**Analysis on Advantages and Influencing Factors of Design and Development of Museum Cultural & Creative Products**

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**Abstract.** The design and development of museum cultural & creative products originated from the needs of museum management and development, the promotion of Cultural and Creative Industry Park and the rise of new museology. Museum resources are cultural resources that can be utilized and developed, which provides the basic conditions for the design of cultural products. Through in-depth excavation and utilization of its own cultural advantages, museums can design and develop products that are popular with the public. The design and development of cultural and creative products in museums are affected by various factors, but actively seek strategies and ways to solve problems, they still have broad research and development prospects.

1. **Introduction**  
Museums are embraced with a large number of resources and contain rich historical and cultural connotations. Cultural and creative products with high added value can be developed by transforming museum resources into effective elements through creative design. The design and development of museum cultural & creative products originated from the needs of museum management and development, the promotion of Cultural and Creative Industry Park and the rise of new museology. Museum cultural & creative products enjoy the characteristics of contemporary design language, which not only facilitate the dissemination of the spiritual connotation of museum collections to the public, but also can create certain social and economic values and effectively promote the sustainable development of cultural and recreational undertakings. Museum resources are cultural resources that can be utilized and developed, which provides the basic conditions for the design of cultural products. The uniqueness of museum cultural resources creates the uniqueness of cultural products, thus making them different from ordinary commodities. It is of great practical significance to study and analyze the advantages and influencing factors of the design and development of museum cultural and creative products.

2. **Advantages of Design and Development of Museum Cultural & Creative Products**

2.1. **Museum Resources Provide Inspiration and Elements for Design and Development**  
Compared with ordinary enterprise organizations, museums have more abundant collection resources for the development and utilization of cultural and creative industries. All kinds of collection resources not only have the characteristics and significance of different times, but also contain many different factors caused by changes in history, environment, humanistic spirit, social consciousness, etc., which provide a lot of inspiration for the design and development of cultural and creative products. Thorough analysis of museum collection resources and full investigation of the needs of the
public and the market are the key to the success of cultural and creative products. The museum's collection resources can provide creative sources of design from two aspects: first, select some objects and images in the museum's collection that have the most public influence and can best meet the aesthetic needs of the public, extract interesting and identifiable elements from them, and then transform them into commercially attractive designs; Second, the design, form, implication and process of the museum collection are refined to convey some feelings and feelings to the public through in-depth excavation of the museum collection information, so as to show the cultural characteristics of the museum collection[1].

Museum resources provide inspiration and elements for the design and development of creative products, and the design and development of related products also enable the value of collection resources to be better extended and spread. As for the traditional mode, the ownership and dissemination right of museum resources are often confined to the interior of the museum, which makes it difficult for the public to obtain resource information and the channels of resource utilization and dissemination are relatively blocked. Nowadays, more and more museums use advanced technical means to collect digitization of resource information, which is convenient for sharing pictures, text materials, videos and educational materials, etc. of the collections. This provides more powerful conditions for the design and development of cultural and creative products. For designers of museum cultural and creative products, they must first be familiar with and understand the museum's historical context and the connotation of the collection, and then they can reasonably and fully use museum resources to provide inspiration and elements for creativity, so as to establish design situations and strengthen design tension. On the basis of the above, it will finally realize the matching of product design expression methods and strategies to stimulate consumers' emotional resonance, so that museum cultural and creative products will convey the core cultural connotation of museum resources to the public.

2.2. Academic Resources Provide Basis for Design and Development of Cultural & Creative Products

The museum enjoys not only rich collection resources, but also professional scholars, experts and researchers. By integrating academic resources, the accuracy and foresight of the museum's dissemination of culture are ensured, and academic basis is also provided for the design and development of related cultural and creative products. The Palace Museum in Beijing has a strong academic research team. In recent years, the Palace Museum has launched a number of creative products App, such as "The Emperor's Day" (Figure 1). Through the role-playing of lions outside Gate of Heavenly Purity, the Palace Museum has an in-depth understanding of the emperor's food, clothing, daily life, work and entertainment 12 hours a day. It also has as many as 200 interactive points full of interest to lead users to complete game tasks, visit the Palace Museum buildings, appreciate the Palace Museum's cultural relics and learn historical allusions. Each interactive link is equipped with written explanations, which not only show vivid palace life, but also restore the misread historical truth. Another example is App "Han Xizai Banquet Map" (Figure 2). In the form of a whole long scroll, you can preview the overall picture and the partial picture of the painting by zooming in and out. You can get a detailed explanation of the figure information by clicking on the figure. The figure in the painting can be displayed in the form of animation. App inside's high-definition cultural relic images, professional academic materials, rich media content and innovative interactive design are combined to fully mobilize the user's sensory experience[2].
The content of App inside, a cultural and creative product of this kind, is produced through in-depth research and careful textual research by museum scholars, experts and designers. It is full of interest and knowledge for users. Thus, professional academic resources ensure the accurate interpretation of the museum's history and culture by cultural and creative products and provide all-round academic support for product design and development.

