

Cultural Influence to the Color Preference According to Product Category

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Abstract: In this study, I focus on color, one of the factors involved in design. It has been assumed that color preference is affected by culture and geographical factors, and much international comparative research has been done on this issue. However, the conclusions vary widely, suggesting that it is difficult to generalize. Therefore, in addition to studying color preference itself, I investigated how basic stated color preference is correlated with specific color preference for commercial products. I analyzed how color preferences vary in different countries and product categories. I interviewed Japanese, Chinese Vietnam and Dutch students on their color preferences, and investigated the correlation between their basic color preference and their specific color preference for product categories such as clothes, cell phones, notebook computers, refrigerators, and vehicles. I found that Japanese participants tend to prefer dark colors. All of three nations other than China liked achromatic colors such as black and white for commercial products. By contrast, the color preferences of Chinese participants varied widely. The Chinese tend to have similar color preferences throughout product categories, whereas the Japanese, Vietnam and Dutch people showed different tendencies for different categories.

Keywords: Color Preference, Product Category, International Comparison, Cultural Background

1. INTRODUCTION

Thanks to the rapid progress of technology, the function and quality of home electronics have developed in a similar way worldwide. Therefore, many firms differentiate their products by form or color. In SoftBank and DS products and the iPod, abundant color deployment has become the fashion. Various color strategies have been used, from the color of the product itself to the logo, advertising, and the shopfront. However, when the most popular model of a cellular phone is black, this color preference is not necessarily transferred to a different product category such as clothes

or furniture. This is evident from the sales situation so far. Moreover, according to the literature, people in countries in East Asia (Japan, South Korea, and China) prefer white or blue. However, if color is investigated according to a product, there is remarkable variation in the favorites, suggesting that the taste for a color changes with the product category.

This research focused on this point and considered the relationship between color taste and some products. And I examined whether it would come from the difference in a country or culture.

2. RESEARCH BACKGROUND

2.1. Relationship between Color Trends and Products

Physiological and psychological factors are believed to cause individual variations in color perception. Differences in visual acuity and perception caused by age and environment are among these factors. Chijiwa (2001) proposed that color preference is defined by super-cultural and biological factors in any general hierarchy of color preferences, and mentioned generality and specificity based on past literature. However, other factors such as sex, ethnicity, area, age, personality, and education have a major effect on color preference.

Around 1950, Japanese home electronics were almost always white, which symbolizes purity. This is one reason why such appliances are called white goods. Various colors came on to the market after the appearance of color television. For example, vivid yellow-orange, the almond and ivory of natural color, were in fashion in the 1970s, and pastel shades in the 1980s. In the mid-1980s, 80% of Japanese cars were white, possibly because of herd instinct pushing all the purchasers in the same direction.

Moreover, Sugiyama and Nagumo (2008) claim that there is a close relationship between a hot-selling product and a color. For example, red came to be used also for cars, notebook PCs, and a food package immediately after the red packaging of Shiseido Tsubaki shampoo became a big hit. Red started to appear in various product categories, suggesting that often utilized primary colors find their way into other products. Sugiyama and Nagumo have pointed out that a time cycle exists within this phenomenon of color preference.

2.2. Prior Research

2.2.1 Color Preference Factors

A person's taste in color generally changes with age. People like yellow and red in their infancy, and as they grow they develop a liking for blue or green (Birren, 1961). Garth, T. R., M. R. Moses and C. K. Anthony (1931) notes that color preference also changes with education, although infants usually prefer the same colors, wherever they are. Researchers argue about whether reaction to color is fundamental (Humphrey 1976, Grossman 1999) or learned (Adame 1973, Hupka 1997), and consider whether color consciousness is associated with meaning and whether preferences change with culture (Sable and Akcay 2010). Furthermore, it is thought that consciousness of color is specific to a geographic factor or a culture factor. In terms of meaning, there is the possibility that both innate individual preferences and environment (education) may be important factors.

2.2.2 Symbolism of Color

Sable and Akcay (2010) compared symbolism and meaning attached to color from the standpoint of cultural marketing. For example, white symbolizes purification in sorrow in East Asia,

but happiness in Australia or the US. Red signals unhappiness in Nigeria or Germany, but is a mark of good fortune in China and Denmark. Yellow in the US signifies warmth, in France distrust, in Russia jealousy, in China happiness, and in Brazil disappointment. Businesses seeking to enter a foreign market need to be aware that the meaning of a color changes with a country or area.

