

## PRODUCT PERSONALITY – TESTING A NEW APPROACH

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*The product personality is a concept that animated the world of design. Over time, researchers have proposed several personality models and also methods to transfer a personality to a product. One idea was to transfer the personality of a living being to a product by analogy between its design and the corresponding being. The experiment designed to test this has invalidated the idea because of two causes: not all people associate the product aesthetics with the same animal and not all people associate the same personality traits with a particular animal. The experiment has proven that the same kind of visual elements has a determining role in associating a product with a personality trait. It has also been shown that the shape is more important than colour in associating personality traits with the industrial design of a product.*

**Keywords:** product personality, industrial design, product perception

### 1. Introduction

In the first half of the 20<sup>th</sup> century, manufacturing of goods on large scale led to lower prices, products becoming affordable for more and more persons, thus contributing to the raise of living standards. A drawback of mass-production was that the products were perfectly identical, uniformizing the consumer population. After the aesthetical success of modernists in erasing historicist decorations out of the goods, products have achieved a geometrical appearance reduced to the functional essence. Thus, the prototype of the generic product has become perfectly functional and ergonomic, but distant and cold.

In the last decades, products have reached approximatively the same technical performance in their product class (due to globalization, technology exports, reverse engineering, etc.) and the same level of quality (due to the almost universal implementation of quality standards).

One of the ways chosen by manufacturers to fight the monotony of mass production's results and to distinguish their products on the market was industrial design. Industrial design attracted consumers through aesthetics, but also through collateral effects such as the opinion that aesthetically attractive products possessed high quality [1]. Industrial design can be conceived according to different paradigms, but how can be identified the successful paradigm? One

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proposal was that industrial design to suggest functional attributes through the so-called personality of the product [2, 3].

Product personality is the set of strong human personality traits used by man to distinguish her/his product from those of others and to justify the emotional relationship with it [4].

The first researchers to approach systematically and in-depth this area of industrial design were Janlert and Stolerman [2], who did not use the term product personality but “character of things”. Even though their article has become seminal, their proposed phrase was not used further. The two believed that the objects “character” helped us to understand and to relate to them.

There was discovered a direct and in some cases even strong relationships between product personality and design-specific features [5, 6]. Also, there were experimentally demonstrated relationships even between product personality and material types [7, 8]. It was discovered that product personality is a meaningful concept for designers [6].

Not every product personality is accepted by any consumer. The consumer feels comfortable only if the product is suitable for her/him [9] and those around see the match. A mature man does not want to be seen using a product aimed for the elderly, and the examples may continue.

Some researchers suggested that the simple suitability was not describing completely the relationship between consumer and product. They hypothesized that a stronger purchase intention and, subsequently, a deeper attachment occurred only if the product personality was similar to the personality of the consumer. Actually, the product personality should be similar to the personality the consumer thought she/he possessed. This theory was called personality congruence or self-congruity.

Several scientific papers provided evidence in favour of the personality congruence [10, 11, 12, 13], while others did not [14, 15, 16]. So, the reliability of the hypothesis is debatable. Besides the mixed results, it should not be forget that the product is not only a vector of owner’s self-image and values, but it is seen also as a *companion in work or leisure* and sometimes becomes a *trusted friend*.

Beyond the personality congruence, the importance of the product personality concept was also underlined by a recent approach in the world of multinational companies, respectively the co-branding of a product made by a company with a perceived weak personality by a fashion company, which usually possessed a strong personality [17].

Over the past two decades, several product personality models have been proposed, beginning with the direct transposition of a classic human personality model: Briggs-Meyers. It was used by Patrick Jordan [10], but the same Patrick Jordan admitted that the model “has been criticised by designers on the grounds that the model of personality used - Briggs-Myers - is not something that is easy

for the non-psychologist to understand without explanation. In particular, the terminology does not reflect that which a layperson would use when describing personality.” [14]

In 2002, Jordan [14] introduced a model with 20 dimensions with the following pairs of opposite values: kind - unkind; honest - dishonest; serious-minded - light-hearted; bright - dim; stable - unstable; narcissistic - humble; flexible - inflexible; authoritarian - liberal; value-driven - non-value-driven; extrovert - introvert; naive - cynical; excessive - moderate; conformist - rebel; energetic - unenergetic; violent - gentle; complex - simple; pessimistic - optimistic.