2.3. The Construction of High-quality Platform Provides Basic Guarantee for the Marketing of Cultural & Creative Products

As an information collection and storage institution, museums have natural advantages in the richness and popularity of their cultural resources. With the help of museum platforms, official shops are set up to sell their cultural and creative products so that the public can recognize the originality and authority of products from the heart. With the popularization of the Internet, the combination of museums and the Internet is increasingly close. More and more museums are starting to set up official product online shops to sell cultural and creative products online, and more actively take various modes to display collections to the public and sell related cultural and creative products. The promotion effect of museum platform on the marketing of cultural and creative products is mainly reflected in the following two aspects:

(1) It provides a platform for display and sales

Both the museum physical store and the online store provide a platform for the display and sale of their cultural and creative products, carrying a very rich amount of information. Taking the Tmall flagship store of the National Museum of China as an example, the website classifies all cultural and creative products in detail, which is convenient for consumers to search for relevant products clearly and quickly, and provides detailed introduction of creative sources, historical allusions, design elements and other aspects of the products, deepening consumers' cultural awareness of the products, thus promoting product sales.

(2) It provides a platform for communication and discussion

Many museums release the latest design and development of cultural and creative products through official social media, thus causing public concern and hot discussion. At the same time, they open Fansite for everyone to exchange and discuss. For example, the "Pearl Headset" and "Emperor Folding Fan" in the Imperial Palace in Beijing, the "I Know" adhesive tape in Inside The Emperor's Treasure, and the "Yue secret color porcelain Lotus Bowl Cookie" in Suzhou Museum have all once aroused public discussion on social media and thus become Internet celebrity products. Originally solemn and serious museum resources have become the topic of people's daily life, which has played an effective role in promoting the museum itself and cultural and creative products. The identity of online social media has also changed imperceptibly during this period, from "information disseminator" to "content creator". The public can freely discuss and express their views on social media and give a large amount of feedback information to cultural and creative products, which provides a big data reference for the museum's subsequent product design and development.
3. Factors Affecting the Design and Development of Cultural & Creative Products in Museums in China

3.1. The Influence of Museum System and Management Mechanism
The government's support in policy and finance is an important factor in the development of cultural and creative industries in museums. In recent years, the state has strongly supported the development of cultural and creative industries in museums. Public museums belong to public welfare institutions. On the one hand, the financial management system of public museums is that all operating funds of museums are fully allocated by finance, and state funds are not allowed to be used for operation, development and investment[3]. On the other hand, all museum revenues must be turned in. Because of the influence of the system and mechanism, although the museum's cultural and creative products have broad prospects for development, they cannot give full play to and release the advantages of talents and resources, which will definitely reduce the motivation and enthusiasm of the museum in developing cultural and creative products.

3.2. Impact of Adverse Protection of Intellectual Property Rights
Nowadays, with the rapid development of Internet technology, it is very convenient to spread and obtain information in the network. In addition, China's current intellectual property protection mechanism needs to be strengthened, which makes the entire cultural and creative industry, including museum cultural and creative products, vulnerable to infringement. Excellent Product innovation is likely to be quickly copied and imitated after it is highly praised by consumers and recognized by the market. For example, after Sichuan Sanxingdui Museum first introduced "Bronze Mask Biscuits", other museums have followed up the development of similar cultural relic-themed biscuits, resulting in serious homogenization of products. At the same time, museums will follow each other's product types, performance and even marketing methods, thus unable to concentrate all their efforts to create products with unique charm of the museum. The innovative research and development of cultural and creative products requires a great deal of manpower, material resources and financial resources. If it is copied and imitated by others without authorization once it is launched into the market, it will inevitably cause the creative commercial value of the originators to be difficult to fully realize and affect their Creative Power Entertaining. Without the protection of intellectual property rights, the legitimate interests of creative subjects cannot be protected. The government should improve the protection system of intellectual property rights and strengthen the protection of intellectual property rights.

