

PERCEIVED IMPORTANCE OF PRODUCT AESTHETICS FOR CONSUMERS

Andrei DUMITRESCU¹, ORCID ID: 0000-0003-3125-9480

Abstract: *The basic questions answered by the research described in this paper is: Are people assigning the same importance to the product aesthetics of different product classes? Are women and men assign the same importance to product aesthetics? Three experiments were organized with a large number of participants, the data was verified in terms of accuracy and reliability, and, after the statistical processing of the data, the following conclusions were formulated. a) People assign different importance to product aesthetics of different product classes. Basically, the order of importance is: personal and family products; professional products; and products associated with activities that not everyone practices. b) Women and men assign the same importance to the product aesthetics of some classes of products, respectively for articles that are generally bought and used by the whole family and for products used for professional purposes. Women assign an increased importance to product aesthetics of articles of adornment, household, and travel goods; and men to product aesthetics of means of transport, arms, and smokers' supplies. c) People assign different importance to the product aesthetics of different product subclasses within the same class. This is due to the fact that product classes (as indexed in Locarno classification) can contain quite different subclasses in terms of consumers interest for product aesthetics. d) People are influenced by images in assigning importance to product aesthetics only if the identity of the product class is not noticeably clear and the image help them to reflect to the aesthetics possibilities.*

Keywords: *perceived importance, product aesthetics, marketing, industrial design, product classes*

JEL Classification: L60, M31

Introduction

Considering that globalization and fierce competition require companies to introduce to the market products that attract and satisfy consumers to the highest degree, companies use all means to make their products occupy the most favourable positions on the market. An effective tool is the value proposition. But an effective value proposition is not created only by the company's marketing specialists (Saaksjarvi & Hellen, 2013). They are joined at least by designers, because product aesthetics contributes positively to a powerful value proposition.

The industrial design, through its aesthetic value, contributes to the overall value of the product alongside the functional, ergonomic, and symbolic values. Product aesthetics brings value to products by addressing the consumer's senses (Candi et al., 2017, Liu, et al., 2017). There are several studies that confirm that product aesthetics adds value to the product, alongside with technical and ergonomic performances. One of this research was carried out by Borneman, Scholer and Homburg (2015). They studied the contribution of three values conferred by product design (aesthetic, ergonomic and symbolic values) to the overall value of companies in the electronics and automotive industries. The researchers examined the reactions of the stock market to the public disclosure of a new product, using a proprietary methodology developed for studying such events.

¹ National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania, Email: andrei.dumitrescu@upb.ro

The results showed that ergonomic value is positively related to outstanding launches, while aesthetic value exerts a significant positive effect on outstanding launches, only if the product also displays certain functional advantages.

The perceived importance of product aesthetics is relevant both to company management and to marketer. At the level of company management, it is important to know how much the consumers are valuing the product aesthetics in order to invest accordingly in this aspect. That means how much money should be spent on materials appearance, industrial designer fee, research related to aesthetics, etc. If the perceived importance of product aesthetics is low, of course the investment in appearance will be low and vice-versa. The marketer would be interested to know how much of the promotion campaign should rely on product appearance. If the market segment is a design fanatic, of course the product aesthetics will be the focus of the campaign.

It is well-known that product aesthetics has become a valuable tool for marketers (Kalins, 2003). As product performance rapidly becomes common, product aesthetics can act as a differentiator and serve as a source of competitive advantage (Page & Herr, 2002). Some research has investigated individual differentiation in response to visual design (Bloch, et al., 2003; Yang, et al., 2010). In general, scholars have explored the ways in which aesthetics contribute to the overall evaluation of products. Product aesthetics can influence choice when performance information is absent or ambiguous (Yamamoto & Lambert, 1994).

In the past, but also now, researchers investigate in order to find out which features of product aesthetics are effective in arousing consumer interest (Veryzer & Hutchinson, 1998; Raghubir & Krishna, 1999; Hekkert, et al., 2003; Blijlevens, et al., 2011). Product appearance is the first thing a potential buyer sees and thus contributes to creating a first impression (Mugge, 2011). Product aesthetics is also important because it provides easy-to-spot cues regarding the operation mode and other product characteristics (Berkowitz, 1987).

