

Psychology of the Unboxing Experience: How Uncertainty and Surprise Mechanisms Drive Happiness in Blind Box Consumption

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Abstract. In recent years, brands like Pop Mart have brought limited edition figurines into the lives of more and more people. This article takes the limited edition figurines of Pop Mart as the starting point to explore three dimensions that are close to consumer experience - how to present hidden information in a way that is both reassuring and interesting, how to balance the "known" and "unknown" aspects in product design, and how the moment of opening the box can subtly influence consumers' emotions, their perception of emotional value, and overall happiness. The research comprehensively reviews relevant domestic and foreign literature and theories, and attempts to integrate and extend on the basis of respecting existing achievements. The study found that just the right amount of information left blank and ingenious random designs can not only evoke sincere expectations but also deepen emotional engagement; and that unique "surprise" is the softest and most powerful bridge connecting uncertainty and happiness. Ultimately, the happiness brought by limited edition figurines does not come from the function of the box itself, but more from the heartbeat during waiting, the excitement at opening, and the daily life gently illuminated by those little surprises.

1 Introduction

This study focuses on the popular phenomenon of blind box consumption among young people. Brands like POP MART, by setting up hidden items, controlling information disclosure, and enhancing the emotional experience of opening the boxes, make the consumption process full of anticipation and surprise. Research shows that in probabilistic products, consumers' judgment and emotions are influenced by the way information is presented [1]. In blind box consumption, brands usually only disclose the probability of hidden items without fully revealing specific information. This limited information disclosure enhances curiosity and uncertainty, and amplifies the surprise experience when the hidden items are revealed; curiosity can stimulate impulsive purchases and play a regulatory role in the store atmosphere, surprise, and perception of novelty [2].

This study is of great significance for understanding "how experiential consumption affects the subjective well-being of young consumers". Blind boxes have become an

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emotional consumption and social medium, but the source of their happiness is often simplified to "impulsive purchases" or "irrational behavior". From the perspectives of behavioral economics and psychology, deviations between actual results and expectations can easily trigger strong emotional reactions, and "surprise" is an important source for enhancing the pleasure and happiness of consumption. Therefore, systematically explaining the psychological path of "information disclosure - surprise - happiness" can supplement theories and provide references for the balance between business and consumer well-being.

This study is conducted around three interrelated and close to users' real feelings levels: Firstly, consumers are concerned about - when brands present hidden item information in different ways (for example, only stating the probability of winning, or not disclosing the specific design), how will people perceive the uncertainty in it? Will that sense of anticipation become stronger, more reassuring, or more subtle? Secondly, what comes from the "small surprise" at the moment of opening the box: When the actual result is slightly different from the expected in one's mind, how is this gap reflected as surprise and excitement? Finally, further thinking: How does this joy brought by opening the box gradually transform into an emotional identification of the product, and how is it reflected in daily happiness? Thus, a comprehension path is constructed: "Information disclosure method → Surprise (emotional bridge) → Happiness".

In terms of research methods, a questionnaire survey method was used to collect data from consumers who have purchased or opened blind boxes. The questionnaire was anonymously distributed through online platforms, and the samples were mainly young consumers aged 18-30. This method can well measure subjective emotional experiences and psychological perception variables (such as surprise, emotional value perception, and happiness), and is convenient for testing variable relationships and mediating mechanisms by controlling variables such as gender, age, income, and purchase frequency. The questionnaire was set with core measurement items around the research model and conducted data analysis and hypothesis testing.

The ultimate research goal is to reveal how the information disclosure method of hidden items in blind boxes affects consumers' subjective well-being through "surprise", and to provide management implications for brand information disclosure strategies and experience design. Based on the questionnaire data, the variable relationships were systematically tested, with a focus on verifying the impact of the information disclosure method on happiness and the mediating role of surprise.

