

Emotional Design Analysis of China-chic Element Packaging Based on AHP

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Abstract. In the context of stimulating consumption, promoting traditional culture and upgrading interactive experience, this study constructs a theoretical model of China-chic packaging design and consumer purchase intention, and explores the moderating role of brand positions used to clarify the preference and the fit of trendy elements. The analytic hierarchy process (AHP) determine weight of consumers of different ages for China-chic elements, and provide optimization ideas for the design of instinct, behavior and reflection layers. Establish an emotional evaluation system including cultural identity, aesthetic pleasure, and modern innovation, and put forward a quantifiable design strategy model to improve market accuracy and emotional resonance, and provide theoretical basis and practical guidance for the cross-international market application of the China-chic brand.

Keywords: The Analytic Hierarchy Process, Emotional design theory, China-chic element packaging design, User experience

1. Introduction

In recent years, with the gradual establishment of social platforms and the continuous iteration of online information, Chinese national culture such as Dunhuang mural style and opera culture has been widely disseminated in the world in a combination of audio-visual methods, thus giving birth to the new term "China-chic". The phenomenon of "China-chic" has evolved from a subcultural trend to a mainstream consumer trend, which is not only a hot spot in the market and business, but also an important carrier for the contemporary young generation to reshape their cultural identity and seek emotional resonance. By integrating traditional Chinese cultural elements with modern aesthetics and design language, China-chic products meet consumers' high-level needs for cultural value and emotional value beyond the functional value of products. In this context, product packaging is the "first visual touchpoint" for consumers to contact products, and its emotional design level directly affects consumers' purchasing decisions and brand experience [1].

According to the "2023 China-chic Brand Development Insight Report", nearly 80% of consumers increase their willingness to purchase due to the traditional cultural elements contained in product design, of which "packaging design" is the second most attractive factor after "product design itself". This shows that excellent China-chic packaging has become the key to establishing emotional connections between brands and consumers and enhancing market competitiveness.

Although China-chic packaging is booming in the market, there are still many problems in practice. First of all, a large number of designs stay in the simple copying of traditional elements and symbol stacking, such as the blunt use of Peking Opera faces, dragons and phoenixes, auspicious clouds, Chinese characters, etc., which lack a deep integration with modern design concepts and consumer emotional needs, resulting in serious design homogenization and aesthetic fatigue. Secondly, design evaluation mostly relies on the designer's subjective experience or qualitative aesthetic analysis, and lacks a set of scientific, systematic and quantifiable methods to evaluate the effectiveness of packaging design in triggering users' emotional resonance. This makes design decisions blind and difficult to accurately meet the emotional needs of target users.

2. Research methods

2.1. Emotional design theory

Proposed by Donald Norman, emotional design emphasizes the use of products to guide users to generate positive emotional experiences, thereby enhancing product attractiveness and user stickiness. User experience can be divided into three levels: Visceral Level, Behavioral Level, and Reflective Level. The instinctive layer mainly focuses on the appearance perception and first impression of the product, emphasizing visual appeal and intuitive experience [2]. The behavior layer focuses on the function and use process of the product, and pays attention to operational efficiency and usability. The reflection layer reflects the user's emotional identity and value judgment after use, including brand identity, emotional resonance, and social significance.

2.2. The Analytic Hierarchy process

The Analytic Hierarchy Process (AHP) was developed by T.L. Saaty, an American operations researcher. Saaty proposed a multi-criterion decision-making method in the 70s of the 20th century (Saaty, 1980). This method decomposes complex problems into target layers, criterion layers, and scheme layers, constructs a hierarchical structure model, and uses a two-by-two comparative judgment matrix to calculate the relative weights of indicators at each level, effectively dealing with the decision-making problem of combining qualitative and quantitative [3]. The core advantage of AHP is that it can quantify subjective judgments and ensure the rationality of judgments through consistency testing, which is widely used in design evaluation, scheme optimization and other fields.

2.3. Research path

At a time when "China-chic" has become an important symbol of cultural self-confidence, how to scientifically demonstrate the value of China-chic elements in packaging design, rather than just subjectively asserting that "good-looking" and "cultured" is a key challenge in academic research and design practice. AHP provides a rigorous methodological tool for this purpose, which can transform vague descriptions of feelings such as "cultural charm" and "visual impact" into computable and comparable weight data.

