The Impact of Social Dominance Orientation on Experienced Threat and Consequent Interviewer Discriminatory Behavior: A Psychophysiological Approach

John F. Capman

The Graduate Center, City University of New York

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The Impact of Social Dominance Orientation on Experienced Threat and Consequent Interviewer Discriminatory Behavior: A Psychophysiological Approach

by

John F. Capman

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

______________________________
Date                         Kristin Sommer, Ph.D.
Chair of Examining Committee

______________________________
Date                         Richard Bodnar, Ph.D.
Executive Officer

Supervisory Committee:
Karen S. Lyness, Ph.D.
Loren J. Naidoo, Ph.D.
Harold J. Goldstein, Ph.D.
Drew Allen, Ph.D.
Abstract

The Impact of Social Dominance Orientation on Experienced Threat and Consequent Interviewer Discriminatory Behavior: A Psychophysiological Approach

by

John F. Capman

Advisor: Dr. Kristin Sommer

Though the representation of Black males within lower echelons of organizations has increased since the inception of Title VII (CRA 1964), Black males continue to be highly underrepresented in management-level roles (EEOC, 2015). The current study was developed to examine how social dominance orientation (SDO) among White males (Sidanius & Pratto, 1994) might disadvantage Black males attempting to advance into management jobs. Additionally, I evaluated the role of threat in contributing to discrimination against Black males by directly assessing threat responses among Organizational Decision Makers (ODM) using psychophysiological measures (i.e., cardiovascular responses). Male and female participants were recruited to participate in an employment interview simulation where they will be instructed to play the role of an interviewer. All participants were randomly assigned to interview a Black male candidate for an open position that varied in the amount of status and authority conferred by the job role. Specifically, one job role simulated an entry-level job (low status), whereas the other job role simulated a management role (high status). Participants were then asked to carry out the employment interview. Afterwards, participants evaluated the candidate and indicate the likelihood of selecting the candidate. Findings did not support the proposed hypotheses, but exploratory analyses revealed that a sub-dimension of SDO might play a more important role in predicting discrimination in the workplace. Specifically, the sub-dimension of SDO that capture a person’s level of anti-egalitarianism (SDO-AE) was found to predict
cardiovascular threat. Furthermore, a marginal interaction effect between job status and SDO-AE was found, wherein SDO-AE was positively related to threat among those interviewing a Black candidate for the lower status role. However, no relationship between SDO-AE and threat was found among those interviewing a Black candidate for the higher status role. Finally, SDO-AE predicted lower ratings of Black candidates on characteristics that were subjective and less susceptible to verification. The theoretical implications of examining the sub-dimensions of SDO-AE were then discussed. This was followed by a discussion of the practical approaches for practitioners to implement in the service of minimizing racial discrimination in organizations. Finally, limitations of the study are discussed.
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Always bear in mind that your own resolution to succeed is more important than any other (Abraham Lincoln, n.d.). This quote has been a guidepost for me as I worked toward this degree. However, for me it was also the resolution exhibited by my family, friends and colleagues that was indispensable to my ability to achieve this goal.

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Chapter 1: Introduction

The passing of Title VII of the Civil Rights Act of 1964 was a critical moment for industrial and organizational psychologists (Outtz, 2010). The act called upon the collective expertise and efforts of this professional community, in collaboration with the United States government, to develop a set of employment policies and practices that would meet the important goals of eradicating discrimination against Blacks and other minority candidates while also developing selection techniques that identify the best candidates. Researchers and practitioners responded to this legislation by developing employment practices and selection protocols that were more valid and fair and reduced group selection differences (Schmidt & Sinha, 2010). At the outset, their efforts were directed toward access to entry-level roles. Not surprisingly, this focus has yielded an entry-level workforce that is substantially more diverse than it was nearly 50 years ago (Tomaskovic-Devey & Stainback, 2007). The progress in access to entry-level employment opportunities should be celebrated as it has largely lived up to the promises of Title VII of the CRA.

Unfortunately, equal access to entry-level job roles seems to have been both the starting and ending point of efforts to reduce group disparities in employment opportunities. That is, while Blacks have entered the workforce at higher rates since Title VII, their representation in managerial and executive roles has remained noticeably low (Tomaskovic-Devey & Stainback, 2007). Research shows that a considerable proportion of the gap in management representation persists even after controlling for factors such as lower education and individual career investment among Blacks (Smith, 1999; Wilson, 1997). Some scholars argue that informal interview and promotional processes play a central and detrimental role in the underrepresentation of Blacks as they are highly subjective and allow the subtle prejudices of
organizational decision makers' (ODM) to influence employment outcomes (Dovidio & Gaernter, 2000; Greenhaus, Parasuraman & Wormley, 1990; Reskin, 1998). Indeed, résumé studies demonstrate that White ODMs’ prejudice negatively impacts the evaluations and selection rates of Blacks (Brief, Dietz, Cohen, Pugh & Vaslow, 2000; McConahay, 1983). Thus, it is not unreasonable to expect that the prejudices that influence resume screening processes might also influence Blacks’ disparate experiences and unequal selection during interviews for management and other high status positions. Surprisingly, studies examining the impact of ODMs’ prejudice during employment interviews with Blacks have not been investigated.

