The Role of Media Portrayals on the Activation of Stereotype Threat: A Study of African American Test Performance

by

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Abstract

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The goal of the present study was to investigate the influence media representations of African Americans have on the cognitive performance of African-descended students. Research suggests that while negative stereotypes about African American intelligence can negatively impact the academic and intellectual performance of Black students, a concept known as *stereotype threat*, positive stereotypes can improve performance, a concept known as *stereotype boost*. Stereotypes can be learned and cognitively activated through a variety of sources, such as through media. Using an experimental design, the present study tested whether exposure to stereotypically negative media representations of African Americans could elicit poor performance on a cognitive test of deductive reasoning and whether exposure to positive media representation of African Americans could improve performance on the same test of reasoning. In addition, the

present study determined whether anxiety mediated the relationship between media exposure and test performance and whether this relationship was moderated by Black racial identity. Students completed the State Trait Anxiety Inventory (STAI) (pre- and post-study), the Raven Advanced Progressive Matrices (APM) and the Cross Black Racial Identity Scale. This study did not find support for the hypotheses that negative media images uniquely decrease cognitive functioning or that positive media images uniquely boost cognitive functioning. Additionally, the findings did not support the hypothesis that exposure to negative stereotypical media representations would uniquely increase state anxiety. Average anxiety scores increased uniformly across groups, regardless of media condition. However, the results of this study indicated an interaction effect between media type exposure and racial self-label on test performance. Students who self-labeled as West-Indian performed statistically worse than those labeling as African American on a test of cognitive performance (APM) after exposure to positive media representations of African Americans. Self-Hatred, Anti-White, and Multicultural Inclusion beliefs were found to independently predict accuracy on a cognitive task. An examination about the implications of these results for clinicians, parents, and teachers is offered.

Dedication

This dissertation is dedicated to my parents who raised me well, to my loving and supportive husband, and to all those who seek equality.

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Chapter 1

Introduction

One of the most insidious challenges for the education system is the long-standing academic achievement gap between Black[1] and White students. Though differences in achievement declined between 1970 and 1988, the gains made have ended and the gap is beginning to increase (Haycock, 2001; Jencks & Philips, 1998). The average Black student performs less well on tests of mathematics, vocabulary, and reading and scores below 75% of American Whites on almost all standardized tests. The consequences to the African American communities as well as to society at large are, to say the least, devastating. African Americans are less likely than their White counterparts to graduate from high school or earn an advanced degree. This unfortunate reality perpetuates both social and economic disparities in this country (Jencks & Philips, 1998).

Academic performance and the highest level of education acquired (i.e. completing a college degree versus completing a high school degree) are directly related to an individual's employment opportunities and earning potential. Reducing racial disparities in academic attainment can expand job opportunities for Blacks and directly reduce racial disparities in income. Some researchers (Jencks & Philips, 1998) believe that reducing the academic achievement gap can also decrease racial disparities in health care, as higher paying jobs often supply health insurance. Furthermore, it seems possible that reducing the academic achievement gap can benefit families. Economic difficulties (i.e. joblessness/low paying jobs resulting from an inadequate education) may create

[1] The terms Black, African-American, and African descended will be used interchangeably throughout this dissertation to reflect the variation in self-label used among people of African ancestry.

stress and tension in the home that can directly impact the development of children (Jencks, 1998).

Disparities in academic performance also exist between White students and other groups historically marginalized in the United States such as Hispanics and Native Americans (Osborne, 2001). In an effort to reduce and eventually eliminate the academic achievement gap between ethnic groups, researchers have hypothesized and debated a variety of factors that may play a role in this phenomenon. The influence of test bias, differences in cultural values (i.e. a hypothesized culturally based opposition to academic success), peer pressure, biology, as well as social and economic disparities have all been hypothesized (Jencks & Philips, 1998; Signham, 1998; Tyson, Darity, & Castellino; Viadero & Johnston, 2001). In the mid 1990's, Steele and Aronson (1995) proposed a socio-psychological explanation for the achievement gap: stereotype threat (ST).

ST is the performance-hindering anxiety that emerges when an individual is placed in a situation in which she feels she is at risk for confirming a negative stereotype about a racial or gender group with which she identifies. ST is said to depress academic and intellectual task performance (under specific circumstances to be discussed later in this chapter) for members of racial or gender groups that are burdened with negative stereotypes about their intelligence (i.e. Blacks, Hispanics, and women), (Steele & Aronson, 1995). While a consensus has yet to be reached in regards to the mechanisms that lead to the depression in task performance, the literature suggests anxiety at least partially mediates the relationship between ST and performance decrements (Blascovich, Spencer, Quinn & Steele, 2001; Osborne, 2001). Additionally, a number of factors have

been hypothesized to moderate the effects of ST, including the degree to which a person believes the stereotype they are at risk of confirming (Schmader, Johns, & Barquissau, 2004) and the importance their threatened racial or gender identity has for their sense of self (Good, Dweck & Aronson, 2007; Davis, Aronson, & Salinas, 2006).

Steele & Aronson (1995) hold that an individual need not believe the stereotype for it to have an impact on performance. Simply having the knowledge of the stereotype creates a psychological threat that has been shown to impede academic and intellectual task performance. A number of researchers (Abraham, 2003; Davies, Spencer, Quinn, & Gerhardstein, 2002; Gerbner, Gross, Morgan, & Signorielli, 1994; Knobloch, Callison, Chen, Fritzche, & Zillmann, 2005; Lester & Rose, 2003; Morgan, 1982; Perse, 2001) have suggested that the media play a significant role in the acquisition of stereotype knowledge. While family and peers may be partially responsible, it seems hard to ignore the influence that mass media has on the perpetuation and dissemination of stereotypes. Furthermore, empirical evidence suggests that stereotypical media representations of women and Blacks can activate stereotypes in the minds of viewers, which subsequently influences cognitive functioning, judgment, and behavior (Davies, Spencer, Quinn, & Gerhardstein, 2002; Ford, 1997; Rudman and Borgida, 1995).

This study investigates the influence that both negative and positive media representations of Black people have on the academic task performance of Black university students. In short, this study hypothesizes that negative media representations of Black people make stereotypes about Black intellectual inferiority salient and activates stereotype threat. Furthermore, it is hypothesized that the activation of ST increases state

anxiety, causing a depression in task performance. Exposure to positive media representations of Black people is hypothesized to increase task performance of Black students when compared to task performance of Black students in a control group. Lastly, this study will examine the moderating role of Black racial identity. Black racial identity is understood to be how positively or negatively a person feels about their African heritage and how important their race is in shaping or determining their identity (Helms, 1990). This study will investigate whether having positive feelings and a connection to one's Black race and heritage (i.e. having an internalized positive racial identity[2]) will serve a protective function when Black students are confronted with negative media representations. This would be demonstrated if, in the negative media exposure condition, an average decline in cognitive performance is found amongst those who more frequently endorse negative feelings about their African heritage and this decline is not seen amongst those who endorse more positive feelings about their African ancestry.

Literature Review

Part I of the chapter that follows will begin by reviewing factors that have been hypothesized to play a role in the academic achievement gap between Black and White students. The concept of stereotype threat will then be introduced, followed by examples of empirical research that has demonstrated the powerful impact of ST and conditions under which it influences test performance, behavior, cognition and judgment. Factors that are hypothesized to mediate and moderate ST will also be reviewed.

[2] Black racial identity will be described more in depth later in this chapter.

In Part II of this chapter, the role of the media in the perpetuation of racial and gender stereotypes will be discussed. Theories regarding how the media impacts its viewers will be provided. Additionally, studies that suggest the media's ability to activate ST will be presented. This chapter ends with a brief summary and set of hypotheses for this study.

Part I

What contributes to the achievement gap?

A number of arguments have been provided and debated in an attempt to further understand the factors that contribute to the achievement gap. Poverty is considered to be one of the major contributors to the difference in academic performance seen between Black and White students. Lack of financial resources often means poor nutrition and health care, which are factors known to have a negative impact on school performance (Viadero & Johnston, 2001). Proponents of the view that socio-economic status is at least partially responsible for the academic achievement gap often note that the legacy of slavery, segregation, and other forms of oppression suffered by Black people in America have led to severe economic disparities. As schools are largely funded by taxes on the income of property owned by community members, schools in poor communities largely populated by ethnic minorities are often underfunded, have less experienced teachers, and are often overcrowded. This leads to a less than ideal educational environment in the very communities that perhaps need it the most (Signham, 1998).

Tracking is also said to play a role in the achievement gap (Viadero & Johnston, 2000). Tracking can be understood as a practice in which students are placed into a

sequence of courses based on their presumed ability level as determined by previous test scores and grades. Some believe that a combination of low teacher expectations based on racial bias, and lower preparedness upon the start of formal education leads African American and Hispanic students to be 'tracked' into less challenging classes. This puts these students at a disadvantage when asked to perform on standardized tests. Additionally, less rigorous high school curricula put students at a further disadvantage when challenged by college level coursework (Singham, 1998; Viadero & Johnston, 2000).

The role of peer pressure has also been hotly debated. In 1986, John Ogbu and Signithia Fordham studied a group of low achieving Black high school students in the District of Columbia. Based on their findings, these researchers concluded that some Black students did not live up to their scholastic potential because they associated academic success with "acting White." “Acting White” is a generally derogatory term used among some African Americans to describe other African Americans who “use language or ways of speaking; display attitudes, behaviors, or preferences; or engage in activities considered to be White cultural norms” (Tyson, Darity, & Castellino, 2005). Ogbu (2003) asserts that cultural attitudes such as this one can hinder academic achievement. In an empirical study regarding this issue, Fryer and Torelli (2006) concluded that the fear of acting White has a significant effect on Black student’s academic achievement, particularly for high achieving Black students attending schools with "high interracial contact." But, they note, the fear of "acting White" has no significant effect on achievement in predominantly Black or private schools. Perhaps in

private schools, academic success is not associated with "acting White," as there is an assumption of success for all students attending more elite [non-public] institutions.

Tyson, Darity, and Castellino (2005) were unconvinced by Ogbu and Fordham's (1986) work and rejected the notion that there is a significant subculture among Black students that associates academic success with "acting White." These researchers (Tyson, et al., 2005) interviewed teachers and students (both Black and White) and collected academic data from eight public schools in North Carolina to further investigate this issue. Tyson et al. (2005) found that among all of the Black students interviewed, most had desire to succeed academically and only a very small minority of Black students felt pressure to underachieve and/or related academic success to "acting White." Additionally, none of the high-achieving Black students from the eight schools sampled reported feeling deterred from excelling or taking advanced placement classes because of a fear of being accused of "acting White." In fact, many students sought to be publicly acknowledged for their success and felt their friends supported their aspirations (Tyson et al., 2005).

Interestingly, the students who identified with the burden of being seen as "acting White" (i.e. felt ridiculed for their academic success and reported being accused of "acting White") were all from the same schools, which had a disproportionately small number of minority and low-income students in advanced or honors classes. Tyson et al. (2005) also found that some high achieving White students experienced ridicule for their academic success from their lower-achieving peers. The researchers uncovered that in some school environments, deep-seated animosity existed between high and lower achieving students that went beyond race. Tyson et al. (2005) found that high achieving

students in some schools were perceived by lower achieving students as socially or economically privileged. This created animosity in academic environments in which an obvious relationship between high socioeconomic status and placement in more advanced classes existed. This kind of animosity for high achievers was not found in schools in which all students were from relatively similar backgrounds (whether poor or economically well-off).

In short, these researchers note that some high achieving students, regardless of race, may experience some degree of stigmatization for being academically successful. What is important in understanding this phenomenon is the role of school structure, the socioeconomic disparities among students, and perceived privilege that may create envy amongst less privileged students and a combative school environment in which a small minority of students may become oppositional to academic achievement (Tyson et al., 2005).

Finally, some researchers believe that intelligence and academic success is based on biology. The 1994 book, *The Bell Curve* (as cited in Viadero & Johnston 2000), suggests that intelligence is based on genetics and people of African descent are genetically intellectually inferior to Whites. This argument has fueled negative stereotypes about Blacks' intellectual abilities. In *The Black White Test Score Gap* (Jencks & Phillips, 1998) psychologist Richard Nisbett contributed a chapter that reviewed the claim that the academic achievement gap between Black and White students is largely due to genetic differences. Nisbett, Jencks & Phillips (1998) point out a number of very important things to consider when thinking about the role of genetics on IQ.

First, studies that investigate the heritability of IQ suggest it is unlikely that

genetic differences between racial groups play a significant role in IQ. Researchers (Jencks & Phillips, 1998) suggest that the ability of an individual's environment to foster the optimal development of one's genetic endowment is far more influential on IQ than pure genes alone. Second, when *The Bell Curve* was originally published, the IQ gap between Black and Whites was 15 points. In 1998 when Nisbett published this chapter (Jencks & Phillips, 1998), the IQ gap between these two groups was closer to 10 points. If intelligence is genuinely based on genetics, such a change would not have been observed. Also, a number of environmental factors (such as socioeconomics, level of education obtained by parents) have been shown to be related to IQ. The differences between Blacks and Whites on these variables are significant and potentially self-perpetuating. Furthering this argument, a number of interventions (such as school based academic and social intervention programs) have been shown to increase IQ scores. The seeming malleability of IQ scores seems to strongly suggest that environmental factors better explain achievement gap than genetics.

Much support has been given to the influence of socioeconomic status, inadequate educational opportunities (for example, the underfunding of schools largely populated by African Americans and Hispanics), and differential academic preparation on the academic achievement gap. However, even when these factors are held constant, Black, Hispanic and Native American students continue to perform less well than White and Asian students (Jencks and Philips, 1998). Additionally, underachievement is also said to exist for women and girls in domains thought to be typically reserved for males such as mathematics, computers and engineering, which these socioeconomic factors are less likely to influence directly, since boys and girls can be raised in the same family and

community (Osborne, 2001). So how does one account for these differences in achievement?

Stereotype threat

Social psychologists Claude Steele and Joshua Aronson (1995) provide insight into a social-psychological phenomenon that has been shown to contribute to the achievement gap: stereotype threat (ST). According to Steele and Aronson (1995) ST is the performance-impeding anxiety that a person may confirm a stereotype relevant to a group (racial or gender) with which they identify. These researchers (Steele & Aronson, 1995) hold that when some Black students are in an academic or intellectual testing situation, they are burdened with the self-evaluative threat of confirming (or being judged by) a negative societal stereotype about the intellectual competence of their group. This threat, due to a variety of mechanisms, is said to interfere with intellectual functioning and performance, especially in standardized testing situations.

ST is said to have an impact on performance only when the domain of interest (i.e. academics) is important to the individual. In the case of Black students, when academic success is a highly regarded aspect of his or her identity, the risk to the sense of self of confirming a negative stereotype is great. This makes it more likely that the person will experience anxiety or a cognitive burden that may negatively impact performance. If a particular domain (academics, sports, etc.) is not a valued or important aspect of a person's identity, then the person is much less likely to be concerned about the implications of their success or failure on a particular task and performance-impeding anxiety becomes irrelevant. Lastly, it is important to note that ST has not been seen to

influence performance on easier tasks. The task must be challenging, but not impossible for ST to influence performance (Steele, 1997).

The consequences of stereotype threat.

The consequences of ST go beyond decrements in performance. Repeated exposure to threatening situations may lead to a reduced sense of self-efficacy in the stereotype relevant domain (Aronson & Inzilicht, 2004). Subsequently, disidentification from (or a reduced sense of belonging to) the domain of interest can develop as a means to preserve self-esteem (Steele & Aronson, 1995). For example, a Black student may feel he or she has adequately prepared for academic tests, but due to ST, may not perform as well as expected. Repeated experiences of the consequences of ST (underperformance despite preparedness) can lead the student to experience doubt he or she can be academically successful. In order to preserve a positive view of self, the student may begin to devalue academics. Disidentification in turn leads to lowered task effort, and thus perpetuates a cycle of lowered performance and continued disidentification (Steele & Aronson, 1995; Steele, 1999).

Continual experiences of ST have been shown to lead targets of the threat to avoid pursuing the relevant domain, thereby limiting the range of professions pursued (Davies, Spencer, Quinn & Gerhardstein, 2002). For example, Black students may steer away from professions that involve or require many years of schooling and women may avoid careers involving mathematics. The long-term effects of stereotype threat are said to play a significant role in educational and social inequality for a number of marginalized racial

groups (such as Blacks, Hispanics, and Native Americans) as well as women in math and the sciences (Schmader, Johns, & Barquissau, 2004).

Blascovich, Spencer, Quinn and Steele (2001) found another surprising consequence of ST. These researchers found that Black participants under high ST conditions (i.e. a situation in which students are led to believe the test was diagnostic of their ability, therefore arousing anxiety that their performance could confirm negative stereotypes) not only perform worse on academic tasks than White students and Black students not under stereotype threat conditions (i.e. students told by a Black man that the exam was culturally unbiased and that Black and White students had performed equally well in the past), but they also have a larger increase in mean arterial blood pressure. The heightened blood pressure level persisted during a five-minute rest period and was maintained through the duration of a subsequent task. In total, blood pressure remained elevated for about 20 minutes. Blascovich et al. (2001) propose that their findings can be generalized to a variety of real-life situations in which Blacks may experience ST (and in which dominant groups may not). This suggests that some Blacks may frequently experience elevated blood pressure levels due to experiences related to ST. In short, these results suggest ST plays a role in the disproportionate rate of hypertension in Black communities.

Empirical investigations about stereotype threat.

Over 100 empirical studies have demonstrated the effects of ST (e.g. Aronson, Lustina, Good, Keough, Steele & Brown, 1999; Belock, Rydell, & McConnell, 2007; Brown & Pinel, 2003; Cadina, Maass, Figerio, Impasliazzo, & Latinotti, 2003; Croizet &

Claire, 1998; Davis, Aronson & Salinas, 2006; Good, Dweck, & Aronson, 2007). Steele and Aronson's original 1995 publication on the subject consisted of a group of studies that varied a number of conditions in order to determine the circumstances under which ST is activated and performance is depressed. In one of these studies (Steele & Aronson, 1995 study 1), Black and White undergraduate students were asked to complete an exam consisting of 27 questions from the verbal portion of the Graduate Record Examination (GRE). Participants were assigned to be in one of two conditions. In the *diagnostic/stereotype threat condition,* participants were told the exam/task they were being asked to complete was a measure of intellectual ability. Leading participants to believe their intelligence was being evaluated was hypothesized to have made racial stereotype of inadequate academic ability salient and established the threat of confirmation. In other words, believing a task is diagnostic of intellectual or academic ability was hypothesized to activate stereotype threat. In the low stereotype threat or *non-diagnostic* condition, participants were led to believe the exam was a non-evaluative exercise in problem solving thus making racial stereotypes and the fear of confirming them irrelevant.

In an additional non-diagnostic/non-stereotype threat condition, participants were told the task they were being asked to perform was a difficult challenge. Steele and Aronson (1995) hypothesized that stressing the challenge of the task in this third condition would increase motivation and therefore performance when compared to the other non-diagnostic condition. This study hypothesized that Black participants would do less well compared to Whites in the diagnostic conditions when there was ST, but perform equally as well in the two non-diagnostic/non-ST conditions.

