

Design Principles of Three-dimensional Elements in Packaging Design of the Republic of China

Mengke Li ^{1, a}, Chaode Li ^{2, b} and Yijin Chen ^{3, c}

¹School of Donghua University, Shanghai, 200051, China;

²School of Suzhou University, Suzhou, 215124, China.

^a583361483@qq.com, ^b18717778570@163.com, ^c18380113316@163.com

Abstract

The packaging design in the Republic of China was diverse, and the different materials gave consumers a different tactile and visual texture. From the perspective of visual language and design psychology, the three-dimensional elements of packaging design during the Republic of China were analyzed, including packaging materials and packaging styling. The packaging materials of the Republic of China were classified. The commonly used packaging materials were paper, metal and glass, and analyzed the different visual textures and touches exhibited by different packaging materials. Analyze and summarize the design principles of the packaging design elements of the Republic of China, and provide reference for modern packaging design to better optimize products.

Keywords

Design principles , packaging design, three-dimensional elements.

1. Introduction

The three-dimensional elements of the packaging design refer to the appearance of the package, the contour design, and the choice of packaging materials. The designer uses a variety of materials to carry out a variety of styling designs, conveying the unique content of the product, giving consumers different visual experiences and psychological feelings. The packaging design of the Republic of China has basically possessed the theoretical framework of Western art. In the two-dimensional plane and three-dimensional space of packaging design, the design principles of symmetry and balance, change and unity are emphasized. In the processing method of packaging modeling, the contrast and blending of curves and sharp corners are often used, and the surface decoration of the container is added to reflect the aesthetic beauty of the design. On the basis of maintaining the traditional style, the packaging design works of the Republic of China gradually integrated into the Western design elements, presenting the design style of Chinese and Western fusion and unique characteristics of the times.

2. Composition of three-dimensional elements in packaging design of the Republic of China

The packaging materials are diverse. Different materials have different texture, touch and color characteristics. During the Republic of China, there were various packaging forms, among which paper materials were the main materials, glass and metal materials were also very common. Different materials bring different visual and tactile sensations to consumers.

2.1 Materials for packaging design in the Republic of China.

In the Republic of China, packaging materials were basically divided into paper packaging, metal packaging, and glass packaging. In addition, a milky white glass bottle was separately listed. The color texture was similar to white porcelain, which was commonly used in creams and creams. The paper packaging materials during the Republic of China were mainly kraft paper, yellow paper, Daolin paper, rice paper, etc.; metal packaging materials are mainly tinplate and aluminum; glass is

rapidly cooled by high temperature melting of quartz sand, caustic soda, limestone and other materials. The transparent substance formed has the characteristics of acid resistance, chemical property stability and high transparency.

2.2 Tactile and visual texture of packaging materials.

The application of visual texture in packaging design further complements the theoretical framework in visual language. Without affecting the information conveyance of other design elements, visual design can dilute text and image information, and communicate with consumers in a unique form, to convey the attributes of the packaging and the image of the product. Metal, glass, and paper materials are often used in packaging design in the Republic of China, and each material exhibits different visual textures and tactile sensations. The metal has high hardness, strong gloss, and the touch is cold, hard and heavy. It represents hard, precise, rational, cold, modern and other visual psychology. It was generally used as lipstick and powder iron box packaging during the Republic of China. The glass material has a smooth texture, and if the surface is engraved, it has a concave and convex texture. The touch is cold, hard, and heavy, giving a sense of science and technology, cool and refreshing, and a clean and pure visual psychology. Different textures of paper material have different touches, smooth or rough, and the touch is flexible, tension and light, which represents the simple, intimate and natural visual psychology. The selection of packaging materials should not only take into account the physical properties of the product itself, but also the visual and tactile textures. The three are complementary and harmonious. The reasonable and correct packaging can be distinguished by visual and tactile characteristics, it exudes charming charm.