Product aesthetics significantly contributes to a positive consumer experience and influences the consumer's subsequent behaviour on multiple levels (Chitturi, et al., 2007; Desmet & Hekkert, 2007). Moreover, industrial designers significantly influence the life, lifestyle, and well-being of consumers and, by extension, of the entire society (Winner, 1986; Latour, 1992; Tromp, et al., 2011; Dorrestijn, 2013).

Research has shown that product aesthetics has a positive and direct impact on purchase intention, and the emotional value of the product acts as a mediator between product aesthetics and purchase intention (Toufani, et al., 2017). The purchase intention is supported by fostering of strong person-product relationships based on product aesthetics (Bloch, 1995; Veryzer, 1995). Interestingly, some researchers were focused not on the exact concept of purchase intention, but with the similar desire to own a product and its relationship with the aesthetic characteristics of the product (Perez Mata, et al. 2017).

Research on the product aesthetics importance also focused on product packaging and it was concluded that package aesthetics allows consumer to estimate how well the product works, determining the purchase decision, but this effect can be diminished by the product brand and the existence of an advertising video (Sundar, et al., 2020).

The perceived importance of product aesthetics can act on various levels and, perhaps unexpectedly, in different directions. Some research has shown that the possession and use of aesthetically rewarding products will provide great pleasure to owners and users (Reber, et al., 2004), while others have indicated that the consumption of such products will lead to a certain loss of visual attractiveness (Wu, et al., 2017). Moreover, it was found that the awareness of the designer's effort to improve the product aesthetics had an inhibiting effect on the product use, because people considered that they were destroying something so beautiful (Wu, et al., 2017).

Hertenstein, Platt and Veryzer (2005) asked 138 industrial design experts from 93 companies from 9 industries to rate the effectiveness of product aesthetics. Based on a preliminary analysis, companies in each industry were divided into two groups: companies that practice a high

level of product aesthetics, and, in the second group, companies practicing a low level of aesthetics. The financial performances of the analysed companies were measured, as well as the companies' expenses incurred with industrial design (designers' salaries, consultants' fees, etc.) and the expenses that designers generate through their design choices (costs of materials, production equipment, etc.). The results obtained by the three researchers clearly indicated that industrial design was directly correlated with the financial success of companies and the performance on the stock market.

Another line of research considered the value of companies' market shares in relation to product aesthetics (Townsend and Shu, 2010). Also, Xia, Singhal, and Zhang (2015) studied the correlation between the awards received by a company for its product aesthetics (as a measure of the efficiency of company's policy regarding industrial design) and the associated variation in the company's market value. The researchers analysed data on 264 design award announcements for products sold between 1999 and 2011. Using various benchmarking models to assess stock market reaction, they observed that the market reaction over a two-day period (the day of the announcement and the previous day) ranged from 0.95% to 1.02%, which is quite significant. The market reaction was greater for SMEs. The correlation was not influenced by industry type or company growth potential.

But a question arises: does the perceived importance of industrial design vary depending on the product class or the type of consumer (in the simplest division: women and men)? Moreover, this is an aspect that is worth exploring because not everyone puts the same worth on industrial design, just as not everyone has a definite attitude of rejection for the visual pollution represented by graffiti (Dumitrescu, & Manolache, 2001; Uka, 2022). Also, each market segment has a different sensitivity to product aesthetics, parameter measured by Centrality of Visual Product Aesthetics (Dumitrescu, 2021). Only Homburg, Schwemmler, & Kuehnl (2015) considered that the importance of design varies depending on the type of product.

Research Design and Methodology

Considering the findings from the evaluation of the current state, the research objectives were established. It was decided to study the perceived importance of product aesthetics depending on the product class. Furthermore, it was considered significant to analyse the perceived importance of industrial design in more detail for certain classes, respectively to apply the approach at the subclasses level. Another aspect that was considered worth studying is whether men and women place different weights on industrial design and whether there are differences depending on the product class in this regard. Finally, the question arose whether the perceived importance of industrial design is influenced or not by the presence of a suggestive image for the respective class of products.

