Influence of Clothing Color Value on Trust Perception

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Abstract—**Clothing is an effective way to show personal image, different colors of clothing can make people have different impression. In order to explore the influence of clothing color value on the perception of trust, this study selected 10 color hues and 3-level value of the same style of professional clothing as stimulus pictures for behavioral experiments. The results show that the clothing color value has a significant impact on the clothing trust perception evaluation. The clothing with low value has higher trust score than those with medium value and high value, and the clothing with medium value has higher trust score than those with high value; color hue has no significant effect on trust perception evaluation.**

Keywords—Clothing; value; trust; perception

Ⅰ．INTRODUCTION

Clothing can convey the extensive and complex information of the wearer, which plays an important role in the formation of interpersonal impression. In interpersonal communication, people tend to evaluate the characteristics of others according to their dress. Even if they don't meet or talk with the dresser, the observer can form a more accurate impression (Olivola et al, 2010; Albright et al, 1988). Johnson et al. investigated how respondents used clothing to form their first impression through open interviews. They found that clothing type, shoes, color and fit of clothing are the basis for observers to judge (Johnson et al, 2002). Clothing not only conveys the ability information of the wearer, such as social ability, cognitive ability and imagination (Damhorst, 1990), but also conveys the personality quality of the wearer. People who wear conservative and casual style are considered to have more self-control, understanding and reliability, while those who wear bold style clothes are considered to be more attractive and individual, while those who wear gorgeous clothes convey social uneasiness and dependence on others (Paek, 1986).

Trust is the degree to which an individual believes in others (McAllister,1995). Trust plays an important role in interpersonal relationships, and its level often leads to social acceptance or exclusion (Jia et al,2019).Judging whether a person is trustworthy can be done in a few seconds, and the judgment result is consistent with the judgment result without any time pressure (Todorov et al,2009). It is found that a good trust relationship between teachers and students is helpful to improve students' academic performance and mental health(Han,2020); Trust in leaders can improve employees' job performance and significantly reduce their turnover intention(Davis et al,2000).In interpersonal interaction, an individual's appearance will have a great influence on his trust. Studies have shown that men with beards are considered more trustworthy than men without beards(Bakmazian,2014;Guido et al, 2011).Job seekers with glasses are considered to be more trustworthy than job seekers without glasses(Der et al,2015). People's facial features also have a certain impact on trust perception. When the observed person is more similar to his own face, the trust will be higher (Debruine, 2002), Men with wider faces are more likely to be trusted by others (Stirrat et al, 2010).

In the professional environment, individual clothes also have a significant impact on impression (Warhurst et al, 2009; Forsythe et al, 1990; Bowman et al, 1992). Haynes's (Haynes, 2012) research found that the trust in female lawyers will be enhanced by traditional professional clothes, while too casual or too trendy clothes will reduce the trust in them. Trust in women in the professional field may be weakened by "huge" high heels (Haynes, 2012) or inappropriate jewelry (Kelan, 2013). Peluchette et al. (Peluchette et al, 2007) think that clothing preference and wearing style have significant influence on self-perception such as work efficiency, trust, creativity and friendliness. Karl et al. (Karl et al, 2013) found that respondents feel more trustworthy and creative when they wear business casual clothes. When wearing proper clothes to complete the tasks described in the advertisement, the spokesperson is more trustworthy, thus improving the purchase willingness of the recommended products (Gwendolyn et al, 1991).

As an important factor of clothing perception, color can unconsciously influence people's emotions and behaviors, and has a much greater influence than style and modeling (Liu, 2004). Clothing color plays an important role in the formation of impression. Maier et al.' s research found that compared with green, the wearer wearing red T-shirt is considered not smart enough, and this effect is the strongest in the process of job hunting; The study also found that job seekers with red ties are considered to have lower income and leadership potential than those with blue ties (Maier et al,2013). Roberts et al.(Roberts et al,2010), through the research and analysis of six colors of clothing, show that clothing color has a significant impact on perceived behavior . In the study of the

influence of clothing color on other people's evaluation, it is found that the evaluators tend to make the evaluation of less activity, tension and emaciation of the wearer for the clothing with cool color, while the clothing with warm color is the opposite(Xu,2010). Compared with low chroma clothing, high chroma clothing increases people's perception of externality and openness (Pazda et al, 2019).