In this study, AHP was used to construct an evaluation system for the emotional design of China-chic element packaging. First, based on Donald Norman's three-level theory of emotional design, the criterion layer (instinctive layer, behavioral layer, and reflection layer) is established, and 12 secondary indicators are extracted as the program layer through preliminary user research. Second, questionnaires are distributed to consumers in multiple regions, occupations, and age groups, and the comparative judgment data of indicators at each level are collected to construct a judgment

matrix. Third, the weights of indicators at all levels are calculated and consistency tests are carried out to obtain comprehensive weight ranking. The results provide a quantitative evaluation basis for the subsequent analysis of the three cases of Hua Xizi, Gujing Gongjiu and Xu Fuji, and verify the effectiveness of the evaluation system.

3. Case studies

3.1. User research

3.1.1. User analysis

In order to collect users' needs for China-chic packaging design, a questionnaire is used to distribute it on the online platform. In this study, a total of 92 valid questionnaires were collected from users from multiple regions, occupations, and ages. Based on the questionnaire results, users generally have a positive attitude towards China-chic packaging, and the core attraction comes from "cultural belonging" and "visual novelty". Based on the three-level analysis of emotional design, the differences are significant: instinctive layer, southern users prefer elegant style, and northern users identify with strong folk totems; Young people love abstract illustrations, and middle-aged and elderly people prefer figurative patterns and hot stamping techniques. At the behavioral level, design practitioners focus on structural innovation, while business practitioners focus on portability and information readability, reflecting the impact of professional rationality on functional needs. At the reflection level, users in first-tier cities show their taste through the co-branding of "intangible cultural heritage", and users in second- and third-tier cities have a strong resonance with regional elements; Young people pursue social sharing and circle recognition, while middle-aged and elderly people pay more attention to auspicious meanings and nostalgia. Through the survey, it was found that users' demand for China-chic packaging has shifted from the early "symbol stacking" to "precise expression". There are significant differences in the aesthetic preferences of the instinctive layer, the interaction habits of the behavioral layer, and the value identity of the reflective layer among users in different regions (cultural soil), age (memory of the times), and occupation (aesthetic training).

3.1.2. Competitive product analysis

Representative products in the market are selected, and the competitive product analysis of three China-chic packaging cases of Hua Xizi, Gujing Gongjiu and Xu Fuji is based on the three-dimensional design of AHP emotional design: the three cases present differentiated China-chic expression paths and user positioning. The three packages are shown in Figure 1:



Figure 1. Three packages

Hua Xizi's "Twelve Flower Gods" are the most prominent in the instinctive layer, with low-saturation oriental colors, fine carving craftsmanship and silk lining, the traditional flower god image is illustrated into modern expression, which greatly meets the needs of Generation Z for "visual luxury" and "social sharing"; Its reflection layer also stimulates national self-confidence through the output of oriental aesthetics, with the highest overall weighted score (4.72/5). The Gujing Gongjiu "Tang, Song, Ming" series is deeply cultivated in the reflection layer, based on the real historical aesthetics of the Tang, Song and Ming dynasties, combined with the heavy texture of the crystal bottle body and the wooden outer box, which dominates the "cultural authenticity" indicator, and is more in line with the value identity of young and middle-aged men and traditional culture lovers, with a comprehensive score of 4.02/5. Xu Fuji's "Oriental Cornucopia" New Year's sugar bucket focuses on the behavioral layer and festive scenes, with the traditional image of the cornucopia as the core, with the portability of the iron barrel material, clear information labeling and the auspicious meaning of "attracting wealth and treasure", to meet the practical needs of the mass New Year's goods market, with a comprehensive score of 3.76/5. The questionnaire-based chart is shown in Figure 2.