In accordance with the research objectives, the following research (null) hypotheses were established:

H01: People assign the same importance to industrial design, regardless of the product class.

H02: Women and men assign the same importance to the industrial design of products belonging to the same class.

H03: People assign the same importance to the industrial design of products belonging to the same class.

H04: People assign the same importance to the industrial design of products belonging to the same class, regardless of the presence of a product image.

Regarding the classification of products, the Locarno classification was used, because it is an objective and complete classification and, above all, it was conceived specifically for industrial design (World International Property Organization, 2023). The Locarno classification has 32 product classes, but not all are relevant to product design. After a thorough analysis of each class,

only 15 classes were retained as significant. In table no. 1, the classes selected for the experiment are indicated, both with full official names and with short names.

Table 1. Product classes and their shortened names used in experiments

WIPO Class No.	Product class (official name)	Product class (short name)
3	Travel goods, cases, parasols, and personal belongings	Travel goods
6	Furnishing	Furniture
7	Household goods	Household goods
10	Clocks and watches and other measuring instruments, checking and signalling instruments	Clocks and other measuring instruments
11	Articles of adornment	Articles of adornment
12	Means of transport or hoisting	Means of transport
14	Recording, telecommunication, or data processing equipment	Recording and telecommunication equipment
16	Photographic, cinematographic, and optical apparatus	Cameras
17	Musical instruments	Musical instruments
21	Games, toys, tents, and sports goods	Games and toys
22	Arms, pyrotechnic articles, articles for hunting, fishing and pest killing	Arms
24	Medical and laboratory equipment	Medical equipment
26	Lighting apparatus	Lighting apparatus
27	Tobacco and smokers' supplies	Smokers' supplies
30	Articles for the care and handling of animals	Articles for the care and handling of animals

As it was considered that the images to be used should be truly relevant, the basic criterion in selecting the images was the expressiveness of product aesthetics. Also, the representative nature of the image for the respective product class was also taken into account. The image sorting process started with a few dozen images. Some of the final selected images are displayed in figure no. 1.