The results of this study revealed that Black students in the diagnostic/ST condition underperformed in comparison to the White participants while Blacks in both of the non-diagnostic conditions performed equally as well. This finding was not explained by pre-existing ability level, which was assessed through prior SAT scores. This study strongly suggests that factors other than ability and preparation contribute to the test score gap between Black and White students. Simply being aware that a task is a measure of ability can activate stereotype threat and impede performance (Steele & Aronson, 1995 study 1).

In a second study (Steele & Aronson 1995, study 2), the researchers were interested in investigating whether the effect of ST on performance was mediated by the participants' apprehension that they may confirm negative group stereotypes. To test this, Black and White undergraduate students were asked to complete the Spielberger State Anxiety Inventory (STAI) following the academic task in both diagnostic and non-diagnostic conditions. The STAI was shown in a previous study (Geen, 1985 as cited in Steele & Aronson, 1995) to be effective in measuring anxiety due to evaluative apprehension. Again, when previous SAT scores were accounted for, Black participants in only the diagnostic condition scored significantly worse than their White counterparts. In terms of state anxiety, no difference was found between Black and White participants after the academic task was completed.

The way these researchers (Steele & Aronson, 1995, study 2) attempted to assess for state anxiety as it is related to evaluative apprehension and ST was arguably flawed. A better means of assessing state anxiety would have been to test state anxiety prior to

the start of any study procedure and then re-administer the same state anxiety measure immediately after the academic task. Mean differences within subjects and between groups should have been assessed. Subsequent studies have since looked into anxiety's mediating role in ST and will be discussed later in this chapter.

As previously discussed, being told a task was a measure of ability (diagnostic conditions) activated ST for Black students and depressed performance. On the other hand, telling Black students a task was a non-evaluative exercise in problem solving (non-diagnostic) did not activate ST or produce the same negative effect on task performance, and these participants were able to score on par with their White counterparts. In study 3 (Steele & Aronson, 1995) researchers investigated whether or not test diagnosticity increased specific thoughts regarding racial stereotypes and increased self-doubts regarding academic abilities. Additionally, the researchers (Steele & Aronson, 1995) hypothesized that if test diagnosticity leads Black students to become anxious that their performance will validate racial stereotypes or that they will be judged by racial stereotypes, then Black students under ST may be motivated to dissociate themselves from the stereotype.

In study 3 (Steele & Aronson, 1995), Black and White undergraduates were randomly assigned to one of three conditions: a diagnostic condition, a non-diagnostic condition, or a control condition. Subjects in the diagnostic and non-diagnostic conditions entered the research lab and were told that the study they were being asked to participate in examined the relationship between two types of cognitive processes: lexical access processing (LAP) and higher verbal reasoning (HVR). Students were told they would be

completing two tasks, one that measured LAP ("the visual and recognition processing of words") and another that measured HVR ("abstract reasoning about the meaning of words"). Test diagnosticity was manipulated by giving participants different written instructions. Those in the diagnostic condition read instructions that said: "Because we want an accurate measure of your ability in these domains, we want to ask you to try as hard as you can to perform well on these tasks. At the end of the study, we can give you feedback which may be helpful by pointing out your strengths and weaknesses.*"* Those in the non-diagnostic condition read the following instructions: "Even though we are not evaluating your ability on these tasks, we want to ask you to try as hard as you can to perform well on these tasks. If you want to know more about your LAP and HVR performance, we can give you feedback at the end of the study".

After reading the instructions, students were shown sample questions. The LAP sample question was a word completion task. Students were given something similar to the following " _ _ C E" and were told they would be required to complete the missing spaces. The sample HVR question was a difficult word from the GRE. This was to alert students to the difficulty of the test and their possible poor performance, thus making racial stereotypes relevant in the diagnostic condition (Steele & Aronson, 1995 study 3).

Those in the control condition arrived at the lab to find a note on the door apologizing for not being present and instructing them to complete a set of measures in an accompanying envelope with the participant's name on it. The envelope contained the LAP word fragment measure and the stereotype avoidance measure (that will be

described shortly) with instructions. The instructions did not mention that their verbal abilities were to be evaluated (Steele & Aronson, 1995 study 3).

To briefly describe the study procedure, participants were first asked to complete the "LAP" which is a version of a word-fragment completion task that has been shown to measure the cognitive activation of constructs that have been primed or self-generated. The LAP consisted of 80 word fragments with missing letters specified as blank spaces (e.g. _ _ C E). While some word fragments had a number of possible solutions, twelve had only one possible solution, each of which was a race-related word associated with African Americans. The race-related words were generated in the following way: A group of White undergraduate students were asked to write a list of words that reflected the image of African Americans. The 12 most common words (e.g. lazy, welfare, minority) were selected for use in this study. Racially related word fragments were interspersed amongst all 80-word fragments in order to reduce the chance that participates would become aware of the racial nature of the study. Twelve word fragments were also included in this task that were thought to activate self-doubt about competence and ability (e.g. L O _ _ _ [loser], _ _ U N K [flunk]). As with the race-related words, these words were also interspersed amongst all 80-word fragments to avoid suspicion (Steele & Aronson, 1995 study 3).

In order to test the hypothesis that ST may lead Black students to avoid things associated with African American stereotypes or "African American life," subjects were asked to rate their preference for a variety of activities (such as reading, listening to jazz or hip hop, watching basketball or soccer) and to rate the self-descriptiveness of a variety

of personality traits, some of which are stereotypically associated with African Americans. All ratings were made on a 7-point Likert Scale. Participants in the diagnostic and non-diagnostic condition were told these questions were being asked in order to understand the underpinnings of LAP and HVR processes. Control subjects were told these questions were being asked to better assess typical interests and personality traits of Stanford undergraduate students (Steele & Aronson, 1995 study 3).

As hypothesized, Black students in the diagnostic condition completed a greater number of the word fragments with race related words. This trend was not observed for White participants in the same condition. Furthermore, Black students in the diagnostic condition produced more race related word completions than Black participants in the non-diagnostic conditions. Similar results were seen regarding self-doubt. Black students in the diagnostic condition generated significantly more self-doubt related word completions than Black students in the non-diagnostic condition and also produced significantly more self-doubt related completions than White students in all conditions. In terms of avoiding anything associated with stereotypes of African Americans, Black participants in the diagnostic condition were the most avoidant of conforming to stereotype images of African Americans, more than Black participants in the non-diagnostic conditions and/or White students in all conditions (Steele & Aronson, 1995 study 3).

In short, this study (Steele & Aronson, 1995 study 3) demonstrated that Black students expecting to take a challenging, ability-diagnostic test (diagnostic condition) experienced significantly greater cognitive activation of stereotypes about Blacks, an

increased cognitive activation of concerns regarding their abilities, and an increased tendency to avoid racially stereotypical preferences. Diagnostic instructions clearly led Black participants to experience measurable concerns regarding stereotypes, which influenced their cognition and academic functioning.

In a subsequent study, Steele and Aronson (1995 study 4) investigated the influence on test performance of simply making one's race salient in a non-diagnostic condition. Would being primed with one's Black race activate ST and impact performance even when Black test takers were led to believe the assigned lab task was not a measure of ability? In study 4 (Steele & Aronson, 1995), Black and White Stanford undergraduate students were randomly assigned to either the race-prime condition (subjects asked to report their race prior to a lab task) or to the non-race-prime condition (subjects not asked to report their race prior to a lab task). All participants were asked to complete standard demographic questions (year in school, age etc.) immediately before being asked to complete the experimental task (a selection of GRE questions) that was described as a non-diagnostic lab exercise (similar to Steele & Aronson, 1995 studies 1 and 2). What varied between subjects was whether or not their version of the demographic questionnaire asked them to report their race. As the reader might assume, those in the race-prime condition were asked to indicate their race while this question was excluded from the questionnaire for those in the non-race-prime condition.

Additionally, after completing the lab task, participants were asked to indicate on an 11-point scale (with end points *not at all* and *extremely*) the extent to which they guessed on difficult questions, persisted on problems, became frustrated and gave up, and

felt that the test was biased. Participants then completed a questionnaire that was designed to measure stereotype threat. Students were asked to respond on a 7-point scale (with endpoints *strongly disagree* and *strongly agree*) to the following statements: "The test may have been easier for people of my race," "Some people feel I have less verbal ability because of my race," "The experimenter expected me to do poorly because of my race," "In English classes people of my race often face biased evaluations," and "My race does not affect people's perceptions of my verbal ability" (Steele & Aronson, 1995 study 4).

Lastly, as the reader may recall, the effects of ST are most pronounced for students who feel academic success is an important part of their identity. In order to measure academic identification, participants were asked to answer nine questions that measured the importance verbal or math skills had for them and their intended career. For example, participants answered questions such as "I am a verbally oriented person," or "I feel that math is important to me". The results of this study indicated that priming racial identity by asking participants to report their race prior to a lab task depressed task performance for Black students even when the task was described as non-diagnostic of ability. Steele and Aronson (1995 study 4) assumed that reporting race for Black students made negative societal stereotypes about Black intellectual performance salient and thus created the self-threatening predicament that their performance could validate negative stereotypes. In addition, analysis of the responses to the perceived stereotype threat questions revealed that Black students felt more stereotype threat than the White students. Interestingly enough, Blacks in the race-prime condition did not report experiencing more stereotype threat than Blacks in the non-race-prime condition. Furthermore, these groups

did not differ on the academic identification measure. The researchers hypothesized that these results were due to the timing in which the ST measure and the academic identification measure were administered. Giving Black participants these questionnaires after the completion of a difficult, frustrating exam may have led all Black students, regardless of the condition, to have experienced some level of ST. Furthermore, the questions on the ST questionnaire alluded to situations outside of the lab context (such as "In English classes people of my race often face biased evaluations") encouraging students to consider experiences that occurred outside of the experiment (Steele & Aronson, 1995 study 4).

This study (Steele & Aronson, 1995 study 4) demonstrated that despite being told a task was non-evaluative, being primed with one's race by asking subjects to report it on a questionnaire depressed performance for Black students. In study 4, it should be noted that Black participants who were not asked to not report their race performed equally as well as their White counterparts. For Whites, being asked to report their race had no effect on performance.

Criticisms of stereotype threat.

Despite convincing evidence that suggests the impact of ST on performance, there are a still a number of criticisms in the literature with regard to how this phenomenon is studied and understood. One criticism is that ST is not generalizable and does not occur outside of the laboratory setting. In 2004, Stricker and Ward conducted an investigation of ST with real data from the Advanced Placement Calculus exam. Some examinees (control group) were administered the exam in the standard way, meaning they were

asked about the gender on a demographic form prior to the start of the exam. Other examinees (experimental group) were asked for race and gender identification information at the end of the exam. The results of this study found the timing of reporting gender had no effect on performance. Based on this data, Stricker and Ward (2004) questioned the validity of ST as a generalizable phenomenon. However, in 2008, Danaher and Crandall reanalyzed Stricker and Ward's (2004) original data as they disagreed with the conservative statistical decision criteria used. Reanalysis found that by using more liberal statistical rules, collecting data on gender at the end of the exam did indeed stet sex differences in performance by 33%.

Stereotype threat and the impact of social identity.

Since Steele and Aronson's (1995) original ST studies, many other investigations have taken place that have also demonstrated that ST is a real and influential phenomenon that can be activated in a variety of ways (e.g. Aronson, Lustina, Good, Keough, Steele & Brown, 1999; Belock, Rydell, & McConnell, 2007; Brown & Pinel, 2003; Cadina, Maass, Figerio, Impasliazzo, & Latinotti, 2003; Croizet & Claire, 1998; Davis, Aronson & Salinas, 2006; Good, Dweck, & Aronson, 2007). Shih, Pittinsky & Ambady (1999) demonstrated that performance under ST is dependent on the implicit activation of an individual's social identity. These researchers note that people often identify with a number of social identities such as race, gender, ethnicity, age, religion, field of study, etc. These different social identities can be triggered in a variety of ways, in a number of situations, and with differing results. Shih et al. (1995) note that while much of the research on stereotype threat has focused on the negative effects of making certain aspects of identity salient, we should not ignore potential positive results that may

come from activating other social identities. The increased performance on a task after the activation of a social identity associated with positive stereotypes can be referred to as "stereotype boost" (Shih et al., 1994; Shih et al., 1999; Armenta, 2010).

Stereotype boost.

For Asian women, two predominant stereotypes are relevant to their social identities. The first is the stereotype that Asians are superior in math. The other relevant stereotype is that women perform poorly in the subject. In a study regarding math performance, female Asian, undergraduate students were divided into three conditions that varied what part of their identity was implicitly primed. One third of participants were primed with their gender. Another third were primed with their Asian identity, and the last third were not primed with any aspect of identity (Shih et al., 1999).

Different versions of a questionnaire regarding university life were administered to implicitly prime either gender or ethnicity. Those in the female-identity-salient condition were asked to report their gender as well as answer questions regarding gender identity on their version. Instead of gender, the questionnaire for those in the Asian-identity-salient condition asked students to report their ethnicity and answer questions regarding their ethnic identity. Those in the no-identity-salient condition were not asked to report their gender or their ethnicity. Instead, they were asked questions unrelated to identity (Shih et al., 1999).

After the priming protocol, students completed a math test and mean scores between groups were compared. Based on predominant stereotypes about women's inferiority in math and Asians' superiority in the subject, these researchers (Shih et al.,

1999) hypothesized that those primed with thoughts of their gender would perform more poorly than those primed with thoughts of their Asian ethnicity. Those not primed with either ethnicity or gender, were hypothesized to perform somewhere in the middle.

A significant difference in performance was shown across the conditions with those primed with their Asian identity performing the best, those primed with the gender the worst and those not primed performing in the middle. In conclusion, this study is a demonstration of how powerfully socio-cultural stereotypes can be at influencing individual performance. Stereotype content need not be explicitly primed; one simply has to prime a socio-cultural category such as race or gender. Making salient identities associated with success at a given task, as opposed to failure, leads to a stereotype boost improving performance while the opposite is also true (Shih et al., 1999).

The results of this study seem to suggest a hopeful malleability of performance based on what parts of the test taker's identity is made most salient prior to the start of a an exam. While other ST studies alert us to the possible negative ramifications of activating an individual's Black race on test performance (e.g. Blascovich, Spencer, Quinn, & Steele, 2001; Davis, Aronson & Salinas, 2006; Steele & Aronson, 1995), this study may suggest the possible benefits to performance in activating positive and intellectual examples of African Americans (the most prominent at the moment would of course be Barack Obama). Perhaps activating a student's Black race through the use of positive examples can lead to stereotype boost and improve performance[3].

[3] This line of thought will be continued in Part II of this chapter.

Population influenced by stereotype threat.

Implied by the aforementioned study, stereotype threat is not just a phenomenon that exists for Black people in academic testing situations. Due to other prevailing stereotypes within our culture, ST can influence other groups, under the right circumstances, as well. Evidence suggests that Hispanics are also burdened by stereotypes about their intellectual performance and vulnerable to ST (Rivadeneyra, 2001), as are women in academic subjects such as math and some sciences (for example, engineering, computer science, etc.) (Schmader, 2002), and the elderly on memory tasks (Levy, 1996). In 1998, Croizet and Claire demonstrated the effects of ST on individuals of varying socioeconomic status (SES). When a verbal task was given to students divided into low and high socioeconomic backgrounds, those from low SES performed significantly worse than those of high SES *only* when the task was described as a measure of intellectual ability. ST has even been demonstrated in Caucasian men in the domain of sports (Stone, 1997).

Mediators of stereotype threat.

A number of explanations have been proposed to explain the causal mechanisms leading to the depression of performance seen under ST. Researchers have hypothesized the role of: evaluation apprehension (Aronson, 1999); anxiety (Blascovich, Spencer, Quinn, & Steele, 2001; Dembo & Eaton, 1997 as cited in Cadinu, Maass, Frigerio, Impagliazzo & Latinotti, 2003; Hill & Wigfield, 1984; Osborne, 2001; Spencer, Steele, & Quinn, 1999); working memory (Beilock, Rydell, &McConnell, 2007); lowered self-expectations (Cadinu, et.al., 2003); increased mental workload leading to limited cognitive resources (Croizet, Despres, Gauzins, Huguet, Leyens, & Meot, 2004); effort

withdrawal (Stone, Perry, & Darley, 1997); and self-handicapping (Smith, 2004). According to Smith (2004), anxiety is said to have the strongest evidence as a mediator of ST and depressed test performance, though it should be noted that anxiety itself operates in part via the above-noted processes.

Anxiety

Evidence exists that seems to support Steele and Aronson's (1995) proposal that anxiety plays a significant role in performance decrements. Osborne (2001) writes that a number of researchers (Geen, 1991; Hunt & Hillery, 1973; Michaels, Blommel, Brocato, Linkous, & Rowe, 1982; Sarason, 1972; Wigfield & Eccles, 1989) have demonstrated that anxiety and arousal can negatively impact performance, especially on tasks that are complex and/or have not been well-learned (which is often the case with academic tasks). Anxiety decreases cognitive capacities, slows response times, and increases intrusive/distracting thoughts.

A number of research studies also support the belief that disadvantaged minority students experience greater anxiety than their White counterparts in general and in academic situations in particular. In 1984, Payne found that Black students scored higher than Whites on measures of test anxiety and also demonstrated behavioral indices of anxiety such as frequently changing answers. In another study (Silverman, La Greca, and Wasserstein, 1995), Black elementary school students reported higher levels of anxiety when compared to White and Latino children. Clawson, Firment and Trower (1981, as cited in Osborne, 1995) found Black junior high school students had higher levels of both state and trait anxiety than their White counterparts. Additionally, students high in anxiety, regardless of race, scored significantly lower on achievement tests. This study

unfortunately did not assess whether anxiety mediated the relationship between race and academic achievement.

In 1999, Spencer, Steele and Quinn gave a group of male and female college students a difficult math exam in stereotype-threat/no-threat conditions and evaluated three possible mediators: evaluation apprehension, self-efficacy, and state anxiety. Anxiety, and not evaluation apprehension or self-efficacy, was shown to partially mediate the effects of stereotype threat manipulation on women's test performance.

In 2001, Osborne conducted the first study on the mediational role of anxiety in ST that did not use a convenience sample or students from elite undergraduate institutions. Using a nationally representative sample of secondary school students, Osborne examined whether anxiety at least partially explained racial differences in academic achievement between White students and ethnic minority students (Blacks, Latinos, and Native Americans). Partial mediation was found. Anxiety accounted for a significant portion of achievement differences between White and Black students and White and Latino students, but not between White and Native American students. Twenty-three percent of the variance in achievement test scores was found to be attributable to racial differences. Forty-one percent of those effects were explained by differing anxiety levels. After academic preparedness was taken into account, up to 15% of the variance in achievement test scores were attributable to race and 31% of those effects were accounted for by differences in anxiety (Osborne, 2001).

Moderators of stereotype threat.

It is important to note that ST does not impact all members of stigmatized groups to the same degree. Implicit in ST theory is the significance of domain identification,

meaning the level of importance the subject being evaluated has for the individual. The more important the domain is to a person's identity, the greater the influence ST has on performance. For example, those who are the most invested in academic achievement are the most susceptible to ST (Steele & Aronson, 1995; Kit, Holly, Tuokko, & Mateer, 2008).

