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THE CATEGORIAL STRUCTURE OF COLOUR PERCEPTION
OF CORPORATIVE INTERNET SITES

SUMMARY. In the article the connection between colour decision of corporative internet-site and actualized semantic categories of the user describing the image of the company, is considered.

According to this work colour is determined as a constant semantic structure, referred to emotional-personal peculiarities of human perception of the environment. It allows to put forward the hypothesis about the existence of constant connections between colour decision of corporative internet-sites and semantic categories actualized by these sites users.

The empiric research was made by the method of modified semantic differential. The research objects were the main pages of corporative internet-sites, using 12 colours (codes in the international system html-colours according to the model RGB); the descriptors were 36 adjectives characterizing the commercial companies.

As a result of factor and cluster analysis there are 4 factors of image characteristics of the company, distributing the cases according to the poles of the factors, it helps to observe the connections between objects and highlighted factors. The generalization of factor analysis results allows to create the ratio chart of the colour decisions of the sites and semantic categories of the description of the company image.

On the basis of received results, the authors reveal the most successful, unsuccessful and controversial colour decisions for corporative internet-sites.

KEY WORDS. Internet-environment, web-sites, psychosemantics of colour.

Nowadays there is a growing tendency to shift the presentations of the firms, offering their products and services, from TV screens, radio and external advertising into the internet environment. This tendency is not new, at least in our country, however it should be noted that the quality of presentation of many firms is quite low. Such conclusion can be made on the basis of the frequent discrepancy between the subjective evaluation of consumers based on their perception of the company's web-site and the evaluation based on the experience of direct market interaction with it.

These days a company's site is one of the main means perceiving which the consumer classifies the company as successful or unsuccessful, reliable or unreliable etc. As a result the consumer will prefer to avoid the company whose site is perceived

as not belonging to the desired semantic category and find a company whose site looks more successful.

At present the connection between the color solution of the corporative internet site and the actualized semantic categories of the user, which depict the company image, as well as the way how the general psychological characteristics of the basic colors perceived outside the context of the internet environment are actualized exactly during the sites perception is under-researched.

Theoretical grounding of the research. In the contemporary literature devoted to color psychology there is a number of conceptions depicting the connection between color and emotional sphere [1], color and personality [2], general psychological color characteristics [3], [4], [5] and possibilities of employing color metaphors in psychological diagnostics [6].

In this work color is viewed as a stable semantic structure related to the emotional and personal peculiarities of human perception of the environment. Color is an autonomous system of orientation in the surrounding world independent of the denotative system. It is such a system which is capable of complex influence on the individual's functional state, bypassing consciousness, and precise signaling of this influence. Color triggers a specter of physiological, emotional and intellectual 'reactions' represented as a semantic structure of the color image [7]. Thus, we can speak about the semantic structure of a color image, whose components have different degrees of semantic constancy.

In spite of a rather large number of works on color psychology the monosemantic and distinct general psychological meanings of colors are hard to elicit. It may be connected with physiological and psychological difficulty of the color perception process.

Perception in the internet environment is subject to the general laws of perception and has no regularities principally and qualitatively different from other environments. However, summarizing the data of a number of researchers [8], [9], [10] we can single out certain specific differences in perception in the internet environment. They have their own characteristic specifics defined by the two main factors: 1) speed of communication and 2) presence of its own system of interaction "person – environment". The key moment in this internet perception is the fact that due to the information overload in the internet environment people tend to reduce the amount of perceived information. Consequently, people look through the text quickly or scan it without reading, thus visual images (pictures, banners and photos) become the major means of communication as far as, unlike the text, they let convey a bigger amount of information within a shorter time period. All the aforesaid let us construct a scheme for an empirical research aimed at identification of the link between the color solution of corporative internet sites and the actualized semantic categories of the user which describe the company image.

Empirical research

We have chosen the *modified semantic differential* as a method for the research of the categorical structure of color perception of corporative internet sites. It was developed in the following way:

— at the first stage, using a questionnaire, we have garnered 45 adjectives depicting commercial companies;

— at the second stage the experts (5 people — senior students and professors of the department of general and social psychology of the Tyumen State University) have selected 36 adjectives used as descriptors of the semantic differential;

— the objects of the research are the homepages of corporative internet sites designed in 12 different colors; the choice of the colors has been made according to the recommendations of experts – web-designers.

The colors used in the research are coded in the international system of html colors according to the RGB model (table 1).

