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Andrew Douglas Hale
College of William and Mary

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The Effects of Race, Gender, and Clothing Style on Stereotype Activation

A thesis submitted in partial fulfillment of the requirement
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By

Andrew Douglas Hale

Accepted for Honors

Cheryl L. Dickter

Jeanine K. Stefanucci

Jason A. Danner

Williamsburg, VA
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Running Head: PERCEPTIONS REGARDING RACE, GENDER, AND CLOTHING

The Effects of Race, Gender, and Clothing Style on Stereotype Activation

Andrew Hale

College of William and Mary

Abstract

The primary aim of this study was to investigate the effects of race, gender, and clothing style on stereotype activation. A priming study was designed to determine if the categorization of stereotypic words (as determined by reaction time) would differ as a function of the presentation of prime pictures displaying social targets who differed by race, gender, and clothing style. Forty undergraduate participants took part in the study; their task was to respond with a button press as to whether the word presented after the prime was a positive or negative word. The primary hypothesis that race, gender, and clothing style would each affect the speed of stereotypical word categorization was not supported by the behavioral data. However, there was some evidence that participants' reaction times were affected by the type of word presented after the primes. Additionally, it was expected that negative words would be categorized faster following the presentation of target individuals wearing casual clothing as compared to more formal clothing; results provided support for this hypothesis with faster reaction times found for more professional clothing sets. Overall, hypotheses were partially supported, although several limitations of the study are noted. Implications for the stereotyping literature as well as applications for business settings are discussed.

The Effects of Race, Gender, and Clothing Style on Stereotype Activation

For many years people have thought that the clothing one wears has a serious effect upon how they are perceived. Understanding how one's outward appearance shapes the perceptions others hold of them can be incredibly useful for people in all points of life, from interviewing for a job to making a good impression on a date. Various phrases and slang across the vernacular indicate that people are always judged to an extent on face value. "You are what you wear" is just one phrase that shows how ingrained this logic is in the collective consciousness of society. In a series of interviews with women, Guy and Banim (2000) discuss the importance of clothing on a woman's sense of personal identity while still maintaining a sense of appropriateness in various circumstances. Understanding how clothing plays a role in person perception has been a recent focus of psychological research, and can have implications for various social situations involving impression formation.

Probably the biggest area of impact that this research may influence is the business world. In recent years, research on clothing has focused on perceptions of professionalism and other work-related traits in a job interview setting. This research has examined the crucial first impressions that clothing may cause during a job interview which, practically, could be the difference between landing a job and another job search. Willis and Todorov (2006) investigated the importance of first impressions in their study. Results indicated that first impressions crafted in one-tenth of a second correlate strongly with perceptions made in the absence of time constraints; furthermore, they found that increasing the time to analyze the subject to half of a second did not significantly change the correlation of the variables under examination (including attractiveness, competence, and trustworthiness). In fact, the only thing that continued to increase without time constraints was the confidence that their perceptions were right at the beginning. Among

professional workers from various fields, a study found that 81% rated appearance of a professional employee as “very important” to the evaluation of the product or service to potential customers or clients (Easterling, Leslie, & Jones, 1992). Thus, first impressions and appearance are important regardless of whether they are accurate or predict work performance.

Gender Stereotypes and the Workplace

Social psychologists agree that social perceivers automatically categorize people into visually perceptible social groups, namely race, gender, and age (Blair et al., 2002). Research has shown that social categorization, or the grouping of people into mental categories, is strongly linked to the activation of stereotypes; that is, stereotypes are activated simply by perceiving physical attributes of social groups (Blair et al., 2002). Furthermore, Devine (1989) showed that people do not have to be high in prejudice against a particular group to have stereotypes automatically activated about the group. Rather, all social perceivers, regardless of individual levels of prejudice, automatically activate learned stereotypes as a result of social categorization.

As reviewed in the study by Blair et al., research has demonstrated that gender is one of the categories that captures the attention of social perceivers (Zarate & Smith, 1990). Studies have shown that categorizing someone by gender automatically activates gender stereotypes that range from domains of intelligence, such as the alleged gap between math and verbal skills (Nguyen & Ryan, 2008), to underlying personality differences. Most gender stereotypes indicate that women and men are separated into different trait domains, with men considered to have more “competent” values such as competitiveness, independence, and ambitiousness, whereas women fall into the “warmth and expressiveness cluster” that includes gentleness, interest in art, and sensitivity to emotions (Broverman et al., 1972). Various studies have shown that there are gender differences in self-evaluations, with women rating themselves higher on average on agreeableness and the

emotional stability/neuroticism scale than men (Costa et al., 2001; Goodwin & Gotlib 2004).

Additionally, these findings have been shown to replicate across cultures (McCrae et al., 2005).

Despite their integration into the workplace, recent research shows that perceivers still have a negative perception of women in the workplace. For example, men tend to be judged as being significantly more associated with “business” words such as ambition, leadership ability, and competitiveness than women (Prentice & Carranza, 2002). While men are often seen as powerful in a business setting, Cuddy et al. (2004) showed that women in the workplace are more likely to be perceived as less competent than men, especially when they reported having children. In this study, however, women were rated as “warmer” when they had children, although this is not necessarily a desirable trait in the business world. This shows that even when women are able to overcome the negative perception of their competence in the workplace they pay a penalty for that respect in another domain, whereas men do not have this difficulty.

Recent studies have examined how gender may interact with clothing style in the workplace. Glick et al. (2005) found that women who dressed in an attractive manner, or “sexy,” at work were not thought of as less competent if they occupied a low prestige job such as a secretary, but if they were in a more powerful job such as in management then dressing in an attractive manner damaged their perceived competence. Even when women are considered to be competent, they receive negative evaluations because of that competence, for literature indicates that women are often perceived as either “warm” or “competent,” but not both (Cuddy et al., 2004). Another study investigated how clothing style and gender affected the perceptions of therapists; results indicated that formal clothing was viewed more favorably than casual clothing and that, overall, females were viewed more favorably than males (Dacy & Brodsky, 1992). Additionally, while it was not found that these first impressions translated into a markedly different experience with the

therapist, these first impressions significantly impacted whether the client would come back to the therapist. A potential cause for the preference for female therapists could be perceptions about women being higher in emotional stability/neuroticism (Chapman et al., 2007).

