

# Research on the Application of Qufu Cultural and Creative Products Under Design Psychology

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**Abstract.** Based on design psychology theory, this research explores the connection between design psychology and cultural and creative products by considering consumer motivation and the relationship between design and demand. It integrates social, consumer, and design psychology into the design concept of cultural and creative products, aiming to enhance the cultural connotation and user psychological needs of Qufu cultural and creative products, thereby promoting the continuous development of Qufu's cultural and creative industry.

**Keywords:** Design psychology; Cultural and creative product design; Design concept

## 1. Introduction

The cultural and creative industry is based on cultural knowledge, innovation, and the shaping of ideological connotations, achieved through various means to merge cultural resources. It is a spiritual product that meets people's emotional and psychological needs and has become an indispensable part of modern society. Consumer demand has shifted from focusing on practicality to emotional and aesthetic psychological needs. Therefore, cultural and creative products hold significant value and meaning[1]. These products not only meet functional requirements but also serve as carriers of cultural heritage, enhancing national cultural confidence and increasing people's sense of identity, belonging, and happiness. They significantly influence cultural dissemination and economic development. The cultural and creative industry has become an essential part of national development strategies, playing a crucial role in promoting cultural dissemination, cultural confidence, and economic development. Additionally, cultural and creative products provide consumers with a richer and more diverse life experience and cultural content, allowing people to appreciate the beauty and joy of life.

## 2. Design Psychology and Cultural Creative Products

### 2.1. Overview of Design Psychology

Design psychology is an interdisciplinary field formed through the intersection and communication between design and psychology. It is a novel branch of general psychology, originating from American psychologist Donald A. Norman's research on "material psychology." Design psychology primarily studies the psychological activities of users and the possible effects they produce. As an applied psychology discipline, design psychology should be based on general psychology theories and highly integrated with design practice, expressing the psychological state and needs of the design subject through design carriers to provide a better product experience[2]. Therefore, design psychology focuses on human psychological activities, such as perception, memory, thinking, emotions, and behavior, attitudes, and reactions when using design products. Design psychology and design are inseparable, as designers must consider users' psychological needs to create designs that better meet these needs. User research is essential in the early design stages to understand users' psychological needs and behavior habits, ensuring better product design and user experience. The research findings of design psychology significantly impact design practice, helping designers

understand user needs and behaviors better and create designs that align with these needs. Design psychology also offers design principles and rules to assist designers in their creative process, making it an important and influential discipline in design practice[2].

## **2.2. Design Psychology and Cultural Creative Design**

Design psychology and cultural creative product design are closely related. Design psychology studies the psychological state and needs of design subjects and expresses them through design carriers to achieve a better product experience. Cultural creative product design needs to deeply explore social and cultural connotations, align with people's aesthetic preferences and psychological needs, and integrate culture into the design and innovation process to enrich the artistic and cultural content of the products. Therefore, design psychology plays a guiding role in the concepts and ideas of cultural creative product design. By applying design psychology concepts and methods to cultural creative product design, products with richer cultural content and appeal can be created, better meeting users' aesthetic and psychological needs[3].

