# Research on the Impact of Cultural Symbol Innovation in Domestic Animated Films on Consumers' Willingness and Satisfaction: Based on Questionnaire Survey and Online Comment Text Analysis of Nezha II

**Qingkui Meng**

*School of Economics and Management, Nanjing Agricultural University, Nanjing, China*
*13015545069@163.com*

*Abstract.* Against the backdrop of global competition in the cultural industry, the innovation of cultural symbols has become the core path to enhance the market competitiveness of domestic animations films. This research takes "Nezha: The Demon Child's Rebellion in the Sea" as the research subject and comprehensively uses questionnaire analysis and online text analysis to study the innovation of cultural symbols in domestic animated films. Firstly, the core dimensions of cultural symbol innovation are analyzed through questionnaire surveys. Secondly, high-frequency words, semantic networks and sentiment analyses are conducted on online texts. This study aims to explore the influence of cultural symbol innovation on consumers' behavioral intentions and their emotional tendencies. Finally, targeted suggestions are put forward for the development of domestic animated films. The research finds that character design and ideological values are the core factors driving consumers' brand culture identification and recommendation willingness. This article aims to explore the impact of cultural symbol innovation on consumers' willingness, explore new paths for cultural symbol innovation, and promote the breakthrough and rise of domestic animated films in the global cultural market competition.

*Keywords:* innovation of cultural symbols, Nezha 2, consumer willingness, questionnaire survey, network text analysis

## 1. Introduction

Cultural symbol innovation is a process of reinterpreting and reconstructing traditional cultural symbols. It reshapes traditional cultural symbols through innovative presentation, modern transformation, and effective dissemination [1]. With the increasingly fierce competition in the global cultural market, the innovation of cultural symbols has become a key path for cultural products to enhance their competitiveness and capture market share. The influence mechanism of cultural symbols on consumers' purchasing decisions has gradually become the focus of attention in both academic and industrial circles. Under the wave of cultural symbol innovation, domestic animated films, as an important part of the cultural industry, are also actively exploring the path of

innovation. Among them, "Nezha: The Demon Child's Rebellion in the Sea" (hereinafter referred to as Nezha 2) has achieved astonishing box office results with its unique cultural symbol innovation, and has also triggered strong cultural resonance globally. The film undergoes a subversive reconstruction of traditional mythological elements and ingeniously integrates modern values into it, creating cultural symbols that combine traditional depth with contemporary characteristics. It not only opens up a new direction for the innovative development of film narrative but also pioneers a new blue ocean for the "creative transformation and innovative development" of China's fine traditional culture in the new era [2].

However, most of the existing studies focus on the static representation analysis of cultural symbols and the research on the influence of a single dimension. There is still a lack of systematic exploration of the internal mechanism by which cultural symbol innovation affects consumer decision-making. Especially in the context of domestic animated films, the complex relationship between cultural symbol innovation and consumer behavior still needs to be deeply analyzed.

This article uses questionnaire surveys and text analysis of online comments to systematically explore the impact of cultural symbol innovation in Nezha 2 on consumers' willingness and satisfaction, providing practical references for the high-quality development of the cultural industry, helping domestic animated films go international through cultural symbol innovation, and enhancing the international influence of Chinese culture.

## 2. Research process

This study systematically explores consumers' perception, preference and satisfaction with the cultural symbol innovation of Nezha 2 through a combination of questionnaire surveys and online text analysis, and explores countermeasures for the high-quality development of domestic animated films from the perspective of the modern transformation of traditional cultural ips. Given that cultural symbol innovation serves as the core driving force for the domestic animation industry to break through development bottlenecks and enhance international competitiveness, the research on the influence mechanism of cultural symbol innovation on consumer behavior has important theoretical and practical value.

### 2.1. Data source

In terms of the questionnaire survey, this article takes the viewing group of Nezha 2 as the target sample and sets up a pre-screening question "Have you watched this film?" If the respondents choose "No", they will be automatically redirected to the questionnaire termination page to ensure the validity of the data. A total of 335 questionnaires were finally collected. After strict screening, samples with no movie-watching, logical contradictions and incomplete responses were eliminated, and 262 valid questionnaires were obtained, with an effective rate of 78.21%. The core modules of the questionnaire cover Likert scale items such as the perception of cultural symbol innovation, the intensity of emotional resonance, and the willingness to purchase recommendations.

