

On Packaging Design for Traditional Chinese Festive Food: A Multi-sensory Perspective

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ABSTRACT

This proceeding article investigates the role of multi-sensory packaging designs in enhancing consumer experiences and market competitiveness, using zongzi and mooncake packaging as case studies. The research reveals that these designs not only satisfy aesthetic preferences but also reinforce cultural festival atmospheres, thereby promoting the spread of traditional Chinese culture. Innovations in color, pattern, material, and structure, combined with non-visual sensory elements such as sound, smell, taste, and touch, create a comprehensive sensory experience that enhances consumer desire and purchase decisions. The paper concludes that these multi-sensory packaging strategies effectively bridge consumers emotionally with cultural festivals and products, demonstrating the potential of sensory marketing in fostering cultural appreciation and consumption.

Keywords: Packaging design, Traditional Chinese festive food, Multi-sensory, Zongzi, Mooncake.

1. INTRODUCTION

Faced with a dazzling array of commodities, what are consumers exactly looking for? “[They] are after a holistic psychological experience with the product as a carrier” (Yu and Wang, 2011, p.9). Being a bridge between products and consumers, food packaging not only has the basic function of conveying generic information, but also needs to trigger consumers’ emotions through multiple sensory channels. When designing such a package, it is necessary to identify with customers’ feelings, encode and reorganize product information with a synergy of different sensory languages, so that the product recipients can better appreciate the message from the product through myriad sensory experiences, thereby boosting consumption and sales.

Themed on the packaging design of zongzi (“Figure 1”) and mooncake (“Figure 2”), two traditional Chinese festive snacks, this essay discusses the ways to enhance consumer experience and promote the modern spread of traditional Chinese culture through the comprehensive use of visual and non-visual senses. “Being essentially customer-tailored, packaging design facilitates emotional integration and conveyance of ingenious

ideas” (Lin, 2024, p.25). Visually, given the physical packaging features of zongzi and mooncake, their designs embody traditional Chinese cultural elements with the innovative applications of color, pattern, texture and structure, as well as improving the cultural connotation of products and consumer experience. Regarding non-visual senses, the adept use of auditory, olfactory, gustatory and tactile elements, such as simulating natural sounds, preserving natural aromas, heightening food flavors, and using eco-friendly materials, can significantly enhance consumer experience and festive atmosphere. Next, the traditional festivals related to zongzi and mooncake will be introduced to provide a background for packaging design analysis.



Figure 1 Zongzi with pork and glutinous rice stuffing.



Figure 2 Mooncakes filled with duck egg yolks and lotus seed paste.

2. FESTIVALS ASSOCIATED WITH FOOD: DRAGON BOAT FESTIVAL AND MID-AUTUMN FESTIVAL

The Dragon Boat Festival (DBF) and the Mid-Autumn Festival (MAF), as two major traditional cultural events in China, carry profound historical and cultural connotations respectively, and convey unique cultural values through specific festival foods – zongzi and mooncake.

Celebrated on the fifth day of the fifth Chinese lunar month (around mid-June) every year, DBF is originated from the country's ancient dragon-worshipping ceremony and has gradually evolved into a festival to commemorate its patriotic poet Qu Yuan ("Figure 3"), reflecting the Chinese reverence for loyalty and justice. Zongzi, a snack with the main ingredient of glutinous rice, can be made with various stuffings such as red beans, sweet potato, bacon, belly pork, beef, chicken and duck egg yolk. Wrapped up in bamboo leaves or reed leaves with different shapes, they imply unity and harmony" (Luo and Tu, 2024, p.81). Their consumption is not only a memorial to Qu Yuan's spirit, but also reflects the Chinese pursuit of familial and social harmony.



Figure 3 Qu Yuan and the Dragon Boat.