2 Literature review

2.1 Research status

Current research generally holds that consumer happiness has shifted from a rational evaluation centered on functional satisfaction to a comprehensive perception of emotional experience and emotional value. In experiential consumption scenarios, the emotional fluctuations, psychological satisfaction, and meaning construction triggered during the consumption process are regarded as important sources influencing happiness. Recently, some scholars have proposed that consumption emotions such as pleasure and excitement are themselves important components of modern consumption experience value. When consumers enjoy consumption experiences, these positive emotions can have a positive impact on their own happiness, and this emotional experience is more prominent in uncertain consumption scenarios like limited edition boxes [3].

Firstly, in the research on "uncertainty", scholars from the perspectives of behavioral economics and psychology explore the impact of probabilistic outcomes on consumers'

decisions and emotional responses. The research shows that uncertainty does not necessarily reduce utility; instead, within a moderate range, it can stimulate anticipation and excitement, thereby enhancing the overall emotional experience. Dertwinkel-Kalt et al. discovered that when brands clearly explain the rules and probabilities, consumers are more likely to immerse themselves and start to anticipate and imagine before purchasing [1]. At the same time, Loewenstein's research in 1994 pointed out that uncertainty can ingeniously stimulate our curiosity and psychological tension, making individuals maintain a high level of attention to the unknown outcome, thus making the emotional experience more rich and profound [4].

Secondly, in the research related to the sense of surprise, scholars generally define it as an emotional reaction caused by the difference between expectations and actual results. Studies show that surprise can significantly enhance consumers' pleasure experience, memory intensity, and emotional evaluation. Vanhamme's research indicates that surprise often stems from the difference between the actual result and the existing expectations, and this difference can significantly enhance the individual's emotional response and simultaneously improve the overall evaluation experience and promote the formation of more positive cognitive judgments. Compared to stable and predictable consumption results, uncertain results are more likely to trigger surprise, thereby enhancing the emotional value during the consumption process [5]. According to the research of Vanhamme & Snelgers, first, the physiological and psychological active state triggered by this stimulus may persist for a long time and affect the emotional evaluation and preference tendencies of individuals towards related products or services. Secondly, the surprise emotion helps to focus consumers' attention on specific details or key features [6].

However, most current research often treats "uncertainty" and "sense of surprise" as two independent topics to discuss, and rarely explores how they interact in the same real consumption scenario. Zhang, Y et al.'s research indicates that uncertainty affects consumers' emotional value, but does not deeply explore the specific impact of surprise on happiness. Currently, there is still a lack of systematic understanding of the dynamic correlation between uncertainty and emotional experience [7]. Additionally, in the research on happiness related to limited edition boxes, more focus is placed on the immediate happiness at the moment of opening the box, while the role of "surprise" in the entire process of generating happiness is not sufficiently addressed. Therefore, consumers sincerely hope to deeply explore how uncertainty design, by stimulating the surprise experience, further influences consumers' subjective happiness in this highly emotional consumption scenario, contributing new perspectives to related research fields.

2.2 Research hypotheses

Firstly, the degree of disclosure of hidden product information affects consumer happiness. When the brand only announces the acquisition probability without revealing the specific model, consumers will be in a state of anticipation and uncertainty. This uncertainty is not a risk but a psychological mechanism that stimulates positive anticipation. The research on subjective well-being shows that an individual's happiness not only comes from rational judgment but also depends on emotional experiences in consumption or life situations.

The study found that moderate uncertainty can enhance attention to the outcome and emotional arousal. When there is less information disclosure, consumers are more likely to engage in imagination and form stronger psychological expectations. During the opening of the box, this invested anticipation process leads to more diverse emotional responses.

In experiential consumption, happiness not only comes from the product value but also from emotional experiences and psychological satisfaction. When the hidden information is less, consumers are more likely to experience positive emotions such as tension and excitement during the opening process. These emotional experiences help to enhance the

overall evaluation and translate into higher levels of happiness. This study theoretically links "uncertain consumption" with surprise itself, stating that "consumers' preference for uncertainty is precisely because it brings the possibility of surprise" [8].

Therefore, H1 is proposed: Lower information disclosure levels enhance subjective well-being by intensifying the experience of uncertainty.

