Application Research of Chu Culture Symbols
Based on the Product Semantics

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Keywords: Chu cultural symbols, Product semantics, Product design.

Abstract. In modern product design, blending traditional cultural symbols into makes more alternatives available for product appearance design, and endows the products’ internal imagery with deeper cultural and historical value, whereby the traditional culture can be spread and carried forward better. On the basis of building the product identification system model of the Chu cultural symbols, through theoretical research on the product semantics, the paper aims to explore and sum up the important associations between the product semantics and the Chu cultural symbols. We are also engaged in proposing the application methods of product semantics in the Chu cultural symbols, and making the traditional cultural symbols and the modern product design merged perfectly in the forms and connotations.

Introduction

Philosopher Susanne K Langer believes that the emergence of art is from the humans’ strong ability in creating symbols. In order to express emotion human is bound to create a symbol to serve emotional expression [1]. With the demand of national features in designing, designers also seek to enhance the product's intrinsic value. Symbols is an important carrier of cultural expression, but also an important way to elaborate designer emotion. The research of products semantics is aim to apply the core essence of the Chu culture to practical product designs, so the products not only have characteristics of the times but also have a deeper cultural and historical atmosphere.

The Present Applications of Chu Culture Symbols in the Modern Product Design

The Metaphysical Application of Chu Culture Symbols

As the main part of Chinese civilization in the south of China, Chu culture’s connotation is broad and profound. In recent years, more and more designers start to become interested in blending Chu culture symbols into their product designs. With the emergence of plenty of excellent works, however, we found that many designers who pursue the trend blindly, without understanding the culture behind the profound backgrounds and the relationships between the design elements and the products, just simply added some Chu culture symbols onto the product designs, or employed any representative elements found in the Chu culture and symbols at random to display in their designs. It is obviously that they could not achieve the purpose of the application of Chu culture symbols while ignoring the symbols’ meanings and connotations, and even making the products come apart from its inner culture. Most of research applications on Chu culture stays in the superficial stage, and lacks of the awareness of the overall and deep connotations. Therefore, in making use of those symbols in product designs, it is supposed to be done first that we deeply understand the cultural meanings behind the symbols and those backgrounds, and at the same time the combination among different symbols should also be considered to conform to their relationships. All these efforts will prove that effective applications of the symbols in the product designs improve the product value of cultural connotation apparently.
The Split-Off-Typed Application of Chu Culture Symbols

As with many other cultures, the evolution of the Chu culture symbols is also an integral and systematic process. For many modern designers, it seems that they do not care much about their evolution and inheritance, but arbitrarily select and combine some symbols instead. Obviously, the applications of Chu culture symbols in product designs should not be split off but be built on the basis of inheriting and combining the characteristics of a new era, and furthermore allow to form a new culture with the flavor of the times.

The Connection between Chu Culture Symbols and the Product Semantics

Chu culture as with a long history and constant transmission, its types and forms vary greatly in many ways. And it cannot be denied that culture symbols is a national, unique geographical culture representative, and is also the important carrier and expression forms of its cultural connotation. Chu culture symbols also have experienced thousands of years of inheritance and evolution, during which they were drawn from the ancient society and natural environment. Many ornamental, artistic symbols with unique cultural backgrounds were extracted from several materials, and after using different combinations of structures, colors, lines and shapes to finish the art processing of symbols, Chu culture symbols ended up becoming a kind of expression with humanity except for its modeling and colors.

Product semantics emphasize encoding and decoding of product language and the relations among them, which allow access to designing products with complex technical connotation in the high-tech, high technology era, and which always maintain its simplicity and popularization in decoding and operation[2]; Product semantics focus on not only the function of its own value but also products’ connotation of the humanities, at the same time focus on cultural, ideological and psychological impacts of products, which make it available that the products have the additional values beyond their own functions. Designers, therefore, during making use of the theory of product semantics in product design, are supposed to put all different connotations, the spiritual and psychological needs in various cultures under consideration, and from the premise they might employ all kinds of design techniques to embed the culture connotation into products. Bernhard once said, when a designer transformed his idea into a symbol, conveyed the product symbol to the users, and let the user know his idea, it finally can be a good design. [3] So symbols in the transmission of product design information may play a crucial part in the "encoding", that is to say, the semiotics is also an important part of the product semantics.

