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**MASCOTS, DESIGN CHARACTERISTICS AND CHILDREN:
DOES AFFECTIVE RESPONSE MATCH WITH COGNITIVE
RESPONSE?**

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Mascots, design characteristics and children: Does affective response match with cognitive response?

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Abstract

This research addresses the question of how mascots design characteristics affect children recognition and affective response of this type of brand sign. Regarding the literature, it was clear for us the important contribution in studying the short and long term recognition. It is found that the different design characteristics associated with the universal design principles (abstraction, figurativity, symmetric, asymmetric, round and angular forms) stimulated different levels of recognition and affection among the children. The study contributes to our understanding of which mascot design characteristics increase the effectiveness of non-verbal communication.

Keywords

Branding Semiotics, Brand Identity, Brand Marketing, Brand Response

Track: Product and Brand Management

INTRODUCTION

Children are seen today as a powerful and attractive market segment, not only by marketing practitioners, but also by the academy (Peacheaux & Derbaix, 1999). In the study developed by Macklin (1996), on the learning of brand names from visual cues, it was concluded that using two visual cues (figures or colours), improves the memorisation of brand names. However, no reference was made to the characteristics of those cues. The present investigation aims to produce an answer at this level. If we can consider the fact that visual cues improve brand memorisation, with this work we intend to study one of those cues, the mascot, which is considered to be one of the most important when the target segment is children (Kirkpatrick, 1952; Mizerski, 1995; Montigneaux, 2002; Keller, 1997). Marketing literature doesn't include any systematic research about the effects of mascots on children. The most relevant discussions only enhance the importance of the mascot as a crucial brand sign in children, without producing a clear and understandable group of indications to guide the marketing practitioners. The most frequent practice in marketing is the selection of mascots based on an idiosyncratic vision. For this reason, it was considered crucial, in the first stage of our investigation, to define the design characteristics of the brand mascots, to allow the empirical analysis of the attitudes children establish with each one of those design characteristics.

The aim of this study is to respond to the following research questions:

1. Do mascots always stimulate a favourable reaction in children, or does that favourable reaction depend on their design characteristics?
2. If there are different attitudes, what are the mascots design characteristics that best sustain the formation of a favourable attitude of children towards the brand mascot?

MASCOT CONCEPT

Brand mascots represent a special type of sign, particularly important in the children's segment, because they allow children to establish an emotional relationship with the brand, and simultaneously they favour their memorisation (Brée & Cegarra, 1994). According to Keller (1998), mascots are useful to create awareness, because being rich in images and colour, they catch the consumer's attention. Beyond that, brand mascots may help the communication of key attributes of the product / organisation. In Aaker's view (2000), if the consumers have strong feelings for a mascot, they will probably create favourable perceptions of the products or organisations associated to that mascot. Brée & Cegarra (1994) differentiate two types of mascot, advertising mascots and brand mascots. The former promote the product's valorisation through association with the mascots they use, or they can promote the creation of the product concept, when the mascot is a user of the brand. These mascots are mainly used in the teenager / adult segments, where the symbolic function of the brand is very important. As far as the brand mascots are concerned, these can have several functions: to be the main visual expression of the brand (through a more or less anthropomorphic representation); to represent an iconic complement of the brand; and in both cases to establish an affective connection to the brand. Based on the results of their study, Brée & Cegarra (1994) stated the necessity of analysing the components that make up the mascot, the elements connected with its anatomy or its expressions, in order to study the different impacts on children. Mascot typology is indeed very diverse (Mizerski, 1995; Montigneaux, 2002; Pecheaux & Derbay, 1999), but the systematisation of typologies is still very incipient. According to Kirkpatrick (1952), the selection of a mascot can be made based on three options; one has to do with the analysis of animated beings and the selection of one with the intended associations; another one, concerning the objects that can suggest some

personality or animation; finally, to establish a real human mascot. Each one of these options can be represented in feminine mascots, masculine, asexual, expressing action, static, with humour, without humour, etc. Pecheaux & Derbaix (1999), identify two types of mascot representations: human representations which are often used in products like candies, whose symbolic foundations of the brand are supported by the adventures of the mascots and their imagination; and animal representations, usually used in products with important nutritional qualities, like breakfast cereals, given the spontaneous associations of vitality and dynamism conveyed by certain animals. Mizerski (1995) says that mascot typology is very important, considering that its influence on children can be significantly different. However, he doesn't suggest any characterisation.