3.3. Impact of Technological Development
Funds and talents are the basic guarantee to support the design and development of museum cultural and creative products, while technical support is the only way to realize the transformation from Creative Concept to real products. More and more museums integrate all kinds of collection information, systematically carry out digital design and establish multimedia data databases to facilitate Internet visitors from all over the world, which all benefit from the development of digital equipment technology. At the same time, the establishment of the digital museum makes the collection resources open to the public anytime and anywhere, which provides a new development opportunity for the design and development of cultural and creative products. On the other hand, through the application of technology, natural history, culture and creative products are more interactive and interesting in form, so that the public can understand and know the collection in a rich way of user experience[4]. For example, the high-tech art performance " Riverside Scene at Qingming Festival 3.0" , jointly designed and produced by the Beijing Palace Museum and Phoenix Satellite TV Group, perfectly combines the application of digital technology with the contents of national treasures. Through excavating the artistic verve and cultural connotation of the original work, it integrates the double 8K ultra-high definition projection technology to show the various living beings and social features of Bianjing, the capital city of the Northern Song Dynasty, in a dynamic effect, and constructs
the immersion experience of real and virtual people in the painting. It can be seen that the development of technology can enrich the design methods of cultural and creative products, and the application of technology can create ideal cultural and creative products, so that the public can be satisfied with the experience behavior, and finally realize the conversion of cultural and artistic values to cultural and artistic prices.

3.4. The Influence of Museum Collection Quantity and Value

The number of museum collections is directly proportional to the number of materials that can be used for reference in the design and development of cultural and creative products, and the value of the collections directly affects the connotation and market attention of their cultural and creative products. The interaction between the museum and the collection takes the museum platform as the carrier, and the museum will be famous for its precious collection. For example, Mausoleum of the First Qin Emperor Museum's Terracotta Warriors, Inside The Emperor's Treasure's The Green Jade Cabbage, Shanghai Museum's Big Grams Tripod, Neues Museum's bust of Egyptian Queen Nefertiti and so on. There are many kinds of related creative products designed and developed based on these precious cultural relics, which are loved by people all over the world. For the design and development of museum cultural & creative products, we should seriously explore the collections that can show the value of the museum as creative materials, create cultural products that are symbolic and can be integrated into contemporary life, and activate the collections, so as to give full play to the educational, collectible, cultural and commercial nature of museum cultural and creative products.

3.5. The Influence of Museum Professionals

Although the museum is extremely rich in cultural resources, if there is no relevant professional personnel to work, the museum's cultural and creative products cannot well show the charm of culture. China's cultural and creative industries started late, especially in the museum's internal institutions, which generally lack talents in creative design, management and other aspects. Therefore, lack of experience in the design and development of related cultural and creative products has led to a series of problems, as follows:

(1) Products lack innovation.

Most museums in China have insufficient investment in the design and research of cultural and creative products, lack their own team of design talents, and have yet to form original design and research capabilities and competitiveness. The design of most products is only a simple copy of the cultural relic resources in the library or a copy of the excellent literary creation products at home and abroad, ignoring the originality of the design and lacking the extraction of the cultural essence of the library. For example, the calligraphy themes developed by the Shanghai Museum, Nanjing Museum and Suzhou Museum have no difference except for the color matching of the products and the calligraphy content printed on the surface. Consumers can hardly identify the source of the products. Cultural & creative products of various museums should display their characteristics to the greatest extent. Imitation of each other will hinder the development of cultural and creative industries. From the consumer's point of view, the lack of creative and similar products affects the consumption choice space and cannot meet the growing material and spiritual needs, thus making the museum cultural and creative products less attractive to consumers.

(2) Products lack brand awareness

Brand is an intangible asset with economic value, occupying a certain position in the consumer's consciousness, covering specific expressions such as product packaging and visual image. At present, the cultural & creative products of most museums lack brand difference and brand identification, and the unique cultural brand image of museums has not yet been established. In order to gain an advantage in the market for museum cultural and creative products, we must stick to original design and brand promotion, which are also the two ends of the "Smiling curve" of the cultural and creative industry with high added value (Figure 3), seize every opportunity to establish Brand Identity, demonstrate the uniqueness and quality of its products, and enhance consumers' trust in the museum
brand[5]. The museum avoid consuming too much investment in the middle and lower parts of the curve, and strive to exert power at the left and right ends of the curve with high added value, i.e. pay attention to design research and development and brand promotion.

Figure 3. Smile Curve of Cultural and Creative Industry Chain

4. Conclusion
The richness and uniqueness of museum resources are an important source of the form and connotation of cultural and creative products. Through in-depth excavation and utilization of its own cultural advantages, museums can design and develop products that are popular with the public. Although the design and development of cultural and creative products in museums are affected by various factors, they still have broad research and development prospects. While making good use of its rich collection resources, academic resources, high-quality platforms and other advantages, museums should also consider the limitations of product design and development, actively seek strategies and ways to solve problems, and integrate various forces to provide better conditions for the design and development of museum cultural and creative products, thus providing broad space for the sustainable development of cultural and creative industries.

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