Racial Stereotypes of African-Americans

Much social psychological research has investigated negative and positive stereotypes about African-Americans. Research has indicated that the content of these stereotypes has only changed slightly over the decades. A study by Devine and Elliot in 1995 indicates that negative stereotypes of African-Americans such as laziness and unintelligence are still pervasive and have not changed much, and that most of the contemporary stereotypes about African-Americans are still largely negative in nature. While research also indicates that there exist a number of positive stereotypes about African-Americans, such as perceptions of exceptional ability in athletics and musical talent, they remain a smaller list of perceptions, and are very different in nature from positive perceptions of other racial groups, such as how African-Americans are “athletic” but Caucasians are “smart” (Czopp & Monteith, 2006; Brigham, 1973).

These stereotypes are so pervasive that activation of the negative stereotypes that exist about African-Americans has been shown to affect the perceptions of group members. It has been shown that Caucasians are more likely to characterize their own race well and African-Americans negatively and vice-versa (Decuzzi et al., 2006). This phenomenon can be seen even in young children, and it is clear that these stereotypes of other races are pervasive and ingrained at an early age, in the case of the Brigham article (1973), significant effects were seen in the fourth grade in terms of how races viewed each other positively and negatively. His findings indicated that even children displayed typical judgments of racial stereotypes, attributing “intelligent” and “weak” to Caucasian children, and “hostile, athletic,” and “sense of rhythm” to African-Americans.

Clothing and Person Perception

Recent literature has begun to show how important clothing can be in perceptions of others in terms of workplace perceptions and personality. Morris, Gorham, Cohen, and Huffman (1996) showed that teaching assistants who were placed in three different clothing sets were perceived differently on measures of competence and sociability by the students, indicating that clothing can alter person perception. In this study, targets who were in less formal clothing sets were perceived as less competent but were more likely to be viewed as social whereas those who were dressed in more formal wear were thought of as more intelligent and competent but were not seen to be as interesting as those in the less formal conditions.

In addition to clothing, gender has also been found to play a role in person perception in the workplace. For example, Morris et al. (1996) found that women who wore formal clothing were not rated as significantly more competent than those in the semi-formal condition, but there was a clear distinction between the male groups under the same circumstances. That is, males were rated as significantly more competent as the degree of formal wear increased in each condition, without any kind of ceiling effect as was seen in the women's data; women were only seen as increasing in competence up to the semi-formal condition, but not beyond that. This shows that the effect that clothing has on perceptions differs greatly between men and women.

The Current Experiment

Taken together, the research reviewed above indicates that there a variety of different stereotypes that are automatically activated when perceiving men and women of different races. Additionally, clothing has been shown to be another factor that affects the perception of competence in target individuals, something of importance in the workplace. It has also been seen that women have typically been stereotyped as inferior to males in the workplace. Racial differences could be found in

the workplace as well, as African-Americans have been thought of as being “lazy” and “violent” as opposed to traits such as “intelligent” and “ambitious,” values attributed to Caucasians that no doubt would help them make a good first impression in a business setting.

Although research has examined the effects of clothing, race and gender on person perception, there have been few studies investigating how these three factors work together. In priming experiments, reaction time (RT) experimentation has become an important staple as it can be used to directly observe the automatic processes of stereotype activation before the participant has an opportunity to enact a conscious reaction strategy. Neely (1977) indicates that the maximum length of time to prime a stimulus without overriding the automatic processes is around 500 milliseconds (ms), and that controlled strategies can be used after that point. Many studies, particularly studies involving race, have used RT as an index of automatic stereotype activation. For example, Correll et al. (2007) demonstrated how social perceivers (including a sample of police officers) are faster to react to African-American targets when they are shown in the “gun” condition than without, and these times were faster than reactions to Caucasian targets with guns. Reaction time studies have demonstrated time and again that stereotype activation is an automatic process and RT is a good tool to measure the automatic association that perceivers have developed.

From this knowledge it remains to be seen whether or not these conditions will have a moderating effect between the differing conditions and whether this will be seen by comparing within-subject reaction time data. It could be that African-Americans will be perceived as less intelligent in the casual condition as evidenced by a slow RT, and this could result in a larger decrease in RT between clothing sets than for Caucasians.

These findings leave open the question of how much clothing affects the social perceptions that others form, especially in a location such as a workplace, where what one wears is constantly on

display to coworkers and employers and might affect such things as job advancement. This study will investigate the various perceptions that are caused or changed due to three different clothing conditions, two race conditions, and gender. The use of three clothing conditions is due to previous research (Morris et al., 1996) that has shown clear differences in a three clothing style format. Beyond simple personality perceptions and clothing, the investigation will look at how these variables might moderate the effect of stereotypes based off of clothing and other factors and how they might affect workplace values.

In this experiment, participants were primed with photos under a variety of conditions, and were asked to react to positive and negative words that were either racially based or business-related and to accurately identify whether they were positive or negative words. The differences in reaction times will then be analyzed to identify potential evidence of sexism, racism, and how clothing might affect these perceptions. The independent variables for this experiment were gender, clothing (casual, semi-professional, and professional), and race (African-American and Caucasian). The primary hypothesis is that there will be greater reaction time differences between African-Americans and Caucasians as a function of the different clothing conditions and the words to which they react, with Caucasian models and "Caucasian" words receiving faster reaction times along with African-Americans and "African-American" words. A secondary hypothesis is that positive words will have slower RTs with casual clothes than formal clothing and negative words will have faster RTs with casual clothing than formal clothing. It was also hypothesized that gender would be a moderating variable, with the difference between reaction times for women differing from men as a function of clothing condition, especially in relation to some of the business-related words, as some of their values are more gender-stereotyped for men than women.

