

# The Effect of Appearance Novelty on Product Purchase Intention

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**Abstract:** In recent years, with the changing needs of people and the impact of COVID-19, competition among enterprises has become increasingly fierce. Product is the foundation of enterprise survival in the market. In order to enhance their competitiveness, enterprises often improve their products, taking product appearance as a breakthrough point. For consumers, appearance is the first impression of a product. When the appearance of a product is changed, it will immediately attract consumers' attention. A novel product appearance may boost sales for a company, but it may also bring perceived risks to consumers. Since there are different conclusions about the effect of appearance novelty on consumers' purchase intention, this study tries to find the boundary conditions of this mechanism. In this study, relevant researches were collected and reviewed by literature method to lay a theoretical foundation for this experiment. Then, data were obtained by questionnaire experiment method. Finally, through data analysis, it was concluded that product type (public product VS private product) regulates the influence of appearance novelty on consumers' purchase intention. Specifically, the novelty of appearance of items used in public places has a significant positive influence on purchase intention.

**Keywords:** Novelty of Appearance; Purchase Intention; Public Product; Private Product; Use Situation; Product Type; Product Design

## 1. Introduction

The product is the basis for the existence of the enterprise and its connection with the outside world. The popularity of a product in the domestic and foreign markets determines the profitability of an enterprise. With the progress of science and technology and

economic development, more and more products appear, and the market competition is becoming more and more intense. Many enterprises are facing the serious situation of increasing homogenization of product functions. Only innovation can distinguish an enterprise from its competitors and form a competitive advantage that is difficult for others to imitate. The function of the product is undoubtedly important, but only focus on product function is not wise, only rely on product function to achieve product differentiation has become more and more difficult.

Consumers' purchase intention a product will be affected by a variety of factors, which include not only the product's own attributes and characteristics, but also external clues such as the product's brand and price, and even the consumer's personal traits, but it is difficult to influence the consumer's purchase intention from their personal traits, so companies often choose to change the attributes of the product to meet the different needs of consumers. Appearance is the consumer's first impression of the product, attracting the consumer's attention. Enterprises often make some changes to existing products in the market, so as to visually produce a new product that is different from what customers expect [1], in order to gain a competitive advantage. In view of the current debate about the effect of appearance novelty on consumers' purchase intention, the author believes that it is necessary to introduce the concept of the use context of goods (i.e., public product/private product) into the research system, and to explore the mechanism of its action and the boundary conditions of this mechanism.

## 2. Literature Review

### 2.1 Product Appearance Novelty

With the progress of science and technology and the rapid development of the economy, a

variety of products are emerging, and consumers have more and more choices. Size, pattern, color and contour are all elements included in product appearance [2]. A consumer's first impression of a product is usually established by the product's appearance, and companies can manage this first impression to gain a competitive advantage [3]. Therefore, companies often change the appearance of existing products on the market, so that it is visually different from the consumer's expectations of the type of product of the new product [1], to influence consumer attitudes, perceptions and behaviors, which has a profound impact on the company's product strategy, which can help the company is to win the consumers and the market [4]. This is because in a chaotic market, product form is a way to gain consumers' attention [5]. Secondly, product form or appearance is an important means of communicating information to consumers [6]. Third, the perception and use of beautifully designed products can provide sensory pleasure and stimulation [7], and the aesthetic experience gained from product design can influence consumers' perception and purchase of products [4].