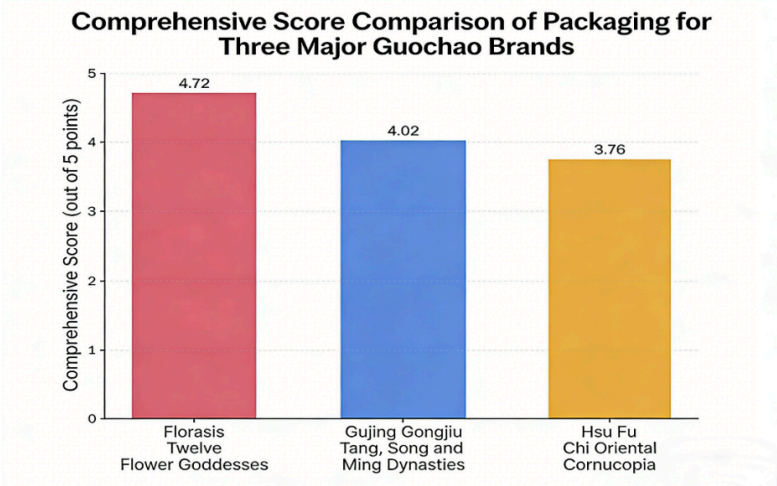


Figure 2. Comparison of the packaging scores of the three major countries

Hua Xizi has significant advantages in material craftsmanship and national self-confidence, Gujing Gongjiu is known for its cultural authenticity, and Xu Fuji is in line with the public's expectations in terms of auspicious meaning and information clarity. The difference in focus of different categories also shows that beauty needs to strengthen the aesthetics and topicality of the instinctive and reflective layers, alcohol should deeply cultivate the cultural depth of the reflection layer, and snacks need to balance the practical functions of the behavioral layer with the emotional resonance of the festival. In summary, the competitive analysis verifies that the AHP evaluation system constructed by this study has good discrimination and explanatory power, which can provide an effective quantitative decision-making basis for the design of China-chic packaging.

3.1.3. User interviews

Based on the three cases of China-chic packaging, this study selected 6 consumer users to conduct in-depth interviews to obtain the real evaluation and emotional feedback of different groups on the cases. The composition of the respondents is shown in Table 1:

Table 1. Table of respondents

number	Age	Career	city	Consumption preferences
A	20	Design student	Shanghai	Pursue visual beauty and social communication
B	34	Internet operations	Hangzhou	Hanfu lovers pay attention to cultural connotations
C	48	Individual merchants	Shandong	Pragmatic consumption and pay attention to auspicious meanings
D	41	Enterprise staff	Shenzhen	High-end gift demand, pay attention to texture
E	28	Teachers	Fuzhou	Home procurement, focus on practicality
F	62	Retirees	Jiangsu	Traditional aesthetics, value the festive atmosphere

The evaluations of the three cases by different groups are clearly differentiated. For Hua Xizi's "Twelve Flower Gods", young people (A and B) highly recognize its social attributes and craft aesthetics, A said that "the carving is too exquisite", and B thought that "the concept of the flower god has cultural heritage but is not old-fashioned"; Although the middle-aged and elderly groups (C, F) recognized its exquisiteness, C bluntly said that "the packaging is good-looking but I can't understand the ingredient list", and F thinks that "it's too fancy and not as affordable". This confirms Hua Xizi's strong attraction to young users in the reflection layer and instinctive layer, but there are shortcomings in the clarity of information at the behavior layer.

For Gujing Gongjiu "Tang, Song and Ming", young and middle-aged men (D) and traditional culture lovers (B) rated it the highest, D said that "the wooden box has face at home, and the sense of history is real", while B thought that "the distinction between the Tang and Song Ming dynasties is very knowledgeable"; However, young people (A) and female users (E) reported that "the design of wine bottles is too traditional and not trendy enough". It shows that Gujing Gongjiu has outstanding advantages in cultural authenticity, but there are limitations in modern expression and social communication.

In response to Xu Fuji's "Oriental Cornucopia", the middle-aged and elderly groups (C, F) and family users (E) generally agree, C believes that "the cornucopia has a good meaning, and the New Year is auspicious", and F means "the iron bucket is practical, and the sugar can be filled with things after eating"; However, young users (A, B) think that "the design is decent and not attractive enough". This shows that Xu Fuji is in line with the mass market in terms of auspicious meaning and behavioral practicality, but is not competitive in terms of visual sense of luxury and social topicality.

Therefore, after a variety of research methods such as user research, competitive product analysis, and user interviews, the user needs are summarized as shown in Table 2:

Table 2. Functional requirements table

Serial number	demand	Description
1	Texture and touch	The packaging material, weight and surface process have excellent touch, showing quality and sincerity.
2	Modern and traditional blend beauty	The design does not copy tradition, but integrates traditional elements with modern techniques to present a classic and trendy aesthetic.
3	Cultural identity and pride	The cultural connotation of packaging can trigger consumers' recognition, closeness and pride in traditional culture.
4	Brand stories resonate with values	Packaging design carries brand stories, conveys cultural confidence, and establishes emotional resonance with consumers.