Secondly, in order to eliminate the limitations of a single data source and enhance the robustness of the research conclusion, this study designed and carried out online text analysis while implementing the consumer questionnaire survey. The network text analysis method relies on natural language processing technology. Through feature extraction and semantic parsing of network text data, it can mine users' potential attitudes and behavioral tendencies and has been widely applied in the field of cultural product consumption research [3]. This article uses the Octopus data collector and customized Xpath to capture the review data of the movie Nezha 2from the Douban

website, including relevant information such as user ID, review time, recommendation index, final score and review content, obtaining 1,735 short review data and 7,605 long review data. Through data cleaning and noise reduction, 7,846 valid data were obtained.

## 2.2. Questionnaire survey analysis

### 2.2.1. The basic characteristics of consumers of Nezha 2

In this study, SPSS19.0 was used to analyze the basic information and perceived preferences of 262 valid questionnaires. The basic information of the sample is as follows: The gender ratio in the sample is basically the same (50.4% for males and 49.6% for females); The age was mostly concentrated between 26 and 35 years old (38.5%), followed by between 18 and 25 years old (22.1%). Among the educational backgrounds, the proportion of undergraduate or junior college degrees was the highest (46.9%), followed by high school and below (32.1%). Among the urban tiers, the proportion from new first-tier cities is the highest (30.5%), followed by super first-tier cities (22.9%).

Among the types of movie-watching, the algorithmic recommendation type accounted for the highest proportion (35.1%), followed by the word-of-mouth driven type (30.2%) and the social following type (14.9%). 235 people chose "Willing to recommend Nezha 2 (89.7%); 206 people chose "willing to purchase peripheral products" (78.6%); A total of 229 people chose "raised expectations for domestic animation" (87.4%).

### 2.2.2. Scale test and descriptive analysis

Based on the analysis of the basic characteristics of consumers, the evaluation scale of cultural symbol innovation is further tested to determine the validity and reliability of the scale and lay the foundation for subsequent in-depth analysis. This paper uses SPSS19.0 to conduct exploratory factor analysis on the sample data and extract dimensions from the 12 evaluation indicators for the cultural symbol innovation of Nezha 2. When the KMO value is greater than 0.5 and Bartlett's sphericity test is significant, it indicates a strong correlation among the variables and is suitable for factor analysis [4]. Therefore, 12 quantitative indicators were constructed for this factor analysis to evaluate the innovation status of cultural symbols in Nezha 2. The data of these 12 indicators were imported into SPSS19.0 for factor analysis, as shown in Table 1 below.

Table 1. Evaluation indicators for cultural symbol innovation in Nezha 2

| Indicator | Evaluation content | Indicator | Evaluation content |
|---|---|---|---|
| X1 | The main characters have outstanding personal charm | X7 | design the principal contradiction and conflict |
| X2 | Create a group portrait of characters with distinct layers | X8 | Weave out multiple foreshadowings |
| X3 | Each character has a strange appearance and unique looks | X9 | The ending unfolds with a twist and elevates the theme |
| X4 | Grand special effects create a strong visual impact | X10 | It interprets self-breakthrough growth |
| X5 | The ink-wash and colorful scenes are truly breathtaking | X11 | Express the proposition of destiny and resistance |
| X6 | The composition of Chinese style is pleasing | X12 | Reshape the core of traditional family affection |

In this paper, principal component analysis and orthogonal rotation method were adopted. The exploratory factor analysis was conducted based on the criteria of characteristic root greater than 1, factor load greater than 0.5, and commonality greater than 0.5. KMO=0.74, Bartlett's sphericity test was significant, meeting the analysis conditions. Finally, four common factors were extracted, cumulatively explaining 68.2% of the total variance, as shown in Table 2 below, which is lower than the ideal level of 70%. This might be due to the insufficient discrimination of some items, or the complexity of the dimension of cultural symbol innovation has not been fully covered. Subsequent studies can consider optimizing the items or increasing the sample size for further verification. Each factor was respectively named as character design, visual effect, storyline and ideological value. The Cronbach's Alpha coefficients of each factor were all greater than 0.7, indicating the good reliability of the scale [5].

