

Hezhe hunting costume pattern in Wenchuang products Design application

Yuchen Gao, Shuyu Li^{a,*}

School of Shenyang Aerospace University, Shenyang 110000, China

^a1790733661@qq.com

*Corresponding author

Keywords: BP Neural Network, Prediction

Abstract: Objective to explore the application methods of Hezhe traditional hunting costume patterns in the design of cultural and creative products, and to explore the model of extraction and translation methods suitable for patterns in different nationalities and regions. Methods From the three aspects of material, non-material, whole, partial, and extraction and translation, the design elements of the patterns in the traditional hunting costumes of Hezhe were extracted, and the information base of design elements was established. The combination of best-selling cultural and product categories, the development of multi-angle, multi-meaning, multi-form cultural and creative products. Conclusion It provides a practical and feasible path for the design of cultural and creative products based on the characteristics of national culture, promoting the spread of regional culture and the development of cultural and creative industries.

1. Introduction

The cultural forms with great ethnic characteristics are fleeting in a specific time and space. The particularity, diversity and compounded of culture make it easier to die in the long years. The design and development of cultural and creative products with regional cultural characteristics and national cultural connotations is particularly important in the process of inheriting and protecting traditional culture. In the context of globalization, regional cultures will become passive if they lack internal vitality, and they may lose their creativity and competitiveness, and be submerged in the tide of the world's 'cultural convergence'. [1] Hezhe as China's six one of the small ethnic groups is the fishing and hunting people, the vast mountains and the vast rivers are their hunting grounds. They are the patron saints of the mountains and rivers. This paper deconstructs the shapes, colors, techniques, materials and meanings of the traditional hunting costumes of the Hezhe people. Such design elements, using white drawing, reorganization, exaggeration, symbolization, etc., apply traditional patterns to the design of cultural creation products that meet the current design aesthetics.

2. Introduction to Hezhe hunting costumes

The Hezhe nationality is a long-established ethnic minority in northeastern China. It has no national texts. It is mainly distributed in the Sanjiang Plain and Wandashan Mountains formed by the intersection of Heilongjiang, Songhua River and Wusuli River. The Hezhe ancestors were part of the Sushen family and were historically included in ancient nationalities such as Su Shen, Yi and Bji. Since ancient times, the Hezhe people have said that "summer fishing for food, winter fishing for bartering for livelihood". Warm hospitality, wearing fish skin, driving "dog car", eating raw fish, living in Luo, known as wearing fish skin clothing, also known as "fish skin". Hezhe believes that all things in nature have gods, and there are primitive worships and shamanistic beliefs such as totem worship, nature worship, spiritual worship, ghost worship and ancestor worship. [2] Animism constitutes the basis of the original worship of the Hezhe people and the original religious beliefs.

The Hezhe hunter was given great divinity in consciousness. Before entering the mountain hunting, the hunter should wear the hunting costumes of the "flowers and exhibitions" (as shown in

Figure 1), and sacrifice the gods and pillars to confuse the demons that interfere with the hunting activities. Returning from hunting, you must sacrifice the tree of God and spread the blood of the prey to the mouth of the tree god.



Figure 1. Hezhe hunting costumes and scenes.

Hunting is generally composed of hunting hats, ear protectors, protective towels, hunting suits, gloves, hunting skirts, skirts, hunting pants, hunting boots and other nine parts. Each part of the decoration has strict regulations. For example, the trousers on the trousers must be decorated with a triangular enamel pattern with a pointed corner facing down, a fish-shaped bird's eye tiger's face on the neckline, and a cuffed ancestors' face pattern on the cuffs and front placket [3].

The shawl and the corner of the towel are in the shape of a vertical diamond. The middle part is composed of a cross pattern, which represents the "sun ancestor", which shines on the mountain forest, protects the harvest, and has summer functions such as anti-mosquito and cockroaches. The shape of the cuff, the head is round, gourd-shaped, wishful head shape, the main picture is placed here, and there are daily, fire, crepe, serpentine, deer, beautiful composition, delicate craftsmanship.

Hunting hat, shaped like a helmet, continues the samurai shape, top decoration appendix or squirrel tail, hat edge multi-embroidered sun, black, crepe, hat ear is mostly fat dragon, human face tiger, crepe, Used to seek the protection of the gods, shocking the prey. As shown in picture 2.



Figure 2. Hezhe hunting costumes.

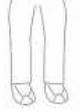
3. Extraction and composition rules of design elements in hunting costume patterns

3.1 Building a design element database

A database is a warehouse that organizes, stores, and manages data according to its data structure. With the development of information technology and market, the database is widely used because it can express the required data information simply, intuitively and systematically. [4] The existing product design database, widely known as the CMF material library, shows a large number of different product materials, colors and processes, is the basis of product design innovation [5].