The visual characterization factors of product design can be classified into four categories, namely complexity versus simplicity, typicality versus novelty, symmetry versus asymmetry, and high versus low contrast [8]. The field of marketing research usually considers novelty as the deviation between the product design and the state of design of the product in that category [9]. If the appearance of a good deviates significantly from the mean value of the appearance characteristics of the product in the category, the product can be considered to have a high degree of novelty [10]; if the appearance of the product is very similar to that of other products in the category, the appearance of the product is considered to be lacking in novelty [4,11]. On the one hand, novelty appearance can realize the unique brand positioning of a product and is regarded as an effective differentiation marketing tool [9,12]. Some scholars have pointed out that novel design has a positive impact on both consumer aesthetic preferences and company sales performance [13,14], and it is generally believed that a more novel design implies greater performance. On the other hand,

however, novel designs may trigger psychological discomfort and increase perceived risk for consumers, which may adversely affect brand awareness and the ability to transfer brand associations [15]. When product designs are too novel, they may even be disliked by the majority of the population [16]. In view of this, I believe that it is necessary to introduce the concept of product type (public vs. private) and conduct a study on the mechanisms by which the novelty of a product's appearance affects purchase intentions.

Currently, the measurement of design novelty is mostly a scale method, such as Cox et al. in their experiments measured the novelty of a product's appearance by using several items: distinctive vs. ordinary, familiar vs. novel, new vs. old, original vs. imitation, and typical vs. atypical [17]; and Hekkert et al. measured novelty by three groups of items: peculiar or typical, familiar or novel, and original or newer [18]; Mugge and Dahl, on the other hand, measured it using three sets of items: non-innovative versus innovative, original versus non-original, and old versus novel [19]. Given the focus on the concept of cosmetic novelty involved in this experiment, this study ultimately draws on Stock and Zacharias' scale, which includes "the product's design is novel," "the product's design is ordinary" "The product is significantly different from existing products in terms of design novelty" [20].

## 2.2 Types of Products

It has been argued that products can be categorized into public and private products based on their context of use (i.e., whether someone is present or not) [21]. A public product is a product whose consumption context is public and visible, and is important for identity communication [22]; on the contrary, a private product's consumption context is non-public and invisible, and the individual is not cared about by others when consuming or using such a product [23]. Some scholars believe that the function of the product changes due to the difference in the context of use, which creates a difference in the psychology of the consumer when purchasing a public product versus when purchasing a private product. Consumers will seek more variety for publicly consumed products (as opposed to privately consumed

products) [24]. For example, when consumers purchase public products, they will be concerned about the reactions of others; on the contrary, when consumers purchase private products, they do not need to consider the reactions of others [25]. Moreover, Yu, Chunling et al. found that when product attributes are basically the same, only in the public context, consumers with high face awareness will prefer to purchase green products (relative to the private context) [26]. In summary, we hypothesize that context of use may play a moderating role in the mechanism by which appearance novelty affects consumers' purchase intention.

The scale used in this study to manipulate the context of product use was based on Zhang Kang's study, which included two items: "This product is not generally accessible to anyone but me" and "This product is for private use" [27]. For the selection of stimuli, this experiment drew on Yu Chunling's experiment according to the specific context and experimental requirements, choosing a watch as the stimulus for the public group and a desk lamp as the test product for the private group [26].

### 2.3 Purchase Intention

The concept of purchase intention is often used in marketing research, and scholars have different definitions of purchase intention. Willingness initially refers to the probability that a particular behavior may be performed, so the possibility or probability that a consumer will buy a certain product or service is also called purchase intention [28]. Jin Yingwei et al. pointed out that the purchase intention is a behavioral tendency that consists of the consumer's attitude and evaluation of the product or service [29]. Although conceptually he is only a behavioral tendency or readiness, he can be used to predict the actual purchase behavior of consumers [30,31]. Fishbein noted that the subjective willingness of the consumer to a certain extent affects the consumer's consumption and purchase of a particular product, service or brand [28]. purchase intention is a prerequisite for purchasing behavior, and purchasing behavior is affected by the magnitude of the strength of the purchase intention, with a higher purchase intention indicating a higher likelihood of purchase, and vice versa a lower chance of

purchase [32,33]. Bagozzi and Baumgartner [34] conducted a survey in a magazine, and they found that 86% of readers turn their desire to shop into real action [34]. So in the study of consumer psychology and buying behavior can start from the study of consumer purchase intention.