Dumitrescu [4] improved the Jordan model and resulted a scale with 20 dimensions again: sense of self-worth; brilliance; complexity; energy; sensitivity; kindness; flexibility; politeness; maturity; openness; generosity; honesty; seriousness; stability; tolerance; morality; attitude towards reality; attitude towards rules; attitude towards results; closeness to subject. Each personality dimension had a pair of opposite values.

Another model [6] was developed by refining a long list of words related to personality. This model had only one word for each dimension, because some of the words employed had no antonyms. This model had again 20 dimensions: cheerful; open; relaxed; pretty; easy-going; cute; dominant; obtrusive; silly; childish; untidy; idiosyncratic; interesting; lively; provocative; modest; honest; serious; aloof; boring.

Because a model with 20 dimensions might seem to be difficult to operate, other researchers used models with fewer dimensions. For example, Brunel and Kumar [5] applied the 5 dimensions model of Jennifer Aaker [18] to study various products. It should be mentioned that the Aaker's model was developed for *brands and not for products*. A more subtle approach can be found in paper [19], where the concept of product brand personality is analysed.

McDonagh and Weightman [20] have proposed a personality model inspired by American pop culture. This model has only two types: female-product and male-product. The two researchers have found that the model has a certain difficulty in application, but was certainly viable.

Without being a product personality model, but just a type, the business-like personality was introduced by Ruth Mugge [21]. The experiments indicated that the perceived performance quality of the product was improved by this sort of personality. Also, the visual features of products with business-like personality were unity, straight lines and grey or black colour. Similar results were obtained by Hung [22].

Another approach was proposed in the paper [20]. The idea was to employ the symbolism of remarkable living beings, considered with their particular features as perceived by the human mind. So, the considered product was

associated with a living being and the personality of that being, as given by the particular traits, became the personality of the product. An experiment was carried-out by authors to test the approach. Because of the relative small sample of subjects (66) and of the considerable variety of responses, the experimental results could not be analysed in-depth.

The idea of comparing products with living beings is quite common, especially for cars. The journalist Welch [23] underlined this idea several times in an article cited dozens of times in scientific articles. For example, he compared the headlight pods of Dodge Charger with the tiger's eyes. His interview with Honda advertising head revealed "that cars, like dogs, may resemble their owners and be seen a friendly companion" and "there are a lot of cars now that look like they are growling at you".

In conclusion, the idea of using the personality of remarkable animals in the construct of product personality was considered before, but this approach was not tested on a larger scale and on the very same few products.

## **2. Design of experiment**

Considering what was presented in introduction, the author questioned whether McDonagh and Weightman's idea, presented in parallel with another idea (of product gender), did not deserve an increased attention and testing on a larger sample of subjects. Another important aspect to be pointed out was that the two researchers invited the participants to the experiment to imagine the animal associated with a product (electric kettle, television set, and car) that they had already possessed. Subsequently, a wide variety of products were analysed, with considerable design differences and marketed under different brands. Practically, McDonagh and Weightman's experiment responded to two generic questions:

1. Can any product (from the chosen classes) be associated with an animal?
2. Can be described any animal chosen for comparison by a set of (human) personality traits?

After their experiment, the answer was positive to both questions. The author of this paper has decided to approach the idea of comparing product personality with that of an animal (living being) from another perspective, namely choosing a few products with a remarkable design (not mundane objects) and checking the following working hypothesis with the help of a large group of participants:

H1: A product with a remarkable design is associated with the same living being by most people.

H2: The living being associated most often with a product is perceived with the same personality traits by most people.

H3. The same kind of visual elements have a determining role in associating a product with a personality trait.

The author chose the technique of the questionnaire as the technique of the experiment. Three questions were chosen to be addressed to the participants for each analysed product:

1. With what living being (plant or animal) would you associate product X, considering exclusively the product aesthetics?

2. What are the personality traits of this living being?

3. Please indicate the dominant visual feature of product X.

Since it was estimated that there would be a wide variety of responses, it was decided from the beginning that a pretest with around 100 participants would be run, and the questions to be addressed in the pretest would be only the first and the third.

In order to choose the images to be shown to the experiment participants, the selection started with a set of 100 product photos. After successive sortings, the set was reduced to 8. The basic idea was to have pairs of products in the same class, and each pair to be made up of products evidently different, maybe even opposite. There were chosen: 2 paper knives, 2 phones, and 2 beach footwear. The last pairs had an issue in the sense of a relative similarity, and the problem was solved by associating a wall clock with a timer, since both were functional products that measure time. The chosen photos are displayed in Figures 1 to 8.



