

# Study of Colors Cognitive Preference in Grotesque Advertising

With Influence Factors of Consumers' Gender, Age and Living Areas

Delai Men<sup>a1</sup>, Yitao Huang<sup>b1</sup> and Xiaoping Hu<sup>c1\*</sup>

<sup>1</sup>School of Design, South China University of Technology, Guang Zhou, China

<sup>a</sup>mendelai@scut.edu.cn, <sup>b</sup>ttlanvin@gmail.com, <sup>c</sup>huxp@scut.edu.cn

\*Corresponding author

**Abstract**—With its strange, exciting visual elements, grotesque commercial advertising challenges consumers' eyes, stimulating the curiosity of them. People generally form of cognitive by graphic style in grotesque advertisements, but the colors of them are also the important factors that influence consumers' visual cognitive preference. The color plays a significant role in the process of its information conveys, but in China, only few researches have been made. This paper mainly use the method of questionnaire survey to explore consumers' color cognitive preferences of grotesque advertising from three aspects of gender, ages and living areas and what kinds of color hue, purity and lightness will attract consumers. The finding would provide a reference for the application of colors matching for marketers and designers in future commercial advertising design.

**Keywords**—Grotesque advertising; consumers; visual cognition; color preference

## I. INTRODUCTION

Grotesque art has a long history, but western grotesque art theory introduced into China in 1950s. The modern advertising design started late in China and grotesque style of which is rare there. With the progress of the era, grotesque advertising appeared more frequently in public view, its stimulating colors constantly challenging the vision of consumers, inspiring their emotion, affecting their cognitive preferences and purchasing behavior. Color is an important component of commercial graphic advertisements, it is a visible mediation connected between consumers and commodities. For advertising design, colors' unique properties and different symbolic significances are conducive to attract the attention of consumers for goods and influence consumers' emotional cognitions, more indirectly affecting consumer's preferences and purchasing behaviors. So color preferences have significantly relationship between consumers' buying behaviors [1]. Dominating color preferences factors roughly can be divided into two parts: one is personal color preferences; the second is the public color preferences [2], as shown in "Figure. 1".

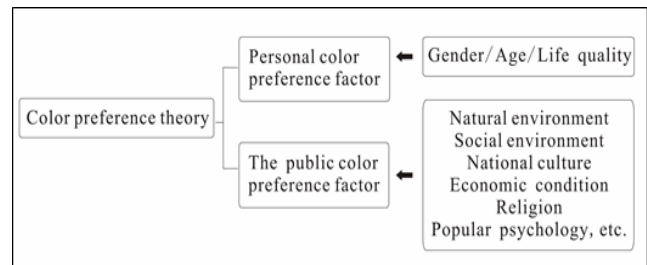


FIGURE I. COLOR PREFERENCES FACTORS

Sources from: S.R.Lin, Chromatics, Taipei: SanMin Press, 1993

By the dualist view by the philosopher Rene Descartes [3], the development of the commercial advertising is from material physical to spiritual psychology, that is, from the purpose of selling goods with intuitive graphic posters developing to highlight unique attributes, and the creative advertising styles, they are business forms by visual wallop, attracting to consumer attentions, trigger curiosity and stimulating consumer purchasing behaviors.

In *The Art of Spiritual* of Kandinsky referred to "Color has great potential, it can affect the body of people, and cause the change of the mind" [4], showed the widespread influence of colors on physiology and psychological feelings. So as a kind of commercials, grotesque advertising has its different forms of expression and creation style, should grotesque advertisements' colors more attract attentions of consumers and favors of public?

## II. METHOD

### A. Participants

According to the factors of color preferences "Fig. 1", cognition of color preferences will be affected by gender, age and residential environment, etc. So people will have difference perceptual preferences in grotesque advertising color. This research mainly uses the method of questionnaires survey through 150 people of different gender, age and living areas by e-mails. A total of 135 questionnaires have taken back, 128 questionnaires are valid after remove the invalid questionnaires by questionnaire analysis of reliability and validity. There are 64 female and 64 male in respondents. Their ages are divided into 20 to 29, 30 to 39 and above 40. The investigations of living areas are respectively sending the questionnaires to participants who live in three major areas of

China. Area (1) is containing seven provinces and three municipalities of the eastern coastal region, e.g. Liaoning, Jilin, Beijing, Tianjin, Shandong, Jiangsu, Shanghai, Fujian, Guangdong, Hainan. Area (2) is containing seven provinces of the central region, e.g. Inner Mongolia, Hebei, Shanxi, Henan, Hubei, Hunan, Jiangxi. Area (3) is containing four provinces and one municipality of the western inland region, e.g. Xinjiang, Shaanxi, Sichuan, Chongqing, Guangxi.

### B. Tools

I used statistical analysis software SPSS19.0 by descriptive statistics analysis of questionnaires results to get the valid data.