Method

Participants

Forty undergraduate psychology students (11 men and 29 women) taking an introductory-level course participated in the experiment. The participants were recruited through an online system and were granted partial credit towards their introductory course research participation requirements.

Materials

Four computers were used in the course of the experiment. These computers were located in the same room and were of the same make and model (Dell desktops with Windows XP operating software). These computers were set up in the same room but each computer was located in a quarter each of a square formation with a divider between each section to ensure that participants were not able to see one another in the instances when more than one participant was in an experiment session. Each computer had the stimulus presentation software, E-Prime, which was used to program and run the experiment. Participants used mechanical pencils that were provided through the course of the experiment when writing utensils were required.

Twenty-four photographs of targets were used for the priming experiment. Each target was asked to maintain a neutral expression and body language and was situated in front of neutral, white backgrounds. Once collected, these photographs were resized to approximate one another and were transformed to black and white in order to control for any effect that color might have on perceptions of the targets (Vrij, 2007, Frank & Gilovich 1988). A pretest was conducted to judge the level of attractiveness of the models to establish that there were no differences across conditions. Twenty-four conditions were created, eight different models (two each for Caucasian

male and female, and African-American male and female), and three clothing conditions (casual, semi-professional, and professional).

The words chosen to be primes were both positive and negative stereotypes associated with each of the different groups in previous studies (Devine & Elliot, 1995). Overall, there were 6 African-American (e.g., lazy, athletic), 6 Caucasian (e.g., weak, intelligent), and 10 business words (e.g., unoriginal, motivated, see Appendix A for a list of all words).

A demographics form was also used to assess basic information such as participant gender and race. Additionally, this questionnaire assessed suspicion as to the true purpose of the study, as well as familiarity with any of the targets in the stimulus pictures.

Procedure

Participants arrived at the experiment in groups of 1-4 people. They first read and signed the consent form (Appendix B), and were then seated at computer terminals. Participants then were read the briefing statement (Appendix C) that explained the instructions for the study. Participants were told that the purpose of the experiment was to examine priming and perceptions; the purpose was kept vague in order to ensure that participants' results would not be affected by expectations. At this time, participants were able to ask questions and were left alone to complete the priming task on the computer.

The introduction to the program repeated the instructions and instructed participants to press one key with one hand when they viewed a positive word and another key with the other hand when they viewed a negative word. The hand that was assigned for each condition was counter-balanced across participants. Participants completed 528 trials over the course of the experiment. The number of trials was the product of the 24 different target conditions (8 targets multiplied by their three clothing conditions) and the 22 words used. Each condition was used in

one trial in the experiment. The word and picture pairings were randomly generated to eliminate concern about sequence as a potential factor. Each trial consisted of one of the photographs of a model presented on the screen for 400 ms, after which the target word was presented for 1000 Ms. Participants pressed either the “x” or the “m” keys to indicate whether the word was positive or negative. Two versions of the experiment were used, one with “x” as negative and one as positive, with some of the trials run with each version of the experiment. The inter-trial interval was 1500ms. At the end of the trials a message was displayed, instructing participants that they had completed the reaction time section of the experiment. They were then instructed to complete the demographics form. Participants were thanked for their time, read the debriefing statement (Appendix D), and were dismissed. The experiment took approximately half an hour to complete.

Results

Of the 40 participants, it was necessary to exclude the data of seven from the analysis for various reasons. Three participants did not follow instructions, (i.e., they watched the photos without responding). The remaining four were deleted because of extremely high error rates. Therefore, the data of 33 participants (7 males, 26 females) were used in the analyses.

For the reaction time (RT) data, only trials in which participants correctly identified the valence of the target words were included in analyses. Furthermore, for each participant, only those RTs that fell within 3 standards deviations of the mean were included in the analyses.

Mean RTs were computed for each participant across each condition, and these RTs were submitted to a 2 (prime race: African-American or Caucasian) x 2 (prime gender: male or female) x 3 (prime clothing: casual, moderate, business) x 6 (word type: positive African-American, negative African-American, positive Caucasian, negative Caucasian, positive business, negative business) repeated measures analysis of variance (ANOVA). Analyses revealed that there were no

significant effects related to the hypotheses. Surprisingly, however, there was a main effect for word type ($F(2,26) = 6.170, p < .001, \epsilon^2 = 0.186$). Examination of the means indicated that the fastest RTs were found for trials with negative African-American stereotypes ($M = 633.33, SD = 18.03$) and negative Caucasian stereotypes ($M = 637.74, SD = 17.04$). The slowest RTs were in response to negative business words ($M = 667.07, SD = 19.97$), whereas RTs for positive African-American words ($M = 640.17, SD = 15.66$), positive business words ($M = 652.68, SD = 16.59$), and positive Caucasian words ($M = 653.57, SD = 16.61$) were in between (Figure 1).

Although not an explicit hypothesis, a second ANOVA was then conducted to examine participant gender as a potential between-subject variable. The data were subjected to a 2 (prime race: African-America or Caucasian) x 2 (target gender: male or female) x 3 (prime clothing: casual, moderate, business) x 3 (word type: African-American, Business, or Caucasian) x 2 (word valence: negative or positive) x 2 (participant gender, male or female) repeated measures ANOVA. A main effect was found for word type ($F(2, 26) = 11.810, p < .001, \epsilon^2 = 0.312$), such that business type words were seen to have much slower RTs ($M = 662.77, SD = 20.95$) than either the “African-American” ($M = 642.56, SD = 19.28$) or “Caucasian” ($M = 644.37, SD = 19.27$) words. A significant interaction was also found for the clothing x valence interaction ($F(2, 52) = 3.794, p < .05, \epsilon^2 = 0.127$). This interacted in such a way that RTs for positive words were faster as the clothing condition went from casual to professional. Similarly, RTs for negative words slowed with increasingly formal wear. Additionally, there was an unexpected word type x participant gender interaction ($F(2, 26) = 4.797, p < .05, \epsilon^2 = 0.156$), and a significant race x participant gender x word valence interaction ($F(1, 26) = 4.719, p < .05, \epsilon^2 = 0.154$). Finally, there was another unexpected word type x word valence interaction ($F(2, 52) = 4.980, p < .01, \epsilon^2 = 0.161$).