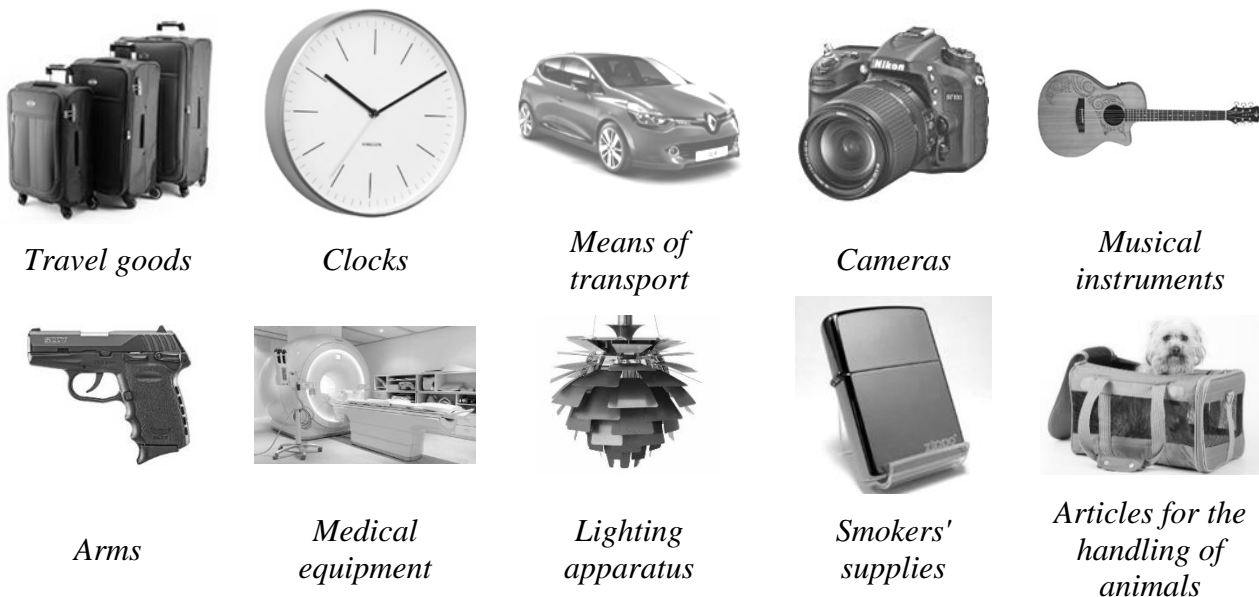


Figure 1. Examples of images used in experiment

It was decided that the results should be relevant for as large a proportion of the population as possible. In this regard, the participants should meet only one criterion: minimal knowledge of

product aesthetics. Thus, it is avoided the situation in which the participants have different conceptions about product aesthetics, or the lack of knowledge makes them rely on the controversial and subjective good taste. It was concluded that the participants should answer only one question for each class (subclass) of products, indicating the answer on a 7-point Likert scale:

“Indicate how important the industrial design of [class short name] is to you.”

Three experiments were organised. The first experiment measured the perceived importance of industrial design at class level conditioned by the presence of images. The second experiment measured the perceived importance of industrial design at class level in absence of images. The third experiment measured the perceived importance of industrial design at subclass level conditioned by the presence of images.

Results

The first experiment was carried-out with 215 participants (124 women and 91 men). All participants were students enrolled at a large technical university in Romania. The participants had basic training in product aesthetics. The participants were not financially rewarded for their participation in this research. The experiment was performed in Romanian. The accuracy of results was tested using Z-score. No Z-scores were outside the interval [-3; +3], so no data sets were eliminated. The Z-score ranged between -2.91 and 2.12. The reliability of data was tested using the Cronbach’s alpha coefficient. The calculated value for the complete set of data was $\alpha = 0.871$, value which stands for a good reliability.

The second experiment was carried-out with 294 participants (177 women and 117 men). All participants were students enrolled at a large technical university in Romania. The participants had basic training in product aesthetics. The participants were not financially rewarded for their participation in this research. The experiment was performed in Romanian. The accuracy of results was tested using Z-score. No Z-scores were outside the interval [-3; +3], so no data sets were eliminated. The Z-score ranged between -2.32 and 2.07. The reliability of data was tested using the Cronbach’s alpha coefficient. The calculated value for the complete set of data was $\alpha = 0.797$, value which stands for a good reliability.

The third experiment was carried-out with 448 participants (249 women and 199 men). All participants were students enrolled at a large technical university in Romania. The participants had basic training in product aesthetics. The participants were not financially rewarded for their participation in this research. The experiment was performed in Romanian. The accuracy of results was tested using Z-score. No Z-scores were outside the interval [-3; +3], so no data sets were eliminated. The Z-score ranged between -0.56 and 0.08, which indicates a certain focus of opinions. The reliability of experimental data was tested using the Cronbach’s alpha coefficient. The calculated value for the complete set of data was $\alpha = 0.958$, value which stands for a very good reliability.

The direct results of experiment 1 (with images) are displayed in table no. 2. The product classes were ranked according to the total mean of the participant group. The differentiation of the classes (depending on the overall mean) is in a range of 2.92 points (for a Likert scale of 7). Also, the differences between the mean marks awarded by women and men are notable for some classes, but this will be analysed later. The order of product classes is largely the expected one: at the top, the personal and family products, then the professional ones and finally the products associated with activities that not everyone practices (care of pets, hunting, and smoking). Perhaps only "Articles of adornment" would have been expected to be placed in the first position.

