

Effect of Race-Occupation Fit and Leadership
Prototypes on Leadership Perceptions of
Minorities in Leadership Positions

by

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Abstract

Although minorities make up a significant part of the U.S. population, a small margin of minorities are in senior leadership roles. A potential explanation behind the demographic makeup is that racial biases may influence leadership perceptions. Accordingly, a particular occupation type could moderate the relationship between race and perceived leader effectiveness, a pattern that can be explained by implicit leadership theory. To test this explanation, this paper focused on specifically Asian Americans and Blacks, in leadership roles in comparison to Whites. To see the effect of race-occupation fit, fictional vignettes of three racially different leaders were created in which each leader was portrayed in three different occupations (i.e., athletics manager, sales manager, engineering manager). A sample of 241 participants rated their assigned target leader through an online survey that contained evaluation items that measured the extent to which the target leader was perceived as effective. The findings show that the hypothesized relationships were not supported and that overall findings should be interpreted with caution.

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Effect of Race-Occupation Fit and Leadership Prototypes on Leadership Perceptions

Minorities in Leadership Positions

Despite minorities comprising nearly 40% of the U.S. population according to the U.S. Census Bureau, they accounted for just 22% of senior leadership jobs, according to U.S. Office of Personnel Management 2018 numbers. However, with monumental events in the United States today, such as the social justice efforts after George Floyd's death in 2020, there have been outspoken efforts in creating concrete changes in diversifying the workforce. For example, Facebook pledged to double the number of its Black and Latinx employees by 2023 and to increase the number of Black people in leadership positions by 30% over the next 5 years (Friedman, 2020). What may have been the reasons behind the low percentage of minorities in leadership positions? One potential explanation is racial biases present toward certain occupations and towards being an effective leader. Accordingly, a particular occupation type could moderate the relationship between race and perceived leader effectiveness, a pattern that can be explained by implicit leadership theory (ILT).

According to ILT, individuals hold everyday theories, in other words, everyday images, about leaders in general (or ideal leaders). They are mental representations of leaders and influence how an individual acts toward leaders or as leaders (Schyns & Riggio, 2016). These cognitive representations are similar to stereotypes, in that they are stored in memory and will be activated when the person meets an individual whose characteristics and behavior matches their implicit representations of a "leader" (Kenney et al., 1996). Stereotypes, which exist as a form of cognitive representations, can occur unintentionally or spontaneously through the process of repeatedly passing social information from person to person. As a result, what initially began as a set of random associations evolved into a system that was simplified and categorically

structured.

Over time, novel stereotypes emerged that not only were increasingly learnable but also allowed generalizations to be made about previously unseen social targets (Martin et al., 2014). The cognitive representations of a “leader” can be defined by the concept of leadership prototypes. Research has demonstrated that leaders are rated as more effective when they possess characteristics that align with raters’ beliefs about a prototypical leader (e.g., Eagly & Karau, 2002). Research has also found that individuals’ leader prototype often overlaps with attributes typically associated with White leaders (Rosette et al., 2008). Therefore, if a perceiver’s expectations involve an effective sales manager being charismatic, it is possible that the rater may rate an Asian American sales manager low due to the stereotype they lack social skills. Past research, such as research by Sy and others (2010), suggests that leadership perceptions are viewed as a function of race-occupation fit, indicating that race and occupation seemed to determine how an individual was seen as a leader.

This paper focuses on examining the reason for the lack of minorities, specifically Asian Americans and Blacks, in leadership roles in comparison to Whites. In the study, factors such as ILT and stereotypes (race and occupational) were examined for their potential role in the makeup of the racial demographic or leaders. To see the effect of race-occupation fit, fictional vignettes of three racially different leaders were created, and each leader was portrayed in three different occupations (i.e., athletics manager, sales manager, engineering manager). A sample of participants then rated the leaders regarding whether they perceived them as effective leaders and to what extent they were perceived effective in each of the occupation types. Research of race-occupation effect on leadership perceptions especially among the chosen minorities is instrumental in understanding the reasons behind the lack of Asian Americans and Blacks in

leadership positions.

In addition, further research can provide implications on whether Asian Americans and Blacks experience different perceptions in leadership roles. Moreover, this study contributes to the lack of research on Asian Americans in leadership positions. Asian Americans have been a racial group whose work experience has been largely ignored in the organizational science literature (Leong & Gupta, 2007). This study also contributes to ongoing studies of Blacks in leadership positions. Implications from the study attempt to clarify present barriers in the hiring and promotion of minorities into leadership positions and investigate leadership perceptions as a function of race-occupation fit.

Linkage Between Race and Leadership Perceptions of Minorities

The leadership prototype can be defined as an abstract cognitive structure formed by the attributes that are the most associated with leaders (Epitropaki et al., 2013). Leadership prototypes are part of ILT, which in turn can influence hiring and promotion of individuals on factors such as race for certain occupations. When Rosette et al. (2008) examined whether race influenced leadership prototypes and leadership evaluations among White and non-white leaders (White vs. Black, Asian, and Hispanic) in different industry types (financial and social services), their results supported the idea that “being White” is perceived to be an attribute of the business leader prototype, where participants assumed business leaders to be White.