Accordingly, a first aim of the current dissertation was to examine the influence of prejudice during interviews with Black candidates. In the main, researchers have evaluated the effect of modern racism when studying racial biases in employment selection situations (McConahay, 1983). Unlike these scholars, I introduce and examine social dominance orientation (SDO; Sidanius & Pratto, 1999) as an alternative predictor of discrimination by ODMs (who are most often White-males) toward Blacks in employment interview contexts. SDO is the individual difference variable couched within social dominance theory (SDT) and represents a person’s endorsement of group-based inequality and dominance. Individuals holding stronger SDO beliefs are more likely to hold prejudiced views, endorse negative out-group stereotypes, advocate for social policies and engage in behaviors that support and exacerbate inequities between social groups – for example, Whites and Blacks (Altemeyer, 1998; McFarland & Adelson, 1996; Pratto, Sidanius, Stallworth, & Malle, 1994; Pratto, Sidanius, & Levin, 2006; Quist & Resendez, 2002; Sidanius, Pratto, & Mitchell, 1994).

A second aim was to leverage SDO and the broader SDT framework to explain Blacks’ experience of more severe discrimination when attempting to gain entry into management and
executive roles. According to SDT scholars, high status (i.e., Whites, males) group members hold stronger SDO beliefs and are more likely to discriminate against an out-group when the targeted out-group is threatening to the status position of their in-group (Jackson & Esses, 2000; Pratto et al., 2006; Quist & Resendez, 2002). Cross sectional investigations show that those with stronger SDO beliefs exhibit worse discrimination against competitive out-group members as they are sensitive to the potential future loss an out-group poses to their status position (Duckitt, 2001; Scheepers, Ellemers & Sintemaartensdijk, 2009). With this in mind, I investigated whether interviewers with higher SDO exhibit more discrimination when interviewing Black candidates for a (higher status) managerial job, which is presumed to elicit greater threat, compared to a (lower status) entry-level job. Empirical support for this suggestion would offer insight into what motivates ODMs' more severe discrimination against Blacks. The study also provides scholars with a broad theoretical framework in which to couch the pattern of underrepresentation in management among Blacks.

Finally, an important goal of the proposed dissertation was to provide more conclusive evidence for the role of threat by assessing it directly using psychophysiological measures. Up to now, intergroup researchers have relied on self-report and behavioral responses to infer threat (Ellemers, Van Dyck, Hinkle, & Jacobs, 2000). Though informative, these approaches do not directly measure threat responses. Researchers using this approach infer threat by evaluating differences in self-reported threat among those in competitive relative to non-competitive contexts, or by evaluating whether greater discrimination occurs when participants are exposed to competitive relative to non-competitive contexts (Jackson & Esses, 2000; Pratto & Shih, 2000). While researchers provide compelling reasons for why these measures accurately reflect threat, their arguments are open to debate. Indeed, as noted by Blascovich and Mendes (2000),
researchers incorrectly assume that participants are consciously aware of and can accurately report feelings of threat. Self-report measures of threat are also susceptible to distortion by respondents such that individuals may deliberately fail to report threat (Scheepers et al., 2009). Behavioral (discrimination) responses are also problematic, as they do not have a “one-to-one” (Scheepers et al. 2009, p. 1076) correspondence with threat. For example, individuals might respond to threat differently depending on situational demands (Ellemers et al., 2000). In some cases, group members may bolster the status of their in-group by exhibiting in-group favoritism rather than out-group discrimination. Alternatively, group members might attempt to appease a threatening out-group by exhibit out-group favoritism. As threat may reasonably underlie both of these responses, inferences about their direct relationship to the presence of actual threat experiences remain murky (Scheepers et al., 2009).

Fortunately, recent methods offer a more direct means of evaluating threat responses. Blascovich, Mendes, Hunter and Lickel (2000) formulated the biopsychosocial (BPS) model, in which cardiovascular response patterns corresponding to psychological threat and challenge states in stressful situations are examined (Blascovich et al., 2000). Threat occurs when a person perceives that the demands of a situation exceed his or her perceived resources, whereas challenge results when perceived resources outweigh perceived demands (Blascovich et al., 2000). In all cases, a person’s perception of resources and demands are affected by various factors (e.g., uncertainty, knowledge and skill, dispositions). I adopted the biopsychosocial methodological approach in my dissertation to provide a more direct test of the mediating role of threat during interactions with Black job candidates. Specifically, I evaluated whether higher levels of SDO correspond to stronger physiological threat responses during an interview with a Black job candidate. Furthermore, I examined whether the status conferred by a job resulted in a
more pronounced threat response among people high compared to those low in SDO. I then evaluated whether heightened threat led to worse discrimination toward Black candidates during the interview process, and whether threat mediated the relationship between SDO and discriminatory behavior.

In sum, in the current dissertation, I examined how interviewer biases, in particular SDO, might exacerbate the employment disadvantages experienced by Black candidates. In the chapters that follow, I first describe the pervasive and persistent underrepresentation of Blacks in management and executive roles (Chapter 2). Thereafter, I present SDT and SDO as potential causes of underrepresentation among Blacks in management roles (Chapter 3). I then describe and adapt the BPS approach to more directly measure threat during interracial interactions within an employment setting (Chapter 4). Next, I present hypotheses that implicate the combined influence of SDO and job status on threat responding by interviewers and the disparate outcomes experienced by Blacks during interviews for management roles (Chapter 5). I then present two pilot studies carried out to develop materials for the main study of this dissertation (Chapter 6). Then, I describe a study that evaluated the impact of social dominance orientation (SDO) on the selection rate of Black candidates as a function of job status (Chapter 7). Results and discussion are then presented (Chapter 8 and Chapter 9, respectively).
Chapter 2: The Underrepresentation Blacks in Management

In the past fifty years, a substantial number of legal and government interventions have been enacted to surmount the negative impact of past discrimination and to eliminate future acts of discrimination, particularly against Blacks. Unfortunately, their ambitious goals have not been realized (Smith, 1999). Findings collectively demonstrate the ubiquitous disadvantage and discrimination Blacks experience in employment settings (Lyness, 2002). They also highlight how discrimination and limited employment opportunities are particularly prevalent in the upper echelons of organizations (Smith, 1999; Tomaskovic-Devey & Stainback, 2007, 2010; Wilson, 1997). Understanding the cause of Blacks’ underrepresentation in management roles is critical as it plays a central role in shaping the social and economic disadvantages that Blacks face in the United States more broadly (del Rio & Alousa-Villar, 2015; Smith & Elliot, 2002; Stainback & Tomaskovic-Devey, 2009; Tomaskovic-Devey & Stainback, 2007).

