

## Research on the Application and Development of Creative Products Based on Artificial Intelligence

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**Abstract:** with the development of artificial intelligence, the form of product innovation is changing. The user-centered and people-oriented design concept must be paid more and more attention. The styling design of literary products is presented to us in the first position. Literary products are the combination of culture and creativity. The theme of strengthening the core of culture is needed in their styling design. With exquisite emotional experience, creative elements are extracted and integrated into the styling design of products. The development of artificial intelligence technology will become the new engine of world economic development. The application of cultural elements to the design of cultural and creative products can enhance the cultural connotation and cultural uniqueness of the products, and also provide new ideas for the inheritance of modern society. With the help of modern high technology, the essence of traditional culture is integrated to achieve the effect of spreading culture, enhancing the cultural value of products, and at the same time obtaining economic benefits.

### 1. Introduction

In today's era of artificial intelligence, the design of creative products emphasizes new ideas of innovation, personal creativity, cultural and artistic support and promotion of economy [1]. Nowadays, artificial intelligence has become a new engine to promote china's economic development, and is gradually practicing “science and technology make life better”, which is the key area of the next round of global scientific and technological revolution and industrial life. Through the perfect cooperation of control system and operating system, it can play a strategic role effectively [2]. In the military area, the application of artificial intelligence can provide various resources to solve complex tactical scenarios, and effectively realize the utilization of resources. Literary products not only have the practical functions of general commodities, but also have strong uniqueness. The uniqueness of seed delivery lies in the cultural core of literary products. Culture is a specific product formed and inherited by long-term accumulation of different nationalities and regions [3]. Through the analysis and induction of culture, we will deeply explore the cultural connotations that have not been developed, redefine the culture that does not conform to the background of the current era, and give new meaning to the new era through design transformation [4]. Deconstructing and re-creating the original artwork, interpreting the traditional cultural meaning from the perspective of the designer, redesigning the symbolic elements of the original daily artwork and the current industrial products to construct a brand-new creative product with certain culture. The human society is constantly innovating and developing. Therefore, the people's requirements for science and technology are gradually increasing, and the further development of informatization must be supported by intelligent technology [5].

Cultural creative products (cultural creative products) are a new type of cultural products formed by the combination of symbolic meaning, aesthetic characteristics, humanistic connotation and creativity contained in cultural elements themselves [6]. It is based on culture. There are some differences between the design of literary products and that of general products. Most product designs are usually redesigned after consumers' needs or target products are determined. Cultural and

creative products are first as a creative product, the biggest characteristic is that they have the cultural attributes that general products do not possess, but they are also a commodity. Only when they enter the market and accept consumer inspection can they produce commercial value [7]. In reverie, it has partially become a mysterious entity, a combination of desire and metaphor. They belong not so much to the material world as to the spiritual world. The functions of modern creative products have much richer connotations than before, including physical functions- product performance, structure, accuracy and reliability; physiological functions-product convenience, safety and pleasure [8]. After the concept of “artificial intelligence” was put forward, countless scientists went forward to study it successively, and strived for the intellectualization and humanization of machines [9]. The beautiful allegory constitutes a graphic expression of people's embarrassment and longing for spiritual will. It is precisely because this emotional feature is deeply loved by the people that it is not difficult to find traces in folk art. Artificial intelligence has become the core driving force of the new round of industrial revolution. As the key field of the next round of scientific revolution and industrial revolution in the world, it is of great significance to the economic development of the whole world. This paper is about the application and development of artificial intelligence products explore [10].

## 2. Definition of Creative Products

### 2.1 The Stratification of Creative Products

The interestingness of cultural creative products is also the trend and pursuit of designers nowadays. The pleasure of using a product can greatly increase the satisfaction of users with the product. The product ultimately comes from life serving life. To refine the unique culture into graphics is the necessary means to develop the design. Re-creation and design of this unique culture can be integrated into creative products, which can convey the unique cultural core and spirit to consumers and the public. The aesthetic appreciation of products is often embodied through novelty and simplicity, rather than relying on too much decoration to become beautiful things. It must be the beautiful body itself on the basis of satisfying functions. Naturally, the beauty of design also follows the basic aesthetic interest of human beings. Cultural connotation is profound and contains various auspicious connotations, which can meet the psychological needs of various customers. Therefore, the cultural elements used in the product itself can arouse the customers' purchasing desire, thus, it has certain market value.