MAF, also known as the Full-Moon Festival, is one of the traditional Chinese festivals and celebrated on the 15th day of the eighth Chinese lunar month every year (approx. mid-September). Stemming from the ancient Chinese worshipping of the moon, it has gradually developed into a symbol

of family reunion, which is deemed by the Chinese as a symbol of happiness and harmony. For this significant annual family togetherness ("Figure 4"), people are willing to travel long distances and overcome all kinds of difficulties, a remarkable migration that reflects the Chinese persistent pursuit of reunion and deep feelings for homecoming. The food featuring MAF is mooncake, a predominantly round piece of pastry representing the full moon and reunion. Its assorted fillings contain nuts, bean paste, lotus seed paste, ham and so forth, reflecting the enormous diversity of Chinese food culture. "Admiring the charming full moon while sharing the delicious mooncakes with family not only heightens kinship, but also expresses the Chinese longing for a peaceful poetic life" (Fang and Cao, 2023, p.169).



Figure 4 Mid-Autumn Festival Reunion.

To sum up this section, as traditional Chinese festive food, zongzi and mooncake not only satisfy people's appetite, but also carry rich cultural significance, conveying the Chinese cultural values that advocate familial reunion and social harmony. Despite great changes in modern lifestyle, the two snacks remain as the indispensable symbols for DBF and MAF, connecting the past and the present, tradition and modernity, as well as facilitating cultural and emotional communication. Next, from the perspective of multi-sensory experience, the development trends of their packaging designs will be generalized using specific cases.

3. THE MULTI-SENSORY DESIGN TREND FOR FESTIVE FOOD PACKAGING

The early ancient mooncakes and zongzies were mostly packed with natural materials. Oftentimes, mooncakes were wrapped in bamboo tubes or leaves, and silk fabrics may also be used. Zongzies were usually first wrapped with bamboo leaves or reed leaves, and then bound with string. Being both eco-friendly and easily degradable, these materials reflect the ancient Chinese awe for nature and their simple environmental awareness. "With the rapid socioeconomic development and the rising living

standards, modern consumers' demand for food packaging has surpassed the simple need to preserve food only" (Wang, 2024, p.249). With the continuous progress of modern design technology, multi-sensory experience has become an indispensable part of food packaging design, especially in traditional handicraft foods such as mooncake and zongzi, which not only reflects the respect and inheritance of traditional culture, but also emphasizes modern consumers' needs for multi-sensory experience that involves the adept use of visual, auditory, olfactory, gustatory and tactile elements.

Firstly, visual elements occupy the core position in the packaging design for mooncake and zongzi, which mainly include color, text and graphics. Utilizing the comprehensive psychological effects generated by the texture, glossiness and solid color of materials, they can stimulate consumers' feelings through visual perception, and effectively convey product information to them through visual language. Designers usually use patterns and colors rich in festival characteristics, such as the moon, osmanthus flower, and Chang'e flying to the moon ("Figure 5") of MAF, and the dragon boat, zongzi and Qu Yuan of DBF, to arouse consumers' emotional resonance with the festival. "Choosing tender tones and warmhearted illustrations can create a cozy family vibe, evoking emotional resonance and identification among consumers" (Wang, 2024, p.249). In addition, the selection of packaging materials also tends towards environmental protection and sustainability, such as using biodegradable paper or bamboo-woven materials, which not only reflects respect for nature, echoes tradition, but also meets the contemporary needs for environmental conservation.



Figure 5 Mooncake gift boxes with a design of Chang'e flying to the moon.

Secondly, tactile experience is equally important in packaging design. "It seems as though the sense of touch – which is anyway to the fore in

a woven work such as a tapestry – is being presented as that in which all the other senses merge, and out of which they emerge" (Connor, 2006, p.14). Designers render packaging a unique tactile feel by selecting materials with different textures, such as matte, glossy, embossed, or relief. For example, the packaging of mooncakes may use cardboard boxes with delicate textures ("Figure 6"), while that of zongzi may use woven fabrics. These tactile details not only increase the texture of packaging, but also enhance the unpacking experience for consumers.



Figure 6 Mooncake gift boxes with embossed texture.

Thirdly, although olfactory and gustatory experiences may not be as intuitive as visual and tactile experiences in food packaging design, they can still be stimulated through packaging design. For example, the packaging paper of mooncakes may emit a faint natural aroma of vanilla or bamboo ("Figure 7"), creating a sense of anticipation before consumers open the alluring package. Paper packaging mainly relies on emerging technologies to integrate the corresponding smell into the packaging materials of small products such as cosmetics and food to achieve olfactory experience. The main methods include printing scented varnish, drying after spraying perfume on the paper, and using scented special paper, so consumers can scent them when approaching those packages. Besides, just as Pallasmaa (2005, p.45) put, "vision becomes transferred to taste as well; certain colors and delicate details evoke oral sensations". The descriptions and illustrations on the package, such as the different stuffings and ingredients for zongzi and mooncake, can also stimulate consumers' taste buds and prompt their imagination of the food through vision.



