

## The Effect of Skin-Tone and Racism on Perceptions of Attractiveness

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*Caucasian college student participants (N=70) viewed and rated the attractiveness of facial photographs of male and female Caucasians and African-Americans with lightened, darkened, or original skin-tone. Participants also completed a measure of racism. Although African-American models with lightened skin-tone and Caucasian models with darkened skin-tone were predicted to be rated the most attractive, results revealed the manipulated skin-tone of the photographs did not significantly alter their attractiveness ratings. As predicted, the Caucasian models overall were rated as significantly more attractive than the African-American models and a significant negative relationship was found between racism scores and attractiveness ratings of the African-American photographs. Implications for skin-tone discrimination are discussed.*

Physical appearance plays an important role in determining how interpersonal attributions are constructed and how individuals are evaluated. Even though laws exist in the United States to maintain equal treatment of all individuals, people are still prone to judging others simply based on external characteristics. Individuals of other races are judged because of the color of their skin, and as time goes on, more and more research is being conducted to understand the relationships between race and perceptions of that race (Keith & Herring, 1991; Bruce, Beard, Tedford, Harman, & Tedford 1997; Ashikari, 2005; Gullickson, 2005). Particularly, it is useful to study how the visual characteristics, such as skin-tone, influence person perceptions. The current research was designed to investigate the influence of skin-tone on person perceptions of attractiveness in Caucasians and African-Americans.

Several research studies (Ashikari, 2005; Gullickson, 2005; Keith & Herring, 1991; Levin & Banaji, 2006; Lerner & Buehrig, 1975) maintain that the pigment of an individual's skin-tone aid in determining attitudes and behaviors expressed toward that individual. For example, Keith and Herring (1991) used data from the National Survey of Black Americans

to investigate the effects of skin-tone on educational attainment, occupation, and income. According to the findings, African-Americans with lighter pigmented skin-tones lead a more privileged life than those African-Americans with darker pigmented skin-tones. These findings were consistent with the research of Frazier (1957), who suggested African-Americans with darker pigmented skin-tones are disadvantaged due to persisting discrimination. In fact, African-Americans actually show a bias for lighter skin-tone over darker-skin tone when judging other African-Americans (Bond & Cash, 1992; Porter, 1991). However, African-Americans are more accepting of other races than Caucasians overall (Bruce, Beard, Tedford, Harman, & Tedford 1997).

Research findings concerning preferences for skin-tone in Caucasians are mixed. Fink, Grammer, and Thornhill (2001) found that darker skin-tone levels were preferred to lighter skin-tone levels in

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Caucasians' facial appearance. However, Zebrowitz (1997) suggests that lighter skin-tone is found to be most attractive in women, which demonstrates a relationship between gender and skin-tone level and how these variables may affect attractiveness perceptions. In time periods past, Caucasians that had lighter skin-tone levels were considered more attractive and had fewer diseases, such as melanoma, associated with being in the sun (Shoveller, Lovato, Young, & Moffat, 2003). Having a darker skin-tone level, or many skin defects, could indicate that an individual had to spend most of their time doing manual labor outdoors, which means they were not a member of royalty or high society (Shoveller, Lovato, Young, & Moffat, 2003). Times have changed and there is currently a preference for tan skin-tones in Caucasians (Shoveller, Lovato, Young, & Moffat, 2003).

Based on these previous research studies, the current study predicted an interaction between the variables of model race and skin-tone on attractiveness ratings. Specifically, African-American models with a lightened skin-tone and Caucasian models with a darkened skin-tone were predicted to be rated most attractive. Unfortunately, a race bias still exists in our society, so it was also hypothesized that Caucasian participants would rate African-American photographs as less attractive than Caucasian photographs overall. Also, participants' level of racism was expected to negatively correlate with their African-American photograph attractiveness ratings.

## Method

### Participants

Seventy four undergraduate students (66.2% women) from a small, liberal arts college volunteered for participation in the study in exchange for partial fulfillment of Introductory Psychology course requirements. Participant mean age was 21.97 years ( $SD=4.79$ ) and participants were predominately Caucasian (94.6%). No African-Americans completed the study, and only one Asian, one Hispanic, and two participants selecting "other" participated.