Due to the diversification of product types in creative industries, there are not only physical products, but also service products which can evoke emotional memories, entertainment or experience. The concept of product in the broad sense refers to a kind of service that can satisfy certain needs and interests of human beings. In the narrow sense, the concept recognizes the location. The product is an object produced with specific material shape and use. The culture in the creative products must be excellent and worth inheriting, so the design of sample delivery will have lasting vitality and endurance; the vulgar and worse culture can not be the creative source of the creative product design, otherwise it is only sensory stimulation flowing on the surface and fresh novelty hunting psychology. Once the visual image of the product has formed a unified design style and characteristics, consumers will have a cognitive and resonance on the creative products. Once consumers form the recognition and preference of the product, they can further build the brand of the product and form the brand effect. These two aspects of Creative products interact and are indispensable, of which the most essential part is the cultural nature of the products, which is the key to determine the attribute characteristics of Creative products and the core value and difference from ordinary products, the level nature of Creative products is shown inTable 1 and Figure 1.

Table 1 the Stratification Of Creative Products

	Value	Features
Condense creative wisdom	3.42	2.91
Conveying cultural connotation	3.06	3.13

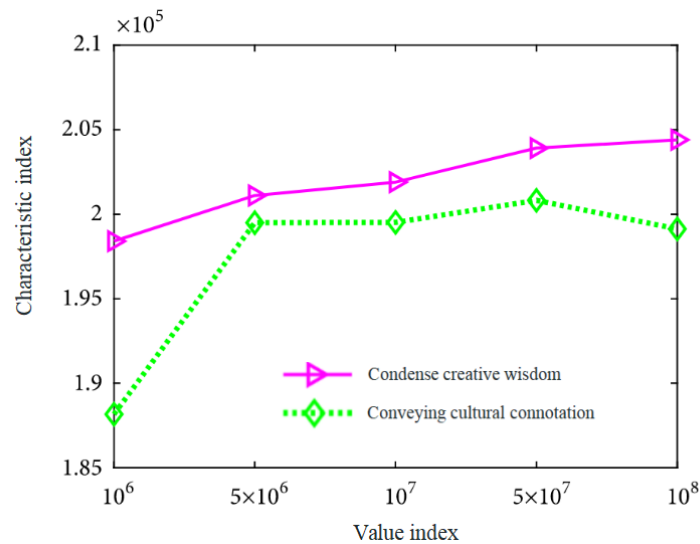


Fig.1 The Stratification of Creative Products

## 2.2 Artificial Creative Products under Artificial Intelligence

Literary products are not serious academic designs based on historical textual research results. They should mix part of the material cultural heritage with part of the intangible cultural heritage. Some characteristics of artistic creation are needed. Literary products are the carrier of the combination of culture and creativity. The key point of their design is the mutual transformation between them and the presentation method in the products. We should determine the cultural information conveyed to extract cultural elements, then transform it into design ideas, and finally complete the design of literary products. In the design and development of cultural creative products, we can transform concepts by observing the concrete manifestations in specific life.

The addition of creativity requires more investment and effort. This kind of creativity can provide vitality and novelty for cultural creative products, and be applied to design to guide life in turn. Conformity with the law of value is the direct reason for the existence of design. Most products are products that meet the needs of the public. Therefore, the aesthetics of products is not the aesthetics of the designer's personal subjective consciousness. Only with the aesthetic sentiment of the general public can the aesthetics be realized. Artificial intelligence plays a certain role in cultural identification, making it different from other products and improving the relevance, uniqueness, originality and story of cultural and creative products. After inputting the data to be run into the computer, the results will be displayed after the computer runs the relevant programs. If you want to carry out further operations, you can program on the original programs to make the math system software have more operation steps. The research on automatic programming can not only promote the development of semi-automatic software development system, but also make the artificial intelligence system learning by improving its own coding get more long-term development.