A large number of studies have shown that among the hue, value and chroma factors of color composition, value plays an important role and is the main factor affecting human emotion in many dimensions (Xin et al, 2004), Jiang 's (Jiang, 2011) research and analysis of three kinds of clothing with 9-level value shows that the value of clothing color has a significant impact on people's emotions. After analyzing the color design elements of sportswear, Iwase asserts that value is the key factor affecting the color design of sportswear (Iwase et al, 2010). Although there have been many previous studies on clothing color and impression and clothing and trust, the influence of clothing color on trust perception has not been fully studied. Previous studies have also shown that trust plays an important role in professional situations. Therefore, this paper takes a professional women's clothing as the research object, and explores the influence mechanism of clothing color brightness on trust perception evaluation in a limited time by changing the color phase and brightness of clothing.

II. EXPERIMENT

A. Participants

32 students from Soochow University (age between 22-26, including 16 males and 16 females). The subjects were all right-handed, with no color blindness, weak color, normal vision or rectified vision, and volunteered to participate in the experiment.

B. Stimulus materials

In In this experiment, the same clothes with different colors were used as stimulating materials. In order to eliminate the influence of hue and saturation change in the process of color value processing, ten hues are selected from the Munsell color card, namely five basic colors red (R), yellow (Y), green (G), blue (B) and purple (P) and five intermediate colors orange (YR), yellow-green (GY), blue-green (BG) and blue-purple. Choose three levels 4, 6 and 8 for value and one level 4 for chroma, with 30 colors in total, as shown in Table 1. Then, put the selected color into the same business suit, as shown in Figure1. The background is white, and the picture size is 500 pixels×667 pixels. All the pictures are processed by Photoshop CS6, with a total of 30 stimulating pictures.

Tab.1 Selected clothing colors

| Hue | Low Value | | Medium Value | | High Value | |
	Code	Sample	Code	Sample	Code	Sample
5R	5R 4/4		5R 6/4		5R 8/4	
5YR	5YR 4/4		5YR 6/4		5YR 8/4	
5Y	5Y 4/4		5Y 6/4		5Y 8/4	
5GY	5GY 4/4		5GY 6/4		5GY 8/4	
5G	5G 4/4		5G 6/4		5G 8/4	
5BG	5BG 4/4		5BG 6/4		5BG 8/4	
5B	5B 4/4		5B 6/4		5B 8/4	
5PB	5PB 4/4		5PB 6/4		5PB 8/4	
5P	5P 4/4		5P 6/4		5P 8/4	
5RP	5RP 4/4		5RP 6/4		5RP 8/4	

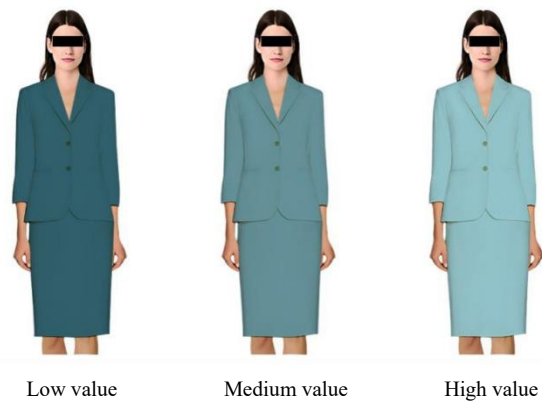Low value   Medium value   High value

Fig.1 Sample of clothing color

C. Experimental equipment

A computer with E-Prime2.0 software was used in the experiment, and the experimental program was designed in E-studio and then run in E-Run.

D. Experimental procedure

Before the experiment, the subjects were asked to sit in a chair about 60cm away from the center of the monitor and read the instructions. At the beginning of the experiment, the "+" gaze point was presented for 100ms to remind the subjects to

start the experiment. After 400ms of gray screen, the stimulus pictures were randomly presented at the center of the computer screen for 600ms, and the subjects were required to score each picture by pressing the button. Grades range from 1 to 5 ("1" means great distrust, "2" means distrust, "3" means average, "4" means trust, and "5" means great trust). At random intervals of 500-700ms after the reaction then proceed to the next trial. After the experiment, the E-Prime program will automatically record the tester's evaluation data.