Table 2. (continued)

5	Social sharing value	Packaging has both appearance and topicality, which can stimulate consumers' desire for social sharing and become a social currency.
6	Ease of opening and closing	The packaging structure is reasonably designed, easy to open and close, and the user experience is excellent.
7	Information readability	Key information such as product name, ingredients, and usage is clearly and easy to read, taking into account both design and function.
8	Protection and security	The packaging has strong protection, and the material is safe and environmentally compliant.
9	Portable and easy to store	The packaging size and structure are portable and easy to store, suitable for actual usage scenarios.
10	Status symbolism and personality expression	Products and packaging have become identity carriers for consumers to show their taste and express their personality.
11	Visual appeal	The packaging is eye-catching with visual elements and highly recognizable on the shelf.
12	Cultural symbol recognition	The packaging accurately uses traditional patterns, calligraphy, retro colors and other China-chic symbols, and the style is highly recognizable.

3.2. Classification of user needs based on emotion

According to the three dimensions of the three-level theory of emotional design, the user needs of China-chic element packaging design are classified and deepened:

Table 3. Classification table of emotional needs

Emotional level	instinctive layer (A)	Behavioral layer(B)	Reflection layer(C)
Demand elements	A1 Visual appeal	B1 Ease of opening and closing	C1 Cultural identity and pride
	A2 cultural symbol recognition	B2 Information readability	C2 The brand story resonates with values
	A3 Texture and touch	B3 Protection and Safety	C3 social sharing value
	A4 Modern and traditional fusion beauty	B4 portable and easy to store	C4 Status Symbol and Personality Expression

3.3. Weight differentiation of user demand based on AHP

3.3.1. Construct Analytic Hierarchy Process

How to scientifically demonstrate the advantages and disadvantages of China-chic elements in packaging design, rather than just subjectively asserting that they are "good-looking" and "cultured", is a key challenge. AHP provides a rigorous methodological tool for this purpose, which can transform vague feelings such as "cultural charm" and "visual impact" into computable and comparable weight data. Therefore, this paper constructs a hierarchical structure model based on user needs.

3.3.2. Data collection and analysis

This study carried out systematic data collection and analysis. Data collection: A total of 7 experts were invited to score the weights by combining online questionnaires and offline interviews. The questionnaire design is based on the three-dimensional evaluation framework of instinctive, behavioral and reflective layers constructed in the early stage, and invites respondents to make a two-by-two comparison judgment on the importance of indicators at all levels, ensuring the representativeness and diversity of the sample. In terms of data analysis, the analytic hierarchy process is used to calculate the score of the recovered data and form a comprehensive weight ranking table.

The above process ensures the scientificity and reliability of the weight of the evaluation index, and provides a quantitative basis for subsequent case evaluation and design optimization. Finally, the data analysis results are shown in Table 4

Table 4. Comprehensive weight ranking

Sort	First-level indicators	The weight of the first-level indicator	Secondary indicators	Secondary indicator weight	Comprehensive weight of
1	B	71.4286%	B3	60.8115%	43.4368%
2	B	71.4286%	B4	19.8584%	14.1846%
3	C	14.2857%	C1	60.8466%	8.6924%
4	B	71.4286%	B1	12.0207%	8.5862%
5	A	14.2857%	A11	52.0008%	7.4287%
6	B	71.4286%	B2	7.3094%	5.2210%
7	C	14.2857%	C3	20.3836%	2.9119%
8	A	14.2857%	A4	20.0609%	2.8658%
9	A	14.2857%	A2	18.2752%	2.6107%
10	C	14.2857%	C4	12.5265%	1.7895%
11	A	14.2857%	A3	9.6631%	1.3804%
12	C	14.2857%	C2	6.2434%	0.8919%

3.3.3. Data analysis conclusions

As shown in Table 3, the comprehensive weight of each user needs of the emotional design of the China-chic element packaging is clearly presented, and it can be seen from the ranking results that it can be seen that protection and safety, cultural identity and pride, visual appeal, portability and storage convenience, modern and traditional integration of beauty, and social sharing value are ranked higher, and its 6 user needs are relatively important, so the above needs should be paid great attention to in the design process. In addition to meeting the comprehensive weight, it should still meet the more important user needs such as cultural symbol recognition, texture and touch. Once the above user needs are met, it will greatly improve the emotional satisfaction of users with China-chic Packaging.