### Materials and Procedure

The photographs used in the experiment included one Caucasian male, one Caucasian female, one African-American male, and one African-American female chosen from Getty Images ([www.gettyimages.com](http://www.gettyimages.com)), a free photo website. The four models were approximately college age (18-22 years old). These images were converted from color to grey-scale. Only the skin of each photograph was selected for change so that the clothes, hair, and eyes did not change. Using a color balance tool included in the software

program Abode Photo Shop 7.0, the intensity of light was increased by an increment of 50 per pixel to lighten skin of the photographs and the intensity of light was decreased by an increment of 50 per pixel to darken the skin of the photographs.

Participants were asked demographic questions regarding their age, sex, and race in order to describe the sample of participants. For each of the photographs presented, participants were asked to respond to the question asking "This person is attractive" to be rated on a Likert scale on a 5-point Likert scale (strongly agree to strongly disagree) next to each photograph.

Participants were also asked to complete McConahay's (1986) Old-Fashioned and Modern Racism Scale. These measures are commonly used in prejudice research with documented reliability and validity (McConahay, 1986). This scale consisted of 14 statements including "Black people are generally not as smart as whites" and "Blacks should not push themselves where they are not wanted". Similar to the attraction statements, these statements were also rated on a 5-point Likert scale. The old-fashioned racism scale tapped the dimension of overt racism, whereas the modern racism scale measured the more subtle form of racism.

### Procedure

Each session took approximately 30 minutes to complete. Participants were randomly assigned into one of three skin tone conditions: lightened, original, or darkened. All four pictures (An African-American male, an African-American female, a Caucasian male, and a Caucasian female) were presented in each condition. Participants in each condition also received a packet including the demographic questions, the pictures and attractiveness statements, and the racism measurement scales.

There was a "rigid instruction sheet" between the pictures and attractiveness statements and the racism measurement scales asking participants to stop and wait for further instruction. Participants were told that the next section was to be used for a different study and was not related to their facial photograph ratings. This was necessary because if the participants discovered the true nature of the experiment at the time of completing the racism measurement scale, they could have returned to their attractiveness ratings to change their answers to reflect a less racist attitude. Placing the rigid instruction sheet between the two sections allowed for easy observation of this action and allowed for the opportunity to eliminate faulty data. After completion of the experiment, participants were debriefed and thanked for their participation.

## Results

Since only four of the participants were non-Caucasian, participant race could not be analyzed and these four responses were removed from the data set. A 3 (skin-tone: light, original, and dark) x 4 (model: Caucasian male, Caucasian female, African-American male, and African-American female) mixed factors ANOVA was conducted to determine if there was a statistically significant difference in attractiveness ratings. There was a significant main effect for the within factor of model,  $F(3, 66)=9.05$ ,  $p<.001$ ,  $\eta^2=.12$ , no main effect for the between factor of skin-tone,  $F(2, 67)=1.08$ ,  $p=ns$ , and a significant interaction effect,  $F(6, 66)=3.05$ ,  $p<.01$ ,  $\eta^2=.08$  (see Figure).

Individual *t*-test comparisons revealed that the lightened and darkened versions of the Caucasian female models ( $M_s=4.0$  and  $4.21$ ,  $SD_s=.63$  and  $.66$ , respectively), the Caucasian male models ( $M_s=3.35$  and  $3.63$ ,  $SD_s=.98$  and  $.97$ , respectively), the African-American female models ( $M_s=3.50$  and  $3.46$ ,  $SD_s=.91$  and  $.98$ , respectively), and the African-American male models ( $M_s=2.92$  and  $3.38$ ,  $SD_s=.98$  and  $.92$ , respectively) were not statistically different, all  $p_s>.10$ . However, the Caucasian models were rated as significantly more attractive than the African-American models overall,  $t(69)=4.64$ ,  $p<.001$ ,  $d=1.12$ , ( $M_s=3.78$  and  $3.37$ ,  $SD_s=.59$  and  $.78$ , respectively).

Old-fashioned and modern racism scores were calculated and correlated with attractiveness ratings. African-American model attractiveness ratings overall were negatively correlated with old-fashioned racism scores ( $r(68)=-.39$ ,  $p=.001$ ) as well as modern racism

scores ( $r(68)=-.30$ ,  $p=.01$ ), indicating that lower racism scores were associated with higher attractiveness scores for the African-American models.

