

# *The Skin Tone Bias that Exists in China and the Role that Physical Appearance Plays*

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**Abstract:** For cultural and historical reasons, skin tone bias has been an important factor in the construction of modern society. Nonetheless, the Chinese skin tone bias, as opposed to the traditional Western perception, has different roots and expressions. The appearance also needs to be taken into account. This research conducted a series of experiments and reviewed much of the relevant literature to explore the role of appearance as a factor in skin tone bias. The results show that appearance does have some influence on skin tone bias and reveal some specific perceptions of skin tone among Chinese people. These results will be discussed using theoretical tools.

**Keywords:** colorism, skin tone bias, Chinese, Asia, comparative research.

## 1. Introduction

Over the centuries, with modernization and globalization in full swing, skin color has gradually become part of the constructs of modern society. Today, most people know skin tone bias mainly from the colonial history of the Western world, the history of race, and the existence of racial problems in society [1]. People of color are often treated unfairly due to implicit bias [2], and inequality in the distribution of resources is reflected in a range of areas such as employment, education, and housing [1]. According to Hunter's argument, outside of racial identity, skin color itself begins to be directly related to social hierarchy and the distribution of resources, which is colorism [1].

Compared to the attention given to the issue of skin tone bias in the Western world, there is a relative lack of research on this issue in Asia. The phenomenon of skin tone bias is also prevalent in Asia, especially in East Asia [3], but is more complex and has more ambiguous origins than in the Western world [3, 4]. Xie and Zhang's study suggests that the phenomenon of colorism in Asia has been influenced to some extent by Western colonialism; while skin tone bias in East Asia, especially in China, is also highly correlated with class and aesthetics [3]. According to Lu et al., the experimenters found that the Chinese participants showed an aesthetic preference for lighter skin tones, which is also of interest [5]. In summary, this paper will focus on skin tone bias in China and the role that appearance plays.

## 2. Literature Review

In reality, people often subconsciously associate some unfavorable stereotypes with some groups, which is the result of implicit bias. According to Greenwald and Krieger, “the science of implicit cognition suggests that actors do not always have conscious, intentional control over the processes of social perception, impression formation, and judgment that motivate their act [2].” Skin tone bias applies to this underlying logic as well. Skin color is often subconsciously associated with a number of socially constructed factors, “Skin-color hierarchies reflect deeply held cultural beliefs about civility, modernity, sophistication, backwardness, beauty, and virtue [4].” As a result, people's implicit bias towards skin color actually affects the judgment and evaluation of another individual to a great extent. The impact of implicit bias is enormous, but when it is consciously examined, often the hierarchy of bias is mitigated.

Implicit bias is usually socially and culturally constructed and shaped by some Hegemony [2]. Generally speaking, skin tone bias is more often used in Western contexts. The preference for lighter skin tones can be traced back to colonial history, white supremacy and racism [4]. During the development of European colonialism, skin color became more associated with social status, work, education, and class mobility. Lighter skin tones could be treated more favorably [1]. The racial history of the West has associated skin color with these social concepts and other inequalities and stereotypes. According to the research from Hunter, the prejudice of racial skin color consequently gave rise to colorism, the aesthetic esteem for lighter skin tones [1]. “Most of the empirical research on skin color concerns the United States, where the idea of colorism has developed as a concept separate from racism.[4]”. Skin color became a separate ranking criterion for classifying resources. At the same time, bias is constantly reinforced by social structures. Through globalization, transnational media conglomerates export Western cultural products and hegemony, allowing this colorism to have an impact on societies outside the West as well [1].