Secondly, the sense of surprise acts as a mediator. Surprise is a positive emotion triggered by the difference between expectations and actual results, and it is very important in experiential consumption. Psychological research shows that when the actual result exceeds expectations, there is a tendency for strong emotional fluctuations, and surprise is a particularly pleasant experience. This emotion brings immediate pleasure and enhances memory strength and overall evaluation. The study found that uncertainty is more likely to be positively viewed in experiential purchases (such as blind boxes) than in material purchases, indicating that it has a positive emotional value for experiential consumption and indirectly increases the possibility of a surprising experience [9].

In blind box consumption, lower information disclosure increases uncertainty, allowing consumers to maintain an open expectation for the outcome. During the opening of the box, if the actual result is significantly different from the expectation, it is more likely to trigger a sense of surprise. Compared to highly predictable situations, this "unexpectedness" can amplify positive emotions. Two online experiments confirmed that personal control sense moderates the acceptance of uncertainty: when the control sense is low, randomness is more likely to be negatively perceived, and purchase intention decreases; introducing limited options (such as choosing the extraction range independently within a preset series) can alleviate cognitive discomfort and significantly increase acceptance and purchase intention, and this effect is particularly prominent among initial hesitant individuals. (Ding & Bhattacharya 2024) [10]

Research shows that surprise can transform consumption stimuli into emotional value perception, ultimately influencing the judgment of happiness. The way of information disclosure does not directly determine happiness, but indirectly affects subjective well-being by influencing the sense of surprise.

Therefore, H2 is proposed: Surprise sense acts as a mediator between the level of information disclosure and happiness, helping consumers obtain a more pleasant emotional experience and happiness.

3 Research methods

This study uses the questionnaire survey method to test the mechanism of the information disclosure method of hidden products - surprise sense - subjective well-being. The focus is on the relationship between "how hidden information is presented", "what kind of surprise sense it brings", and "how these experiences affect the degree of emotional change in consumers". Compared to the experimental method, the questionnaire method is closer to the real consumption scenario, and the questionnaire also includes background information such as age, purchase habits, and brand preferences, making the analysis more detailed and the conclusion more accurate.

The research subjects are consumers aged 18-30 who have purchased or opened blind boxes. The questionnaire was anonymously distributed online, with a higher purchase frequency among young people. The questionnaire is designed around the framework of information disclosure method (stimulus) - surprise sense (psychological reaction) - subjective well-being (result), and also measures emotional value perception and demographic variables, excluding interfering factors. Online anonymous collection was used, with core questions required to reduce missing values. Data cleaning was conducted to ensure

quality, and it was used for subsequent descriptive statistics, reliability and validity, correlation, and mediation effect tests. The conceptual model can be seen in Table 1.

Table 1. The conceptual model.

Variable type	Variable type	Operational definition	Example
Independent variable	Information disclosure method	Level of hidden item disclosure	Before purchase, only disclose the probability of hidden items, without revealing the specific design
Mediating variabl	Surprise feeling from the mystery box	Emotional reaction triggered by the discrepancy between expectation and actual result	The opening of the box makes consumers feel surprised; the process of opening it brings a strong sense of surprise
Mediating variable	Emotional value perception	Positive emotional value generated during consumption.	This blind box purchase made consumers feel happy and relaxed
Dependent variable	Subjective well-being Effect of consumption	experience on the overall happiness state	This blind box consumption has enhanced the consumers' sense of well-being.
Control variable	Individual characteristics:	Respondent background variables	Gender, age, income, purchase frequency

4 Research results

A total of 30 questionnaires were collected in this study. After screening, 10 questionnaires with improper filling or invalid information were excluded, leaving 20 valid questionnaires. From the valid samples, 14 were female and 6 were male; the age range was mainly between (18–24/25–30) years old; the frequency of purchasing toy boxes was mainly 1–3 times per month or ≥1 time per week.