There are many factors influencing consumers' purchase intention, including endorsers, quality, price, demographic factors, geographic factors and so on [35]. Existing studies have shown that product usage characteristics, corporate social responsibility, corporate reputation, and consumer demographic characteristics all have an impact on consumer purchase intention after a product crisis [36]. Liu Hua et al. showed that three extrinsic factors, namely price, brand image and image of origin, had a positive effect on customers' perceived quality and had a great impact on consumers' purchase intention [37]. In addition, product type, color, taste, product function or performance can affect consumers' purchase intention [38-41].

There are a number of well-established scales for measuring consumers' purchase intention, and Bearden used only two items, "likelihood to buy" and "degree of planning to buy", to measure consumers' purchase intention in his study [21]. Lim and Darley in their 2009 study used three items: "high or low chance; likely or unlikely; very likely or unlikely" to measure consumers' purchase intention [42]. "I would consider buying this product if the budget allows" [43].

## 3. Research Hypothesis and Theoretical Model

### 3.1 Research Hypothesis

#### 3.1.1 Appearance novelty affects purchase intention

Consumers' purchase intention is usually affected by a variety of factors such as product quality, appearance, brand and even consumers' personal characteristics. When the appearance of a product does not match the average value of the appearance of the product in the category, we consider it novel [3], and the more its appearance deviates from the existing products, the more attention it will receive from consumers [44]. The role of product appearance novelty in influencing consumers' purchase intention is still

controversial in existing studies. On the one hand, products with unfamiliar appearance design will arouse consumers' interest [45], and the stronger the novelty, the more emotional aesthetic response will be aroused [46]. On the other hand, novel designs can reduce consumers' brand awareness, which can trigger psychological discomfort and increase perceived risk [15]. However, Landwehr et al. found in their study of German car market sales that typical exterior designs were more popular during the market introduction phase, but after several exposures, consumers preferred novel designs over typical ones [47]. In summary, we believe that the negative impact of novel appearance on brand recognition can be solved by multiple exposures, and people still prefer novel appearance. Therefore, this paper proposes the following hypotheses:

H1: Appearance novelty positively affects consumers' purchase intention.

### 3.1.2 Moderating effect of product type

Although we believe that product designs with high novelty can enhance consumers' purchase intention, this is not always the case and the effect may be influenced by the type of product (public product vs. private product). Based on different criteria, products can be categorized into different categories such as utility products/hedonic products, indulgences/self-regulation and public products/private products as taken in this study. It has been demonstrated that consumers' purchase intention is affected by different product types (indulgences vs. self-regulated products), and consumers' willingness to purchase is more profoundly affected by self-regulated products than consumers' willingness to purchase generated by indulgences [41]. Zhu Zhenzhong et al. also pointed out that consumers prefer hedonic products with high novelty appearance, while for utility products, novelty of appearance has no significant effect on consumers' purchase intention [48]. Products can be categorized into public and private products based on whether someone is present when they are used [21]. Consumers are concerned about the perception of others when purchasing public products, but not when purchasing private products. This leads to the fact that consumers are psychologically different when purchasing products with different contexts of use, which

in turn affects their purchasing behavior. Yu Chunling's study showed that context of use moderates the effect of face consciousness on purchase intention of green products, that is, in the public context, consumers with high face consciousness will tend to buy green products; while in the private context, purchase intention of green products is usually not affected by face consciousness [26]. On this basis, it is reasonable to hypothesize that product type (public vs. private) plays a moderating role in the mechanism of appearance novelty's influence on consumers' purchase intention.

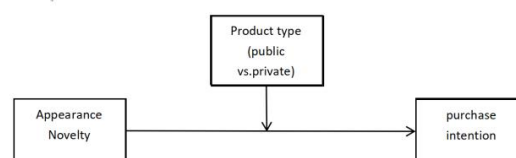
Based on the results of the relevant studies described above, the hypothesis is proposed:

H2: Product type (public product vs. private product) has a moderating role in the relationship between appearance novelty and product purchase intention.

