

THE EFFECT OF SKIN TONE ON PERCEPTIONS OF COMPETENCE AND WARMTH  
AMONG AFRICAN-AMERICANS

by

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A thesis presented to the faculty of Towson University in partial fulfillment of the requirements  
for the degree MASTER OF ARTS

Department of Psychology

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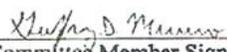
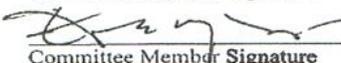
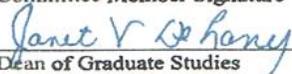
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**THESIS APPROVAL PAGE**

This is to certify that the thesis prepared by Lelise Aklilu entitled The Effect of Skin Tone on Perceptions of Competence and Warmth among African-Americans has been approved by the thesis committee as satisfactorily completing the thesis requirements for the degree Master of Arts.

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## **Abstract**

The Effect of Skin Tone on Perceptions of Competence and Warmth among African-Americans

Lelise Aklilu

Several studies have outlined the impact of skin tone bias on the Black community in America. The purpose of the current study was to examine the effect of skin tone bias through the lens of the stereotype content model (SCM), which states that stereotypes have competence and warmth dimensions. According to the SCM, a target can be rated high on one dimension and low on the other, but never high on both dimensions. Sixty-two Black students from Towson University completed surveys rating various light- and dark-skinned male and female targets on their competence and their warmth. It was found that dark-skinned targets were perceived as being warmer and more competent than light-skinned targets. The results indicated that the stereotype content model may not apply to the study of skin tone bias. Future studies should pursue other methods of studying perceptions of competence and warmth among Black Americans.

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### **Literature Review**

In spite of the great measures taken towards equality, skin tone still plays a major role in determining African-Americans' place in today's society. This skin tone bias emerged during slavery when slaves with lighter complexion, usually a product of a sexual union between a slave and the owner, received preferential treatment relative to the dark-skinned slaves (Keith & Herring, 1991). This meant that the fair-skinned blacks were assigned tasks such as serving the slave-owners personally, while the dark-skinned blacks were assigned the heavy field tasks. Skin tone bias is also referred to as colorism, an intraracial discrimination based on skin color, and, to this day, continues to shape the life experiences of Black people (Thompson & Keith, 2001). Wilder (2010) further argues that colorism is the internalized bias and favor for light-skin and European features that has stratified the African American society for many generations and continues to exist.

Many studies have shown that skin tone affects how positively or negatively Black people are perceived; that is, light-skinned Black people are perceived more positively than dark-skinned Black people (Hagiwara, Kashy, & Cesario, 2012; Hill, 2002; Maddox & Gray, 2002). Light-skinned African-American women have been found to experience more advantages than their darker skinned counterparts when it comes to educational attainment, level of personal income, and even marrying higher-status men (Hunter, 2002). Harrison and Thomas (2009) found that light-skinned applicants received higher ratings when it came to hiring for jobs. Their findings indicated that even when darker-skinned applicants had higher education, more work experience, and an overall better resume, they were rated the same as a lighter-skinned counterpart with less education, less work experience, and overall lower qualifications. This skin tone bias has led to the desire to be light-skinned, resulting in skin bleaching, the use of home-

made products, cosmetic creams, and dermatological creams to reduce one's skin melanin; skin bleaching is now a global phenomenon, but is especially popular in Jamaica (Charles, 2011).

Thus, it is important to understand the processes of skin tone bias. The following paper reviews the effect of skin tone bias based on gender, socioeconomic status, and the language used to describe the stereotypes associated with skin tone; also, the stereotype content model and its two dimensions of competence and warmth, along with how these can contribute to the investigation of skin tone bias, will be detailed.

### **Skin Tone Bias**

Keith and Herring (1991) conducted a study investigating skin tone and its relationship with the socioeconomic stratification within the Black community. Using data from National Survey of Black Americans (NSBA), 2,107 respondents were interviewed by professionally trained Black people. Education, occupation, personal income, and family income were the four stratification measures. The interviewers rated the participants' skin tone as (1) *very dark brown*, (2) *dark brown*, (3) *medium brown*, (4) *light brown*, and (5) *very light brown*. The study found a relationship between skin tone and educational attainment, such that the lighter skinned Blacks achieved higher education levels. Data showed that very dark Blacks attained 10.3 years of education while very light Blacks attained 12.2 years of education. Occupational distribution also differed significantly according to skin tone, with darker skinned Blacks more often being employed as laborers and operatives, whereas lighter skinned Blacks were more often being employed as professional and technical workers. In terms of family income, the lighter skinned Blacks were found to have 50% greater family income than the darker participants. Personal income showed greater disparity, with lighter skinned Blacks receiving 65% higher income than

their darker counterparts. These results show that skin tone bias has consequences in the real, applied world, affecting people's lives in very personal ways.

Thompson and Keith (2001) studied the effects of skin tone on the self-concept. Using data from the NSBA, face-to-face interviews were carried out, providing a sample of 2,107 respondents for this study. Skin tone, the independent variable in this study, was determined by the interviewers, who rated the participants from very dark brown to very light brown. The participants' sociodemographic variables (age, marital status, and area of residence), socioeconomic status (education, employment, and income), and body image (attractiveness, weight, and disabled health status) were also taken into account. The dependent variables were self-esteem and self-efficacy. Self-efficacy included participants' feelings of control, confidence, and agency in their lives. A regression analysis of self-efficacy on measures of skin tone, sociodemographic, socioeconomic, and body image variables was carried out. The findings indicated a positive relationship between skin tone and self-efficacy for both men and women, meaning that light-skinned respondents scored higher on self-efficacy. "Among men, each incremental change in skin color from dark to light is associated with a .33 increment in self-efficacy; for women, changes in skin color are associated with a .18 increment in self-efficacy" (Thompson & Keith, 2001, p. 344). Even after all the sociodemographic, socioeconomic, and body image variables were controlled for, skin tone significantly predicted men's self-efficacy. However, once the variables were controlled for the women, the effect of skin tone on their self-efficacy was significantly reduced, suggesting that this effect was mostly indirect for the women.

Thompson and Keith (2001) carried out a similar regression analysis for the self-esteem measure. In this case, it was found that skin-tone significantly predicted self-esteem for women, but not men. The effect for women remained even after the control variables were included in the

model. It was found that a change in skin color from dark to light was associated with a .28 increase in self-esteem for the women. Another interesting finding in this study was the relationship between skin tone, personal income, and self-esteem for women. Women with low incomes had significantly higher self-esteem if they were light-skinned; however, if they had high income, there was no effect of skin tone on their self-esteem. The same pattern emerged for women judged as unattractive; that is, women who were deemed unattractive had significantly higher self-esteem if they were light-skinned. For the men, the interaction of skin tone and weight predicted their self-esteem. Underweight men felt lower self-esteem as their skin tone became lighter, whereas overweight men experienced higher self-esteem as their skin tone lightened. This study was instrumental in showing how skin tone affects men and women differently in terms of self-efficacy and self-esteem.

