and enables the audience to experience the necessity of emotional transmission in real space and virtual field in the process of design practice, thus improving the aesthetic experience of New Year's Picture, and arousing the aesthetic cognition of blending emotions with scenes form people in the subjective visual aesthetic feeling and the objective virtual image, which is of inheritance significance and commercial value.

Literature Review

The aesthetics of New Year's Pictures of traditional folk art

As a developing country with time-honored history, China has brought many art treasures to the world and attracted global attention due to its profound cultural accumulation and traditional custom of handicraft. Rooted in Chinese traditional culture, New Year's Picture represents the fusion of classical literature and traditional culture, and is one of the important treasures of intangible cultural heritages as well (Xu et al., 2021).

Although the New Year's Picture are similar in artistic aesthetics, they still retain local characteristics and personal emotional expression in terms of subject matter, craftsmanship and color matching. As the most representative New Year's Picture of Southwest of China, is produced in inland China, different from those of coastal areas in terms of style. It is known for hand drawing and created mainly relying on the aesthetic experience of folk artists, compared with the overprinting in other regions.

Development and Change of New Year's Picture of Mianzhu

Mainly characterized by manual sketching and coloring of the painter, New Year's Picture of Mianzhu is firstly outlined with ink lines, and then manually colored by the folk inheritors, while other New Year's Pictures are mainly overprinted with color printing plate in terms of coloring. The craftsmanship of traditional New Year's Picture is complex, which needs to go through several steps, such as drafting, finalizing, preparing, pasting, dip dyeing, engraving, revision, washing, coloring, printing and hand-painted coloring and so on.

However, in order to save time and effort, the steps have been reduced in the production of Modern New Year's Picture. Especially after the popularization of computer printing technology, manual printing was gradually replaced by screen printing technology. The painters rarely made blocks by themselves, and most of them rely on computer printing.

Although the efficiency and quality have been improved, the primitive simplicity of traditional handcraft and the paper used in printing have been changed and replaced by standardized templates, losing its unique aesthetic charm. Fortunately, the coloring part of New Year's Picture of Mianzhu is manually filled by painters, which makes up for the lack of aesthetic feeling to a certain extent. Although manual coloring is retained, it's a pity that the painters have to use cheap gouache or acrylic for coloring due to high cost of mineral pigments and the increase in manual costs, which leads to the lack of visual beauty of New Year's Picture.

In addition, the protection of intangible cultural heritage at present mostly relies on digital technology, using audio and video to complete the collection of traditional data and innovative design. For example, it used multimedia to record the living inheritance of folk artists, and uses virtual reality (VR) or animation technology to realize the performance of traditional folk culture. Although these studies have played a certain role in protecting folk art, the aesthetic experience toward traditional art itself has been separated further. Just like thinking of relatives upon festive occasions, people in the past could still present gifts to each other face-to-face, and visit each other to express their love and missing for their families. Nowadays, a mobile phone can convey the missing of family members, and people only communicate by telephone or by message. Without the blending of emotions with scenes, it is inevitable that the feelings of missing family members become more and more weak.

Currently, the inheritance of New Year's Picture is also facing the same dilemma. If we want to seek the possibility of restoring traditional craft, we can't only rely on computer technology. After all, the sciences of color theory, information visualization and composition has been established in visual graphic design. However, it is not true (Motamedi, 2007). It is necessary for us to follow the trend, and find a more acceptable way for modern people to protect and inherit folk art.

Method

Aesthetic Summary in the Craftsmanship of New Year's Picture

We specially went to MianZhu to carry out interview and investigation with the folk artists engaged in New Year's Picture before the research. During the interview, I heard many artists say that the "image" is the expression of the heart, which means the New Year's Picture reflects the emotion from the deep bottom of in the heart. It demonstrates that the most real aesthetic experience of artists in the process of making New Year's Picture is the plain and simple beauty of human nature. It can be seen that regarding the folk art by the thinking mode of subject-object dichotomy (Lockhart, 2019). We can not only find the answer from the visual aesthetics of object existence, but also need to combine the aesthetic activities, that is, participation and experience, and finally perceive the real beauty in the image world of emotions blended with scenes. This is the aesthetic principle of Chinese philosophy and the view of Ye Lang, an aesthetic professor of Peking University. He believes that people's aesthetic expression of folk art is not the direct unification of subjective and objective, but the direct integration of scenery and imaginative creation, that is, the imagery aesthetic of blending sentiment and natural scenery.