H2a: When the main product is a public product it positively affects consumers' purchase intention.

## 3.2 Research Model

In this paper, after carefully studying the research results of product novelty in academia, the novelty of appearance is taken as the independent variable in this study, and the type of product (public vs. private) is taken as the moderating variable in this study, so as to establish a theoretical research model on the influence of product novelty on consumers' purchase intention, and based on it, we put forward the hypotheses in this paper, and prove the hypotheses in this study through scenario experiments and data analysis. and data analysis to prove the hypotheses proposed in this study. Figure 1 shows the research model.



**Figure 1. Research Model**

## 4. Experimental Design and Result Analysis

### 4.1 Experiment 1 Effect of Appearance Novelty on Consumers' Purchase Intention

#### 4.1.1 Experimental design

This study is completed by questionnaire survey, aiming to test hypothesis H1

(Appearance novelty positively affects consumers' purchase intention). In this experiment, a glass cup was used as the test product, and the subjects saw two stimuli with different novelty in the same category (high novelty vs. low novelty) in turn, scored the novelty of the two products, and answered the willingness-to-buy and demographic questions. The Willingness to Purchase Scale (WPS) was based on Griskevicius et al. and included the question "If you could only choose one of the two products a and b, which one would you choose?", with a special note that the price and brand of the two products were the same [49].

#### 4.1.2 Analysis of results

##### 4.1.2.1 Sample descriptive statistics

The four demographic variables of monthly income, age, gender, and education of the sample were first analyzed using SPSS23.0, and the results are shown in Table 1.

**Table 1. Demographics**

title	option	frequency	percent (%)
1. Your gender:	Man	94	47.0
	Woman	106	53.0
2. Your age	Under 18 years old	6	3.0
	18-25 years old	65	32.5
	26-34 years old	91	45.5
	Over 35 years old	38	19.0
3. Your education level	High school and below	66	33.0
	College or Bachelor's Degree	126	63.0
	Master's degree or above	8	4.0
4. Your monthly income	Under 1000	6	3.0
	1000-3000	53	26.5
	3000-5000	96	48.0
	5000 above	45	22.5

A total of 200 valid questionnaires were received for the experiment. The details are shown in the table. There were 94 males and 106 females, and most of the subjects were above 18 years old, with 26 to 34 years old accounting for 45.5% of the total, and most of the subjects were college students. The number of people whose monthly income is between 1000 and 3000 yuan is 53, accounting for 26.5% of the total number of respondents, and the number of people whose monthly income is between 3000 and 5000 yuan is about half of the respondents, accounting for 48.0%.

##### 4.1.2.2 Reliability test

In terms of the reliability test of the scale,

scholars mostly adopt Cronbach- $\alpha$  coefficient to judge its reliability. It is generally believed that the reliability of the scale is well verified when the Cronbach- $\alpha$  coefficient is greater than 0.8; when the value of Cronbach- $\alpha$  coefficient is greater than 0.7 and less than 0.8, the reliability of the scale is in a still acceptable range; when the Cronbach- $\alpha$  is less than 0.7, the reliability of the scale is considered to be poor, and the question items of the scale must be modified. The scale items must be modified.

**Table 2. Reliability Test**

dimension	Product Type	Cronbach- $\alpha$
Appearance novelty	Normal Appearance	0.804
	Novel appearance	0.782

As shown in Table 2 the Cronbach-alpha coefficients of appearance novelty for the two different types of stimuli were obtained after processing the reverse question items of the scale were greater than 0.7, which is within the acceptable range.

