# Color Composition Features of Magazine Advertisements 

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## 1. INTRODUCTION

Advertisements are appealing messages designed by advertisers to persuade consumers into making various purchases. This study analyzes the color composition of commodity colors and background colors used in actual advertisement inserts in currently published magazines. Subsequently the roles that color plays in advertising expression is discussed, especially from the viewpoint of color harmony.

## 2. METHOD

More than 500 advertisement inserts were collected from magazines published in Japan and the U.S.; this included nine fashion magazines, five informational magazines, and three cooking magazines. The advertisement samples were classified according to category type as shown in Table 1.

Three attributes of color (Munsell hue, value and, chroma) were measured using a colorimeter with a focus on

Table 1. The advertisements used in analysis

| Category |  | contents | Japan | U.S. | total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | Cosmetics | Skin care, foundation, lipstick, perfume | 78 | 14 | 92 |
| B | Pharmaceuticals and Bath Products | Medicine or pills, cleansers, medicines for external application, eye lotion, shampoo, bath goods | 62 | 16 | 78 |
| C | Fashion Brands | Fashion wear, sports wear/sports shoes, underwear, shoes, bags | 49 | 26 | 75 |
| D | Accessories | Accessories, wristwatches | 28 | 8 | 36 |
| E | Food | Noodles, pasta, seasoning, candy, desserts, water, alcohol | 63 | 13 | 76 |
| F | Electric Appliances | Cellular phones, computers, cameras, TVs, vacuum cleaners | 34 | 13 | 47 |
| G | Automobiles | Automobiles | 24 | 7 | 31 |
| H | Credit Cards | Credit cards | 6 | 2 | 8 |
| I | Amusement and Entertainment | Travel, books and publications, horse racing | 54 | 2 | 56 |
| J | Livingware and Goods | Kitchen ware/goods, pet goods | 11 | 2 | 13 |
| K | Tobacco | Cigarettes | 7 | 10 | 17 |
| L | Corporate Advertisements |  | 21 | 6 | 27 |
|  |  |  | 437 | 119 | 556 |



Figure1. Samples which are used to analize the color composition
two sections of the advertisements; commodity area and background area. In cases where the commodity or background area consisted of two or more colors, multiple sections were measured (the color of the section the widest area was referred to as Color 1, and the second widest as Color 2, and so on). If a color wasn't uniform over an entire area, for example, in the case of a photo or gradation, two or three points which were determined to represent the area by three measurers were measured.

## 3. RESULTS

## 3-1. ANALYSIS OF INTERRELATIONS AMONG BACKGROUND COLORS

The frequency of occurrence of hue in Background Color 1 compared to Background Color 2 is shown in Table 2. Table 2 indicates that the most frequent pattern is a combination of chromatic color and achromatic color, which accounts for almost $50 \%$ of the whole (163/304). Almost all of the Munsell values for the background achromatic colors were 8.5 or $9.0(201 / 211)$. Thus, this result is interpreted to mean that the most frequent background color combination is white and chromatic colors. Moreover, this tendency becomes even clearer when we take into account that a Munsell value of 9.0 was recorded for the 38 chromatic colors in Background Color 1.

The second most frequent pattern is shown as a line from the upper left to the lower right (surrounded by a broken line) in Table 2, which indicates a similar hue color combination. This pattern accounts for close to one third of the total (87/304). Such kind of pattern is frequently seen in the areas of Cosmetics, Accessories, Food, Electric Appliances and Automobiles when data listed by category type is analyzed.

Finally, we looked at the usage rate difference among hue colors. White is used most frequently, and Y to PB colors are used second most frequently, followed by R to YR colors. P to RP colors are rarely used. In particular, BG to PB hue colors are used frequently for advertisements involving clothes, pharmaceuticals, and amusement/entertainment.

Table 2. Hue analysis of background colors.

|  |  | Background Color 2 (Hue) |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { sub } \\ & \text { total } \end{aligned}$ | blank | total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | R | YR | Y | GY | G | BG | B | PB | P | RP | N |  |  |  |
|  | R | $3!$ | 1 | 2 |  | 1 |  |  |  |  |  | 6 | 13 | 8 | 21 |
|  | YR | 11 |  |  |  |  |  | 2 | 1 |  |  | 5 | 10 | 3 | 13 |
|  | $Y$ |  | $\underline{2}$ | 41 | - | 2 | 4 |  | 1 |  |  | 8 | 22 | 14 | 36 |
|  | GY | 2 | 1 | 1 | 11 |  |  |  | 1 |  |  | 10 | 21 | 15 | 36 |
|  | G | 1 | 1 |  | 5 |  | - | 2 | 1 | 1 |  | 11 | 32 | 19 | 51 |
|  | BG |  | 2 | 1 | 1 | 41 | 5 | 7 | 3 | 1 | 1 | 13 | 38 | 22 | 60 |
|  | B |  |  | 3 | 1 |  |  | 10 |  |  |  | 7 | 29 | 19 | 48 |
|  | PB | 1 |  | 2 |  | 3 | 51 | 7 | 91 | 2 |  | 20 | 49 | 17 | 66 |
|  | P |  |  |  |  |  |  |  |  | 1 | - 1 |  | 2 | 2 | 4 |
|  | RP |  |  | 1 | 1 |  |  | 1 |  |  | - 21 | 1 | 6 | 1 | 7 |
|  | N | 4 | 5 | 10 | 5 | 6 | 10 | 15 | 15 |  | 4 | 8 | 82 | 129 | 211 |
|  | blank |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 3 |
|  | tal | 12 | 12 | 25 | 16 | 24 | 34 | 44 | 34 | 6 | 8 | 89 | 304 | 252 | 556 |