Research into color from a physiological standpoint has been conducted by, for example, Jacob Liberman (1996), who investigated the relationship between color and blood pressure, pulse rate, and respiration rate. He found that yellow caused the numerical value of a physiological function to rise, whereas black and blue caused it to fall. He also found that the color red heightens concentration, whereas blue stimulates the imagination. Other studies have explored the influence that a color has on the brain or the heart.

2.2.3 International Comparisons of Color Tastes

A study by Sakamoto, Shirabe, and Sato (2006) compared tastes in color in Japan and South Korea, specifically relating to a cellular phone and a refrigerator. There was a marked difference. Bluish colors were preferred in Japan, reddish colors in South Korea. For a cellular phone, Japan's breadth of color preference was found to be larger than in South Korea; for the refrigerator, South Koreans tended to prefer a wider range of hues.

Such research shows that, in choosing product colors, it is necessary to consider the influence of the area or the culture, reflected in differing tastes according to symbolism or perception. In addition, colors influence the way in which people relate to and use a product.

3. INVESTIGATION OUTLINE

Two investigations were conducted in order to explore the issue of color preference in preparation for entry into the Chinese market.

3.1. Relationship between Color Tastes and Product Category

Each product category tends to evoke colors that are peculiar to it, and a color conversely tends to evoke particular product categories. This correlation between commercial products and colors has developed over a long time. More traditional categories exhibit a closer correlation with certain colors. In this section, I investigate color preference for selected representative product categories.

Investigation about basic color preference and color preference for a product category was conducted in 2011. As for stated preference, although there was individual difference among individual favorite colors was almost no individual difference among disliked colors. Moreover, the stated color preference and the color preference within a product category tended to be similar only within the T-shirt category, while color preference for Crocs and cars concentrated on a specific color.

These findings suggest that basic color preference is reflected in clothes, whereas such a correlation would not be applicable to other product categories. Color preference within a product category is assumed to be affected by the product's size, form, and feeling as well as the method and situation in which it is used. Therefore, in this study, I focused on a total of five product categories: frequently and officially used products, such as clothes; frequently and personally used products, such as cell phones (small in size), computers (middle in size) and refrigerators (large in size); and non-frequently, officially and personally used products, such as stationary.

Thirty-six colors were chosen from the Munsell color system based on intensity, saturation, and

hue balance. Participants were interviewed about their favorite colors and their specific color preference for each product category

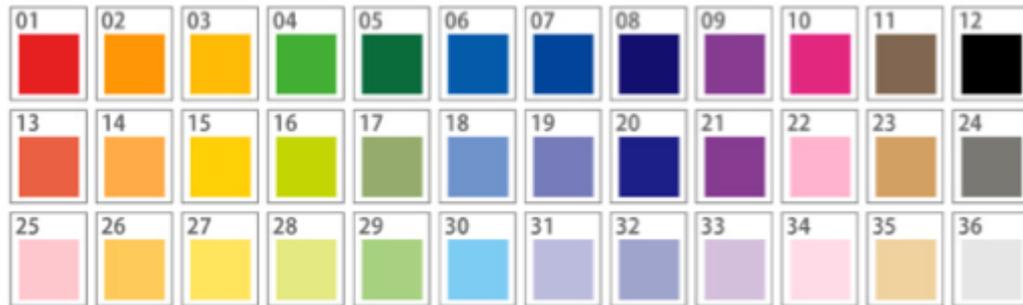


Figure.1 color chart

Surveys were carried out in the Netherlands, Japan, and China. The Netherlands was chosen from the EU because of its history with Japan. It was diplomatically privileged to trade with Japan during the Edo era (1603-1868), called Dejima; thus, it has had a longer relationship with Japan than have other European countries. The Dutch culture, including its knowledge and materials, affected Japan. In addition, the Netherlands, which produced Van Gogh and Vermeer, is a kingdom of design

We then investigated the differences between design tastes in the Netherlands and Japan.

Because balance and harmony are needed, it is not necessarily beneficial to collect the best things. Here, a combination of the optimal elements was extracted from a rough set theory.