The aesthetic principle of Chinese philosophy is that beauty lies in the image world in which emotion and scenery blend. On one hand, it is the creation of human beings and the transcendence of subject and object. On the other hand, it returns to the original state of being. Beauty is the unity of transcendence and return. Beauty and aesthetic feeling are both aesthetic activities (Yuan, 2015). For example, in production of New Year's Picture, the plastic arts of New Year's Picture themselves conform to the aesthetic characteristics, but the aesthetic experience involves people's participation and expression of their aesthetic feelings in production process. And folk artists can reflect their personal feelings so strongly, which is also based on the unity of aesthetic experience and visual aesthetic feeling in the process of creating New Year's Picture, Wang Yangming (1509, as cited in Tien, 2012) emphasized in his interpretation of aesthetics that the real aesthetic feeling is "unity of two in one" in ontology.

As for the beauty of New Year's Picture of Mianzhu, we need to figure out that beauty is not cognition, but an experience. However, most of the scholars' understanding of folk arts' aesthetics adopts the thinking mode of subject-object dichotomy and makes people know the beauty of New Year's Picture through innovative application of digital technology in traditional art based on the epistemology, such as digital innovation in the production techniques of New Year's Picture, digital expression of the content and theme of New Year's Picture, etc. These studies are the deconstruction of aesthetic experience by researchers, rather than the common experience of participants, which is not comprehensive from the essence of aesthetic philosophy.

In the theoretical system of Western aesthetic philosophy, Arnheim emphasizes the importance of human visual perception, just as the modern people only pay attention to their sensory perception. In the idealism advocated by the Italian esthetician Croce, the understanding for all arts is symbolization, that is, "image". With respect to this point, the center of everything in world is spirit, and spiritual activities can be divided into cognitive activity and practical activity, thus creating everything (Yuan, 2015).

In modern China, Zhu Guangqian, the most representative philosophical thinker, put forward the image thought of agreement of interest and image in image intuition, which was consistent with Zong Baihua's image thought of mutual blending and mutual penetration of life sentiment and objective natural scenery (Yuan, 2015). Taking the New Year's Picture in folk art aesthetics as an example, the New Year's Picture is similar to image in appearance,

which is neither a specific concept nor an abstract concept in modern and contemporary aesthetics, but a complete perceptual world full of implication and interest.

Therefore, in order to integrate the cognition of aesthetic feeling of designers and participants into one in the craftsmanship of New Year's Picture, it is necessary to take the aesthetic experience as the premise in the interactive design, and both sides should jointly complete the aesthetic activities of the blending of sentiment and natural scenery in the digital media.

Aesthetic Design of Interaction in New Year's Picture

From the perspective of art, there are two different aesthetic theories in philosophy: Chinese traditional art and Western modern art. Western aesthetics is defined as the philosophical study of beauty and taste (Encyclopedia Britannica) or a set of related principles (Mati, 2017). Oriental aesthetics is interpreted as the unity of man and nature, which is the aesthetic cognition of the blending of sentiment and natural scenery in the image world.

However, aesthetics of interaction is often ignored in the field of philosophy. The emerging field of aesthetics of interaction has been combined with pragmatism, emphasizing the social and cultural context of use and the aesthetic theory of how people experience the world as embodied subjects (Motamedi, 2007).

Both the East and the West emphasize the unity of sentiment and scenery in observing aesthetic issues. The traditional craftsmanship of New Year's Picture is characterized by the blending of sentiment and natural scenery. Whether it is hand-made plate making or traditional ink coloring, it is an aesthetic experience in the "image" world. In order to facilitate the experience of such aesthetic activity on multimedia devices, it is necessary to complete the aesthetic experience of tactile interaction with the help of interactive technology, rather than passively restore visual aesthetics solely based on technology.