While Blacks have made significant gains in representation in entry and lower level professional roles over the past fifty years, their access to jobs conferring organizational authority and power (e.g., managerial and executive roles) has declined (Reskin, 1998; Smith 2005; Stainback & Tomaskovic-Devey, 2009; Tomaskovic-Devey & Stainback, 2007). Using panel data of EEO-1 reports between 1966 and 2004, sociologists Tomaskovic-Devey and Stainback (2007) analyzed management representation among White males and racial minorities since the enforcement of Title VII in 1966. According to their findings, Blacks (males and females) were underrepresented by over 90% in management roles at the start of Title VII. At the turn of the twenty first century, Black males and females continued to be underrepresented at a rate of 43% and 72%, respectively. At the same time, White males’ representation increased following the introduction of Title VII and remained nearly 60% overrepresented since the
enactment of Title VII. A more recent examination of Equal Employment Opportunity Commission (2015) data revealed similar patterns of underrepresentation. Though Blacks constituted nearly 14% of the private sector workforce (EEOC, 2015), they occupied roughly 7% of all low and mid-level management roles and just over 3% of upper management (i.e., senior and executive management) roles. At the same time, Whites comprised 62% of the private sector workforce, but held 77% and 86% of all mid and upper level management positions, respectively.

Sociologists have proposed several explanations to account for lower promotion rates and representation in management among Blacks. The first, originating from the human capital perspective (Wilson, 1997), contends that Blacks’ lower promotion rates and representation in management can be accounted for by their lower human capital endowments (i.e., education, training, work experience). An underlying assumption of this view is that there is an equitable merit based system that rewards both Blacks and Whites similarly for their human capital investments. Scholars have evaluated the merit of this perspective by assessing whether the promotion rates of Blacks and the likelihood of holding a management position differ from those of Whites after controlling for human capital variables. An initial examination was carried out by Baldi and McBrier (1997). Using a nationally representative dataset of employees in the United States, these authors found that Blacks were half as likely to be promoted, despite having comparable education, work experience, and training as Whites. Examining data from a Fortune 500 financial firm, James (2000) surveyed Black and White managers to explore the effects of race, education, training, work network racial similarity, and work network relationship strength on promotion disparities. Unlike the abovementioned study, James (2000) also controlled for actual performance ratings as well as human capital and organizational variables (sex, age, line
or staff role). As expected, James found that being White was associated with more promotions, which offers more direct evidence of discrimination in promotion decisions.

Smith (1999) and Elliott and Smith (2004) extended this line of research by examining whether Blacks’ and Whites’ representation gap in management increased at higher levels of authority and power. Smith (1999) analyzed two decades (i.e. 1972-1994) of national data from the General Social Survey and developed a three-category operationalization of workplace authority in order to examine whether the gap in representation between Blacks and Whites expanded at higher levels of authority. The three categories were: obey class – those who are supervised by others; (2) lower command class - those who have two or greater supervisors above them and manage others only one level below them; and (3) upper command class – those with two levels of subordinates below them and one or no direct supervisors above them. Human capital and personal characteristics (i.e., education, work experience, hour worked per week, job type, and marital and parental status) were controlled for prior to testing their hypotheses. Results failed to find disparities in representation at the lower levels; the rate with which Blacks and Whites occupied an obey class or a lower command level was not significantly different. However, representational disparities emerged at the upper command level. Blacks with similar human capital characteristics were significantly less likely than Whites to be promoted into upper command positions. Moreover, Blacks’ lower access to upper command levels worsened from the 1970s to the late 1980s and the gap remained stable through the 1990s.

Elliott and Smith (2004) used data from a multi-city study of urban inequality (i.e., MCSUI; Atlanta, Boston, and Los Angeles) to examine gaps between Blacks and Whites in access to workplace power. They also analyzed whether gaps in power were more pronounced in more powerful roles, specifically, higher level management. Similar to Smith (1999), they
created three levels of workplace power that approximated managerial level. These levels were: 
a worker - one without any supervisory responsibility; a supervisor - supervisory responsibility 
over others; a manager - supervisory responsibility, influence over pay and employment status of 
others. In line with Smith’s (1999) findings, Whites and Blacks (both males and females) were 
equally likely to be represented in a worker and a supervisor role after controlling for human 
capital characteristics (i.e., education, work experience, job-specific experience, and 
organizational tenure). Yet, the likelihood of holding a manager role was significantly lower for 
Blacks than for Whites.

