Research on the Modern Packaging Design Paradigm under the Background of Low Carbon and Green Thinking Orientation

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Abstract

In this paper, we conduct research on the modern packaging design paradigm under the background of low carbon and the green thinking orientation. Packaging design is the core of commodities, through the unique shape, beautiful pictures, beautiful color and carefully edited text and joint performance, to give the goods beautiful appearance. In terms of the design, the design of different countries, national and the regional also has its own cultural personality, and the cultural personality is the essence of the various national and regional design connotations. Through the application of the green efficiency can prolong the service life of packaging waste, it can also stop after use of packaging waste, to minimize impact on the environment and the green efficiency of the application in packaging design mainly in the unique respects. This paper combines the related literature survey to propose the novel perspective.

Keywords: Modern Packaging, Design Paradigm, Low Carbon, Green Thinking Orientation.

Introduction

Packaging design is the core of commodities, through the unique shape, beautiful pictures, beautiful color and carefully edited text and joint performance, to give goods beautiful appearance. Beautiful things can always be the first time into the scope of human vision and attention. As the designer, therefore, study of aesthetics and aesthetic psychology is extremely necessary and significant. Beauty is applied to the human senses after have the joy, happiness, mood or emotional experience, aesthetic activity is the production and the experience of beauty is a kind of subjective psychological process. In the table one, we show the principles of the packaging design [1-3].

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<th>Design Principles</th>
<th>Reasons</th>
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<td>Scientific principles.</td>
<td>Emphasizes the scientific principle is first and foremost on commodity packaging design way of scientific attitude and scientific research question, born commodity packaging and commodities, distribution is the distribution of packing goods, so don't pay attention to scientific attitude and thinking. Other packaging need to rely on the implementation of the process technology and processes, it also needs the scientific knowledge and scientific methods.</td>
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<td>The principle of innovation.</td>
<td>Creativity is the pursuit of unique, novel and interesting, very artistic conception. Creativity is not just the simple methods and techniques to ascend, creativity should be the creator's spirit and soul of self-improvement and even &quot;reborn&quot;, that is its real value. Creativity is the ability to production works, these works both novel, and appropriate [4-6].</td>
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The overall principle. Packing the three-dimensional characteristics of make with observation on the multiple perspectives and multifaceted, so packaging design considering the main display surface at the same time, also consider mutual relations, and other surface considering the overall style and features of packing materials.

Packaging design requirements of low carbon era systematically control the whole process of the packaging design production and use of recycling. So in terms of design is not only the pursuit of one of the links of design, but to the entire life cycle in the packaging should be the pursuit of low carbon design production and processing. We must carry on the systematic design, logic analysis, with the method of the connection link different link and consider the impact of various aspects and role, so as to solve the problem of carbon emissions and other pollutants.

![Figure 1. The Green Thinking Perspective.](image)

In this paper, we conduct research on the modern packaging design paradigm under the background of low carbon and green thinking orientation. In the later sections, we will discuss in detail.

**The Proposed Methodology**

**The Modern Design Characteristics.** In addition to the occurrence and development of the modern design by science and technology, social factors, economic factors, cultural factors, the influence of such development also strongly affected by the profound art. In terms of the design, the design of different countries, national and the regional also has its own cultural personality, and the cultural personality is the essence of various national and regional design connotations. Because in the process of design, no matter design subject is the consumer, is in the particular conditions of time and space and under the guidance of certain ideology and aesthetic standards in design and accept the design, so also is the specific cultural environment of the brand mark.

Human science is the foundation of design, and one of an important part of design aesthetics is guide the design of the lighthouse. The new generation of high-tech means, such as the design tools is worldwide popularity, but human imagination and creativity as is that they can't substitute. Design aesthetics can also be able to become a widespread and broad range of the people to help form a deep understanding of the discipline. The idea of technical aesthetics and modern design could then be summarized as the follows. (1) Technical definition of that aesthetics itself, birth, development and prospect of technology aesthetics, aesthetics in the general aesthetic system of technology status, the relationship between aesthetics and the aesthetic education, and related disciplines, the relationship between technology and aesthetic schools and influence each other, and the popularization and the application of technology aesthetics, etc. (2) Modern designer or industrial designer should have the
quality, skills training and knowledge structure, design the collective organization and division of the labor cooperation and functions, etc. Design is a creative activity, of course, will reflect the designer's personality, knowledge accomplishment, experience and aesthetic experience. (3) Productive labor environment and beautification and its relationship with modern production process, that aesthetic education and overall healthy development of the relationship with laborer. Here the environment and process, of course, including industrial production environment and process, but not limited to this.

Throughout the development process of the foreign modern design from the development of the historical background, cultural background and design development itself, we can build a macro for the modern design development. With the development of the society as well as the design concept of constantly updated, visual image design should be on the premise of core elements remain the same, to change some of its elements. In different occasions has the different application form, while still maintaining its original charm. All this shows the visual image design should break the routine tend to diversification, more young and active on the technique of expression [7].

The Packaging Design Paradigm. Green packaging design efficiency refers to the packaging design of the general packaging form, function and materials in accordance with the requirements of environmental protection, so that the packaging and environment and the consumer in the natural rapport and improve the efficiency of the packaging to protect the ecological environment and ability as specifically, packaging products from raw material selection that returned to the waste of the whole process to meet the requirements of the ecological environment protection and can keep the virtuous cycle in the natural ecosystem. The figure two shows the principles.