THE MODEL

Considering that the mascot is one of the most relevant brand signs in the children's segment, it seems crucial to understand what type of attitudes children establish with the different typologies of mascots associated to different design characteristics. The model presented has the individual as the analysis unit, which determines the low number of highly explainable variables. This perspective allows the future results to be determined by variables controlled in the investigation (Annex 1)

METHOD

The paradigm of the investigation was predominantly positivist, intending a uniformity of relations between the form of the behaviour and its meaning, so as to allow an appropriate operationalisation of the variables, objectivity, replicability and causality (Bryman, 1984; Erickson, 1986). In this study, we applied a frequently used method in the domain of the experimental aesthetics, where the main empirical studies on design appear. Henderson and Cote (1998), also applied this method in the study carried out on the selection and modification of logos, thus validating its use in the domain of the strategies of the brand signs. After the results had been gathered, they were analysed using univariate and bivariate descriptive statistics. To facilitate the visualisation of some of the data, Box and Whisker diagrams were used, which make it easier to see the ordinal variables being studied which tended to present higher or lower values, the differences between the groups being compared, defined by selected discrete variables and also the results of the tests of the mean differences which we expected to find particularly by the position of the median. In order to study the association between two discrete qualitative variables, chi-squared tests of independence were applied. Whenever the cross-classification tables were 2x2, we also analysed the results of Fisher's test. To complement the results of chi-squared tests the following measures of symmetry were also calculated: Phi, Cramer's V and contingency coefficient. As well as tables with the results of the chi-squared tests and the results of the symmetry test, annex n° 3 contains a table of cross-reference with the absolute frequency and percentages by column and also the adjusted residuals. As the scales being studied are all ordinal and not continuous, the tests of difference in medians, applied to relate two variable ordinals were always non-parametric tests, more specifically Wilcoxon tests. When the discrete qualitative variable defines two groups of individuals, we used Mann-Whitney tests, when it defines 3 or more groups, Kruskal-Wallis tests were applied.

Figurative versus Abstract

Figurative is related to the capacity that a stimulus has to represent a shape containing a subject which is recognisable, beyond its purely visual lines. In other words, figurative is associated with representative forms. When a form contains a subject which cannot be recognised, it is considered to be non-representative or abstract (Wong, 1993). An abstract form reveals the sensitivity of the designer to the form, colour and composition of the elements of his composition, without making them explicitly recognisable. In the area of semiotics and more specifically in the Greimas and Courtés dictionary (1993), the term abstract is used in opposition to the term concrete when it is important to distinguish between a weak and a strong semic density. Semic density is related to the number of units of signification present in a stimulus: when the number of semic units is low, the sign is abstract; when the number is high, the sign is concrete. On the other hand, the term abstract is used to mean the opposite of the term figurative when we are referring to the absence or presence of signs associated with the natural world, the world of the senses: in this case, the sign is considered abstract if it does not contain any signified from the natural world to which the signified refers; if the opposite is true, the sign is said to be figurative.