Although this innovative form is still based on the application principle of computer, it is combined with pragmatism on the basis of visual modeling optimization of New Year's Picture, and enables the participants to have a beautiful perception of the virtual scene through entertainment and game experience with the help of the touch screen mode of interactive technology.

Touch is a mode of feeling that combines our experience of the world with our own. The essence of felt life is shaped by the tactile, haptic, and peripheral blurred vision of the physical world. (Pallasmaa, 2005, as cited in Motamedi, 2007). Therefore, the importance of the physical world and our bodies is a cornerstone in interaction design. The interaction of aesthetic of pragmatism plays a unique role in reexamining and integrating contact with discourse and practice (Motamedi, 2007).

Research Methods and Technical Solutions

The research methods in this chapter mainly include literature collection, interview and survey, and practice design research. Through the literature, we have a further understanding of the craftsmanship of New Year's Picture of Mianzhu. Combined with the digital process of interactive design, the real and virtual process flow is simulated to guide the integration of touch experience and real scene, so that participants can understand the production method of New Year's Picture of Mianzhu online.

At the same time, by using the image aesthetic vision and interdisciplinary practice method in traditional Chinese culture, the project gets a brand-new display and innovative

application in the process of traditional culture aesthetic turning to modern art aesthetic experience.

The implementation steps of the study are shown in the following, see Chart 1:



Chart 1: the implementation steps of study

Implementation Process of New Year's Picture of Mianzhu in Interactive Design

Data Preparation-Collection of Information on Modeling Process and Equipment of New Year's Picture of Mianzhu

The aesthetics of traditional New Year's Picture of Mianzhu focuses on exaggeration of modeling and gorgeous colors. The picture is balanced and symmetrical in composition, complete and full in content, with distinct theme, especially focusing on the primitive simplicity and smoothing of lines, exaggerated and deformed characters, rich sense of rhythm, and extremely bright color. The traditional door god of New Year's Picture is selected as a reference, as shown in Figure1. This door god is the imperial bodyguard, which is often pasted on the gate to deter ghosts and evils and keep the family sage. The local folklore of Mianzhu is selected as the theme of the New Year's Picture, as shown in Figure2. The pictures are "A Mouse Marriage" and "Three Monkeys Cheat Pigs", which reflect real life with humorous plots. Both the artistic conception and the idea of story are characterized by the unity of practicality and plot, reflecting the optimistic attitude of Sichuan people towards life. At the same time, the local folk customs have been surveyed (see Figure3), and communications on the production methods and tools of New Year's Picture were made with local artists, as shown in Figure4.



Figure.1 Door God by author



Figure.2 Mouse Marriage and Three Monkeys Cheat Pigs by folk artists



Figure.3 Investigation and survey of New Year's Picture Village



Figure.4 Communication between the author and folk artists

Production Process of Interaction Design

After the preparatory work is completed, it is necessary to conceive the blueprint of interaction, and make a comprehensive layout of modeling, animation, interaction, color and other aspects with the aesthetic of modern people. Th PS (Photoshop) software is mainly used to optimize the creation of the original image, and then the CSP (Clip Studio Paint) animation software is used to complete part of the animation elements, and then the HTML5 (Hyper

Text Markup Language5) interactive software is used for image layer grouping and splicing, and final rendering of the image (see Figure.5).

The project focuses on the clue of historical traversal, and guide the participants to complete the aesthetic experience of touching and interactive design in the process of interactive experience from “Entrance→ Understanding the story of New Year’s Picture→ Starting the process of New Year’s Picture making→ Pasting New Year’s Picture → Fireworks display→ Finally get to understand New Year’s Picture of Mianzhu” in the virtual image world.



Figure.5 Rendering Process of Virtual Image

The final interactive design can be opened solely by scanning the QR (Quick-Response) code. The experience process is very simple. Participants can complete the finger touch according to the interface prompts. In the process of touching, there will be unexpected game links, such as the color application in Mianzhu, which needs to be completed according to the formula of “One for black, two for white and three for golden yellow to wear colorful clothes”.

At the same time, it basically restores the subjective initiative of using optional tools and color matching, except different hand feeling of tools and materials between the virtual color filling and manual coloring. The project brings the participants a real sense of achievement in

the interactive experience, and forms a set of perfect and comprehensive aesthetic transmission of interactive experience.