## **3. Current State and Issues in Qufu Cultural Creative Design from the Perspective of Design Psychology**

### **3.1. Analysis of the Current State of Qufu Cultural Creative Design**

Qufu, leveraging its rich Confucian cultural resources, has developed its tourism industry rapidly, expanding various cultural tourism projects and promoting multiple social, economic, and cultural benefits. However, the development in the field of tourism cultural and creative products in Qufu is still uncoordinated, facing several shortcomings, such as product innovation, branding, digitalization, and talent. In recent years, with the promotion of the conversion of new and old kinetic energy in Shandong and the construction of a culturally strong province, Qufu's cultural and creative industry faces the test of transformation and high-quality development. To promote the rapid development of Qufu's cultural creative industry, the provincial government, in collaboration with industry associations, has organized cultural creative design competitions, involving many enterprises and young design talents. This initiative aims to stimulate the early stages of Qufu's tourism cultural and creative product development, injecting new vitality into the industry[4]. However, the development of Qufu's tourism cultural and creative products still faces many challenges. In terms of product innovation, more creativity and innovation are needed to meet the diverse needs and expectations of tourists. Brand building requires attention to product quality and image shaping, enhancing product awareness and reputation. Digitalization needs improvement in information construction, development of more digital products and services, increasing product convenience and interactivity. Talent cultivation needs to focus on training and attracting cultural creative talents to meet the industry's development needs[5]. Qufu's cultural creative industry development faces opportunities and challenges, requiring joint efforts from the government and enterprises, strengthening cooperation, focusing on innovation, improving product quality, strengthening brand building, expanding digital services, and cultivating and attracting more cultural creative talents to promote the industry's rapid development and inject new vitality into Qufu's economic, social, and cultural development.

### **3.2. Existing Issues in Qufu Cultural Creative Products**

#### **3.2.1. Serious Homogenization, Lack of Regional Characteristics**

Currently, Qufu's cultural creative products lack variety, and products in the "Three Confucius" scenic area are similar to those in other tourist attractions, leading to serious homogenization. Existing cultural creative products are limited to handicrafts and a few consumables, restricting development, lacking design innovation, and failing to highlight cultural characteristics and differences. Additionally, existing cultural creative products face severe craftsmanship issues, with poor-quality products potentially harming traditional cultural inheritance and innovation.

### **3.2.2. Lack of Implementation for Excellent Cultural Creative Products**

Qufu's cultural creative industry faces multiple issues, including difficulties in product development, challenges in implementing excellent cultural creative works, and lack of support for outstanding creative ideas. These problems may result from insufficient market research, lack of creativity and design capability, shortfall in funding support[6], and inadequate cultural creative awareness. To address these issues, relevant departments and enterprises in Qufu need to adopt various measures, such as strengthening market research and analysis, attracting professional talents, expanding funding sources, enhancing intellectual property protection, and formulating effective promotion strategies to promote the development of the cultural creative industry, enhance product and work competitiveness, and facilitate the implementation and realization of outstanding cultural creative ideas.

### **3.2.3. Lack of Insight into Inner Needs, Cultural Creative Products Lack Appeal**

Existing cultural creative products are often designed for the sake of design, without considering implementation costs and manufacturing difficulties, resulting in low practicality and lack of appeal to consumers. Designers fail to deeply understand users' inner needs, making the products less attractive and lacking novelty. This situation highlights the necessity of considering consumer needs in product design as emphasized in design psychology. Products designed under the guidance of design psychology can better capture consumers' inherent psychological needs, making the products more popular with the public. Therefore, incorporating design psychology into design can enhance the overall performance of cultural creative products.

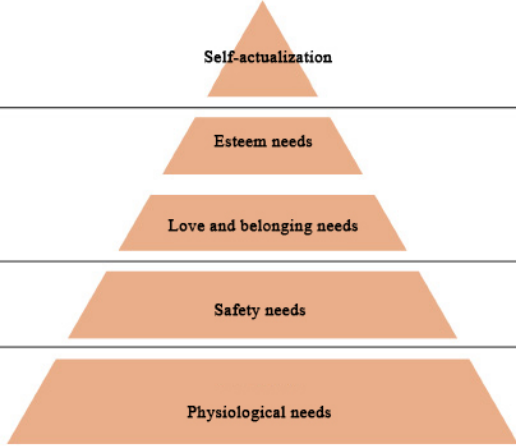
### **3.2.4. Insufficient Media Promotion**

Effective media promotion is crucial for the dissemination of excellent cultural creative products and culture[7]. For instance, the successful promotion of the Forbidden City's cultural creative products owes much to their quality, cultural content, and media promotion. Similarly, strong media promotion can enhance consumers' awareness and interest in Qufu's cultural creative products, influencing their trust and purchase decisions.