## 3-2. ANALYSIS OF INTERRELATIONS AMONG BACKGROUND COLORS AND COMMODITY COLORS

Table 3 shows the frequency of occurrence of hue in Commodity Color 1 compared to Commodity Background Color 1. Commodity background color, e.g. the color next to the commodity photo, is often similar to Background Color 1, but is not necessarily always the same.

The number of the commodity color in each hue doesn't show much difference, except for P and RP colors where it is less, and achromatic color (white) where it is larger than the others. Meanwhile, commodity background color differs according to usage. White represents a third of the total (169/464), and BG to PB colors account for another third (146/464).

However, no interrelation was found among commodity color and commodity background color. The line from the upper left to the lower right is not clear in Table 3, and there are one or more samples in almost all of the cells from R to PB .

Although commodity color deviation is observed when the data of each commodity category type is analyzed (for example, white is frequently used as a commodity background color for Cosmetics, the commodity color used for Pharmaceuticals is typically white, and Fashion Brands use various colors), the interrelation among commodity color and its background color is not clear. The fact that white is often used as a background color for Pharmaceuticals is only one example of a clear relation.

Table 3. Hue analysis of commodity color and background color of it

|  |  | Commodity Background Color 1 (Hue) |  |  |  |  |  |  |  |  |  |  |  | total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | R | YR | Y | GY | G | BG | B | PB | P | RP | N | blant |  |
|  | R | 4 | 2 | 3 | 3 | 1 | 6 | 6 | 6 |  | 1 | 17 |  | 49 |
|  | YR | 1 | 2 | 1 | 3 | 5 | 2 | 1 | 2 |  |  | 14 |  | 31 |
|  | Y | 1 | 4 | 4 | 7 | 2 | 3 | 4 | 5 | 1 |  | 12 |  | 43 |
|  | GY |  | 2 | 4 | 3 | 2 | 3 | 2 |  |  |  | 9 |  | 25 |
|  | G | 3 | 2 | 1 | 2 | 5 | 3 | 1 | 5 |  |  | 10 |  | 32 |
|  | BG |  | 1 | 9 |  | 4 | 11 | 2 | 3 |  |  | 14 |  | 44 |
|  | B | 2 | 2 | 2 |  | 2 | 4 | 5 | 8 |  |  | 20 | 1 | 46 |
|  | PB | 1 | 2 | 2 | 4 | 1 | 2 | 6 | 6 | 2 |  | 18 |  | 44 |
|  | P |  |  |  |  | 1 | 1 |  | 1 |  |  | 1 |  | 4 |
|  | RP |  | 1 | 2 | 1 | 2 |  | 1 | 1 | 2 | 2 | 4 |  | 16 |
|  | N | 2 | 8 | 5 | 9 | 9 | 19 | 13 | 14 | 1 | 1 | 49 | 1 | 131 |
|  | blank |  |  |  |  |  |  |  |  |  |  | 1 | 90 | 91 |
| total |  | 14 | 26 | 33 | 32 | 34 | 54 | 41 | 51 | 6 | 4 | 169 | 92 | 556 |

## 4. DISCUSSION

Rating experiments of various color-simulated scenes such as streetscapes, interiors and table coordination which the author and colleagues have conducted before show a prevailing similarity, especially in terms of the hue-related similarities regarding color harmony. In the analysis described above, such kind of color composition was observed for similar hue background colors. However, this varies widely for commodity color and background color matching, not only for the described hue analysis but also for analysis of value and chroma which was not mentioned.

Analysis of value and chroma reveals that there are no samples where the R to GY commodity background
colors have a value less than five when the commodity color has a chroma of more than seven.
When the value of commodity color is higher than seven and the chroma is less than four, there are few samples where the chroma of commodity background color is less than four and the value is between three to six .

Considering these results and the fact that white and bluish colors are used frequently, background color is determined to clearly attract attention and to create a strong impression, and color matching among commodity and background colors should not be important for advertisers and designers.

## 5. CONCLUSION

1. The most frequently used background color is white, which is the base color used in magazines.
2. The combination of white and chromatic colors is the most frequent pattern of background color matching.
3. Chromatic color combination, the second most frequent pattern, shows many cases where similar hue colors are used. Such kind of pattern is frequent in the areas of Cosmetics, Accessories, Food, Electric Appliances and Automobiles.
4. There is a small interrelation among commodity color and background color.

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## REFERENCES

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