If you want to convert digital works into paper-based products, you can also take your Do It Yourself (DIY) New Year's Picture home or give them to friends through background printing. This innovative mode can bring great economic value in the commercial cultural and tourism industry, which is currently under development.

Results and Discussion

Aesthetic Rules of New Year's Picture Modeling in Interaction Design

Belonging to the category of traditional Chinese realistic painting, New Year's Picture are featured by a hint of humanistic painting in aesthetic connotation, but they are still different from Chinese freehand brushwork painting. The characteristics of New Year's Picture lie in color, with the use of high saturation light color highlighting the festive and auspicious atmosphere, and the lines being carved on the board by craftsmen with carving knives and then printed one by one, rather than being made by hand. The traditional Chinese New Year's Picture are more popular among the poor people, which emphasizes decoration and practicality in artistic beauty, having a strong local flavor. Compared with painting in elaborate style or magnificent freehand brushwork painting, it is difficult to define New Year's Picture as a refined art.

The application of New Year's Picture in the aesthetic design in the form of interaction, which is used and like by modern people, is the research focus of this project. We try to integrate the beauty of modeling in traditional art with the modern beauty of western aesthetics, and find the common language of beauty between the two, by comparing the traditional and modern time periods. On the one hand, we find the aesthetic characteristics in style, theme, composition and color, etc., from the visual aesthetic of arts. On the other hand, we summarize the 'internal' aesthetic principles (Cham, 2009) of image aesthetics from the perspective of psychology, humanities and interactive design.

Visual Style

The style of visual arts can reflect strong individual preference as well as unique view of art for some particular subject groups (Chen et al., 2019). We analyze the aesthetic characteristics from the lines, modeling language and stylized features of New Year's Picture, and further combine and innovate it with the aesthetic ideas of modern people on this basis.

Traditional	Modern
Lines: simple and fluent, rigid and soft.	The line style is variable with plentiful brush effect, but the control strength of lines is difficult to present the smooth and unsophisticated line rhythm. After all, the digital panel cannot completely replace the texture of hand-made paper and the nature of freehand painting.
Modeling language: exaggeration and deformation.	Exaggerated deformation, and rich in modern aesthetics, with cute, lovely and symbolic characteristics.
Stylized features: graphic and decorative.	Combination of graphic decoration and cubism, with rich texture effects.

Lines

The lines of New Year's Picture are carved with concave and convex lines on wood by craftsman with carving techniques, and then covered with ink to print out the black lines on white background. The smoothness of lines is mainly determined by the size of the carving knife and the strength of the technique of using the knife. Then the craftsmen print the lines by skillful rubbing technology, so that the lines are full of ancient and natural beauty. The rough freehand lines are not only smooth and concise, but also vigorous and powerful, which shows the diligent and simple national spirit of the working people, generally demonstrated in the secular themes of door gods and labor scenes.

Most of the lines applied in modern design are drawn by computer. It is found in practice that even if the computer algorithm closely demonstrates the pressure feeling force of freehand drawing, it is still unable to restore the original aesthetic feeling in comparison with the effect of freehand line drawing (Otsuki et al., 2010). Although there are many brush effects, most designers emphasize more about the fluency of the lines, but they seldom consider the in-depth study of the rhythm and texture of the lines when drawing New Year's Picture. In Modern Digital arts, designers prefer to adopt the art techniques of cartoon in order to highlight the theme and color, especially in the expression of lines, drawing with thick black lines to outline the picture, which makes the whole modeling focused and grand. With the increasing changes of cartoon techniques, the black lines used to outline pictures in modern aesthetics are gradually replaced by the heavy colors of the same color.

On the one hand, the lines and colors are more gently integrated, and on the other hand, it delivers the features of boneless brush painting of Chinese meticulous brushwork painting to the New Year's Picture. The outline of boneless brush painting is rendered with ink or color, rather than drawn with ink brush, which is an innovative painting method of meticulous freehand brushwork. It's neat but not rigid in the technique of expression, and strong in color but elegant in temperament, giving the artistic conception of literati painting. Therefore, the innovation of New Year's Picture in modern interactive design shall start with lines, with improvement mainly in the ink layer or the edge outlining between virtuality and reality. Since lines are the basis of painting, the strength of virtual lines and real lines can reflect the level of picture modeling.