Hill (2002) utilized the data from the NSBA to further study the effects of skin tone on perception of attractiveness. Hill (2002) actually studied the interviewers' perception of the respondents, rather than follow the same method as the studies discussed above. An exclusively Black team of 239 interviewers (56 men and 183 women) were sent out to conduct the interviews and at the end, the interviewers had to complete a questionnaire rating the respondents on their temperament, social skills, and personal appearance, including attractiveness and skin tone. The independent variables were gender and skin tone. There was a significant gender-by-skin-color interaction and main effect for skin color but no main effect for gender for ratings of attractiveness. These results showed that the relationship between skin tone and physical attractiveness for male targets was much weaker than that for female targets. The gender X skin tone interaction also supported the hypothesis that light-skin was seen as a prominent feminine characteristic, meaning skin tone is an important characteristic that is considered when rating

Black women's attractiveness. Hill (2002) also found that the perceiver's gender did not have a significant effect on one's color bias; that is, these physical attractiveness judgments were balanced between the male and female respondents.

Thus, skin tone bias is an influential aspect of Black people's daily lives. To show how salient skin tone bias is within the African-American community, Wilder (2010) examined the words used to identify, describe, and distinguish the different skin tones among African-Americans. The participants were 58 females between the ages of 18 and 25, divided into nine focus groups. The respondents were asked to free-list and discuss the various names associated with the different skin tones, as well as to discuss the stereotypes linked with each name and skin tone category. The findings were that there were 40 words that are commonly used today to distinguish between light, medium, and dark skin tones. For example, light skin tone can be described as bright, yellow, redbone, mixed, house nigga, browning, light bright, pretty skin; medium skin can be described as brown skin, milk chocolate, caramel, pecan tan; and dark skin can be described as jigaboo, blue-black, tar babies, charcoal, watermelon child, midnight, and burnt. Wilder (2010) emphasized the positive attitude with which the light-skinned group is regarded, whereas the dark-skinned group is regarded with derogatory attitude. While the term "house nigga" addresses the origin of skin color bias, when the light-skinned slaves worked inside the owner's house, the term "pretty skin" shows that being light-skinned is seen as a beautiful characteristic; on the other hand, terms like "charcoal, watermelon child, and burnt" are extremely uncomplimentary towards the dark-skinned people.

Does the skin tone bias only apply to African-Americans? Maddox and Gray (2002) carried out two studies to address these questions. In Study 1, 32 White students and 30 Black students were recruited and were directed to observe a simulated discussion while forming an

impression of the discussants from their statements. They were later instructed to match certain statements with a photo of the simulated discussants. When matching the statements and photos, the participants were asked to rate their confidence in their matched pair. Participants observed a conversation between groups of men who varied in terms of both race and skin tone. The design of this study was a 2 (discussion composition) x 2 (race of participant) x 2 (error type) mixed factorial. The dependent variable is the error rate, whether the participants made the correct within-group match or between-group match during their matching task. It was found that both Black and White participants used race and skin tone as an organizing principle when observing the discussion. That is, the participants not only paid attention to whether the discussant in question was Black or White (as indicated by the between-group error rates), but also to the skin tone of the Black discussants (as indicated by the within-group error rates). In Study 2, Black students and White students were recruited to complete questionnaires about seven specific social groups; participants were told to list positive, negative, and neutral cultural and personal characteristics that the greater society associates with the groups. The target groups were light and dark-skinned men and women. Participants in both racial groups stated that dark-skinned Black males were more aggressive and criminal than light-skinned Black males, who were deemed intelligent and wealthy. Both racial groups described light-skinned Black females as more attractive and intelligent than dark-skinned females, who were characterized as lazy, poor, and unattractive. Therefore, both Black and White participants were aware of the cultural stereotypes between the light- and dark-skinned Black males and females.

Studies, however, suggest that skin tone bias is more prevalent on an intra-group level. Harvey, LaBeach, Pridgen, and Gocial (2005) conducted a study investigating the salience of skin tone bias among African-Americans. They hypothesized that skin tone bias would be much

greater in a predominantly African-American setting than other settings. To test their hypothesis, they had African-American students from a predominantly Black college and a predominantly White college complete a survey containing measures on skin tone, self-esteem, racial self-esteem, perceived peer-group acceptance, and skin-tone importance. As they hypothesized, Harvey et al (2005) found that the students who attended the predominantly African-American college placed more importance on skin tone. Within the predominantly Black context, skin tone was strongly associated with peer acceptance; it was found that darker skin tone was associated with higher perceived acceptance among peers. Also, within the Black context, personal self-esteem was significantly correlated with skin tone; darker skin tone was associated with higher personal self-esteem. In both the predominantly Black and White contexts, darker skin tone was associated with stronger racial identity. Overall, Harvey and colleagues (2005) found that racial context is crucial in determining the salience of the skin tone bias. In their study of skin tone discrimination among African-Americans, Uzogara, Lee, Abdou, and Jackson (2013) also found that darker- and lighter-skinned African-American men perceived more ingroup discrimination than the medium-skinned group members. Kahn and Davies (2010) investigated implicit bias among ingroup members utilizing a “shoot/don’t shoot” videogame paradigm in which participants had to decide whether to shoot or not shoot the presented target. The targets were a high stereotypical Black male (i.e. darker skin, broader nose, thicker lips), a low stereotypical Black male (i.e. lighter skin tone, narrower nose, thinner lips), and a White male. Kahn and Davies (2010) had an all African-American participant group complete the study in order to study ingroup implicit bias. They found that the participants mistakenly shot the high stereotypic Black male more than the low stereotypic Black male or the White male. Kahn and Davies’ (2010) research shows that “perceived stereotypicality biases among Blacks may operate against

their own group members at less controllable, unintended and implicit, as well as explicit, levels (p. 577).” Altogether, these studies show the importance of studying skin tone bias at an ingroup level.

An array of literature has demonstrated that skin tone plays a major role in the lives of Black people, in terms of socioeconomics, employment, self-esteem, attractiveness, and overall self-concept. It has been shown that skin tone bias is carried out not only by the dominant majority, but also by the minority groups themselves. The divisive nature of skin tone bias among African-Americans and the stereotypes associated with the various skin tone categories were discussed in Wilder’s (2010) study. So, to what extent does skin tone bias among African-Americans influence their perception of one another? The stereotype content model presents a way of studying the relationship between skin tone bias and perception of a group’s warmth and competence.