Black Leaders

When the impact of White managers’ perceptions and stereotypes on the managerial mobility of Blacks were measured, a successful manager was perceived to possess characteristics more commonly ascribed to Whites than to Blacks in the fields studied (Tomkiewicz et al., 1998). It is argued that race elicits occupational fit perceptions, which affect leadership

perceptions through the activation of different leadership prototypes (Sy et al., 2010).

This sparks discussion about whether Black leaders would receive more favorable perceptions in the fields stereotypically represented by them. For example, African Americans have faced stereotypes and biases concerning physical fitness (Harrison & Lawrence, 2004; Sailes, 1993). Similar beliefs exist regarding the competitiveness, physical superiority, athletic ability, and mental temperament in Black athletes (Sailes, 1993). Thus, Black leaders in fields related to athletic ability or physical fitness may be perceived as more competent and effective. This argument also appears to be the same for Asian Americans as well.

Asian American Leaders

Stereotypes of Asian Americans as technically competent and their perceived fit with technical occupations may be one reason for the limited numbers of Asian Americans in business leadership positions (Korn Ferry International, 2006). According to Trytten and others (2012), positive stereotypes such as being extremely intelligent, hardworking, uncomplaining, and seeking both economic attainment and educational prestige are often projected onto many Asian Americans. This portrayal of Asian Americans stems from the Model Minority Stereotype (MMS), which describes Asian Americans as the epitome of assimilation into U.S. society, using hard work, intelligence, high educational attainment, and economic success to overcome the challenges of discrimination and recent immigration (Trytten et al., 2012).

Stereotypes about Asians being highly competent can make Asians appear threatening in the workplace, and stereotypes about Asians lacking social skills make them seem unfit for leadership (Johnson & Sy, 2016). Those who have perceived Asians as high in competence have experienced higher admiration and envy towards the group (Ho & Jackson, 2001). As a result, individuals who held stereotypical views of Asians were less likely to want to interact with or learn

more about Asians (Lin et al., 2005). As racial stereotypes may influence the number of minorities in certain fields, it is also valid to consider that occupation also plays a role between race and leadership perceptions. Given their background and achievements, one might expect Asian Americans to be overrepresented in leadership positions. However, as noted above, data suggest that advancing to leadership positions may be a significant challenge for Asian Americans (Sy et al., 2010). Thus, these stereotypes may contribute to the explanation behind the lack of Asian Americans in leadership positions. It is important to note that there is limited research in Asian Americans in the U.S. workplace.

Role of Occupation Between Race and Leadership Perceptions

As many jobs are stereotyped according to race, occupation can also play a role within race and leadership perceptions (Terpstra & Larsen, 1980). For example, Blacks received significantly higher hireability and salary assignment ratings than Whites for the Black-typed job (i.e., building custodian), whereas Whites were rated more favorably than Blacks for the White-typed job (i.e., lathe operator; Terpstra & Larsen, 1980). Thus, it is important to consider not only racial demographics but also the nature of the type of job in investigating racial biases towards leadership perceptions, hireability, and favorability. Moreover, both positive and negative stereotypes were found across race and gender groupings (Leong & Hayes, 1990). In fact, statistics suggest that Asian Americans are heavily represented in the engineering and computer science fields, tend to hold positions as mathematicians and scientists, and are less likely to hold positions in sales, production, and labor-related careers (Leong & Hayes, 1990; Sue & Kirk, 1973; Sy et al., 2010). When focusing on the Black population in 2020, almost three-quarters of the players in the National Basketball Association (NBA) were African American. In comparison just under 17% of NBA athletes were White and 2.2% were Hispanic (Gough,

2020). This statistic implies the potential existence of racial stereotypes of Blacks in athletics.

Hypothesis Development

Although racial minorities have had progress in filling out the workforce, there still appears to be a lack of minorities in top leadership positions. The percentage of board seats held by African American/Black men has increased 4.4% and 44.8% among African American/Black women between 2016 and 2018. The percentage of board seats held by Asian/Pacific Islander men has increased 16% and 30.8% among Asian/Pacific Islander women between those years as well. The data show slight increases across the years, but board representation of women and minorities is increasing at a slow rate (Wilson et al., 2019). Therefore, it is essential to continue investigating why racial minorities are held back from being promoted or hired into leadership positions so that such efforts can provide implications for workplace diversity and discrimination.