In 2004, Schmader, Johns, and Barquissau (study 2) embarked on a research study that investigated the moderating role women's endorsement of gender stereotypes has on the influence of ST on their math performance. Participants in this study were undergraduate students majoring in a math related major (such as math, engineering, physics, and computer science). Stereotype endorsement was measured by asking participants to what extent they agreed with the following statements: "In general, men may be better than women at math," "It is possible that men have more math ability than do women," and "I don't think there are any real gender differences in math ability."

When gender was made salient for female participants, it was found that women who tended to endorse gender stereotypes were most susceptible to ST and performed worse on a test of mathematical abilities than women who did not endorse such beliefs. In short, this study demonstrated that for women, beliefs in stereotypes have a moderating role on the effect ST has on math performance. The researchers emphasized that women's beliefs in stereotypes did not predict lower math performance in general; rather its effects were felt when gender was made salient (i.e. under ST) (Schmader et al., 2004).

The results of this study also demonstrated that women who tended to endorse gender stereotypes were less confident in their ability to succeed and had lower self-

esteem. Furthermore, women who tended to endorse gender stereotypes were less likely to report having a desire to attend graduate school in their math-related major and performed worse in their major. Interestingly, this alone did not predict math performance. (Schmader et al., 2004)

The influence that ST has on a person's test performance has also been demonstrated to be moderated by whether a person has an internal or external locus of control. Locus of control can be understood as the extent to which people believe they control what happens to them. A person described as having an internal locus of control believes that she controls the events that happen to her while a person with an external locus of control feels that forces outside of herself largely determine events in her life. Canidu, Maass, Lombard and Frigerio (2006) found that those with an internal locus of control were found to be more susceptible to ST conditions than those with an external locus of control (Cadinu et al., 2006).

In 2003, Brown and Pinel found that an individual's level of stigma consciousness, meaning "how chronically self-conscious [a person is about] their stigmatized status," impacted the influence of ST. In high ST conditions, women who were high in stigma consciousness performed significantly lower on a math test than women low in stigma consciousness.

Related to factors that moderate the influence of ST, in 2002 Sekaquaptewa and Thompson embarked on a study that investigated the impact on performance of being a "token" or "solo" member of a racial or gender group within a larger group whose other members were all of the opposite gender or of another racial group. Being a "solo" or

having a "solo status," according to these researchers (Sekaquaptewa & Thompson, 2002 p. 694), can be defined as "being the only member of one's social category in an otherwise homogenous group". For example, being the only African American in an otherwise all White class or being the only female in an all-male work environment. Sekaquaptewa and Thompson (2002) asked participants to complete an oral exam in the presence of others who were either all of a different racial or gender group (solo status condition) or in the presence of others who were all of the same gender or racial group (non-solo status condition). Interestingly, task performance of individuals who were from socially privileged backgrounds (i.e. White males) did not suffer as drastically when compared to task performance of individuals who identified with socially marginalized groups (Women and ethnic minorities) in the solo status condition.

In short, these researchers (Sekaquaptewa & Thompson, 2002) concluded the effects of having "solo status" (i.e. the only member of one's racial or gender group in a situation) negatively impact task performance, with those identified with marginalized social groups being most negatively influenced. It should be noted that these researchers did not explicitly speak of the phenomenon they observed in terms of ST. Similar underlying mechanisms are hypothesized to explain the depression in task performance in being a solo in a group and for ST (for example increased anxiety impacting cognitive processing).

The impact of ST has also been shown to be dependent upon the degree to which people base their identities on their group memberships (Good, Dweck and Aronson, 2007). In a study by Shmader (2002), it was shown that women who were highly

identified with their social identity as a female were most vulnerable to ST in math testing situations. There is debate in the literature regarding whether a similar or opposite pattern exists in regards to an individual's racial identity. According to Davis, Aronson, and Salinas (2006), the opposite pattern was shown in regards to race. These researchers conducted a study that looked at the modulating role of Black racial identity attitudes on intellectual performance under varying degrees of ST. It was found that Black people who are most identified with their racial social identity were found to be *least* vulnerable to ST. Before further explaining this study, a brief overview of racial identity is necessary.

Black racial identity.

Theories of racial identity have been developed in order to understand the degree to which a person identifies with his or her racial group. According to Helms (1990) an individual's Black racial identity refers to his or her "sense of group or collective identity based on one's *perception* that he or she shares a common racial heritage with a particular racial group." A person's Black racial identity encompasses how positively or negatively he or she feels about his or her African heritage and how important race is to his or her identity. William Cross's original theory of Nigrescence (1971 as cited in Vandiver, 2001) -- which translates from French into "turning" Black -- was described as a developmental, five step, stage model by which a person develops their Black identity. It was understood to be a personal evolution from Black self-hatred to Black self-acceptance within American society. In 1991, Cross revised his conceptualization of Black racial identity from a stage theory to an attitudinal theory. This new model

considered Black racial identity to be a complex interaction between thoughts, behaviors, and feelings a person has in regards to his or her racial group membership. Included in the revised model was a new emphasis on the significance of race in an individual's life, and the direction of the valence, meaning how positively or negatively they feel about it (Carter, 1995). In a further revised and expanded model (Cross & Vandiver, 2001) the Nigrescence model is described as consisting of three major identity types or exemplars (Pre-Encounter, Immersion-Emersion, and Internalization), with each identity type consisting of two or three different 'attitudes' or typologies as described in the following paragraphs (Cross & Vindiver, 2001).

The *pre-encounter identity* is characterized by one of three attitudes: pre-encounter assimilation, pre-encounter miseducation, and pre-encounter (racial) self-hatred. The *pre-encounter assimilation* typology is characterized by low race salience, meaning race is not viewed as an important part of the individual's identity. Those characterized by this identity may feel race neutral or have a strong pro-American identity. Persons in this category often exhibit disdain for Black culture, and all Black organizations but in more passive forms, those described as pre-encounter assimilation simply choose not to consider or engage Blackness. *Pre-encounter miseducation* describes a person who accepts and believes negative stereotypes about African Americans. They are likely to endorse statements such as "Black's place more emphasis on having a good time than on hard work" (Cross & Vandiver, 2001). For individuals characterized in this way, being Black has a high negative salience. Finally, *pre-encounter (racial) self-hatred* describes a Black person who experiences extreme negative feelings and "deep-structure self-loathing" because he or she is of African

descent (Cross & Vandiver, 2001). Studies have shown these feelings are strongly related to psychological dysfunction, high levels of anxiety, depression, low self-esteem and low self-regard (Carter, 1995; Davis et al., 2006).

Immersion-emersion encompasses two racial identity attitudes: anti-White and intense Black involvement. *Immersion-emersion anti-White* describes Black people who feel their African heritage makes them superior to Whites and are overwhelmed by their hatred of White people and White society. Individuals who fall into this category are often unpredictable, volatile, and rageful. *Immersion-emersion intense Black involvement* characterizes African Americans who romanticize their race and have an intense involvement in anything 'Black.' The person "engages in Blackness in a nearly cult like fashion" and often has interactions with other Black people in which they are proving they are 'more Black' (Cross & Vandiver, 2001).

Internalization is achieved when a more balanced view of race is felt. Three internalized typologies, all characterized by Black self-acceptance, are said to exist: internalized nationalist, internalized biculturalist, and internalized multiculturalist. The three identities are differentiated by individual's salient identities beyond their Black race (such as gender, sexual orientation, religion, etc.) For *internalized Black nationalists*, being Black is their only salient identity and often these individuals participate in political activism empowering the Black community. A bicultural attitude emphasizes both an individual's Blackness and their American identity. Finally, the multiculturalist attitude combines three or more identities, such as a person's Black identity, their gender, sexual orientation or other salient parts of themselves. When compared to other forms of

racial identity status, those characterized as being internalized have been found to have higher self-esteem, an internal locus of control, better coping mechanisms, lower levels of depression, and better overall psychological functioning (Anglin, 2003; Anglin and Wade, 2007; Carter, 1995; Cross & Vandiver, 2001;Davis et al., 2006; Vandiver, 2001).

In 2001, the Cross Racial Identity Scale (CRIS) (Cross & Vandiver) was developed in order to assess which of the previously described identities or typologies characterizes an individual. Since the development of this scale, researchers have studied the connection between an individual's Black racial identity and his or her adjustment to college, psychological defenses (Anglin, 2003; Anglin, 2007), success in psychotherapy (Carter, 1995), academic outcome, susceptibility to ST, coping abilities (Davis et al., 2006), self-esteem, and general mental health and wellness (Vandiver, Cross, Worrell, & Fhagen-Smith, 2002).

Bringing our attention back to Davis et al. (2006) study, this study investigated the role of Black racial identity in moderating ST under varying degrees of threat. The primary hypothesis was that having internalized racial identity attitudes would make students less vulnerable to ST conditions and would predict higher scores on an academic task (which was selected from the GRE and represented the dependent variable). Furthermore, it was predicted that performance would be best under low ST conditions regardless of an individual's racial identity. The results from their study demonstrated that internalized racial identity (i.e. having a strong sense of connectedness and belonging to one's racial group) moderated performance in low threat conditions but not in high threat conditions. Thus, high ST conditions led to decrements in performance regardless

of the racial identity of the participants. In short, internalized attitudes did not seem to have the hypothesized protective function under high threat conditions.

The influence of stereotypes on thoughts, behaviors, and performance.

Steele and Aronson (1995) note that an individual does not have to believe in prominent stereotypes in order for those stereotypes to influence thoughts and behaviors. In the case of ST for African Americans, simply having knowledge of stereotypes can influence performance, regardless of one's belief in the validity of the stereotypes. But where does one learn about stereotypes? Knowledge of stereotypes most likely comes from multiple avenues, including family, peers and others in an individual's social environment. Another source that is becoming increasingly influential is television and the mass media.

Part II

Stereotypes and the media.

Stereotypes are simplified representations of groups of people that deny individual differences among group (especially out-group) members (Perse, 2001). Furthermore, stereotypes implicitly convey the assumption that all members of a group possess "the same set of characteristics, attitudes or life conditions" (Liebert & Sprakfin, 1988 as cited in Perse, 2001). Content analysis has shown that television and movies are heavily saturated with stereotyped portrayals of ethnic and sexual minorities, women and the elderly. Furthermore, the news media are also dominated by stereotypical portrayals of Blacks and Hispanics (e.g. criminal, poverty stricken, unintelligent, etc.) (Entman, 2006). While stereotyped portrayals of marginalized ethnic groups in the news media

represent a highly important topic (as they are a supposed reflection of reality), this study will focus on media portrayals seen in entertainment media (television and movies). Portrayals of ethnic minorities on television and in movies can be interpreted as a covert example of racism, as stereotypical beliefs are transmitted under the guise of entertainment. Viewers may be less likely to watch television and movies with a critical eye and therefore their messages may be more influential on the subconscious.

Content analysis of entertainment media reveals female characters on television are often younger than male characters, they are seen as caretakers and sources of emotional support, and are more likely to be shown in the home, with family or within a romantic context (Van Evra, 1990; Perse, 2001). In 1993, Signorelli noted that only 30% of married female characters are employed outside of the home, even though in reality about one-half of married women are employed (Perse, 2001). Even when female characters are employed outside of the home, the program generally focuses on their home lives (for example Claire Huxtable in the Cosby Show). Additionally, even on family television shows, fathers and/or children are most likely to be the main focus of story lines and mothers have less significant roles.

Females in starring roles are often portrayed as sexual objects (Van Evra, 1990). In cartoons, largely consumed by children, female characters are often depicted as subservient or helpless in comparison to males, are less clever, and ask for more advice (Perse, 2001). In comparison, male characters are usually the main characters (with 65% of all prime time characters being males [Children Now: Fall Colors, 2001]) and are seen

as aggressive, independent, the voice of authority and knowledgeable (Perse, 2001; Van Evra, 1990).

In terms of media's portrayal of characters of various ethnic and racial backgrounds, content analysis of prime time television shows from 2001 revealed 75% (1688 characters) were White. Seventeen percent of prime time characters were Black, 3% Asian American, 0.2% Native American, and 2% Hispanic. Arab or Middle Eastern characters, since the mid-1980s, are shown rarely, and when they are, they are portrayed as terrorists, amoral, wealthy, or villains (usually in children's television programs). Arab women are almost non-existent on television unless they are belly dancers or a member of a harem (Shaheen, 1984 cited in Perse, 2001). In 2001 (Children Now: Fall 2001), only 2 percent of primetime characters were gay or lesbian. When we compared the above statistics to 'the real world', we find that in 2008, White/non-Hispanics represent 65.6 % of the American population and Blacks represent 12.8%. American Indians represent 1% of the population, Asian Americans represent 4.5 percent of the populations, and Hispanics represent 15.4% of the population. The government website from which this data was retrieved (http://quickfacts.census.gov) did not provide information regarding the percentage of people identifying themselves as having Middle Eastern heritage. While Blacks are not necessary underrepresented on television, the variety of ways in which they are depicted certainly are[4]. American Indians, Asians, Hispanics, and Arab Americans are most certainly underrepresented both in numbers and the way in which these groups are portrayed.

[4] This line of thought will be continued shortly.

The absence or underrepresentation of particular groups of people is called "symbolic annihilation." Tuchman (1978, cited in Klein & Shiffman, 2009) describes symbolic annihilation as the omission, trivialization or condemnation of groups that are not socially valued within the media. By rarely (or never) showing particular groups of individuals, the mass media as a cultural mechanism disseminates a message regarding that group's social value. Groups that are valued by society (White people, males, heterosexuals, etc.) are most often portrayed, and viewers are unconsciously (or consciously) taught what characteristics are valued, what a person should strive for, and the expectations society has for a person based on superficial characteristics. Symbolic annihilation in the media has profound effects on people's beliefs, attitudes and behaviors (Klein et al., 2009). In short, this seems to suggest that the sheer lack of characters of a variety of races and ethnicities sends a strong message to non-white viewers about their importance, worth, or social status within society.

Research verifies that when Black characters are on screen, they are most often portrayed by the media as being low achievers having less education and lower socioeconomic status when compared to their White counterparts (Bramlett-Solomon & Farwell, 1996; Seggar & Wheeler, 1997 as cited in Punyanunt-Carter, 2008). Empirical investigations have also found that Black characters often possess a number of stereotypically negative personality traits. In 1977, the U.S. Commission on Civil Rights found Black characters on television were most typically represented as being: inferior, immoral, stupid, comical, and dishonest (Punyanunt-Carter, 2008). Later work (Dates, 1990 as cited in Punyanunt-Carter, 2008), found that most Black characters possessed negative qualities such as: rebellious, disrespectful, buffoonish, overly sexual, immoral,

uneducated, noisy, untrained, untidy and menacing. Lastly, Black characters over the years have been stereotypically portrayed as having employment that does not rely on the type of intellect most socially valued by our society (such as house cleaner, servant, entertainer, musician, athlete or corrupt individual) (Seggar & Wheeler, 1973; Warren, 1998 as cited in Punyanunt-Carter, 2008).

Black characters are most often seen in comedies rather than dramas, which is of concern when the characters are seen as 'buffoons' such as in minstrel shows such as Amos n' Andy (e.g. Flava Flav). Black actors are rarely seen in romantic contexts and only 11.6% of intimate scenes on soap operas portray a Black couple (Perse, 2001). When commenting on sports games, announcers most often make reference to Black athlete's physical abilities, while they praise White athletes' cognitive abilities. Furthermore, Rada (1997 as cited in Perse, 2001) notes that commentators used animal nicknames for Black players and not White. Black characters are less likely than White characters to be shown in high-powered professional business occupations and are more likely to be shown in law enforcement or service related occupations. In comparison to White characters, Hispanic characters are three times as likely to be portrayed as criminals while Asian and Blacks are twice as likely to be portrayed in this way (Van Evra, 1990).

The literature notes that television casts are largely segregated (although viewers are not). In 1986, Greenberg (as cited in Van Evra, 1990) notes that half of television programming did not include any ethnic minority characters. In 1994, less than 20% of the top 5 networks sitcoms had a racially diverse cast. In 1999, 26 new television shows

premiered and none of them had minorities in starring roles. As of 2001 (Children Now: Fall Colors 2001), hour-long dramas contained the most diversity, but these shows did not air until 10pm. During these dramas, characters were not only racially diverse, but story lines were more likely to deal with issues of tolerance. It should be noted though, that by this time, children and even teens (who are most likely to be influenced by television) are already asleep. Shows in the 8pm time slot (which is most commonly the last hour of television consumed by children) are the least diverse with over 50% of the shows being racially homogenous (either an all-Black or all-White cast.)

Perse (2001) writes that the media often rely on stereotypes in programming and in storylines for a number of reasons. First and foremost, is the media producer's desire to create content that attracts and is understood by a wide range of viewers of different ages, cultural backgrounds and with varying levels of education. People generally view television to unwind and forget their troubles; therefore it is assumed viewers are generally not interested in intellectually challenging material. Furthermore, there are obvious time constraints that prohibit in-depth development of characters and storylines, so producers use stereotypes "to present easily understood and identified character types" (Perse, 2001, p. 165). The problem is that frequent viewing of stereotypes solidifies them in the minds of viewers, influences identity development and conceptualizations of the world, and can be used to justify social inequalities.

Young people receive a very strong message regarding race, class and gender via the television programming they consume. Research confirms that young people, especially in their formative years, internalize many of the values and attitudes they see

presented on screen. Therefore, the frequency and context in which a diversity of characters is portrayed teaches important social lessons (Children Now: Fall Colors, 2001). Perse (2001) writes that stereotyped media images of racial minorities can result in the creation of prejudice and stereotypes among non-group members and have significant effects on the development of children who are members of the group targeted by stereotypes. In fact, a meta-analysis of 230 studies regarding television's influence on thought and behavior found "the effect of television on role stereotyping was particularly strong (.90)" (Hearold, 1986 as cited in Reep & Dambrot, 1989).

Ward (2005) suggests that we need to think about the effects of the media in a realistic yet complex way. The media has often been a scapegoat, targeted as being solely responsible for a variety of social epidemics, such as violence, obesity, or teen promiscuity. When it comes to these issues, the influence of the media seems to be exaggerated. On the other hand, the influence the media has on shaping viewers' (especially young viewers') beliefs about race, gender and personal identity has often been understated or overlooked (Ward, 2005, Klein & Shiffman, 2009).

How television influences viewers.

Cultivation theory and perceived realism.

Given the empirically demonstrated impact that the media have on our social and psychological realities, it is critical to review the theories regarding the mechanisms by which the media influence viewers. As just reviewed, content analyses reveal that characters and storylines of prime-time shows on major broadcasting networks share very similar features. There seems to be a significant lack of diversity amongst characters, men are overrepresented, woman and ethnic minorities are underrepresented, and

violence is common. Furthermore, racial and gender groups tend to be portrayed stereotypically. The consistency of representations on television and in movies lead viewers to falsely believe television resembles and is a reflection of the real world (Perse, 2001). Cultivation theory, which is often used to describe how children's socialization is influenced by television, dictates that the more television a person watches, the more likely he or she is to have stereotypical views of social groups. In other words, our perceptions of reality are "cultivated" or developed by what we see in the media. Cultivation is founded upon the viewer's perceived realism of television portrayals. In short, evidence suggests that television is most influential to its viewers when they perceive the characters or storyline as being a reflection of 'real life.' (Bandura, 2002; Perse, 2001; Punyanunt-Carter, 2008).