Modeling Language

The next step is the exaggeration and deformation of the New Year's Picture. The modeling is mostly based on the characters in fairy tales, such as civil servants and military generals, ladies and children, or fairies. In terms of modeling, the images of characters are exaggerated and plump. In terms of artistic intuitive expression, the characters are fat and strong, representing health and longevity, which is related to people's yearning for a better life. In modern design, the deformation exaggeration of figures is refined from the more complex decorative lines, from complex to simple, which makes the figures cute and symbolic through exaggeration. This kind of modeling poses a new challenge to the design of Modern of New Year's Picture, but also the combination of lovely symbols and local elements in line with modern aesthetics. Therefore, the New Year's Picture integrating traditional and modern design demonstrates the style and simplicity of cartoon.

Stylized Type

The New Year's Picture have prominent stylized features. The vigorous lines and mineral pigments, as well as the ancient and natural freehand carving, make the collection value of

New Year's Picture increasingly high. Though digital art lacks the collection value of hand-made artifacts and practical features, but the stylized types are variable in texture patterns made of various materials, colorful patterns, and cool special filter effect, which adds a plenty of modern touch to the digital New Year's Picture, and makes them easier for modern people to accept and like.

Expressive Theme

From the perspective of the theme of New Year's Picture of Mianzhu, there are four themes during traditional period: door god, middle-hall painting, ladies and children. Under the living conditions with backward medical equipment at that time, the wishes of all the people are praying for peace and auspiciousness, happy family, virtuous women and healthy growth of children. At the same time, the New Year's Picture is also a kind of handmade work for worshiping gods and psychological comfort in the feudal society. Nowadays, people are open and free in minds, and full of fantastic ideas. The integration of disciplines and specialties makes New Year's Picture no longer confined to traditional themes, but to the fields of regional environment, local customs, visual beauty and novelty, and fantastic science and technology field. Besides folk stories, the themes of them are added with new themes related to modern society, such as myths and legends, current events news, funny God of Wealth, etc., which aims to attract the world's attention by borrowing modern interesting IP (Intellectual Property) while promoting the New Year's Picture.

Traditional	Modern
Door God, mostly in pairs of historical heroes.	Door Gods, in combination with regional products, such as elements of Panda
Middle-hall Painting including themes such as gods of happiness, wealth and longevity.	With a majority of God of Wealth, and illustrations of Gods of Happiness and Longevity, rather than in single form of New Year's Picture.
Painting of ladies, mainly focusing on the leisure life during the traditional period.	With a majority of girl's head portrait, not in the form of New Year's Picture, mostly improved by CG (Computer Graphic) digital illustration.
Painting of boys, with lotus, Koi fish, representing 'rich and have a surplus' in the successive years.	It's rare, and basically similar to the child series, but the pictures are more interesting from an experienced artist.

Door God

Widely spread in many rural areas in China, the door god painting is regarded as a good omen for the prosperity of family and houses. It's diverse and rich in modeling of the art forms of door gods, including 'Qin Qiong and Yu Chigong', 'Door God with Hammer', 'Door God with Double Whips', etc. which are selected from the historical legends of heroes and gods. Similarly, there are many heroes in modern society as well, such as doctors, police and the People's Liberation Army. In order to inherit the characteristics of door god paintings, in comparison with traditional themes, Sichuan panda elements and mainstream modeling in regional culture are added into modern themes, such as the door god panda holding Kung Fu tea. (See Figure.6)



Figure.6 The Door God of Panda by author’s design



Figure.7 Lady Riding a Bicycle

Middle-Hall Painting

Middle-hall painting refers to the painting hanging in the middle of the traditional bungalow hall, for driving the evils and keeping the houses safe, mainly with various gods as the objects of worship, such as ‘Zhao Gong Zhen Zhai’, ‘Shou Tian Bai Lu’, ‘Lian Nian You Yu,’ etc. (see Figure.8) expressing the wishes of people for peach and happiness, health and longevity, wealth and other auspiciousness. Nowadays, the theme of happiness and longevity have been reduced in modern New Year’s Picture. Instead, the splendid rivers and mountains and beautiful scenery of the motherland are taken as the yearning for a better life. Chinese literati landscape painting becomes the main approach of painting, while New Year’s Picture become fewer. On occasion of festivals, young people still hope to get rich, and worship the God of wealth. As a result, more and more designers disguise New Year’s Picture of ‘Lu’ (the salary of ancient civil servants) into cartoon like God of Wealth, such as wearing sunglasses, holding gold coins, with a look of millionaire.