Inequity scholars have also countered the human capital perspective by positing that 
Blacks and Whites are provided with distinct paths to management roles (Baldi &McGuire, 
1997; McGuire & Reskin, 1997; Smith, 2005; Wilson, 1997). These theories are collectively 
called the particularistic mobility thesis, contest mobility and sponsor mobility thesis (Wilson, 
1997; Wilson, Sakura-Lemessy &West, 1999). Despite having different names, for each the 
thesis is that Blacks’ pathway to management and executive roles is circumscribed and more 
dependent on human capital investments. That is, Blacks need to earn more formal educational 
and professional training, and demonstrate greater organizational tenure and commitment to their 
career or profession in order to reach the same levels as Whites (Wilson et al., 1999). At the 
same time, Whites benefit from formal credentials as well as informal sponsorship (i.e., by White 
Executives) to gain entry into management (Wilson, 2012). Divergent pathways to management 
and promotions are confirmed when the strength and direction of the relationship between 
human capital characteristics and promotions into management differ for Blacks and Whites. 
Different relationships imply that organizational decisions makers weigh human capital 
characteristics differently depending on the race of an employee (McGuire & Reskin, 1993). An
absence of discrimination is inferred when the relationship between human capital characteristics and promotions is the same for both Blacks and Whites.

Several studies demonstrate that organizational decision makers appraise credentials differently depending on the race of an employee. Baldi and McBrier (1997) and Wilson (1997) were among the first to examine the different mobility paths of Blacks and Whites. Wilson (1997) studied panel data of income differences between Blacks and Whites and found the relationship between the likelihood of promotions into management and having a college degree, work experience, and organizational tenure was significantly stronger among Africans Americans than it was for Whites. Baldi and McBrier (1997) found that education was related to promotion among Blacks but unrelated to promotion for Whites. Subsequent work by Wilson and his colleague’s (1999) found that education, work experience, and tenure with one’s current employer were more strongly related to movement into upper level jobs among Blacks than for Whites. Though not a main goal of the study, James (2000) also found that race moderated the relationship between human capital investments (i.e., participation in company sponsored training) and promotion rate such that the relationship between training participation and rate of promotion was stronger among White relative to Black managers. In other words, Whites received more rewards, in the form of promotions, for participation in training than Blacks.

Taken together, the pattern of results suggests that ODMs, who are more typically White males, may be knowingly or unknowingly restricting the opportunities of Blacks to gain access into management and executive roles. Results show that Blacks’ opportunities to be promoted into management roles are limited despite having commensurate human capital characteristics. They also reveal that promotion paths narrow as Blacks attempt to gain access to roles at higher
echelons of organizations. Lastly, results highlight that Blacks’ are required to “work twice as hard to get the same results as Whites” (p. 283, Wilson, 2012).

Sociological scholars (Reskin, 1998; Tomascovic-Devey & Stainback, 2007) have prominently attributed the underrepresentation of Blacks and the divergent promotional paths to racial biases and modern prejudices among organizational decision makers (typically White-males). Though the disparate patterns provide compelling evidence that prejudice may be operating, prejudice has never been directly assessed. I suggest that the prevailing pattern of increased underrepresentation of Blacks as they attempt to move into more powerful roles might be driven by social dominance motives (Sidanius & Pratto, 1999). That is, the barriers that persistently disadvantage Blacks, despite comparable human capital, might indicate that ODMs may be threatened and behave in ways that maintain the hierarchical arrangement and position of the hegemonic group in the United States and most private organizations. In the next chapter, I present SDO, the individual difference variable within social dominance theory, and explain how SDO might explain the representation disadvantages Blacks experience in management and executive roles.
Chapter 3: Social dominance orientation and discrimination

Social dominance theory (SDT) is a comprehensive social psychological theory that explains the pervasiveness of hierarchically arranged social systems, wherein one social group controls the dominant social position and is afforded a disproportionate amount of power, status and resources relative to all other social groups (Sidanius & Pratto, 1999). According to Sidanius and Pratto (1999), gender, age, and arbitrary-set systems (i.e., race, ethnicity, and caste systems) constitute the main group based social hierarchies. While all societies have gender and age hierarchies, they argue that arbitrary-set hierarchies only exist in societies where there is an economic surplus. Furthermore, the theory delineates the mechanisms operating in concert at the individual, interpersonal, institutional and societal levels that work to create and maintain hierarchically arranged societies (Pratto et al., 2006; Sidanius et al., 2004; Sidanius & Pratto, 1999). Though all are significant, only the discriminatory processes operating at the individual level were examined in the current study. In particular, I investigated how the influence of individual acts of discrimination by dominant group members might contribute to the underrepresentation of Blacks in management positions.

The Aggregated Effects of Individual Acts of Discrimination

According to SDT, individual acts of discrimination represent any act perpetrated by an individual from one social group that negatively affects an individual from another social group (Sidanius & Pratto, 1999). Individual acts of discrimination in isolation do not have a substantive impact on out-group oppression and inequity. Rather, these acts, aggregated over time and across educational, healthcare, legal and business contexts play a central role in the divergence in power and status between groups (Pratto et al., 2006; Sidanius et al., 2004). The effect of these acts are most impactful when perpetrated by dominant group members as their advantaged social position
and associated power afford them with greater opportunities and resources to discriminate against subordinate groups (Sidanius & Pratto, 1999). For instance, the selection of a White candidate over an equally qualified Black candidate for a management position (or any position) by itself has little impact on the prevailing social hierarchy. However, their impact on the perpetuation and maintenance of social group inequality is most felt when White candidates are consistently selected over Black candidates for most all jobs, management or otherwise (Sidanius & Pratto, 1999).

_Legitimizing myths: Ideologies that proliferate and mitigate group based inequities_

All social systems have developed means to economically, morally and intellectually justify discriminatory systems, processes and behaviors (Sidanius & Pratto, 1999). Most often, they take the form of legitimizing myths, which are characterized as beliefs, stereotypes, values and cultural ideologies that guide and substantiate the decisions and actions of individuals and institutions within a given society (Pratto et al., 2006). Legitimizing myths can be differentiated into two functional categories (Pratto et al., 2006); hierarchy-enhancing legitimizing myths (HE-LM) and hierarchy-attenuating legitimizing myths (HA-LM).