##### 4.1.2.3 Validity tests

**Table 3. KMO and Bartlett Test**

KMO		0.773
Bartlett	approximate chi-square	432.927
	<i>df</i>	15
	<i>p</i>	0.000

From Table 3: KMO value is 0.773 which is greater than 0.7 indicating that the research data is suitable for extracting information. The value of Bartlett's test of significance is 0.000 indicating that the significance is good.

##### 4.1.2.4 Hypothesis testing

The author used paired sample t-test to compare the appearance novelty scores and obtained the results in Table 4:

**Table 4. Paired T-Test**

pairings	average	p
a novelty—b novelty	-3.560	0.000
a normal—b normal	3.045	0.000
a Significant difference—b Significant difference	-4.170	0.000

The results are: for the question "This product is novel" M common = 2.27, M novel = 5.83; for the question "This product is common" M common = 5.57, M novel = 2.53; for the question "There is a significant difference between this product and existing products in terms of design novelty" M common = 1.80, M novel = 5.97. "There is a significant difference between the design novelty of this

product and that of existing products”  $M_{\text{common}} = 1.80$ ,  $M_{\text{novel}} = 5.97$ . From the data in the table, we can see that the p-value of the scores of the three pairs of questions is less than 0.05, i.e., there is a significant difference, which means that the novelty score of novelty product b is significantly larger than that of common product a. And in the subsequent questions (if this product is common), we can see the p-value of the scores of the three pairs of questions.

And in the subsequent question (if the price and brand of product ab are the same, which product would be more willing to buy), 86.5% of the people are more willing to buy novel product b, which is greater than the proportion of people who want to buy ordinary product a, i.e., to verify that the hypothesis H1 is valid, and that appearance novelty positively affects the consumer's willingness to buy.

## 4.2 Experiment 2: The Effect of Appearance Novelty on Consumers' Purchase Intention: The Moderating Effect of product Type Test

### 4.2.1 Experimental design

The purpose of the study is to test hypothesis H2 (whether usage context moderates the effect of appearance novelty on product purchase intention). In this paper, a 2 (Appearance Novelty: High Appearance Novelty vs. Low Appearance Novelty) \* 2 (Product Type: Public vs. Private) between-groups experiment was designed to verify the role of different product types in relation to appearance novelty and purchase intention.

The experiment was completed through the Questionnaire Star online questionnaire, in which subjects were divided into four groups to observe different stimuli, and were asked to answer questions related to the characteristics of the product and their willingness to purchase the product, and finally to complete demographic information questions. In this study, a watch and a desk lamp were used as test products. The watch was clearly stated in the questionnaire as “This product is a watch for public use” (public product), and the lamp was stated as “This product is a desk lamp for private use” (private product) [26]. Each group was designed with both novelty and ordinary products with the same price and brand. All scale items used in this experiment were on a seven-point Likert scale, e.g., subjects were

asked to rate the novelty of the stimuli on a numerical scale of 1-7, and the data were analyzed using SPSS 23.0 at the end of the overall experiment.

### 4.2.2 Analysis of results

#### 4.2.2.1 Descriptive statistics of the sample

As shown in Table 5, the demographics of the subjects were: 187 females (83.9%) and 36 males (16.1%). The majority of the subjects, 175 or 53.4%, had a monthly income of \$1,000 to \$3,000. Moreover, more than half of the respondents had incomes between 1,000 and 3,000 yuan. Since the main group of respondents participating in the experiment are college students, the majority of them have bachelor's degree or above, and their ages are basically between 18 and 25 years old.

**Table 5. Descriptive Statistics**

title	option	frequency	percent(%)
1.Your gender:	Man	36	16.1
	Woman	187	83.9
2.Your age	Under 18 years old	3	1.3
	18-25 years old	212	95.2
	26-34 years old	5	2.2
	Over 35 years old	3	1.3
3.Your education level	High school and below	3	1.4
	College or Bachelor's Degree	209	93.7
	Master's degree or above	11	4.9
4.Your monthly income	Under 1000	57	25.6
	1000-3000	119	53.4
	3000-5000	30	13.4
	5000 above	17	7.6

#### 4.2.2.2 Reliability test

In this study, the scale data obtained from the completed questionnaires among the subjects were analyzed for reliability and the results are presented in Table 6.