A separate analysis was also run comparing the two forms of experiments versus one another (one with the right hand response as positive and the other with the left hand response as positive), but it was found that there were no significant differences due to this condition. Thus, this factor was left out of any further analysis.

Additionally, in the final data set there were 18 blank data slots (sections whereby a participant did not respond correctly to any of the trials in a particular condition, either by incorrectly identifying the word as positive or negative or by taking too long to respond). Of those 18, 14 were racially coded entrees (word sets that were either positive or negative stereotypes that are considered either Caucasian or African-American stereotypes), and 12 were for the positive “African-American word” condition. Of those, 4 were missed against African-American targets and 8 missed against Caucasian targets. Due to the experiment being reaction based, it is possible that some of those misses occurred because participants did not react fast enough (2 seconds was the maximum allowed). Though some sets were not completed because of this, it is important that a time limit was set so as to get first impressions and not considered responses.

Discussion

The primary aim of the study was to investigate the effects of race, gender, and clothing style on stereotype activation. Specifically, a priming study was designed to measure potential differences in reaction time to stereotypical words presented after individuals (primes) who differed by race, gender, and clothing style. On a series of trials, participants responded with a button press to indicate whether the word presented after the prime was a positive or negative word. It was hypothesized that reaction times (RTs) would be faster for stimuli and target words that were stereotypically congruent on race, such as “African-American” words with primed stimuli of African-American targets. Furthermore, it was expected that clothing would act as a

moderating variable, causing slower RTs when more formal clothing would be paired with negative words. Finally, based on previous research indicating that person perception processes might affect interactions between social categories and clothing style (Morris et al., 1996), another primary hypothesis was that race, gender, and clothing style together would affect the speed of stereotypical word categorization. That is, a three-way interaction between these variables was expected to be seen in reaction time.

Although the results from this experiment indicate that there were no strong effects that directly point to either racism or sexism, there are several findings that raise questions concerning the validity of the experiment. First of all, RTs for racially based words did not differ as a function of word condition. This piece of information is troubling considering the large literature that has consistently shown quicker RTs to racially stereotype-congruent trials with similar priming paradigms (e.g., Devine, 1989; Devine & Elliot, 1995; Czopp & Monteith, 2006; Brigham, 1973). The fact that RT in this study did not differ decisively as a result of race-compatibility raises serious concerns about the validity of the experiment. One possible explanation for these findings could be that the sample was selected from undergraduate college students from one of the top public schools in the country, and the participants were non-prejudiced individuals. However, this is unlikely given that most research is conducted with similar samples at similar locations, and that low-prejudiced participants typically show similar patterns of responses as high-prejudiced participants to African-American targets in priming paradigms (e.g., Devine, 1989). Another possibility is that the salience of race was diluted in this study by using photographs that showed the entire body and does not simply show a picture of a face as in most priming studies. Due to this aspect of the experiment, it is possible that race does not become as salient as other factors,

such as clothing or gender. However, there was a modest effect for target race X target gender X word valence that indicates some possible evidence of racial bias against African-American males.

Another surprising finding is the lack of an interaction of gender with the other variables. Previous studies have shown evidence of gender as moderating variable in terms of perceptions and clothing conditions. In the Morris et al. (1996) experiment it was found that men were found to have roughly the same value of interest in the lecture presented in the course of the experiment across the semi-professional and casual condition, with the most formal set receiving the lowest rating for an interesting lecture. However, for women the semi-casual attire received the lowest rating and the casual set had the highest rating in that ranking.

However, despite this surprising lack of racial or gender-based findings, there are some interesting trends that deserve consideration. In the analysis of the race x target gender x valence interaction, it was seen that African-American males had a much faster negative RT than Caucasian males, showing limited support for racial bias (Figure 2). However, this finding was less clear in the female condition, as the results inverted the trend seen with the males though it cannot be determined if this is an interaction effect due to a combination of gender and race. Despite the fact that RT did not differ as a function of word condition, there was some support for racial bias. Examination of the RT means for each condition revealed that the African-American male -"African-American negative" condition had three of the five fastest reactions times. This pattern, while not statistically significant, still shows some evidence that participants were aware of the race of the primed targets, and that these targets activated the stereotypes associated with this group. This trend is consistent with a vast social cognition literature that has investigated the automatic negative stereotypes that are activated when viewing an African-American target (Devine, 1989; Devine & Elliot, 1995).

When the data were examined using participant gender as a between subjects variable, some other trends appeared. One such trend was a main effect for clothing in which it was seen that women participants displayed a much faster RT than men in the casual condition, and this gap lessened into the formal condition. Despite the lack of conclusive findings concerning race or gender, it is important to note that the valence x clothing interaction proved significant. This interaction showed a decrease in RT for positive words as clothing conditions became more formal, while the opposite pattern was observed for negative words (Figure 3). This supports the design run by Morris et al. (1996) wherein they found that higher levels of formal dress corresponded with higher levels of perceived competence, a positive trait. Consistent with previous studies, faster RTs were seen in conjunction with positive words and more professional clothing. When this effect was joined with race, an interesting effect appeared, as African-Americans RTs followed the pattern laid above, but Caucasians inverted the trend in the professional clothing set. For Caucasians, positive RTs decreased from casual to semi-professional conditions while negative RTs rose, but this trend reversed from the semi-professional to the professional condition, something that did not occur in either the average trend or the African-American interaction. Ultimately, this effect was not predicted and it is unclear what the cause of it was.