Figure 7 Traditional-style aromatic mooncake packaging paper.

Fourthly, although it is relatively indirect in packaging design, auditory experience can also play a role through some creative unpacking methods or the novel gadgets inside the package. A specific sound when a package of zongzi or mooncake is opened up can be designed, such as when gently tearing the package paper or opening the box lid. These sounds increase the fun of unpacking to a certain extent, enhancing consumers' expectations. "The fun packaging design subtly meets the emotional needs of consumers, who can feel the pleasure through interaction at the unpacking process" (Lin, 2024, p.23). For example, the packaging of Xiaomi's 10th anniversary mooncake gift box ("Figure 8"), when unfolded, each individual pack is equipped with a micro switch. By tapping the top of each pack, the corresponding sound of instrument and Xiaomi ringtone are emitted from the side speaker. This auditory interactive approach can effectively spark consumers' interest, thereby extending the service life of packaging and enhancing the overall impression of the brand and its products. Just as Bull (2000, p.123) noted, "the subjective desire to transcend the everyday through music becomes a focal point...as is the desire to remain connected to specific cultural products". Besides, similar to olfactory experience, auditory experience can guide consumers to associate a product with its sound environment through onomatopoeic text or graphics.

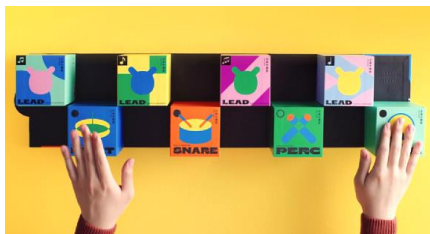


Figure 8 Xiaomi 10th anniversary mooncake gift box.

To conclude this section, the packaging design of traditional festive foods such as mooncake and

zongzi tends to integrate multi-sensory experience. "Notions of looking, seeing, remembering and hearing become mediated cultural practices and strategies, as indeed does the very constitution of experience" (Bull, 2000, p.120). Therefore, by using a combination of visual, tactile, olfactory, gustatory, and even auditory senses, both the product appeal and the overall consumer experience can be greatly boosted, a trend that not only contributes to the inheritance of traditional food culture, but also aligns with modern consumers' pursuit of quality living experiences. Next, the multi-sensory culture in packaging designs of zongzi and mooncake will be elaborated on from two aspects – visual and non-visual – using detailed examples.

4. VISUAL PACKAGE DESIGN

The packaging designs for zongzi and mooncake, two traditional Chinese foods, carry with them not only protective and carrying functions for products, but also cultural inheritance and aesthetic expression. "With consumption behavior and concepts gradually shifting towards the pursuit of cultural spirit and aesthetic ideals, consumers have shifted their focus from the physical characteristics, edible and practical value of food to their symbolic and image value, as well as their cultural and spiritual features" (Liu, 2024, p.109). This section analyzes the design features of zongzi and mooncake packaging from a visual perspective through specific cases, and discuss how these features convey the cultural connotation of traditional Chinese food and festivals.

As for zongzi, its packaging design is often integrated with Chinese traditional cultural elements. For example, the zongzi gift box ("Figure 9") skillfully uses traditional Chinese red as the main color, which is particularly festive and warm in the minds of Chinese people, who have a special complex about red because it symbolizes happiness, auspiciousness and prosperity. Such bright and lively red is believed to ward off evil and disasters, bringing good luck and happiness. It is also closely related to the Spring Festival (equivalent to the Western Christmas), weddings and other important festivals and ceremonies, and has become a part of Chinese spiritual and cultural identity. In the design, dragon boat, zongzi (personalized as sailors of the boat), wormwood and other unique cultural elements of DBF are skillfully integrated, which looks vivid and full of festival atmosphere. Additionally, the gift box also features the

calligraphic font, with the words “Lucky Bag” written on it, appearing quaint and elegant, full of strong cultural heritage. Through this unique design, the brand hopes to make more people feel the unique charm of DBF, and also arouse their attention to and inheritance of traditional culture. The gift box is not only an exquisite holiday gift, but also a work of art that carries profound cultural heritage.