## **4. Analysis of Design Concepts for Qufu Cultural Creative Products Based on Maslow's Hierarchy of Needs**

Qufu, located in the eastern part of Jining City, Shandong Province, China, is a historical and cultural city with a rich heritage. It is known as the hometown of Confucius and a significant center of ancient Chinese culture, often referred to as the "Eastern Athens." Historically, Qufu has been a political, cultural, and educational center, enjoying titles such as "First School Under Heaven," "First City Under Heaven," and "First County Under Heaven." The city houses numerous cultural heritage sites and historical buildings, such as the Confucius Temple, Confucius Mansion, Qufu University, the Three Confucius Sites, and Rites Instrument Street, showcasing its thousand-year-old cultural charm. In recent years, Qufu has actively developed its cultural creative industry, encompassing cultural tourism, arts, media, and sports, injecting new vitality into its economic and cultural development[8]. Considering the unique cultural context of Qufu, applying Maslow's hierarchy of needs to analyze the demand for cultural creative products can enhance the rationality and practicality of Qufu's cultural creative product design[9].

**Table 1.** Maslow's demand theory analyzes the demand for cultural and creative products in Qufu

| Maslow's Theory   | Analysis of Qufu cultural and creative needs | Analysis of Qufu cultural and creative products  |
|---|--|--|
|  <p>Self-actualization</p> | Aesthetic needs (presence layer)             | Product aesthetics: Emphasizing the thinking of life aesthetics, such as the origin of life, life transcendence, etc   |
| <p>Esteem needs</p> <p>Love and belonging needs</p>   | Cultural needs                               | Product connotation: the spirit of Confucian culture, that is, the core values of "benevolence, righteousness, courtesy, wisdom and faith". The spirit of constant search and pursuit of knowledge, wisdom and truth |
| <p>Safety needs</p>   | Functional requirements                      | Product utility: carrying, storage, folding, storage, lighting, etc  |
| <p>Physiological needs</p>  | Sensory needs                                | Product appearance: shape, color, texture, material, etc   |

#### 4.1. Sensory and Functional Needs

According to Maslow's hierarchy of needs, human needs are divided into physiological, safety, social, esteem, and self-actualization needs. Based on this theory, we can analyze the needs for Qufu cultural creative products from sensory, functional, cultural, and aesthetic perspectives. Sensory and functional needs form the foundation for higher-level needs. Sensory needs are direct and instinctive emotional responses, emphasizing the physiological characteristics of users' attention, feeling, and listening to the product. Functional needs relate to the actual utility of the product, focusing on whether the product can effectively solve users' problems in life. For example, the ancient practice of burning incense while reading creates a serene atmosphere conducive to concentration, merging with the spirit of Confucian learning[10]. Products designed around sandalwood can incorporate this cultural essence.

#### 4.2. Cultural Needs

Cultural needs occupy the middle level of Maslow's hierarchy, providing the foundation for love, belonging, and esteem. They reflect the recognition of the product's cultural value. The goal of product design is not only functionality but also enabling users to gain deep emotional satisfaction through multi-level interaction with the product. For Qufu cultural creative design, cultural needs are crucial, as Qufu is a significant source of traditional Chinese culture with a rich historical heritage. Qufu cultural creative design must consider cultural needs to meet people's desire for traditional culture and history[11].

#### 4.3. Aesthetic Needs

Aesthetic needs relate to the perception and pursuit of beauty, significantly impacting the design and promotion of Qufu's Confucius cultural creative products. Aesthetic needs influence design styles and elements, affecting consumer choices and behavior. Understanding how to attract consumers to purchase Qufu cultural creative products is crucial, given the influence of aesthetic needs on promotion and marketing strategies.

## 5. Design Practice of Qufu Cultural Creative Products Based on Design Psychology: A Case Study of the "Three-Character Classic" Creative Storage Design

### 5.1. Design Strategy

**Consumer Positioning:** The target consumers of this cultural creative product are those who appreciate Chinese culture, have an interest in traditional Chinese culture, and require practical yet artistic cultural creative products. Promotion can be done through social media, cultural events, and exhibitions.