Comparing two minority groups (Asian American and Blacks) to a majority group at the same time can provide further insight towards the link between race and leadership perceptions and how occupation type may play a moderating role. The rationale behind choosing Asian Americans and Blacks as the minority groups is that over time, both groups have come to occupy a greater percentage of entry-level positions and more middle management roles (Tomkiewicz et al., 1998). Nevertheless, Asian Americans and Blacks are still less visible in top leadership positions (Sy et al., 2010). It appears that Asian American white-collar professionals are the least likely group in the United States to be promoted into management (Gee & Peck, 2018). Black professionals in 2018 held just 3.3% of all executive or senior leadership roles, which are defined as within two reporting levels of the CEO, according to the U.S. Equal Employment Opportunity Commission. More current research can bring forth implications onto better understanding of the

lack of these racial groups in leadership positions.

In this paper, it was investigated whether Asian Americans and Blacks received different leadership perceptions. To compare these two minority groups to a majority group along with different occupations, three occupation types were selected. By selecting occupations that have the potential to be stereotyped with certain racial groups, it was observed whether there were significant differences in perceptions towards racial groups in being an effective leader. For Blacks, there is a long history of theories and pseudoscience suggesting that people of African descent are superior athletes, and this stereotype still persists (e.g., Clark et al., 2014) and is somewhat true (e.g., Gough, 2020). Therefore, an athletics occupation (athletics manager) was selected to help portray this stereotype.

The sales occupation was also selected for race-occupation fit comparisons between Asian Americans and Whites because the sales position may be stereotyped to be a better fit for Whites in comparison to Asian Americans and potentially other minorities (Sy et al., 2010). In addition, anglicized-named applicants appear to receive more favorable pre-interview impressions than did ethnic-named applicants within the sales field (Watson et al., 2011). Lastly, an engineering type of position (engineering manager) was selected because Asian Americans are heavily represented in the engineering and computer science fields, and tend to hold positions as mathematicians and scientists, as described in the statistics mentioned before. Since leadership perceptions may act as a function of race-occupation fit, manipulating both race and occupation may activate specific leadership prototypes. In other words, manipulation of race and occupation may result in different expectations or perceived attributes of an ideal leader. Racial stereotypes may act as a significant factor in how race and occupation can influence leadership prototypes, which in turn may affect leadership perceptions. In this case, perceptions of an Asian American

leader may change due to the occupation they are presented with along with any stereotypes associated with this racial group. Based on these rationales, the following hypotheses were developed:

Hypothesis 1: For the athletics manager position, the effectiveness of Black leaders will be perceived better than the effectiveness of Asian Americans and White leaders.

Hypothesis 2: For the sales manager position, the effectiveness of White leaders will be perceived better than the effectiveness of Asian Americans and Black leaders.

Hypothesis 3: For the engineering manager position, the effectiveness of Asian American leaders will be perceived better than the effectiveness of Black and White leaders.

Methods

Participants

The Statistical Package for Social Sciences (SPSS) was used to analyze data. Participants were 18 years old or older. Participants were also employed and had to be present in the United States. The participants had been recruited from Amazon Mechanical Turk (MTurk), an online crowdsourcing marketplace that can be used to collect data for research purposes. For the initial 244 participants that completed the survey, a screening process took place to check if any participants had submitted more than one response, and whether participants were able to answer the manipulation check items correctly. Any responses that would misidentify the race and gender of the assigned target leader, with substantially short response times, and/or with incomplete responses were removed. After the screening process, three responses were deleted, which resulted in a total of 241 participants.

There was a near equivalent sample of male (49%) and female (50.6%) participants. The racial demographics of participants were majorly White (85.1%), 6.2% Black or African

American, 7.5% Asian, and 1.2% of participants of multiple races. Occupation type varied with professional, scientific, or technical services being the most frequent answer among participants (17.4%). Most participants (62.2%) did not hold a supervisory role position. Nearly half of the participants (45.2%) had achieved a bachelor's degree as the highest level of education attained. Tenure also ranged between .08 and 32.75 years ($M = 9.43$, $SD = 7.23$). Age of participants ranged between 23 and 78 years old ($M = 43.93$, $SD = 11.16$). Results regarding the perceived diversity of the living location of the participants varied; however, the most frequently answered range was 16-30% living diversity, which is less diverse than the national average Diversity Index (61% in 2020) according to the U.S. Census Bureau (Jensen et al., 2021). A test for normality was conducted to determine whether the sample data was normally distributed. Within the test, continuous variables such as leadership effectiveness perceptions, education, diversity, age, and tenure were examined. The results indicate that across all variables, the significance level of these variables across both types of normality tests, Kolmogorov- Smirnov and Shapiro-Wilk, were lower than the alpha level of .05. Therefore, the sample was not normally distributed (see Table 1).

Design and Procedure

A 3 by 3 independent factorial design was used in which the between-subjects variables were race (White, Black, Asian American) and occupation (athletics manager, sales manager, engineering manager). Participants were informed that the study involves making a personnel decision in a work setting and they would be evaluating a leader. Specifically, participants were given the role to appear as the target leader's subordinate in which they rate how effective the target leader may be in an occupation. For example, a participant who is assigned to a sales manager would receive the subordinate role as a salesperson. Participants were given

information about the leader (e.g., employee's race, occupation) and were asked to evaluate the leader based on a brief vignette (see Figure 1).