## Discussion

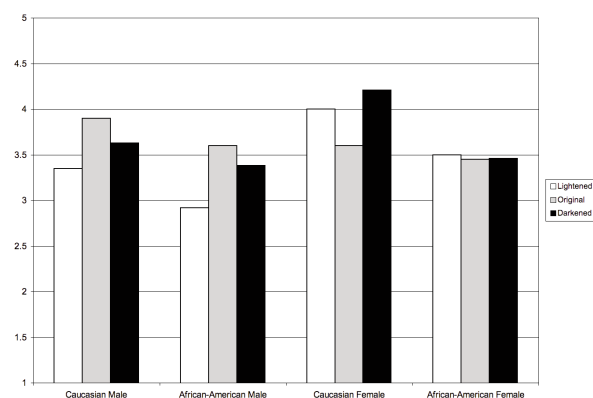
Support for the hypotheses presented in the current study was mixed. The prediction that Caucasian models overall would be rated as significantly more attractive than the African-American models and the prediction of significant negative correlations between racism scores and attractiveness ratings of the African-American photographs was found. A same-race attractiveness bias still exists and Caucasian college students who are more prejudice are less likely to rate African-Americans as attractive. However, we did not find support for the prediction that African-American models with a lightened skin-tone and Caucasian models with a darkened skin-tone would be rated most attractive. However, when just looking at the pattern of the means, the African-American female with lightened skin-tone and the Caucasian female with darkened-skin tone were rated most attractive. Perhaps skin-tone differences are especially relevant when judging female attractiveness (Hill, 2002; Thompson & Keith, 2001). In addition, the various levels of skin-tone used may have appeared unnatural to the participants affecting their attractiveness toward certain photographs. We wanted the levels of skin-tone to be noticeably different but if smaller increments were used the pictures may seem more natural and attractive to participants.

Another possible explanation for findings is the topic of averageness. In previous studies on facial averageness (Jones, Little, Feinberg, Penton-Voak, Tiddeman, & Perrett, 2004; Valentine, Darling, & Donnelly, 2004) the symmetry and averageness of an individual's face result in that face being considered more attractive than other, non-symmetrical faces. It is possible that this concept of averageness translates across different aspects of the human body and is not restricted to facial appearance. Perhaps this concept of averageness is also applicable to skin-tone in that people may be most attracted to average levels of everything on another person. This could explain our lack of significant skin-tone differences. In fact, the original skin-tone of the male models was rated as more attractive than the lightened or darkened versions.

Another topic of study that contributes to an understanding of visual perceptions and their affect on peoples' opinions of one another is the topic of averageness. In these studies on facial averageness, (Jones, Little, Feinberg, Penton-Voak, Tiddeman, & Perrett, 2004; Valentine, Darling, & Donnelly, 2004) the symmetry and averageness of an individual's face

**FIGURE 1**

**Mean Model Attractiveness Ratings by Skin-Tone and Model Type. Attractiveness ratings were made using a 5-point Likert scale where larger values indicate greater agreement that the individual was attractive.**



result in that face being considered more attractive than other, non-symmetrical faces. It is possible that this concept of averageness translates across different aspects of the human body and is not restricted to facial appearance. Perhaps this concept of averageness is also applicable to skin-tone in that people may be most attracted to average levels of everything on another person.

There are several aspects of this study that can be replicated and expanded in future investigations. The current sample was not diverse. As previously stated, there were no African-American participants in the study, so we were unable to examine how African-Americans viewed different skin-tones and whether their racial attitudes were related to attractiveness ratings. Future studies may also consider skin-tone variations in other races, such as Hispanics or Asians. It may also be beneficial to examine a similar relationship between attractiveness ratings, skin-tone levels, and prejudice levels when using facial composites and color pictures instead of individual pictures and grey-scale pictures. Facial composites would provide the pictures with a base of attractiveness which would further implicate that any change in attractiveness rating must be due to skin-tone since, based on previous research, pictures of facial composites are often considered extremely attractive (Langlois & Roggman, 1990). It may also be advantageous to conduct this study using color pictures, or with live models, since these stimuli are more realistic.

The purpose of this research was to better understand the relationship between peoples' perceptions of others and how they are affected by their perceptions. This experiment lays the groundwork for further experimentation methods that lead to an enhanced understanding of the relationship between personal perception and personal judgment of attractiveness. It also serves as a stepping stone to understanding prejudice. In order to fix a problem the source of that problem must be identified. Sadly, it is evident that discrimination is still prevalent in today's society. People constantly judge each other in their first impressions of one another whether that judg-

ment is based on gender, race, skin-tone level, or other visual factors. Once an initial judgment is made people blur the line between stereotypes and individual characteristics. Once prejudice is better understood, in terms of why it happens, what happens, when it happens, and how it happens, then it will become easier to stop peoples' personal prejudices.

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