In the process of product design, designers may have many humanity connotation elements decoded into typical Chu culture symbols, make the special forms of Chu culture symbols linked with the expression of specific information, encode the Chu culture symbols into a simple and easy design language, upload to the users with the product operating mode or its internal structure, and even more information about the product performance via product visual modeling, let the users be aware of the product images, at the same time deliver Chu culture connotations of the product to the users, and arouse the spiritual experience of Chu culture.

![Figure 1. Product semantic encoding and decoding.](image-url)
The Construction Method of Chu Culture Symbols in Product Semantics

In the product semantics, Chu culture symbol recognition system construction is to help complete the design from the humanistic connotation decoding the process of cultural symbol recognition, but also provides the design basis for the later coding to design language. At the beginning of the design, in order to make product design unified on the connotation, designers need to do effective extraction from Chu culture symbols, and to comply with the design theme. Chu culture symbol recognition system construction is a process from understanding to application, in which the Chu culture symbols that might be used as design elements are to be extracted, the symbols analysis in the form, color, historical background, connotation and etc. is to be made, then the more core symbol expression can be extracted. Symbolism is not only a representative icon or object, but it tends to be an expression which is filled with a cultural position, materiality and meaningfulness and even effective carrier. So "shape" should be extracted on the basis of understanding its "meaning", and on behalf of the symbol recognition, it is "meaning" of life, to achieve the effect of the "spirit". At the same time, the identification of different cultures is directly reflected in symbol recognition, but at a deeper level the difference is more of a "meaning" of expression, because different cultures have different ways of emotional expression.

![Figure 2. Chu culture symbol recognition system.](image)

While Chu culture is one of typical representatives of the southern Chinese culture, its cultural symbols whatever in its "shape" or "meaning" are different from other regional cultures in essence. As a particular cultural system, Chu culture’s core prototype should be considered throughout the product design process, and its cultural symbol system should become the basis of product design in the various processes, and then designers may derive a variety of expressions based on the cultural symbol system. For example, unlike many other regional cultures adoring dragons, the most representative image of Chu culture is phoenixes. The people of Chu worship phoenixes, and when describing the image of phoenixes they were engaged to endow good characteristics and qualities with the image of phoenixes, so the image of phoenixes were most widely used in the Chu culture. But the image was not invariable. Because of Chu culture’s unique artistic temperament in their pursuit of tallness, straightness, strangeness and gorgeousness, the images presented different beauty which makes it unmatched by other cultures. In art product design, designers should not directly borrow or imitate the traditional culture symbol elements. Obviously, art design features a new and strange creation, that is to say based on the accurate cognition of original symbol elements, and understanding the cultural connotation behind the symbols, the modern images with the characteristics of practicality and informativeness are finally to be analyzed, extracted and created. Chu culture, in addition to the image of phoenixes, have other representative elements, for instance, a clock, car, Jane, chimes, all which were made with unique musical characteristics and super manufacturing technologies, and reflected the artistic quality of Chu culture and science and technology.
The Application of Chu Culture Symbols in Product Semantics

Chu culture symbols as decorative elements of product design need to use design language to process the characteristics in image, so the design language in positioning the product style plays a decisive role. Product visual image is the ultimate sign of the culture symbols applied in semantic, and based on product visual image cognition users independently decode the design theme that designers want to express. One of the main component in the application includes modeling, color and material aspects.