In 2008, Punyanunt-Carter investigated the perceptions viewers have of the perceived realism of African American portrayals on television. Specifically, this study looked at undergraduates' beliefs regarding the perceived realness of television portrayals of African Americans' occupational roles, negative personality traits, low achieving status, and positive stereotypes. Students were asked to answer questions such as: "Television presents African Americans' negative personality characteristics as they really are in life"; "Television lets me really see the occupational roles of African Americans;" "Television lets me really see African Americans, who are low-achievers;" and "Television presents African Americans with positive stereotypes as they really are in life." It should be noted that the terms such as "occupational roles," "low-achieving," "negative personality traits," "low status roles," and "positive stereotypes" were not defined or explicitly explained to the participants in the research study. The participants

were required to interpret the meaning of these descriptors on their own (Punyanunt-Carter, 2008).

Students responded using a 5-point, Likert scale that ranged from 5 (*strongly agree*) to 1 (strongly disagree). Subjects were all undergraduate students enrolled in a basic communications course. Eighty-five percent of subjects were White, 6% were Black, and 9% were "of other ethnic origins." Most participants (43%) watched at least 30 minutes to an hour of television per day (Punyanunt-Carter, 2008).

The results of this study demonstrated that there were significant differences in viewers' perceptions of African Americans on television. Viewers reported perceiving the occupational roles and negative personality traits of African Americans portrayed on television as real or true to life. They felt television depicted African Americans in jobs that are realistic and believable. But, viewers did not perceive the low-achieving status roles and positive stereotypes of African Americans on television as accurate or believable portrayals. Researchers hypothesized that the popularity of some high achieving African Americans (such as Oprah Winfrey and Condoleezza Rice) may have led viewers to feel that not all African Americans are low achieving. Along similar lines, the researchers hypothesized that participants may have felt that positive stereotypes of African Americans were not very realistic because they endorsed the belief that negative personality characteristics of African Americans were true to life. In summation, this study demonstrated that the way African Americans are portrayed on television does influence viewers' perceptions of African Americans in general (Punyanunt-Carter, 2008).

Given that there is a theorized relationship between the amount of television one consumes and how much the viewer believes it is a reflection of the real world, it is alarming to recognize that the average child spends more time watching television than participating in formal education. Furthermore, research has demonstrated that Black children watch vastly more television than their White and Hispanic counterparts, even after income and socioeconomic status have been controlled for (Stronman, 1991; Roberts, Foehr, Rideout, & Brodie, 2003; Ward, 2004). According to Roberts et al. (2003), African American youth on average watch two more hours of television per day than White children and one more hour per day than Hispanic children. African American youth consume an average of 5 hours of television a day (35 hours per week) while White youth watch less than 2 hours and 48 minutes of television a day (less than 20 hours per week) (Roberts, et al., 2003; Ward, 2004)

Socialization and Social Learning Theory.

According to Berry (1998), socialization is the process by which individuals learn about the culture, rules and regulations of their family, and society. It involves learning attitudes, values, information, cognitive processes, behaviors and self-concepts that are expected and or accepted within one's segment of society. Modeling, or observational learning, plays a key role in socialization. It is the process by which individuals learn by observing, retaining, and imitating the behavior of others.

Traditionally the family, school, peer groups and religious organizations were primarily responsible for socialization, with parents playing the most influential role. Parents often reinforce the behavior of the child, essentially confirming for them what behaviors are acceptable or not. If a behavior is acceptable, the parent can use positive

reinforcement to transmit the message to the child that his or her behavior is acceptable. The parent can also provide punishment or correction in response to a behavior that is not valued. But, according to Bandura (1969 as cited in Berry, 1998), direct reinforcement of behavior is not always necessary for a behavior to be learned. In fact, it is believed that people learn behaviors through simply observing models perform behaviors. Therefore, social learning seems to suggest that children can learn from models seen on television. According to Bandura (2002), children use characters on television as models and use what they see to shape their beliefs, attitudes and behaviors. Once information from television is stored, it may manifest itself in thoughts, feelings, and behaviors later in life. Frequent and repeated exposure to similar messages leads to the reinforcement of the message.

Methods of mass communication, especially television, are having an increasingly influential role as a means of socializing individuals. In fact, according to Berry (1998), "No medium within our vast communication system is more competitive with the traditional agents of socialization than television." A number of researchers (Comstock et al., 1978 and Stroman, 1984 as cited in Berry 1998; Rivadeneyra et al. 2007) believe television is a source of vicarious socialization that provides role models and greatly impacts young people's attitudes, beliefs, and behaviors.

It may be hard to assess the particular ways television may impact ethnic minority viewers. No group of individuals is homogeneous, making it difficult to identify the possible influence that television has on beliefs and behaviors and on those most at risk (Berry, 1998). Despite this, research (Berry, 1998) suggests that television will have the greatest impact on young viewers under the following four circumstances. First, if similar

values or perspectives are found in numerous programs; second, if the messages are presented in a way that evokes primarily emotional reactions; third, if the values are related to the young viewer's immediate needs and interests; and finally, if the viewer does not have others in his or her environment to provide a competing set of values or beliefs against which to assess the perspectives offered by television.

Media activated stereotypes.

Given the above review of the literature that seems to suggest the media is at least partially responsible for the dissemination and perpetuation of stereotypes, it should also be noted that media content has the ability to activate stereotypes, which then influences mental processing such as judgment, perception, performance and memory. In 1979, Tan demonstrated that exposing individuals to stereotyped media portrayals influenced self-schemas (i.e. the beliefs people have about themselves). She found that adolescent girls who viewed television ads were more likely to report believing that beauty was important to popularity with men than girls who did not view the ads.

More recently, in 2002, Davies, Spencer, Quinn, & Gerhardstein conducted 3 studies that investigated the influence of viewing gender stereotypical television commercials on women's math performance, preference for completing math versus verbal tasks, and interest in pursuing a variety of educational and vocational options. In study 1 (Davies et al., 2002), both female and male undergraduate students were randomly assigned to view either stereotypic or counter stereotypic televisions commercials (which will be described shortly) prior to being asked to complete a lexical-decision task and then a math test described as being non-diagnostic of ability. These researchers hypothesized that viewing commercials that stereotype females would

activate the female stereotype in the minds of both female and male subjects. This activation of the female stereotype was hypothesized to create a stereotype threat condition for female participants (and not males) when asked to complete a math exam (as relevant societal stereotypes hold that females are less skilled than men in this subject) and task performance would be depressed. The math test administered was described as non-diagnostic (as was done in Steele & Aronson, 1995 study 3) to help demonstrate that the stereotype threat activated was most likely due to the commercial viewed, rather than the diagnosticity of the math exam. It was hypothesized that stereotype activation (as measured by the lexical-decision task) would occur for all participants who viewed the stereotypic commercials and that the level of activation would mediate the performance depressing effects of the stereotypic commercial hypothesized to occur for female participants (Davies et al., 2002 study 1).

To give the reader examples of the stereotypic commercial shown, one commercial depicted a young woman who was so enthused about a new acne product that she bounced on her bed with joy. In another stereotypic commercial, a woman was depicted "drooling" with anticipation to try a new brownie mix. It is important to note that these stereotypic commercials did not make specific reference to alleged gender differences in math ability or major/career selection. Rather, the researchers hypothesized that activating one stereotype about females (i.e. the importance of appearance or the love of chocolate) would activate the female stereotype generally, making all stereotypes about females salient. As examples of a counter-stereotypic commercial, participants viewed a commercial in which an attractive woman impressed a man with her knowledge of automotive engineering. In another counter-stereotypic commercial, a woman spoke

intelligently about health care concerns (Davies et al., 2002 study 1).

In order to assess whether the commercials viewed activated the female stereotype in the minds of viewers, a lexical-decision task was administered after participants viewed the media images. This task required students to identify as quickly as possible if flashing strings of letters on a computer screen were words or nonwords. The basic idea behind this task was that individuals would recognize words related to the female stereotype (e.g. irrational, weak, inferior, emotional) more quickly if the stereotype has been activated when compared to those for whom the stereotype was not activated. After this lexical-decision task, participants completed 12 questions from the math section of the Graduate Record Examination (GRE).

The results of this study indicated that male and female subjects performed equally as well on a difficult math test after viewing counter-stereotypic television commercials. When exposed to gender stereotypic commercials, female participants performed significantly worse than male participants on the difficult math test. Additionally, women in the stereotypic condition scored worse on the math task when compared to women in the counter-stereotypic condition. Participants, regardless of gender, who viewed the stereotypic commercials, experienced a higher degree of female stereotype activation (as measured by the lexical-decision task) when compared to those who viewed the counter stereotypic commercials. Simple-effect tests revealed there were no differences in activation levels between male and female participants in the stereotypic condition or the counter-stereotypic condition. In terms of the mediational hypothesis, these researchers found that the level of stereotype activation among women did mediate the effect of the commercials on math performance (Davies et al., 2002 study 1).

In another study by these researchers (Davies et al., 2002 study 2), male and female students who were strongly identified with and enjoyed math (as determined by a mass questionnaire administered months before the study) viewed either female gender stereotypic commercials (as defined in the aforementioned study) or gender neutral commercials (e.g. commercials that did not include humans and had nothing to do with gender). After viewing the commercials, subjects were given a task described as being non-diagnostic consisting of 24 verbal questions and 24 math questions. Participants were asked to complete as many questions as possible in twenty minutes and were invited to skip questions they did not want to answer.

It was hypothesized that under general circumstances, these math identified students should all show preference for math versus verbal questions. But, because the previously reviewed study (Davies et al., 2002 study 1) demonstrated that gender stereotypic commercials activated ST for women, female participants in this condition were expected to avoid math problems and instead favor verbal problems. It was also hypothesized that men in both conditions would prefer to answer quantitative rather than verbal questions. Additionally, it was hypothesized that females who viewed the gender stereotypic commercials would experience ST and underperform on math questions when compared to males and to females who viewed gender-neutral commercials. Male subjects' math performance was hypothesized to be unaffected by condition (Davies et al., 2002 study 2).

The results of this study (Davies et al., 2002 study 2) demonstrated that females exposed to gender stereotypic commercials avoided math questions in favor of verbal

questions when compared to females exposed to gender-neutral commercials. Furthermore, women exposed to gender stereotypic commercials underperformed when compared to the performance of women who viewed gender-neutral commercials. Male participants' math performance and choice of math versus verbal questions were not influenced by condition. This study provides strong evidence that ST can lead women to temporarily avoid male dominated domains (such as math) and seek areas of work and study in which they do not risk being personally reduced to a stereotype.

In yet another study (Davies et al., 2002 study 3), similar to the aforementioned studies (Davies et al., 2002 studies 1 and 2), male and female undergraduate students were asked to indicate their level of interest in a range of college majors and careers immediately after viewing gender stereotypic commercials (as described in Davies et al., 2002 study 1) or neutral commercials (as described in Davies et al., 2002 study 2). Participants indicated their preference for majors and careers on a scale ranging from 1 (*no interest*) through 7 (*strong interest*). It was hypothesized that women who viewed gender stereotypic commercials (and thus more likely to be experiencing ST [Davies et al., 2002 study 1]) would indicate less interest in pursuing educational/vocational options in which they would likely experience ST (e.g. quantitative domains such as engineering, accounting, physics) and would express more interest in more traditionally female majors and careers (e.g. verbal domains such as majoring in English or becoming a journalist) when compared to women who viewed gender neutral commercials and men in both conditions.

As expected, women exposed to gender stereotypic commercials expressed significantly more interest in verbal domains. Also, women in the gender-neutral condition reported significantly more interest in quantitative domains than women in the stereotypic commercial condition. In conclusion, Davies et al. (2002 study 3) found that viewing gender stereotypical commercials temporarily influences female viewers' expressed interest in academic and career pursuits, leading them to demonstrate a preference for verbal domains and to avoid traditionally male-dominated domains. Additionally, these researchers demonstrated that viewing gender stereotypic commercials depresses math performance (Davies et al., 2002 studies 1 and 2) and leads female students to temporarily report having a preference for verbal rather than quantitative tasks (Davies et al., 2002 study 2).

In 1995, Rudman and Borgida asked men to view television commercials that stereotyped women as sexual objects. Compared to men who had seen gender neutral ads, men who viewed the sexist ads were more likely to judge a female job applicant as less competent, remember less biographical information about her, and recall more about her physical appearance. In 1997, Ford exposed White subjects to comedic clips featuring stereotypical or neutral portrayals of African Americans. The stereotypical clips depicted African Americans in a demeaning stereotyped manner (i.e. poor, uneducated, and prone to acts of crime and violence). Immediately after exposure, participants were asked to read a vignette describing an incident in which a college student was allegedly assaulted by his roommate. In half of the conditions, the alleged assailant was assumed to be White, in half of the conditions, the assailant was assumed to be Black. Subjects were asked to rate the likelihood the alleged offender was guilty of assault. Guilt rating of the

White target did not differ significantly between the stereotypical and the neutral conditions. However, guilt ratings of the Black target were significantly higher in the stereotypic condition than in the neutral comedy condition. In other words, White viewers exposed to stereotypical comedic portrayals of African Americans are much more likely to assume the guilt of a Black assailant than White viewers exposed to neutral portrayals.

In response to the momentous American presidential race that occurred in 2008, Friedman, Marx, and Ko conducted a study on what is now famously known as the "Obama Effect" (as cited in Wolf, 2009). While this study has yet to be published in a peer-reviewed journal, it has taken the news media by storm and therefore seemed essential to mention in this chapter. These researchers (Friedman, Marx and Ko as cited in Wolf, 2009) hypothesized that Obama's presence in the presidential election, and the way in which the media portrayed him (as an educated, responsible, intelligent Black man) could have an impact on the academic/intellectual performance of Black Americans. They believed that Obama was a powerful, "real-world, in-group role model," who defied the way the media typically portrayed a person of African descent and could potentially have a measurable and positive influence on academic/intellectual performance.

The "Obama effect" study recruited 472 participants from across the nation (84 Black Americans and 388 White Americans matched for age and education level). Participants completed questions from the GRE (reading, comprehension, analogies and sentence completion) at four points over a three-month time period during the presidential campaign of 2008. At two administration points, Obama's success was "less

prominent" (i.e. prior to his acceptance of the democratic nomination and the mid-point between the democratic convention and Election Day). The other two administration points occurred when Obama was receiving the most media attention for his presidential run (i.e. immediately after his nomination speech and after he won the presidency in November) (Wolf, 2009).

The results of this study revealed that White participants scored higher than their Black counterparts at the two administration points in the campaign when Obama's achievements were least visible. But, during the administration points that occurred when Obama was receiving an extraordinary amount of positive media attention, the performance gap between Black and White participants was eliminated. Furthermore, Friedman, Marx, and Ko (as cited in Wolf, 2009) found that Black participants who did not watch Obama's nomination acceptance speech continued to underperform in comparison to their White peers while those who did view the speech successfully closed the achievement gap.

Friedman, Marx, and Ko (Wolf, 2009) also sought to examine whether Obama's success reduced concerns about negative racial stereotypes. Participants were asked if they were concerned that poor performance on the exam would be attributed to their race. The results indicated that Blacks were concerned that they faced negative stereotypes about academic achievement whether Obama was prominent or not, but when Obama was prominent they were able to overcome that concern and perform better on the test. Again, while this study has yet to be peer reviewed or officially published in an academic journal, it makes an important statement about the value, importance, and influence that

positive media representations of Black people can have on Black youth and their academic success.

The aforementioned studies provide compelling evidence of the media's ability to activate stereotypes within the mind of the viewers, which subsequently influences a variety of cognitive functions. Although the studies discussed demonstrated the short term/immediate effects of exposure to stereotypes, and the immediate effects of stereotype activation fade after a few minutes, it is important to keep the following in mind: Regardless of their duration, each activation of a stereotype reinforces stereotypic thinking over time. Evidence suggests that once a stereotype is activated, it can be reactivated very simply (for example, by asking an individual to report their race or gender) and if brought to mind frequently enough can become chronically accessible (Ford, 1997; Kunda, Davies, Adams, & Spencer, 2002).

The frequent activation of self-relevant stereotypes is very likely for members of marginalized racial, ethnic and gender groups, who may encounter racism and sexism on a daily basis. Thus, even though the effects of media-based stereotypes may seem transient when considered individually, their cumulative effect over time can be substantial. It is likely that exposure to television that is more often than not based on stereotypes acts to continuously prime viewers with stereotypic thoughts, resulting in chronic accessibility of the stereotypical representations featured in mass media. This is likely to produce long-term cultivation and socialization effects (Shrum, 2002; Gerbner, 1998).

Purpose and Rationale

The literature reviewed in this chapter suggests that predominant societal stereotypes have the potential to influence cognitive functioning, performance on academic tasks, feelings about the self, and judgment if cognitively activated (Schmader, 2002; Shih et al., 1999; Steele & Aronson, 1995; Rivadeneyra, 2001) Most relevant to this study, if stereotypes about an individual's Black race are activated, ST (or the performance inhibiting anxiety that emerges when a person feels he or she is at risk for confirming negative societal stereotypes) can inhibit task performance. This phenomenon is said to be at least partially responsible for the academic achievement gap between Black and White students.

Furthermore, empirical evidence suggests that stereotypes can be activated in a variety of ways such as by asking individuals to report their stereotyped identity (racial or gender) (Steele & Aronson, 1995; Shih et al., 1999), or by exposure to media/television images that show racial or gender stereotypical representations (Davies et al., 2002; Ford, 1997; Rudman & Borgida, 1995). Much of the literature that investigates the media's ability to activate stereotypes that subsequently influence functioning involves the activation of gender stereotypes or the influence that racial stereotypes have on White viewers. The current body of literature lacks sufficient work on the influence that media representations of African Americans have on viewers of African descent.

The following study seeks to investigate the influence that positive and negative media representations of African Americans have on the cognitive functioning of African American university students. For the purposes of this study, negative media representations of African Americans are defined as the characterization of African

American people as unintelligent, unemployed or employed in low paying/low status jobs, promiscuous/overly sexualized and/or as having negative character traits such as loud, obnoxious, lazy and/or disrespectful. Positive media representations of African Americans will be defined as media representations of Black people that are constructive and make a concerted effort to avoid the negative representations as previously defined. Positive media representations of African Americans as defined by this study portray African Americans as intelligent, responsible, respectful, and employed in counter-stereotypical jobs (such as professor, doctor, lawyer, business executive, etc.). It is hypothesized that negative media images of African American's will activate ST in participants (i.e. the concern that their performance will be used to confirm or deny negative stereotypes about African American's intelligence.) In other words, I hypothesize that negative media images will have a similar effect on African American student's performance as telling them that the task they are performing is a test of intelligence.