Summary of survey:

The Netherlands

Enforcement period: September 15-28, 2012

Subjects: 77 undergraduate and graduate students from Eindhoven University of Technology

Examination method: Questionnaire

Japan

Enforcement period: October 15–22, 2012

Subject: 125 undergraduate and graduate students in the Kyoto area

Examination method: Questionnaire

China

Unlike the other two cases, investigation was performed through WEB questionnaire.

Enforcement period: January 30, 2013

Examination method: WEB questionnaire ¥conducted by a living questionnaire monitor in Beijing.

The number of respondents: 100 persons in their twenties

Vietnam

Enforcement period: September 9-10, 2013

Subject: 95 undergraduate and graduate students in Ho Chi Minh City

4. RESULTS

The result of the investigation is shown in the graphs.

Color preferences in all of three nations other than China show a clear trend. Dutch participants prefer blue, green and red, While Japanese participants tend to like pink and pale green and blue. However, Chinese participants show a wide variety of preferences. An apparent characteristic among the Chinese is that their preferences vary widely.

Also, trends of specific color preferences within product categories were similar among Japanese ,Vietnam and Dutch participants. Only Chinese participants showed a different trend.

Japanese participants tend to prefer black for product categories, except for refrigerators and stationary. Black is especially preferred as a color for clothing. White is preferred for refrigerators, while no specific color preferences were seen in the stationary category. Specific color preference in clothing shows trends similar to those of fundamental color preference, while in other categories such the correlation between fundamental and specific was not observed, except in the stationary category where such a tendency existed with the color pink.

Among Dutch participants there was a similar trend. They much preferred achromatic colors, such as black for cell phones and clothes and white and gray for computers. Specific color preferences in clothes show trends similar to those of simple color preference.