The advantages and superiority of the dominant group and lower position of subordinate groups are substantiated by HE-LM beliefs, ideologies, values, and stereotypes. Stereotypes are the most common HE-LM. Stereotypes are used to justify the inferior position of subordinate groups, while concurrently validating the ascendency of the dominant group or groups. Thus, dominant groups are purported to possess valued traits (i.e., intelligent, hard-working), whereas non-dominant groups hold undesired traits (e.g., unintelligent, lazy) and these beliefs are a potent tactic that perpetuates the inequities between social groups. In the United States, stereotypes of Blacks and ideologies of meritocracy and the protestant work ethic reinforce the notion that
Blacks’ disadvantaged position in society stems from their lower abilities and effort (Sidanius, Pratto & Mitchell, 1994). Conversely, HA-LMs counter HE-LMs by championing ideologies and beliefs that support social equality and the attenuation of group based differences in power and status (Sidanius & Pratto, 1999). Liberal views of social democracy, social welfare, and universal rights of man are at the core of attenuating ideologies (Pratto et al., 1994).

**Social Dominance Orientation**

A central component of SDT is the personality variable SDO. SDO refers to an individual’s belief in a hierarchically arranged social system such that one group should hold the hegemonic position and hold more resources relative to all other social groups (Pratto et al., 1994). SDO is a key contributor to group inequality in that it drives greater support for hierarchy enhancing myths such as racism (e.g., anti-Black and modern racism), discrimination, and lower support for policies and interventions promoting equal rights for subordinate groups in the United States, including Blacks (Pratto et al., 1994; Pratto et al., 2006; Sidanius & Pratto, 1999).

Social dominance scholars have found that members of the dominant group have stronger social dominance and hierarchy enhancing beliefs than members of subordinate groups (Pratto et al., 1994; Pratto et al., 2006). Not surprisingly, evidence shows that dominant group members are motivated to maintain their advantaged position and employ legitimizing myths and other strategies to buttress the existing social systems that advantage their in-group (Sidanius & Pratto, 1999, 2004). As explained by social dominance scholars, dominant group members’ stronger SDO and HE-LM endorsement provide them with moral and intellectual justification for their prejudiced thoughts and discriminatory behaviors toward subordinate groups, as well as supporting their views that their dominant position in the social hierarchy is warranted.

*Social dominance orientation and discrimination against subordinate groups*
According to SDT, the greater the degree to which dominant group members adhere to an ideology of social hierarchy (i.e., SDO), the more likely they will actively discriminate against non-dominant group members and attempt to increase the distance between their dominant in-group in relation to all other subordinate groups in a social system (Pratto, et al., 1994). Previous studies have employed resource allocation and minimal group paradigms to examine the impact of SDO on discriminatory behaviors of dominant group members. Results have consistently shown a positive association between SDO and discrimination against subordinate groups. An early investigation by Sidanius et al. (1994) used a minimal group paradigm to evaluate the impact of in-group social identification, SDO and their interaction on in-group bias and out-group derogation. Participants in this study were asked to complete a dot estimation task, which served as the ostensible reason for group membership. In reality, group membership was determined by randomly assigning participants to “over estimators” and “under estimators” groups and asking them to rate out-group members’ competence, report their preferred distance from out-group members and indicate their willingness to cooperate with out-group members. Stronger SDO beliefs predicted lower willingness to cooperate with out-group members and a desire for greater social distance from the out-group members. Even more, participants who identified most strongly with their group (i.e., under- or over-estimators) exhibited greater in-group bias and negative views of the minimal out-group if they were simultaneously high compared to low on SDO. However, SDO was less predictive of bias when participants were weakly identified.

SDT scholars suggest that policy support is also strongly influenced by SDO. Stronger SDO beliefs are associated with stronger meritocratic beliefs, wherein high SDO individuals allocate rewards in accord with their view that achievements within society should be wholly
attributed to traits and efforts of individuals or social groups (e.g., protestant work ethic; Pratto, Tatar & Conway, 1999). Alternatively, weaker SDO beliefs are related to stronger support for egalitarian views, such that low SDO individuals use a need as opposed to a merit based approach when allocating resources and support to individuals or groups. Pratto et al. (1999) conducted a study to examine the influence of SDO beliefs on participants’ fairness evaluations of different resource allocation strategies and their justification for their evaluations. Participants were asked to read scenarios describing two parties (i.e., people or groups); the two parties described were either between two individuals or two groups. In each scenario, one party was depicted as an advantaged, meritorious person or group. The other party was depicted as a need-based, disadvantaged person or group. After reading each scenario, participants rated the fairness of different allocation strategies; one that favored the merit-based target and another that favored the need-based target. As expected, high relative to low SDO individuals’ perceived the allocation strategies as fairer when the strategies favored the advantaged, meritorious party. Participants with weaker SDO beliefs rated allocation strategies favoring need based parties as more fair. An evaluation of higher and lower SDO participants’ rationales for their evaluations revealed that they were imbued with terms and arguments that emphasized the importance of merit and need, respectively.

