

# Study on the Package Design Effect on Low-Calorie Snacks: Analyzing the Basic Behavior of Emotional Design in Low-Calorie Snacks Focused on Delight Project

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Healthcare is an important issue, and obesity has become one of the main causes of health problems. Therefore, reasonable and healthy diet has entered the public agenda, and low calories have become an important choice for consumers. Low-calorie snack brands are emerging in endlessly at the top of the market. This article analyzes the packaging effect of low-calorie snacks, and uses emotional design to analyze the psychological impact of low-calorie package design on points of purchase. Emphasis is placed on the design of colors, cultural codes, and layout to analyze and discuss the emotional and behavioral responses of consumers, considering the interplay between visual packaging and emotional responses. Finally, by analyzing the effect of low-calorie snack packaging, this study emphasizes the empathy contained in the design, and summarizes the necessity of its emotional design and how to promote the innovation and development of low-calorie brands.

Keywords: low calorie snack packaging, emotional design, cultural code

# Introduction

# **Research Background and Objectives**

As the problem of sub-health becomes more and more serious, people gradually begin to pay attention to how to eat healthily, so there are many healthy, pure natural, no-added low-calorie products on the market, whose purpose is not only to attract the attention of sub-health consumers, but also to attract most consumers who have fitness and weight loss needs. The consumer's senses receive the product image (Figure 1); the image of the product food constitutes a significant visual stimulus in the consumer's mind (Simmonds & Spence, 2017). Therefore, the visual appearance of a product is a decisive factor in determining consumer reaction and product success (Bloch, 1995, p. 16). Consumers usually judge the practicality, function, social significance, and even value of the product based on the color, picture, and font of the product packaging. These judgments are usually related to the perceived properties of the package in order to meet the needs and desires of consumers.

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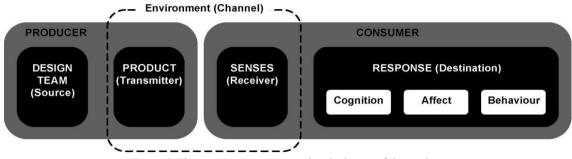


Figure 1. The consumer's senses receive the image of the product.

According to Maslow's hierarchy of needs theory, when physiological needs, safety needs, namely practicality and safety, are met, the focus of consumers' purchase of products will shift to the higher level of Maslow's needs and social needs, respect needs, and self-actualization needs. Aaron Walter's theory of user hierarchy of needs also indicates that when a product satisfies consumers' functional, reliability, and usability of the product, consumers will pursue a higher hierarchy of needs and seek pleasure through the product to meet their emotional needs. Therefore, the packaging design of products is important for consumers, who buy not only products but also entertainment, experience, identity, and other forms of value (Crilly, Moultrie, & Clarkson, 2004). Since consumers who buy light food are usually based on spiritual needs, the need for emotional design becomes a crucial part.

The appearance of the product packaging design has become the main factor for consumers to buy, and the cultural codes and symbols on the product packaging have become the first impression of the product to consumers. Semiotic theory states that specific product designs evoke thoughts, emotions, impressions, and associations because the symbols they display are consciously and unconsciously interpreted as such (Ares et al., 2011). Low-calorie consumers will scan the symbol on the package for information about the food content of the product. Therefore, eye-catching visual symbols are necessary for low-calorie snack packaging.

### **Research Purpose**

The purpose of this study is to analyze the packaging design of low-calorie snacks based on emotional design, and analyze the purchasing behavior of consumers based on the purchasing behavior pattern. Second, combined with CCBD (Culture Code Brand Design) methodology, the cultural code and packaging design of Delight Project low-calorie snacks were studied. Thirdly, based on this, the presentation elements and types of packaging design of Delight Project were studied, and the future design direction of packaging design in the low-calorie food market was suggested.