However, some findings in recent years have shown that the skin tone bias in Asia, especially in East Asia, clearly has some differences from the West. In research from Dixon and Telles, the root causes of color discrimination were found to be different across the globe [4]. The phenomenon of skin tone bias exists in Asia, based on colonial history, or traditional culture, “East and Southeast Asia show a stronger preference for lighter skin tones.[5]” Nevertheless, colorism was already manifested in East Asian cultures before the contact with the West, mainly related to class and aesthetic culture. “Persons in low-status occupations labored in the sun, whereas high status persons tended to work indoors. Moreover, for women in particular, lightness has been associated not just with the leisure class, but also with femininity, beauty, and purity in India, China, Indonesia, and Japan [4].” This suggests that, although western colonialism has shaped colorism in Southeast and South Asia to some extent [1], but it is difficult to explain the origins of colorism in East Asia [5].

In some studies, it can be found that in East Asia, especially in China, skin color seems to be more correlated with physical appearance. There is a Chinese proverb, “one white covers three uglies”. “In classic Chinese poems, the skin of beautiful women was often described as being like ‘snow’, ‘ice’, or ‘jade’ to convey the quality of translucency, delicacy, smoothness, and fairness.[6]” In traditional East Asian culture, skin colorism is most intuitively reflected in the fact that it is often part of the judgment of a person's physical attractiveness. According to Lu et al., experimenters found that attractiveness was highly correlated with the brightness of skin color when Chinese observers rated appearance [5]. Therefore, the skin tone bias in China today cannot be interpreted solely in terms of Western-dominated colorism but requires attention to the influence of physical appearance.

### 3. Method

#### 3.1. Participants

The experiment was conducted with a number of online questionnaires, and the participants were young Chinese women randomly selected on social media. Forty participants ( $N = 40$ ), all young adult females aged 18-35 years old, were recruited for the experiment. Twenty of the participants ( $N1 = 20$ ), were in the first set of experiments; the other 20 participants ( $N2 = 20$ ), were in the second set of experiments ( $N2 = 20$  were further divided into 5 groups, G1-G5, each with 4 participants). Since these participants come from different regions and cultures in China, in order to ensure the reliability of the data, both experiments will start with a large-scale social media questionnaire, and then 20 of them will be randomly selected as participants for data analysis. Participants from the first experiment will be identified and excluded from the second experiment.

#### 3.2. Materials

The main material for this research was 25 photographs. Figure 1 shows five original photographs, composited by computer software. The 25 photographs used in experiment were edited from these 5 original photographs (female faces, synthesized from real face pictures with computer technology, numbered F1-F5, as shown in Figure 1), and each photograph was color-treated by computer software to 5 skin tones ( $S1 = \textit{very light}$ ,  $S2 = \textit{light}$ ,  $S3 = \textit{medium}$ ,  $S4 = \textit{dark}$ ,  $S5 = \textit{very dark}$ ). The processing of the image is limited to the shade of the skin tone and does not change the features and looks of the people in the photo. Since Asian skin tones are usually not too different, the shades of skin tones are kept within the range of normal Asian skin tones where the difference can be felt by the naked eye.



Figure 1: 5 original photographs, synthesized from real face pictures with computer technology, numbered F1-F5.

Two sets of experiments will be performed using different sets of images. In the first set of experiments, five original photographs with unedited skin tones (i.e., the same skin tone) will be used. In the second group of experiments, the toned photos were arranged and combined into five Appearance-Skin tone Groups (ASG1: A1-S1, A2-S2, A3-S3, A4-S4, A5-S5; ASG2: A1-S2, A2-S3, A3-S4, A4-S5, A5-S1; The next grouping also follows this pattern). Ultimately, each ASG is guaranteed to have 5 different faces and skin tones at the same time and not duplicate each other. This allows different appearance and skin tone to have the same chance of being displayed while combining with the same probability, allowing for better testing of their respective impact on the final result.

### 3.3. Procedure

The experimental procedure was divided into two parts, the first set of experiments (Experiment 1, E1) and the second set of experiments (Experiment 2, E2). The experiments are performed in sequential order, and Experiment 1 is the pre-experiment of Experiment 2. Both experiments will be posted on social media in the form of a questionnaire to attract participants to fill out. Those who participate in the questionnaire will have the opportunity to receive some rewards.