**Table 6. Reliability Test**

dimension	Cronbach $\alpha$
Appearance novelty	0.773
purchase intention	0.959

As shown in the table 6, the Cronbach-alpha for willingness to buy is 0.959 and the Cronbach-alpha value for novelty of appearance is 0.773. It can be seen that the reliabilities of both scales are higher than 0.70,

which indicates that the reliabilities of the measurement scales used in this study are within the acceptable range, and thus are reliable.

#### 4.2.2.3 Validity test

Existing studies have mainly tested the accuracy and validity of the scales through validity.

**Table 7. KMO and Bartlett Test**

KMO		0.709
Bartlett	approximate chi-square	990.217
	<i>df</i>	15
	<i>p</i>	0.000

From the table 7, it can be seen that: the KMO value is 0.709, which is between 0.7 ~ 0.8, the research data is suitable for extracting information. The value of Bartlett test of significance is 0.000, which means that the significance is good.

#### 4.2.2.4 Manipulation test

To test whether this experiment's division of product types (public vs. private products) is recognized by the subjects, the questions refer to Zhang Kang's study, including "This product is for private use" (M table lamp = 5.470, M watch = 3.348) "This product is not generally accessible to others except me". Other people besides me do not usually have access to it" (M table lamp = 4.851, M watch = 3.483) two question items. The results of the manipulation test analysis of product type indicated that the subjects generally agreed that the lamp is a private product and the watch is a public product.

#### 4.2.2.5 Hypothesis testing

Moderating effect is a special kind of interaction effect, which has a clear causal direction. In social science research, in general, whether the moderating variable is valid can be directly tested by examining whether the interaction effect between the moderating variable and the independent variable is significant. In this study, for the division of the product type of the moderating variable (public product vs. private product), referring to the study of Yu Chunling et al. the desk lamp was selected as a private product and the watch as a public product [26]. Finally, four subgroups were formed by intersecting with the independent variable of appearance novelty 2\*2, and the treatment as shown in the figure was done, i.e., the product type was used as a categorical variable, and the appearance novelty was used as a continuous

variable. The final results obtained are shown in Table 8:

**Table 8. Description of Treatment of Research Variables**

typology	title	data type	data processing
implicit variable	purchase intention	quantitative	withheld
independent variable	Appearance novelty	quantitative	centralized
moderator variable	Product Type	categorized	virtual variable

**Table 9. Pearson Correlation**

	Appearance novelty
purchase intention	0.156*
* $p < 0.05$ ** $p < 0.01$	

As shown in Table 9, the value of the correlation coefficient between novelty of appearance and willingness to purchase is 0.156 and shows significance at the 0.05 level, thus indicating that there is a significant positive correlation between novelty of appearance and willingness to purchase.

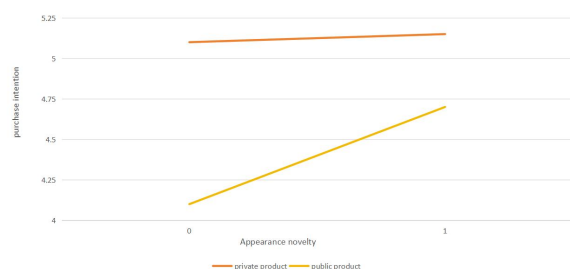
**Table 10. Interactivity Test**

	mode 11		mode 12		mode 13	
	B	t	B	t	B	t
Appearance novelty	0.171**	2.347	0.219**	3.124	0.093**	1.161
Product type - 1.0 [reference]	-	-	-	-	-	-
Product Type-2.0			-0.899**	-4.790	-0.963**	-5.194
Appearance novelty*Product type-2.0					0.485**	3.088
R <sup>2</sup>	0.024		0.116		0.153	
Adjusted R <sup>2</sup>	0.02		0.108		0.142	
F	F(1,221)=5.509,p=0.020		F(2,220)=14.502,p=0.000		F(3,219)=13.222,p=0.000	
$\Delta R^2$	0.024		0.092		0.037	
$\Delta F$	F(1,221)=5.509,p=0.020		F(1,220)=22.948,p=0.000		F(1,219)=9.535,p=0.002	