III. RESULTS AND ANALYSIS

As shown in Figure 2, it is found that with the increase of clothing color value, the trust perception score becomes lower by analyzing the evaluation mean of trust perception under the conditions of low value, medium value and high value.

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That is to say, the lower the color value, the higher the trust perception scores. Repeated measurement variance analysis shows that the main effect of color lightness is significant (F=6.767, p=0.006), which indicates that clothing color value

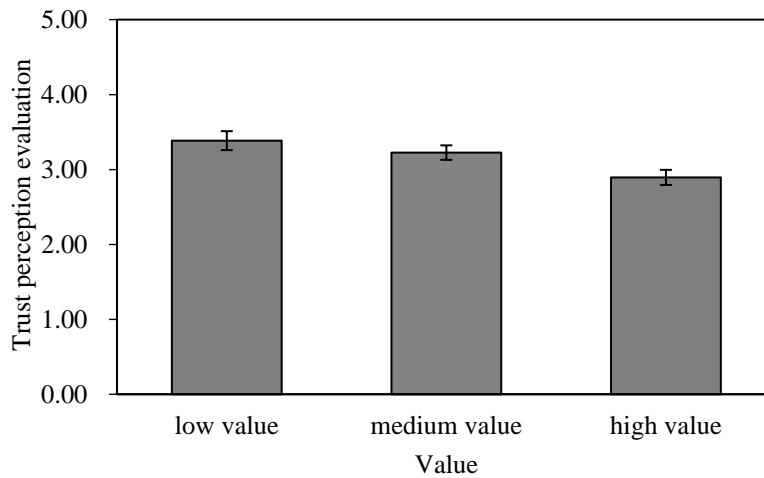has an extremely important influence on the evaluation of trust perception.

Fig.2 Evaluation of trust perception with different value

Tab.2 Variance analysis table of trust perception evaluation

Source	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared
Hue	16.593	5.225	3.175	2.054	0.071	0.062
Value	40.090	1.453	27.599	6.767	0.006**	0.179
Hue×Value	7.723	9.405	0.821	0.635	0.774	0.020

Note: ** indicates a significant correlation at the 0.01 level.

T tests are carried out on trust perception evaluation under three value conditions. The results are shown in Table 3. When low value and medium value are compared, there is no significant difference in trust perception evaluation. However, there are significant differences in the evaluation of trust perception when comparing low value with high value and middle value with high value.

Tab.3 T test of trust perception evaluation with different value

Comparison of Low and Medium Value		Comparison of Low and High Value		Comparison of Medium and High Value	
t	p	t	p	t	p
1.431	0.162	2.839	0.008**	2.875	0.007**

Note: ** indicates a significant correlation at the 0.01 level.

It can be seen from Figure 3 that there are differences in trust perception scores under different hue conditions. The trust perception score of the subjects is the lowest when the hue is 5G, and the highest when the hue is 5PB. Obviously, compared with wearing green (3.000±0.113), those wearing blue (3.250±0.119) or blue-purple (3.438±0.096) clothes are evaluated as more trustworthy people, as shown in Table 3. However, the main effect of hue is not significant (F=2.054, P=0.071), and the interactive effect between hue and value is not significant (F=0.635, p=0.774), as shown in Table 2.
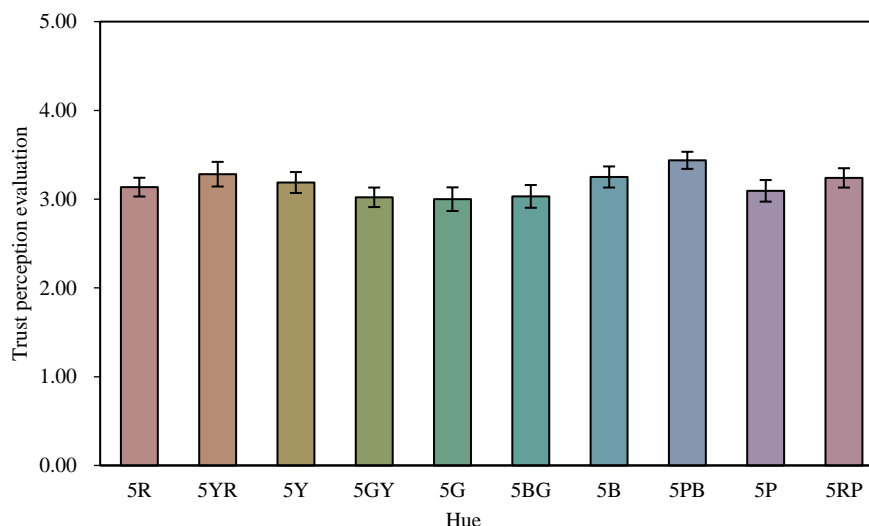
Fig.3 Evaluation of trust perception with different hue