This paper hopes to carry out multi-angle and deep-level design exploration of the traditional costume design elements of Hezhe from the perspective of material and intangible cultural heritage. Material cultural heritage refers to the tangible material forms of historical records, cultural relics, architectural complexes and sites, and the national cultural connotations contained in this material form. For the design elements of the traditional hunting costumes of the Hezhe people, the material culture level is explored. First, the design function of the hunting equipment is divided. For example, according to the longitudinal structure of the human body, the hunting gear can be roughly divided into a hunting cap (hunting cap + ear protector + shawl), hunting suit (hunting suit + gloves), hunting pants, hunting shoes, or according to design elements. It is divided into two parts: clothing and patterns. The second is to extract the design elements of the five levels of modeling, color, material, decoration and pattern. The design elements are named according to the names of the parts, and a design element information base is established. As shown in Table 1.

Table 1. Hezhe Hunting Clothing Information Library.

Number/name	Outline extraction	Pattern extraction	Color extraction
H-1 Hunting cap + ear protector + shawl			
H-2 Hunting suit + hunting skirt			
H-3 Hunting pants + wula			
H-4 Hunting gear			

3.2 Pattern composition and design translation

Patterns, broadly refers to the pattern of patterns, arranged or combined according to certain rules or exist alone, with a certain decorative effect. The individual patterns are composed of edge contour patterns, horn pattern and center pattern. They are not arranged in a continuous arrangement with other patterns. They are rich in content and have strong emotional connotations. Such as the squatting pattern on the knees of the hunting trousers, the fish-shaped bird's eye tiger eye pattern embroidered on the neckline and cuffs, and the ancestors' face of the crest. These geometric patterns are composed of simple points, lines, faces, and squares, triangles, circles, and prisms. The movement of points, lines, and faces constitutes various trajectories. Most of the plant patterns are composed of simple and abstract lines; animal patterns mostly use geometric fold lines to form various abstract animal forms; natural patterns often form various abstract patterns with dots, lines and faces. The patterns and patterns are well matched, the main and the subtle, the dense and dense, full of rhythm and rhythm. [6] The translation of modern design language for patterns can follow the following principles:

1) The frame shape is curved. The contouring of the contour refers to the simplification of the complex shape, that is, the ratio and curvature of the extracted shape are applied to the simple geometric figure. The second is to make a simple border shape, combined with rich expression design, is the overall product presents a lovely, full, emotional rich user experience.

2) Add. The deformation of the traditional pattern can extract the basic pattern as the design base point and carry out two-way continuous deformation. These include rotary stacking, one-stage continuous alignment, and two-level continuous alignment. According to the design requirements, the deformed patterns are arranged horizontally, vertically, diagonally, and other fusion design elements are added to combine the patterns of the various levels.

3) Cut down. First, the edge pattern of the original pattern needs to be deleted, and it is reserved as a secondary element for design. Unnecessary elements need to be decoratively removed and geometrically deformed during the design process, and the original pattern of the original pattern is designed to be retained. Dig deep into the design connotation and spiritual implication, and reflect the beauty of rhythm through repeated, gradual, staggered, and false realities of pattern patterns. Give the rhythm of the pattern rhythm, undulation and change.

4) Symmetry and balance. Symmetry and balance are two common methods of plane formation, which creates a sense of perfection, tranquility and harmony in both visual and psychological. Symmetry refers to a pattern in which a hypothetical centerline is arranged on the left and right, up and down or around, with the same shape, the same amount, and the same color pattern. Equilibrium is the same amount of inequality of the upper and lower left and right sides of the central axis or the center point, that is, the components are the same, but the pattern and the color are different, which is the balance of the holding force according to the central axis or the center point. Balance is to seek unity in change.

The extraction of patterns in the Hezhe hunting costumes must first be divided into different components according to the level of the pattern, and the deformation, increase, decrease, symmetry, rotation, balance and other column deformations of each part of the elements. Direct or indirect design of the original pattern modeling [5]. As shown in Figure 3.