Fig. 1. Product 1



Fig. 2. Product 2



Fig. 3. Product 3



Fig. 4. Product 4



Fig. 5. Product 5



Fig. 6. Product 6



Fig. 7. Product 7



Fig. 8. Product 8

### 3. Experimental results

The pretest was performed with 107 participants (61 female and 46 male participants). All participants were students enrolled at a large technical university in Romania. The participants filled the same questionnaire with 2 open questions (in Romanian) per product under the supervision of the author. The product images were presented on computer displays of the same model. The whole experiment duration was one month.

As expected, the results were very diverse. So, the results (living beings and dominant visual features) were analysed in terms of similarity. After the identification of all similar terms, a generic one was chosen. For example, the words “lizard”, “chameleon”, “gecko”, etc. were considered to refer to “lizard”. After substituting similar terms with the generic one, simple statistics have been performed and the generic terms have been hierarchized. The living beings who occupied the first four positions for each product are displayed in Table 1, and the predominant visual elements - in Table 2. The results are listed alphabetically.

It was decided that during the main experiment the first and the third questions should be closed questions with drop-down menus and the second question should be open. The items of the drop-down menus were obviously the elements presented in Tables 1 and 2.

Table 1

**Associated living beings with considered products (pretest)**

<i>Product 1</i>	<i>Product 2</i>	<i>Product 3</i>	<i>Product 4</i>
Cactus	Leaf	Cat	Giraffe
Cat	Shark	Elephant	Seahorse
Dragonfly	Snake	Rhinoceros	Sunflower
Fish	Tiger	Turtle	Swan
<i>Product 5</i>	<i>Product 6</i>	<i>Product 7</i>	<i>Product 8</i>
Cat	Bear	Cat	Butterfly
Frog	Crab	Dog	Ladybird
Lizard	Crocodile	Mushroom	Mouse
Snake	Hippopotamus	Owl	Rabbit

Table 2

**Dominant visual features of products (pretest)**

<i>Product 1</i>	<i>Product 2</i>	<i>Product 3</i>	<i>Product 4</i>
Curved surface	Elongated shape	Cuboid shape	Orange colour
Elongated shape	Grey colour	Grey colour	Round lines
Grey colour	Straight angle	Orthogonal net of lines	Round shape
Round cutting edge	Straight cutting edge	Straight edges	Straight angle
<i>Product 5</i>	<i>Product 6</i>	<i>Product 7</i>	<i>Product 8</i>
Delicate overall shape	Dark colours	Black hands	Bright colours
Delicate details	Large details	Grey colour	Overall conical shape
Rounded overall shape	Sole thickness	Overall precise geometrical shape	Precise geometrical details
Yellow colour	Stodgy overall shape	Precise geometrical details	Shape of actuation mechanism

The main experiment was carried-out with 386 participants (236 female and 150 male participants). All participants were students enrolled at a large technical university in Romania. The participants filled the same questionnaire with 3 questions (in Romanian) per product under the supervision of the author. The product images were presented on computer displays of the same model. The whole experiment duration was three months.

Analysing the raw results, it was found that some participants were not able/willing to attribute personality traits to living beings. It was accepted that each participant could make only one error. If several errors had been made, their entries were completely removed. Several single errors have been detected, and the faulty features were removed, but without deleting the other data entered by participant. Thus, there were considered for analysis only the data obtained from with 348 participants (215 female and 133 male participants).

The experimental results obtained for question 1 of the questionnaire are presented in Table 3.