Table 1

List of the Colors Used in the Research

Name of the color in the research	Name of the color in html system	Color code of #123ABC type
Red	Red	#FF0000
Orange	Orange	#FFA500
Yellow	Yellow	1 #FFFF00
Sky-blue	LightSkyBlue	1 #B0E2FF
Green	Chartreuse3	#66CD00
Blue	Blue	#0000FF
Purple	Purple4	#551A8B
Olive	DarkOliveGreen	1 #CAFF70
Turquoise	Turquoise	#40E0D0
Lilac	RichLilac	#B666D2
Brown	Chocolate	#D2691E
Black	Black	#000000

The empirical basis for the research consisted of 40 people aged 19–50.

As a result of the *factor analysis* of the data obtained with the help of the *screen plot* functions and Kaiser criterion we have identified 4 factors of the image characteristics of the companies as well as distribution of the cases into the poles of the factors which let us observe a connection between the objects and the identified factors. The summary of the results of the factor analysis let us draw a table of the correlation of the color solutions of the sites in question and semantic categories of description of the company's image (table 2).

Table 2

Correlation of the Color Solution of the Site and Semantic Categories of Description of the Company's Image

Color name	Image characteristics corresponding to the color
1	2
Turquoise	New, developing, modern, innovative, progressing, conceptual, developed, democratic
Yellow	New, developing, modern, innovative, progressing, conceptual, developed, democratic, bad, aggressive, dishonest, scandalous, not competent. The meaning is opposed to the characteristic "strong".

1	2
Green	Professional, stable, reliable, honest, well-known, confident, large
Brown	Bureaucratic, old, mean, «dark». The meaning is opposed to the characteristics «strong», «well-known», «confident», «large»
Red	Bad, aggressive, dishonest, scandalous, not competent
Sky blue	Professional, stable, reliable, honest
Orange	The meaning has not been identified
Blue	Strong
Lilac	The meaning is opposed to the characteristic «strong»
Olive	New, developing, modern, innovative, progressing, conceptual, developed, democratic. Moreover, the meaning is opposed to the characteristics «well-known», «confident», «large».
Purple	Strong
Black	Strong, well-known, large, confident. Bureaucratic, old, mean, «dark»

Based on these data we can single out the most efficient, inefficient and arguable color choice for the corporative internet-sites:

1) Green, sky-blue and turquoise are considered efficient. Consumers associate them with the positive image characteristics. They do not have an 'underside' in the form of negative characteristics. The purple color is connected with the characteristic of "strong", but this connection is not so clearly expressed in comparison with other colors in this group.

2) Brown and red are the least efficient. They turn out to be linked only with negative image characteristics. Besides, lilac has an image-building meaning opposed to the characteristic of "strong", but this link is less strong and meaningful.

3) Yellow and black are arguable from the point of view of their image-building meaning as they turn out to be connected with both positive and negative image characteristics.

For example, the homepage of a site done in the yellow color is linked with the image of a modern, new and developing company but at the same time not competent, dishonest and scandalous. It is reflected in the cliché of "a young but fast-growing company" which as a rule is engaged in spam, active sales and network marketing. On the streets of big cities one can often see advertisements: "A young and fast-growing company offers employment to ambitious young people" and such advertisements are frequently designed in bright, acid colors. As a rule the "growth" of such a company quickly finishes and the reputation of such kind of companies cannot be considered positive. This may be one of the possible reasons of the observed ambivalence of the positive and negative image-building characteristics of yellow.

Black forms an interesting picture of image-building characteristics. Homepages of the sites designed in black can create an image of a strong, well-known and confident company which is at the same time greedy, bureaucratic and 'dark'. The image of an

"evil corporation" is established – a company which is successful on the whole, but not aimed at the client's well-being.

Conclusions. The most preferable colors for corporative internet sites are turquoise (link with the positive pole "development – bureaucracy"), green (link with the positive poles of the factors "company's professionalism" and "company's scale") and sky blue (link with the positive pole of the factor "company's professionalism"); these colors are connected only with the positive image-building characteristics.

The least favorable are the color schemes done in red and brown as they have shown connection only with the negative image-building characteristics. The arguable colors that create an ambiguous image are yellow and black; they have revealed bipolar meanings describing both positive and negative image-building characteristics.

This research is a step towards the cooperation between specialists in the fields of psychology and web-design. The data obtained can be used as one of the criteria for web-designers choosing a color scheme for corporative internet sites.

There is a limitation to the research though. The garnered empirical material is culturally conditioned and, thus, can be employed only in the Russian internet environment. The study of the semantic categories of color perception by users in different cultural contexts, identification of the invariant and differential connections can become the subject for further investigations within the considered field.

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