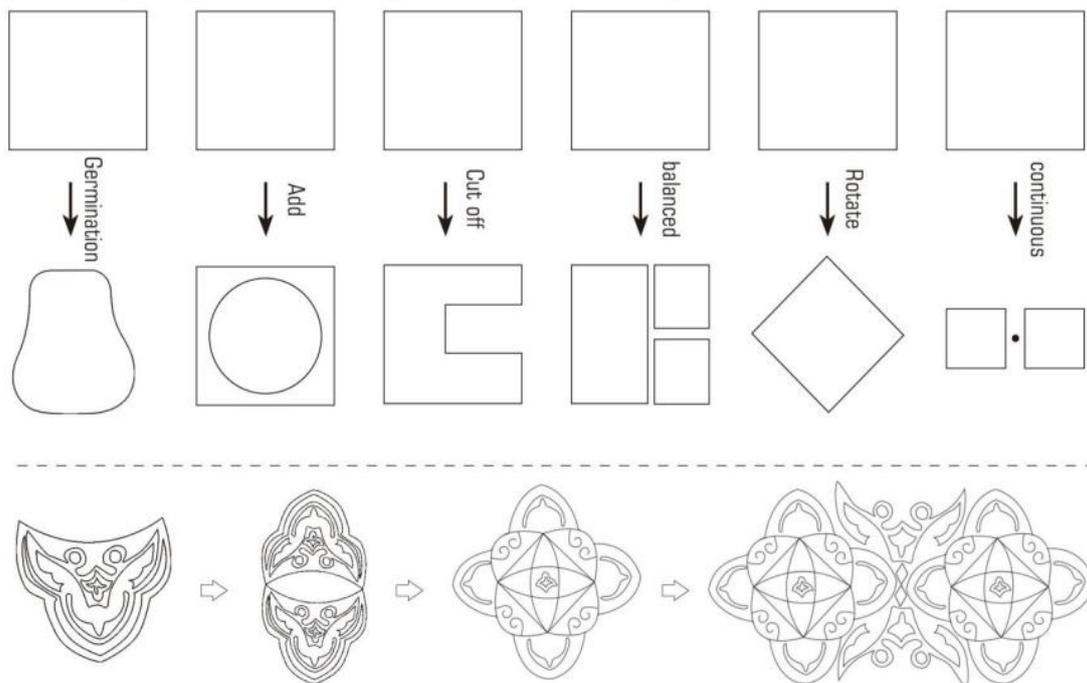


Figure 3. Pattern translation and translation case.

4. Application of Hunting Costume Patterns in Wenchuang Product Design

4.1 Wenchuang product classification

Cultural and creative products (Wen Chuang products) are a kind of art derivatives. They use the symbolic meaning, aesthetic features, humanistic spirit and cultural elements of native art to interpret and reconstruct native art through the designer's own culture. The understanding, the cultural elements of the original art and the creativity of the product itself, form a new type of cultural creative products. From the perspectives of “Wen Chuang Content”, “Product Carrier” and “Combination Method”, Wenchuang products are roughly divided into two categories: “integrated” and “IP-derived”. [7] The combination of specific content, carrier, and method formed by the content of Wenchuang, which cannot be independently existed after being separated from a specific carrier, is called “integrated” Wenchuang. Product design.

In the field of Wenchuang product design, it is widely used, and everyone is familiar with the "IP-derived" Wenchuang product design. For example, Kumamoto, a mascot launched by Kumamoto Prefecture in Japan, is revitalizing the Kumamoto economy and promoting Kumamoto’s reputation. Kumamoto’s image is unique and authorized to operate outside Japan and beyond. Welcome to become a mascot with a very high popularity in the world. As shown in Figure 4.



Figure 4. Kumamoto Bear around Wenchuang products.

4.2 Wenchuang product sales survey

Wenchuang products, as a material carrier that can effectively promote local culture and promote local economic development, can “take away” culture. According to the different craftsmanship and materials, they are roughly divided into industrial culture creative products, artistic derivative cultural creative products and handicraft cultural and creative products. From the Wenchuang products sold in the Hezhe nationality township of Jiejinkou, it can be seen that most of them are handicraft cultural and creative products and artistic derivative cultural creative products. However, there are not many products that are practical or available, and the collection value is weak. It is difficult to find souvenirs that can represent the local cultural characteristics and have the “take away”.

In response to consumers' attitude towards Wenchuang products, a questionnaire was published on the online platform, and a total of 300 valid questionnaires were collected, with an effective rate of 85%. According to the consumer questionnaire survey, everyone is more inclined to interesting, functional, culturally representative, or high value collection of cultural and creative products. The most important thing is to conform to the contemporary aesthetic point of view. Wenchuang products are by no means as simple as “cups + patterns”. As shown in Figure 5 and Figure 6.