Additionally, this study will investigate the effect these media images have on the state anxiety of viewers. This study hypothesizes that viewing negative media images will activate stereotypes about African American intellectual inferiority and the concerns that their performance will be judged in light of negative stereotypes. If this stereotype is activated prior to participants being asked to complete a task, despite it not being described as a reflection of their intelligence, this study hypothesizes an increase in state anxiety will occur. Furthermore, it is hypothesized that increased state anxiety will depress performance on a cognitive lab task. In other words, anxiety is hypothesized to

mediate the relationship between exposure to negative media images and the depression in cognitive task performance.

Lastly, given the research that suggests that an internalized racial identity status is associated with higher self-esteem, increased coping skills and better overall psychological functioning (Anglin, 2003; Anglin and Wade, 2007; Carter, 1995; Cross & Vandiver, 2001;Davis et al., 2006; Vandiver, 2001), it is hypothesized that the task performance of Black students with an internalized black racial identity will suffer less after exposure to negative media images than the task performance of Black students with other racial identity statuses after similar exposure. In other words, having an internalized Black racial identity is hypothesized to protect students from some of the negative ramifications of exposure to negative media images.

Hypotheses

H1- Viewing media images that portray negative stereotypes about African Americans will be related to relatively lower task performance when compared to the task performance of those viewing both positive images of African Americans and racially neutral media images.

H2- Viewing media images that portray positive images of African Americans will be related to better task performance when compared to viewing negative or racially neutral media images of African Americans.

H3- Students asked to complete a cognitive lab task after viewing media images

that depict African American characters in a stereotypically negative light, will experience an increase in state anxiety.

H4- Students asked to complete a cognitive task after viewing positive media representations of African Americans will not experience an increase in state anxiety.

H5- Increased state anxiety will lead to decrements in performance on the assigned cognitive lab task.

H6- Anxiety will mediate the relationship between viewing negative media images and low task performance.

H7- Internalized Black racial identity will moderate the relationship between negative media and task performance such that task performance will not suffer despite exposure to negative media images.

Chapter 2:

Method

This chapter describes the participants, recruitment methods, experimental conditions, measures and procedure used in this study.

Sample and Participant Selection

Ninety students were recruited from the City College campus to participate in this study. Socio-demographic information as well as missing data is summarized in Table 1. In total, exactly 80% of the students were recruited from a Psychology class, 20% were from Black Studies courses. Though recruitment came from two departments, 16 majors were represented by the entire sample with 60% identifying as psychology majors.

The majority of the participants (73.3%) were female. Students' ages ranged from 18 to 60 years old (Mean=23.57 SD=7.71) with 80.8% of the students falling between the ages of 18 and 23. Ethnically, over half (54.5%) of the sample self-identified as African-American and a third (31.1%) as West-Indian/Caribbean. Slightly more than a tenth of the sample self-identified as African. A marginal amount of students characterized their ethnicity as either Biracial or other (2.8%).

Regarding socioeconomic status, most participants identified as either working class or middle class. Over 65% of the sample described the communities they grew up in as Urban, close to a third as Suburban, and the rest either rural or other (5.5%). Most students reported that racially their communities were mostly Black (47.8%) or mixed (45.6%). Less than 5% reported growing up in a mostly white community. In terms of the samples' current year in school, forty percent of the sample self-identified as juniors, 17% were freshman, 22% were seniors, and 19% were sophomores. The mean GPA of

the students was 3.1.

A majority of the participants were born in the United States, while less than 20% reported being born outside of the United States. Of those born outside of the United States, on average, students arrived in the US at an age of 7.3 (SD=3.7). This sample of participants recruited was largely second generation Americans, as most (65.6%) reported one or more of their parents were born outside of the United States. Over half of the students whose parents were born outside of the United States were from either Jamaica or Haiti. The rest of this subgroup reported one or more of their parents were born in one of eighteen other countries spanning the Caribbean, Central America, Africa, Europe and Asia.

The level of education obtained by the participant's mothers was variable across the subject pool. Nearly 60% of mothers were reported to have had at least some experience with post-secondary education. More specifically, just over 23% of the mothers completed some college, 6.7% completed an associates or two-year degree, 8.9% earned a bachelor's or another four-year degree. Slightly over 2% of the mothers have some graduate or professional school experience, and 14.4% have completed a graduate or professional school degree. Exactly 20% of mothers have earned a high school diploma or equivalent while just about 18% never completed high school.

The level of education earned by the student's fathers also varied across participants. Close to 60% of the participant's fathers had some experience with higher education. Less than 10% completed some college and nearly 8% earned an associates or two-year degree. Approximately 16% earned a bachelor's or four-year degree, 5.6% have

Table 1

Demographics Information for Study Participants (N=90)

Race	N	%	SES	N	%		
African	10	11.1%	Poor	2	2.2%		
African-American/ Black	49	54.4%	Working class	45	50.0%		
West-Indian/ Caribbean	28	31.1%	Middle class	34	37.8%		
Biracial	2	1.7%	Upper middle	8	8.9%		
Other	1	1.1%	Unreported	1	1.1%		
Gender			Communities of origin				
Female	66	73.3%	Rural	3	3.3%		
Male	24	26.7%	Suburban	26	28.9%		
			Urban	59	65.6%		
			Other	2	2.2%		
Academic year			Education Level	Mother		Father	
Freshman	15	16.7%	Elementary	3	3.3%	1	1.1%
Sophomore	17	18.9%	Some high school	13	14.4%	18	20.0%
Junior	36	40.0%	High school diploma or equivalent	18	20.0%	15	16.7%
Senior	20	22.2%	Business or trade	3	3.3%	4	4.4%
Unreported	2	2.2%	Some college	21	23.3%	8	8.9%
			Associates or two-year degree	6	6.7%	7	7.8%
			Bachelor's or four-year degree	8	8.9%	14	15.6%
			Some graduate or professional	2	2.2%	5	5.6%
			Graduate or professional degree	13	14.4%	7	7.8%
			Unreported	3	3.3%	11	12.2%
American born			Parents American born				
Yes	73	81.1%	Yes	31	34.4%		
No	17	16.8%	No	59	65.6%		
Age			Television/week				
m	Mode	SD Range	m	Mode	SD	Range	
23.57	20	8.5 18-60	13.4	10	9.4	0-50	

completed some graduate or professional school, and 7.8% have earned a graduate or professional school degree. Approximately 4% of the fathers have completed trade school while 16.7% have at least a high school diploma or equivalent. 21% of the fathers have less than a high school education.

Experimental Conditions

Students who met criteria for this study were randomly assigned to one of three experimental conditions: negative media representations, positive media representations or the control/race neutral media representations. Viewing content varied for each of the conditions.

Negative media representation condition.

In the negative media representations condition, students (N=30, 30% of the sample) viewed a 4- minute clip from the 1993 movie *Menace II Society*. *Menace II Society* takes place in Watts, a poor, violent, predominantly Black, drug-infested section of Los Angeles. The movie chronicles the violent and criminal missteps of an eighteen-year-old, Black drug dealer named Caine. The scene selected for this study gives the viewer a glimpse into Caine's early life (scene 2 on the DVD). Filmed as a flashback, an older Caine narrates the conditions of his upbringing. The viewer sees Caine (most likely around the age of 7) in his pajamas, in his childhood home, at a party thrown by his parents. The viewer learns that Caine's father was a violent, ruthless, no-nonsense drug dealer. Caine's mother was a heroin addict and neglectful parent. Caine's environment was riddled with unfit role models who encouraged the child to drink alcohol, bear witness to criminal activity, and play with firearms. This scene portrayed its Black

characters as violent, criminal, ignorant, rejecting of knowledge, childlike and unremorseful.

Positive media representation condition.

In the positive media representation condition, students (N=30, 30% of the sample) viewed a 4-minute clip from the 2007 movie *The Great Debaters*. *The Great Debaters* is a drama set in the 1930's at Wiley College, a historically Black college located in Texas. Based on real life events, the story follows the successes and struggles of an African American college debate team. The story culminates with the all-Black Wiley College team beating Harvard University's all-White team. The 4-minute clip chosen for this condition (scene 9 on the DVD) depicts the team's first debate and their rise to success, respect, and fame. This scene depicts its African American characters as determined, resilient, highly intelligent, and hungry for knowledge and success.

Control condition.

In the control/race neutral media representation condition, students (N=30, 30% of the sample) viewed a 4-minute clip from the popular television cartoon series *SpongeBob SquarePants*. *SpongeBob SquarePants* is a program about a group of aquatic animal friends and their many adventures. As the characters are nonhuman cartoon animals, this clip is free of explicit racial representations.

Materials and Measures

The measures that will be used in the present study are as follows: the Spielberg State-Anxiety Inventory, the Raven Advanced Progressive Matrices, the Cross Racial Identity Scale, and a demographics form.

State Anxiety.

The State-Trait Anxiety Inventory. The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) consists of two subtests: the A-State, a measure of state anxiety, and the A-Trait, a measure of trait anxiety. State anxiety can be thought of as transitory and consciously perceived worry, tension, or nervousness that fluctuates in reaction to situations perceived by an individual as threatening. Trait anxiety can be thought of as an individual's stable sense of anxiety or apprehension that is not influenced by external circumstance (Hambleton, Marenda, & Spielberger, 2005; Novy, Nelson, Goodwin, & Rowzee, 1993; Spielberger, Gorsuch, Lushene, Vagg & Jacobs, 1983).

This study utilized the A-State subtest of the STAI. The A-State is a 20-item, self-administered, paper and pencil measure that requires participants to describe the intensity of feelings experienced at the time of administration. Participants respond to questions such as "I feel calm," "I feel tense," "I feel confident," and "I feel jittery" using the following four-point Likert-type scale: 1) *not at all* 2) *somewhat* 3) *moderately so* and 4) *very much so*. The A-State has demonstrated high internal consistency and low test-retest reliability (Spielberger et al., 1983). Internal consistencies for the A-State have been found to range from .90 to .92. For the present study, A-State Baseline scores were found to have an internal reliability alpha of .90 and for Time 2, an alpha of .91 was found. Test

re-test reliability has been found to range from .16-.62, with a median reliability coefficient of .33. Low stability coefficients are to be expected (and even desired) on a scale that measures transient states. The STAI was correlated with the Taylor Manifest Anxiety Scale (a twenty item, self-report, true/false questionnaire designed to assess conscious anxiety) and the IPAT Anxiety Scale (a forty-item, self-administered test that assesses covert and overt anxiety) to test for validity. The correlations found were .80, and .75, respectively (Spielberger, et al., 1983).

The STAI has been used to measure anxiety in a number of studies regarding stereotype threat (ST) (Beilock, et al.; 2007Steele & Aronson, 1995). Novy, Nelson, Goodwin and Rowzee (1993) write that this test is one of the most frequently used paper-pencil measures used to assess anxiety in different racial groups. In a study that examined the STAI across different ethnic groups, Novy et al. (1993) found internal consistency and reliability estimates for the A-state of .94 for Black females, .95 for Black males, .94 for Hispanic females, .93 for Hispanic males, .93 for White females, and .94 for White males. For the A-Trait, internal consistencies were found to be .93 for Black females, .92 for Black males, .94 for Hispanic females and .94 for Hispanic males, .94 for White females, and .95 for White males. Correlations between the A-State and the A-trait ranged from .79-.89 for Black participants, .85 to .87 for Hispanic participants, and .65 to .85 for White participants. These results led Novy et al. (1993) to conclude that the STAI is a particularly strong measure of anxiety for multi-cultural populations. Only the A-state subscale will be used for the present study to measure state anxiety as change in state anxiety is hypothesized to mediate depression in performance due to ST.

Internalized racial identity.

The Cross Racial Identity Scale. The Cross Racial Identity Scale (CRIS; Vandiver, Cross, Fhagen-Smith, Worrell, Swim, & Caldwell, 2000) is a self-report, 40-item questionnaire that requires participants to indicate their level of agreement to a series of statements using a 7-point Likert scale (1=*strongly disagree* through *7=strong agree*). The questionnaire results in six subscale scores that correspond to six out of the 8 racial identities reviewed in chapter one: Pre-encounter Assimilation, Pre-encounter Miseducation, Pre-encounter Self-Hatred, Immersion-Emersion Anti White, and Internalization Afrocentricity, and Internalization Multiculturalist. Higher scores reflect a stronger endorsement of attitudes for the corresponding subscale. For the purposes of this study, the constructs of interest are the two Internalized Racial Identities, Internalization Afrocentricity and Internalization Multiculturalist.

The scale includes statements (which apply exclusively to one of the six subscales), such as "I see and think about things from an Afrocentric perspective" (Internalization Afrocentricity [AI]); "As a multiculturalist, I am connected to many groups (Hispanic, Asian-Americans, Whites, Jews, gays & lesbians, etc." (Internalization Multiculturalist Inclusive [IMCI); "I hate White people" (Immersion-Emersion Anti-White [IEAW]); "I sometimes have negative feelings about being Black" (Pre-encounter Self-Hatred [PSH]); "Too many Blacks 'Glamorize" the drug trade and fail to see opportunities that don't involve crime" (Pre-encounter Miseducation [PM]); and "I think of myself primarily as an American, and seldom as a member of a racial group" (Pre-encounter Assimilation [PA]).

Factor analysis revealed six meaningful factors with good internal consistency reliabilities. The following alpha scores were found: .83 for Internalization-Afrocentricity; .82 for internalization-Multiculturalist Inclusive; .89 for Immersion-Emersion Anti-White; .89 for Pre-Encounter Self-Hatred; .78 for Pre-Encounter Miseducation; .85 for Pre-Encounter Assimilation (Vandiver, 2002). In the present study, the following alpha scores were found: .87 for Internalization-Afrocentricity; .73 for internalization-Multiculturalist Inclusive; .87 for Immersion-Emersion Anti-White; .80 for Pre-Encounter Self-Hatred; .80 for Pre-Encounter Miseducation; .87 for Pre-Encounter Assimilation.

To test for convergent validity, these researchers (Vandiver et al., 2002) correlated the CRIS with similar subscales from the Multidimensional Inventory of Black Identity scale (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997). The MIBI is a scale based on another multidimensional conceptualization of racial identity. It consists of seven subscales, which represent the following racial identity attitudes: Assimilation, Centrality, Humanist, Nationalist, Oppressed Minority, Private Regard, and Public Regard. Subscales on the CRIS were correlated with theoretically similar subscales on the MIBI. The Internalization Multiculturalist-Inclusive subscale was positively related to the Humanist and Oppressed Minority subscales of the MIBI. The Assimilation subscale of the CRIS was positively related to the Assimilation and Humanist subscales of the IBI and negatively correlated to the Centrality and Nationalist subscales of the MIBI. The Immersion-Emersion Anti-White and Afrocentricity subscales of the CRIS were positively related to the Nationalist subscales of the MIBI. Based on this data, evidence for convergent validity was found.

Cognitive ability.

Raven Advanced Progressive Matrices. The Raven Advanced Progressive Matrices-Set II (APM; Raven, Court, & Raven, 1988) is a 36-item, multiple choice, nonverbal test of abstract reasoning, cognitive ability, and educative ability (Hamel & Schmittmann, 2006; Raven, Court, & Raven, 1988). Each item on this measure has a 3 x 3 matrix with a missing cell. For each test item, participants will be required to choose which cell out of 8 possible choices, correctly completes the matrix. Students were encouraged to use common features of columns, rows, and diagonals on the matrix to choose the missing cell correctly.

Re-test reliability was determined by administering the APM Set II to a selected group of individuals on two occasions separated by six to eight weeks. A high re-test reliability of 0.91 was found for adults. To assess for convergent validity, the APM was compared to the WAIS. A .74 correlation was found. When compared to the Otis I.Q., a .75 correlation was found (Raven, Court, & Raven, 1988).

While many studies of ST have employed a selection of GRE questions (Steele & Aronson, 1994) to assess for performance decrements, McKay, Doverspike, Bowen-Hilton, & Martin (2002) conducted the first study of ST that used the APM as the dependent measure. These researchers (McKay et al., 2002) replicated Steele and Aronson's (1995) original studies using the Advanced Progressive Matrices to assess for changes in mean cognitive ability due to ST conditions. Black students were given the APM in both low and high threat conditions. In the high threat condition, participants were told the test was diagnostic of intellectual ability. In the low threat condition,

participants were told the APM was a pattern completion task. The results of this study found that Whites outperformed Blacks in both conditions, but a marginally significant interaction demonstrated the difference in performance was somewhat greater in the stereotype threat condition when compared to the results found in the control condition between black and white participants. Although these results did not reach standard levels of statistical significance, they did show the similar patterns demonstrated to exist in previous studies on stereotype threat studies. One explanation for the lack of significant interaction findings between race and threat condition was that demographic information assessing for participants race and socioeconomic status was collected prior to the administration of the APM. As has been shown in previous studies, this could be enough to elicit ST. Therefore, all Black participants, regardless of how the APM was described, may have been under ST.

In 2006, Brown & Day also conducted an ST study using the APM to address criticism that perhaps the APM was not susceptible to ST and that the results of the McKay et al. (2002) study were flawed. These researches conducted a comparison of Black and White participants in a standard administration condition (i.e. the directions that accompany the measure were read to participants) as well as in low and high stereotype threat conditions. In the low stereotype threat condition, the task is described as a puzzle, and in the high stereotype threat condition participants were told the APM was an IQ test. Brown & Day (2006) found that African American participants under-performed in the standard and high threat conditions but scored equally as well and white students in the low threat conditions. This finding suggests that the Raven Advanced Progressive Matrices is susceptible to ST.

McCay, et al. (2002) note the benefits of this nonverbal test of cognitive ability as it does not favor reading comprehension skills that may give White test takers an advantage. Furthermore, because of the novel way in which APM measures cognitive ability (i.e. with pattern completion tasks), it is easy to manipulate study participants' beliefs about the test's capacity to assess ability. It should be noted though that scores on the APM might be subject to cultural exposure effects. White children may get more exposure to games that use pattern finding, again potentially giving them an advantage.

While the APM is an often-used test of cognitive abilities, its 30-40 minute administration time can be a drawback when used for empirical investigations. In 2006, Hamel and Schmittmann conducted a study to assess how well scores on the APM after 20, 30 and 40 minutes, respectively, predicted untimed scores after completion of the test. These researchers found that on the APM, scores after 20-minutes of completion time reasonably predicted scores after total completion: r=.74. To not fatigue research participants, and for expediency, the APM will be administered and participants will have 20 minutes to complete as many problems as they can. Participants were not told they had a time limit in order to avoid creating additional anxiety that might confound the impact of ST.

Demographic questionnaire.

A demographic questionnaire assessed participants' gender, age, highest level of education obtained, religious affiliations, and citizenship status. Economic status was also assessed by having participants estimate their (their family's) annual income before taxes. Six yearly income ranges were provided as choices (i.e. less than 10,000; between $10,000 and $20,000; between $20,000 and $30,000; between $30,000 and $40,000;

between $40,000 and $60,000; and over $60,0000). Students' top three favorite television shows were also assessed to get a better understanding of the type of media programming most frequently consumed by participants.