Figure 9 Traditional Chinese zongzi handbag.

The packaging design of mooncake can also display distinctive cultural characteristics, including such traditional images as the moon, osmanthus and Chang'e flying to the moon. The design in “Figure 10” uses dark blue and golden yellow as background colors. Blue symbolizes the depth and tranquility of the mid-autumn night sky, with a shimmering golden moon pattern printed on a deep blue background. In addition, osmanthus patterns are conscientiously designed on the surface of the moon, with their fragrance seemingly permeating in the air, which enables people to feel like the romantic ambience of MAF. More significantly, the wane and wax of the moon echoes a Chinese life philosophy that life remains colorful despite and thanks to imperfection. Through such unique packaging design, consumers can not just enjoy delicious mooncakes at the time of purchasing and gifting them, but also feel the profound charm of traditional Chinese wisdom.



Figure 10 Mooncake packaging box with wax-and-wane patterns.

In addition to patterns and colors, the packaging designs for zongzi and mooncake also pays attention to the selection of materials and the innovation of structure. Some high-end mooncake packages use wooden or metal boxes, which are not only sturdy and durable, but also give people a sense of nobility and elegance. Structurally, many packages adopt reusable box designs, which not only facilitate the carrying and storage of products, but also reflect the notion of environmental protection. Such designs not only elevate a product's rank, but also align with modern consumers' pursuit of a sustainable lifestyle. In “Figure 11”, the red wooden mooncake box adopts a traditional double-door design, equipped with a handle, and its appearance is modeled after ancient Chinese wooden food boxes. Its surface is decorated with a white crane pattern on a red background, showcasing a classical elegance. Opening the box, consumers will find that its internal structure is designed in a drawer style with upper and lower layers, each delicately holding mooncakes, which is pleasing to the eye.

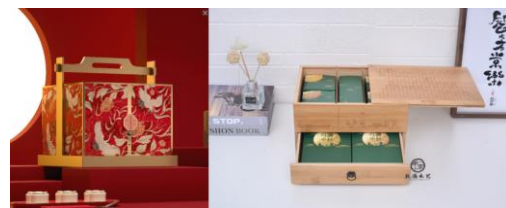


Figure 11 Wooden mooncake gift boxes with creative Chinese features.

“The senses not only mediate information for the judgement of the intellect; they are also a means of igniting the imagination and of articulating sensory thought” (Pallasmaa, 2005, p.45). The packaging designs of zongzi and mooncake vividly convey the cultural connotations of traditional Chinese foods and festivals through the comprehensive use of color, pattern, material and structure. These designs not only satisfy consumers' pursuit of beauty, but also visually enhance the festive atmosphere, promoting the dissemination and inheritance of traditional Chinese culture. Apart from visual senses, non-visual sensory elements such as touch, scent and hearing can also play an important role in the packaging design of these two traditional handmade foods. By integrating these non-visual elements, a more comprehensive consumer experience can be brought to consumers. Next, non-visual sensory packaging designs will be analyzed.

5. NON-VISUAL PACKAGING DESIGNS (AUDITORY, OLFACTORY, GUSTATORY, TACTILE)

In addition to the predominant visual designs, how the two cultural delicacies convey cultural values and capture consumers' attention can be analyzed through the four non-visual senses of hearing, smell, taste and touch. Firstly, from the auditory perspective, sound elements in packaging design can significantly enhance consumers' purchasing experience. "With the progress of the times, people are no longer satisfied with the quality of products, but are beginning to pursue personalized packaging design" (Lin, 2024, p.26). In the zongzi packaging design in "Figure 12", the sound elements of bamboo leaves or straws are skillfully added to simulate the natural sound of traditional zongzi wrapping. The moment consumers open the package, it seems that they can hear the lively atmosphere in the traditional rural setting like a village during DBF. This sound simulation can arouse consumers' good memories of traditional festivals, so as to enhance their purchasing experience. Similarly, in the packaging design of mooncake, metal or ceramic materials can be used ("Figure 13"). When different parts of the package (like the lid and the base) slightly clash, it makes a clear pleasant sound, which resonates with the eternal peace-and-harmony theme of MAF, enabling the customers to feel the festive atmosphere when unpacking the snack.