# **Emotional Design**

With the advent of the experience era, users are more concerned about emotional needs and spiritual comfort when their basic needs are met, which is the so-called emotional value brought by the brand. American psychologist Donald Norman's "Emotional Design" (2004) found that emotional design can be divided into three levels: the instinctive level, the behavioral level, and the reflective level. Through the analysis of instinct layer, behavior layer, and reflection layer, we can understand whether the product provides consumers with other values besides functions, so as to modify and narrow the emotional distance between users and products, and make consumers more trust in the product and even loyalty to the brand. At the same time, emotional design can increase product appeal, guide user behavior, arouse user emotion, and enhance brand identity.

The target consumers of low-calorie products are mostly economically independent young people in the Z era, who have certain requirements for the quality of life, and consumers usually take the initiative to scan the packaging before buying (Ares et al., 2011). So packaging also plays an important role in attracting their attention. The visual packaging of low-calorie products gives priority to color, pattern, and shape consideration, and attracts consumers and arouses the desire to buy through emotional design.

#### **Emotional Design—Visceral Level**

Because the consumer is excluded from the design and manufacturing process, there is no emotional attachment to the product (Aftab & Rusli, 2017). However, as a visual animal, the observation of the appearance of the product when buying the product is an instinct for people to understand the product. Therefore, the instinctive layer of emotional design mainly focuses on the appearance and visual effect of the product, and excellent packaging design will first consider the appearance design of the product, in order to narrow the relationship with consumers. For example, fresh fruit is always designed in the most prominent position on the packaging of low-calorie products (Figure 2), the natural health that low-calorie consumers are most concerned about is displayed on the packaging, and the product information is clearly transmitted to consumers from a visual point of view, thus promoting consumption.



Figure 2. Delight Project brand of low-calorie snack packaging.

#### **Emotional Design—Behavioral Level**

People at the behavioral level tend to prefer functionality, usability, and a sense of control during use (Norman, 2004). Products that focus on emotional design at the behavioral level pay more attention to the user experience of interactivity, functionality, usability, and usability, which can bring happy product experience to consumers. When consumers use a product, it is a continuous operation. When the product satisfies the aesthetics of the instinctive layer and brings a good first impression, whether it can be continued depends on the following two aspects: First, consumers will think about whether the product can effectively complete the task; secondly, whether the product can bring consumers an interesting operating experience. The above two points are the problems that behavioral level design needs to solve. For low-calorie products, the practicality of packaging is the focus of consumer attention. Figure 3 and Figure 4 show the low-calorie jelly of Delight Project and Chef M respectively. Compared with Figure 4, the packaging method of Figure 3 is to use straw for eating, which is not only more convenient to eat but also easier to carry. From the perspective of packaging, the emotional design of the behavioral layer of jelly packaging in Figure 3 is stronger.



Figure 3. Delight Project brand of low-calorie snack packaging.



Figure 4. Chef M brand of low-calorie snack packaging.

# **Emotional Design—Reflective Level**

Reflective design can help users gain a deeper understanding of themselves and the market around them, and through this understanding can lead to changes in behavior and attitudes. Reflective design considers the rationalization and intelligence of the product (Norman, 2007). Product design is related to the feelings of consumers, and products need to establish brand image to establish a bond with consumers. Consumers will be affected by environment, culture, identity, identification, etc. Through interaction, self-image, satisfaction, memory, etc., they can form brand cognition and cultivate brand loyalty, and brand becomes the representative or carrier of emotion. The reflection layer is related to the long-term feelings of customers and needs to establish the long-term value of the brand or product.



Figure 5. Delight Project brand of low-calorie snack packaging.



Figure 6. Delight Project brand of low-calorie snack packaging.

The illustrations on product packaging of Delight Project mainly focus on fresh fruits and healthy foods to meet the emotional needs of low-calorie consumers and slimming groups. Clean food elements can arouse consumers' resonance and purchase desire. By triggering the common memories of users and products, consumers' positive emotions on memories can be transformed into feelings on products, thus enhancing users' sense of identity on products.