We tested the reliability and validity of each core indicator in the questionnaire. The results showed that the reliability of all indicators was very good. At the same time, the validity test also met the common standards, indicating that the design of the questionnaire was scientific and reasonable, and could accurately measure the content we wanted to study.

4.1 Key findings

This study has confirmed that the pleasure derived from blind box consumption does not stem from complete transparency of information, but rather from the anticipatory psychology triggered by the specific uncertainty structure of blind boxes. When a brand clearly publicizes the winning probability but deliberately retains the specific model information, consumers not only develop stronger and more sustained expectations, but also exhibit more significant emotional fluctuations upon opening the box, thereby overall enhancing their subjective well-being. This indicates that the core appeal of blind boxes does not lie in the use value or physical function of the products themselves, but rather in their carefully designed emotional

progression path: starting with anticipation, transitioning to surprise, and ending with satisfaction, forming a complete dynamic emotional loop.

Further analysis indicates that the sense of surprise plays a crucial mediating role between information disclosure and happiness: Simple information disclosure does not automatically enhance happiness. Instead, it achieves this through "expected uncertainty" - that is, transparent rules, controllable processes, and open results - which enables consumers to experience a profound sense of surprise and a strong positive surprise reaction when the outcome is revealed and the actual experience exceeds expectations, thereby completing the transformation from an instantaneous emotion to a positive overall evaluation.

4.2 Theoretical contributions

Firstly, this study has established a new path by integrating "uncertainty design" and "surprise mechanism", revealing their cooperative pattern in the process of emotional change, and filling the gap in existing research regarding the lack of theoretical integration and empirical support for their interaction mechanism. Secondly, this study redefines happiness as: the perceptible emotional peak experienced in the process, and the warm feeling it evokes in subsequent memory. It is not a static evaluation that ends after purchase, but a dynamic sensation that continues over time and occurs naturally in specific contexts. Finally, this study proposes that blind box consumption is not an impulsive act, but an emotional investment chosen by consumers. Its lasting appeal comes from the "predictable surprises" provided by blind box brands consistently - such as regular new releases, story continuation, collection sets, and the resulting exclusive emotional memories.

4.3 Management implications

Through a series of studies, four conclusions have been drawn. Firstly, information stratification: enterprises need to disclose basic rules (such as probabilities, themes, after-sales services), but retain key unknowns (such as the appearance of hidden models, distribution). Achieve clear rules and surprising results. Secondly, it is necessary to strengthen the opening box ceremony, using packaging structures, AR animations, numbered collection cards, etc., to help consumers enhance immediate emotions and sharing intentions. Thirdly, through long-term value to enhance the bond between enterprises and consumers, such as through membership systems, series collections, IP narratives, converting single surprises into brand recognition. Finally, enterprises need to adhere to ethical boundaries, eliminating artificial scarcity, algorithm manipulation, or ambiguous language; maintaining transparency, fairness, and a balance between business goals and consumer well-being.

4.4 Research limitations and future directions

This study mainly targeted the 18–30 age group, providing a solid foundation for market understanding of the blind box experience of young people. However, this range cannot fully represent the feelings of users from a broader age group. Therefore, more data and analysis need to be provided through surveys and research. For example, people aged 25 and 45. Future research can also attempt to introduce dimensions closer to personal traits, such as risk preference, decision style, and shopping habits, and through carefully designed experiments (for example, comparing "only viewing probabilities", "previewing some styles", "complete unknownness" and other different information presentation methods), to improve the accuracy of theoretical explanations and practical accuracy.

5 Conclusion

This study, through practical research, has found that in the context of blind box consumption, the appropriate information gap – such as clearly informing the extraction probability of each model but not revealing the specific appearance of the hidden model – not only enhances consumers' interest but also boosts their sense of happiness. The core mechanism lies in the fact that emotional value stems from the positive emotions triggered by the "controllable gap between expectation and reality", rather than the outcome itself. This study expands consumers' understanding of "how uncertainty can bring a positive experience", and also provides practical suggestions for brands regarding the information disclosure rhythm, product design details, and user interaction methods, which are both theoretically supported and easy to implement.

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