Affective response

The children in our study showed a marked preference for figurative stimuli (69%), than for abstract stimuli (10%). It is of note that the percentage of children preferring abstract stimuli (10%) is practically identical to the percentage of children who show no preference for either figurative or abstract stimuli (9%). Analysis of Table 1 (Annex 3) and the Box and Whiskers diagrams allow us to conclude that figurative stimuli are preferred to abstract ones (Annex 4). Significant differences were detected between the median affectivity for a figurative stimulus and the median affectivity for an abstract stimulus (to a significance level of 1%- ns 1%): the figurative stimulus generates more affect than the abstract stimulus. (Annex 3: Tables 1-3). From the literature we know that the importance of affect in the behaviour of children led authors such as Rouen (2002) to suggest that the process of selection can generate affect in the child consumer as a result of the feelings and emotions associated to an object. Thus, the child will tend to make a choice based on emotions, with recourse to affective heuristics (Peterson et al, 1986). Consequently, and because of the above-presented results relating to the affectivity of abstract stimuli, no study of its recognition was undertaken, insofar as according to the literature cognitive response in children implies an initial affective response. These results were confirmed when we took a closer look at the data for cognitive response to figurative stimuli. There were significant results both for short-term (80%) and long-term (73%) recognition of figurative stimuli.

Symmetrical versus Asymmetrical

Symmetry is associated to the classical ideal, clearly associated to balanced identity, to equilibrium, to the very notion of beauty. Symmetry is order, it is harmony. According to studies in the field of psychology, symmetry triggers affect, and this is also true in the evaluation of beauty in human faces (Perez, 2004). However, asymmetry, as it implies a certain misalignment of shapes, is often able to generate agitation, dynamism, a break in the monotony of more symmetrical images. According to Perez (2004), based on Halburt, asymmetry may also be associated with constructions which favour inter-relationship with surroundings rather than a concern for the ordering of interior space.

Affective response

Children demonstrate a clear preference for asymmetrical stimuli (50%) rather than symmetrical stimuli (29%). It is interesting to note that in a scale-based affective response, the differences between these two stimuli are not as significant (Annex 5) and that in fact their distribution is closer. But when we move to preference - a much more decisive response - the children's choices leave no room for doubt, and asymmetrical stimuli are clearly preferred. In view of our analysis of the literature, and contrary to the previous results regarding abstract versus figurative stimuli, these results were completely unexpected,

Cognitive Response

As we have seen, asymmetrical stimuli generate higher levels of affect than symmetrical stimuli, and this is also true when we look at the cognitive response. Asymmetrical stimuli generate higher levels of recognition than symmetrical stimuli, both long and short term. In order to go further into the intriguing research results regarding symmetry versus asymmetry, we decided to cross check them with another semantic category of great importance in the field of aesthetics: rounded versus angular.

Symmetrical versus Asymmetrical: rounded versus angular

Angular shapes are associated to straight lines, to lines where precision is all-important, where as far as possible, according to Wong, (1993) all hand-drawn lines should be eliminated. In the research done by Messaris (1997), more angular shapes appear as more powerful and more dynamic, associated to high levels of potency and activity, whereas rounded shapes are associated with low levels of these characteristics. More rounded and more angular shapes are also associated with a fundamental feature of design which is the concept of proportion. According to Perez (2004) although rounded shapes do create the perception of harmony, softness and perfection, more angular shapes can, on the other hand, appear even softer.

Affective response: symmetrical and angular shapes versus symmetrical and rounded shapes): We noticed that when a child is faced with two symmetrical stimuli - one angular and the other rounded – the preference is for the round shape. Symmetry is therefore better accepted when it is round. However, it is important to note that a significant percentage of children make no difference between these two stimuli (33%) (Annex 6)

Affective response: asymmetrical and angular shapes versus asymmetrical and rounded shapes): When faced with two asymmetrical stimuli, one angular and the other rounded, the child prefers the angular one. It was clear that children prefer symmetrical stimuli when they are rounded and asymmetrical stimuli when they are angular.