Table 3

**Associated living beings with considered products**

<i>Product 1</i>				<i>Product 2</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Fish	<b>56.32</b>	53.49	60.90	Shark	<b>48.56</b>	48.37	48.87
Dragonfly	<b>29.60</b>	33.02	24.06	Leaf	<b>26.15</b>	29.30	21.05
Cactus	<b>7.76</b>	6.51	9.77	Snake	<b>19.54</b>	17.67	22.56
Cat	<b>6.32</b>	6.98	5.26	Tiger	<b>5.75</b>	4.65	7.52
<i>Product 3</i>				<i>Product 4</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Turtle	<b>57.18</b>	57.67	56.39	Giraffe	<b>52.30</b>	51.63	53.38
Elephant	<b>20.11</b>	19.07	21.80	Seahorse	<b>27.59</b>	26.51	29.32
Rhinoceros	<b>12.07</b>	12.56	11.28	Sunflower	<b>14.08</b>	14.42	13.53
Cat	<b>10.63</b>	10.70	10.53	Swan	<b>6.03</b>	7.44	3.76
<i>Product 5</i>				<i>Product 6</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Lizard	<b>57.76</b>	58.14	57.14	Crocodile	<b>42.53</b>	40.93	45.11
Frog	<b>18.97</b>	17.67	21.05	Hippopotamus	<b>32.18</b>	34.42	28.57
Cat	<b>12.36</b>	13.02	11.28	Crab	<b>16.38</b>	15.35	18.05
Snake	<b>10.92</b>	11.16	10.53	Bear	<b>8.91</b>	9.30	8.27
<i>Product 7</i>				<i>Product 8</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Owl	<b>50.00</b>	50.23	49.62	Butterfly	<b>40.52</b>	40.93	39.85
Mushroom	<b>39.66</b>	41.86	36.09	Ladybird	<b>33.33</b>	33.02	33.83
Dog	<b>8.33</b>	6.05	12.03	Mouse	<b>16.67</b>	18.60	13.53
Cat	<b>2.01</b>	1.86	2.26	Rabbit	<b>9.48</b>	7.44	12.78

It was observed that in most cases two living beings stood out for each product. Most living beings that were considered were animals, because it was harder to assign a personality to a plant. However, the plants were not completely absent (examples: cactus, leaf, sunflower and mushroom).

Most associations were made on the basis of the visual similarity between the overall shape of the product and the shape of the living being. There has been three categories of exceptions:

a) association was made on the basis of the similarity between a formal detail of the product with a part of the living being (the net of lines of Product 3 with the shell of a turtle; the actuation mechanism of Product 8 with the wings of a butterfly or with ears of a mouse or rabbit);

b) association was carried out considering the similarity between the overall shape of the product and an anatomical part of the living being (Product 1 with the teeth of three species of animals);

c) association resulted from chromatic considerations (especially for Product 8).

The experimental results obtained for question 2 in case of Product 1 are shown in Table 4. The percentages refer to all traits correctly expressed for the fish and separately for the dragonfly.

Table 4

Personality traits of living beings associated to Product 1							
<i>Fish</i>				<i>Dragonfly</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
rapidity	<b>29.09</b>	24.19	35.42	finesse	<b>22.95</b>	18.18	35.29
agility	<b>17.27</b>	14.52	20.83	delicacy	<b>18.03</b>	25.00	0.00
calmness	<b>12.73</b>	16.13	8.33	agility	<b>13.11</b>	11.36	17.65
energy	<b>10.00</b>	17.74	0.00	rapidity	<b>13.11</b>	15.9	5.88
fearfulness	<b>5.45</b>	1.61	10.42	elegance	<b>6.56</b>	4.54	11.76

It can be observed that there were a series of common traits (rapidity and agility), different (fearfulness and elegance) and even contrasting (calmness and energy). Referring the found traits to Product 1, it was noticed that some traits (delicacy and fearfulness) cannot be related to Product 1 (which is essentially a knife).

Similar calculations were made for the rest of the products, but in order to avoid loading the paper with too many tables, only the comments are presented for each product, accompanied by the eloquent values.

Product 2 was most often associated with the shark and the leaf, two contrasting beings and not just because of their different biological kingdoms. The contrast was also noted in the defining traits of the two beings. Thus, the shark's personality traits were aggressiveness (68.59%) and powerfulness (9.62%) in opposition to the dominant feature of the leaf - delicacy (39.47%). Considering only the results obtained for Product 2 seen as a shark's teeth, the high percentage indicating aggression was very significant for a paper knife.

For Product 3, the results were conclusive only for the resemblance with the turtle, which was perceived to be slow (51.35%) and calm (11.35%). The next animal (elephant) was considered powerful only by 19.3% of the participants, the other traits recording lower values. By comparing the results associated with the turtle with the aesthetics of the product, it can be appreciated that this comparison was efficient.

Although the giraffe was the animal associated most often with Product 4, the personality traits did not get percentages as large as the next ranked, the seahorse. The giraffe personality traits (tranquillity 21.05%, gentleness 15.79% and elegance 14.04%) were similar to some of the seahorse (delicacy 32.43%, cheerfulness 21.62% and elegance 10.81%), with the remark that by its

tranquillity the giraffe was considered static, and by its cheerfulness the seahorse became dynamic. Examining the appearance of Product 4, it was noticed that its verticality gave it a certain dynamism, but in no way the product seemed delicate.