Participants had been randomly assigned to one of nine experimental conditions (White athletics manager, White sales manager, White engineering manager, Black athletics manager, Black sales manager, Black engineering manager, Asian American athletics manager, Asian American sales manager, Asian American engineering manager). The online survey consisted of the voluntary consent form, the vignette describing the employee from one of the nine experimental conditions, evaluation items, manipulation items, and a section that collects the demographics of the participant. The completion time for the entire survey was approximately 3-4 minutes. The participants were provided a total of 30 minutes to read the scenarios and address the questions in the survey. Once a participant had completed the entire survey, they were compensated \$.50 through MTurk.

Vignette

There was a total of nine different vignettes describing the three occupations. Occupations were compared with one another on the Occupational Information Network (O*NET) to ensure that the requirements to pursue these jobs are comparable and that they carry leader-like functions such as planning, directing, and coordinating. The race was manipulated by the variation in name (John Davis vs. DeAndre Washington vs. Tung-Sheng Wong) and the corresponding race category (White vs. Black vs. Asian American), thus creating the nine experimental conditions of race-occupation. Good race-occupation fit was assumed to be present in the White sales condition, the Black athletics condition, and the Asian American engineering condition. Each vignette intentionally provided limited information about the target leader. The specific responsibilities in the vignette varied according to the type of occupation. The design of

the vignettes is consistent with past research indicating that leadership perceptions can be elicited with such information (e.g., Chung-Herrera & Lankau, 2005; Epitropaki & Martin, 2004, 2005). An example vignette is in Figure 1 in Appendix A.

Dependent Measure

Leadership perceptions were assessed using the Global Leadership Impression (GLI) Scale (Cronshaw & Lord, 1987; Lord, 1977). The GLI consists of five main items. Sample items within these categories included questions such as, “How typical of a leader is Tung-Sheng Wong (John Davis, DeAndre Washington)?” and “To what extent does Tung-Sheng Wong (John Davis, DeAndre Washington) demonstrate leadership behaviors?” Participants responded to each item using a 5-point Likert-type scale. For example, the two examples given above were anchored at 1 (not at all) and 5 (very much). These five items were averaged to produce a composite GLI measure (coefficient $a = .87$). The GLI scale is located in Appendix A.

Manipulation Check

Manipulation checks for race and gender were conducted to examine whether participants were able to correctly identify the target leader. An example of such a question was “What is the race of Tung-Sheng Wong?” and all the races (White, Black, and Asian American) were provided for the participant to choose from. Another example question asked, “What is the gender of Tu-Sheng Wong?” and gender options (male and female) were provided for the participant to choose from.

Control Variables

Control variables were included within the demographics section and consisted of questions regarding what occupation type most closely matches the participant’s current job, whether they are in a supervisory role, and other factors regarding the participants such as race,

gender, age, tenure, education level, and the perceived diversity of their current living location.

Results

Condition Distribution

Each condition (race and job) consisted of around 25-28 participants. Across nine conditions, there are 80 (33.2%) assigned to the White (across all the jobs) condition, 81 (33.6%) assigned to the Black condition, and 80 (33.2%) assigned to the Asian condition. There are 80 (33.2%) participants in the sales (across all the races) condition, 83 (34%) participants in the athletics condition, and 78 (32.8%) participants in the engineering condition (see Table 2 in Appendix B). Participants were near evenly distributed among the race and job conditions.

Descriptive Statistics

Correlations were conducted first to examine any existing associations among the race of target leader, occupation of target leader, control variables, and leadership effectiveness perceptions. The results from this analysis indicate that leadership effectiveness perceptions from participants tended to be positive ($M = 3.88$, $SD = .71$) across all conditions (see Table 3). There were no significant correlations between the control variables and the dependent outcome leadership effectiveness perceptions. However, there were significant correlations between the control variables themselves, such as between race and education ($r = .16$, $p < .05$). Race also had a significant correlation with age ($r = -.19$, $p < .01$) and with tenure ($r = -.15$, $p < .05$). A correlation also existed between supervisory and diversity ($r = -.15$, $p < .05$), and between age and tenure ($r = .43$, $p < .01$). A positive correlation existed between race and education, indicating that non-White participants tended to have a higher level of education. A negative correlation exists between race and age, which means that non-White participants tended to be younger. A negative correlation was also present between race and tenure, which indicates that

non-White participants tended to have shorter tenure. A negative correlation exists between supervisory and diversity, meaning that those in a supervisory role are usually living in a more diverse location. The correlation matrix present in Table 4 indicates that there were no significant correlations found between leadership effectiveness and the race of the target leader ($r = .12, p > .05$), and between leadership effectiveness and the occupation of the target leader ($r = .02, p > .05$). There was also no significant correlation between race of target leader and occupation of target leader ($r = .02, p > .05$).