### **Stereotype Content Model**

The stereotype content model theorizes that stereotypes contain two dimensions, *competence*, which is derived from targets’ status, and *warmth*, derived from targets’ competitiveness (Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999). Fiske et al (2002) argued that while stereotypes are traditionally believed to be unflattering towards out-groups and flattering towards in-groups, the same stereotype can be flattering on one dimension and unflattering on the other dimension. For example, elderly people are thought to be warm on one hand but incompetent on the other; thus, according to the stereotype content model, elderly people are low-competence, high-warmth. Fiske et al (1999) claimed that competence, measured by intellectual and task traits, and warmth, measured by sociable and agreeable traits, underlie

many stereotypes, rendering the stereotypes about many social groups more ambivalent than was generally believed.

Fiske et al (1999) proposed that group stereotypes originate from the group's relative status and competitiveness. This is to say that high-status groups are envied for their competence but not liked, whereas low-status groups are disrespected for their incompetence but may be liked and patronized, "as they often fulfill roles that the dominant group wishes them to fulfill, creating a cooperative, though exploitative, relationship between the groups" (Fiske et al, 1999, p.476). Fiske et al (1999) also stated that based on perceived status and competitiveness, outgroups are categorized as competent but cold, or incompetent but warm. Fiske et al (1999) claimed only the ingroup, due to favoritism, is viewed as both competent and warm. Outgroups cannot be both competent and warm simultaneously. To support their claims, Fiske et al (1999) conducted group surveys regarding specific groups and their traits; they found the two dimensions to be negatively correlated for most groups. For example, groups such as house cleaners, disabled people, homemakers (that is, traditional women) and welfare recipients were high on relative warmth and low on relative competence; feminists, Asians, businesswomen, and rich people were high on relative competence but low on relative warmth. The result was two types of outgroups: the envious prejudice outgroup, which is stereotyped as competent but cold, and the paternalistic prejudice outgroup, stereotyped as incompetent but warm.

Once they determined the two dimensions, Fiske et al (2002) tested the hypothesis that relative status predicted perceived competence, whereas the degree of cooperation or competition predicted perceived warmth. Fiske and colleagues (2002) supposed that outgroups would be perceived as warm so long as they did not compete with the ingroup and remained subordinates. Competitive outgroups frustrate the ingroup and are thus viewed as having adverse intent. To

examine the relationship between the correlates status and competence, as well as competitiveness and warmth, the researchers had 78 students and 38 nonstudents rate 23 different groups of people on their perceived status and competitiveness. The target group's status was measured by questions regarding how prestigious, economically successful, and well-educated its members are. Competitiveness was measured by questions regarding how the preference group members receive (for example, in hiring decisions), the power the members have in society, and the resources the group members have access to may affect the perceiver's own life. Upon investigation, a positive correlation was found between status and perceived competence at both the individual (each individual participant) and group (i.e., the student and nonstudent participants as one unit each) levels, but a negative correlation was found between competition and perceived warmth. Therefore, higher social status predicted higher competence, lower social status predicted lower competence; also, higher competitiveness predicted a lack of warmth in those outgroups, and lower competitiveness predicted warmth in those outgroups.

Two of the groups Fiske et al (2002) examined were Black professionals and poor Blacks. They found that Black professionals were viewed as high in competence, but low in warmth; conversely, poor Blacks were low in competence, but high in warmth. Thinking that this may have actually been due to socioeconomic status rather than race, Walzer and Czopp (2011) conducted their study about positively stereotyped Black groups. Walzer and Czopp (2011) looked specifically at Black athletes and Black musicians. As these are the positively stereotyped subgroups of a minority, the researchers split the competence rating into competence-talent and competence-intelligence. Thus, participants in the study were asked to rate the Black athletes and musicians on their perceived warmth, competence-intelligence, competence-talent, status, and competitiveness. The results showed that both athletes and musicians were perceived as high in

talent, low in warmth; and high in talent, low in intelligence. There was also an interaction that showed athletes were perceived to be higher in talent, lower in warmth than the musicians.

Therefore, Black athletes and musicians were viewed as able but unintelligent, “and consistent with the [stereotype content model], perceptions of their warmth suffer accordingly” (Walzer & Czopp, 2011, p.529).

According to the stereotype content model, stereotypes are not completely unflattering. Instead, the competence and warmth contents of stereotypes allow them to be flattering on one dimension and unflattering on the other (Fiske et al, 2002). Based on this, it can be expected that skin tone bias will also be complimentary on one dimension and not on the other. This is to say that, based on previous skin tone bias literature, light-skinned Black males and females would be rated higher on the competence dimension than the dark-skinned males and females; dark-skinned males and females would be rated higher on the warmth dimension than light-skinned males and females. The main focus of this study is to show the effect of skin tone bias on the rating of the targets’ competence and warmth.

### **The Present Study**

Previous studies investigated skin tone bias and the stereotype content model separately. Research on skin tone bias focused on topics such as self-concept and self-esteem (Thompson & Keith, 2001) and attractiveness (Hill, 2002). The current study aims to study skin tone bias through the lens of the stereotype content model. Specifically, this study will investigate how skin tone bias affects African-Americans’ perception of other African-American targets’ competence and warmth. Rather than investigate self-assigned ratings (such as self-esteem and attractiveness) as in previous studies, this study will examine how differently targets are perceived based on their skin tone. No studies to date have researched this relationship explicitly;

therefore, this study fills that research gap and contributes information from a different point of view.

Therefore, in this study, African-American participants were asked to complete a survey where they rated numerous individual photos varying in skin tone and gender on their perceived competence and warmth. Based on previous findings of the stereotype content model and skin tone bias, I proposed the following hypotheses.

Hypothesis 1: I predicted main effects of skin tone on both warmth and competence such that light-skinned targets will be rated higher than dark-skinned targets on the competence dimension, but lower on the warmth dimension. This hypothesis stemmed from the societal belief that lighter-skinned Black people are more able, and thus, they pose a competitive threat to the darker-skinned Black people.

Hypothesis 2: I predicted main effects of gender on both warmth and competence such that female targets will be rated higher than male targets on the warmth dimension and male targets will be rated higher than female targets on the competence dimension. This hypothesis was based on the general, societal belief that males may be more capable than females, who in turn are more emotionally open and approachable than males.

## Methods

### Participants

Sixty-seven African-American students from Towson University participated in the study. Five surveys were discarded due to incompleteness, resulting in a final sample of sixty-two participants. Thirty-five students participated for class credit and were recruited through Towson University's Psychology researchpool website; twenty-seven other students were recruited as volunteers from various student organizations on campus. There were 43 females and 19 males. The ages of the participants ranged from 18 to 57 ( $M= 22.85$ ,  $SD= 7.18$ ). Although all participants were African-American, 22 participants self-identified as African, 34 as Black American, and six as multiracial. Fifty-one participants stated they were from the northeast region of the United States, three from the Midwest, six from the south, and two from the west. Two participants identified their current living area as rural, 44 as suburban, and 16 as urban.