Table 2. Exploratory factor analysis of cultural symbol innovation in Nezha 2

| Item | Factor | | | | Mean value | Characteristic root | proportion of variance | Commonality |
|------|--------|--------|------|---------|------------|---------------------|------------------------|-------------|
|      | Role | Vision | Plot | Thought |            |                     |                        |             |
| X1   | 0.80 |        |      |         | 3.95       | 1.93                | 16.1                   | 0.65        |
| X2   | 0.82 |        |      |         | 3.64       |                     |                        | 0.68        |
| X3   | 0.78 |        |      |         | 3.78       |                     |                        | 0.62        |
| X4   |      | 0.84   |      |         | 3.80       | 2.36                | 19.7                   | 0.72        |
| X5   |      | 0.82   |      |         | 4.12       |                     |                        | 0.68        |
| X6   |      | 0.79   |      |         | 3.58       |                     |                        | 0.63        |
| X7   |      |        | 0.76 |         | 2.87       | 1.72                | 14.3                   | 0.58        |
| X8   |      |        | 0.73 |         | 3.13       |                     |                        | 0.54        |
| X9   |      |        | 0.78 |         | 3.06       |                     |                        | 0.61        |
| X10  |      |        |      | 0.83    | 2.94       | 2.17                | 18.1                   | 0.70        |
| X11  |      |        |      | 0.80    | 3.07       |                     |                        | 0.65        |
| X12  |      |        |      | 0.77    | 3.23       |                     |                        | 0.60        |

### 2.2.3. Cross-analysis

To explore the differences in the influence of different movie-watching types and city levels on consumer behavior, this study adopted Chi-square cross-analysis to test the correlations among variables. The analysis was conducted with "viewing type" as the independent variable and "whether willing to promote" as the dependent variable. The results showed that the Chi-square value was 12.34 (p=0.015), indicating that there was a statistically significant difference in the promotional willingness of users with different viewing types (p<0.05). Among them, the sample size of users recommended by the algorithm was the largest (92 people), but the percentage of their promotional willingness (86.96%) was lower than that of the groups driven by word-of-mouth (94.94%) and those in active search (93.55%). This result indicates that the role of interpersonal influence in social communication is greater than that of algorithmic recommendation, suggesting that the promotion of domestic animations in the future should focus on word-of-mouth marketing. Through methods such as others' recommendation and topic interaction, the willingness of users to spread actively can be enhanced and the motivation for promotion can be stimulated.

The analysis was conducted with "city type" as the independent variable and "whether willing to purchase the surrounding area" as the dependent variable. The results showed that the Chi-square value was 18.42 (p=0.003), indicating that there was a statistically significant difference in the peripheral purchase intention of users of different urban types (p<0.01). Super first-tier cities are significantly leading, with a purchase intention of 95% far exceeding that of other types, reflecting the high consumption capacity and cultural participation of their residents. The new first-tier cities (81.25%) and second-tier cities (75%) were both higher than the average level (78.63%), indicating that economically active cities are the main markets for surrounding consumption. The purchase intention in rural towns and third-tier and lower cities is less than 70%, which may be limited by income levels or the lack of consumption scenarios. In lower-tier cities, domestic animation-themed streets and exhibition activities can be created. In collaboration with e-commerce platforms, peripheral zones can be set up and customized products can be developed to enhance cultural participation and consumption power.

### 2.2.4. Correlation analysis

Through Pearson correlation analysis, the correlations between the four core dimensions of cultural product symbol innovation - character design, visual effect, storyline, ideological value and symbol innovation itself, as well as their influences on cultural confidence and recommendation willingness, were systematically examined. The results showed that all four dimensions were significantly correlated with symbolic innovation (p<0.05), but the strength of the correlation varied. The correlation between character design and symbol innovation is the strongest, with a correlation coefficient of 0.365**, indicating that character images have a significant influence on symbol innovation. The correlation coefficient between visual effect and symbolic innovation is 0.232**, and the correlation coefficient between ideological value and symbolic innovation is 0.297**, indicating that both have a certain influence on symbolic innovation. However, the correlation coefficient between visual effects and character design is only 0.048, indicating that the correlation between the two is relatively weak. In the innovation of cultural symbols, their synergistic effect may not be significant.