Figure.8 the Pictures of ‘Zhao Gong Zhen Zhai’ ‘Shou Tian Bai Lu’ and ‘Lian Nian You Yu’ by M. Li

Painting of Ladies

As a theme, the painting of ladies is to praise the women in traditional society. They live a comfortable life, dress fashionably, and love life and new things. For example, in ‘Lady Riding a Bicycle’ (see Figure.7), the bicycle in this painting didn’t exist actually at that time, and even the painter had not seen it. It was created from the craftsman’s random imagination. Although the bicycle cannot be ridden from the structural principle, it also illustrates the scene of young and beautiful lady enjoying life and reflects the regional customs of Sichuan. In modern New Year’s Picture, the painting of ladies has gradually become pictures of beautiful women. The visual beauty for modern young people is no longer lies in the praise from the inner level, but in a vivid and real picture. The image of beauty in the real vision restored with technology is quite different from the traditional aesthetic.

Painting of Boys

Under backward living conditions of medical equipment in the traditional period, family with several children worried that the weak and sick children would die. Therefore, every family pasted pictures of big fat boys as a wish. These New Year’s Picture boys were beautiful, healthy and lively with big eyes, black hair, lovely shape. On the contrary, young people in modern society are not interested in the theme of children. Only those middle-aged people with a sense of life and expectations for children choose the theme, but they do not express them in New Year’s Picture. Most of them are replaced by illustrations or cartoons. On the one hand, children’s themes are more suitable for cartoon expression. On the other hand, the belief recognition of New Year’s Picture is gradually abandoned by modern people.

Mode of Composition

Composition is a very important link to express the central purport of a work. Both graphic works or dynamic works require unique conception and accurate purposiveness before the painting, which is called composition in some artistic expression. In the aesthetics composition of space design, it is necessary to plan the sequence of the whole dynamic process, the interactive clues, the plot changes and the relationship between interactive scenes in advance, far more than simple graphic visualization, it is a form of innovation, integrating the traditional graphic with the expression of multiple dimensions and spaces, which is also known as transformational creativity.

Traditional	Modern
Symmetrical balance	Symmetrical balance
Blank-leaving	Blank-leaving
Dispersion and aggregation in graphic vision.	The space dimension is changed in the conception of interactive design, that is, the transformational creativity mentioned in the literature.

Symmetrical Balance

The symmetrical composition of Chinese architecture is particularly classic since ancient times, with symmetrical balance representing gravity and solemn. Especially in formal

occasions, symmetrical graphics tend to bring people a sense of peace and order, which are not easily disturbed by the outside world, with a kind of peaceful beauty from inside to outside. This kind of symmetrical composition is particularly prominent in the New Year's Picture of door god, and also suitable to quickly attract the audience's vision if used in interactive design, so that people can appreciate the visual beauty of stability.

Blank-Leaving

Blank-Leaving is one of the composition forms in Chinese painting, which leaves empty space in the painting and make people to feel the beauty of the artistic conception of the painting by themselves. Blank-leaving in background is also a unique art form in New Year's Picture of Mianzhu. The painting is mainly dominated by the character, without any decorations, aiming to make the audience focus on the character and make the content more concentrated. It is also necessary to use this composition form in the interactive design, to provide people with a clear vision and clear effect when they are prompted to contact the interaction instructions.

Dispersion and Polymerization

The dispersion and aggregation in New Year's Picture refers to the scope form of perspective center, while it is the dispersion and aggregation of cognitive perception and body cognition related elements in modern interactive design. On the one hand, it can be understood as the combination of behavior and perceptual cognition between interactions, on the other hand, it can be considered as the independence and coexistence of design. Thus, the application of dispersion and aggregation in the emotional conveyance with interactive design can generate the innovation of creativity performance in different dimensions and spaces, which is not available in the New Year's Picture, and only exists in the interactive design process, as one of the innovation points of this project.