Another finding that could prove of importance in future RT studies was the significant finding for word type (“African-American,” business, and “Caucasian”). This finding indicated that only business words had a significantly different RT than either of the racially coded word sets. This could indicate several things, one of which is that business words are harder to interpret than racially based words and are therefore difficult to determine whether they are positive or negative, thusly slowing down their RT. These findings were not made clearer by the interaction

of word type and valence, race x target gender x word type, or word x participant gender interactions, all of which showed similar trends with business words being slower than other sets. These un-hypothesized findings have unclear implications for future use of business type words in RT studies, though a possible cause could be due to word length and the use of words that were not pre-tested for RT priming studies.

As briefly mentioned earlier, there were also conditions for some participants in which there were missing data; that is, the participant had incorrectly categorized all words associated with that type of trial. Although this varied by participant, examining potential trends with the missing data could perhaps lead to some interesting insights. One possible trend that was found involved missed data entries. Out of the data sets used, there were 18 missed entries, 4 of which involved business sets and 14 involved racially coded word set. Of those 14 missed, 12 were in the “positive African-American” word condition, and 8 were against Caucasian targets. While just a trend, this might show some evidence of stereotypical priming behavior since more of the misses came against racial targets of another race. Another small trend was that in the business sets, 2 negative conditions were missed against Caucasian targets and 2 were missed against African-American targets. This trend might indicate that positive business words are more stereotypically thought of as Caucasian stereotypes where the negative words might be more thought of as African-American stereotypes, but this is only a small trend. However, it is important to not interpret these findings as indicative of anything, due to the fact that they are not statistically significant patterns.

There are also some limitations and experimental flaws that may have been responsible for the relative lack of findings in the current study. One such flaw was in the creation of the word sets. The business words were meant to be created so as not to overlap with the racially-

stereotyped words as much as possible, but there were cases where the words that were crafted could be seen to be synonyms to other words in another set (“Caucasian positive” intelligent and “business positive” bright) and cases where a word from one set could be seen to belong to another set just as easily (“Caucasian positive” ambitious could be argued to belong under “businesses positive” as well). Furthermore, there was one word that overlapped with two separate conditions. Specifically, the word “greedy” was appropriate for both the “business negative” and the “Caucasian negative” sets. Although this may have influenced the results, there were only a small number of words that could have been applicable to more than one condition.

Another limitation of the present study was that the stimuli that served as primes were not ideal. Specifically, although care was taken to ensure that there was as much control as possible over extraneous factors, the photographs themselves did vary on several dimensions. First, although all models were instructed to portray a neutral facial expression, there was slight variation from photograph to photograph. Secondly, the models wore their own clothes and the women were given their own discretion as to what they considered to be “casual, semi-professional, and professional,” which meant that there was a degree of variability in that condition because of the ambiguous nature and the choices that women could wear to satisfy that condition. They were asked to use their own clothing partially to get a variety of different clothes, but also because it would have been hard to have gotten clothes to fit the models asked as well. Aside from better controlling for target attractiveness in the future, creating the target photographs against a uniform background in all conditions and going back to change photos that have minor defects are both small changes that could be done to help ensure that small variables did not threaten the overall design. In regards to the background, while the photos were all taken in front of a form of white wall, there were small differences in each location, such as white brick in one location. Future

studies should include photos taken in front of the same backdrop. Small defects in photos included small variations in pose, facial expression, and other forms of body language, as some participants listed on their demographic form that they thought the experiment had something to do with perceptions of body language. Finally, the pretest indicated that there were significant differences in perceived attractiveness of the models used, indicating that in a future study this should be better controlled for, though it is unclear how much effect attractiveness had given the short time exposed to each photograph and the salience of it compared to other factors, such as target race and gender.

In light of the current study's failure to conclusively support any of the proposed hypotheses regarding gender or race, future research should investigate the research question, addressing the limitations of the current study. First, the photographs used as stimuli in the experiment should be extensively pilot tested to ensure that there are no differences in gaze, facial expression, body language, and physical attractiveness. Secondly, it may be necessary to cut down the number of trials used in future research. This is an important consideration because while the current experiment took less than thirty minutes to complete from start to finish, there were a total of 528 different trials. The large number of trials was necessary because of the large number of conditions examined in this study. However, this may have led to concerns about user fatigue; in fact, several participants remarked that they felt fatigue during the reaction time study and felt that it may have impaired their performance. Some participants stated that they thought the purpose of the study involved fatigue and its effects on reaction time. Future studies could cut down on the number of trials by examining fewer conditions at once.

Another limitation of the current research was that most of the participants were females. In the final data set males were greatly underrepresented, with only 7 males in the final set of 33

participants. Thus, it was difficult to assess potential between-subjects gender effects or interactions with participant gender and conditions. In future research, recruiting a more representative sample should be a goal as one of the non-statistically significant trends was the increased speed in which males reacted in a racially biased manner. Additionally, the current sample was limited in that it was exclusively made up of college undergraduates from a small liberal arts institution. Thus, it is important to investigate business-related issues with a sample who have more work-related experience.

Additionally, while there are fairly clear distinctions between professional and semi-professional (more commonly known as business versus business casual) for men, with women's clothing that distinction is harder to make. A possibility for a follow-up study might include a more varied clothing sample from the women that would then be pretested in order to clearly break the clothing sets into distinct groups to find clearer effects. A future study should also include shoes in the photo, as shoes could be an integral part of a full business suite. Another possibility would be to clearly break the clothing groups into two groups, casual and professional, and completely eliminate the middle category (an analysis was run with the current data using this method, though no differences were found in the current study). However, this could be considered undesirable because of the possible workplace implications that this study has and the obvious existence of such "business-casual" clothing in the workplace. Furthermore, the Morris et al. (1996) design found clear effects between 3 different clothing conditions, indicating that it is possible to find significant effects using those criteria. In their design there were statistically significant differences in perceptions of sociability, competence, and level of interest from one clothing condition to another using three clothing conditions, indicating that separate conditions for casual, semi-professional, and professional wear are important and have clear distinctions, and

the differences between positive and negative words in this study across the three clothing sets support this distinction between the three clothing sets.