Thus, there appears to be a relationship between symmetry and the rounded shape of the stimuli and asymmetry and the angular shapes of the stimuli presented. (Annex 7)

Cognitive response: angular symmetry versus rounded symmetry

Based on preference analysis, we realised that symmetry is better accepted if it is associated to round shapes; it is therefore interesting - and once again surprising - to observe that in terms of cognitive response, the same tendency is not found: higher levels of recognition are obtained both short and long term when the stimuli are symmetrical and angular. What is more, this tendency is reinforced with the passage of time.

Cognitive response: angular asymmetry versus rounded asymmetry: With regard to recognition of asymmetrical angular stimuli versus asymmetrical rounded stimuli, although the difference is not great in the short term, the former are better recognised than the latter (57% versus 53%). And so it can be seen that in the short term there is a relationship between affect and recognition; in other words, children prefer angular asymmetrical stimuli, which generate higher levels of recognition. Long term, this tendency is not found. Indeed, although children prefer asymmetrical stimuli when they are angular, the recognition rate is higher when the asymmetrical stimuli are rounded (60% versus 53%). Thus long-term recognition is not better for the preferred stimuli.

CONCLUSIONS AND LIMITATIONS OF THE STUDY

The results reveal a strong correspondence between preference and recognition, a much stronger response to figurative stimuli than to abstract and a stronger affective and cognitive response to asymmetry than to symmetry.

Asymmetry is effective when it is angular and loses effectiveness at the affective level when it is rounded. In turn, though symmetry is ineffective when it is angular, its effectiveness increases at an affective level when it is rounded (although this is lost at a cognitive level). On one hand, at an affective level a certain tendency was seen for children to associate symmetry to rounded shapes. The round shape is associated to harmony, to smoothness, to softer more continuous shapes which in children's minds seem to be related to symmetry which represents equilibrium. On the other hand, it was clear that this affective harmony does not generate the strongest responses at a cognitive level. It could perhaps be concluded that to some extent this represents the difference between "normality" which is liked (symmetry, roundness) and an inconsistency which is memorized (angular asymmetry). The results of this study are limited to two central issues: one related to the definition of the semantic categories and the other because of the fact that mascots were used that had no association to brands. Thus, it would be interesting to explore the interaction between the characteristics of the design and the brand, by showing them to children at the same time. The scope of this research made it impossible for us to include colour as an independent variable. Finally, the use of fictitious mascots, which was necessary in order to control the uncontrolled effects of learning in the research, may have complicated the assessment of the children when shown the stimuli. The children were only shown each mascot for a short period of time and this may have led to an incorrect assessment by the children. An interesting research path to be followed could be the evaluation of existing mascots which are typical of the design characteristics analysed in this work and to check if the results remain the same (or not) and if this alters the results.

It is obvious that not all mascots can be made to be asymmetrical just because children prefer them that way. But it must be noted that in two dimensional representation of mascots, brands could always use different design features in order to obtain the desired results over the lifetime of the mascot.