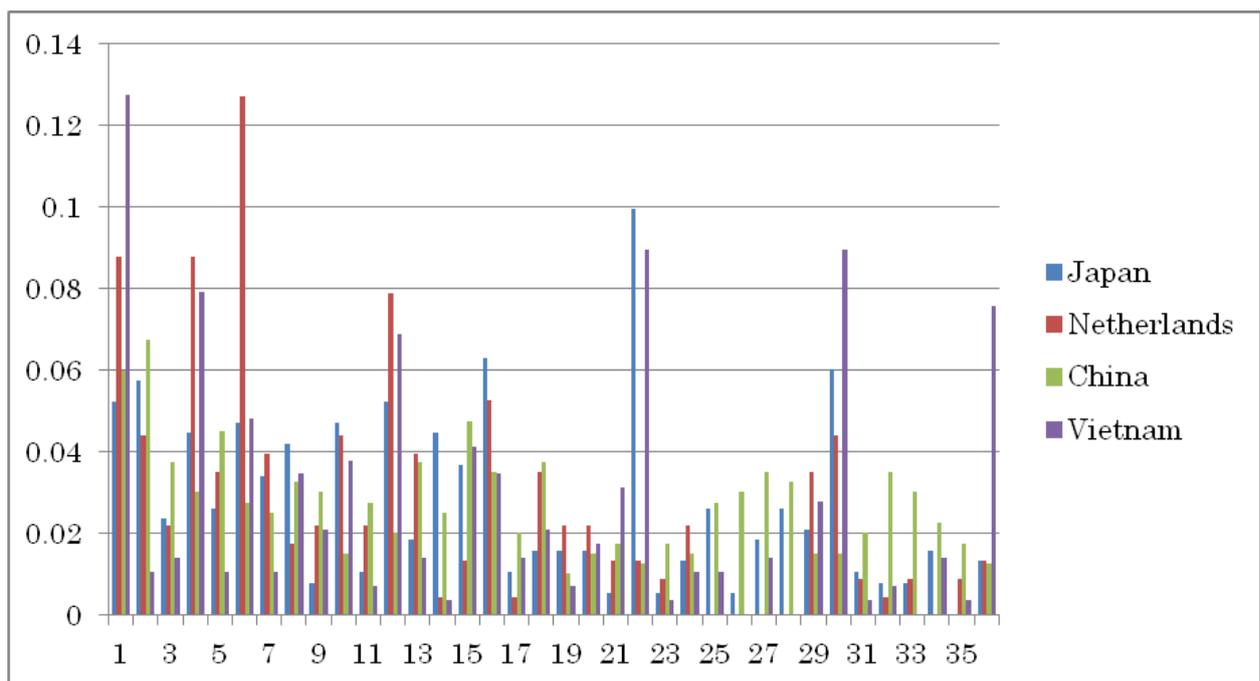


Figure 2 four countries comparison of color preference

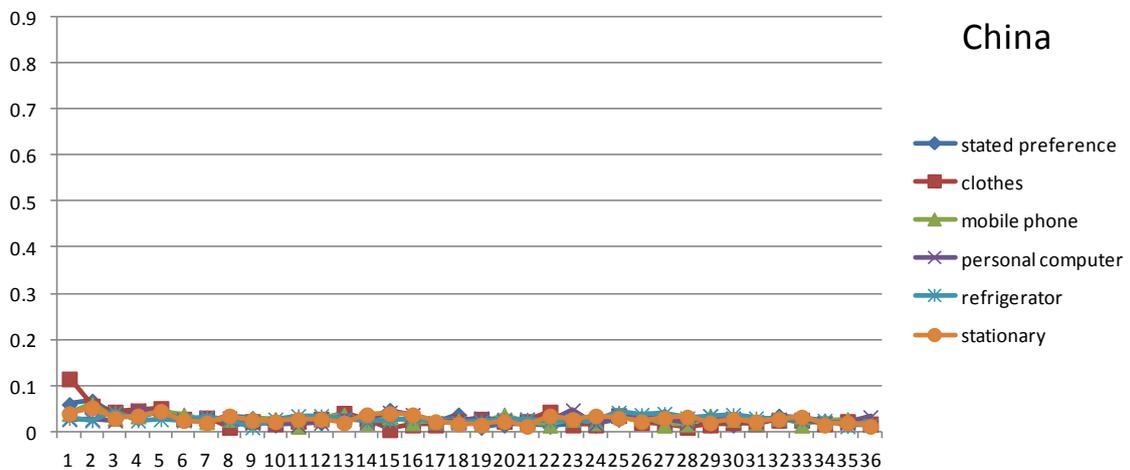
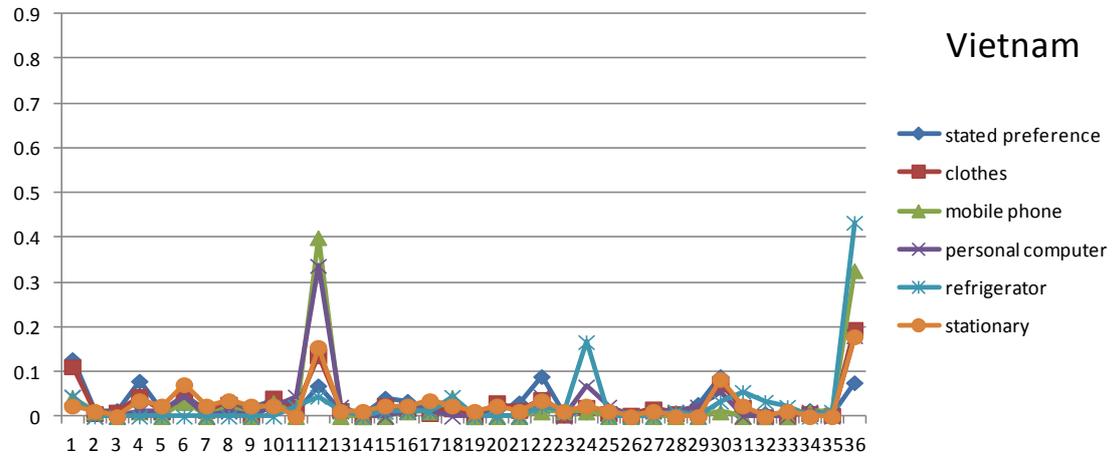
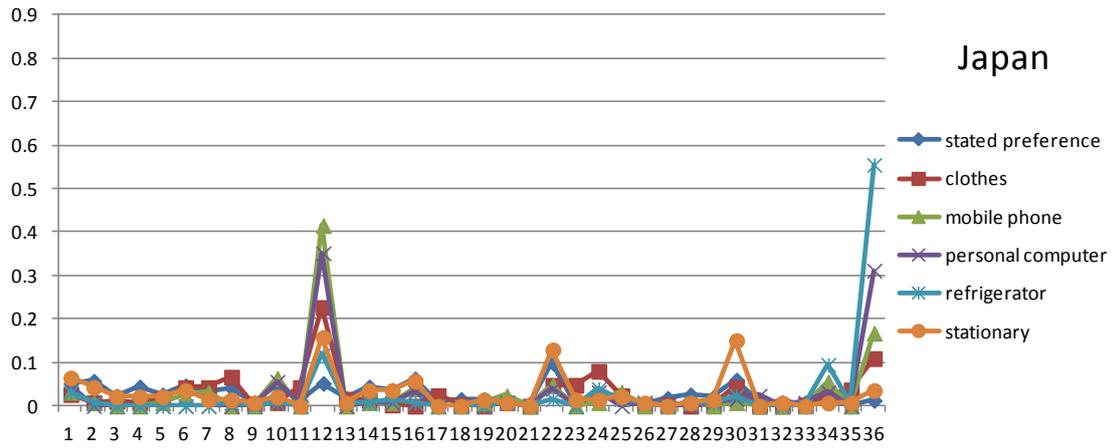
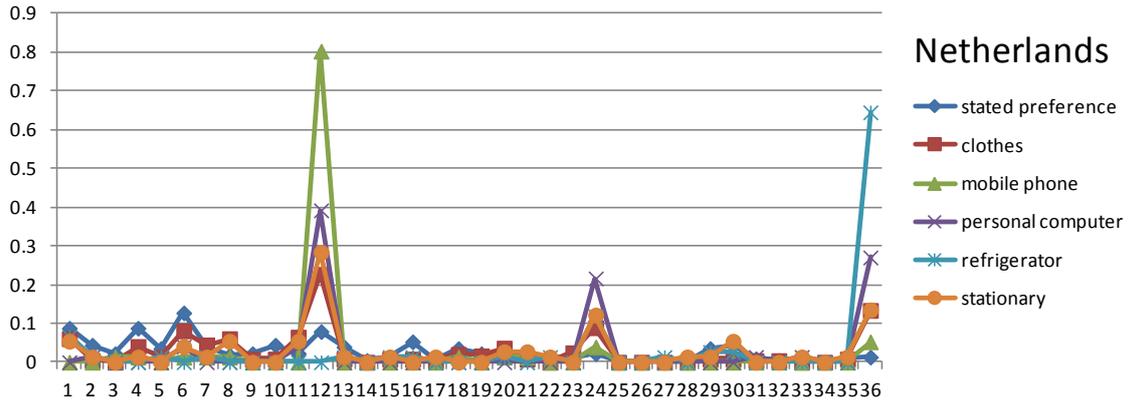