Table 2. Mean of industrial design importance (assessment with images)

Product class (short name)	Product depicted in image	Female	Male	Overall
Means of transport	Car	5.99	6.49	6.20
Furniture	Chair	6.10	5.81	5.98

Product class (short name)	Product depicted in image	Female	Male	Overall
Articles of adornment	Woven covers	6.14	5.60	5.91
Lighting apparatus	Lamp	5.80	5.73	5.77
Household goods	Wine glasses	5.76	5.14	5.50
Clocks and other measuring instruments	Wall clock	5.24	5.04	5.16
Games and toys	Electronic game console	4.93	5.31	5.09
Travel goods	Troller	5.25	4.52	4.94
Cameras	Camera	4.72	4.89	4.79
Medical equipment	Magnetic resonance imaging apparatus	4.88	4.65	4.78
Recording and telecommunication equipment	Sound recorder	4.10	4.63	4.32
Musical instruments	Guitar	4.41	4.16	4.31
Articles for the care and handling of animals	Pet handbag	3.94	3.67	3.83
Arms	Revolver	2.88	4.30	3.48
Smokers' supplies	Lighter	3.00	3.67	3.28

The direct results of experiment 2 (without images) are presented in table no. 3. The product classes were ranked according to the overall mean of the participant group. This time, the range in which the means varied was much larger, namely 3.49 points. This indicates that using only words allowed for a more nuanced evaluation of perceived importance. By and large, the order of perceived importance is similar to that of experiment 1. "Means of transportation" underwent a spectacular change of position, which reached the middle of the hierarchy. The explanation is that the name of the class is somewhat misleading and does not immediately lead to the idea of passenger cars.

Table 3. Mean of industrial design importance (assessment without images)

Product class (short name)	Female	Male	Overall
Furniture	6.49	6.01	6.30
Articles of adornment	6.18	5.64	5.97
Household goods	5.48	5.15	5.35
Games and toys	5.21	5.53	5.34
Lighting apparatus	5.14	4.92	5.05
Travel goods	5.01	4.82	4.93
Clocks and other measuring instruments	4.77	5.12	4.91
Means of transport	4.69	5.11	4.86
Recording and telecommunication equipment	4.62	5.14	4.82
Cameras	4.38	4.44	4.41
Medical equipment	4.33	4.19	4.27
Articles for the care and handling of animals	4.50	3.88	4.26
Musical instruments	4.10	4.32	4.19
Arms	3.06	4.25	3.53
Smokers' supplies	2.69	2.98	2.81

From the perspective of hypothesis *H01: People assign the same importance to industrial design, regardless of the product class*, the direct results of experiments 1 and 2 would indicate a rejection of this hypothesis, considering that the mean values varied in a considerable interval. If from the perspective of descriptive research, the variation of the mean values would have been sufficient, it was still considered necessary to apply a statistical test. ANOVA Single factor was

applied both for the results of experiment 1 and for the results of experiment 2, obtaining the values presented in table no. 4 which confirm not only the rejection of H_{01} , but a rejection on a large scale.

Table 4. Results of ANOVA: Single factor for testing the H_{01} hypothesis

Experiment	F_{calc}	p -value	F_{critic}	Decision
With images	63.9075	1.1×10^{-159}	1.695	Hypothesis H_{01} was rejected.
Without images	93.2669	1.2×10^{-235}	1.695	Hypothesis H_{01} was rejected.

After the analysis of tables no. 2 and no. 3, it appears that there is at least a tendency for women and men to give a different importance to industrial design. Is this difference really consistent and manifests itself in the same way for all product classes? To verify the hypothesis H_{02} : *Women and men assign the same importance to the industrial design of products belonging to the same class*, the data from experiment 1 (considered more significant) were used and the Z test was applied for each product class. The values obtained after the application of the Z test are presented in table no. 5. It would have been expected that the H_{02} hypothesis would have been rejected for all classes, but the situation was different, that is, the H_{02} hypothesis was confirmed for some classes and rejected for others.