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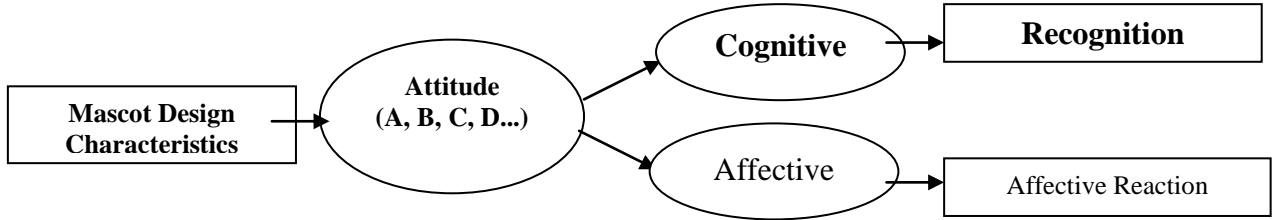
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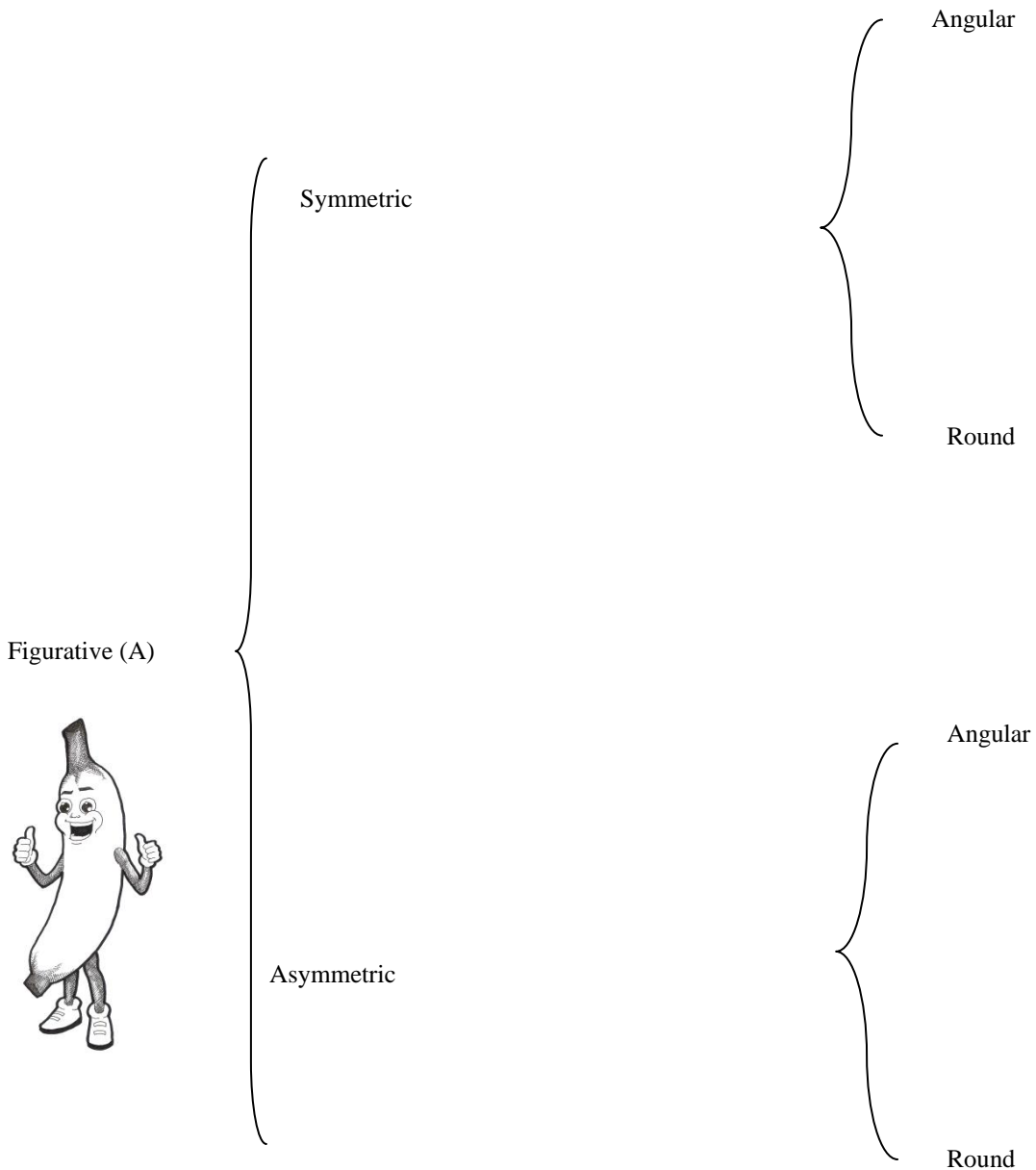
ATTACHMENTS

Annex 1 – Investigation Model



Annex 2: Stimulus

Due to mail capacity, the mascots are not all illustrate, just the figurative one, that was than manipulated on each semantic category.



