# The Effect of tone on tone coloration of shirts and neckties on the perception of Harmony

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## 1. Introduction

The aim of the coloration is to increase the entire effect of design by harmonizing with several different colors on purpose. Therefore, the coloration has an intention to get beautiful effects by strengthening or weakening the comparison relation of three attributes of color – hue, value and chroma. By harmonizing the hue, value, and chroma skillfully, you are able to get a number of coloration changes as well as it helps increase the effect of coloration significantly.

Given that male suit colors are limited to some extent by dark colors such as black and grey, coordination with both shirts and neckties has become an important clue for males to express their own character in suits. In addition, since many males take off their jakets inside building in spring or summer, the match of shirts and neckties become crucial in forming male's image. For example, when you coordinate shirts with neckties, harmony of tones and colors is very important because the difference of designs is not that big. Thus, you might try various changes of the coloration of shirts and neckties: coloration of two colors. Although the previous study showed how the color effect of males' clothes and neckties, and its' harmonization with patterns influence male image, it has not been found that the image effects coming from several tone coordinations are matched by necktie and shirt colors.

Therefore, this study is going to examine how this matching tone influences on evaluating the degree of harmony as several tone on tone coloration which fix the colors same and changes the value of color are given to peple.

# II. Research Methods

This experiment design was 4×4×4×2 factorial designs: colors(red, blue, purple, and green), tones of shirts(vivid, light, dull, and dark), tones of neckties(vivid, light, dull and dark) and perceiver's gender(a male and a female).

The experimental materials developed for this study were a set of stimuli matched by shirts and neckties and response scales to evaluation the coloration harmony. The stimuli were 64 upper body photographs which were color out put by CAD system(4D-box

program). The colors used in the stimuli were red, blue, purple and green, and we made shirts and neckties' colors same. Then after controling the colors to become vivid, light, dull and dark respectively, we harmonized those tones with shirts and neckties differently. In order to evaluate harmony of two color coloration, we used bi-polar adjectives "harmonious – disharmonious" and "matching – mismatching", presenting seven-point semantic differential response scales. The Cronbach's  $\alpha$ -reliability coefficient was 0.8929

The subjects of this research were 192 male and 192 female college students in Jinju and Kyungnam province. The total 64 stimulus consisted of 6 experiment combinations, and we included four stimuli among each experiment combination. The number of subjects per each experiment combination was arranged by the design between subjects grouping with twelve people per each experiment combination.

The data was analyzed by using SPSS program. Analysis methods were four-way ANOVA.

#### III. Result and Discussion

When it comes to the coloration of male clothes' shirts and neckties, after shirts matches neckties with the same colors, such as red, blue, purple and green, chroma should be fixed and we changed only value. And then, we obtained the clue that influences on harmony perception in terms of 64 tone on tone coloration of shirts and neckties. The results are as follows.

The main effect of the factor analysis result showed that colors, shirts' and neckties' tones were significant except for gender. According to the result of MCA, the match of red and blue was more harmonious than the match of purple and green in shirts' tones, and the match among light, dull and dark was harmonious except for vivid. In addition, we found that the match of dull and dark tones was harmonious in neckties' tones, and Women tend to report higher harmony than men do.

It was reported that when vivid tones of shirts with a wide size was negative regardless of colors, while light, dull and dark tones were negative only in green in the interaction effect between colors and the tones of shirts which influenced on harmony.

When the tones of neckties were vivid and light, it was negative regardless of colors and light, while dull and dark tones were negative only in purple and green in the interaction effect between colors and neckties tones.

It was also found that when the tones of shirts were vivid, all neckties were negative, and when the shirts' tones were light, the match of dull, dark, and vivid tones were positive. And also when shirts in dull were harmonious with neckties in dark and light, shirts in dark were harmonious with neckties in dull and light. When the tones of shirts were vivid, it was negative to both gender, and when shirts' tones were dull, we got the different result; that was, males were positive to it, females were negative, on the other hand.

## **V.** References

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