Hypothesis Testing

Next, in order to test all hypotheses, a two-way ANOVA was conducted to examine the effects of race of the target leader and occupation of the target leader on leadership effectiveness perceptions. The ANOVA analysis indicated there was only a statistically significant main effect of race on leadership effectiveness perceptions, $F(2,232) = 4.99, p = .01$. There was no significant main effect of occupation on leadership effectiveness perceptions, nor was there any interaction effect between race and occupation of target leaders (see Table 4). In consideration, there was no interaction effect between race and occupation of target leader; the hypothesized relationships were not supported. However, a Tukey post hoc test was conducted after to examine differences among different race-occupation pairs (see Table 6). Montgomery (2001) stated that in comparison to other post-hoc tests such as Fisher's LSD test, the Tukey method does control the overall error rate and because of this, many statisticians prefer to use it.

Hypothesis 1 stated that for the athletics manager position, the effectiveness of Black leaders will be perceived better than the effectiveness of Asian Americans and White leaders. This hypothesis was not supported. Within the athletics condition, there was a mean difference of $-.2$ ($p = .29$) between Black and Asian American target leaders and a mean difference of $-.01$ (p

=.96) between White and Black target leaders.

Hypothesis 2 stated that for the sales manager position, the effectiveness of White leaders will be perceived better than the effectiveness of Asian Americans and Black leaders.

Surprisingly, White leaders in the sales manager position were perceived as the least effective when compared to Asian American and Black leaders (see Figure 3), not supporting Hypothesis 2. The hypothesized differences between groups were significant. Within this condition, there was a significant mean difference of $-.64$ ($p = .001$) between White and Black target leaders in sales. There was also a significant means difference of $-.40$ ($p = .04$) present between White and Asian American target leaders in sales as well. A significant difference between two groups means that there is a measurable difference between the groups and how effective they were perceived as leaders. In this context, there was a measurable difference between White and Black target leaders, and in addition, between White and Asian target leaders in the sales condition.

Hypothesis 3 stated that for the engineering manager position, the effectiveness of Asian American leaders will be perceived better than the effectiveness of Black and White leaders. This hypothesis was not supported. The hypothesized difference between groups were significant. Asian Americans were not perceived as the most effective in the engineering condition; instead, Asian Americans were perceived better than White leaders but not better than Black leaders in this condition (see Figure 3). There was also a significant mean difference of $-.38$ ($p = .05$) between White and Black target leaders in engineering such that Black leaders were perceived as more effective than White leaders. In sum, there was a measurable difference between White and Black target leaders in the engineering condition.

Interestingly, among the three racial groups, the Black target leaders were significantly perceived as the most effective in two of three job conditions (sales and engineering), while

White target leaders were perceived as the lowest in all three job conditions. Overall results from the Tukey test indicated that Black and White target leaders were perceived significantly different (mean difference of .34) when assessing leadership effectiveness perceptions ($p = .005$). Black target leaders received significantly more effective leadership perceptions than White target leaders, $t(159) = -3.04$, $p = .003$, $d = -.48$, 95% CI [-.8, .17]. A plot graph (see Figure 3) was created to graph out a two-way interaction between race and leadership effectiveness differing by job type.

Lastly, although no significant correlations were observed between the dependent variable and control variables, ANCOVA was conducted to test the main and interaction effects of the condition (target leader's race and job) on leadership effectiveness perceptions, while controlling for the effects of several control variables (race, age, and tenure). ANCOVA can be useful as it has better statistical power and an improved ability to detect and estimate interactions. Table 7 in Appendix B illustrates the results of the ANCOVA analysis. The results showed that none of the control variables had a significant effect on leadership effectiveness perceptions.

Discussion

In this study, the relationship between race-occupation fit and leadership perceptions was examined by applying the implicit leadership theory towards the subordinates' belief about a racial x job prototypical leader. Occupation type was tested to measure the extent to which the racial stereotypes towards occupations influence the subordinate's perception of the target leader. Hypotheses stated that stereotypes of certain racial groups may influence the rater's belief regarding the assigned leader combined with occupational stereotypes. The findings indicate that only race had a significant main effect on leadership perceptions and that the following

hypothesized relationships were not supported. In the interest of examining the race-occupation pairs, a Tukey test was conducted to examine differences between race-occupation pairs, and three significant differences were found among the pairs (see Table 6). However, it is important to note that the examinations among different race-occupation pairs are to be interpreted with caution due to the lack of an interaction effect between race and occupation of target leader from the ANOVA.

There may be a few potential reasons behind these findings. One possibility is that leadership perceptions are influenced by people's experience, knowledge, goals, motivation, and purpose of judgment (Sy et al., 2010). According to the connectionist model of leadership categorization, information originating from various sources (individual, task-related, social context, etc.) can co-act and create "contextually sensitive leadership categories or behavioral scripts" (Lord et al., 2001). Therefore, these factors that were not actively included or manipulated in this study could have played a role in how individuals perceived the target leaders presented in the vignette. Participants were only provided a brief vignette to refer to when evaluating the target leader, and there was no direct information on the target leader's performance. Although this was done intentionally, according to Landau (1995), conditions of neutrality or lack of clarity may increase bias.