Procedure

The author of this study, a Black West-Indian female, administered the research protocol. The study was carried out in multiple group sessions of 2-4 students. Each group was randomly selected to participate in one of the three media representation conditions. When students entered the lab, they were given a cover story regarding the nature of the study they will be asked to participate in. All students were told the following:

> The goal of this study is to understand how television and movie viewing influences a person's ability to perceive and interpret shapes and patterns. After listening to these instructions, you will be asked to fill out a brief form regarding how you are feeling at this present moment. Afterwards, you will watch a brief clip from a popular television show or movie. After the clip has ended, you will be asked to do a set of puzzles.
> Even though this is just a lab task, we would like you to concentrate and try your best.
> After you complete the pattern task, you will again complete a short form regarding how you are feeling at *that* moment. Finally, you will be asked to complete two more brief forms.

As demonstrated by Steele and Aronson (1995), test takers' beliefs that a task is a measurement of ability can activate ST. Describing the task as "a puzzle task" is an attempt to ensure that any decrements in performance observed would be due to ST resulting from experimental condition.

Informed consent was obtained from all participants prior to the start of the study procedure. Participants were informed that they could withdraw from the study at any point. The consent form provided participants with the name and contact information for the Principal Investigator as well as contact information for the IRB at The City University of New York in the event that they had further questions regarding the study.

Participants were then asked to complete the A-State. Upon completion of the baseline measure of state anxiety (A-state baseline), students viewed one of three 4-minute clips that varied by experimental group. Following the clip, participants were given the instructions to the APM and 20 minutes to complete as many questions as possible. Post-experiment measure of state anxiety (A-state post), the CRIS, and lastly a demographic form were then administered. Participants were debriefed verbally and dismissed.

Operational Hypotheses

Hypothesis 1- Mean accuracy scores on the Advanced Progressive Matrices (APM) will be significantly lower for the negative media representation condition when compared to mean accuracy APM scores in both the positive media representation condition and the control condition.

Hypothesis 2- Mean accuracy scores on the APM will be significantly higher for the positive media representation condition when compared to mean accuracy APM scores in both the neutral media condition and the negative media representation condition.

Hypothesis 3- Mean scores on the state anxiety scale at baseline (before viewing the media clip [A-state baseline]) will be significantly different from mean scores on the state

anxiety scale at time 2 (after viewing the media clip [A-state post]) in the negative media representation condition.

Hypothesis 4- Mean scores on the A-state scale at baseline will not be significantly different from mean scores on the A-state scale post in the control condition.

Hypothesis 5- Mean scores on the A-state baseline will not be significantly different from mean scores on the A-state post in the positive media representation condition.

Hypothesis 6- Change in mean anxiety scores (A-state baseline – A-state-post) will be significantly larger in the negative media representation condition when compared to change in mean anxiety scores for the control condition and for the positive media representation condition.

Hypothesis 7- The relationship between media condition and performance on the APM will be explained by change in anxiety scores (i.e. change from A-state baseline to A-state post).

Hypothesis 8- Mean scores on the Internalized Black racial identity subscales will moderate the relationship between negative media representation condition and performance on APM.

Chapter 3: Results

The following chapter is a review of the results from several analyses conducted to address the hypotheses made in the previous chapter. Descriptive statistics for the study sample are first described on key study variables with accompanying tables that provide means and standard deviations. Inferential statistics addressing hypothesized outcomes are then described. The principle analyses used in this study were analyses of variance (ANOVA), repeated measures ANOVA, Pearson product moment correlation and step-wise multiple linear regression. An alpha level of .05 was used to determine statistical significance for all inferential analyses.

Operational Hypotheses	Analyses Used
Hypothesis 1 - Mean accuracy scores on the Advanced Progressive Matrices (APM) will be significantly lower for the negative media representation condition when compared to mean accuracy APM scores in both the positive media representation condition and the control condition.	One-way between groups analysis of variance
Hypothesis 2 - Mean accuracy scores on the APM will be significantly higher for the positive media representation condition when compared to mean accuracy APM scores in both the neutral media condition and the negative media representation condition.	One-way between groups analysis of variance
Hypothesis 3 - Mean scores on the state anxiety scale at baseline (before viewing the media clip [A-state baseline]) will be significantly different from mean scores on the state anxiety scale at time 2 (after viewing the media clip [A-state post]) in the negative media representation condition.	Repeated measures analysis of variance
Hypothesis 4- Mean scores on the A-state scale at baseline will not be significantly different from mean scores on the A-state scale post in the control condition.	Repeated measures analysis of variance
Hypothesis 5 - Mean scores on the A-state baseline will not be significantly different from mean scores on the A-state post in the positive media representation condition.	Repeated measures analysis of variance
Hypothesis 6 - Change in mean anxiety scores (A-state baseline – A-state-post) will be significantly larger in the negative media representation condition when compared to change in mean anxiety scores for the control condition and for the positive media representation condition.	Repeated measures analysis of variance
Hypothesis 7 - The relationship between media condition and performance on the APM will be explained by change in anxiety scores (i.e. change from A-state baseline to A-state post).	Not applicable
Hypothesis 8 - Mean scores on the Internalized Black racial identity subscales will moderate the relationship between negative media representation condition and performance on APM.	Pearson product-moment correlation, Stepwise multiple regression analyses

Descriptive Results

Table 2 depicts the means, standard deviations and ranges of scores on each of the six racial identity typologies of the Cross Racial Identity Scale (CRIS; Vandiver, Cross, Fhagen-Smith, Worrell, Swim, & Caldwell, 2000) across the sample (N=90). With regards to racial identity, participants tended to more strongly endorse Internalized Multicultural beliefs. They were much less likely to endorse Pre-encounter Self-Hatred and Immersion-Emersion Anti-White beliefs. Students endorsed Pre-encounter Assimilation, Pre-encounter Miseducation, and Internalized Afrocentric beliefs to similar extents. The present college student sample was fairly consistent with most college samples in terms of several key variables relevant to the study (e.g. television viewing, health etc.). Means and standard deviations on such variables as well as on outcome variables (i.e. anxiety, mean accuracy APM scores) are presented on the next page, Table 3.

Table 2
Average scores on Cross Racial Identity Scale Typologies (N=90)

			Range	
Racial Identity Sub-scales	M	SD	Potential	Actual
Pre-Encounter Assimilation	15.41	7.4	5-36	5-35
Pre-Encounter Miseducation	16.76	6.28	5-36	5-35
Pre-Encounter Self-Hatred	9.06	5.37	5-36	5-29
Immersion-Emersion Anti-White	7.02	3.74	5-36	5-28
Internalization Afrocentric	15.33	6.4	5-36	5-35
Internalization Multicultural Inclusion	28.95	5.21	5-36	5-35

Table 3

Mean change scores in anxiety and mean accuracy scores on APM across important demographic groups (n=90)

	Anxiety		Accuracy			Anxiety		Accuracy	
	Change	SD	%	SD		Change	SD	%	SD
Overall					Gender				
	3.8	10.2	70.5%	20.9	Female	4.2	10	69.6%	20.8
					Male	2.4	10.9	72.7%	21.5
Ethnic Self-Designation					Community Raised in				
African	2.4	7.8	57.8%	26.2	Rural	2	2.6	74.4%	9
AA/Black	3.3	12.2	76.6%**	17.6	Suburban	2.3	9.1	74.9%	23.1
West-Indian	5.1	7.5	64.3%	21.3	Urban	4.5	11.1	69.3%	20
Biracial	4.5	2.1	85.0%	2.1	Other	2.5	2.1	41.4%	1
Other	1	n/a	41.0%	20.9					
Year in School					SES				
Freshman	2.9	12.8	75.0%	12.8	Poor	1.7	1.4	76.1%	11.5
Sophomore	4.6	8.7	80.2%	11	Working Class	3.6	11.5	70.4%	22.4
Junior	4.7	9.8	67.1%	23.2	Middle Class	3.2	9.5	68.4%	20.2
Senior	3.5	10.2	62.9%	24.8	Upper Middle	3.8	5.1	82.5%	10.2
American born					Parents American born				
Yes	3.4	7.8	72.0%	19.5	Yes	4.8	7.8	75.0%	19.8
No	5.1	10.7	64.1%	26	No	1.8	13.6	68.0%	21.3

Change scores represent change between the pre and post measure anxiety scores.

*p<.05, **p<.01

With regards to overall health, most students (86.7%) described their mental health as "good" or "very good." Similarly, most students (81.1%) reported their physical health was "good" or "very good." Transitioning to media consumption habits, students watched an average of 13.4 hours of television per week (range=0-50, mode=10, SD=9.4). According to the American Time Use Survey (2009) conducted by Bureau of Labor Statistics, the average 20-24 year old watches 17.12 hours a week and the average

African-American/Black person (across age categories) watches an average of 25.66 hours per week. This suggests that the average student in the present study watches less television than the average American of similar ages and race.

Students reported watching a wide array of television shows when asked to share their top three most favored programs. The most frequent responses were "Law and Order: Special Victims Unit" (a one-hour police drama in which sexually oriented crimes are investigated), "The Bad Girls Club" (a reality show in which seven multiracial, self-proclaimed "bad girls" live together and experience "personality clashes") and "Criminal Minds" (a one-hour drama in which a group of profilers analyze dangerous criminals in an attempt to capture them).

As described in Chapter 1, empirical evidence suggests that television programming plays a critical role in the way in which viewers interpret, understand, and socially construct their worlds. A 2007 content analysis was found for this sample's most frequently reported "favorite" program, Law and Order: Special Victim's Unit. For details on the racial and gender portrayals of this show, which this sample is most frequently exposed to, please see the appendix. The samples' top three favorite actors and actresses are Denzel Washington, Will Smith, and Halle Berry. Notably the most frequently named actors and actresses by this sample have African ancestry.

Concerning the participants' overall performance on the Raven's Advanced Progressive Matrices, students earned a mean accuracy score (total number of correct responses, divided by total number attempted multiplied by 100) of 70.5% (20.9). This is very much in line with the mean accuracy score of African American participants in the low threat administration condition (i.e. participants were told the APM was a set of

puzzles) by Brown and Day (2006). A general overview of the way in which the current study sample's APM accuracy scores compare to the APM accuracy scores earned by Brown and Day's (2006) study sample is provided in the discussion section. This is to provide an additional context in which to further understand accuracy results.

Generally, there were few socio-demographic differences in APM performance (see Table 3 for details). Males and females scored equally well, as did individuals from the spectrum of socio-economic groups. Participants who reported being born outside of the United States performance equally well on the APM as participants who reported being American born. This was also true of participants with American-born parents when compared to participants with foreign-born parents. No statistically significant differences were found between mean APM accuracy scores earned by individuals raised in varying types of communities (i.e. rural, suburban, etc.) or students across academic year in school (i.e. freshman, sophomore, etc.) An analyses of mean Raven Advanced Progressive Matrices accuracy scores by ethnic self-designation (i.e. African-American, West-Indian, etc.) revealed that overall performance varied significantly by group (F[2, 87]= 5.17, $p<.01$). African Americans had significantly higher accuracy scores (76.6%, SD=26) than Africans (57.8%, SD=17), West Indians (64.3%, SD=21), and the "other" designation (41%, SD=20).

With regard to state anxiety levels, participants generally exhibited marginally lower levels of baseline anxiety (33.09, SD=9.14) when compared to mean state anxiety levels for college students found by the STAI creators (m=37.62, SD= 10.98 [STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983]). Across the entire sample, state anxiety increased an average of 3.8 (SD=10.2) points from baseline to Time 2. A

comparison of change in anxiety scores across demographic groups found no significant differences on change scores based on gender, ethnicity, year in school, community raised in, or socioeconomic status. Likewise, individuals born in the US had similar change scores as those who were born outside of the US. Participants whose parents were born in the US exhibited similar change in anxiety scores when compared to students whose parents are foreign born.

Inferential Results

Experimental main effects.

Hypotheses 1-2: Media's influence on APM score

Hypotheses 1 and 2 made predictions about the influence that varying media depictions of African Americans would have on task performance (as measured by the Raven Advanced Progressive Matrices). Hypothesis 1 expected that participants exposed to negative media representations of African Americans would score significantly lower on the APM than participants exposed to positive or control media representations. Hypothesis 2 predicted that scores on the APM would be significantly higher for students exposed to positive media representations of African Americans when compared to the scores of those exposed to both the negative and control representations. Table 4 provides accuracy scores on the APM across media condition groups.

Support for hypotheses 1 and 2 was not found. A one-way, between groups analysis of variance was conducted to assess the impact of media representation exposure on task performance. No significant differences on mean APM accuracy between experimental groups was found (F [3,116]= 1.0, p=.38, ES=.03). Students performed equally well on the APM despite media exposure condition.

Table 4
Mean accuracy scores on the Raven Advanced Progressive Matrices across media representation groups

Condition	n	Percentile	SD
Positive	30	71.2%	.233
Negative	30	70.2%	.229
Control	30	70.0%	.166

Hypotheses 3-7: The media's influence on anxiety.

Hypotheses three through seven made predictions about the effects of positive and negative media representations of African-Americans on anxiety scores. It was expected that the mean scores on the state anxiety scale at baseline (before media exposure) would be significantly different from the mean score at Time 2 (after media exposure) in the negative media condition (hypothesis 3), but not in the control (hypothesis 4), or positive media representation conditions (hypothesis 5). Table 5 presents mean anxiety score data across group conditions at baseline and Time 2.

Table 5
Anxiety levels at Time 1 and Time 2 across media representation groups

	Negative			Positive			Control		
	n	M	SD	n	M	SD	n	M	SD
Baseline	30	31.73	7.73	30	34.5	10.49	30	33.03	9.08
Time 2	30	35.07	11.23	30	38.17	10.25	30	37.03	9.15
Change	30	3.60	10.03	30	3.67	10.83	30	4.0	10.21

A mixed between-within subjects (repeated measures) ANOVA was conducted to

assess these predications. Results indicated that mean state anxiety scores at baseline were significantly lower than mean state anxiety scores at time 2 (F [1,87]= 11.20, p=.001 ES= .114) in all three conditions. The increase in anxiety after media exposure and task completion was not limited to those in the negative media representation condition. The main effect comparing the media representation groups on change in state anxiety was not significant (F [2, 87]= .96, p=.38 ES= .02) and there was no significant interaction effect between media representation group and time. No significant difference in anxiety between groups was induced by asking students to perform on a task after exposing them to varying media depictions of African Americans. In short, no support for the hypothesized interaction effect between media representation group and change in anxiety was found.

Hypothesis 7 predicted the relationship between media representation condition and score on the APM would be explained by the change in anxiety score (i.e. change from baseline anxiety score to anxiety score at time 2). Given there was no direct relationship between diagnostic condition and mean accuracy score on APM, there is no support for this prediction.

Hypothesis 8: Racial identity, media exposure and performance

Hypothesis 8 predicted that stronger Internalized Black racial identity beliefs (i.e. higher scores on Internalized Multicultural Inclusion and Internalized Afrocentric subscales) would moderate the relationship between media representation condition and performance on APM. As previously presented, there was no main effect found between media condition and accuracy score: F(2,87)=.03, p=.97. According to Barron and Kenny (1986), the first step in determining moderation is to assess the main effect, in this case,

between media representation group and APM accuracy. To determine if the effect of media representation condition on APM accuracy is dependent on participant's racial identity, using Pearson product-moment correlation, I first tested the relationship between racial identity and APM accuracy on the overall sample (N=90). Next, I assessed if there was a significant correlation between racial identity typology and APM scores for the control, negative, and positive media condition groups individually (n=30 per group). See Table 6 for a summary of the correlations.

Statistically significant correlations were found between participant's overall accuracy scores on the Raven and the following three CRIS subscales: Internalized Multicultural Inclusion, Immersion-Emersion Anti-White, and Pre Encounter Self-Hatred. A positive correlation between Internalized Multicultural Inclusion beliefs and accuracy was found ($r=.24$, $n=90$, $p < .05$) with higher levels of Internalized Multicultural beliefs associated with higher scores on the APM. A significant and negative correlation was found between Immersion-Emersion Anti-White beliefs and accuracy on the APM ($r= -.23$, $n=90$, $p < .05$) with higher levels of Anti-White beliefs being associated with lower accuracy scores. Lastly, a strong and significant negative correlation was found between Pre-Encounter Self-Hatred beliefs and accuracy ($r= -.40$, $n=90$, $p < .01$) with higher Self-Hatred scores associated with decreased accuracy. When correlations were assessed between the strength of the samples racial identity typologies and their APM accuracy scores by media representation group, a positive correlation between Internalized Multicultural Inclusion beliefs and accuracy was found for participants in the negative media condition ($r= .37$, $n=30$, $p <.05$), with higher levels of Internalized Multicultural beliefs associated with higher scores on the APM. A significant and

negative correlation was found between Pre Encounter Self-Hatred beliefs and accuracy on the APM also for participants in the negative media condition (r= -.59, n=30, p <.01). In short, in the negative media condition, stronger Self-Hatred beliefs are associated

Table 6
Correlations between Cross Racial Identity Typologies and accuracy on the APM by overall sample and by media representation group

		Raven Accuracy Score			
		R			
		overall (n=90)	Positive (n=30)	Negative (n=30)	Control (n=30)
Internalized					
	Multicultural Inclusion	.24*	0.19	.37*	0.17
	Afrocentric	-0.1	-0.19	-0.1	0.04
Immersion-Emmersion					
	Anti-White	-.23*	-0.3	-0.27	-0.11
Pre Encounter	Self-Hatred	-.40**	-0.2	-.59**	-0.35
	Miseducation	-0.07	-0.16	-0.02	0.01
	Assimilation	-0.1	0.05	-0.22	-0.13

* Correlation is significant at the 0.05 level (2-tailed)

with lower scores on the media condition, stronger Self-Hatred beliefs are associated with lower scores on the APM while stronger Multicultural Inclusion beliefs are associated with higher scores on the APM.

The ability of study variables to predict APM accuracy scores in controlled hierarchical regression analyses.

As already described, bivariate correlation analyses revealed the effects of media condition on mean APM score were associated with Internalized Multicultural Inclusion,

Immersion-Emersion Anti-White and Pre Encounter Self-Hatred beliefs. To further assess if racial identity beliefs and media condition could predict APM scores, controlled hierarchal regression using the model outlined by Barron and Kenny (1986) was used to test moderation and interaction effects. Hierarchical multiple regression analyses were conducted to assess the ability of media condition (i.e. positive, negative or control) and the strength of Cross's racial identity typologies (CRIS; Vandiver, Cross, Fhagen-Smith, Worrell, Swim, & Caldwell, 2000) to predict accuracy scores on the APM after accounting for gender and ethnic self-designations (i.e. student's self-identifying as African American, West-Indian, Black, etc). Given there are six independent racial identity typologies, six sets of hierarchical regression models were employed separately. Blocks 1 through 4 were the same in each of the regression models and block 5 varied between analyses in order to test the interaction effect of each of the six racial identity typologies (hypothesized by Cross) by media condition to predict Ravens Advanced Progressive Matrices performance.