Further analysis reveals that symbolic innovation and cultural confidence jointly constitute the "two wings" of recommendation willingness: Cultural confidence directly drives recommendation behavior through value resonance (r=0.496**), while symbolic innovation indirectly reinforces this path through role design (r=0.365**) and ideological values (r=0.297**). In contrast, the storyline and visual effects are more driven by short-term experiences. In the future, domestic animated films should enhance the depth of cultural interpretation of character design and ideological values in symbol innovation, increase the connection between visual symbols and traditional aesthetics, and promote the value anchoring of story plots and cultural confidence, so that the "wings of technical expression" and the "wings of value recognition" can form a resonance effect, thereby enhancing the continuous driving force of recommendation willingness.

### 2.3. Web text mining

This paper conducts research on the cultural symbol innovation of Nezha 2 through content analysis method and text mining method. Firstly, the ROST CM6 analysis software is used to conduct high-frequency word analysis on online text comments. By eliminating generalized and meaningless words and extracting high-frequency words with practical significance, the focus of attention on the cultural symbol innovation of Nezha 2 in online text comments is explored. The "sentiment

Analysis" function is utilized to conduct sentiment semantic analysis on the comment texts, grasp the current status of consumers' emotional perception of the cultural symbol innovation of Nezha 2, and generate word cloud maps for high-frequency negative emotion words to deeply explore the specific directions of the audience's negative evaluations.

### 2.3.1. High-frequency word analysis

The word frequency analysis was conducted on 7,846 comment samples using the ROST CM 6 analysis software. The higher the frequency of word occurrence, the stronger the recognition of the word by netizens [6]. This paper eliminates generalized words, filters out meaningless words, and extracts the top 20 high-frequency words with practical significance from the massive text data, as shown in Table 3 below, in order to explore the focus of attention on the cultural symbol innovation of Nezha 2 in online text comments, and provide qualitative data support for exploring the relationship between cultural symbols and consumer behavior.

Table 3. High-frequency word list of Nezha 2

| Sorting | Word | Frequency | Sorting | Word | Frequency |
|---------|------|-----------|---------|------|-----------|
| 1 | Nezha | 48831 | 2 | Ao Bing | 10930 |
| 3 | Shen Gong Bao | 9327 | 4 | Plot | 9134 |
| 5 | Story | 7467 | 6 | Production | 6586 |
| 7 | Audience | 6529 | 8 | Chentangguan | 5805 |
| 9 | Special effects | 5390 | 10 | Character | 4881 |
| 11 | Rebel | 4784 | 12 | Animation | 4545 |
| 13 | Director | 4824 | 14 | Dragon King | 3778 |
| 15 | Villain | 3613 | 16 | Narrative | 3297 |
| 17 | Picture | 3151 | 18 | Fate | 3122 |
| 19 | The Demon Child | 2844 | 20 | Growth | 2801 |

The combined frequency of the three words "Nezha", "Ao Bing" and "Shen Gong Bao" is 69,088 times, accounting for 45.56% of the total frequency of the 20 selected high-frequency words (151,639 times). This indicates that in the audience discussions of Nezha 2, the vocabulary related to the core character design occupied nearly half of the semantic weight, highlighting the crucial role of character shaping in the innovation of cultural symbols. "Chentang Pass" serves as an important setting for the story; The "plot" and "The Magic Child's Disturbance in the Sea" highlight the narrative structure and plot setting of the film. High-frequency terms such as "special effects", "visuals" and "production" confirm the film's outstanding performance in visual presentation. The frequent appearance of words such as "resistance", "fate" and "growth" reflects the film's exploration of profound themes. Nezha's spirit of struggling against fate and the transformation his character undergoes through experiences have sparked deep reflection among the audience.

### 2.3.2. Emotional semantic analysis

In order to further analyze the current situation of consumers' emotional perception of the cultural symbol innovation of Nezha 2, this paper uses the "Emotion Analysis" function in ROST CM6 to analyze the review texts. The results show that the proportion of positive emotions among consumers is the highest, with the text accounting for 67.37%. The proportion of neutral emotion

texts and negative emotion texts is basically the same. Positive comments include "the ceiling of animation special effects", "detailed character portrayal", "plot build-up and twists", "profound theme of resisting fate", etc.