In Experiment 1, participants are given a questionnaire on social media. In this questionnaire, five photos (F1-F5) are presented to the participants in sequence. Each photo appears in front of the participant's eyes for 10 seconds, and a scoring bar (on a scale from 0-5) appears at the bottom of the photo, and each participant is required to assess and score the appearance of the faces in the photo within 10 seconds. The purpose of the time limit was to allow participants to make judgments based on their subconscious first impressions. To ensure that skin color did not influence the results of E1, each photo shown here had the same skin tone. After Experiment 1, the scores of 20 participants (N1=20) were randomly selected to ensure the accuracy of the results. The 20 scores obtained for each of the 5 faces were summed to calculate their respective total scores and ranked according to the total score from highest to lowest (A1-A5). The main purpose of Experiment 1 was to determine the attractiveness of each of the five photographs.

In Experiment 2, participants (N2 = 20) were given a questionnaire. Those who had participated in E1 were excluded due to the fact that, when they saw faces they had seen before showing different skin tones, they might realize that this was an experiment about skin tones, thus affecting the results of the experiment. Each photo was presented to the participants for 25 seconds, and participants were asked to evaluate each photo within a time limit on five items (in order: friendliness, intelligence, reliability, economic status, and guessing a personal trait; the first four items were scored on a scale of 1-5 and the last one was not limited). As mentioned above, the short time limit allowed participants to subconsciously give a more realistic evaluation. The final results of the evaluation were summarized and analyzed according to "Appearance" and "Skin tone".

## 4. Result

The following is an analysis based on the results of the experiment. In analyzing the data, the skin tones were divided into 5 groups ( $SG1 = \textit{very light}$ ,  $SG2 = \textit{light}$ ,  $SG3 = \textit{medium}$ ,  $SG4 = \textit{dark}$ ,  $SG5 = \textit{very dark}$ ). Next, the five levels of appearance were divided into 2 groups, A1-A3 for Appearance Group1 ( $AG1 = \textit{Better physical appearance}$ ), and A4-A5 for Appearance Group2 ( $AG2 = \textit{Ordinary physical appearance}$ ). Combining 5 levels of skin tone with 2 levels of facial appearance results in 10 unique combinations of skin tone and facial appearance. By experimenting, it's can be ensure that each combination had access to the same amount of data.

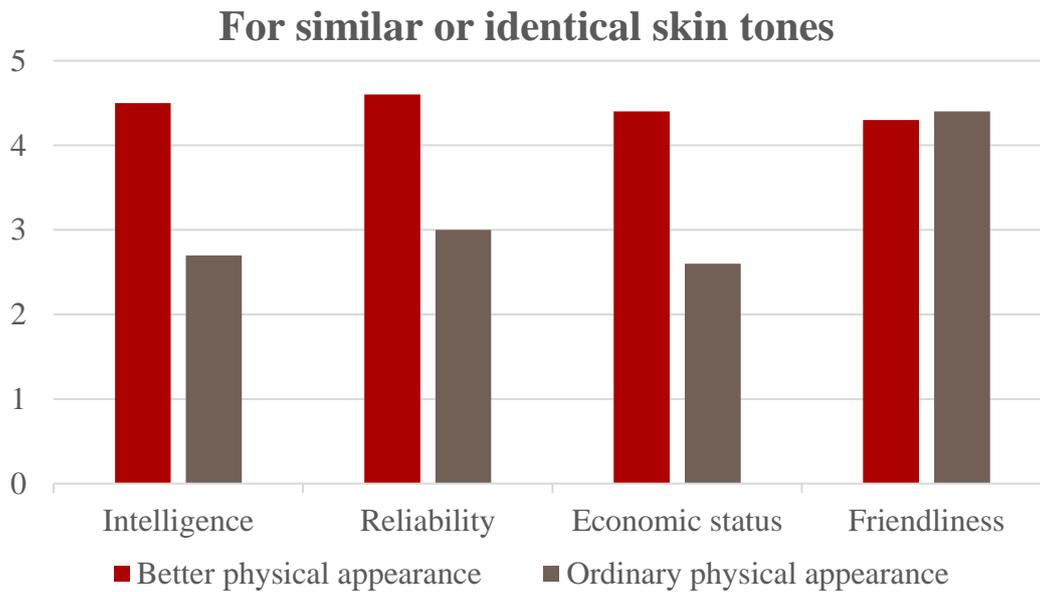


Figure 2: Experimental results with physical appearance as a variable.