**Establishing Design Points:** The design points focus on two aspects. First, in product design, the content of the classic "Three-Character Classic" is transformed into practical desktop storage tools, highlighting cultural connotations and design creativity. Second, in materials and craftsmanship, neodymium iron boron, known for its strong magnetism and corrosion resistance, is used, along with antique texture designs to enhance artistic and classical appeal.

**Application of Design Theory:** Norman's cognitive psychology's three levels theory is applied, focusing on reflective levels in cultural creative design. Most cultural creative products need to strengthen behavior and reflective levels.

**Determining Product Style:** Based on the analysis of Qufu cultural creative product needs, the key terms extracted are practical, unique, integrated, and artistic conception. The practical aspect addresses basic needs, uniqueness counters homogenization, integration merges traditional culture with modern design, and artistic conception ensures the cultural heritage is well-presented in a modern context.

### 5.2. Design Practice



Figure 1. The total rendering of the product

Product design communicates with people, based on Norman's design psychology theory, through three levels: instinctive, behavioral, and reflective. These levels interact and support each other, with a focus on each level considering the influence of the others. In product design, the instinctive level's emotional response comes from the initial perception, necessitating attention to appearance, feel, and first impression to attract consumer interest. The behavioral level emphasizes user experience and functionality, ensuring convenience and satisfaction in usage. The reflective level concerns deeper cognitive responses, focusing on comprehensive user experience and satisfaction.

#### 5.2.1. Instinctive Level Design

The instinct level is the first level of the user's contact with the product, which triggers a deeper level of consciousness and thinking through a product impression formed in the user's mind instantly, which is the starting point and foundation for the formation of emotional experience. Product attractiveness is the manifestation of the instinctive level, which is mainly reflected in the appearance

of the product, corresponding to the design elements such as the shape, color, texture, and pattern decoration of the product. According to the cultural and creative product I designed, "Sanzijing Cultural and Creative Product", we also paid attention to the appearance design of the product at the instinctive level to increase the attractiveness of the product (Figure 1 Total effect of the product).

The "Three-Character Scripture Cultural and Creative Products" is inspired by the classic textbook "The Three-Character Classic", and each character is designed as a small ferromagnet, which is matched into different storage tools through different combinations, such as pen holders, sticky notes, hooks, etc. This cultural and creative product gives full play to the cultural connotation of the "Three Character Classic", and shows the classical beauty and practicality through the practical ferromagnetic design.

When using design at the instinctive level, we skillfully integrate the cultural connotation of classic textbooks into the appearance design of the product. The design of each character is inspired by ancient Chinese culture, using traditional fonts and textures to present a classical aesthetic. At the same time, the meaning of each character is also derived from the content of the "Three Character Classic", which can arouse people's thinking and discussion about Chinese culture. This kind of design that integrates cultural connotations can not only attract the attention of consumers, but also arouse their resonance and emotional resonance. (Figure 2 Design details a.)