Annex 3

Table 1 – Wilcoxon test

Wilcoxon Test	Group	Statistical value	p-value	Rejection / No rejection
Figurative - Abstract	-	-5.070	.000	Rejection a 1%
Symmetric - Asymmetric	-	-1.169	.242	No rejection
Angular asymmetric - Round asym	-	-2.039	.041	Rejection a 5%
Angular Symmetric – Round sym	-	-1.065	.287	No rejection
MASCOT				
Figurative - Abstract	Bear	-4.125	.000	Rejection a 1%
Figurative - Abstract	Banana	-3.645	.000	Rejection a 1%
Symmetric – Asymmetric	Bear	-2.521	.012	Rejection a 5%
Symmetric - Asymmetric	Banana	-.073	.942	No rejection
Angular asymmetric - Round asym	Bear	-1.823	.068	Rejection a 10%
Angular asymmetric - Round asym	Banana	-1.116	.264	No rejection
Angular symmetric - Round sym	Bear	-.546	.585	No rejection
Angular symmetric - Round sym	Banana	-.870	.384	No rejection
Gender				
Figurative - Abstract	Boy	-3.549	.000	Rejection a 1%
Figurative - Abstract	Girl	-3.648	.000	Rejection a 1%
Symmetric – Asymmetric	Boy	-1.986	.047	Rejection a 5%
Symmetric – Asymmetric	Girl	-.182	.856	No rejection
Angular asymmetric - Round asym	Boy	-3.268	.001	Rejection a 1%
Angular asymmetric - Round asym	Girl	-.370	.711	No rejection
Angular symmetric - Round sym	Boy	-.185	.853	No rejection
Angular symmetric- Round sym	Girl	-1.709	.087	Rejection a 10%

Table 2 – Mann-Withney and Kruskal-Wallis Test

Stimulus	Statistical value	p-value	Rejection / No rejection
Mann-Withney Test - MASCOT			
Figurative	437.500	.039	Rejection a 5%
Abstract	307.000	.006	Rejection a 1%
Symmetric	434.000	.038	Rejection a 5%
Asymmetric	243.000	.000	Rejection a 1%
Angular asymmetric	619.000	.466	No rejection
Round asymmetric	556.500	.164	No rejection
Angular symmetric	526.500	.380	No rejection
Round symmetric	593.500	.984	No rejection
Mann-Withney Test – Gender			
Figurative	586.500	.900	No rejection
Abstract	503.500	.911	No rejection
Symmetric	539.000	.364	No rejection
Asymmetric	538.000	.604	No rejection
Angular asymmetric	447.000	.001	Rejection a 1%
Round asymmetric	583.500	.169	No rejection
Angular symmetric	444.500	.069	Rejection a 10%
Round symmetric	565.500	.796	No rejection
Kruskal-Wallis Test - Grade			
Figurative	4.946	.176	No rejection
Abstract	4.302	.231	No rejection
Symmetric	6.664	.083	Rejection a 10%
Asymmetric	8.074	.045	Rejection a 5%
Angular asymmetric	2.655	.448	No rejection
Round asymmetric	3.604	.307	No rejection
Angular symmetric	4.120	.249	No rejection
Round symmetric	1.570	.666	No rejection

Table 3 – Chi-Square Independent test

	Statistical value		p-value	Fisher Test	Rejection / No rejection
Mascot recognition – Short term					
Mascot recognition – long term	40.650	1	.000	.000	Rejection a 1%
Gender	.000	1	.998	1.000	No rejection
Grade	1.895	3	.595		No rejection
Stimulus	28.201	6	.000		Rejection a 1%
Mascot recognition – long term					
Gender	2.292	1	.130	.163	No rejection
Grade	8.008	3	.046		Rejection a 5%
Stimulus	10.461	6	.107		No rejection