As a kind of commodity, literary products have its particularity, but they are still valuable commodities in essence. Therefore, the attributes of this commodity determine that designers need to pay attention to its practicality when designing every creative product. Learning is not only the fundamental means to acquire knowledge, but also an important symbol of human intelligence. Machine learning is the basic way to make computers have machine intelligence. In the design of creative products, the integration with other cultures such as popular culture and world culture will produce different sparks, which will contribute to the prosperity of the whole culture. This also relates to people's understanding of the cultural outlook. Artificial intelligence can store a large amount of information, process and judge these information at high speed, and make the most accurate decision, which is impossible for human brain to do. The deep image of culture is transformed into a visible, touchable and perceptible realistic form, which undoubtedly provides a realistic carrier for the traditional cultural elements and an opportunity and impetus for the design and

creation of industrial products with cultural characteristics. Different people have different understanding of culture because of their own knowledge background and growing environment, which also results in the diversity of creativity. Creativity can transform ideological culture into material form, skillfully linking unrelated things, behaviors and concepts. It is necessary to grasp the subtle connection between things sensitively, establish the connection through design means, and transform it into design symbols that can be used in design, so as to adapt to the modern environment and continue to inherit and carry forward. Culture of different times and different regions can be better understood and accepted through creative transformation.

### 3. Attribute Analysis of Literary Creation Products

#### 3.1 Combination of Culture and Creativity

Literary products must make people enjoy beauty through their beautiful external form. In reality, the vast majority of design requirements are new, different, changing and different, otherwise design will not be called design. Automatically write a program to prove that the task of a given program to obtain a specified result is closely related to the task of obtaining certain specified results. From a face-to-face perspective, products are only a unit of the whole literary industry chain. In order to achieve better sales results, designers need to go deep into all aspects to form a systematic brand logo. Artificial intelligence enables it to have its actual functional function while maintaining the expression of morphological aesthetic feeling or spiritual connotation. It is combined with grafting method, through element extraction, modeling design, and on the basis of retaining element characteristics, it integrates modern design style, adopts pattern colors with more contemporary aesthetic elements, and seeks the combination point of ancient and modern culture, The attributes of the creative product are shown in Table 2 and Figure 2.

Various modes are effectively and accurately identified, thus ensuring the accuracy and efficiency of information processing. The more patterns the computer intelligent recognition system can recognize, the stronger its ability to process complex information. The product has no visual sense of contradiction and its design is reasonable. Creative products can also bring certain social benefits. The cultural content and cultural information it contains will imperceptibly affect consumers' principles, emotions and ideas. High-quality creative products can create good social influence.