Table 4. Audience comment sentiment analysis table of Nezha 2

| Emotional tendency | Emotional segmentation | Proportion (%) | Total proportion (%) |
|---|---|---|---|
| Positive emotions | Height | 34.23 | - |
| | Moderation | 10.49 | 67.37 |
| | general | 22.65 | - |
| Neutral emotion | - | 16.52 | 16.52 |
| Negative emotions | Height | 5.35 | - |
| | Moderation | 6.48 | 16.11 |
| | general | 4.28 | - |

In negative emotions, view the original comment based on negative high-frequency words. The term "vulgarity" has a significant impact on consumers' negative emotions. Through the original comments, it was found that "vulgarity" is mainly reflected in the design of funny points, such as the production of lotus root starch mixed with nasal mucus and foot mud, and the characters eating vomit, which caused discomfort to some viewers. The "radical modification" and "disorder" directly point to the plot issues. The significant adaptation of the original work exceeds the audience's expectations, and the multi-line narrative rhythm is chaotic. Words like "cliched", "vague" and "awkward" further expose the film's shortcomings. They believe that the plot lacks a breakthrough in creativity, adheres to the traditional revenge model, has insufficient clarity in expression, and the emotional transmission is stiff. For instance, the sentimental scenes between Nezha and his mother seem out of place and forced against the backdrop of a grand disaster. Such plot shortcomings, along with multiple issues such as vulgar jokes and chaotic narratives, cause aesthetic fatigue among the audience during the viewing process, thereby weakening the market appeal of the film.

## 3. Conclusion

The dimensions such as character design, visual effects, storylines and ideological values of cultural symbol innovation significantly influence consumers' willingness. Specifically, in terms of purchase intention, economically developed regions, with their higher cultural participation and consumption capacity, have a higher acceptance of innovative animated peripherals. Lower-tier cities, on the other hand, are constrained by consumption scenarios and economic levels. In terms of recommendation willingness, symbolic innovation stimulates the emotional resonance of the audience through character shaping and the transmission of ideological values. Cultural confidence promotes sharing behavior through value resonance, while passive algorithmic recommendation is relatively weak in stimulating communication motivation. In the future, domestic animated films should integrate cultural confidence into the creative core, explore the value resources in classic classics, and shape animated characters with the Chinese spirit. At the same time, build an active dissemination model with content as the core driving force and social platforms as the viral path to stimulate the audience's desire to share actively.

Consumers focus on four major dimensions of domestic animated films: characters, visuals, narratives and themes. Take Nezha 2 as an example. The character development highlights the personality charm and group characteristics. The visual presentation integrates grand special effects

with traditional Chinese aesthetics. The narrative structure enhances tension through conflict and reversal. The theme delves deeply into the core of struggle and growth. The film meets the audience's expectations for artistry, thoughtfulness and innovation through multi-dimensional innovation. From this, it can be known that in the future, domestic animated films can make efforts in four aspects: In terms of character design, three-dimensional and diverse character images can be created, a rich group image system can be built, and traditional artistic elements can be integrated to enhance recognition, thereby increasing the competitiveness of animated films; At the visual effects level, in terms of special effects scenes, it is necessary to be good at leveraging cutting-edge technologies and integrating Chinese characteristics at the same time, to build a Chinese-style picture system with Oriental aesthetics. The creation of the story plot needs to strengthen the multiple conflicts and contradictions, skillfully set up foreshadowing and twists, and deepen the theme of the story. The transmission of ideological values focuses on the growth of characters, the struggle against fate and the reconstruction of family ties, evoking emotional resonance and in-depth reflection among the audience and enhancing the spiritual core of domestic animation.

To promote the development of domestic animation based on cultural confidence, it is necessary to demonstrate production capabilities through technological research and development, talent cultivation and international exchanges. Traditional philosophies such as Taoism and Confucianism should be integrated into stories to spread Eastern thoughts. Characters and stories should be explored from traditional mythological classics and presented in modern forms. At the same time, intangible cultural heritage elements such as paper-cutting and shadow puppetry should be incorporated to enhance cultural identity. Based on this, drawing on the strategic concept of building a Chinese animation mythological universe proposed by Wang Changtian of Enlight Pictures, it is necessary to establish a unified worldview framework to clarify the connection differences and element Settings of the mythological system, design cross-work character linkage to weave a story network, and strengthen brand influence through series brand operation, unified visual identity, etc., to convey Chinese culture to the world.

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