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Implicit Biases of the World: The Effect of Skin Tone on Initial Perceptions of People

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Abstract: Initial perceptions of people are the basis of how we view one another and most likely determine how relationships will turn out. In recent years, the idea of implicit biases, subconsciously being unfair to a particular group of people, has been widely scrutinized. Whether it is related to being employed at a company or just simply interacting with a stranger, implicit biases exist through and through. Because of this, we have to ask ourselves how much skin tone affects our perceptions of specific individuals daily, especially how we judge their personalities differently. This research will be based on how people's skin tone affects their initial perceptions/snap judgments regarding their personalities. To address this question, this experiment will consist of 150 participants looking through 160 images of men and women, sorted into four main categories: very dark, dark, light, and very light skin tones. Each of these images will be shown for 100 ms, and then the participants will be asked questions regarding the images 'personalities based on the Big 5 Personality Test. These responses will then be measured as being a negative or a positive perception response. It is expected that the stimulus images that represent individuals of darker skin tones will receive more negative perception responses. In contrast, the stimulus images representing individuals of lighter skin tones will receive more positive perception responses. These results imply that implicit biases not only exist but exist at a deeper, subconscious level.

Keywords: Big5, Skin tone, Snap judgments/Initial perceptions

1. Introduction

We are all told to not judge a book by its cover, but the question is, has this been actualized in the modern world? Moreover, how big of a role do our physical appearances play into the perceptions of others? More than 65% of the public believes racial discrimination is a severe issue in the United States [1]. Although there is a worldwide consensus that treating someone differently because of their skin tone or skin color is problematic, this issue still exists on a much deeper level. Despite the strong urge to remain politically correct or to "not be racist", the truth is that we all are the culprits to some extent. Implicit biases are acts of treating others differently subconsciously, a level that we cannot control or alter. For example, in 2004, an experiment took place where participants were asked to play a video game [2]. In this video game, participants had to shoot the armed characters, not the unarmed ones. The results of this experiment indicated that participants were more likely to shoot the unarmed darker skin-toned characters accidentally. At the same time, they were likelier to fail to shoot the armed character when they had a lighter skin tone. This is where implicit biases enter the

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equation; although the participants are not necessarily “racist," the deeply rooted subconscious biases ultimately alter the actions of these participants. In another experiment, Eugene Caruso, a social psychologist at the University of Chicago, revealed that when given a choice between a darker-skinned person and a lighter-skinned person, most people would favor the lighter-skinned individual [3].

Furthermore, it is found that skin tone is a significant factor in terms of how people make those subconscious decisions [4]. In our day-to-day life, we make tens of thousands of decisions, and each and every one of those decisions could be influenced by completely arbitrary factors. What makes implicit biases even more important is that it could exist in the most essential environments, such as in workplaces, schools, hospitals, etc. Being rejected by a company, receiving a poor grade, or even the method of treatment are all situations that could occur just because of your physical appearance. This makes the present work even more critical because we need to understand to what extent these implicit biases exist. Given these pieces of past research, we hypothesize that skin tone significantly affects how people perceive others and that people with darker skin tones tend to receive more negative feedback regarding their personalities.

2. Present Work

This research aims to show how skin tone truly affects how we view others and how quickly we judge their personalities based on that.

3. Experiment

3.1. Method

We will report all measures, manipulations, and exclusions. This study will be approved by and carried out by the recommendations of the Institutional Review Board for human participants, with written informed consent obtained from all participants.

3.2. Participants

A total of 150 individuals will be recruited to participate in this experiment. This pool of participants will involve 75 male participants and 75 female participants. Participants will be excluded if they are under 18 or have a record of discrimination towards certain races. We hope to achieve a sample size of 150 participants ultimately.

Our primary hypothesis involved assessing the negative and positive perception responses received from the participants. We performed a power analysis using the software package G*Power. The results indicated that with N=150, our experiment could detect an effect size of Cohen’s d of .3, using a paired t-test at a 5% alpha level (two-tailed) threshold with 95% statistical power.

4. Experimental Design

4.1. Procedures

One hundred fifty participants will each look at 160 images of men and women with different skin tones. After showing these images for 100 ms, the participants are asked a series of questions regarding the images’ personalities. These questions will look like this: “Do you think this person is extroverted or introverted?” (extraversion), “On a scale from 1-10, how conscientious is this person?” (conscientiousness), “Do you think this person is creative and imaginative?” (openness), “Is this person likely to help you when you are in trouble?” (agreeableness), “Do you think this person is emotional and prone to stress?” (neuroticism). The participant's responses will be sorted into negative

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and positive perception responses. Essentially this will be a 4 (skin tone: very dark, dark, light, very light) x 2 (gender: male and female) x 5 (personality: Neuroticism, agreeableness, conscientiousness, openness, extraversion) design. The independent variable here is skin tone, while the dependent variable would be initial perceptions (quantified by negative and positive perception responses). For the sake of this experiment and according to traditional values on personalities, low conscientiousness, extraversion, agreeableness, openness, and high neuroticism will be deemed as "negative perception response" and vice versa.