The case of Product 5 is a positive one, because both animals placed on the first positions were associated with the same personality traits. Thus, the dominant personality traits were agility (lizard 29.77%, frog 26.83%) and rapidity (lizard 28.24%, frog 31.71%). Considering the practical function of the Product 5, but also the comparison with the heavy aspect of Product 6, it could be considered that the personality traits found really expressed the industrial design of the product considered.

It was clear that the heavy and somewhat threatening aspect of Product 6 had influenced the choice of associated animals (crocodile and hippopotamus), among which there are certain physical resemblances. The personality traits were common but with different weights for each animal. If the crocodile was perceived to be most aggressive (55.75%), but also cunning (9.73%) and powerful (8.85%), hippopotamus was considered aggressive to a lesser extent (13.33%) and more massive (25.33%) and strong (22.67%). Despite the considerable result obtained for crocodile's aggressiveness, the Product's 6 aesthetics could hardly be regarded as aggressive, but more massive and strong.

The industrial design of Product 7 was not very offering for the evaluation of the participants, however resemblances were found with the owl (a spectacular resemblance, no doubt) and the mushroom. Moreover, based on the practical function of the clock, it was appreciated that the owl was agile (35.29%) and intelligent (19.33%). The mushroom obtained insignificant percentages (simple - 15.56% and cunning - 8.89%). This confirms the thought that a simplistic design does not allow the association of a personality with the considered product.

In opposition to Product 7, the last product in the series had been attractively designed, something that was reflected in both the obtained numerical values and the eloquent correspondence of the perceived personality traits (delicacy, cheerfulness, playfulness) of both animals. The timer was associated with the butterfly (delicate 42.5%, cheerful 23.75% and playful 10%) and with the ladybird (delicate 31.25%, cheerful 18.75% and playful 16.25%).

The results of the statistical analysis of the answers to question 3 of the questionnaire are presented in Table 4.

The results in Table 4 should be analysed together with the answers to question 2 of questionnaire in order to observe the perception of the elements of the visual language in terms of personality traits. It was not specified in question 3, but in the general context of personality assessment, it was implicit that the visual elements considered dominant were correlated with the personality traits.

The percentage associated with the formal elements have been added. So were the percentages associated with the chromatic elements. The ratio between

the formal and chromatic elements was 3.45, which meant that shapes are far more important in transferring personality traits. Also, it will be noticed how relevant the chromatic elements were in giving personality traits in each case.

Table 4

**Dominant visual features of products**

<i>Product 1</i>				<i>Product 2</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Elongated shape	<b>38.79</b>	36.74	42.11	Straight cutting edge	<b>44.54</b>	44.19	45.11
Curved surface	<b>34.48</b>	33.95	35.34	Elongated shape	<b>29.31</b>	32.56	24.06
Round cutting edge	<b>19.25</b>	20.47	17.29	Straight angle	<b>21.26</b>	18.14	26.32
Grey colour	<b>7.47</b>	8.84	5.26	Grey colour	<b>4.89</b>	5.12	4.51
<i>Product 3</i>				<i>Product 4</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Cuboid shape	<b>44.83</b>	47.44	40.60	Orange colour	<b>51.72</b>	54.88	46.62
Grey colour	<b>22.70</b>	22.33	23.31	Round lines	<b>22.70</b>	22.33	23.31
Orthogonal net of lines	<b>16.67</b>	14.42	20.30	Round shape	<b>14.08</b>	12.09	17.29
Straight edges	<b>15.80</b>	15.81	15.79	Straight angle	<b>11.49</b>	10.70	12.78
<i>Product 5</i>				<i>Product 6</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Delicate details	<b>30.17</b>	34.42	23.31	Stodgy overall shape	<b>60.92</b>	61.40	60.15
Delicate overall shape	<b>28.74</b>	28.84	28.57	Sole thickness	<b>26.44</b>	26.05	27.07
Rounded overall shape	<b>25.57</b>	20.47	33.83	Large details	<b>10.92</b>	11.16	10.53
Yellow colour	<b>15.52</b>	16.28	14.29	Dark colours	<b>1.72</b>	1.40	2.26
<i>Product 7</i>				<i>Product 8</i>			
%	<b>Total</b>	<i>Female</i>	<i>Male</i>	%	<b>Total</b>	<i>Female</i>	<i>Male</i>
Precise geometrical details	<b>37.07</b>	36.74	37.59	Bright colours	<b>44.83</b>	51.63	33.83
Overall precise geometrical shape	<b>32.18</b>	32.56	31.58	Overall conical shape	<b>25.00</b>	19.07	34.59
Black hands	<b>20.11</b>	22.79	15.79	Shape of actuation mechanism	<b>24.43</b>	26.05	21.80
Grey colour	<b>10.63</b>	7.91	15.04	Precise geometrical details	<b>5.75</b>	3.26	9.77