### C. Procedure

The questionnaires survey took a month, started with grotesque advertisements' color visual stimulation to investigate consumers' cognitive preferences, then exploring what kind of grotesque advertising color conform to consumer's cognitive of color preferences in three aspects: gender, age and living areas.

## III. RESULTS

### A. Investigation and analysis of consumers' preferences in visual stimulation

In visual cognitions, people will have sensory stimulation when their eyes receive the information. And then form the cognitive preferences from understanding, judgment and distinguish. To investigate grotesque commercial advertisements' color to consumers' preferences of visual stimulation, I showed four advertisements with different color brightness, purity and hue, as shown in "Fig. 2".



FIGURE II. TEST SAMPLE OF ADVERTISEMENTS

From left to right is number 1, 2, 3, 4

These four works based on the theme of female bags, sample (2) is an advertisement that cooperates between Louis Vuitton and Yayoi Kusama who is the "Psychotic artist" from Japan. The other three advertisements are common brand bags advertisements in daily life. Respondents should select one sample which is the most visual impact in the test samples, and then I used SPSS19.0 software to frequency analysis of descriptive statistics and the result of valid data shows in "Table 1".

According to the results of data, there are 82% of people choose sample (2) is the most visual impact one in advertisements test samples. In visual perception of four advertisements, sample (2) has followed Yayoi Kusama's iconic dot style, a lot of black dots breeding on a yellow background, the intense contrast of yellow-black give people a kind of nervous and strange feeling, but the cooperation of goods are popular with a large number of consumers. In visual

perceptions of four advertisements, color contrast of (2) is very strong. Yellow is the highest brightness and high purity in three primary colors, and also it has very high compared in visibility when backcolor is yellow and graphic color is black [5], this kind of colors set off the subject which is exaggeration and strange to make the whole design very attractive. Other three samples are common fashion commercial advertisements, sample (1) uses high brightness and low purity color contrast, but large areas of white space haven't reach the maximum effect of visual. Sample (3) belongs to middle brightness and low purity color contrast, large areas of pink create a soft and relaxed atmosphere and won't cause visual pressing and stimulating when consumers see such kinds of design. Sample (4) gives priority with low tones and lightness, the vision in the whole picture gives person a heavy and powerful visual sensibility. Grotesque advertisements' color can seize consumers' eyes in a short time, because its color is abundant, high visibility and strong contrast, what's more the color matching skillfully foils the subject to bring more than ordinary visual feeling.

TABLE I. VISUAL STIMULUS REFERENCES DATA

Sample Number	Frequency of Select	Percentage	Effective Percentage	Cumulative Percentage
1	4	3.1	3.1	3.1
2	105	82.0	82.0	85.2
3	8	6.3	6.3	91.4
4	11	8.6	8.6	100.0
Total	128	100.0	100.0	—

### B. Investigation and analysis of consumers' color cognitive preferences

In former part, I have investigated and analyzed the consumers' preferences of visual stimulation in grotesque advertisements. In this part, I have surveyed consumers' color cognitive preferences for grotesque advertisements from three aspects of gender, age and living region. Respondents watched two groups of advertising test samples, one group is showed bright colors series (1), another group is showed darker colors series (2), as shown in (Fig.3).

The group (1) is commercial advertisements of bags from fashion photographer Bela Borsodi who is a maverick genius from Austrian, through creating illusion, overlap the reality and illusion he reached a unique visual effecting with rich color contrast. The group (2) is jewelry commercials of spring vacation series in early 2012 by Alexis Bittar who is a genius of design in jewelry in New York. By using the collage technique in the picture, he combines a variety of elements which are in different period and space, the black and gray colors set off metallic of jewelry make people feel fantastic.

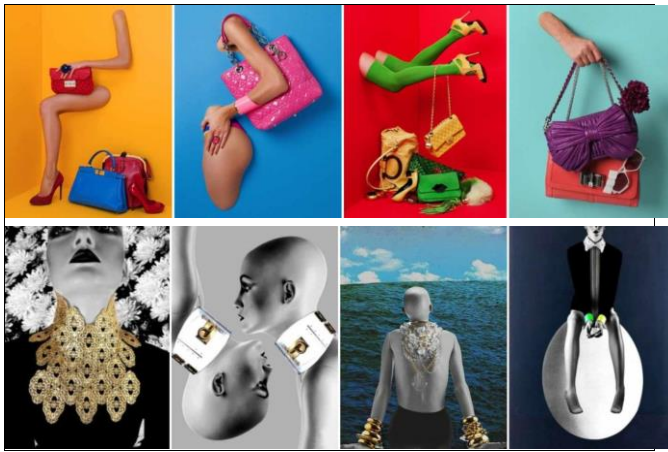


FIGURE III. ADVERTISEMENTS TEST SAMPLE OF COLOR PREFERENCES

Sources from: (1) [www.belaborsodi.com](http://www.belaborsodi.com). (2) [www.haibao.com/article/186344.htm#ixzz2d2cr3Ey](http://www.haibao.com/article/186344.htm#ixzz2d2cr3Ey).