Measure 1.

Big 5 Inventory:

The participants will be asked questions like the Big 5 Inventory (as shown above). Factors include conscientiousness, neuroticism, openness, agreeableness, and extraversion [5]. All five of these personality traits are not interconnected. Therefore, they will be analyzed separately.

Measure 2.

Positive and Negative Perception Responses:

After receiving the responses from participants, these responses will be generally split into two groups: negative and positive. Finally, the data will be categorized and analyzed to examine whether skin tone affects our perceptions of others and, more specifically, our perception of others' personalities. Moreover, we will likely see whether specific perceived personality traits correspond to certain skin tones.

4.2. Data Analytic Approach

This experiment is within the subject's quasi-experimental design that will be analyzed using a Chi-square analysis.

4.3. Expected Results

Descriptive Statistics

Aim 1. We expect to find that skin tone correlates with people's initial perceptions.

Aim 2. We also expect to find that the darker skin tone you have, the more likely you are correlated with "negative personality traits". On the other hand, the lighter skin tone you have, the more likely you are correlated with "positive personality traits". As illustrated in Figure 1, we predict a direct relationship between how light your skin tone is and the number of positive perception responses you receive and between how dark your skin is and the number of negative perception responses you receive.

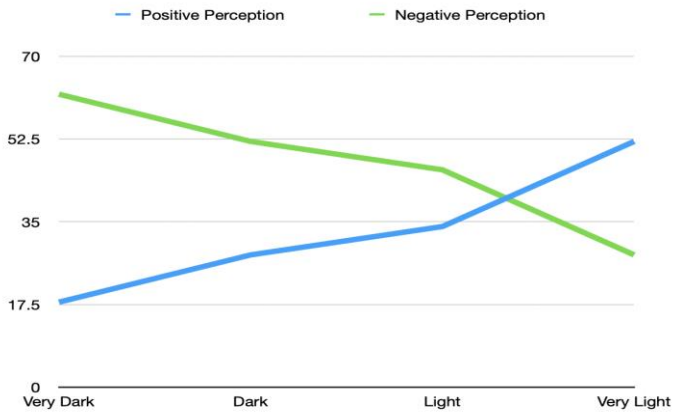


Figure 1: Illustration of hypothesized effects.

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The graph illustrates the relationship between your skin tone and the number of positive and negative perception responses you receive. More specifically, as the skin tone gets darker, you receive more negative perception responses; while your skin tone gets lighter, you receive more positive perception responses.

5. Conclusion

This experiment aims to generally examine how much implicit biases exist within our modern world, or in other words, how biased we are without us knowing. This experiment takes in the factor of snap judgments and attempts to see if initial perceptions (ideas formed regarding others without the conscious mind's evaluation) are affected by skin tone. We expect to find that implicit biases do exist on a broad scale, to the point where individuals are subconsciously more likely to be friends with someone with a lighter skin tone or believe that they are more likely to be helped by someone with a lighter skin tone. We cannot control our subconscious mind, and it is quite unfortunate that these implicit biases exist within us. The general rise of racial discrimination in recent years makes subconscious biases very impactful.

Suppose skin color does affect how people perceive others. In that case, this experiment will prove that subconscious biases exist within people without them realizing and to what extent they affect our daily lives. The strength of this experiment is how simple it is to execute and analyze. The replicability of this particular experiment is crucial because a few hundred people or sample sizes as small as this is not enough to concretely prove the hypothesis. Therefore, with the strength of replicability, there is likely going to be an increased number of sample sets from all over the world. This could also answer questions such as whether these initial perceptions or implicit biases exist more in a certain country compared to another country, or whether culture and religion affects how we initially perceive someone else as well as their personalities. However, there are still limitations that exist. First, people may realize the purpose of the experiment and therefore give different responses. The urge to remain consciously politically correct will alter the primary aims of this experiment. Second of all, the responses given by the participants could potentially be random instead of correlating with skin tone. Meaning, the results could be altered by a simple change in probability, rather than the independent variable. Lastly, the initial perceptions/snap judgments could be based on other facial features, such as facial structure. At the end of the day, whether it is the horrible misconceptions formed regarding certain people with certain skin tones or the sad sight of certain races having much lower employment rates, implicit biases make experiments like these all the more critical.

The data and the materials will be available on the Open Science Framework database.

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