Table 5. Results of Z-Test: Two Sample for Means for testing H_{02} hypothesis (experiment with images)

Product class	Z_{calc}	p -value	Z_{critic}	Decision
Travel goods	3.707	0.00021	1.96	Hypothesis H_{02} was rejected.
Furniture	1.887	0.0591	1.96	Fail to reject hypothesis H_{02} .
Household goods	3.32	0.0009	1.96	Hypothesis H_{02} was rejected.
Clocks and other measuring instruments	0.945	0.3442	1.96	Fail to reject hypothesis H_{02} .
Articles of adornment	2.701	0.0069	1.96	Hypothesis H_{02} was rejected.
Means of transport	3.604	0.0003	1.96	Hypothesis H_{02} was rejected.
Recording and telecommunication equipment	2.111	0.034	1.96	Hypothesis H_{02} was rejected.
Cameras	0.764	0.444	1.96	Fail to reject hypothesis H_{02} .
Musical instruments	1.016	0.309	1.96	Fail to reject hypothesis H_{02} .
Games and toys	1.587	0.112	1.96	Fail to reject hypothesis H_{02} .
Arms	4.902	9.4×10^{-7}	1.96	Hypothesis H_{02} was rejected.
Medical equipment	0.868	0.385	1.96	Fail to reject hypothesis H_{02} .
Lighting apparatus	0.435	0.662	1.96	Fail to reject hypothesis H_{02} .
Smokers' supplies	2.221	0.026	1.96	Hypothesis H_{02} was rejected.
Articles for the care and handling of animals	0.981	0.327	1.96	Fail to reject hypothesis H_{02} .

It would be an educated guess that people assign the same importance to the industrial design of product subclasses within a certain class. To test this, experiment 3 was performed. For each selected class, 4-5 products were chosen, each representing a separate subclass. For each class, ANOVA Single factor was applied for testing hypothesis H_{03} : *People assign the same importance to the industrial design of products belonging to the same class*. The results obtained after the application of ANOVA are displayed in table no. 6. It is evident that the hypothesis H_{03} was rejected in all cases, and the rejection was very significant, considering the very low values of the p -value and, respectively, the much higher values large of F_{calc} compared to F_{critic} .

Table 6. Results of ANOVA: Single factor for testing the H_{03} hypothesis

Product class	F_{calc}	p -value	F_{critic}	Decision
Means of transport	121	1.5×10^{-93}	2.375	Hypothesis H_{03} was rejected.
Furniture	123.2	3.5×10^{-95}	2.375	Hypothesis H_{03} was rejected.

Product class	F_{calc}	p -value	F_{critic}	Decision
Clocks and other measuring instruments	325.7	9.2×10^{-169}	2.375	Hypothesis $H03$ was rejected.
Household goods	25.5	1.9×10^{-20}	2.375	Hypothesis $H03$ was rejected.
Lighting apparatus	71.5	1.1×10^{-43}	2.375	Hypothesis $H03$ was rejected.

Hypothesis H04: People assign the same importance to the industrial design of products belonging to the same class, regardless of the presence or not of a product image was formulated to verify whether people are influenced by the presence of a suggestive product image when assessing the perceived importance of industrial design. To verify this hypothesis, the differences between the average values obtained in experiment 1 and respectively experiment 2 were calculated, and the results are presented in table no. 7. With the exception of the "Means of transport" class (difference of 1.35), all other differences are relatively small and apparently insignificant. Therefore, it was necessary to apply the Z Test (table no. 8). After applying the Z test, it was found that for some classes the difference between the presentation of an image and its absence is significant. However, it is not clear whether these differences are due to the class context or to the expressive quality of the image used. (It should be emphasized once again that the product images were also chosen based on their expressiveness.)