Another possibility is that participants overcompensated for their biases in rating certain groups. For example, because they understood that the study was trying to measure racial stereotypes, the participants who were assigned the minority conditions (Black and Asian American) may have attempted to "prove" that they do not have any stereotypes or that their stereotypes were not influencing their decision. And such social desirability may have led to increasing the target leaders' ratings, especially for the minority leaders. A study by Croft and

Schmader (2012) tested the hypothesis that minority students receive less critical feedback on their written work from evaluators who are primarily externally motivated to inhibit their racial biases. Results of two experiments showed that although participants provided equivalent amounts of positive feedback to both authors, they provided less negative feedback and gave higher grades to minority authors to the extent that they were externally but not internally motivated to respond without prejudice. Although subtle forms of discrimination persist (Jones et al., 2016), most people, under the context of public research, do not want to be perceived as homophobic or racist.

Another study by Palmeira and Sharifi (2020) conducted a series of 10 studies, across multiple contexts (retail banking, financial advice, and retail electronics), measures (behavioral intentions, attitudes, and actual choice) and populations (Americans, Germans, Italians, Koreans, Britons, and Canadians). They found consistent evidence that consumers react more favorably to an employee from a minority group (gay or Black) than to one from a majority group (straight or White). The study shows that, in the United States, this bias is prevalent among independents and liberals, but not among conservatives, suggesting that political ideology may play a moderating role in consumer perceptions of minority employees.

Lastly, a study by Harber (1998) tested the prediction that Whites supply more lenient feedback to Blacks than to fellow Whites. In two separate experiments, White undergraduates gave more favorable feedback on poorly written essays when the author was described as Black rather than White. The authors mentioned that out-group polarization theory may be one of several potential explanations behind evaluative lenience toward Blacks by White participants. Out-group polarization theory (Linville & Jones, 1980) has shown that people accentuate their evaluations of out-group members, exaggerating both the outsider's successes and failures. White

participants in the feedback studies did exaggerate their ratings of Blacks' written work, but not in the direction out-group polarization would predict, as Blacks were consistently reviewed more favorably than were essays supposedly written by Whites.

Overall, some research suggests that participants may have displayed a positive bias toward evaluating minority groups (Croft & Schmader, 2012; Harber, 1998; Palmeira & Sharifi, 2020). However, it is important to note that there may be potential discrepancies between how individual subordinates view minority leaders and how minority leaders are evaluated by their supervisors and treated systematically. Findings show that women and racial minorities are less likely than their White male counterparts to be promoted in the workplace (Cook & Glass, 2014; Landau, 1995; Yap & Konrad, 2009). Therefore, it is important to consider that barriers to leadership positions are more likely linked to the leadership perceptions that are formed by those in top management roles such as supervisors than those with lower decision-making power such as subordinates. It's also critical to note that all findings should be interpreted with caution due to certain limitations of the study.

Limitations

One limitation of the study was the sample size. A small sample size per condition can reduce the power of the study and increases the margin of error, which then in return can increase the probability of a Type II error occurring and decrease the generalizability. Based on the sample size of 241 with a significance level of .05 and the effect size of .075 (η^2), the power of the study comes out to be .95, which indicates the result does not show high chance of Type II error.

It is important to note that the correlations that were found between the control variables may have also influenced the results of this study. The race of the participant had significant

correlations among other demographic variables, such as age, tenure, and education. In sum, the correlations indicated that the majority racial group of the sample, White participants, tended to be older, have longer tenure, and attain lower levels of education in comparison to other racial groups. A test for normality also indicated that the sample quality was skewed regarding the age, tenure, education, diversity, and leadership effectiveness perceptions of participants. This sample quality may pose limitations when compared to the current demographic statistics of the U.S. population.

According to the U.S. 2020 Census, although the White population remained the largest race or ethnic group in the United States, with 204.3 million people identifying as White alone, the White alone population has decreased by 8.6% since 2010. The multiracial population has changed considerably from 9 million people in 2010 to 33.8 million people in 2020 (Jones et al., 2021). Therefore, considering that the current study had mostly White participants (85.1%), this study sample is most likely not representative of the current racial demographic in the United States. Moreover, according to the population estimates in 2019 from the U.S. Census Bureau, Millennials have surpassed Baby Boomers as the nation's largest living adult generation (Fry, 2020). Millennials, defined as ages 23 to 38 in 2019, numbered 72.1 million, and Boomers (ages 55 to 73) numbered 71.6 million. Generation X (ages 39 to 54) numbered 65.2 million and is projected to pass the Boomers in population by 2028. The average age of this study's sample is 43.93 years old, which can be considered among Generation X. Therefore, a larger and more diverse age sample may provide more representative findings of the current U.S. population.