There are several other paths of research that can be explored by examining perceptions of clothing, race, and gender. Another interesting way to address the current research question would be to examine the same variables at a more explicit level. For example, perceivers could make judgments about individuals in a more controlled setting, such as a job application. Additionally, it may be fruitful to explore underlying reasons for the large error rates seen in some of the conditions. Specifically, the results indicated that more mistakes were made when positive “African-American” photos were used, and that the conditions in which business sets were missed were negative sets for Caucasians and positive sets for African-Americans. This could indicate that people do not think that these “complimentary” terms are positive and that people are prejudiced to think more positively about Caucasians in business than African-Americans. It is possible that these error rates were driven by the context of the pictures, such that in more professional clothing, targets are more likely to mistakenly identify racially based words but will be more accurate in identifying business-related words. When used in conjunction with the other conditions it would also allow for investigation into the moderating effects of target gender on these conditions, though there would be some revision to the word selection, since most of the business-related words have gender-related undertones, such as how leadership, ambition, and various other business qualities are more commonly associated with men than women (Prentice & Carranza, 2002).

Another, alternative vein of research would be to investigate perception of personality characteristics as a function of the conditions used in this experiment. Personality Theory research has become more important in recent years in the business community, partially thanks to research

showing comprehensive links between some personality characteristics (conscientiousness being the most important) and workplace efficacy (Barrick, Mount, and Judge, 2001; Hertz & Donovan, 2001). Given the nature of these findings, it is natural that businesses are going to aim for increased accuracy in personality inventories. This has become an issue of importance as it has been shown that participants can “fake” personality characteristics relatively easily, and this damages the validity and utility of using the Five-Factor Model in business settings (Paulhus, Bruce, & Trapnell, 1995). However, new research indicates that “knowledgeable” observers can generate accurate personality assessments, potentially eliminating bias or faking of traits (Mount, Barrick, & Strauss, 1994).

These trends and facts would lead to a of research examining the perceptions of stereotypes under the conditions used in this experiment in order to better understand how perceptions of personality are affected by such things as race, gender, and clothing. This research would be of immense importance in the business community because of the trend mentioned above in mistrusting self-reports and the chance of a larger migration to external evaluations of personality in order to gain objectivity. If this trend were to establish itself it would be incredibly important for people to understand how their clothes, gender, and personality affect what a potential employer is “seeing” in terms of their personality and how they might be able to cope for those perceptions.

Thus, understanding perceptions based upon complex things such as clothing, gender, and race and how they all might interact, is very important in the modern workplace. In this time of immediate economic crisis, a better understanding of how perceptions are formed and the manner in which they interact with each other and how they might be controlled or changed is more important that ever. This research is of significant importance to African-Americans and women

due to the barriers that both groups have had to face in terms of leveling the playing field. African-Americans still have many negative stereotypes attributed to them, and a better understanding about how those stereotypes play out under workplace conditions and whether or not clothing could lessen these stereotypes would be very important. Similarly, women are still fighting to be considered to be equal to men in the workplace and have special caveats in how they are perceived at work that need to be better understood, such as how they are perceived differently based off of clothing and job position. A clearer grasp of how their clothing affects what their coworkers think of them and how to maximize their perceived productivity could help them in that pursuit. Beyond the benefits that this understanding could have in helping African-Americans and women in order to better manage some of the negative stereotypes about them, it would provide better insight into the conditions that cause stereotypes to occur and how perceptions are created and how they changed under various criteria. Such better understanding of stereotypes and their interactions can lead to better ways to combat them in a multitude of settings.

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Appendix A

Word Bank

“African-American Negative”

Lazy

Stupid

Violent

“African-American Positive”

Athletic

Funny

Expressive

“Business Negative”

Unreliable

Unoriginal

Incompetent

Deceptive

Greedy

“Business Positive”

Professional

Crisp

Motivated

Bright

Efficient

“Caucasian Negative”

Greedy

Selfish

Weak

“Caucasian Positive”

Intelligent

Ambitious

Honest

Appendix B

Research Participation Consent Form



*Psychology Department
College of William & Mary*

Title of Project: Person Perception

Researcher(s): Professor Cheryl Dickter, Andrew Hale

This is to certify that I, _____ have been given the following information with respect to my participation in this study.

1. Purpose of the research: First-impressions have been shown to have a powerful impact on opinions of others. This research looks to measure some of these first impressions and determine possible causes, such as stereotypes, that these first impressions might have been caused by.
2. Procedure to be followed: Participants will take an implicit association test on the computer that will match a series of pictures under various conditions with adjectives. Following these trials there will be a brief questionnaire followed by a debriefing.
3. Discomforts and risks: there are no physical elements to the study, nor are there elements that might cause mental discomfort. However, if a participant wishes to terminate their participation in the study, they may do so at any time without penalization of their SONA credits by contacting an experimenter.
4. Time duration of participation: Half an hour.
5. Statement of anonymity: By participating in this study, all work for the psychology department and the design department will be held anonymous. Ending participation during at any point of the experiment will not compromise the anonymity between the researcher and the participant. Furthermore, should the study be terminated at any point by the participant, this anonymity would not be voided.
6. Voluntary participation: Participation is completely voluntary at all points of the experiment. If at any point before or during the experiment the participant is not comfortable with the experiment they may cease participation at any time without loss of credit.
7. Incentive for participation (e.g., course credit, payment): 0.5 credit hours toward the required hours of introductory psychology classes.

8. Termination of participation: The experiment may be voluntarily terminated by a participant at any time without penalization. To end the experiment the participant should simply inform the researcher and their results will be voided. Further questions about participation termination can be directed to Professor Cheryl Dickter or Andrew Hale.
9. Questions regarding the results of research or questions or concerns regarding participation or study termination should be directed to: Professor Cheryl Dickter, Andrew Hale.