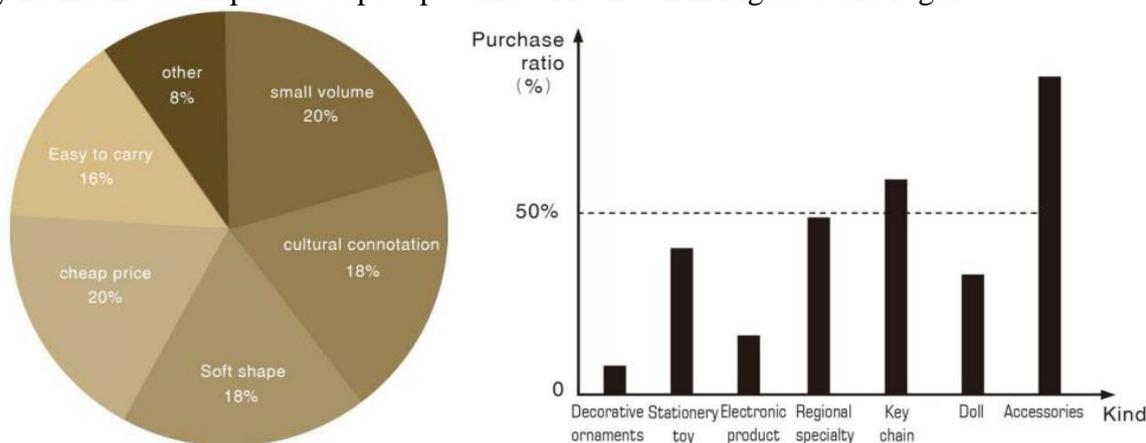


Figure 5. Consumers' survey on the of Wenchuang products.

Figure 6. Survey of different types of cultural popularity and software products purchase ratio.

4.3 Hezhe traditional hunting costumes

"Zhebao" - ROOMY, is a character doll that takes its own image of the traditional hunting of Hezhe. The color of the doll's costumes is red, yellow, blue and white. The colors are bright and eye-catching. As shown in Figure 7. The hat and costume pattern is a geometric deformation of the traditional pattern, retaining the beauty of the pattern and adding modern design elements. ROOMY image design, full body and full of gaze, showing a wise and brave hunting character. The reclining design behind it is used to hold fruit signs and incorporate hunting into our lives. Inspire children to eat fruit, and cultivate children to pay attention to good health habits. As shown in Figure 7.

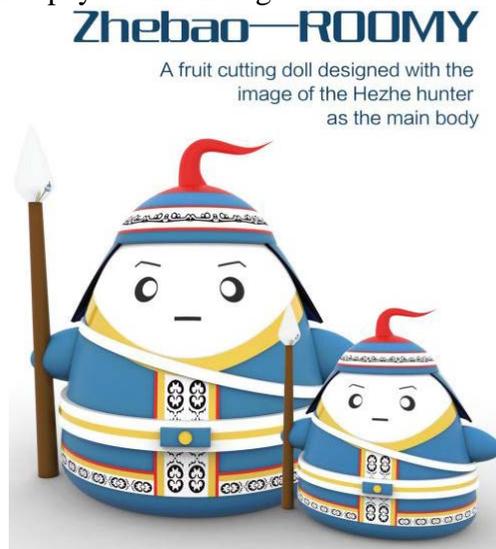


Figure 7. "Zhebao" - ROOMY doll design.

5. Conclusion

The patterns in the traditional hunting costumes of the Hezhe people are the embodiment of the life, beliefs and wisdom of the Hezhe people and an important carrier of the Hezhe culture. With the development of the economy, traditional national culture is facing the situation of being assimilated. The study of traditional national costumes is largely the dissemination and protection of its culture. While bringing economic benefits, it better promotes the hunting culture of the Hezhe people. The research on the design of Wenchuang products in the patterns of Hezhe hunting costumes is to divide the hunting costumes into partial and overall designs, patterns and accessories, shapes and colors. Combine different kinds of cultural creation carriers, and explore the cultural connotation behind hunting in a multi-angle and deep level. Create a cultural and creative product with regional cultural connotations with diverse modeling elements and modeling language.

Acknowledgments

This work was financially supported by Shenyang Aerospace University introduced talent research start-up fund project fund. (Fund number: 18YB22).

References

- [1] Wu Liangwei. Research and Creation of Chinese Architectural Culture [R]. History and Culture of the 100 Lectures, 2010.12.
- [2] Danzhu Ang Ben. Approaching the Chinese Minority Series - Hezhe [M]. Liaoning Nationality, 2012.01.

- [3] Wang Yinghai, Sun Wei. The collection of traditional patterns of Hezhe people [M]. Heilongjiang Education Press, 2011.05.
- [4] Yu Xiang. Research and Application of Digital Resources in the Inheritance of Intangible Cultural Heritage-Taking Nantong Printing Blue Printed Cloth as an Example [J]. Wireless Interconnect Technology, 2016.07 (14), 128 - 130.
- [5] Xiao Hualiang, Lin Li, Yan Longhua. Design of Tourism Souvenirs Based on Design Semiotics for Analysis and Evolution of Miao Silver Ornaments [J]. Packaging Engineering, 2011.07 (14): 221 - 226.
- [6] Tang Huini. Analysis of the Forms of Jianghua Yao's Costume Patterns [J]. Art China, 2016.09: 130 - 131.
- [7] Chen Zezhen. "The Culture to Take away"-Definition Classification of Wenchuang Products and "3C Resonance Principle" [J]. Modern Communication, 2017.01, 103.