### Design

This study was a 2 (skin tone: light-skinned; dark-skinned) x 2 (gender: male; female) x 2 (survey group) mixed factorial. Skin tone and gender were within-subjects variables, whereas the survey group, which refers to the two versions of the survey being administered, was a between-subjects variable. The independent variables were the skin tone (light-skinned; dark-skinned) and gender (male; female) of target. The dependent variables were the ratings on the competence and warmth dimensions.

### Procedure

The study was approved by the Towson University Institutional Review Board (Appendix A) for research involving the use of human participants. Participants were told that

the study investigates cultural stereotypes and beliefs, and their informed consent (Appendix B) was obtained. They then began completing the survey (Appendix C). The survey consisted of several photos of individuals the participants rated on their perceived competence, warmth, status, and competitiveness. The photos were of various targets: light-skinned Black male, dark-skinned Black male, light-skinned Black female, dark-skinned Black female, White male, White female, Hispanic male, Hispanic female, Indian male, Indian female. The focal conditions for this study were the light- and dark-skinned Black males and females (Appendix D). The remaining photos were distractors, serving to divert the participants from guessing the true purpose of the study.

There were two versions of the survey. The difference between the two lies in that if one survey had a light-skinned Black male or female as a target, the second survey had the dark-skinned version of the same Black male or female as a target. Thus, the two surveys are a way of counterbalancing the target conditions and preventing the participants from repeated exposure to the same picture, which would have made the purpose of the study transparent.

The participants were instructed to rate each target on their perceived competence and warmth and their correlates. Once they had rated all the targets, participants were asked to rate each target's skin tone at the end of the survey. While the participants were completing the survey, the researcher noted and recorded the observed skin tone of each participant in the study. Upon completion of the study, participants were fully debriefed regarding the true purpose of the study.

## **Materials**

**Stimuli.** There were four pictures (two male, two female). The skin tone for these pictures was manipulated using Photoshop, Perfect365, and Makeover. The manipulation

resulted in four light-skin and four dark-skin pictures, a total of eight. Pictures of each of the targets were included along with the survey items. The pictures were counterbalanced to control for order effects in their presentation.

**Competence and Warmth Scales.** Items to measure competence and warmth are taken from Fiske and colleagues' (2002) research. Competence ( $\alpha = .95$ ) was measured by rating the perceived confidence, independence, competitiveness, intelligence, competence, capability, skillfulness, and efficiency of the target individuals. Warmth ( $\alpha = .95$ ) was measured by rating the perceived friendliness, trustworthiness, sincerity, warmth, tolerance, how well-intentioned, and good-natured the target individuals were. This scale also included three items measuring how society views the target's overall group status ( $\alpha = .89$ ) and three items measuring the target's overall competitiveness ( $\alpha = .91$ ), which have been proven to predict competence and warmth, respectively. Participants rated each item on a scale of (1) *not at all* to (5) *extremely*. Items on this scale were presented in a randomized, counterbalanced order.

**Skin Tone Ratings.** Each target's skin tone was rated on a scale of (1) *very dark* to (5) *very light*. Higher ratings correspond to lighter skin.

**Demographics.** A short questionnaire asking for the participants' age, gender, and ethnicity was administered. This questionnaire included items asking what region of the United States the participant was from, as well as the setting of their current living area (urban, suburban, or rural).

**Personally Using Skin Tone to Judge.** At the very end of the study, an 8-item questionnaire developed by the researcher was administered. The participants were instructed to answer questions asking to what extent they personally use skin tone to judge others' competence ( $\alpha = .90$ ) and warmth ( $\alpha = .86$ ).

**Observed Participant Skin Tone.** The researcher recorded the skin tone of each participant on a scale of (1) *very dark* to (5) *very light*. Higher ratings correspond to lighter skin.

## Results

### Manipulation Check

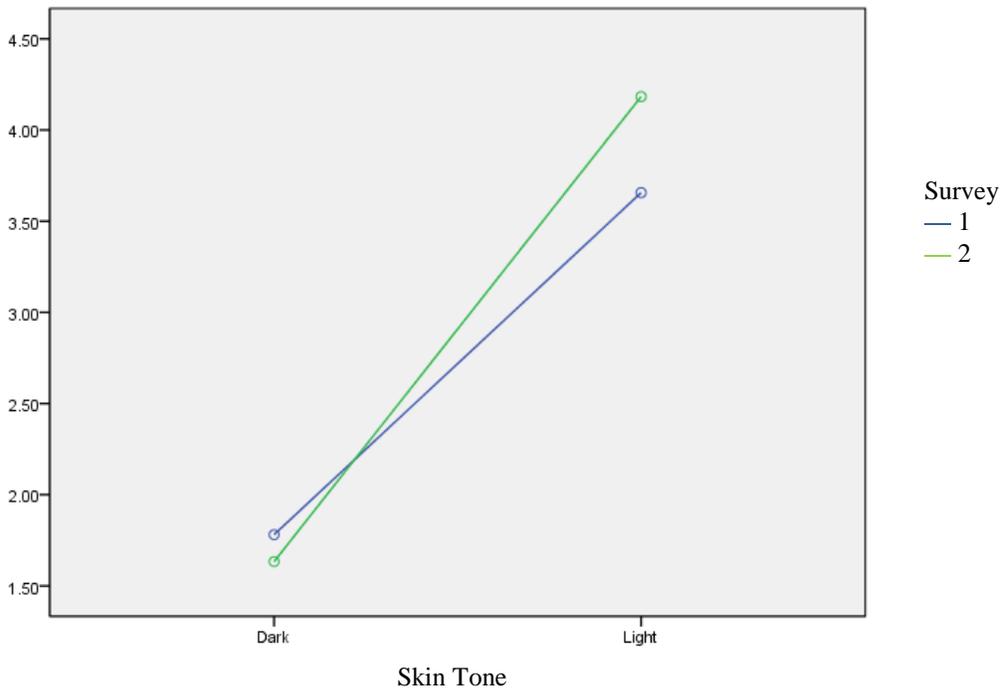
A manipulation check was conducted to determine if the target pictures' skin tones were successfully manipulated. Participants could rate the targets from (1) *very dark* to (5) *very light*. A Gender X Skin tone X Survey repeated measures analysis of variance was executed to check the manipulation of the targets' skin tones. Skin tone and gender were analyzed as within-subjects variables, whereas the survey group was analyzed as a between-subjects variable because there were two different versions of the same survey. The analysis yielded a main effect of skin tone,  $F(1, 60) = 722.583, p < .05, \text{partial } \eta^2 = .923, \text{power} = 1.00$ , confirming that the skin tone manipulation was successful. Participants viewed the light-skinned targets as significantly lighter than the dark-skinned targets (see Table 1). The analysis also yielded an interaction of skin tone and survey,  $F(1, 60) = 16.814, p < .05, \text{partial } \eta^2 = .219, \text{power} = .981$ , indicating a greater difference between dark-skinned targets and light-skinned targets on Survey 2 (see Figure 1). Paired-samples t-tests showed that the dark- and light-skinned targets were rated significantly differently on both surveys. On Survey 1, the dark-skinned female targets were rated significantly darker than the light-skinned female targets,  $t(31) = -16.025, p < .05$ , as were the dark-skinned male targets than the light-skinned male targets,  $t(31) = -8.753, p < .05$ . On Survey 2, the dark-skinned female targets were rated significantly darker than the light-skinned female targets,  $t(29) = -14.062, p < .05$ , and the dark-skinned male targets were rated significantly darker than the light-skinned male targets,  $t(29) = -15.031, p < .05$ . The skin tone manipulation overall was successful.