I agree to participate in this study and have read all the information provided on this form.

Name (please print) : _____

Signature : _____

Date : _____

Contact information for study results:

Professor Cheryl Dickter: cldickter@wm.edu

Andrew Hale: adhal2@wm.edu, 301-219-6636

Appendix C

Briefing Form

Thank you for agreeing to participate in our experiment today on Person Perception. In this study, you will be seated at one of our stations and complete the experiment that is run on the computer. In this experiment, you will be shown pictures of people under various conditions, following which a word will be shown on the screen. We ask that you press either the “x” or “m” buttons on your computer to indicate whether the word is a positive or negative word. Instructions regarding which key indicate positive or negative words will be provided at the beginning of the program. The program is already running at each station, and your participant number to be entered at the beginning of the program is written on each of your demographics’ form.

Following that will be a quick, follow-up questionnaire that contains demographics information. As stated on the informed consent form, all information is kept anonymously. Please take a moment to silence or turn off your cell phones for the duration of the study.

If necessary, you may terminate the experiment at any time by informing an experimenter for no penalization of credits. If you wish to hear about the results of this study, please check the appropriate column on the sign-in sheet. Are there any questions? Ok, we will get started then.

Appendix D

Debriefing Form

Thank you for participating in this study. The main purpose of this study was to determine if clothing, race, and gender have an impact upon various work-related (including things such as ambitiousness and intelligence) and race-related (stereotypes commonly associated with Caucasians and African Americans) variables. Research has indicated that under different conditions of clothing, thoughts concerning productivity and efficacy of oneself and others might change, and that they might also be a moderating variable due to race and gender. Our experiment aims to determine the level of these effects in order to better understand how race, gender, and clothing might affect work-related perceptions.

Full disclosure of the aims of the study in terms of perceived effects was not possible at the beginning of the study because of the chance of expectancy effects. We apologize for the necessity of masking the specific nature of the experiment until completion.

If you have any concerns or questions about the experiment, ask the experimenter for more information or contact information, and if you are interested in learning about the results from the experiment you can receive the results by indicating so in the sign-in form.

Table 1

Mean Reaction Time for African-American Male Targets

Word Condition	Casual	Semi-Professional	Professional
“Negative African-American”	643.84	643.42	644.93
“Positive African-American”	678.31	681.36	644.45
“Negative Business”	680.19	670.04	684.11
“Positive Business”	692.03	678.08	675.48
“Negative Caucasian”	651.73	657.33	649.17
“Positive Caucasian”	687.24	705.14	660.81

Table 2

Mean Reaction Time for Caucasian Male Targets

Word Condition	Casual	Semi-Professional	Professional
“Negative African-American”	657.48	654.16	669.88
“Positive African-American”	686.08	683.64	665.81
“Negative Business”	688.02	676.19	690.21
“Positive Business”	676.30	671.28	660.66
“Negative Caucasian”	643.92	656.88	668.06
“Positive Caucasian”	681.03	661.64	648.75

Table 3

Mean Reaction Time for African-American Female Targets

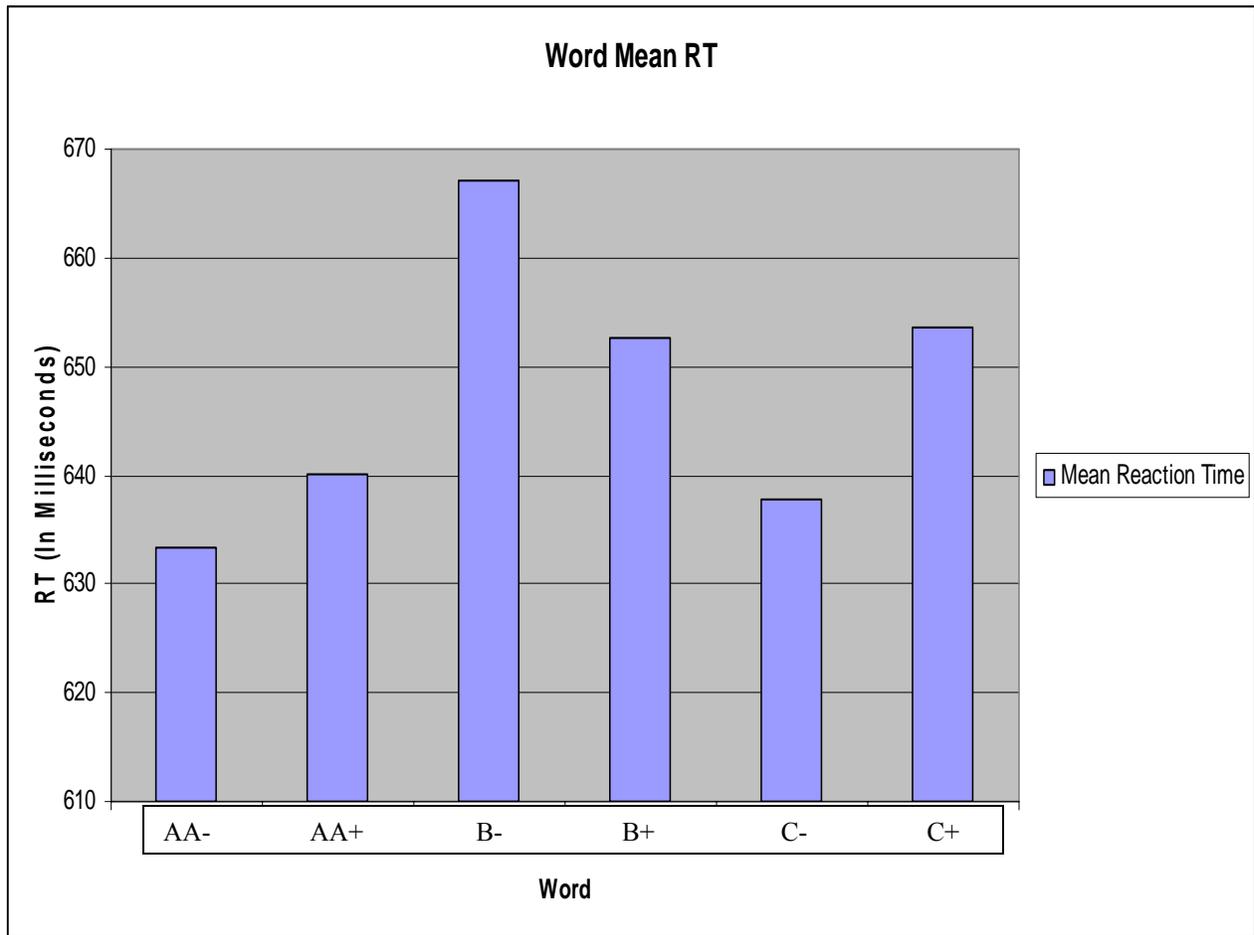
Word Condition	Casual	Semi-Professional	Professional
“Negative African-American”	657.70	647.35	652.62
“Positive African-American”	677.28	662.01	657.11
“Negative Business”	666.76	712.18	681.60
“Positive Business”	679.15	667.30	669.63
“Negative Caucasian”	651.64	678.66	667.78
“Positive Caucasian”	693.38	682.58	658.31