Figure 3 Color preference according to product category

It is difficult to detect trends among Chinese participants, since they show a wide variety in product-specific color preferences as well as simple color preferences. However, they definitely tend to prefer red for clothes and warm colors for all product categories. Simple color preference and category-specific preferences did not show any correlation within this ethnic group, while there is likely some correlation in the stationary category.

5. DISCUSSION

In this study, I investigate the correlation between basic and product-specific color preferences in Japan, China and the Netherlands. It has been assumed that there were different tendencies among countries regarding basic color preferences countries. However, it is also assumed to be difficult to generalize rules of color preference, since previous literatures have demonstrated widely varied results. Therefore, here I focus on the correlation between basic and product category-specific color preferences. The data demonstrated very interesting trends. Firstly, All of three nations other than China showed similar tendencies, as they much prefer achromatic colors for officially used products such as clothes and cell phones. Color preference within these categories is very different from basic color preferences. Also, achromatic colors are preferred for refrigerators and computers, suggesting a strong correlation between color and product categories. Possible causes for this is that since their creation these commercial products have been associated with achromatic colors and that achromatic colors such as white and black are recognized as cool and/or innocuous colors. However, Chinese participants did not show any product-specific preferences except for red for clothes. This could be caused by the fact that since the Chinese began attaching a high value to design a wide variety of products can be seen in market. Also, cultural background would be reason for Chinese preference for warm colors, such as red.

Basic and product-specific preferences are correlated with mutual in Japan, the Netherlands, and Vietnam., whereas such trends cannot be seen in China.

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