From Table 10, it can be seen that the interaction term between appearance novelty and product type significantly affects purchase intention, so the moderating effect is valid, i.e., hypothesis H2 is valid.

From Figure 2, it can be seen that the appearance novelty of items used in public

places significantly and positively affects purchase intention, and hypothesis H2a is verified.



**Figure 2. Purchase Intention**

## 5. Conclusion and Discussion

The purpose of this paper is to explore the relationship and boundary conditions between product appearance novelty on consumer purchase intention, based on the existing theoretical foundation and theoretical results at home and abroad, two experiments were designed. Experiment 1 takes appearance novelty as the independent variable, and the dependent variable is purchase intention, to explore the influence of different degrees of appearance novelty on consumers' purchase intention, and the results verify the hypothesis H1 that appearance novelty positively influences consumers' purchase intention. That is, under the premise of the same price and brand of the product, the product with high degree of appearance novelty is more favored by consumers. In Experiment 2, the independent variable is appearance novelty, consumer purchase intention is the dependent variable, and different product types (i.e., public versus private products) are used as the moderating variables in this study. A significant positive relationship between appearance novelty and purchase intention was found through the experiment, and the product type (public product vs. private product) had a moderating effect on the relationship between appearance novelty and product purchase intention. Specifically, for public products, consumers prefer products with high novelty appearance; while the novelty of private products has no significant effect on consumers' purchase intention. This paper further complements and improves the theoretical system of appearance novelty research, enriches the theoretical research on sensory marketing of product appearance,

deepens people's understanding of the impact of appearance novelty, and builds a more in-depth and clearer framework in the theoretical and applied fields.

As mentioned earlier, novelty of appearance can enhance consumers' willingness to buy through certain mechanisms. To improve the competitiveness and attractiveness of products in today's huge consumer market, novelty of appearance can be used as a new breakthrough point. The relationship between product design novelty and consumers' willingness to buy can be affected by a number of factors, so when designing new products, enterprises should consider the impact of product type (public vs. private) on different levels of product design novelty, so as to formulate a reasonable product strategy as well as a marketing strategy, and to obtain higher benefits for the enterprise. The findings of this paper help companies to better carry out their sales efforts and implement sensory marketing in a competitive market. From a macro point of view, through this study, enterprises can better understand consumers' acceptance of the novelty of different types of product designs, which can help enterprises improve their product designs. By improving product design, enterprises can better respond to the changing personalized needs of mature consumers in the new era and improve their own innovation ability. It also plays a positive role in adapting to the current stage of China's high-quality development and the requirements of supply-side structural reform, and promoting the innovative development of Chinese enterprises.

Based on the limitations of various realistic factors, this study was conducted in an experimental environment, only using images as stimulus materials instead of the product itself, and only a few types of items were selected as stimuli, so the research method of this experiment has certain limitations. And mostly focusing on one type of group, it cannot represent the view and position of the whole society, so the research conclusions of this paper are not necessarily generalizable and need to be further tested. Therefore, in order to overcome the limitations of the conclusions and enhance the generalizability of the conclusions, future research can collect more and more extensive sample data for different consumer groups and change the experimental



method to conduct empirical research in the real environment. In addition, the factors affecting the effectiveness of product appearance novelty are complex, and this paper divides product types into public and private products for research, while external cues such as the price and brand of the product may also have an impact on the design novelty decision, which is worthy of further exploration in the future.

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