Elongated and rounded shapes, also curved surfaces, were correlated to agility and rapidity (Product 1 and 5), cheerfulness (which is also a somehow

dynamic feature), gentleness, delicacy and elegance (Product 4). Opposing the rounded shapes, the cuboid shape was correlated to slowness and calmness (Product 3).

Straight edges and straight angles were associated to aggressiveness and powerfulness (Product 2). Stodgy overall shape and large details (large thickness) were correlated to massivity, powerfulness and aggressiveness – Product 6.

Biological forms inspired by living beings perceived as gentle and playful were associated with delicacy, cheerfulness, and playfulness (Product 8). The bright warm colour had also contributed to this association.

Actually, the bright red colour of Product 8 and the orange colour of Product 4 were the few cases when the colour played a major role in the assignment of personality traits to a product. Anyway, the contribution of colours (especially cold colours) to allocation of a personality deserves further research.

#### **4. Discussion**

The first aspect to be discussed is whether the personality traits indicated by the participants were indeed personality traits. It has to be stressed that the “extrovert” word has never been used by any of the 386 participants, and the “introvert” word has been used only once (for owl), given that participants had been specifically asked to indicate personality traits (see question 2), but without receiving explanations on what personality traits had meant.

By comparing the personality traits indicated by the participants with the values and dimensions of the model [4] or other models, it was found that two traits corresponded exactly (example: energetic), most corresponded at the synonym level (example: delicacy = gentleness) and the rest could be considered related to (example: agility to flexibility). Two features could not be correlated with the models: slowness and fearfulness. During informal discussions with some participants, they indicated that they were unable to apply the classical model of human personality (extrovert-introvert, as they said), thus confirming what was stated in article [14], but they thought, for example, agility refers to the agility of the mind, and the rapidity to an increased decision-making speed.

With regard to the validation of hypotheses, it was noted in the case of the first (“A product with a remarkable design is associated with the same living being by most people.”) that no living being was associated with a product in a higher percentage than 60%. So hypothesis 1 was not supported by evidence.

The second working hypothesis was: “The living being associated most often with a product is perceived with the same personality traits by most people.” There was only one case (the shark) in which most of the participants (68.59%) indicated same trait personality (aggressiveness). So the hypothesis was rejected.

However, the third hypothesis ("The same kind of visual elements has a determining role in associating a product with a personality trait.") was confirmed by the proved association of rounded and elongated shapes with agility, rapidity, gentleness, and elegance, respectively by associating shapes with straight edges and straight angles with aggressiveness and powerfulness. In fact, the connection between rounded shapes and positive features confirmed the idea that people prefer curved visual objects [24].

But the fundamental idea of the experiment was related to the use of analogy with animals in constructing a product personality model. Considering that the first two working hypotheses were rejected, it can be concluded that such a model is not feasible.

On the other hand, if the industrial designer invites representatives of the targeted market segment to a focus group, for example, in order to compare the product he has to design with an animal or plant and insists on the description of the personality traits of that living being, surely it would have an animated focus group and could gather many elements to stimulate her/his imagination. As the experiment indicated, the unexpected responses provided by the participants stimulate imagination.

## 5. Conclusions

The conclusions obtained through descriptive research and basic statistics from the experiment are indicated below. It should be mentioned that these conclusions are valid only for the product classes used in experiment.

1. Most people (up to 74%) associate rounded and elongated shapes with the following personality traits: agility, rapidity, gentleness, and elegance.

2. Most people (up to 87%) associate shapes with straight edges and straight angles with personality traits of aggressiveness and powerfulness.

3. The product personality model proposed by some researchers based on comparison to significant living beings have proved to be not feasible for two reasons. The first reason was: people do not consistently associate a certain product with the same living being. The second reason was: people do not consistently associate a certain living being with the same personality traits.

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