![Figure 2. The Green Packaging Design Paradigm.](image)

Through the application of the green efficiency can prolong the service life of packaging waste, it can also stop after use of packaging waste, to minimize impact on the environment. Green efficiency of the application in packaging design mainly in the following respects. (1) Packing in view of system design and packaging are designed that would be a perfect into product packaging design, using the modelling of packing and material characteristics, make packaging part or all of the product structure, also can let packaging with new function. (2) Packaging recycling design, recycling needs composite structure in the form of packaging should be designed as a removable type structure, different parts, respectively, while using different materials and structure is advantageous for the classification and recycling. (3) Packaging decoration is still mainly by printing ink to achieve the transmission of the information and color rendering, and printing ink contains substances harmful to the environment and the human body. So the packing decoration design should as far as possible concise, highly refined design elements, in order to reduce the environmental impact of packaging and printing.

The Low Carbon Design. Under the circumstances of developing low carbon economy, many of the ideas and concepts are constantly changing, many new situations and new requirements are put forward, and for design are also facing unprecedented opportunities and challenges low carbon design
is also design the design of the rise of a new round of "wave". But many designers' understanding of "low carbon design" degree is differ, "contracted design", "use environmental protection material", "use of energy-saving system" and so on were involved in the design of low carbon.

Low carbon packaging design is derived from the development of modern industry increasingly serious environmental problems and puts forward a new concept and is a low carbon economy era of packaging design was put forward new requirements. It requires that the designers in the design of product packaging, from the selection of packaging materials, materials processing and forming, packaging design mould making, plate making, printing, packaging, logistics, use, recycling, and degradation of the view point of the entire life cycle, such as the control of each link and the overall carbon emissions. So as the designer should further thinking the new development of product design under the environment of low carbon, by improving the industrial design ideas and methods in itself and the boosting trend of small and medium-sized enterprises in the new environment and research, in the form of basic transformation direction of product innovation for small and medium enterprises, establish product to create new ways to provide certain reference and help improve product value, and help enterprises to form the new environment of product culture idea and product research and the development mechanism to enhance their products under the "low carbon" new pattern of innovation and competitiveness, to the sustainable development of small and medium-sized enterprises and the overall economy play a positive role to make the value of design itself until better under low carbon.

The Environmental Protection Perspective. People rely on the general strength of science and technology, constantly transforming nature, conquering nature, creates numerous miracles. People in exclamation oneself have infinite power at the same time, also in a contradictory situation. Green technology is to reconcile the contradictions, tries to solve the technology to the development of the technology itself. However, now more and more philosophers think technology is the load value has the value rationality, therefore, technology and the ethics are closely linked together. Environmental protection technology can't from the category and it is also linked with social ethics [8].

Economic and ecological theory, the economic system as a kind of artificial ecological system has a complete system structure and function, and with the general ecological system has the intrinsic consistency on the function structure, namely, economic system and the ecological system has the isomorphism. Economic system and ecological system also has the co-evolution trend. Ecosystems have to climax state continued evolution trend, and reach the top state of ecosystem, not only presents the biological diversity and general biological maximum volume, but also in terms of stability and self-regulation has reached the best. Environmental protection industry has become the world a new round of industrial structure adjustment, the various countries rushed to the development of strategic emerging industries. In the face of the international financial crisis, the countries all over the world, especially developed countries have to energy conservation and environmental protection, renewable energy and low carbon technology as a future economic competition the commanding heights of the science and technology, all kinds of incentive policy, invest a lot of money, give strong support, which on the other hand, environmental protection industry in supporting the economic development is of strategic significance and meaning.

The Green Concepts and Reality. Green design is proposed according to the lack of traditional design of a new design concept. Since it is to prevent pollution and protect the resources of strategic integration to the ecology and economy can afford the active method of product development, so from its birth date is generally recognized by the academia and industry, and more and more attention.

Here we should be a special understanding of green design as this mainly refers to the operability of green product design methods and measures. Art design is the use of certain material for creative activities from the product design, packaging design, advertising design, or environmental art design require using a specific material as a carrier to create. So, the first point of the green design should be on the choice of design materials advocate clean and renewable. Non-polluting materials processing production process not only refers to the material will not produce environmental pollution, but also
include the use of process and product life after the end of all links, design the application materials are not have the polluting environment while renewable materials refers to reduce the application of materials and resources irrefragable can promote the use of renewable resources and materials.

Green design with basic theories and principles of ecological philosophy as its guiding ideology, ecological values and ecological ethics as its design values, the cultural value concept. We build a new design in the design of abandoned by undermining the natural value to realize the cultural value of the traditional way, adhere to recognize and respect the natural value, and based on respect for the natural value, on the basis of innovation and creativity design itself should have cultural value. The comprehensive, balanced and sustainable scientific development view requires human in developing not only meet the demand of modern people, is the future demand and development of the hazards, pay attention to economic efficiency and pay attention to the ecological harmony, the pursuit of social justice, to achieve a sustainable economy, sustainable ecological and sustainable society harmonious and unified which should be considered from the following perspectives.

- Green design is a parallel closed loop design, traditional design is the serial open loop design process, and the green design requirements at various stages of the product life cycle must be considered in parallel, and establishes the effective feedback mechanism, the implementation stages of closed cycle.
- Green design is conducive to protect the environment, maintain the ecosystem balance, design process analysis and that considering the product environment demand is one of the main characteristics of different from traditional design, green design and green design can be produced to reduce waste at the source.

Conclusion

In this paper, we conduct research on the modern packaging design paradigm under the background of low carbon and the green thinking orientation. Packaging design requirements of the low carbon era systematically control the whole process of the packaging design production and use of recycling. So in terms of design is not only the pursuit of one of the links of design, but to the entire life cycle in the packaging should be the pursuit of low carbon design production and processing. Green design is a parallel closed loop design, traditional design is the serial open loop design process, and the green design requirements at various stages of the product life cycle must be considered in parallel. Under this basis, this paper integrates related theories to enhance the traditional methodology that is novel.

References