# Packaging Analysis of Low Calorie Snack Delight Project

The symbolism of a product is culturally defined (Crilly et al., 2004). The information on the product packaging is the brand cultural code displayed to consumers, and consumers will choose products and even trust the brand by identifying the brand cultural code. The concept of Brand Culture Code is mentioned in the book *Culture Code Brand Design*. General Visual Culture Code (GVCC) is a visual culture code that is understood and trusted by a particular social group but can be easily changed (Choi, 2018).

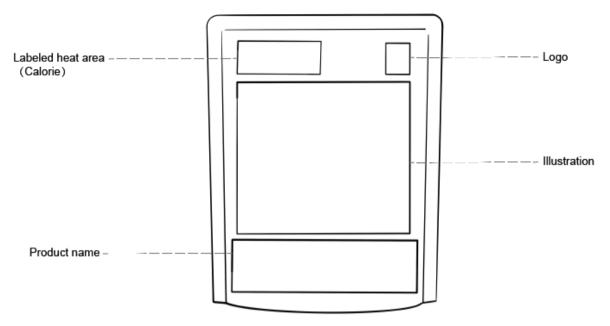


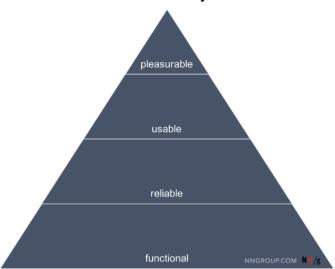
Figure 7. Packaging analysis diagram of Delight Project brand.

Pictures of fresh ingredients on Delight Project packaging occupy most of the packaging positions (Figure 7), which can clearly convey product taste, product attributes, product information, etc., which is also the general visual culture code of Delight Project. Bright fruits are placed in the most prominent position of the packaging (Figure 8), forming Delight Project's unique brand image. Pure natural raw materials deliver a low-calorie brand image to low-calorie consumers, and the brand establishes a bond with consumers through pictures.



Figure 8. Delight Project brand of low-calorie snack packaging.

In his book *Designing Emotions*, Aaron Walter refers to the hierarchy of user needs (Figure 8), arguing that advanced needs can only be achieved after basic consumer needs (such as functionality and usability) are met (Fessenden, 2017). The obvious calorie number on the packaging of Delight Project is what low-calorie consumers care most about when purchasing products (Figure 9). Eye-catching calorie labels can better meet consumer demand and enable consumers to enjoy pleasant experience. That is to say, eye-catching numbers can satisfy the upper level of the hierarchy of consumer user needs and pleasurable.



# Aarron Walter's Hierarchy of User Needs

Figure 9. Aarron Walter's Hierarchy of User Needs.

The *Culture Code Brand Design* book has also mentioned the high-level and specific needs of consumers. Specific needs are divided into self-esteem needs and self-actualization needs, also known as "hedonic needs" (Choi, 2018). Consumers' demand for pleasure is a kind of psychology that consumers realize themselves and self-value affirmation. Consumers will make purchase decisions according to the emotional elements and symbols of the brand.

Low-calorie consumers will be attracted by the numbers, colors, and pictures on the package, so as to choose the goods to meet the hedonic needs. Low-calorie consumers, who have a unique pursuit of calorie numbers, will satisfy higher-order psychological needs from the numbers displayed on product packaging.

From the perspective of packaging color, it was found that the main brand color of Delight Project was white background color. On the one hand, white background color could more clearly display product feature pictures (Figure 10), such as citrus juice, dried sweet potato, etc. On the other hand, a clean and refreshing white color could also convey the clean and simple characteristics of raw food materials to consumers, and to low-calorie consumers to show relaxed, quiet, fresh visual effects.



Figure 10. Delight Project brand of low-calorie snack packaging.