Fig.1 Metal packaging of lipstick during the Republic of China

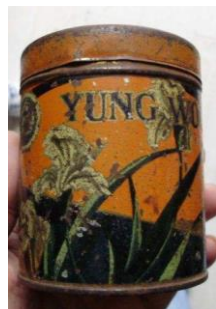


Fig.2 cylindrical iron box



Fig. 3 Red leaf brand of toilet water bottle



Fig. 4 Portrait of a perfume bottle

2.3 Appearance design of packaging design in the Republic of China.

The design of the packaging container during the Republic of China was closely related to the material of the packaging. Generally, the shape of paper packaging and metal packaging is relatively simple and ordinary, usually cylindrical or rectangular, and the popular Western style also has a heart shape, oblate shape and so on. Glass packaging, especially the shape of perfume bottles, is the most fascinating. In addition to various basic shapes, there are also spherical, cubic and various creative shapes. In general, the shape of the packaging container in this period is divided into two major categories: geometric shape and pictographic shape. Common geometric shapes include cuboids, cylinders, and a variety of geometric shapes. Mimetic pictogram are common in glass bottles of creams and perfumes, such as flower patterns, portrait shapes, architectural shapes, etc. From the perspective of the shape of the packaging container during the Republic of China, the cuboid and the cylinder are the two most common shapes. The cuboid can be used for packaging a variety of packaging materials. According to the study of the art materials in the Republic of China, the art theory system of the Republic of China introduced western art thoughts. The structure modeling began to pay attention to the principles of visual aesthetics such as symmetry and balance, change

and unity. The textbook proposed the shape of the package by circle and triangle. And the three basic shapes of the rectangle are changed into nine basic types by overlapping, increasing, and cutting.

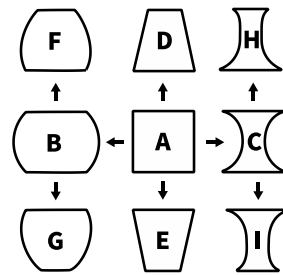


Fig.5 Nine basic types consisting of triangles, circles, and rectangles. These nine basic types are combined and changed to form a new shape structure.

(Source: Fu Baoshi, basic patternology)1

3. Design principles for the components of packaging design in the Republic of China

In addition to the basic requirements of design aesthetics, the individual design elements of packaging design, change and unity, symmetry and balance, contrast and harmony, coordination between plane elements and three-dimensional elements, pay attention to the integrity of the entire packaging design. To make the packaging design play a better effect. Specifically, the unity of each element should adhere to the following principles: the primary and secondary relationship between shape, texture and other design elements. Other design elements include pattern design, font, material, and the entire packaging design should have a visual center. Focus. The stereoscopic and planar visual effects are unified to achieve a harmonious and unified effect. The unique three-dimensional effect and tactile sensation of the styling and container design are exerted. The texture of the packaging material is closely related to the packaging design. The reasonable combination of the two can optimize the product. Let consumers truly experience the excellent workmanship and design of packaging materials, and make full use of the positive effects of tactile senses in the sales process, in order to attract consumers and stimulate the desire to purchase. Focusing on practicality, the art education in the Republic of China advocated pragmatism, focusing on the practical utility of goods, the right price and a good appearance.

4. Conclusion

Through the study of art materials and contrasts in the Republic of China, it was found that the design of the Republic of China absorbed Western art design ideas and focused on symmetry and balance. The craftsmanship of the Republic of China used as many stereoscopic representations as possible to enrich the design: first, the contrast between the curve and the sharp corner. Second, the container surface decoration technique. In addition, this paper analyzes the design principles of the packaging design elements of the Republic of China. The designers will integrate the modeling expressions into the packaging design with the characteristics of the materials themselves, which can better optimize the products and leave a deep experience and impression to the consumers.

Acknowledgements

Natural Science Foundation.

References

- [1] Hu,X.(2006) On the Improvement of the Transmission Effect of Packaging Visual Language. *Packaging engineering*, 2006(06):283-284+292.
- [2] Jin,M.(2014) Analysis of environmental protection packaging materials and development applications. *Journal of Jilin Agricultural Science and Technology College*. 2014(04)p78-80.
- [3] Shang,S.(2007) Application of visual elements in packaging design. *China Packaging Industry*. 2007(06):49-50.
- [4] Zeng,F.(2017). Analysis of packaging design elements of "planar vision". *Modern decoration (theory)*,2017(02):90.
- [5] Wu,M.(2004) Packaging design and digital design means. In: *The 9th National Conference on Packaging Engineering*. Xi an.91-92.
- [6] Fu,B.(1947) *Basic patternology*. The Commercial Press, Shanghai.