Table 1

*Means and Standard Deviations of Targets' Skin Tone Ratings*

Survey	Target	Mean	(SD)
1	Dark-skinned males	1.78	(.71)
	Light-skinned males	3.47	(.88)
	Dark-skinned females	1.78	(.49)
	Light-skinned females	3.84	(.63)
2	Dark-skinned males	1.93	(.64)
	Light-skinned males	4.50	(.78)
	Dark-skinned females	1.33	(.48)
	Light-skinned females	3.87	(.73)

Figure 1. *An Interaction of Skin Tone Rating and Survey*

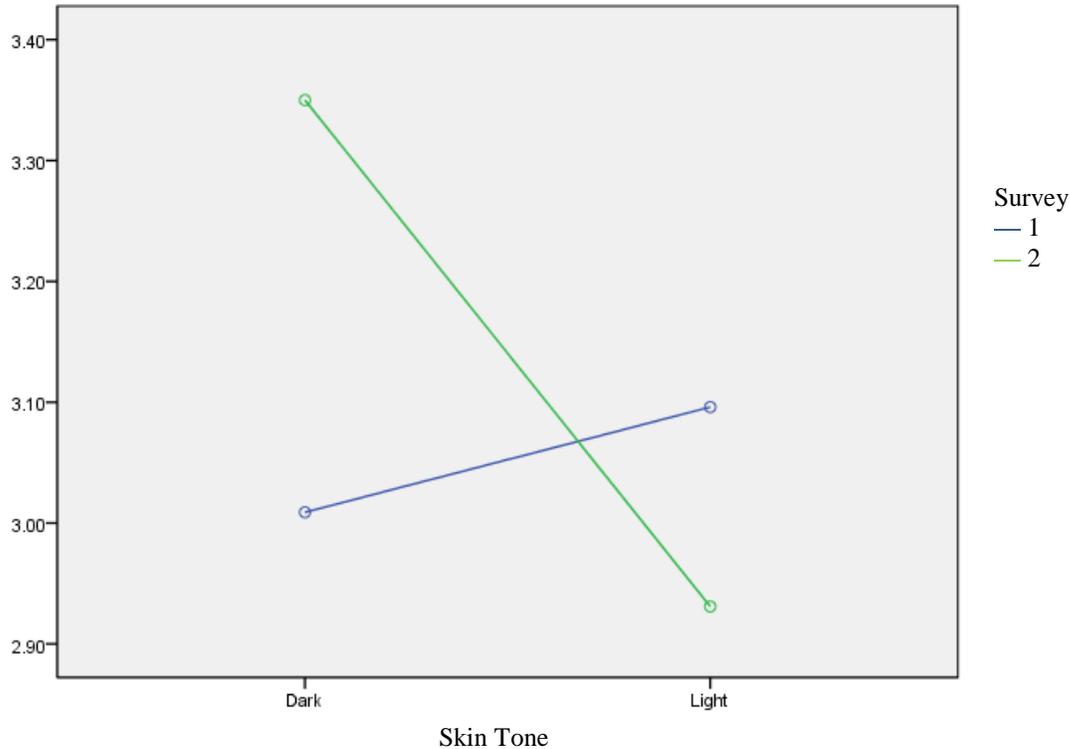


### Data Analysis

The first hypothesis stated there would main effects of skin tone on both the warmth and competence dimensions, such that light-skinned targets would be rated higher on the competence dimension but lower on the warmth dimension. A 2(skin tone: light-skinned; dark-skinned) x 2 (gender: male; female) x 2 (survey group) repeated measures analysis of variance was carried out for both the competence and warmth dimensions to test the hypothesis.

The analysis revealed a significant main effect of skin tone on warmth,  $F(1, 60) = 4.894$ ,  $p < .05$ , partial  $\eta^2 = .075$ , power = .586, showing that the dark-skinned targets (males:  $M = 3.10$ ,  $SD = .86$ ; females:  $M = 3.25$ ,  $SD = .80$ ) were rated as warmer than the light-skinned targets (males:  $M = 2.96$ ,  $SD = .84$ ; females:  $M = 3.07$ ,  $SD = .75$ ). This supported the hypothesis that dark-skinned targets would be rated higher than the light-skinned targets on the warmth dimension. There was a significant interaction effect of skin tone and survey on warmth,  $F(1, 60) = 11.373$ ,  $p < .05$ , partial  $\eta^2 = .159$ ,  $p = .913$ . The dark-skinned targets were rated as warmer than the light-skinned targets, but only on Survey 2, whereas the light-skinned targets were rated as warmer than the dark-skinned targets, but only on Survey 1 (see Figure 2). A paired-samples t-test showed that the difference was only significant on Survey 2, where the dark-skinned female targets were rated warmer than the light-skinned female targets,  $t(29) = 2.184$ ,  $p < .05$ , and the dark-skinned male targets were rated warmer than the light-skinned male targets,  $t(29) = 2.820$ ,  $p < .05$ . There was neither a main effect of gender,  $F(1, 60) = 3.649$ ,  $p > .05$ , partial  $\eta^2 = .057$ ,  $p = .468$ , nor any interaction of skin tone and gender,  $F(1, 60) = .042$ ,  $p > .05$ , partial  $\eta^2 = .001$ ,  $p = .055$ , on the warmth dimension.