4. Design strategy/design suggestions

Based on the comprehensive weight ranking results of AHP and the data analysis conclusions, this study puts forward the following three suggestions for the packaging design of China-chic elements:

(1) Give priority to ensuring protection and safety, and consolidate the functional foundation. The comprehensive weight of "protection and security" at the behavioral layer is as high as 43.44%, ranking first among all indicators, indicating that users attach the most importance to the basic protection function of packaging. In design practice, it is necessary to first ensure that the packaging structure is stable, compressive and loss-proof, and ensure the integrity of the product during transportation and storage, which is the prerequisite for winning the trust of users.

(2) Strengthen cultural identity and visual appeal, and build emotional resonance. The comprehensive weight of "cultural identity and pride" (8.69%) and instinctive "visual appeal" (7.43%) of the reflection layer ranks in the forefront, reflecting that the core competitiveness of China-chic packaging lies in the unity of cultural value and aesthetic experience. The design should dig deep into the connotation of traditional culture, present cultural symbols with modern expression techniques, and pay attention to the sophistication of visual elements such as color and composition, so as to stimulate users' national pride and aesthetic pleasure [4].

(3) Optimize user experience by taking into account the convenience of the behavior layer and information readability. Although the comprehensive weights of indicators such as "portability and storage convenience" (14.18%), "opening and closing convenience" (8.59%), and "information readability" (5.22%) at the behavior layer are not as prominent as protection, they are still important factors affecting user satisfaction. The design should reasonably control the volume and weight of the packaging on the basis of ensuring protection, optimize the opening method, ensure that key information is clear and readable, and achieve a balance between function and experience.

To sum up, the design of China-chic packaging should follow the progressive logic of "function first, culture as the core, and experience optimization", and build emotional value with cultural identity and visual aesthetics on the premise of meeting basic protection needs, and improve the user experience with humanized details.

5. Conclusion

This study focuses on the emotional design analysis of China-chic element packaging based on analytic hierarchy process, and completes the whole process from theoretical construction to empirical verification. Three typical hot cases of Hua Xizi, Gujing Gongjiu, and Xu Fuji from 2025 to 2026 were selected for competitive analysis, combined with in-depth interviews with six users with different backgrounds, and through multi-regional, multi-occupation, and multi-age user surveys, 12 core user needs of China-chic Packaging under the three levels of emotional design were extracted, and the analytic hierarchy process was used to construct a judgment matrix, calculate the weights of indicators at all levels, and obtain a comprehensive weight ranking [5]. The "protection and security" weight of the behavioral layer is the highest, which constitutes the bottom line of design. The "cultural identity and pride" of the reflective layer and the "visual appeal" of the instinctive layer follow, reflecting the cultural core and aesthetic value of the China-chic packaging.

Based on this, design suggestions should be given priority to ensuring protection and safety, strengthening cultural identity and visual appeal, and taking into account portability, opening and closing convenience and information readability. The AHP evaluation system constructed in this study provides a quantitative decision-making basis for China-chic packaging design, and has practical guiding significance for improving user emotional satisfaction.

References

- [1] Cao Wenfang, Yan Xincheng. Research on the communication practice and optimization strategy of Changsha's "China-chic" brand in the new media era [J]. New Media Research, 2022, 8(24): 45-48.DOI: 10.16604/j.cnki.issn2096-0360.2022.24.008.
- [2] Wang Weiqing. Nanjing University of Information Science and Technology, 2025.DOI: 10.27248/d.cnki.gnjqc.2025.001224.
- [3] Li Wenying. Application of AHP method in project risk management [J]. Journal of Beijing University of Chemical Technology(Social Sciences), 2009, (1): 46-48+66.
- [4] Yang Huyue. Research on the design of characteristic tourism cultural and creative products based on regional culture [D]. Hubei University of Technology, 2016.
- [5] Wu Ailin. Research on the emotional design of the Chinese time-honored brand Ma Yinglong [D]. Hubei University of Fine Arts, 2024.