#### Discussion

For the current era of emotional consumption, consumers not only pay attention to the practicality of products when buying products, but also gradually pay more and more attention to the emotional needs of products. Brands should to focus on the emotional needs of consumers to strengthen their competitiveness in the market. By analyzing the emotional needs in brand packaging design of Delight Project, this study attempted to explore the emotional needs in packaging from the perspective of plane.

Through the basic analysis of emotional design, researchers can determine that low-calorie snack customers are consumers. Secondly, taking Delight Project brand as an example, through the analysis of three levels of emotional design, researchers can determine that consumers tend to directly convey product information in the packaging design at the instinct level. Packages with visual images are more attractive. At the behavioral level, the researchers found that consumers pay more attention to the interactive, functional, ease-of-use, and usable user experience of product packaging. On the reflection level, consumers in Era Z pay more attention to the health of diet and snacks, so the health of food is more attractive to consumers. Products from packaging to text are conveying healthy information to consumers, thereby improving the status of products in the minds of consumers and enhancing market competitiveness.

#### Notes

Through the analysis of three levels of emotional design, Delight Project brand not only starts from the aesthetic perspective, but also displays the packaging design analysis based on consumers' emotional needs. There are more and more packaging designs based on emotional design needs in the market. In the face of diverse markets and consumers, the appeal of packaging design to consumers has gradually become the main factor for products to attract consumption. Some products that lack emotional design will eventually be eliminated from the market. It is worth noting that this study mainly discussed the packaging design of Delight Project brand and the overall direction of consumer emotional needs of the brand. The details still need to be verified through market testing.

#### References

- Aftab, M., & Rusli, H. A. (1 Aug. 2017). Designing visceral, behavioural and reflective products. *Chinese Journal of Mechanical Engineering*, 30(5), 1058-1068. Retrieved from https://doi.org/10.1007/s10033-017-0161-x
- Ares, G., Piqueras-Fiszman, B., Varela, P., Marco, R. M., López, A. M., & Fiszman, S. (Oct. 2011). Food labels: Do consumers perceive what semiotics want to convey? *Food Quality and Preference*, 22(7), 689-698. Retrieved from https://doi.org/10.1016/j.foodqual.2011.05.006
- Bloch, P. H. (July 1995). Seeking the ideal form: Product design and consumer response. *Journal of Marketing*, 59(3), 16-29. Retrieved from https://doi.org/10.2307/1252116 (accessed on 14 Oct. 2019)

Choi, A. Y. (2018). Culture Code Brand Design. Seoul, Korea: Book Lab.

Crilly, N., Moultrie, J., & Clarkson, P. J. (Nov. 2004). Seeing things: Consumer response to the visual domain in product design. *Design Studies*, 25(6), 547-577. Retrieved from https://doi.org/10.1016/j.destud.2004.03.001

Fessenden, T. (2017). A theory of user delight: Why usability is the foundation for delightful experiences. *Nielsen Norman Group*. Retrieved from https://www.nngroup.com/articles/theory-user-delight/

Norman, D. A. (Jan. 2004). Emotional design. Ubiquity, 2004(January), 1. Retrieved from https://doi.org/10.1145/966012.966013

Norman, D. (20 Mar. 2007). *Emotional design: Why we love (or hate) everyday things*. New York: Google Books, Basic Books. Retrieved from books.google.co.kr/books?hl=zh-CN&lr=&id=QtWSu3zBtPoC&oi=fnd&pg=PA3&dq=Emotional+design&ots= 9kwpoX24rE&sig=c\_xgdxr5vZhs2za9bCpWMQB6iDQ&redir\_esc=y#v=onepage&q=Emotional%20design&f=false (accessed on 17 Mar. 2024) Simmonds, G., & Spence, C. (Dec. 2017). Thinking inside the box: How seeing products on, or through, the packaging influences consumer perceptions and purchase behaviour. *Food Quality and Preference*, 62(0950-3293), 340-351. Retrieved from https://doi.org/10.1016/j.foodqual.2016.11.010