Figure 12 Bamboo leaf zongzi.



Figure 13 Ceramic-style mooncakes.

Secondly, scenting plays a crucial role in the culinary experience. In the packaging design of zongzi, the fragrance of bamboo leaves can be well retained. This natural fragrance can awaken consumers' good memories of traditional festivals and enhance their purchasing desire. Likewise, in the packaging design of mooncake, paper materials or spices with light osmanthus fragrance ("Figure 14") can be used to echo the traditional customs of MAF and create a strong festival vibe. The use of this aroma will not only attract consumers' attention, but also enable them to feel the festive ambience at the moment of opening the packages, thereby enhancing their purchasing experience.



Figure 14 Mooncake packaging paper with osmanthus scent.

Thirdly, the taste of mooncake and zongzi constitutes their premium appeal. The packaging design of zongzi can highlight the natural flavor of glutinous rice and myriads of fillings, such as red bean paste, preserved duck egg yolk, dried abalone, meat and herbs, so that consumers can smell the aroma of these fillings at the moment of unpacking, thus stimulating their taste buds. The design of mooncake can also emphasize various flavors such as lotus seed paste, assorted nuts, as well as specific flavors related to festivals, such as the double yolk with lotus seed paste filling and the green tea powder filling. Such flavors not only represent local characteristics, but also symbolize family reunion during festivals, further boosting consumers experience.

Fourthly concerning touch, zongzi can be packed with environmentally friendly and biodegradable materials, emphasizing its feel and texture. For example, natural materials such as hemp rope and bamboo weaving can be used to allow consumers to feel the unique texture of these materials when opening the package. "Seeing and the tactile sensation are so closely wed that even when we are looking at a painting it is not clear that

we are attending solely to its visual qualities” (Tuan, 2005, p.77). In this sense, the packages of mooncake can be made of smooth cardboard boxes, silk and other high-end materials, highlighting their texture and luxury, so that consumers will have the impulse to open them when seeing such exquisite packaging. And the moment they open one, they will associate it with the high-end delicacy, thus enhancing their desire to purchase and share.

Hong Kong’s Wing Wah icy-crust mooncake (“Figure 15”) has achieved such an effect. Its packaging uses a relatively hard metal material, with sound applicability, economy, hygiene, moisture resistance and fragrance retention. Consumers can touch the concave and convex text and peony patterns, feel the text and pattern on the handbag, and also perceive the patterns of mooncakes inside the package. The box uses traditional icy bamboo patterns, and the application of colors is also appropriate for icy-crust mooncakes, reflecting their characteristics. The main color of the pattern is milky white, with a light touch of pink, yellow, purple, and blue as subtle background colors, giving people a fresh and natural feeling without losing elegance. Peony is the national flower of China, elegant and luxurious, with a rich aroma, symbolizing wealth, auspiciousness, and prosperity. The petals of peony flowers are layered, and their color gradually changes from dark to light pink, emitting a cool vibe. Consistent with the unique sweet and soft taste of icy-crust mooncakes, the packaging brings people a beautiful longing for MAF.



Figure 15 Wing Wah icy mooncake.

In the final analysis, an innovative packaging design of zongzi in “Figure 16” will be analyzed as an integrated example for the current study. To begin with, visually, its shape, color and pattern are very close to zongzi itself and the words reading “Merry Dragon Boat Day” is quite captivating. Secondly, when consumers pick up this pack, the vein on it also feels like the reed leaves that are used for wrapping up the snack. Their textures are so close that the design offers people a feeling of being close to nature. Thirdly, the Xiangyun-style

(wave-shaped clouds bearing auspicious symbolic meaning in China) window hollowed out on the box not only reminds people of the traditional Chinese granary structure, an important visual connection to hearty harvest, but also enable people to smell the aroma of zongzi through this opening when it is brought to their face, offering them a pleasant olfactory experience. Finally, one can also hear zongzi hitting the package from inside when lifting the handle on the top of the box and gently shaking it. More often than not, it would sound like the snack inside is heavy. In the final analysis, this packaging which fully reflects the connectivity between culture and food is quite ingenious, as it may galvanize consumers’ curiosity and purchase desire via four sensory dimensions, namely vision, touch, scent and sound.