Table 7. Differences of mean for importance assessment with and without images

Product class (short name)	Female	Male	Overall
Travel goods	0.24	-0.30	0.01
Furniture	-0.39	-0.20	-0.32
Household goods	0.28	-0.01	0.15
Clocks and other measuring instruments	0.47	-0.08	0.25
Articles of adornment	-0.04	-0.04	-0.05
Means of transport	1.30	1.38	1.35
Recording and telecommunication equipment	-0.52	-0.51	-0.50
Cameras	0.33	0.45	0.38
Musical instruments	0.32	-0.16	0.12
Games and toys	-0.29	-0.22	-0.25
Arms	-0.18	0.05	-0.05
Medical equipment	0.55	0.46	0.51
Lighting apparatus	0.66	0.80	0.72
Smokers' supplies	0.31	0.69	0.48
Articles for the care and handling of animals	-0.56	-0.21	-0.43

Table 8. Results of Z-Test: Two Sample for Means for testing the H04 hypothesis

Product class	Z_{calc}	p -value	Z_{critic}	Decision
Travel goods	0.061	0.951	1.96	Fail to reject hypothesis $H04$.
Furniture	3.575	0.0003	1.96	Hypothesis $H04$ was rejected.
Household goods	1.258	0.208	1.96	Fail to reject hypothesis $H04$.
Clocks and other measuring instruments	1.879	0.061	1.96	Fail to reject hypothesis $H04$.
Articles of adornment	0.442	0.657	1.96	Fail to reject hypothesis $H04$.
Means of transport	11.807	1×10^{-198}	1.96	Hypothesis $H04$ was rejected.
Recording and telecommunication equipment	3.229	0.001	1.96	Hypothesis $H04$ was rejected.
Cameras	2.697	0.007	1.96	Hypothesis $H04$ was rejected.
Musical instruments	0.785	0.432	1.96	Fail to reject hypothesis $H04$.
Games and toys	1.671	0.094	1.96	Fail to reject hypothesis $H04$.

Product class	Z_{calc}	p -value	Z_{critic}	Decision
Arms	0.272	0.785	1.96	Fail to reject hypothesis $H04$.
Medical equipment	3.001	0.002	1.96	Hypothesis $H04$ was rejected.
Lighting apparatus	5.848	4.9×10^{-9}	1.96	Hypothesis $H04$ was rejected.
Smokers' supplies	2.482	0.013	1.96	Hypothesis $H04$ was rejected.
Articles for the care and handling of animals	2.455	0.014	1.96	Hypothesis $H04$ was rejected.

Discussion

The experimental research presented in this paper was conducted on relatively large samples of participants (over 200 and, respectively over 400), so the results can be considered consistent. Accuracy and reliability were also validated by *Z-Score* and, respectively Cronbach's alpha.

Theoretical Implications

Four working hypotheses were formulated. For convenience of subsequent work, the working hypotheses were expressed from the very beginning as null hypotheses. The hypotheses concerned the following aspects: a) testing the existence of a differentiation of the perceived importance of industrial design depending on the product class; b) testing the existence of a differentiation of the perceived importance of industrial design depending on the gender of the consumer; c) testing the existence of a differentiation of the perceived importance of industrial design within the same class; d) the possible influence of an expressive image when assessing the perceived importance of industrial design.

As expected, there was a difference in perceived importance of industrial design according to product class, and the difference was indicated by the different means obtained by different product classes. The differentiation was confirmed by rejection of associated null hypothesis after the application of ANOVA Single factor. The order of the product classes, confirmed by two experiments, was as follows: at the top, the personal and family products, then the professional ones and finally the products associated with activities that not everyone practices (care of pets, hunting, and smoking). In the case of personal and family products (Means of transport, Furniture, Articles of adornment, Lighting apparatus, Household goods, Clocks and other measuring instruments and Games and toys), the industrial design is important because these products act as vectors of personal and family values and product aesthetics is the most capable vehicle for such vectors. In the case of professional products (Cameras, Medical equipment, Recording and telecommunication equipment, Musical instruments), their appearance is not as important as their good functionality. The products associated with activities that not everyone practices (care of pets, hunting, and smoking) received low mean marks from participants because those who are not involved in those activities gave low marks, generally not caring about the appearance of these products. It can be speculated that weapons are intended for destruction and death, and smoking seriously damages health, and that this would justify their placement at the bottom of the hierarchy, but the experiments cannot provide evidence in this regard.