More recently, Sidanius et al. (2007) found that SDO predicted individuals’ greater willingness to sacrifice in-group resources (e.g., money, privilege, status) to ensure the relative advantage of their in-group over other out-groups; termed Vladimir’s choice. Sidanius et al. (2007) reasoned that those with stronger SDO beliefs are more motivated to maintain their group’s dominance, which leads them to be more willing to adopt tactics that best secures their groups’ relative hierarchical position even though such actions might negatively impact the
absolute amount of resources or power their group holds. In this study, White participants were presented with a resource allocation scenario instructing them to distribute monetary endowments to various student organizations comprised of either dominant (i.e. White) or non-dominant (i.e., ethnic and racial minority) groups in a college campus system. In line with predictions, they found that high relative to low SDO individuals preferred a strategy of maximizing the relative distance in profits (i.e., money allocation) between their in-group (e.g. Whites) and non-dominant (i.e., racial and ethnic minorities) out-groups. They took this approach despite having an opportunity to choose a strategy that would maximize the absolute monetary reward for their in-group. From these findings, Sidanius and colleagues reasoned that higher SDO individuals’ motivation for group dominance predisposes them to sacrifice valuable in-group benefits (i.e., maximal reward) so long as their behaviors enhance their groups’ dominant position. These findings might explain why Blacks continue to experience a “glass ceiling” (Morrison & Von Glinow, 1991). That is, dominant group members, who represent the greatest proportion of management incumbents and hold the strongest SDO beliefs (Pratto et al., 1994), might be more willing to hire a less qualified in-group member (i.e., White male) over a more qualified subordinate group member (i.e., Black) to maintain their in-group’s hegemonic position in an organization.

An early test of the influence of individuals’ SDO within an organizational context by Amiot and Bourhis (2005) who examined whether SDO would impact in-group favoritism as well as out-group derogation. To do this, Amiot and Bourhis presented participants with a merger scenario. In this scenario, participants were asked to distribute negative outcomes (operationalized as salary cuts and increases in unpaid work hours) and positive outcomes (defined as salary increases and cuts in unpaid work hours) to their in-group or out-group,
respectively. Coworkers from the pre-merger organization represented the in-group, whereas employees from the external company prior to the merger represented the out-group. Higher SDO was related to positive and negative resource allocation toward the in-group and out-group, respectively. Specifically, high (compared to low) SDO individuals allocated more money to their in-group and reduced the number of hours that in-group members needed to work. At the same time, high (compared to low) SDO participants imposed pay cuts and increased work hours for the out-group. The authors concluded that SDO is related to both in-group favoritism and out-group derogation.

According to SDT, decisions made in employment contexts play a pivotal role in the perpetuation of group-based inequality, particularly for Blacks in the United States (Sidanius & Pratto, 1999). At the outset, Sidanius and Pratto (1999) claimed that SDO influences the incidence and severity of employment discrimination in the workplace. Yet, studies examining the influence of SDO on employment discrimination against non-dominant groups have only recently started to receive attention. Indeed, a growing body of research over the last half decade has shown that SDO is associated with greater discrimination against various non-dominant groups such as women (Fraser, Osborne, & Sibley, 2015), non-native speakers (Dovidio & Hansen, 2016), obese individuals (O’Brien, 2013), gays and lesbians (Pichler, Varma, & Bruce, 2010) and those who are mentally ill (Bizer, Hart, & Jekogian, 2012).

Importantly, research has also only recently begun to investigate how SDO affects the employment circumstances of Blacks, a group that has a long history of being excluded from valued employment opportunities. Michinov, Dambrun, Guimond and Méot (2005) were the first to examine how SDO might influence personnel decisions. To do this, White participants (from France) participated in a simulation where they were asked to place “paper” employees of
varying racial ancestries into positions on a hierarchically arranged departmental organizational chart. Researchers varied the skin tone of employees to parallel the different racial ancestries of the employment pool. In line with their hypotheses, they found that higher SDO was related to greater discrimination in job placement such that high relative to low SDO participants demonstrated a greater propensity to place White employees higher on the organizational chart than dark-skinned employees. These researchers also evaluated the effect of SDO on discrimination by examining the time interval it took to place dark skinned employees in the organizational chart. They found that high compared to low SDO individuals (as determined by a median split) took significantly longer to place dark-skinned employees into the organizational chart. Mediational analysis revealed that prejudiced beliefs partially explained the relationship between SDO and discriminatory placement of dark skinned employees. This finding supports a central proposition of SDT, which states that hierarchy-enhancing myths in the form of prejudiced beliefs mediate the relationship between SDO and discriminatory behavior.

Later work by Umphress, Simmons, Boswell, and Triana (2008) offered further evidence that higher SDO is related to greater discrimination against non-dominant groups (i.e., Blacks) within selection contexts. Umphress et al. asked undergraduate participants to evaluate the qualifications of various candidates and to select candidates for participation in a group task. Results revealed that the positive evaluations of and intent to select non-dominant candidates (White women in Study 1 and Black men in Study 2) were negatively related to SDO. Interestingly, in both studies, the profile of the non-dominant group candidate was manipulated so that the candidate was more qualified than all other candidates. Thus, higher SDO was predictive of lower evaluations of and less willingness to select a non-dominant group candidate
despite his or her stronger credentials and greater potential to contribute to the success of the group task.

In a follow-up to Umphress et al.’s (2008) study, Simmons and Umphress (2015) examined whether the relationship between SDO and greater discrimination was increased when evaluating and selecting a candidate for a leadership role; a job role that offered greater power and status. To test this hypothesis, participants reviewed candidate profiles, but were randomly assigned to a condition where the open position was either a teammate or a team leader role. As with Umphress, et al. (2008), the non-dominant group candidate (i.e., Black-female) was crafted to have significantly higher credentials than all other candidates. In line with results by Umphress et al. (2008), SDO was negatively related to the intent to select the Black female candidate for any role. Furthermore, they found support that the relationship between SDO and selection worsened when selecting a candidate for a leadership role, wherein the relationship between SDO and selection was non-significant in the team selection condition, but was significantly (and negative) for the leadership selection scenario.