Another potential limitation of the study is MTurk's data quality. There is empirical evidence of a substantial decrease in data quality (Chmielewski & Kucker, 2020; Kennedy et al., 2020; Peer et al., 2014). According to Chmielewski and Kucker (2020), there are significant

increases in participants failing response validity indicators, decreases in reliability and validity of a widely used personality measure, and failures to replicate well-established findings.

Regarding the type of participants, the sample (MTurk Workers) may not be representative of the U.S. population. Research assessing characteristics of MTurk workers as social science research participants concludes that workers represent a large and diverse population, yet MTurk workers are a convenience sample (Paolacci & Chandler, 2014).

Future Research

Future researchers can repeat the design with a higher sample size to increase the generalizability of the study and increase the probability of attaining more conclusive findings.

In addition to increasing the sample size, a more diverse group of participants should be collected for a future study. The current study had mostly White participants (85.1%), which may have influenced the results of the study; therefore, collecting a more diverse sample of participants may bring more generalizable findings. To address any conditions of neutrality or lack of clarity that may have contributed to any biases, vignettes can be further enhanced by adding more detail about the target leader's work experience, performance evaluation, and a list of tasks or responsibilities.

Future research could also incorporate studying more attributes of the rater. Studying factors such as the rater's knowledge, goals, motivation, experience, industry-specific effects, work experience, and knowledge of occupations can provide useful data on whether those factors influence the race-occupation leadership relationship (Sy et al., 2010). Research has shown that situational factors can determine patterns of prototype activation and perceived leader effectiveness (Gündemir et al., 2014). Additionally, analyzing a specific attribute such as a participant's political ideology may provide insight into whether political ideology plays a

moderating role in forming perceptions. Lastly, to address the discrepancy between how a subordinate may perceive a target leader versus how a supervisor may perceive a target leader, a future study can be framed towards having supervisors rate target leaders. For example, a more specific sample type can be collected in which the participants have been or are currently in a supervisory role.

Practical Implications

The study appears to contrast previous research on race-occupation fit and how this linkage influences leadership perceptions or hireability. Although the race of the leader was found as having a significant main effect on leadership effectiveness perceptions, the results did not align with the racial stereotypes. Tukey's test indicates that Black target leaders were perceived as the most effective in two of three occupation conditions (sales and engineering) when in comparison to Asian American and White target leaders. It should be emphasized that the findings of this study should be interpreted with caution due to limitations and because these findings do not reflect the racial stereotypes and glass ceiling that minorities still experience to this day (Johnson & Sy, 2016; Korn Ferry International, 2006; Leong & Hayes, 1990; Rosette et al., 2008; Sue & Kirk, 1973; Sy et al., 2010; Terpstra & Larsen, 1980; Tomkiewicz et al., 1998). Whether this discrepancy truly represents the difference between the macro and micro-level of racial stereotypes and perceptions warrants further investigation. Regardless, this study was a meaningful attempt in investigating leadership perceptions as a function of race-occupation fit. In addition, the study attempted to identify present barriers to hiring and promotion of minorities into leadership positions, especially when in consideration of the lack of minority groups such as Asian Americans and Blacks in leadership roles in comparison to Whites.

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Appendix A - Vignette and Scale**Figure 1***Vignette*

Tung-Sheng Wong (John Davis, DeAndre Washington), a 31-year-old Asian American (White, Black) male, graduated from University of Arizona as a Marketing (Engineering, Sports Management) major. He has been employed in the same U.S.-based organization for five years as a Sales Manager (Athletics Manager, Engineering Manager). His responsibilities include managing customer complaints, providing consultation regarding the company's services, and troubleshooting customer problems. While he sometimes has problems with certain co-workers, he is generally good tempered.

Figure 2*Global Leadership Impression (GLI) Scale*

1. the amount of leadership the ratee exhibited
2. how willing the rater would be to choose the ratee as formal leader
3. how typical the ratee was of a leader
4. to what extent the ratee engaged in leader behavior
5. the degree to which the ratee fit their image of a leader.

Appendix B - Results Tables

Table 1

<i>Test for Normality</i>		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
Variable	Statistic	df	Sig.	Statistic	df	Sig.	
Age	.1	241	<.001	.97	241	<.001	
Tenure	.11	241	<.001	.92	241	<.001	
Education	.28	241	<.001	.89	241	<.001	
Diversity	.25	241	<.001	.89	241	<.001	
Leadership Effectiveness	.16	241	<.001	.95	241	<.001	

a. Lilliefors

Significance Correction

Note. $N=241$. df indicates degrees of freedom. Diversity refers to the diversity of the participant's current living location. Leadership Effectiveness (composite of GLI measure) has a coefficient ($a = .87$).