In the first set of analysis as shown in Figure 2, we took 2 groups of appearance . (AG1, AG2) with the same skin color for comparison. The visual chart shows their average scores in the first four quantitative assessments (intelligence, reliability, economic status, friendliness). Using the data, it's can be observed that AG1 (Better physical appearance) received fairly high scores in all four assessments, with almost no significant differences between the mean scores of each item (all around 4.5); AG2, on the other hand, received lower scores in the first three items (intelligence, reliability, economic Status), and only the fourth item (friendliness) received a higher score, even surpassing AG1.

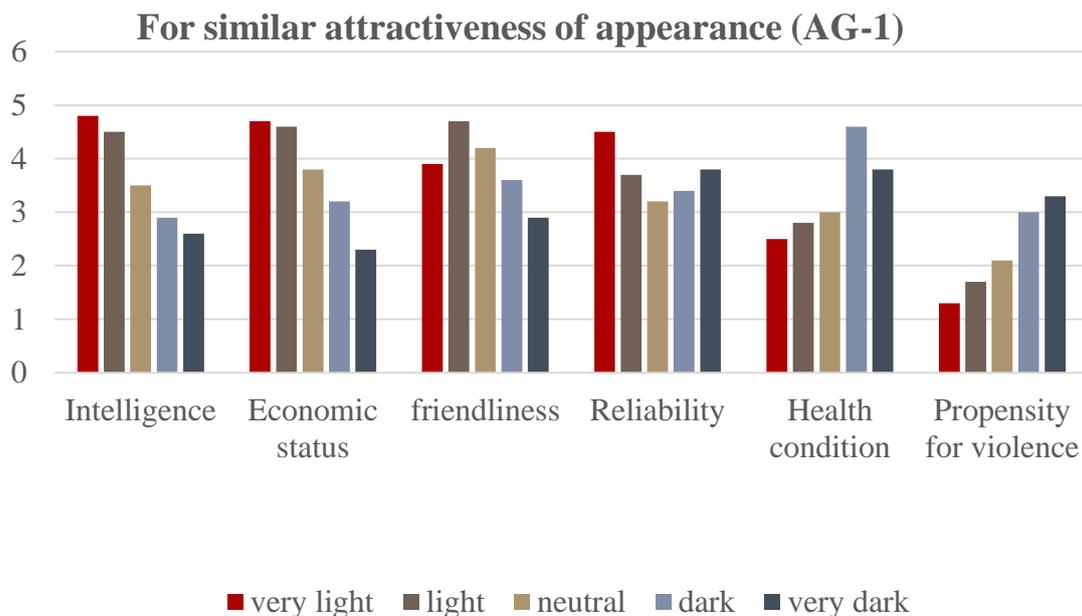


Figure 3: Experimental results with skin tones as a variable, More attractive appearance group (AG 1).