As shown in Table 4, by analyzing the average evaluation scores of trust perception of different clothing colors, it is found that the average evaluation scores of trust perception of clothing with low value and medium value are the same except at 5BG, and the trust perception scores of clothing with low value are always higher than those with medium value and high cleverness in other hues.

Tab.4 Variance analysis of the influence of color relative trust perception evaluation

Hue	Value（Mean±Standard Error）			ANOVA	
	Low value	Medium value	High value	F	p
5R	3.375±0.200	3.125±0.178	2.906±0.158	1.710	0.186
5YR	3.438± 0.162	3.313±0.203	3.094±0.164	0.964	0.385
5Y	3.344± 0.232	3.219±0.154	3.000±0.162	0.877	0.419
5GY	3.156± 0.175	3.094±0.170	2.813±0.165	1.163	0.317
5G	3.344± 0.199	3.156±0.180	2.500±0.206	5.150	0.008**
5BG	3.188± 0.208	3.188±0.158	2.719±0.192	2.091	0.129
5B	3.469± 0.190	3.406±0.161	2.875±0.200	3.131	0.048*
5PB	3.813± 0.171	3.375±0.200	3.125±0.194	3.404	0.037*
5P	3.375± 0.184	3.125±0.194	2.781±0.166	2.686	0.073
5RP	3.344± 0.172	3.250±0.142	3.125±0.172	0.455	0.636

Note: **indicates significant correlation at 0.01 level; *indicates significant correlation at 0.05level.

IV. CONCLUSION

The purpose of this study is to investigate whether the change of clothing color will affect the wearer's trust perception evaluation. By scoring professional women's dresses of the same style with different hues and value, it is proved that people can make trust evaluation according to women's clothing colors. The results show that the clothing value has a significant impact on the trust perception evaluation of the wearer, and the trust evaluation of wearing low value clothing is higher than that of wearing high value clothing. Under different hues, there are also differences in trust evaluation. Those who wear blue and purple clothes get higher trust evaluation, while those who wear green clothes get the lowest trust evaluation.

It is reasonable to draw such a conclusion. The reason why low-value clothing can get higher trust evaluation is related to the emotional factors it expresses. Value mainly describes the relationship between light and shade of color, and is used to distinguish the visual attributes that color gives people. Clothing with different value will make people have different associations, while clothing with low value will make people feel calm (Chen, 2018). Secondly, darker colors will project a more masculine and powerful impression (Jackson, 1983). Therefore, for the subjects, clothing with low value is more influential than clothing with high value (Osgood, 1957), so there will be a higher trust evaluation at low value. In addition, color has a certain moderating effect

on trust perception evaluation. Because the subjects have different preferences for different colors of clothing (Dong, 1993).Therefore, hue has certain influence in the evaluation of trust perception. However, under the same hue, the trust perception score of low value clothing is obviously higher than that of medium value and high value clothing.

In this study, only one style of women's professional wear was chosen, and the difference in hue and value was obvious. In the future research, we can add the variable of chroma, select more hues, select more grades in the changes of chroma and value, and increase the types of women's clothing styles to obtain more complete experimental data. In addition, this study only discusses the evaluation in the dimension of trust, and in future studies, we can evaluate the change of clothing color in multiple dimensions.

The results of this study have certain practical significance. In the highly competitive workplace, clothing has been widely concerned by people. Dressers can make a good impression with the help of external images such as clothing. Exploring the dress impression of workers in the workplace can provide objective and feasible dress guidance for job seekers and incumbents, and provide a certain reference for the development of targeted products and services in the clothing industry.

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