Table 2

Frequencies of Conditions

Condition	<i>N</i>	<i>Percent</i>	<i>Leadership Effectiveness</i>	
			<i>M</i>	<i>SD</i>
Asian-Sales	26	10.8	3.89	.66
Black-Sales	27	11.2	4.14	.72
White-Sales	27	11.2	3.50	.67
Asian-Athletics	28	11.6	4.04	.54
Black-Athletics	27	11.2	3.84	.70
White-Athletics	28	11.6	3.84	.66
Asian-Engineering	26	10.8	3.76	.76
Black-Engineering	27	11.2	4.13	.66
White-Engineering	25	10.4	3.74	.87
Total	241	100		

Note. n indicates the number of participants. Across nine conditions, there are 80 (33.2%) White, 81 (33.6%) Black, and 80 (33.2%) Asian. There are 80 (33.2%) participants in the sales condition, 83 (34%) participants in the athletics condition, and 78 (32.8%) participants in the engineering condition.

Table 3*Correlation Matrix of Variables*

Variables	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Leadership Effectiveness	241	3.88	.71		-.08	-.03	-.04	-.04	-.02	-.04	.05	.06	.05
2. Race & Gender Manipulation Items	241	1.98	.16			.01	.03	-.02	-.02	-.08	.00	-.05	-.03
3. Gender	241	1.51	.51				-.01	-.06	.06	-.08	-.11	.09	.10
4. Race	241	1.35	.96					.14*	.01	.16*	-.01	-.19**	-.15*
5. Occupation	241	11.79	5.47						.04	-.07	-.02	-.11	-.10
6. Supervisory	241	1.62	.49							-.06	-.15*	-.02	-.03
7. Education	241	4.67	1.28								.05	-.02	-.01
8. Diversity	241	3.33	1.40									.00	-.03
9. Age	241	43.93	11.16										.43**
10. Tenure	241	9.43	7.23										

Note. *N*=241. **Correlation is significant at .01 level (2-tailed), *Correlation is significant at .05 level (2-tailed). *M* and *SD* are used to indicate mean and standard deviation. Supervisory refers to whether the participant is in a supervisor role or not. Diversity refers to the diversity of the participant's current living location. Leadership Effectiveness (composite of GLI measure) has a coefficient (*a* = .87).

Table 4*Correlation Matrix Between Leadership Effectiveness Perceptions, Race of Target Leader, and Occupation of Target Leader*

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Leadership Effectiveness	3.88	.71		.12	.02
2. Leader Race	2	.82			.02
3. Leader Occupation	2	.81			

Note. *N* = 241. **Correlation is significant at .01 level (2-tailed), *Correlation is significant at .05 level (2-tailed). *M* and *SD* are used to indicate mean and standard deviation.

Table 5*ANOVA*

Source	Sum of Squares	df	Mean Square	<i>F</i>	Sig.
Corrected Model	9.10a	8	1.14	2.34	.02
Intercept	3618.01	1	3818.01	7442.13	0
Race of Target Leader	4.85	2	2.42	4.99	.01
Occupation of Target Leader	.17	2	.09	.18	.84
Race of Target Leader * Occupation of Target Leader	4.08	4	1.02	2.10	.08
Error	112.79	232	.49		
Total	3744.72	241			
Corrected Total	121.88	240			

a. R Squared = .075 (Adjusted R Squared = .043)

Note. df indicates degrees of freedom. *F* indicates the *F*-value.

Table 6*Tukey Test*

Occupation of Target Leader	Race of Target Leaders	Mean Difference	Std. Error	Sig.	95% Confidence Interval - Lower Bound	95% Confidence Interval - Upper Bound
Sales	White and Black	-.64*	.19	.001	-1.02	-.27
Sales	White and Asian	-.40*	.19	.04	-.77	-.02
Sales	Black and Asian	.25	.19	.2	-.13	.63
Athletics	White and Black	-.01	.19	.96	-.38	.36
Athletics	White and Asian	-.21	.19	.27	-.58	.16
Athletics	Black and Asian	-.2	.19	.29	-.57	.17
Engineering	White and Black	-.38*	.19	.05	-.76	-.001
Engineering	White and Asian	-.02	.19	.92	-.4	.36
Engineering	Black and Asian	.36	.19	.06	-.01	.74

Note. Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

Table 7*ANCOVA*

Source	Sum of Squares	df	Mean Square	<i>F</i>	Sig.
Corrected Model	9.50a	11	.86	1.76	.06
Intercept	159.26	1	159.26	324.52	0
Race	0.24	1	.24	.50	.48
Age	0.05	1	.05	.096	.76
Tenure	0.003	1	.003	.01	.94
Condition	8.90	8	1.11	2.27	.02
Error	112.38	229	.49		
Total	3744.72	241			
Corrected Total	121.88	240			

a. R Squared = .078 (Adjusted R Squared = .034)

Note. df indicates degrees of freedom. F indicates the f-value.

Figure 3

Two-way Interaction of Race and Leadership Effectiveness Perceptions differing by Job Type