A pragmatist aesthetic of interaction has a unique role in revisiting and integrating touch back into discourse and practice. The crucial challenge is to understand the interplay between all the senses and discover new ways of combining sense modalities to create synesthetic interfaces that are holistic, integrating our cognitive senses with our bodily senses (Motamedi, 2007).

Color Application

As the main feature, color application varies with regions, with different characteristics. Compared with the overprinted pictures in coastal areas, all the colors of Mianzhu New Year's Picture are painted by hand, which is closely related to the excellent skills and personal aesthetics of local craftsmen.

Traditional	Modern
Warm color at upper part and cool color at lower part.	Keep the tradition
Large piece of red and purple	Keep the traditional, but with tint reduction, showing the saturation of palace paintings and the rich colors of decorative paintings.
White lines used for brightening	Keep the tradition
Decorative elements	Keep the tradition and increase textures.

Warm Color at Upper Part and Cool Color at Lower Part

In the contrast between cool colors and warm colors, the latter brings a sense of happiness and peace, and auspiciousness and exorcism to people. For example, traditional Chinese wedding dresses are mainly red, representing happiness and exorcism. The warm colors such as red, orange and yellow in the New Year's Picture of Mianzhu are often used in the clothing for upper body of the characters, while the cool colors such as purple, green and blue are generally used for pants and shoes of the lower body of the characters, illustrating a sense of calm and solemn of the character, which is also applicable in interactive design.

Large Piece of Red and Purple

The New Year's Picture is extremely high in color saturation as a saying goes in feudal society that strong bright colors can drive away evil spirits. Since lots of people died in Sichuan due to historical reasons at that time, people posted colorful pictures to exorcise evil spirits and add a festive atmosphere. Later, craftsmen used to make the colors of New Year's Picture extraordinarily bright, which developed into them with local characteristics. Then back to modern society, there is little saying that New Year's Picture are used to ward off evil spirits, and people are more likely to judge the aesthetic perception of them from the perspective of visual comfort. In terms of the color theory analysis, the color with relatively high saturation can easily make the audience feel tired and uncomfortable. In addition, most of the modern people are exposed more to mobile phones and other multimedia devices with eyes vulnerable to high color saturation on the screens. Therefore, the researchers also systematically analyzed the color scheme to guide the cognition and bias of people towards modern color (Rhyne, 2017). We retain the original main color of the color in the interactive design with tint reduction, and inherit the drawing approach of cartoon to make gradual change of light and dark color, which makes the color of the painting more hierarchical and softs, and makes the color relationship with rich local flavor become elegant and thick, so as to enhance the visual perception of the painting.

White Lines Used for Brightening

There is a final step after completion of the coloring in New Year's Picture of Mianzhu, is to outline the white edges, that is, overlap the edge of color blocks with white lines, and draw the outline of the painting with white lines to brighten the edge and increase decorations. It is also applicable to the Modern New Year's Picture and this step is a unique way to present the decorative effect of them (Yao et al., 2016).

Decorative Elements

Decoration is the last process before the completion of New Year's Picture. The painter paints the flower patterns carved on the small wood blocks with gold powder pigment, and then manually covers and presses them on the colored clothes for decoration in sequence, which aims to add gorgeous decorative effect to simple colors. In modern Chinese New Year's Picture, the brush and texture effects of digital software can be applied instead of handwork. Although its with stamped flower patterns have more ancient and clumsy feeling of handwork, while the digital art can only reflect the value of works through interactive behavior and emotional transmission, the design method of both is identical, which is to enhance the decorative effect of New Year's Picture and obtain a sense of achievement.