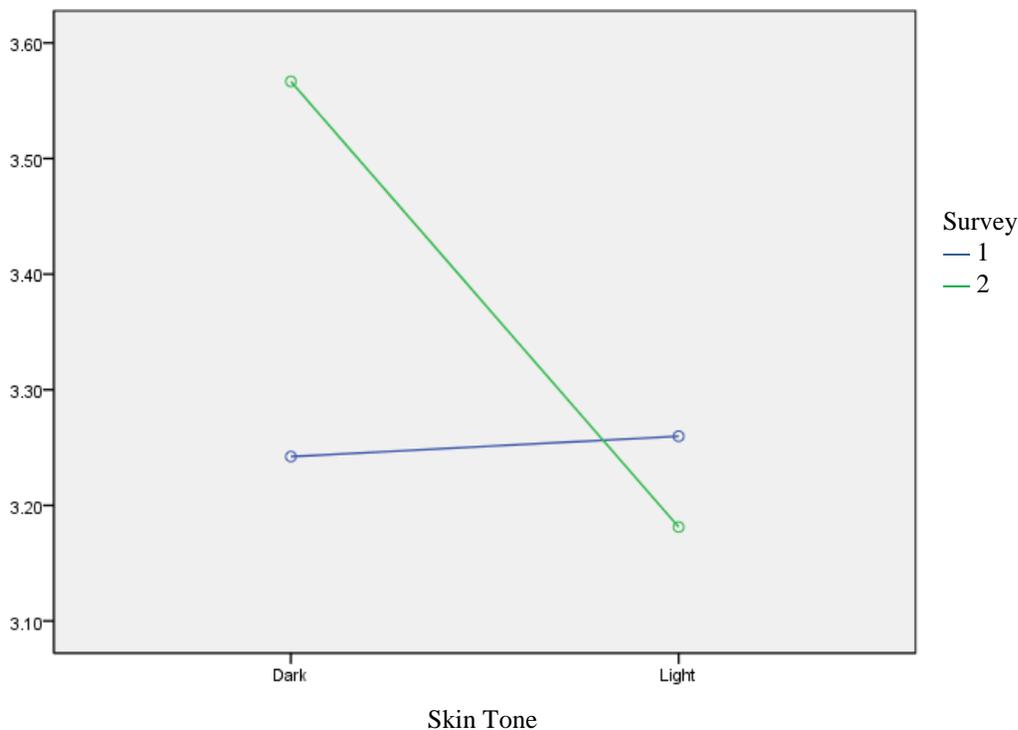
Figure 2. An Interaction of Skin Tone and Survey on the Warmth Dimension



A similar result was found with the analysis on the competence dimension. There was a main effect of skin tone on the targets' competence,  $F(1, 60) = 5.338, p < .05$ , partial  $\eta^2 = .082$ , power = .623, showing that targets with dark skin tone (males:  $M = 3.43, SD = .84$ ; females:  $M = 3.37, SD = .80$ ) were perceived as *more* competent than targets with light skin tone (males:  $M = 3.25, SD = .86$ ; females:  $M = 3.20, SD = .71$ ). This result did not support the hypothesis that light-skinned targets would be rated higher than dark-skinned targets on the competence dimension. There was also an interaction of skin tone and survey on ratings of competence,  $F(1, 60) = 6.407, p < .05$ , partial  $\eta^2 = .096$ , power = .702, indicating that the dark-skinned targets were rated as more competent than the light-skinned targets, but only on Survey 2 (see Figure 3). Paired-samples t-tests showed that, on Survey 2, the dark-skinned female targets were rated

significantly more competent than the light-skinned female targets,  $t(29) = 2.336, p < .05$ , and the dark-skinned male targets were rated more competent than the light-skinned male targets,  $t(29) = 2.436, p < .05$ . There was neither a main effect of gender,  $F(1, 60) = .742, p > .05$ , partial  $\eta^2 = .012$ , power = .136, nor an interaction of skin tone and gender,  $F(1, 60) = 0.17, p > .05$ , partial  $\eta^2 = .000$ , power = .052, on the competence dimension.

Figure 3. *An Interaction of Skin Tone and Survey on the Competence Dimension*



The effect of skin tone on perceptions of status and competitiveness was also analyzed. The analysis yielded a significant effect of skin tone on perceptions of the targets' status,  $F(1, 60) = 4.800, p < .05$ , partial  $\eta^2 = .074$ , power = .578, indicating that the dark-skinned targets were perceived to be higher in status than the light-skinned targets. There was neither a main effect of gender,  $F(1, 60) = .189, p > .05$ , partial  $\eta^2 = .003$ , power = .071, nor an interaction of skin tone and gender,  $F(1, 60) = 1.226, p > .05$ , partial  $\eta^2 = .020$ , power = .193, on perceptions of status.

In terms of competitiveness, there were no main effects of skin tone,  $F(1, 60) = .786, p > .05$ , partial  $\eta^2 = .013$ , power = .141, main effects of gender,  $F(1, 60) = 2.950, p > .05$ , partial  $\eta^2 = .047$ , power = .394, or an interaction of skin tone and gender,  $F(1, 60) = .000, p > .05$ , partial  $\eta^2 = .000$ , power = .050.

Multiple analyses of variance were conducted to examine if certain demographic characteristics of the participants, such as gender and race, predicted their perception of the targets' competence and warmth. There was a main effect of the participant's gender in judging the light-skinned female target's warmth,  $F(1, 60) = 8.049, p < .05$ , partial  $\eta^2 = .118$ , power = .797, and the light-skinned male target's warmth,  $F(1, 60) = 6.369, p < .05$ , partial  $\eta^2 = .096$ , power = .700. Male participants rated both the light-skinned male and female targets significantly warmer than the female participants. There was no significant effect of the participants' race on perceptions of competence,  $F(1, 59) = .361, p > .05$ , partial  $\eta^2 = .012$ , power = .105, or warmth,  $F(1, 59) = 1.373, p > .05$ , partial  $\eta^2 = .044$ , power = .284.

The participants themselves varied in skin tone: nine (14%) were very dark, 11 (18%) dark, 25 (40%) medium, six (10%) light, and 11 (18%) very light. A correlational analysis examining the relationship between the participants' observed skin tone (as noted by the researcher) and their ratings of the targets' skin tones yielded no significant results. An analysis of variance was conducted to measure the effect of the participants' observed skin tone on their personal use of skin tone to judge the targets' competence and warmth. The results yielded no significant effect on either dimensions of competence,  $F(4, 62) = .566, p > .05$ , partial  $\eta^2 = .038$ , power = .178, or warmth,  $F(4, 62) = .702, p > .05$ , partial  $\eta^2 = .047$ , power = .214. A correlational analysis supported this by indicating that there was no significant relationship between the participants' observed skin tone and their personal use of skin tone to judge others'

competence and warmth. A multivariate analysis of variance showed no significant effect of the participants' skin tone on their judgment of the targets' competence,  $F(4, 62) = 1.032$ ,  $p > .05$ , partial  $\eta^2 = .068$ , power = .305, or warmth,  $F(4, 62) = .787$ ,  $p > .05$ , partial  $\eta^2 = .052$ , power = .237.