Table 2 Attribute Analysis Of Literary Creation Products

	Dominance	Elastic
Commodity attributes	0.35	1.50
Spiritual attributes	2.41	0.61

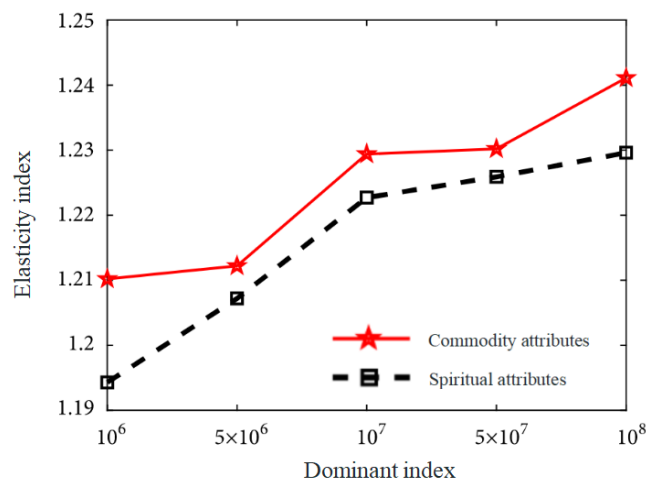


Fig.2 Attribute Analysis of Literary Creation Products

### **3.2 Extraction and Transformation of Cultural Elements**

The modelling of cultural creative products needs to meet certain functional requirements, and the isomorphic composition of artificial intelligence can provide many feasible design principles for the modelling of cultural creative products to meet functional requirements. Cultural diversity and stimulation of human creativity. The character, impression and image of a city can only have the common psychological impression under the blending of material and intangible cultural heritage, which will lead to the appropriate design of creative products. It circulates in the market in the form of commodities. While increasing the cultural connotation of creative products, we can integrate excellent culture into daily life through creative products, so that consumers can understand culture, feel culture and convey a positive attitude towards life while using them. In addition, due to the dual attributes of creative products, especially the spiritual attributes, the realization of their value is influenced by the subjective factors of consumers according to the different cultural cultivation abilities of consumers, thus resulting in greater demand elasticity of creative products. They all depend on people's expectation that it can directly or indirectly meet material or spiritual needs and must have certain practicability. A good creative design product should have good practicability, functionality, applicability and controllability, and must be carefully designed. Simulate human thinking process and intelligent behavior. This long-term goal goes far beyond the scope of computer science and involves almost all disciplines of natural science and social science.

Because of the variety, small batch, multi-variety, highly personalized, customized, time and event sensitivity. The greatest feature of AI is to make corresponding judgments by simulating the thinking process of human beings. For AI systems with expert experience and knowledge reserve, they can feel their emotional mood and then present the depicted scene images. Complete the conversion of physical and chemical graphics, and combine with the process to try to select the most suitable shape design scheme. The short-term goal of AI is to build an intelligent computer to replace human beings in mental work. The choice it makes represents the choice of experts, so as to solve complex problems effectively and improve the efficiency of work in each field. Before the design of creative products, we need to confirm the correctness of the cultural content by investigating the symbolic meaning of the culture we want to convey. Then we need to transform the design into cultural creative elements appropriately to create creative products that meet the aesthetic and spiritual needs of consumers. Integrating the essence of culture into product design can not only show the unique spiritual style of our Chinese nation, but also reflect our unique product image. Constantly injected with new era elements to maintain vigorous vitality. This is exactly what cultural and creative products need in modeling, is in line with public aesthetics, and is a redesign of the original elements in line with current aesthetics. People from different cultural backgrounds will be attracted by its graceful shape and then try to understand its cultural connotation.

### **3.3 Artificial Intelligence Product Application**

The writing robot speeds up the layout on many media and information websites. At the end of June, the first writing robot in Yunnan Province, Xiao Ming, was launched in Kunming. In 1 second, Xiao Ming "written" a manuscript with more than 100 words. Before the "Xiao Ming" took office, the "Southern Metropolis Daily" writing robot "Xiaonan" was officially launched, and more and more media began to produce intelligently. Compared with the media, the Internet giant started earlier in this regard. Tencent's writing robot has been running for nearly two years. Liu Kang, the head of Tencent's content robot project, told reporters that the robot is not a gimmick. This means that on the production side, the culture and media industries are rapidly entering the automation threshold. On the distribution side, the intelligent and personalized reading client, the recommendation engine such as the headline number and the daily express, is recommended according to the interests of the audience, and has been distributed all over the people's smart terminal devices. Coupled with the application of technologies such as drones, VR, and AR, artificial intelligence is bringing tremendous changes to the entire cultural industry.

#### 4. Conclusion

This paper explores the application and development of AI's creative products. The presentation of products is based on their cultural connotations. It needs to have the function of cultural identification with certain ideological characteristics. Strengthen the combination of design and culture, promote the production, trading and transformation of creative and design products and services, create contemporary creative products with characteristics, and realize the organic unity of cultural value and practical value. Through the introduction of artificial intelligence, the combination of technological production and the combination of literary creation products and accompanying ceremony culture, the landing of specific products is realized. We should tap the potential of its uniqueness, embody its rich connotation, and maintain the practicability of the products to meet the cultural needs of consumers while meeting their consumption needs. Cultural connotation can be incorporated into everyday literary creation products, so that each user can interpret cultural connotation in a more relaxed and interesting way and pass on a positive and upward life attitude when using the product. In the future, the development of artificial intelligence technology will certainly bring long-term and profound impacts on people's work, life and education. The application of elements in the design of creative writing products requires operability that can be realized at the same time, and due to the particularity of intangible culture, only non-creative writing products that fully consider feasibility have development prospects.

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