Innovative Combination of New Year's Picture in Interactive Design

Among the three innovative methods from Cham, Karen, New Year's Picture have also experienced a variety of innovative practices with the changes of the times. Different research and exploratory creativity, while only the last approach which is creative from the different dimensions that change the conceptual space produce amazing results. Therefore, based on the third theory of transformative creativity (Cham, 2009), we analyze and summarize the development rules of modern aesthetics from different perspectives of traditional New Year's Picture and modern design. At present, people's innovation breakthrough in a single field is extremely limited. The integration of them between traditional and modern art is an innovation of multiple combinations at the same dimension. For example, the printing and drawing methods of New Year's Picture are combined by traditional manual printing and computer screen printing, which can no longer satisfy the aesthetic needs of people at present. As a result, people have made technological innovations in the style of New Year's Picture, for example, the texture effect of hand-painted picture is simulated by computer, integrating with special effects and modern dynamic graphics, as well as the spatial transformation from 2D to 2.5D and then to 3D. The innovation of New Year's Picture in interactive design is the expansion of space or other dimensions in the process of exploration and innovation. For example, the emotional conveyance from visual dimension to psychological level between interactive design and graphic design is the multi-dimensional and interdisciplinary integration, which makes the innovative achievements of digital interactive New Year's Picture more meaningful.

Application of New Year's Picture in Interactive Design

The application rules of New Year's Picture in interactive design aesthetics are based firstly on the aesthetic style and emotional expression of traditional pictures, secondly on the transformation of aesthetic space and dimension, and then on the guided communication supported by interesting human-computer interaction, and finally complete the definition of interactive aesthetics of modern New Year's Picture. It is not a one-sided visual aesthetic, but the comprehensive manifestation from the visual aesthetic, but the comprehensive manifestation from the visual, behavioral and psychological aspects with the progress of science and technology and the interdisciplinary application. Vision is the most intuitive expression in art aesthetics, while behavior is the stimulus response generated by the signals received from the psychological level. Only when the brain perceives the imagery aesthetics in the emotional transmission, can it be transmitted to all parts of the body through the central nervous system, thus generating the interactive experience of finger touching on the screen and visual perception of image. Therefore, the game is an interactive entertainment based on behaviors.

The innovative application of the project is not based on visual aesthetics, but on interactive aesthetics. People can understand New Year's Picture and then like them through the interactive experience of games, which is totally different from the aesthetics experience of traditional arts which is based on the visual colors that are established on the feudal ideology of belief and worship. In order to effectively guide modern people to accept and like the aesthetics of New Year's Picture, the project explores from the perspectives of design and human psychology through practical research and hypothetical definition, and change the application rules of aesthetics of New Year's Picture under the interactive mechanism, so as to prompt quick acceptance and wide popularity of New Year's Picture among modern people.

Conclusions

Theoretical Significance

This research makes up for the unilateral application research on the aesthetic experience of folk art from the perspective of epistemology, and plays a positive role in promoting the application of interaction of aesthetic to explore the protection and inheritance of intangible cultural heritage from the perspective of ontology. In the past, people could only understand the craftsmanship of traditional art through digital images, literature, interviews and research. Nowadays, with the continuous development of digital means, the aesthetic activities of interactive design and immersive experience are becoming increasingly abundant, and people are in demand to improve the aesthetic experience of the image world in the blending of emotion and natural scenery.

At present, the traditional aesthetics can no longer satisfy the needs of modern people. In order to cater to the market and the mainstream business model, it is necessary to make use of the interdisciplinary research of new technology and folk art. However, no matter how innovation develops, it's a must to focus on the real feelings of people's own experience. The direct feeling in the real existence, however, will become less with the advent of the intelligent era, which is an inevitable contradiction in the process of social development. In order to reduce the contradictions and conflicts, it not only relies on digital technology, but also seeks the blending of taste and beauty in people's aesthetic connotation, so that modern people can accept the beauty in traditional art, and the protection and inheritance of intangible cultural heritage can be carried forward.

Practical Value

Especially for the protection and inheritance of intangible cultural heritage it is necessary to use interaction design for emotional conveyance in people's cultural exchange. With the development of New Year's Picture of Mianzhu till now, although weakened in function, it is increasingly enhanced in spiritual inheritance, nourishing a wonderful flower of the unified city symbol, which is a symbol of national self-confidence and the spirit of inheriting the quintessence of Chinese culture. The innovative method of digital interactive experience can break the restrictions of language, region, time and space, and promote Chinese folk art to go further.

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