For comparative value, a repeated measures analysis of variance was conducted to investigate differences in competence and warmth rating for dark-skinned Black targets, light-skinned Black targets, Indian targets, and Latino targets. The analysis showed that there is no significant effect of ethnicity on the competence dimension,  $F(3, 58) = 1.798$ ,  $p > .05$ , partial  $\eta^2 = .085$ , power = .444, showing that the participants did not rate one group of targets as significantly more competent than another. However, there was a significant effect of ethnicity on the warmth dimension,  $F(3, 58) = 4.140$ ,  $p < .05$ , partial  $\eta^2 = .176$ , power = .827. A post hoc test, using Bonferroni at the .05 significance level, indicated that there was a significant difference in the warmth ratings of Indian targets ( $M = 2.94$ ,  $SD = .08$ ) and Latinos ( $M = 3.21$ ,  $SD = .09$ ) with Latinos being rated as significantly warmer.

### **Discussion**

The first hypothesis stated that there would be a main effect of skin tone such that the light-skinned targets would be rated as more competent than the dark-skinned targets, who would be rated as higher on the warmth dimension than the light-skinned targets. This hypothesis was somewhat supported in that the dark-skinned targets were rated as warmer than the light-skinned targets. However, the dark-skinned targets were also rated higher on the competence dimension than the light-skinned targets. This was even more evident on Survey 2, where the dark-skinned targets were rated significantly higher in both competence and warmth than the light-skinned targets (see Figures 2 and 3). The strong evidence on Survey 2 may be due to the fact that the skin tone manipulation was more successful on Survey 2. The second hypothesis stated that there would be a main effect of gender such that the female targets would be rated higher on the warmth dimension, and the male targets higher on the competence dimension. This hypothesis was not supported.

Fiske and colleagues (2002) found that perceptions of status predicted perceived competence and perceptions of competitiveness predicted perceived warmth. Thus, the current study analyzed perceptions of the targets' status and competitiveness. The results showed that dark-skinned targets were perceived to be higher in status than the light-skinned targets. Since the dark-skinned targets were also rated as more competent than the light-skinned targets, the findings of this study support Fiske et al.'s previous findings that perceptions of high status lead to perceptions of high competence. However, this was not the case with the analysis of competitiveness, which yielded no significant main effects of skin tone, gender, or an interaction of the two. The current study found that dark-skinned targets are rated higher in warmth than the

light-skinned targets; thus, according to Fiske et al., the dark-skinned targets should have been rated lower in competitiveness than the light-skinned targets. Hence, in terms of perceived competitiveness, the present study did not support Fiske et al.'s previous findings.

The results of this study indicate that the stereotype content model does not apply to skin tone bias in a sample of African-Americans. The stereotype content model posits that stereotyped groups cannot be both competent and warm; the group can be high on one dimension, but low on the other dimension (Fiske et al., 1999; Fiske et al., 2002). In this study, the dark-skinned targets were rated higher than the light-skinned targets on both the competence and warmth dimensions.

These results could be attributed to the fact that the sample belonged to the same group as the target stimuli. While intragroup stigmatization has been seen in an African-American setting before, it was in terms of self-esteem, perceived peer-group acceptance, and skin-tone importance (Harvey et al., 2005). Harvey et al. found that darker skin tone was associated with a higher perceived acceptance among peers as well as a stronger racial identity. Perhaps, the findings of the current study could be interpreted through Harvey and colleagues' findings. If darker skin tone was associated with a stronger racial identity, this could have led to an ingroup bias, prompting the participants to consistently rate the dark-skinned targets as warmer and more competent than the light-skinned targets.

A comparative analysis of variance was carried out to determine the role of ingroup bias by analyzing the differences in the competence and warmth ratings for the Black, as well as the distractor Indian and Latino targets. The analysis showed that Latinos were significantly rated higher than the Indian targets in terms of their warmth, while there were no significant effects of ethnicity on the competence dimension. This could perhaps be explained by the primacy of warmth vs. competence (Richetin, Durante, Mari, Perugini, & Volpato, 2012). Richetin and

colleagues, in their review of literature, found that when evaluating outgroups, members of a certain group tend to judge the target on the warmth dimension rather than the competence dimension to ascertain how beneficial or harmful they may be to the ingroup. However, when judging targets that are close and/or similar to their self-perception, people tend to use the competence dimension more than the warmth dimension to determine how much benefit or harm the target may bring to the ingroup. Thus, in the current study, participants may have rated the dark-skinned targets as more competent and warmer than the light-skinned targets because that emphasizes ingroup cohesion, especially when presented with the distractor outgroups (i.e. Indians and Latinos).

Another possible explanation for these results may be the sample's educational level. The participants were all college students, most of whom had admittedly taken psychology and sociology classes in which race matters were discussed to various extents. The study survey may have triggered their learned knowledge about such matters, influencing the way they responded to the questionnaire.

The existence and mechanisms of skin tone bias cannot be denied, as there are various literatures to outline its effect on the African-American community at large. However, the findings of this research show that the stereotype content model is not an entirely applicable model to the study of skin tone bias among African-Americans.

Threats to internal validity, such as history, may have affected the outcomes of this study. In this case, history refers to the occurrence of events outside the experiment that may affect the participants' responses (Gay, Mills, Airasian, 2011). Within the past few years, there have been major films that started discourse on race matters in the media at large. These films include 2011's *The Help*, 2012's *Django Unchained*, 2013's *The Butler*, *Fruitvale Station* and *12 Years*

*A Slave*. These movies were extremely popular and were winners of various film awards. During the progress of the current study, the very dark-skinned actress Lupita Nyong'o from *12 Years A Slave* received numerous awards, including an Academy Award and a Screen Actors Guild Award for her supporting role. She also received an award at the Black Women in Hollywood Luncheon, and, in her acceptance speech, spoke about her struggles with her dark skin tone ("Lupita Nyong'o Delivers", 2014). She was named the Most Beautiful Woman by People magazine, and she used that platform to speak about skin tone, beauty, and success (Jordan & Coulton, 2014). This history is particularly important in the current study because Nyong'o was mentioned several times by participants during debriefing, indicating that such historical occurrences may have affected the participants' ratings of the targets' competence and warmth.

The study had some limitations. The target stimuli were photographed using different cameras, which affected the quality of the pictures. Participants could tell some of the target stimuli were doctored, and they posed some questions about it after the study. Additionally, the anonymity of the survey study should have been more enhanced. Although the instructions and researcher made it clear that the survey was completely anonymous, very few participants mentioned that their peers may feel pressured to give socially desirable answers, even if that conflicts with their true beliefs. Another major limitation for this study was the predominantly white context from which the participants were recruited. Future research should consider the limitations of this study and improve upon it by having standardized pictures taken by the same camera, target stimuli that do not show obvious signs of being manipulated, a more anonymous methodology, and a pool of participants from a largely Black context.