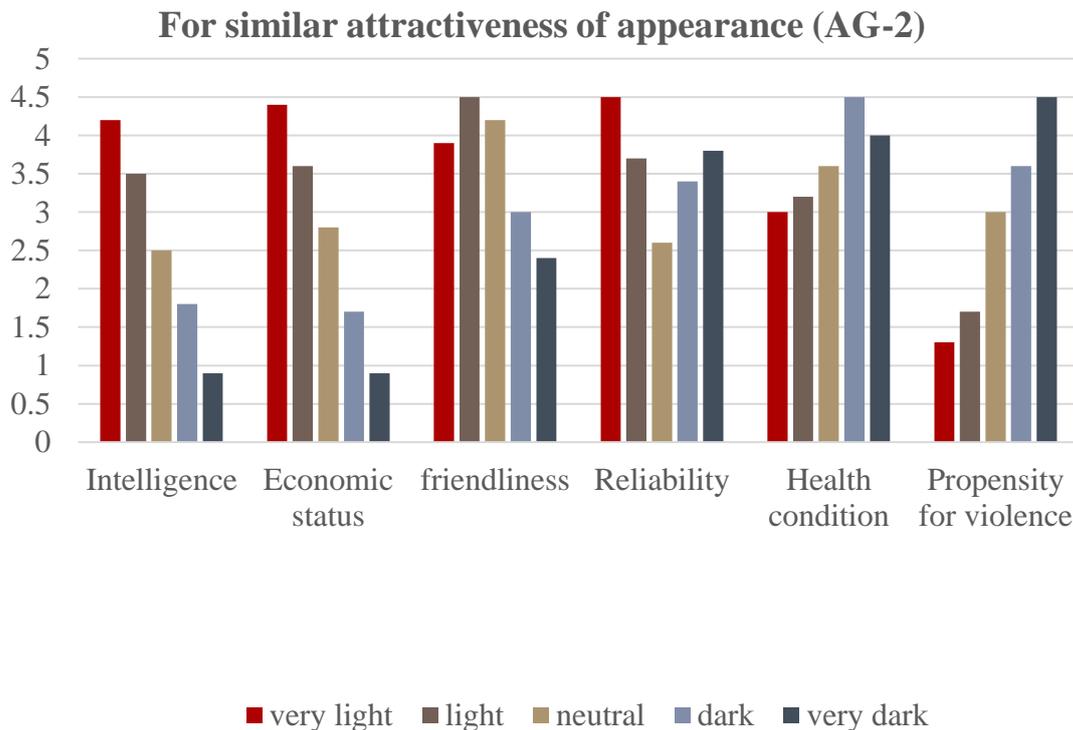


Figure 4: Experimental results with skin tones as a variable, less attractive appearance group (AG 2).

In the second set of analyses as shown in Figure 3 and Figure 4, five groups of skin color of the same appearance (SG1-SG5) were used as independent variables. The data show the different ratings obtained for different skin tones of the same appearance, including four quantitative ratings (intelligence, reliability, economic status, friendliness), and the two most frequently mentioned personal traits (health condition, propensity for violence). What can be observed is that in both intelligence and economic status data, the participants showed almost identical ratings, with scores decreasing progressively as the skin tone became darker. And in the reliability item, both the lighter skin tone and the darker skin tone received good scores, without too strong a contrast. In the two most mentioned personal traits, health condition data did not differ much due to changes in skin tone, although darker skin tones received higher scores; the data on propensity for violence showed more significant differences, with participants generally believing that the darker the skin color, the stronger the tendency to commit violence.

In the variation of these data (see Figure 3 and Figure 4), a characteristic was also found: for the more attractive appearance (AG1), the fluctuation of each data with the change of skin tone is smaller. In addition, AG1 generally received higher scores than AG2 for both intelligence and economic status data, while propensity for violence was lower compared to AG2.

## 5. Discussion

Through the analysis of the data and a series of comparisons based on skin tone and appearance respectively, this study explores the impact of each of these two in the assessment, thus enabling a clearer and unique perception of the skin tone bias in China. According to this study, the attractiveness of appearance does have an effect on skin tone bias for Chinese people, but the effect is limited and does not eliminate skin tone bias. In addition, the Chinese have many characteristics in their assessment of skin tone and appearance, which is what needs to be discussed in this section.