Modeling

The application of Chu culture symbols in product semantics is modeling. Unlike western art which gives priority to "body" and "face", in Chinese traditional art "line" is always the basic design elements. The combination among lines used in the Chu culture has its unique feature, the people of Chu understood deep in use of lines, especially the curves. Whether the shape design of the curves in Chu Ding, chimes and other implements, or the different shapes of phoenix pattern which are most representative of Chu culture, the spirit of curve was reflected incisively and vividly. Such as "Wang Zi Wu ding" body and waist, overall modeling by bending, form of dimensional administrative levels become more abundant. Not only that, people in art outstanding creativity and observant and Chu culture in the curve shape will decompose, abstraction, and integration, it's not just the simple disassembly, the restructuring process, but a simple pattern to the image of a cultural symbol. Such as grain shape, for example, phoenix design itself has rich line characteristic, the grain of PND tail-on curve is extracted, chicken wing, abstracting deformation, at the same time combined with moiré, with lines, etc., formed a varied hierarchy, form rich art of Chu culture characteristics.

For designers of contemporary art, cultural heritage and development is the unshakable duty. On the model of modern goods design, can be appropriately referring to the form of Chu cultural artifacts, such as bronze, pottery, jade, morphological structure, so that works not only in shape continuity, but also cultural connotations modelling, this also is the inheritance and development of Chu culture.

Color

The application also should be expressed by colors. Appropriate color can make products with strong visual appeal, at the same time, it can help to transmit product information in fast and accurate way. Chu culture has the most distinct features in the symbol colors, in which color black and color red were extensively used, because people adored Zhurong, the god of fire, and color red represents fire and a symbol of the south, while color black represents the north, so color read and color black are in harmonious proportion. In exactly the most people are good at lacquer craft, you can see that Truman preference for the black and red, with red color, the basis of which compose of gold, yellow, blue, green wait for color, color colorful and do not break grave, color difference between also give a person strong visual impact, in the tomb of the ZengHou Yi can clearly found that the sika deer in color woodcarving, yuan yang color woodcarving box, "Ershibasu Figure" wooden trunks, lacquer, paint, paint all color is red and black and white color, intense color contrast black and red give a person the sense with richly valued.

Chu culture characteristics of bright color for the product semantics, color semantics provides a rich reference element in its style of colors, nationalization, and standard knowledge also to color Settings in order to inspire modern products. Chu culture symbols are carrying the color in the way of belief, change of time and space, and the same is the cultural connotation behind the color, it will be the unique charm of Chu culture inheritance, also improve product added value of culture.

Material

Material mechanism and Chu culture symbol in the important application of product semantics. The creation of art cannot leave the environment, the influence of Chu culture is widely used in materials mostly derived from Cu, such as bamboo, wood, rattan, clay, cloth, etc., the material of
natural form, the original texture, texture, etc. Can convey the nature, elegance, to use these materials to modern product design, can greatly rich national characteristics of the product and the charm of the Chu culture. Such as the use of clay or bronze, etc. can be used to make containers for storage or as a drinking vessel, cloth can be used as a modern clothing materials, add flavor of primitive simplicity to clothing, or the woven rattan, branches, etc. all kinds of items in the product, for these products to form a series of native products with Chu culture characteristics.

Chu culture used materials are all derived from natural resources, its convey the natural simple implication is lack of modern new material, when the material is applied to the modern product design, product is no longer an icy objects, through the material of material texture is passed to a person the feeling of visual and tactile, let a person produce interest in cultural implications behind the search for products.

Conclusion

Modern product design must be coordinated with its function, but also meet consumers’ demand for the cultural implication behind the product. Product design itself is a kind of culture, and the dissemination of national and regional culture with distinctive features is also the mission of our designers. Culture is the eternal theme in the design of products, so it is important for us to increase the cultural value of the products and to guarantee the cultural characteristics of the products in the process of product design. To explore the association between product semantics and the symbols of the Chu culture, and to build the Chu culture symbol system by making use of product semantics, are all aimed to blend the traditional culture elements into modern product design. It might be hard to accurately transmit Chu culture in product design connotation and pass on the national essence of local culture, until designers come to master the modern product design method in which much traditional culture elements are to be used properly.

Acknowledgements

This work was financially supported by the Fundamental Research Funds for the Central Universities HUST (No.2014QH019) and the Teaching Research Project of HUST (No. 2016001).

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