Since in some fields there are differences between the preferences of women and men, and in others not, the perceived importance assigned to industrial design might or might not vary depending on the consumer's gender. Both from observing the mean values obtained in experiments 1 and 2, and by applying the Z test for each product class, it was found that there are product classes for which there are differences in the perceived importance of industrial design assigned by women and men and are product classes for which women and men assign the same importance to industrial design. The same importance is given to a series of products, which can be grouped into two categories: articles that are generally bought and used by the whole family (Furniture, Lighting apparatus, Articles for the care and handling of animals, Clocks and other measuring instruments, and Games and toys) and products used for professional purposes (Cameras, Musical instruments,

and Medical equipment). In the case of product classes for which there is a difference in perceived importance of industrial design (considering the data in table no. 2), women emphasize product aesthetics of Articles of adornment, Household goods, and Travel goods and men emphasize aesthetics of Means of transport, Recording and telecommunication equipment, Arms, and Smokers' supplies. In the case of men, they are known to value cars and guns, and statistics also show that more men smoke than women (Our World in Data, 2022).

Apparently, there should not be a difference in perceived importance of industrial design for subclasses of the same class. But within some classes there are subclasses that arouse a much different interest from consumers. In experiment 3, 4-5 subclasses were chosen for each class, taking care to have extremes of product aesthetics from the point of view of the ordinary consumer's interest. Here are some examples with the mention of the consumer's level of interest: Means of transport (cars - maximum interest and locomotives - minimum interest), Furniture (armchairs and coat hangers), Clocks and other measuring instruments (clocks and measuring instruments), Household goods (ceramic tableware and washing machines) and Lighting apparatus (lamps and flashlights). After applying the ANOVA Single factor for each class, the differentiation of perceived importance for industrial design within the product classes was confirmed.

In relation to the influence of an expressive image on the assessment of the importance of industrial design, it was found that the image had no influence in the case of Travel goods, Household goods, Clocks and other measuring instruments, Articles of adornment, Musical instruments, Games and toys, and Arms, respectively for products that are used less often as vectors of personal and family values, being at the same time product classes with a clear identity. The product classes that were influenced by the presence of an expressive image were Furniture, Means of transport, Lighting apparatus, Cameras, Medical equipment, Recording and telecommunication equipment, Smokers' supplies, and Articles for the care and handling of animals, respectively classes that either can be used as vectors or they have a blurred identity for most consumers.

Practical Implications

Industrial design is subject to an increased interest from manufacturing companies. This research indicates that the importance assigned to industrial design should be nuanced according to the class/subclass to which the new product belongs. If the new product falls into the category of personal or family products, then the investment in developing a remarkable product aesthetics is justified. It should also be taken into account whether the market segment is predominantly female or predominantly male, because for some product classes the gender of the consumer matters in terms of industrial design valuation. Finally, if a company manufactures products from different (sub)classes it is recommended to test the perceived importance of industrial design for each product in order to know for which products worths investing more in product aesthetics.

Limitations and Future Direction

The results of this research were valid for Romanian young people. Additional research targeting different market segments is needed for possible extensions of the scope of research results. Also, the assessment of importance of industrial design was performed in objective "lab conditions". But the purchasing process is not entirely objective. For this reason, the author identified a promising area of research, respectively to assess the perceived importance of industrial design in a simulated "purchasing situation".

Conclusions

Briefly, the conclusions are as follows:

People assign different importance to the industrial design of different product classes. Basically, the order of importance is: personal and family products; professional products and products associated with activities that not everyone practices.

Women and men assign the same importance to the industrial design of some classes of products, respectively for articles that are generally bought and used by the whole family and for products used for professional purposes. Women assign an increased importance to the industrial design of articles of adornment, household and travel goods and men to the industrial design of means of transport, recording and telecommunication equipment, arms, and smokers' supplies.

People assign different importance to the industrial design of different product subclasses within the same class. This is due to the fact that product classes (as indexed in Locarno classification) can contain very different subclasses in terms of consumers interest for product aesthetics (for example cars and locomotives).

People are influenced by images in assigning importance of the industrial design only if the identity of the product class is not very clear and the image help them to reflect to the aesthetics possibilities.

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