Figure 16 A creative zongzi packet.

6. CONCLUSION

From the perspective of multi-sensory cultural experiences, this essay has analyzed the aesthetics and latest trend of the packaging designs of two festival foods – mooncake and zongzi – attached respectively to the Mid-Autumn Festival and the Dragon Boat Festival, two traditional Chinese festivals. “Food packaging design is not only a functional task, but also a form of artistic expression” (Zhang, 2023, p.250). Compared with the traditional simple packaging forms of the two snacks that have been passed down for millennia, contemporary consumers have more diversified and personalized preferences. By innovatively incorporating multiple senses such as vision, touch, smell and taste, consumers can unintentionally generate new sensory stimuli based on their initial impressions, thus making sensory experience a new marketing strategy and design concept to stimulate consumption. This essay therefore takes successful packages that integrate multiple sensory

experiences as a case study to explore in depth their multi-sensory characteristics and market competitiveness.

Through case studies, it is found that the packaging designs of zongzi and mooncake, through a comprehensive use of color, pattern, material and structure, not just has satisfied consumers' pursuit of beauty, but also visually strengthened the festival atmosphere, and promoted the spread and inheritance of Chinese traditional culture. With the development of the times, their packaging designs are constantly been innovated, but their core is always the respect and inheritance of Chinese traditional culture. In addition to visual elements, the smart use of non-visual sensory designs such as hearing, smell, taste, and touch further enhances consumption experience. The sound elements in the packaging can evoke beautiful memories of traditional rituals for consumers, while the natural aroma can enhance their desire to purchase. In terms of taste, the designs emphasize the core taste of the two snacks, while concerning touch, the use of environmentally friendly materials and high-end ones improves the texture and luxury of the products. Through these integrated design techniques, the packaging of zongzi and mooncake has overall improved the purchase experience. In general, these innovative packaging designs not only reflect the traditional Chinese cultural features related to the two foods, but also bridge consumers emotionally with the relevant festivals and food products through multi-sensory experiences.

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REFERENCES

- [1] Bull, M. *Sounding out of the City: Personal Stereos and the Management of Everyday Life*. Oxford: Berg, 2000.
- [2] Connor, S. 'Menagerie of the Senses'. In: *Senses & Society*. 2006, Vol.1(1). pp.9-26.
- [3] Fang, Y.P. and Cao, H.Y. 'On the Origin of Folk Customs of Mid-Autumn Festival and Moon Cakes', In: *Journal of China University of Mining and Technology (Social Sciences Edition)*. 2023, Vol.25(3). pp.169-180.
- [4] Lin, C. 'Exploring the Fun of Modern Packaging Design'. In: *China Packaging*. 2024, Vol.44(10). pp.23-26.
- [5] Liu, Y. 'The Application Design Strategy of Spatial Art Features Based on Meishan Culture in Local Food Packaging Design'. In: *Food & Machinery*. 2024, Vol.40(6). pp.104-110.
- [6] Luo, W.M. and T, K. 'Rice Culture and Dragon Boat Festival Customs and Activities', In: *Journal of Jimei University (Philosophy and Social Sciences)*. 2024, Vol.27(5). pp.77-82.
- [7] Pallasmaa, J. *The Eyes of the Skin: Architecture and the Senses*. Chicester: Wiley, 2005.
- [8] Tuan, Y.F. 'The Pleasure of Touch'. in *The Book of Touch* ed. by Classen, C. Oxford: Berg, 2005.
- [9] Yu, Z.B. and Wang, Z.Q. 'Study on the Packaging Design for Seafood Soy Sauce', In: *Packaging Engineering*. 2011, Vol.32(10). pp.8-10.
- [10] Wang, T.X. 'Food Packaging Design under the Concept of Interaction'. In: *Food & Machinery*. 2024, Vol.40(5). pp.249-250.
- [11] Zhang, P.C. 'Visual Display and Artistic Effects in Food Packaging Design'. In: *Food & Machinery*. 2023, Vol.39(5). pp.250-251.