I surveyed 128 respondents and got the valid data by using crosstabs of descriptive statistics in SPSS19.0 software, and shows in “Table 2”.

TABLE II. GENDER, AGE, LIVING REGION AND COLOR PREFERENCES

Influencing Factors		Advertising Sample		Total
		Bright colors	Darker colors	
Gender	Male	38	26	64
	Female	46	18	64
Total		84	44	128
Age	20—29	70	38	108
	30—39	9	4	13
	Above 40 years old	5	2	7
Total		84	44	128
Living Areas	Area 1	49	32	81
	Area 2	25	10	35
	Area 3	10	2	12
Total		84	44	128

The data shows, both men and women prefer group (1) which are grotesque advertisements of bright colors, and women more favor (1) than men. There are 65% respondents favors (1) and 35% people prefer (2) from 20 to 29 years old. 69% respondents prefer (1) and 31% people prefer (2) from 30 to 39 years old. 71% respondents prefer (1) and 29% people prefer (2) over 40 years old. In China, there are 60% respondents are fond of (1) and 40% respondents are fond of (2) in the eastern coastal region; 71% respondents like (1) and 29% of the respondents like (2) in the central region. 83% respondents favor (1) and 17% respondents prefer (2) in the western region.

#### 1) Analysis of gender and color preferences

According to the analysis of data, the two series of advertising test samples are very unique and weird. The group (1) is the theme of women bags, it is high purity, high brightness and rich colors. The main color is yellow, red and blue in samples, and uses contrasting color, complementary color and adjacent color. But Bela Borsodi created illusion and rich color contrast, and recombining the familiar, realistic and normal women's body with bags into a strange and unusual image, through the foil color, the whole series of samples are very beautiful and attractive, but there are also comical, exaggeration and strange visual effect. Female respondents are more preferred this series of samples, because the effect of colors conform women's color to bright, harmonious qualities. The group (2) is jewelry series advertising by using the collage technique, Alexis Bittar performed a surrealism style, the black and gray set off metallic of jewelry gives people a kind of strange visual effect. Although group (2) is a theme of women adorn article, most men are more rational and stable than women in psychological. This calmness and strong metal feeling of colors are in conformity with the male visual preference, so men like darker colors more than women in grotesque advertising. Color preference is a very important guidance for commercial design, merchants and designers can design with this basis to accord with the male and female psychological appeal.

#### 2) Analysis of age and color preferences

According to the results of the data in “Table 3”, all ages prefer group (1) samples, and color preferences will change with ages. Elder respondents prefer bright colors of grotesque advertisements than younger respondents. As the growth of the age, people's eyesight and cognitive will become poor, elder people's reaction of perception will be slower. So colorful, high purity, high brightness, high contrast color can more stimulate and attract their eyes. When designers design advertisements especially the grotesque style should base on consumers' color preferences in different ages that will attract more consumers.

#### 3) Analysis of living areas and color preferences

Since the different local flavor and national customs, each region has its own characteristics, people's color preferences of life were affected by the regional environmental factors. According to the survey, interviewees from all three regions prefer group (1) samples. People's perceptions of colors are not consistent by who live in different parts, on the other side, the people who live in the same area are with the same degree of preferences for colors and trends, because of the common life experience and the environment, in the view of “Geography” to explain the phenomenon of color preferences, that is in the same area, the entire people in the region will have the same color preferences [6]. Grotesque advertising is developing in Chinese advertising markets, but there is no widespread popularity among consumers. In China, eastern coastal region is more developed than western inland region in many aspects, they contact grotesque advertising more frequency and acceptance level of bright colors and dark colors are general. However, there have 83% interviewees prefer bright color in area (3), this phenomenon might be related to grotesque advertising's penetration and consumption

environment. Therefore, grotesque advertising design and applications should adjust measures to local conditions, pay attention to the application of color and take the whole consumption environment into consideration.

#### IV. CONCLUSION

Colors help advertising to attract consumer's attention in designs, because colors have its unique properties and represents different symbolic significance [7]. The current application of color in the commercial design has been gradually transformed into sentimental value, it should be considered when design, the level of color psychological preference is belong to emotional level, consumer's visual cognition and psychological preferences can directly influence its purchase behavior. By successfully use colors to achieve commercial goals, merchants and designers should communicate with each other to grasp consumers color preference.

In order to attract consumers' attention, also merchants and designers to make stimulating visual impression to achieve the purposes of advertise, the grotesque advertising emerged, but usually because of the grotesque style, consumers feel fear and reject often. Although grotesque advertising can stimulate visual and attract attentions in special way, designers should find the orientation of commodities and consumers'

psychological demands and interests of advertising, based on consumer's color preferences in different gender, age and living areas, thus can make grotesque advertising to achieve effect reversed.

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