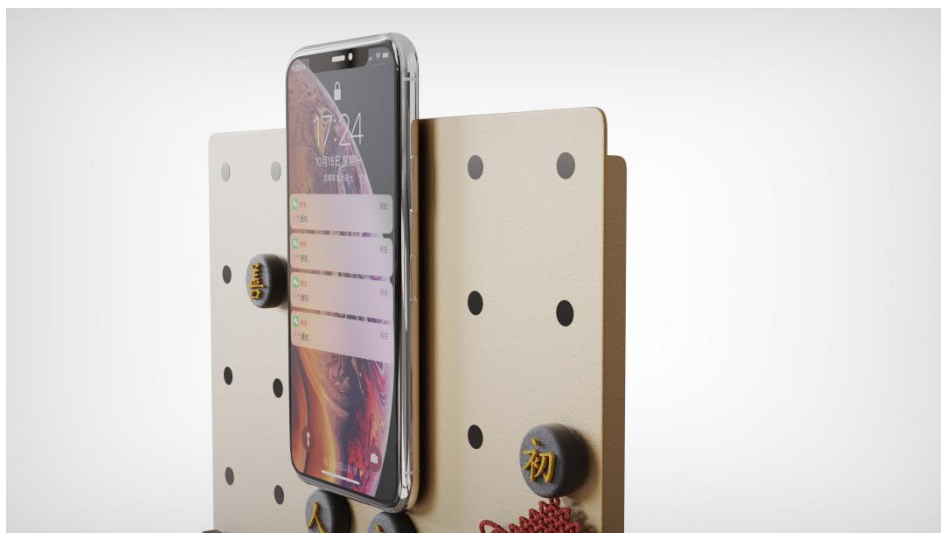
Figure 2. Product Detail Diagram a

### 5.2.2. Behavioral Level Design

**Behavioral Level** is the second layer of user interaction with a product, where users engage with the product's functions to fulfill their needs, thereby forming an emotional experience. The design at this level emphasizes the product's operational methods and the overall user experience, focusing on aspects such as how the product is turned on or off, its functionality, safety, and convenience.

Analyzing this cultural product from the perspective of the behavioral level's requirements for operation and experience, the design utilizes magnetic components, allowing consumers to combine them in various ways to create different storage tools. This enhances the product's practicality and flexibility. Additionally, the surface of these magnetic components features an antique texture, adding to the product's artistic appeal and classical charm. This design approach aligns with the behavioral level's emphasis on operation and experience, providing consumers with a more satisfying and enjoyable experience while using the product.

From the perspective of enhancing the user experience, the design of this cultural product fully leverages the cultural significance of the "Three Character Classic" by incorporating traditional fonts and textures to evoke a sense of classical beauty. This design not only captures the consumer's attention but also encourages reflection and discussion on Chinese culture, enriching the product's cultural value and usability. Furthermore, by allowing consumers to freely combine different components to create various functional tools, the product offers greater practicality and flexibility. (Refer to Figure 3, Product Detail Image b).



**Figure 3.** Product Detail Diagram b

This design approach enhances the consumer experience by meeting their demands for both functionality and aesthetics. In emotional product design, it is essential to remove misleading elements or those that do not contribute to the product's intended purpose. Instead, the focus should be on reinforcing elements that guide user behavior and emphasize the product's core functions.

Additionally, designers must consider the product's new usage environment, adding or removing elements as necessary. The concept of "integrating utility with culture" is key to overcoming the design challenges of cultural products. Designing at the behavioral level requires keen observation of consumers' everyday life scenarios, uncovering new functions, and enhancing the product's utility to elevate the overall user experience. (Refer to Figure 4, Product Detail Image c, and Figure 5, Product Detail Image d).

### **5.2.3. Reflective Level Design**

Reflective level design evokes emotional resonance and self-awareness, with the "Three-Character Classic" as inspiration, connecting with users' cultural experiences. The design allows for creative combinations, stimulating creativity and imagination, providing joy and a sense of achievement. Additionally, it has educational significance, familiarizing users with traditional Chinese culture through design elements, enhancing cultural literacy.

## **6. Conclusion**

Design psychology, a discipline studying the relationship between human thinking, emotions, behavior, and design, holds significant application value in cultural creative product design. This research, based on Qufu's cultural creative products and design psychology, proposes a cultural creative product design concept based on social, consumer, and design psychology to enhance Qufu cultural creative products' cultural content and user psychological needs, promoting the development of Qufu's cultural creative industry. This study analyzes the current state and issues of Qufu cultural creative design from a design psychology perspective, applying Maslow's hierarchy of needs to analyze design concepts, including sensory, functional, cultural, and aesthetic needs. The case study of the "Three-Character Classic" creative storage design explores design strategies and practices based on design psychology. The findings suggest that design psychology theories can provide significant guidance and support for Qufu cultural creative product design. Future research should continue exploring the application of design psychology in cultural creative product design, contributing to the development of the cultural creative industry.

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