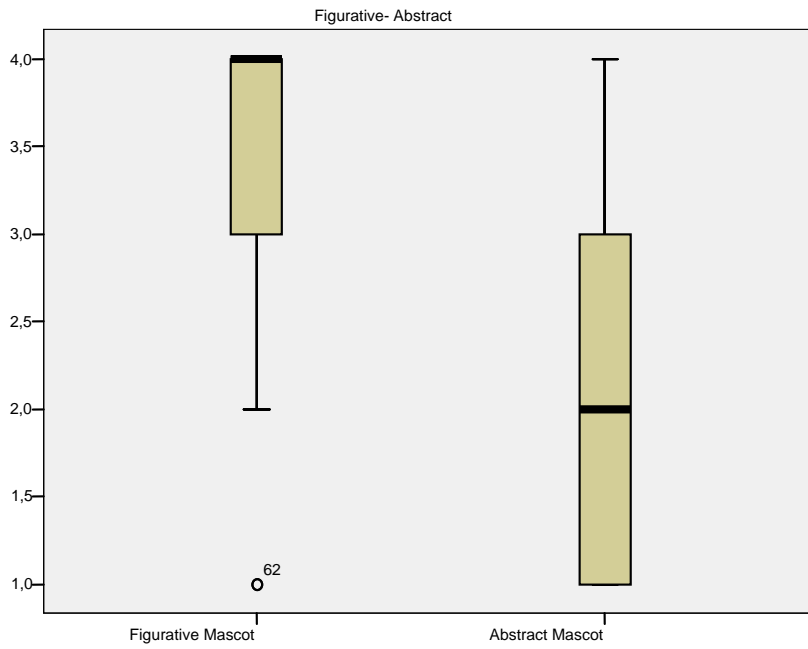
Table 4 – Crossing of the short-term recognition of the mascot (1^a selection) with the respective long term recognition (absolute frequencies, % for column, adjusted residues)

			Short Term Recognition		Total
			Yes	No	
Long Term Recognition	Yes	Freq	84	36	120
		% Col	78.5%	35.0%	57.1%
		R ²	6.4	-6.4	
	No	Freq	23	67	90
		% Col	21.5%	65.0%	42.9%
		R ²	-6.4	6.4	
Total	Freq	107	103	210	
	% Col	100.0%	100.0%	100.0%	

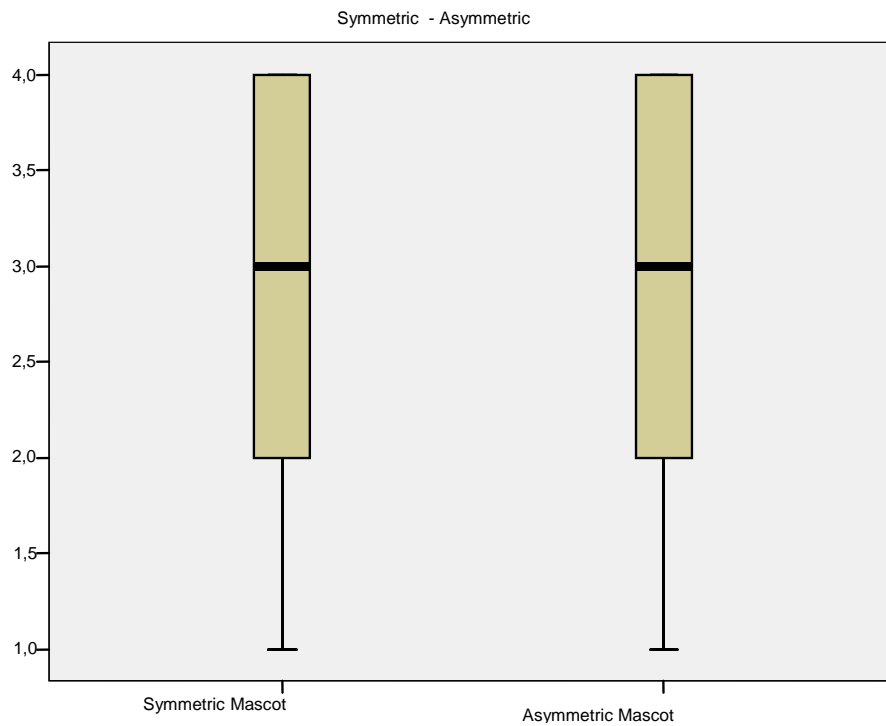
Table 5 – Crossing of the short-term recognition of the mascot (1^a selection) with the design characteristics analyzed (absolute frequencies, % for column, adjusted residues)