Table 4

Mean Reaction Time for Caucasian Female Targets

Word Condition	Casual	Semi-Professional	Professional
“Negative African-American”	645.41	648.92	654.02
“Positive African-American”	671.39	678.98	680.59
“Negative Business”	686.57	705.20	699.18
“Positive Business”	668.94	674.62	685.31
“Negative Caucasian”	654.58	666.60	656.75
“Positive Caucasian”	718.93	686.88	669.88

Figure 1



“Word” Key

AA = African-American

B = Business

C = Caucasian

- = Negative

+ = Positive

Figure 2

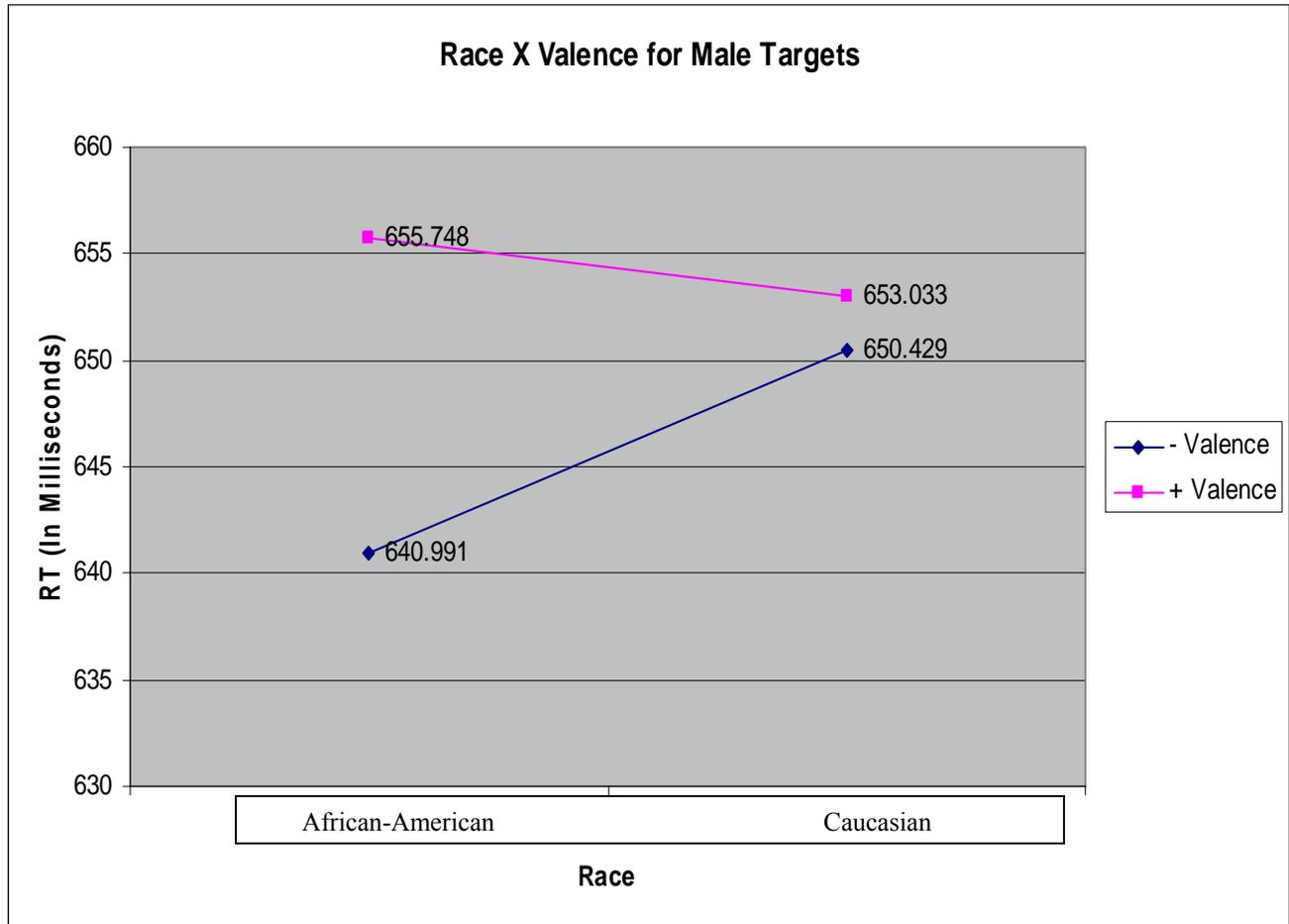


Figure 3