While research investigating how SDO influences the evaluation and selection of Black candidates has only started to gain attention, the collective findings from these three studies fit with sociological findings and census data outlined in the prior chapter (i.e., EEOC, 2015; Tomaskovic-Devey & Stainback, 2007). Specifically, Blacks are regularly excluded from most roles in organization and this exclusion is particularly strong in management and executive roles, despite possessing stronger qualification than candidates from other racial/ethnic groups. These results give insight to why fewer Blacks hold high power positions and leadership roles relative to members of higher status groups.

*Competition induced threat and social dominance orientation*
Those with stronger SDO beliefs are particularly sensitive to competition from out-groups. Competition is more salient among those with higher SDO as they view the world as a zero sum game wherein social groups are engaged in an ongoing competition for scarce resources, status and power (Duckitt, 2001; Duckitt, Birum, Wagner, & Du Plessis, 2002). High SDO individuals propensity to view the world as a zero sum game lead them to perceive advances in power and status by an out-group as an equivalent loss in power and status for their in-group. Accordingly, those with stronger SDO beliefs are more likely to carry out more frequent and severe discrimination against competitive out-groups as they are more motivated to protect the status and power position of their in-group (Duckitt, 2001; 2006; Duckitt et al., 2002). Given this reasoning, high compared to low SDO individuals might be more inclined to see Blacks (or any other low-status group) attempting to gain access into high power jobs as a threat to the position of the dominant group in the organizational and larger social and economic hierarchy.

Existing research evidence suggests that competitive contexts (perceived or real) cause dominant group members to feel threatened about stability in the social hierarchy. Perceived out-group competition leads dominant group members with stronger SDO views to exhibit more pronounced negative evaluations of and discrimination against (i.e., competitive) subordinate out-groups (Jackson & Esses, 2000; Pratto & Shih, 2000). Using items from archival survey data, Quist and Resendez (2002) examined whether SDO and perceptions of economic threat influenced the negative stereotypes that Whites hold of Blacks. These researchers used survey items that served as proxies for SDO, economic threat and stereotypes. To operationalize perceived economic threat, Quist and Resendez utilized an item assessing the belief that affirmative action threatened Whites’ opportunities for gainful employment. SDO was assessed
with an item reflecting belief in, and endorsement of, the hierarchical arrangement of groups. Finally, three items were used to identify stereotype endorsement. The items inquired as to whether respondents endorsed the view that Blacks were intelligent, lazy and dependent on welfare. Hierarchical regression analysis revealed a significant interaction between Whites’ SDO level and perceptions of economic threat by Blacks on the endorsement of negative ethnic stereotypes of Blacks. Specifically, among high SDO individuals, stronger perceptions of economic threat were related to the endorsement of negative stereotypes of Blacks. Among low SDO individuals, perceived economic threat and endorsement of negative stereotypes remained unrelated. In sum, the findings point to the notion that feelings of competition result in stronger endorsement of negative stereotypes about Blacks, particularly among high SDO White individuals.

In a similar vein, Jackson and Esses (2000) examined whether perceived economic competition by immigrants would influence high and low SDO Canadian citizens’ support for assistance for immigrant out-groups. Participants were randomly assigned to one of two conditions. In the control condition, participants read a neutral article highlighting immigration trends in Canada. In the perceived economic competition condition, participants read an editorial highlighting the success of immigrant workers and professionals in the national labor market. Findings revealed that high SDO participants were less supportive of policies that would empower immigrants as well as improve their economic condition in the perceived competition condition compared to control condition. Conversely, no differences between conditions emerged among those low in SDO.

Pratto and Shih (2000, Experiment 2) used an experimental approach to examine whether participants’ SDO level and systematic changes in the status of participants’ in-group would
interact and cause stronger out-group discrimination. These researchers manipulated status by assigning participants to a control or status loss condition. In the status loss condition (i.e., threat), participants were asked to evaluate an article that disparaged the educational prestige of their university (i.e., Stanford University). Participants in the control condition were not exposed to the article. After the manipulation, Pratto and Shih measured participants’ out-group prejudice with the Implicit Association Test (IAT, Fazio, Jackson, Dunton & Williams, 1995). The IAT measures the preconscious associations people hold about social stimuli. Participants taking the IAT are presented with social stimuli (e.g., the faces of White and Black people) on a computer screen over several trials. In each trial, participants are instructed to select either a positive and negative trait adjective (e.g., pleasant and unpleasant) that is concurrently displayed with the stimuli. The tendency to select certain traits as well as the response latency (i.e., time delay) by participants determines the strength of group bias or prejudice. Pratto and Shih (2000) customized an IAT assessment where “us” and “them” terms were used to refer to participants’ in-group and out-group, respectively. That is, the in-group was other Stanford students, whereas the out-group was non-Stanford students. Those in the status loss condition, who held stronger SDO views, demonstrated higher implicit prejudice, and greater in-group bias and out-group derogation, relative to high SDO participants in the control condition. That is, high SDO participants in the status loss condition responded to positive adjectives faster when paired with “us” (and negative adjectives paired with “them”) than high SDO participants in the control condition. However, low SDO participants did not exhibit biases toward either group.