Future directions for the skin tone bias study should include recruiting participants from various regions across North America. As the research points out, skin tone bias is a

phenomenon that started during slavery (Keith & Herring, 1991; Wilder, 2010). Thus, a skin tone bias study sampling the population from the southern region of the United States may yield different results than those of the largely northeastern pool of participants that were recruited for the current study. These future studies should include measures of racial identity to determine to what extent racial identity influences one's view of skin tone in relation to competence and warmth. Also, since the stereotype content model did not yield the hypothesized results in this study, other methods of studying the effects of skin tone on perceptions of warmth should be developed, as there are already other methods of studying the effect of skin tone on perceptions of competence.

## Appendix A



February 19, 2014

To: Lelise Aklilu  
Department of Psychology  
RE: Modifications to TU IRB project 13-0X75

Office of Sponsored Programs  
Et Research

Towson University  
8000 York Road  
Towson, MD 21252-0001

t. 410 704-2236  
f. 410 704-4494  
www.towson.edu/ospr

Dear Lelise:

Thank you for informing the Towson IRB of your modifications to project 13-0X75 "The Effect of Skin Tone on Perceptions of Competence and Warmth Among African-Americans". The Towson University Institutional Review Board for the Protection of Human Participants has reviewed and approved your modification for this project. Since this is exempt research, this approval does not expire.

If any other modifications are made to this project, or if any new risks are discovered, please inform the Board immediately.

Should you have any questions, please do not hesitate to contact me at (410) 704-4488.

Sincerely,

A handwritten signature in blue ink, appearing to read "V. Denise Spears".

V. Denise Spears, MPA  
Compliance Administrator, On Behalf of Towson University Institutional Review  
Board for the Protection of Human Participants

CC:  
File

## Appendix B

### Informed Consent

**Principal Investigator:** Lelise Aklilu, Department of Psychology, Towson University

This is a study in which we are investigating cultural beliefs about specific groups. In this study, you will be asked to complete a questionnaire regarding beliefs about various groups.

There are no known risks associated with participating in the study. Should you become distressed or uncomfortable, we will terminate the session immediately. You will receive 1 credit on researchpool for participating. The study should take no longer than 30 minutes to complete.

Participants must be at least 18 years old.

Your participation is entirely voluntary. You do not have to participate in the study. If you choose to participate, you may discontinue your participation at any time. Your decision to participate or not to participate will not influence your grade or class standing.

All information about your responses will remain confidential. We will not show your information to anyone outside of our research team unless you give us written permission. Your responses will never be linked to your name.

If you have any questions, you may ask them now or at any time during the study. If you should have questions after today, you can call Lelise Aklilu at 540-314-0123 or email her at [laklil1@students.towson.edu](mailto:laklil1@students.towson.edu). If you have any questions or concerns regarding your rights as a participant, you can contact the Towson University Institute Review Board at 410-704-2236 or

their email [ours@towson.edu](mailto:ours@towson.edu). Dr. Debi Gartland is the chairperson of the IRB and can be reached at [dgartland@towson.edu](mailto:dgartland@towson.edu).

I, \_\_\_\_\_ affirm that I have read and understand the above statements and have had all of my questions answered.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**Appendix C**

**Instructions:** Please study the picture on the left and respond to each of the following questions and/or statements by checking the answer using the scale from “1= Not at all” to “5= Extremely.” Before responding, consider how your peers and other Towson University students may judge someone based on their appearance alone.

1. How would your peers judge this person in terms of their competence?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

2. How would your peers judge this person in terms of their confidence?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

3. How would your peers judge this person in terms of their independence?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

4. How would your peers judge this person in terms of their competitiveness?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

5. How would your peers judge this person in terms of their intelligence?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

6. How would your peers judge this person in terms of their tolerance?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

7. How would your peers judge this person in terms of their warmth?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

8. How would your peers judge this person in terms of their being good-natured?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

9. How would your peers judge this person in terms of their sincerity?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

10. How would your peers judge this person in terms of their capability?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

11. How would your peers judge this person in terms of their trustworthiness?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

12. How would your peers judge this person in terms of their efficiency?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

13. How would your peers judge this person in terms of their being well-intentioned?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

14. How would your peers judge this person in terms of their skillfulness?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

15. How would your peers judge this person in terms of their friendliness?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

16. According to your peers, how prestigious are the jobs typically achieved by this person?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

17. According to your peers, how economically successful has this person been?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

18. According to your peers, how well educated is this person?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

19. If this person gets special breaks (such as preference in hiring decisions), this is likely to make things more difficult for people like me.

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

20. The more power this person and others like him/her have, the less power people like me are likely to have.

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

21. Resources that go to this person are likely to take away from the resources of people like me.

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

**Instructions:** Please complete the following as accurately as you can.

Age: \_\_\_\_\_

Gender      M                  F

Ethnicity:

\_\_\_\_\_ African

\_\_\_\_\_ Black American

\_\_\_\_\_ Hispanic Black

\_\_\_\_\_ Multiracial

Other \_\_\_\_\_

Which region of the United States are you from?

\_\_\_\_\_ Northeast

\_\_\_\_\_ Midwest

\_\_\_\_\_ South

\_\_\_\_\_ West

What best describes the area you live in?

\_\_\_\_\_ Rural

\_\_\_\_\_ Suburban

\_\_\_\_\_ Urban

What is the highest level of education your parents have achieved?

\_\_\_\_\_ Less than high school

\_\_\_\_\_ High school

\_\_\_\_\_ Vocational/Technical School (2 year degree)

\_\_\_\_\_ Some College

\_\_\_\_\_ College Degree

\_\_\_\_\_ Master's Degree

\_\_\_\_\_ Doctoral Degree (PhD)

\_\_\_\_\_ Professional Degree (MD, JD, etc)

**Instructions:** Bearing in mind the anonymity of this study, please answer the following questions as honestly and accurately as you can.

1. To what extent do you use skin tone to judge someone's capability?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

2. To what extent do you use skin tone to judge someone's competence?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

3. To what extent do you use skin tone to judge someone's qualification?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

4. To what extent do you use skin tone to judge someone's proficiency?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

5. To what extent do you use skin tone to judge someone's hospitality?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

6. To what extent do you use skin tone to judge someone's friendliness?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

7. To what extent do you use skin tone to judge someone's sociability?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

8. To what extent do you use skin tone to judge someone's cordiality?

1. Not at all 2.Slightly 3.Somewhat 4. Very 5. Extremely

**Appendix D**

**Target Conditions**

Pictures of the target conditions are not displayed here due to the privacy rights of the photographed individuals.

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**Training and Certifications**

NIH Human Research Protection Certificate, License 1197777, 2013

CITI Program Training Certificate in Social & Behavioral Research, 2014

**Honors and Awards**

College of William and Mary Scholar, 2008-2012

Cummings Research Scholarship, 2011