More specifically, block 1 in the hierarchical regression analyses controlled for gender and ethnic self-designation. Block 2 determined the effect of media condition net of the effects of gender and ethnic self-designation. Block 3 determined the effect of Cross's 6 racial identity typologies (e.g. Multicultural Inclusion, Self-Hatred, etc.) net of the previous effects. Block 4 assessed the interaction effects between ethnic self-designations (African American, West Indian) and media conditions (positive, negative). Lastly, in block 5, the interaction between racial identity and media representation groups were entered (please see Tables 8 and the index). As mentioned previously, the last block varied by analyses to assess the interaction effect between each racial identity self-

designation by media condition to determine if these variables interacted in a way that would to predict APM score.

For example, in the first regression model set, blocks 1-4 were as described above and block 5 tested the interaction between Internalized Multicultural Inclusion and the Positive Media Group as well the interaction between Internalized Multicultural Inclusion and the Negative Media group (See Table 7). In the second regression model set, blocks 1-4 were as described above and block 5 tested the interaction between the Internalized Afrocentric typology and the Positive Media Group as well the interaction between Internalized Afrocentric typology and the Negative Media group (See appendix, Table 7B). Similarly the analysis was conducted four more times with block 5 varying such that the interaction between all of Cross's 6 hypothesized racial identities and the positive and negative media conditions were assessed.

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. In order to assess the effects of media in the regression analysis, the three media representation groups were dummy coded into a two-level variable with the control media condition as the reference group (0). Self-reported ethnic designations (African American, West-Indian) were also recoded to allow for interpretation in the regression analyses. Specifically, African, Biracial, and Other were grouped together as one "all other ethnic self-designation group" due to low representation in each group. African American and West-Indian were kept as separate ethnic designations. This new, three level nominal variable was then dummy coded with the largest group, African American, serving as the reference group (0). Racial identity typology subscales were centered at the mean score.

As shown in Table 8, block 1 gender and ethnic self-designation (i.e. West Indian, African American) accounted for 11% of the variance in APM accuracy (F[3,86]=3.56, p <.05). Specifically, self-designated West-Indians on average had 12% less accuracy than self-designated African Americans and all other ethnic groups had 17% less accuracy. In block 2 media exposure conditions (positive, negative) explained no additional variance in APM accuracy score (F[(5,84] = 2.10, p = .07) and media condition was not significantly related to APM. In other words, exposure to positive or negative media representations alone had no significant influence on APM performance.

When Cross's (Vandiver et al. 2000) six racial identity subscales (centered at their means) were entered into the model at block 3, 27% of the variance in APM mean accuracy scores was explained. Of the six racial identity typologies, Self-Hatred (p <.01) and Multicultural Inclusion (p<.05) were significantly related to APM accuracy. Specifically, stronger Self-Hatred beliefs negatively impacted APM scores and higher Multicultural Inclusion scores positively impacted APM [R-squared change = 16.1, F change (6, 78)= 2.86, p <.05]. In block 4, when the interaction effect between ethnic self-designations (African American, West Indian) and media condition group (positive, negative) were entered, the model explained 34% of the variance in APM accuracy score (F [15, 74]=2.5, p <.01). The interaction between West-Indian self-designation and the positive media representation condition (p =.01) significantly predicted APM accuracy score. Specifically, those who self-labeled as West-Indian and viewed a positive media representation of African Americans had on average 28.61% less accuracy (when compared to the average APM score in this study). These variables explained an

additional 6.5% of the variance in performance and was not statistically significant (*F* change [4, 74]=1.83, p=.13) (See Table 7 for details).

Lastly, in block 5 the interactions between the strength of Multicultural beliefs and media representation condition were entered into the model. This model as a whole explained 35% of the variance in mean APM accuracy score *F* (17, 72)= 2.25, p <.01. The interactions between multicultural beliefs and media representation conditions were not significant and only explained an additional 1% of the variance in APM accuracy, *F* change (2, 72)=.59, p=.58. In step five the strength of Self-Hatred beliefs and the interaction effect between West-Indian self-designation and media condition were the only two significant predictors in the final model. When the regression analyses were performed an additional five times, each time with steps 1-4 remaining as described above, but with blocks 5 varying to assess the unique contribution of the interaction effects between each of Cross's (Vandiver et al., 2000) racial identity typologies and media representation groups, no significant interactions between these variables were found. See appendix for regression model details (Tables 7[B-F]).

In short, no interaction effect between media condition and scores on either of the Internalized racial identity scales were found therefore evidence does not exist that supports the final hypothesis that the strength of Internalized beliefs moderates the relationship between exposure to negative media representations of African Americans and APM performance. Unexpectedly, ethnic self-designation moderated the relationship between media exposure condition and APM accuracy. Specifically, when in the positive media condition self-designated West-Indians experienced a statistically significant depression in performance.

Table 7

Hierarchical Multiple Regression analysis for variables predicting mean accuracy on APM

	Block 1*		Block 2		Block 3**		Block 4 **		Block 5A **	
Predictor	*b*	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Intercept	78.82	4.5	79.19	5.93	74.28	5.88	69.13	6.69	67.96	7.06
Gender	-3.13	4.92	-2.76	5.07	-1.19	4.9	-1	5.1	-1.83	5.2
West Indian	-11.82*	4.81	-11.89*	4.88	-8.78	4.95	3.74	7.67	5.36	7.98
All other Ethnic Groups	-16.48*	6.33	-16.69*	6.5	-7.54	6.97	-4.28	11.26	-2.66	11.48
Negative Media Group+			0.06	5.39	3.62	5.19	7.44	7.22	8.56	7.66
Positive Media Group+			-0.95	5.29	-1.4	5.17	8.31	6.72	10.23	7.13
Assimilation					-0.37	0.29	-0.46	0.3	-0.45	0.3
Mis-Education					0.44	0.34	0.44	0.34	0.47	0.35
Self-Hatred					-1.41**	0.49	-1.54**	0.49	-1.59**	0.49
Anti-White					0.08	0.67	0.18	0.66	0.36	0.69
Afrocentric					-0.28	0.36	-0.29	0.36	-0.25	0.37
Multicultural Inclusion					.89*	0.42	0.8	0.43	1.92	1.43
West-Indian X Negative Group							-9.28	11.47	-10.2	11.69
West-Indian X Positive Group							-28.61**	10.77	-31.52*	11.2
Other Ethnicities X Negative Group							-1	14.03	-1.45	14.4
Other Ethnicities X Positive Group							-6.53	18.9	-8.08	19.09
Multicultural X Negative Media Group									-1.43	1.52
Multicultural X Positive Media Group									-0.74	1.59
R squared	0.11		0.11		0.27		0.34		0.35	
F Change	3.56*		0.02		2.86*		1.83		0.56	

Notes: Media group was represented as dummy variables with 1 representing the media group of interest and 0 representing the reference groups.

Ethnic group was represented as dummy variables with 0 representing African Americans, the reference group.

Racial Identity subscales were centered at their means.

*p < .05. **p < .01

Post-hoc Analyses.

This study found that anxiety did not uniquely increase for students in the negative media condition therefore support was not found for the hypothesis that anxiety mediates the relationship between media condition and APM performance. Strength of Self-Hatred and Multicultural Inclusion beliefs were related to overall APM scores. Furthermore, it was found that ethnic self-designation (specifically West-Indian) was found to moderate the relationship between the positive media condition and APM accuracy. Additional analyses were conducted to further understand the significant interaction effect between ethnic self-identification (i.e. dummy coded West-Indian variable) and the positive media group. As noted on Table 3, and depicted in Figure 1, African Americans (mean accuracy= 76.6%) performed significantly better on average than Africans (mean accuracy = 57.8%) and West-Indians (64.3%). In order to determine how this effect may have changed depending on the media condition, the mean accuracy score was calculated for the three self-designations (i.e. African Americans, West-Indians and all other ethnicities) separately in each media condition. The results of this are visually depicted in Figure 1. The results suggest African Americans performed significantly better than West-Indians in the positive media condition (F [2, 87] = 5.17, p <.01) but not in the negative or control conditions. In other words, after exposure to positive images of African Americans, West-Indians performed significantly worse than African Americans on the APM.

Given West-Indians on average had significantly lower APM accuracy scores than African-Americans in the positive condition, analyses of variance were conducted to

assess if this difference might be explained by a change in anxiety level. No significant differences between ethnic groups on change in anxiety scores between baseline and Time 2 were found (F [4, 85]=.20, p=.93). An analysis was also done to ascertain whether or not differences in the strength of endorsement on each of the six racial identity scales (as measured by the Cross Racial Identity Scale) exist between different self-designated ethnic groups. An ANOVA revealed a significant difference in the endorsement of racial identity beliefs exists between groups on Pre-Encounter Self-Hatred beliefs (F [2,87]=11.83, p <.01, ES=.21) and Immersion-Emersion Anti-White (F[2,87]=3.25, p <.05, ES=.07). Post Hoc comparisons revealed Other Ethnic Groups (Africans, Biracial, and Other) scored significantly higher on Self-Hatred beliefs than African-Americans (p<.01) and West-Indians (p<.05). Additionally, it was found that Other Ethnic Groups (African, Biracial, and Other) scored significantly higher on Immersion-Emersion Anti-White beliefs than African-Americans (p<.05) (See table 9).

Table 8

Post Hoc analysis of APM accuracy by self-identified ethnicity across media representation groups

	Positive			Negative			Control		
	n	Accuracy	SD	n	Accuracy	SD	n	Accuracy	SD
African-Americans	19	80.5%	16	15	77.3%	18.4	15	71.0%	18.2
West-Indians	9	53.8%	21	8	67.5%	25.6	11	70.6%	16.3
Other Ethnicities+	2	61.1%	55	7	23.4%	14.2	4	64.8%	14.2

+ Includes: Self-Identified Africans, Biracial, and Other

Figure 1
Advanced Raven Progressive Matrices accuracy across ethnic groups by media representation type

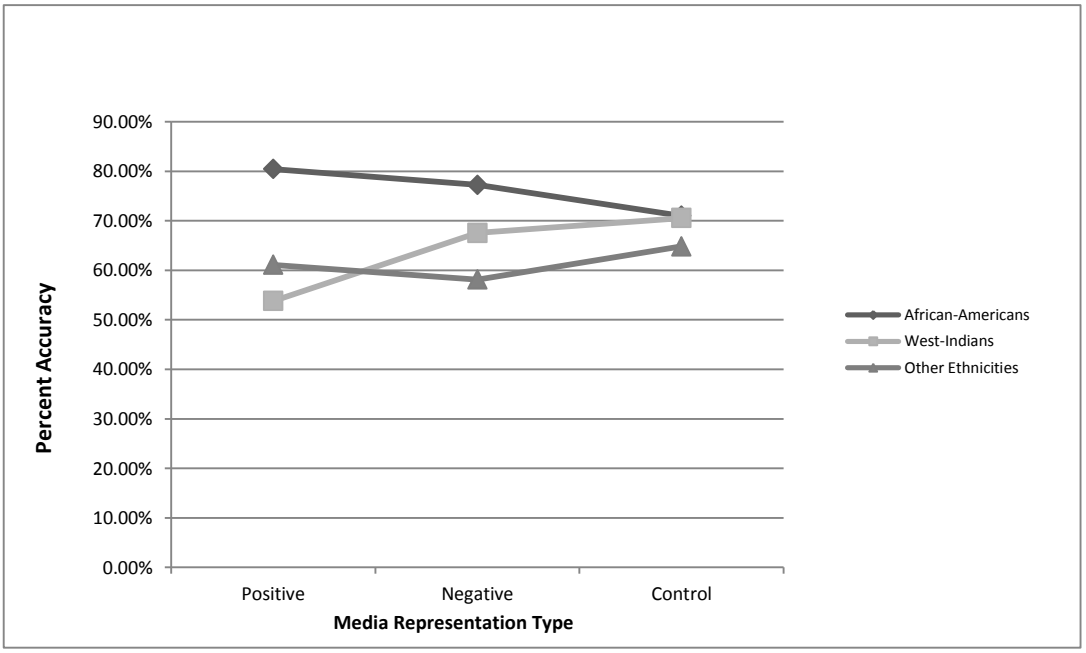

Table 9

Mean level of Cross Racial Identity Typology endorsement by self-identified ethnic identity group

		Pre-Encounter Assimilation		Pre-Encounter Miseducation		Pre-Encounter Self-Hatred		Immersion-Emmersion Anti-White		Internalized Afrocentric		Internalized Multicult. Inclusion	
	n	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD
African-American	49	16.08	7.4	15.41	6.7	7.18	3.5	6.51	5.3	15.41	6.5	29.76	5.0
West-Indian	28	14.57	7.6	18.14	7.2	9.89	6.4	6.82	2.9	14.36	5.6	27.99	6.4
Other Ethnic Groups+	13	14.69	7.4	19.08	5.4	14.31**	5.3	9.38*	5.3	17.15	7.9	28	4.4

+ Includes: Self-Identified Africans, Biracial, and Other

*p<.05

**p<.01

Chapter 4:

Discussion

The goal of the present study was to investigate the influence media representations of African Americans have on the cognitive performance of African descended students. It was hypothesized that exposure to stereotypically negative media portrayals of African Americans would induce the type of anxiety consistent with ST to hinder cognitive performance but that this process would be buffered by a strong internalized racial identity (i.e. internalizing positive beliefs about an individual's own race.) Even though the main hypotheses were generally not supported, this study yielded some interesting and potentially surprising results which have implications regarding the impact of racial self-designation (i.e. West-Indian, African-American, etc.) on performance in the face of media depictions of African Americans. Furthermore, this study supported the role of racial identity on cognitive performance suggested by past research. This chapter will discuss the implications of the findings of the study, limitations and suggestions for future research.

Discussion of Results

Media, anxiety, and performance.

Participants as a whole, regardless of media exposure type (positive, negative, control) earned on average similar accuracy scores. Exposure to negative media representations of African Americans did not negatively impact performance or uniquely impact anxiety. State anxiety increased almost uniformly across media condition and was not specific to those in the negative media condition. Simply asking students to perform a

task created a degree of anxiety. What was found to be true by Davies et al. (2002) for women (that ST can easily be induced by viewing media that negatively stereotypes women) was not found to be true for the Black participants in this study. One interpretation could be that media does not have the ability to activate ST in Black viewers as it does with women possibly because of the complexity of racial identity and racial self-labeling. Another way to interpret these results is that it is possible that ST was activated in all participants, regardless of the valence of media exposure.

Prior to debriefing, the experimenter asked students what they believed the study was investigating. While no participants guessed the exact nature of the study, a number of students guessed it was about race because the experimenter and all of the other participants in the room (as the reader may recall, this study was administered in a group format) appeared to be of African descent. Being in a room of only Black people appeared out of the ordinary (or just notable) to those who made this or a similar observation. It is possible that students were vigilant to the racial markers of others in the room thereby making race salient to all participants regardless of media condition, uniformly eliciting ST.

Racial Identity and performance.

While racial identity did not moderate the relationship between the negative media representation condition and APM accuracy, it did independently predict accuracy on a cognitive task. Across media conditions, stronger endorsement of Pre-Encounter Self-Hatred beliefs and Immersion-Emersion Anti-White beliefs were associated with lower APM performance. Regardless of media condition, a stronger endorsement of

Multicultural Inclusion beliefs was associated with higher performance on the APM. After being exposed specifically to negative media representations of American Americans, stronger Multicultural Inclusion beliefs were associated with high performance on the APM while Pre-Encounter Self-Hatred beliefs were associated with significantly worse performance in this condition. It appears that having a secure and positive sense of belonging in one's racial group makes it less likely that the individual will be psychologically threatened when asked to perform a task and lessens the likelihood of being adversely impacted by negative stereotypes, even when confronted explicitly with those negative stereotypes.

On the other hand, having strong Self-Hatred beliefs (i.e. strongly endorsing negative racial stereotypes about African Americans) or Anti-White beliefs (strong and positive beliefs about Black identity but a strong denigration of Whites) makes it likely that race and racial issues are more easily cognitively accessible and are associated with some strong and negative feelings. The saliency of strong and negative feelings around race perhaps makes these individuals more susceptible to performance impeding psychological threats. It potentially makes the risk of confirming negative stereotypes about one's racial group more disturbing which negatively impacts an individual's ability to perform on a cognitive task. These results are important in that they suggest the benefits that strengthening African American student's racial identity could have on improving academic performance.

Ethnic self-designation and performance

Interestingly, analyses revealed an interaction effect between ethnic self-designation and media condition. In the positive media condition, the accuracy rate of

self-designated West-Indian's was significantly lower than self-designated African Americans. In other words, exposure to media images that portray African Americans favorably led to a decline in cognitive performance for those who self-label themselves as West-Indian. This study assumed that a media clip portraying African Americans competing and excelling at debate (an intellectual domain) would – like in the Obama study (Friedman, Marx and Ko as cited in Wolf, 2009) – lead to an improvement in cognitive performance (stereotype boost). It was not considered that this could in fact lead to a depression in performance. An explanation for the results of this study that demonstrated self-labeled West Indians had a decline in performance in the positive media condition is that these images were psychologically threatening and elicited ST. It is possible that for self-labeled West-Indian's, seeing high intellectual performance portrayed on screen induced (or induced to a greater degree) the performance interfering concern that their intelligence would be judged against of negative stereotypes.

In light of the importance of ethnic self-labels, perhaps the Cross Racial Identity scale was unable to capture the nuance of what it means to be Black, especially for the ethnically diverse student body of City College. The CRIS, while useful in capturing the strength of a circumscribed set of beliefs about Black people, it may lack specificity with regards to ethnicity. Furthermore it lacks the ability to assess how people of African descent can identify or de-identify with the terms such as African-American or Black. The reader should consider that an alternative explanation for the study results is that how one chooses to ethnically identify is critical in terms of the impact media images have on performance. Conceivably there are times in which associating with African Americans as a larger group can lead to feelings of unity, camaraderie, and closeness leading

students to freely identity with “African American”, but possibly when negative associations are being made, individuals defend against the association and psychological protect themselves by choosing to identify with another label that allows for more differentiation (e.g. country of origin). People of African descent can psychological choose to identity or de-identify with subgroups as a matter of psychological protection.

It may seem counterintuitive at first but research examining ethnic identity in West-Indian populations suggests some may strategically distance themselves from African Americans and may not see themselves as part of the same reference group (Deaux et al., 2007). Therefore it seems quite possible that participants in the present study varied by the degree to which they were able to see the individuals being portrayed in the media clips as in-group and out-group members and this was likely based on the students self-labeled ethnic identity.

A vast majority of the participants in this study reported their parents were born outside of the United States (mostly in Jamaica or Haiti). The fact that the sample was mostly second generation immigrants potentially played an important role in the findings. The hypotheses for the present study assumed that visual depictions of Black people would generate either an identification with the actors on the screen or an anxiety that the viewers could be “put in the same category” with those on the screen. The results of this study seem to suggest a more complex relationship between skin color and identification that may be based on ethnic self-label which reflects significant differences in experience. Anglin and Whaley (2006) emphasize the importance and meaningfulness of self-labeling (especially for disadvantaged groups) and explain that the labels people choose for themselves can be used to foster a positive social identity in an often

invalidating world. Self-labels often reflect more than just what one prefers to be called, it can be thought of as a reflection of important socialization experiences including messages from parents about an individual's race and group membership (Anglin & Whaley, 2006).