The more attractive appearance somewhat reduced skin tone bias, which may be the result of several factors. First, it may be because the beauty of facial appearance influenced the participants' judgment of an individual. As van Leeuwen and Neil Macrae emphasize in their article, people have always associated beauty with positive perceptions, "Put simply, that which is beautiful is also seemingly healthy, wealthy, and wise" [7]. It is a subconscious judgment based on implicit stereotypes and can have a fairly high impact [7]. Another reason may be rooted in the traditional Chinese culture. According to Xie and Zhang, in the traditional Chinese narrative, skin color is often one of the criteria for judging female appearance [6]. This may mean that in the Chinese context, appearance influences the assessment of a person more than skin color, and skin color is only one of the influencing factors rather than a separate criterion for judging.

In addition, the most significant differences in the ratings of the photographs were found in intelligence and economic status, which is in line with the previous expectations. Prior to contact with the West, skin color differences in East Asia were largely dependent on sun exposure and status, "Persons in low-status occupations labored in the sun, whereas high-status persons tended to work indoors.[4]" Thus, Chinese skin tone bias has a strong classist overtone, which explains why ratings of intelligence and economic status show relatively large differences with skin tone. Intelligence often reflects a person's IQ, or level of education, while economic status reflects an individual's occupation, wealth and class. Good educational resources and more comfortable indoor work (or even no need to work at all) are more readily available to those with higher social status; those with lower status have less access to education and mostly work outdoors in manual labor. This combination of social constructs and skin color creates an implicit bias that influences Chinese participants' judgments about other individuals in society, particularly in terms of intelligence and economic status [2].

Regarding the data on health condition, although there are no very significant differences, it is still certain that people with darker skin tone are generally considered to be healthier. One reason that could explain this result is that people with darker skin tone appear to do more outdoor activities (or physical work) than people with lighter skin tone, so their bodies get more exercise and sun exposure, making them more fit and healthy.

Contrary to what I expected from the RELIABILITY data, both lighter skin tones and darker skin tones were considered more reliable. The stereotype of the association between skin color and class may also explain this phenomenon. Because people tend to associate higher social status and more decent jobs when they see lighter skin tones, they will have more trust in these people. On the other hand, although people with darker skin tones are often perceived as having lower social status, they are generally engaged in manual labor, and are therefore associated with qualities such as "patience," "hard work," and "simplicity" that are related to reliability.

Also, the indicator Propensity for violence is worth exploring. Participants apparently had an implicit bias that people with deeper skin tone were more inclined to use violence. Because people generally believe that darker skin tones represent lower class people, they carry some stereotypes about these people. Some of the crime myth in the United States has led people to believe that violent crime and street crime spawned by the poverty and backwardness of the lower classes are a source of social instability [8]. More importantly, crime myth has associated blacks and their skin color itself with violent crime. African Americans are almost always portrayed as criminals by the mass media, thus illustrating the "black devil" stereotype [9]. Along with mass media and globalization, these hegemony have also influenced Chinese people's perceptions of skin color. Although these stereotypes are not true, they do not prevent people from unconsciously associating dark skin color with violence.

## 6. Conclusion

### 6.1. Conclusion

This study has its valuable contribution and a certain degree of creativity given the growing and sound needs of Chinese society and the enormous impact of skin tone bias on society. The purpose of this study is to move away from the traditional Western narrative and perspective of skin tone bias, to more comprehensively assess the different ways in which skin tone bias is manifested in China, and to dialectically explore the root causes and influencing factors behind it. This study provides evidence for some Chinese forms of skin tone bias and fills in the gaps from a particular perspective by referring to some of the literature related to skin tone bias and appearance as research tools and supplements.

### 6.2. Limitations and Future Research

There are still several limitations of this study. First, due to the need to control for variables, the participants in the experiment were only female. The difference in gender may or may not lead to a very large bias in the results of the experiment. Second, fewer participant data were included in this study, which may lead to less generalized, reliable and credible results of the experiment. Different participants may lead to different experimental results. In future studies, more effective experimental models should be identified to accommodate more complex data, and the scale of the study should be expanded so as to improve the credibility of the results.

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