			Short Term recognition		Total
			Yes	No	
Stimulu	Figurative	Freq	24	6	30
		% Col	22.4%	5.8%	14.3%
		R ²	3.4	-3.4	
Asymmetric	Asymmetric	Freq	20	10	30
		% Col	18.7%	9.7%	14.3%
		R ²	1.9	-1.9	
Symmetric	Symmetric	Freq	13	17	30
		% Col	12.1%	16.5%	14.3%
		R ²	-0.9	0.9	
Round asymmetric	Round asymmetric	Freq	16	14	30
		% Col	15.0%	13.6%	14.3%
		R ²	0.3	-0.3	
Angular asymmetric	Angular asymmetric	Freq	17	13	30
		% Col	15.9%	12.6%	14.3%
		R ²	0.7	-0.7	
Round symmetric	Round symmetric	Freq	6	24	30
		% Col	5.6%	23.3%	14.3%
		R ²	-3.7	3.7	
Angular symmetric	Angular symmetric	Freq	11	19	30
		% Col	10.3%	18.4%	14.3%
		R ²	-1.7	1.7	
Total		Freq	107	103	210
		% Col	100.0%	100.0%	100.0%

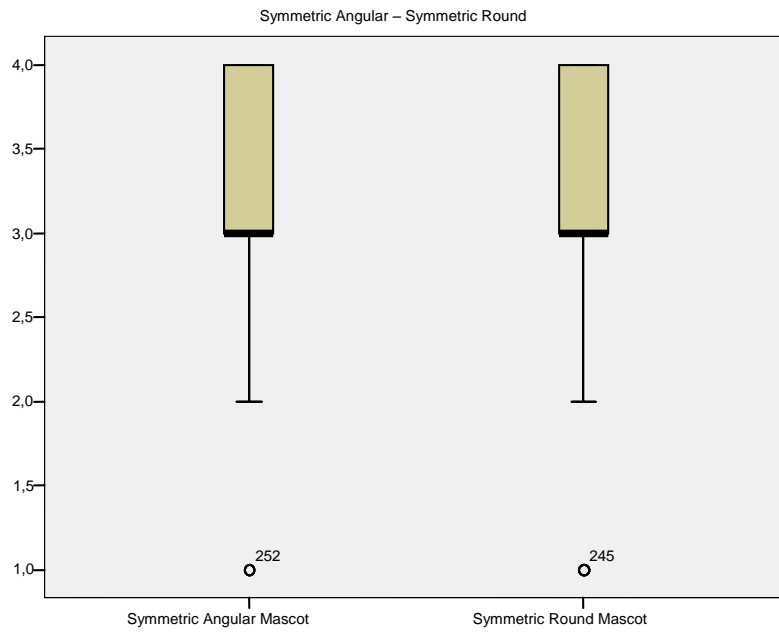
Annex 4 – Box&Whiskers Diagram Figurative-Abstract



Annex 5 – Box&Whiskers Diagram: Symmetric-Asymmetric



Annex 6_ Box&Whiskers Diagram: Symmetric Angular-Symmetric Round



Annex 7_ Box&Whiskers Diagram: Asymmetric Angular-Asymmetric Round