A number of participants at the end of the study (after debriefing) defended against being associated with African Americans and reported the characters on the screen didn't represent them. Many of the students said specifically to the researcher that despite being born in the United States they did not think of themselves as American. Many of the participants thought of themselves as West-Indian (notably some that may have labeled themselves as African American prior to the start of the study). Similarly Deaux et al. (2007) found many second-generation participants identified themselves as West Indian, despite being born in the United States. They found that first generation placed an equivalent amount of importance and positive valence on their West Indian identity as second generation West Indians. This suggests that despite being born in the United States, these participants felt a greater connection to their parent's countries of origin and did not see themselves to be African American.

In the present study some students felt that it was so important to express to the researcher that they are not "African American" that they crossed out the word "African American" which was frequently used on the Cross Racial Identity Scale and wrote in "Caribbean American" or "West-Indian," an action that suggests they were strongly motivated to differentiate themselves from African Americans. So viewing positive depictions of a group one may actively disassociate from to maintain positive self-regard

could create psychic tension – an unconscious anxiety about maintaining their social standing in comparison to this other marginalized group – leading to lower performance.

Black West-Indians who move to this country from majority Black nations may find that race is much more salient in the United States because of the increased diversity when compared to their home countries. In the US they may be forced to confront new racial stereotypes about Black people. Some Black West-Indian's cope with new racial stressors by distancing themselves from the resident group of marginalized people (Black Americans) in order to preserve self-esteem in situations that threaten their positive self-regard (Deaux et al., 2007). These new residents hold on to the reality that in the United States, research (Deaux et al., 2007) suggests West Indians are looked upon more favorably than African Americans and are thought to be more ambitious and hard-working whereas African Americans are looked upon as more "troublesome" and looked upon more negatively by society.

First and foremost, it is important to acknowledge the impact of exposure to stereotypes that suggest West Indians are seen more favorably by the majority (White people) when compared to African Americans (Deaux et al., 2007). Though this is a positive stereotype, all stereotypes have a double edged sword. If some West-Indians use negative stereotypes about African Americans to maintain a sense of self-esteem in a new more racially threatening environment, something potentially complex and psychologically threatening can occur when that demeaned group is portrayed favorably (like in the positive media condition). In the present study, West Indians performed significantly worse than self-labeled African Americans in the positive media condition. It is possible that seeing this usually marginalized group in a positive light was

psychologically threatening to the self-esteem of these students thereby negatively impacting their performance. Race and ethnic identity are complex social constructions that are impacted by social norms and stereotypes present within our culture. This study highlights the need to further explore the complicated relationship between identity, psychological methods of self-esteem maintenance, and stereotypes in this culture.

Potential Limitations

Impact of research at a public institution.

The potential impact of conducting stereotype threat research at a public, versus private and more elite university should be considered. Differences in these types of institution could represent differences in terms of identification with academic domains and differences in the importance students place on task performance. Brown and Day (2006) emphasize the meaningfulness of the fact that many of the original ST studies took place at elite institutions such as Stanford. One of Steele and Aronson's (1995) original assertions about ST is the importance of domain identification. The people who are most influenced by ST are the ones who are most invested in or who care the most about the domain within which they are being assessed. Therefore, Black students who are the most susceptible to ST are the ones in which intelligence and academics are the most important. Brown and Day (2002) suggest that participants at public institutions may not be as invested in academics to the same extent as those who are matriculated in private elite institutions and therefore ST effects are not generalizable to students in the "general population." While this point of view could be considered in itself stereotypical if not classist, it should be considered that there is likely to be more diversity amongst

students at a public institution in terms of their emphases on academics when compared to a more private, expensive, and homogenous university and the impact of this could potentially be influencing the results of this study in that ST could have been suppressed in this student population.

For those who are the most identified with the academic domain (i.e. students whose thoughts and beliefs about themselves are most impacted by their cognitive performance) ST is much easier to elicit because the importance of doing well is much more salient. For students who are less identified with the academic domain, an ambiguous situation (such as the one created for this current study) would be much less likely to evoke thoughts or concerns about the way in which their performance could impact their beliefs about their cognitive abilities or others beliefs about their abilities. In other words, the more an individual identifies with and values their cognitive performance, the easier it is to interpret a wider range of situations as a situation in which their performance would be at risk of confirming or denying the merits of their intelligence. City College students, being members of a less elite and overtly competitive environment, could on a whole be less likely to see ambiguous situations as a threatening opportunity in which their intelligence and abilities could be assessed therefore these students may be less susceptible to ST or they all were equally impacted by ST regardless of media group.

Abbreviated administration of the APM.

Another potential limitation of this study design was abbreviating the administration of the Raven Advanced Progressive Matrices (APM). As mentioned in the methods section of the study Brown & Day (2006) conducted a study that confirmed the

APM's susceptibility to ST. They suggested though that providing an abbreviated administration of the APM (20 minutes, rather than 40) such as what was done in the Mckay et al. (2002) study and the present study, may have decreased the likelihood that participants would encounter difficult questions. And, as ST research suggests, tasks must be difficult but not impossible to complete to induce ST. Without encountering difficult and significantly challenging questions that occurred towards the end of the APM, it is unlikely that concerns about performance, ST, would be elicited. In short, it is possible that another reason for the lack of significant differences between groups was due to providing participants with only 20 minutes to complete the APM made it less likely that students would get to the most challenging questions that would be thought to bring about concerns about performance (ST). That said, the percentage accuracy was not particularly high in this sample.

Sample size.

A limitation of this study may have been the overall number of individuals in this study and the number of individuals within the subgroups for comparisons purposes. When the results of the mean accuracy scores on the APM are looked at by racial group, and across media representation group, different patterns of performance appear between ethnic groups but not within. It is possible that given a higher number of participants within each group, significant differences between how individuals performed in the negative, positive, and control media conditions as self-labeled African-Americans, West Indians, or Other could potentially be significant. Given the relatively small sample size in this study, the only significant difference in performance was not found *within* each ethnic group between media condition, rather it was *between* ethnic groups in the positive

condition. Initial power analysis for this study did not take into account how variation in self-labeling would impact the results of the study. If this study was conducted again, the researcher may want to recruit a much higher number of students identifying with a variety of self-labels to better assess the results of media's impact on performance across groups. This research project was based on the false premise that all students of African descent may react more similarly to stereotype exposure and did not take into account the importance of different socialization experiences students would have based on their ethnic self-label.

Suggestions for Future Research

The following section briefly presents suggestions for researchers who may want to further understand the impact that stereotypical media representation have on the performance of people of African descent. The results of this study in combination with findings of Deaux et al. (2007), strongly suggests the importance of ethnicity and acculturation when studying the influence ST has on cognitive performance. Simply being born in the United States does not necessarily translate into an African American identity, which, as research suggests, is a predominant target of negative stereotypes. In addition to assessing the birthplace of participants, their parents, and even grandparents, it would also be potentially beneficial to assess the degree to which participants identify with or see themselves as African American. Along similar lines, it would be valuable to assess the extent to which participants see themselves in the characters portrayed in the media stimulus presented. Additionally, a researcher may find it useful to measure the degree to which people feel that they themselves or their performance will be judged

against negative societal stereotypes. Lastly, it seems critical to determine the degree to which academic success is an important part of participant's identity.

In terms of methodological suggestions, although much more complex, researchers may find value in conducting a 3x3x2 research design. Participants could be administered the APM, in low (i.e. the APM is described as a puzzle), standard (i.e. standard directions that accompany the APM are read), and high stereotype threat (i.e. participants are told explicitly the APM is an IQ test) conditions, after seeing either a control, negative or positive media representation of African Americans in the presence of either a Black or White testing administrator. Deaux et al (2007) found that varying the race of the experimenter impacted student's performance depending on the student's first or second generation status and study condition. In the non-diagnostic condition, performance was better when the experimenter was Black. When Deaux et al (2007) looked at the interaction between generation and experimenter race, it was found that first generation students performed better when the experimenter was White and second generation students performed better when the experimenter was Black. It is possible that the first generation individuals performed better with a White experimenter because, as these researchers found, first generation individuals believe they are viewed more positively than Black Americans and therefore may have experienced a stereotype lift in the presence of a White experimenter. They may have a greater ability to utilize the positive images they have of their group in the face of "diagnostic pressure" in order to distance themselves from the negative stereotypes associated with Black individuals from the United States. On the other hand, second generation students may have been more sensitive to being stereotyped by the White experimenter therefore performing worse in

this condition. On the other hand, the second generation students in the Deaux et al (2007) study may have felt less likely to be at risk for being stereotyped by the Black experimenter, reducing ST and improving performance.

This above mentioned 3x3x2 design, in addition to the suggestions regarding more careful sample selection, would provide a much more nuanced understanding of the relationship between media representations and performance in conditions that vary to the degree they are similar or dissimilar to real life testing situations that Black students may experience.

Implications

This study presents important implications regarding the impact educators, clinicians, and parents can have in terms of reducing inequities for African descended student. Improving academic outcomes for Black students and diminishing the academic achievement gap that exists between racial groups is a vital step in the fight for racial and economic equality. Research has demonstrated that above and beyond economic factors that contribute to the achievement gap, the proliferation of negative stereotypes about the abilities and intelligence of certain racial and gender groups contribute to the persistence of disparities in performance. This study has provided the field with insight into the role of Internalized Multicultural, Self-Hatred and Anti-White beliefs and the role of ethnic self-labels and the media on performance.

Race and ethnicity are very complex social constructions and the sample represented in this study in no way represents the diversity of people of African descent found in this country. An improved understanding of the influence that stereotypical

media images of African Americans has on cognitive performance is a necessary part of the continued efforts to understand the various factors that play a role in the academic achievement gap between Black and White students. The finding that racial identity, or the feelings an individual has about their African heritage, is positively associated with improved performance is one that should be taken seriously. Given this result, it seems imperative for clinicians to explore racial identity with all clients of African descent to more deeply understand their experiences. This appears to be a critical yet often overlooked aspect of clinical work. For parents and educators this work also seems to strongly suggest a need to explore the beliefs their children and students hold about their racial identity and race relations generally. Also, seeing as this study demonstrated the benefit of Multicultural Inclusion attitudes (i.e. an acceptance of an individual's racial identity in combination with the acceptance and desire to connect with others who hold different identities) it seems that creating clinical, school and home environments that educate and encourage universal acceptance of others could improve academic performance and potentially general life experiences.

Appendix 1

Brief review of participants' television content exposure

As described in Chapter 1, empirical evidence suggests that television programming plays a critical role in the way in which viewers interpret, understand, and socially construct their worlds. Given this, it is necessary to describe the racial and gender portrayals in this sample's most frequently reported "favorite" program, Law and Order: Special Victim's Unit. In 2007, a content analysis of this show (Law and Order: Special Victim's Unit, Season 5: 2003-2004) was conducted to assess, among a number of things, the portrayal of the gender, race, and age of victims and their perpetrators (Britto, Hughes, Saltzman, & Stroh, 2007). The demographic information (age, race, job, etc.) of the show's victims, perpetrators and city's residents were compared to actual rates of residents, offenders, and victims from Manhattan (obtained from The Federal Bureau of Investigation: Uniform Crime Reports for Manhattan and National Crime Victimization Rates). In short, the analysis found SVU significantly overrepresented Manhattan's White population when compared to the real rates (72% vs 54%) and drastically underrepresented Hispanic residents (3% vs 27%). Additionally, SVU had no Hispanic main characters (a clear example "symbolic annihilation" [Tuchman, 1978] discussed in chapter 1. The number of African Americans portrayed as city residents in this show most closely represented the real rates, although they were still marginally underrepresented.

Regarding victim portrayals, White people, especially males were significantly overrepresented as victims while Hispanics were drastically underrepresented. African American females were not represented as rape victims at all during the fifth season

while they are the group most as risk for sexual assault. Britto et al. (2007) purports that under-representing female, ethnic minority victims reinforced the assumption that women of color are "Jezebels" and do not fall into the category of a "special" victim. Furthermore, viewers lose out on empathizing with victims from ethnic minority groups.

Concerning the way in which Law and Order: SVU represents criminals, this show significantly over-represented female perpetrator of sexual assaults and murders when compared to known Manhattan rates. Interestingly, Black and Hispanic offenders were underrepresented by this program when compared to documented rates. (Please see index for a visual comparison on the way in which Law and Order SVU portrays the racial and gender breakdown of the population of Manhattan, the city's victims and perpetrators.)

This sample's top three favorite actors and actresses are Denzel Washington, Will Smith, and Halle Berry. Notably the most frequently named actors and actresses are of African descent (Halle Barry is biracial).

Victims in Manhattan, NY Data compared to SVU Victims (Britto et al., 2006)

	Manhattan, NY: NCVS*	**"Law & Order: SVU"**
Sex		
Male	11%	39%
Female	89%	61%
Race/Ethnicity		
White	47%	62%
Black	20%	16%
Hispanic	26%	6%
Other	7%	16%

* Estimates for New York City victimization combine 2003 NCVS national victimization rates for violent crime, with ages rounded to fit study categories for violent crime, with New York City 2000 Census data on age composition of city.

Offenders in Manhattan, NY Data compared to SVU Victims (Britto et al., 2006)

	Manhattan, NY: UCR*	**"Law & Order: SVU"**
Sex		
Male	95%	63%
Female	5%	37%
Race/Ethnicity**		
White	48%	82%
Black	50%	10%
Hispanic	22%	2%
Other	4%	6%

*Estimates for Manhattan, NY offenders are from 2001 UCR estimates of forcible rape, murder, and manslaughter. Source: Http://criminaljustice.state.ny.us/crimnet/ojsa/cja_00_01/contents.htm

** Race estimates for UCR will total more than 100%, because Hispanic ethnicity may also be included in other race categories.

Appendix 2

Tables 7B and 7C

Hierarchical Multiple Regression analysis for variables predicting mean accuracy on APM

	Block 5B**			Block 5C*	
Predictors	*b*	SE	Predictors	*b*	SE
Intercept	69.70	6.89	Intercept	68.54	6.94
Gender	-2.08	5.27	Gender	-0.45	5.23
West Indian	4.18	7.81	West Indian	3.91	7.82
All other Ethnic Groups	-3.62	11.41	All other Ethnic Groups	3.91	7.82
Negative Media Group	7.51	7.31	Negative Media Group	7.53	7.33
Positive Media Group	7.57	6.83	Positive Media Group	6.84	7.15
Assimilation	-0.41	0.30	Assimilation	-0.46	0.30
Mis-Education	0.42	0.34	Mis-Education	0.46	0.35
Self-Hatred	-1.52**	0.49	Self-Hatred	-1.58**	0.50
Anti-White	-0.04	0.71	Anti-White	-0.12	1.78
Afrocentric	-0.13	0.62	Afrocentric	-0.35	0.38
Multicultural Inclusion	0.79	0.43	Multicultural Inclusion	0.83	0.43
West-Indian X Negative Group	-9.37	11.61	West-Indian X Negative Group	-9.28	11.59
West-Indian X Positive Group	-28.88**	10.91	West-Indian X Positive Group	-26.91**	11.21
Other EthnicitiesX Negative Group	-1.67	14.17	Other EthnicitiesX Negative Group	-1.60	14.25
Other Ethnicities X Positive Group	-3.12	19.26	Other Ethnicities X Positive Group	-0.32	20.62
Afrocentric X Negative Media Group	0.22	0.82	Anti-White X Negative Media Group	0.57	1.89
Afrocentric X Positive Media Group	-0.70	0.86	Anti-White X Positive Media Group	-1.10	2.61
R-squared	0.35		*R-squared*	0.34	
F Change	0.60		*F* Change	0.35	

Notes: Media group was represented as dummy variables with 1 representing the media group of interest and 0 representing the reference groups.

Ethnic group was represented as dummy variables with 0 representing African Americans, the reference group.

Racial Identity subscales were centered at their means

*p < .05. **p < .01.

Table 7D and 7E
Hierarchical Multiple Regression analysis for variables predicting mean accuracy on APM

Block 5D*			Block 5E**		
Predictor	*b*	SE	Predictors	*b*	SE
Intercept	68.63	6.81	Intercept	69.03	6.66
Gender	-1.18	5.19	Gender	-0.59	5.32
West Indian	4.76	8.10	West Indian	3.55	7.71
All other Ethnic Groups	-2.74	11.81	All other Ethnic Groups	-4.88	11.58
Negative Media Group+	7.97	7.51	Negative Media Group+	8.69	7.35
Positive Media Group+	10.51	7.33	Positive Media Group+	8.15	6.78
Assimilation	-0.47	0.30	Assimilation	-0.43	0.30
Mis-Education	43.00	0.35	Mis-Education	0.59	0.59
Self-Hatred	-1.89*	0.94	Self-Hatred	-1.61**	0.49
Anti-White	0.18	0.69	Anti-White	0.20	0.66
Afrocentric	-0.30	0.37	Afrocentric	-0.33	0.37
Multicultural Inclusion	0.77	0.44	Multicultural Inclusion	0.84	0.43
West-IndianXNegative Group	-9.94	12.29	West-IndianXNegative Group	-13.14	11.91
West-IndianXPositive Group	-30.53**	11.25	West-IndianXPositive Group	-27.37*	10.84
Other EthnicitiesX Negative Group	-2.03	15.15	Other EthnicitiesX Negative Group	-3.42	14.68
Other Ethnicities X Positive Group	-13.54	21.00	Other Ethnicities X Positive Group	-5.81	19.26
Self-HatredX Negative Media Group	0.28	1.15	MiseducationX Negative Media Group	0.69	0.89
Self-Hatred X Positive Media Group	1.05	1.38	Miseducation X Positive Media Group	-0.58	0.73
R-squared	0.34		*R-squared*	0.36	
F Change	0.32		*F* Change	1.22	

Notes: Media group was represented as dummy variables with 1 representing the media group of interest and 0 representing the reference groups.
Ethnic group was represented as dummy variables with 0 representing African Americans, the reference group. Racial Identity subscales were centered at their means
*p < .05. **p < .01.

Table 7F

Hierarchical Multiple Regression analysis for variables predicting mean accuracy on APM

	Block 5F*	
Predictor	*b*	SE
Intercept	68.83	6.92
Gender	-0.81	5.20
West Indian	4.03	7.79
All other Ethnic Groups	-5.12	11.61
Negative Media Group+	7.40	7.31
Positive Media Group+	8.36	6.81
Assimilation	-0.65	0.53
Mis-Education	0.45	0.35
Self-Hatred	-1.58**	0.50
Anti-White	0.23	0.67
Afrocentric	-0.30	0.38
Multicultural Inclusion	0.82	0.45
West-Indian X Negative Group	-9.17	11.61
West-Indian X Positive Group	-28.84*	11.01
Other Ethnicities X Negative Group	0.08	14.39
Other Ethnicities X Positive Group	-5.30	19.55
Assimilation X Negative Media Group	0.34	0.71
Assimilation X Positive Media Group	0.19	0.73
R-squared	0.34	
F Change	0.11	

Notes: Media group was represented as dummy variables with 1 representing the media group of interest and 0 representing the reference groups.

Ethnic group was represented as dummy variables with 0 representing African Americans, the reference group.

Racial Identity subscales were centered at their means

*p < .05. **p < .01.

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