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CATEGORY METHOD PROPOSAL OF COLOR *KANSEI* INFORMATION WHICH USES MPI

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Abstract: In this study, we surveyed memorial colors and pure images for 7 colors based on personality. These colors are red, orange, yellow, green, blue, white and black. Color has always been having particular characters, such as fashion design and craft art, but nowadays the important thing it is not only in the design area but also product market which makes function and technology. So the goal of this study is based on pure colors, not object colors.

Before the experiment, we perform the MPI (by Eysenk) on the subjects. Eysenck mainly analyses people's temper which defines by the emotion and the neuroticism.

Then the subjects expressed their impression about colors with color pencils. In order to get their pure images, no sample was shown, and they freely pull out the images of color from their own individual impression by experiences. These images which appear purely in the relation between color and human being are called memorial colors. We make a new *Kansei* category of memorial colors data which had been drawn by the subject's results of MPI and consider each tendency. Pictures, vocabularies and many other expressions were seen from the subjects' sketches. We got the data of the sketches that they drew and the colors and the vocabularies used for these sketches and put the results on the MPI map to find out the peculiarities of impression evaluation from each territory. It shared each territory with four characteristics and tried to examine by the analysis method of MPI, various and peculiar tendencies were seen.

Keywords: *Kansei, Color, Memorial color, Sketch, Personality, Category*

1. INTRODUCTION

Visual information is relatively important among the external stimuli that are leading the *kansei* reaction in human mind. Especially, the color, among the visual information, is one of the important elements which have influence on preference and images of products. Color has been increasing in most of domains in connection with design areas such as fashion design that had meaning traditionally, packaging design and product market which made function and technology priority up to now. Utilization of color is using the color image, and the color image is closely connected with cultures, social circumstances, learning and personal experiences. We define as 'memorial color' the one that is associated with the perception of the actual artifact, that can be reminded, and that can be reconstructed. But, there is a difference between individuals to memorial colors, such as everyone has each different characteristic within same culture and social circumstance. It has been called personality in psychology.

In this study, we hypothesize differences of memorial color and utilize MPI (Maudsley Personality Inventory) test, that is designed by Eysenck, which has been using in the field of psychology and medical sciences widely. [1]

This study is focused on individual differences, so we make the subjects express colors depending on their memories. And then, we try to make a new categorization applying the analysis of personality, and analyze the

characteristics and the tendencies about each item of memorial colors. This category is expected to utilize to visual planning of interface field.

2. EXPERIMENT

We make subjects express freely individual images about colors using various formats such as pictures, colors and vocabularies.

We extract the various ways about how each feels differently from subject's sketches and find relevance to results of personality test and conduct the experiment in order to make a new category at the following.

2.2 EXPERIMENT METHOD

To start the experiment, we performed the MPI (Maudsley Personality Inventory by Eysenck) to the subjects to which all consented (From following it will be written as the personality test). Then experiment of color impression was conducted (From following it will be written as the sketch).

2.2.1 PERSONALITY TEST (MPI)

For observing a personal pattern, we adopted the Eysenck personality test. We distribute the subjects the questionnaire which are consist of 80 questions, and check the all subject's results on the map.

2.2.2 EXPERIMENT OF COLOR

120 color pencils and A3 size of the canvases were

prepared to express every impression regarding colors without restrictions. The assignment is below.

Please express what you feel and come to mind some objects regarding colors with sketches or vocabularies. These colors are red, orange, yellow, green, blue, white and black. You can draw pictures and can paint proper colors to each item. And you can describe atmosphere as vocabularies if you can not draw with pictures. But, if you draw pictures, you have to explain as vocabularies what you draw. You can mix the colors.

2.3 SUBJECT AND ENVIRONMENT

We obtained the consents to all subjects who were Korean and Japanese students (32males, 22 females, ages 20~30) during one month in November 2005. The subjects' majors were various as design, medical sciences and economics etc. The times of experiments are up to the subjects and it takes about 20~40 minutes.

2.4 ANALYSIS

2.4.1 PERSONALITY TEST (MPI)

Eysenck mainly analyses people's temper which defined by the dimension of extraversion - introversion and the dimension of neuroticism. According to his theory, with the type of the personality, it forecasts the subjects' temper or areas of point of view. By his test, subjects could be divided into 9 types of personality and 4 patterns of preference.

In this study, we bind up nine territories in four territories to analysis the tendencies clearly on the results of experiments.

2.4.2 SKETCH

At first, we put the subject's sketches on MPI map and observe tendencies and characteristics of each territory based on personality test totally. Also, we survey the range of color recognition to each territories with PCCS (Practical Color Coordinate System) which is designed by Japan Color Research Institute.

3. RESULTS

3.1 ANALYSIS OF SKETCHES

We consider the sketches according to each personality territory as a whole.

- A : There were many adjectives expressing sensuous and temperature images such as 'cool', 'hot', 'cute', 'painful'. Without using a variety of colors to only one item, similar ratio of used color was shown to each item. The tendency of drawing pictures was shown to be closely to middle of the map.

- B : It is explained one or two representative images simply as noun such as apple, fire, banana and sea. And separate images were drawn to each color item with one or two color pencils.

- C : Even though they described all color items, do not

Picture 1. Four territories on MPI map

Picture 2. Sketches on map

follow the presented orders. And it was made to develop next images from previous images. For instance, ‘the tree’-‘the earth’-‘the environment’ to green, ‘image of paradise’-‘south island’-‘vacation’-‘warm’ and ‘slow life’ to orange.

3.2 THE RANGE OF COLOR RECOGNITION

We extract only colors which were used at least two subjects and make groups on PCCS map.

We can recognize that every territory has different

Picture 3. Example of A territory

Picture 4. Example of B territory

Picture 5. Example of C territory

ranges to each item. To examine according to the range, B territory has the widest range and the next is C to A.

The following shows range of color recognition to Green. It can be utilized to plan visual interface.

4. CONCLUSION AND FUTURE STUDY

We analysis the sketches by using method of personality and can observe diverse tendencies through the results of color image sketches. Each territory has different characteristics. It means that personality affects how to express and accept the feelings from color stimuli. In addition, we think that it is much related to personality because this experiment is not complicated color but valuation of memorial color basically. If we make individual category based on individuality of color and flexibility of *kansei*, it can be real such as customized advertisement display in the future movies. And we are able to expect to use for visual interface of mobile products and personal blog which are popular in these days.

Through this study, we can consider a following study; first, we have to add subjects who are in D territory as stable and calm characteristic. And we are able to enlarge an age group from teenager to over fifties because this experiment has been limited an age group. If so, we can evaluate and obtain new results by adding new age group. It will help to develop in design field.

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Picture 6. The range of color recognition to Green

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