Most recently, Capman (2011) carried out a study that also examined the independent and interactive effect of SDO and job status on candidate resume evaluations and selection. As with previous studies, Capman (2011) proposed that higher SDO would be associated with greater
discrimination against Blacks and that greater discrimination could be explained by greater threat experiences among those with higher SDO. To test these propositions, he recruited White participants currently working in industry (ranging from entry level to executive level professionals) to complete measures of SDO, modern racism and modern sexism and complete an "in-basket" simulation. During the “in-basket” simulation, participants were asked to play the role of an executive responsible for reviewing and selecting resumes of candidate who varied in race and gender for a position that also varied in the level of job status. Findings of this study revealed that SDO and job status differences were not predictive of resume ratings of White and non-White (e.g., Black) candidates. However, SDO did predict selection discrimination, such that higher SDO predicted a higher proportion of White male candidates selected for an in person interview. Yet, selection discrimination differences among high SDO individuals were not found in the high compared to low status job. The disparity in ratings and selection found in this study serves as the impetus for the current study as it implied that participants may strategically moderate ratings, despite showing selection discrimination that favored Whites.

Collectively, research findings show that those with stronger SDO beliefs have a greater propensity to view an out-group that gains real (e.g., economic and political power) or symbolic (e.g., status and prestige) resources as a challenge to the existing group-based hierarchy (Jackson & Esses, 2002; Pratto & Shih, 2000; Quist & Resendez, 2002). What is more, they exert greater effort to inhibit the progress of out-groups they perceive as competitive in order to protect their advantaged position in the existing hierarchical structure. Duckitt and colleagues (2001; Perry, Sibley, & Duckitt, 2013) have argued and shown that high SDO individual might demonstrate these patterns as they liken the world to a zero-sum game, whereby competition for desired resources is constantly at stake. In view of this, a subordinate out-group member applying for a
management role provides a signal to a high SDO individual that the individuals’ out-group might legitimately compete for organizational and social roles that offer valuable economic and social resources. In turn, their heightened perception of out-group competition will provoke concerns about the future instability of their position on the organizational and broader status hierarchy (Doosje, Spears, & Ellemers, 2002). Accordingly, it is expected that a high (but not low) SDO individual will work to resist advances of the out-group and potential hierarchical instability by blocking the subordinate group member from access to a management role.
Chapter 4: Psychophysiological measures to assess threat in intergroup contexts

Scholars have long argued that interracial interactions (e.g., Black-White, Hispanic-Black) are highly threatening. Within the framework of SDT, it is believed that people with stronger SDO views act more negatively toward out-groups when out-groups signal they may be able compete for the in-groups' dominant position in the social order (Duckitt, 2001; Duckitt et al., 2002; Jackson & Esses, 2000; Perry et al., 2012; Pratto et al., 2006; Pratto & Shih, 2000; Quist & Resende, 2002). Perceived group competition is believed to provoke feelings of threat as higher SDO individuals have a stronger motivation to protect their dominant social status as well as the economic and social resources that accompany their high status (Duckitt, 2001).

Yet, up to now, SDT researchers have primarily employed indirect measures of threat to test their hypotheses. The most common and arguably most convenient method is self-report measurement (Blascovich et al., 2000). With this approach, high and low SDO participants assigned to either a competitive or non-competitive intergroup contexts are asked to evaluate their level of perceived threat. Yet, as with self-report measures in general, interpretations are questionable as they are highly susceptible to deliberate distortions based on self-presentation motives (Blascovich & Mendes, 2010; Capman, 2011; Mendes, Major, McCoy & Blascovich, 2010). Other research suggests there is a tenuous connection between expressed emotions and unconscious emotional responses (Greenwald & Banaji, 1995; Mendes et al., 2002; Vanman, Saltz, Nathan, & Warren, 2004).

The second approach assesses differences in the incidence and severity of discrimination as a function of SDO beliefs and changes in-group status within an intergroup context. Scholars taking this approach suggest that weakening participants' group status advantage causes greater threat, which in turn leads to more frequent and severe discrimination (Scheepers et al., 2009).
However, a perfect correspondence between the incidence and severity of discrimination and threat (i.e., status change) is unlikely as contextual demands of an intergroup situation may impact how a person behaves toward an out-group (Scheepers et al., 2009). According to Scheepers, a person will choose to use in-group favoritism or out-group derogation depending on which strategy provides the best opportunity to strengthen or maintain the higher status or power position of one's in-group relative to an out-group. Favoring a person's own in-group in the face of a competitive out-group would ameliorate threat by highlighting the relative superiority of one’s in-group. At the same time, out-group favoritism may serve to placate a competitive out-group, thus ameliorating any threat an out-group and its members provoke. The conflicting behavioral patterns make it difficult to definitively conclude that greater and more severe discrimination corresponds to threat (Scheepers et al., 2009). In sum, self-report and behavioral methods for evaluating the presence of threat, while somewhat informative, remain open to alternative interpretations (Blascovich et al., 2001; Scheepers et al., 2009).

*Physiological responses as a direct measure of psychological threat*

The advent of more sophisticated technology has advanced psychophysiological theory as it has led to a more robust understanding of the psychological states that correspond to physiological responses (Blascovich & Tomaka, 1996; Tomaka, Blascovich, Kibler & Ernst, 1997). Importantly, intergroup researchers have increasingly leveraged physiological measures as they offer on-line, uncontaminated measures that surmount the shortcomings inherent in self-report and behavioral measures (Vanman, Paul, Ito, & Miller, 1997; Vanman et al., 2004). Not surprisingly, these measures have helped intergroup researchers garner important insights into the attitudes and emotional states operating during intergroup interactions (Blascovich et al.,
1999; Gugliemi, 1999; Mendes et al., 2000; Phelps, O’Connor, Cunningham, Funayama, Gatenby, Gore & Banaji, 2000).

Early psychophysiological research carried out by social psychologists sought to demonstrate the utility of physiological responses as implicit measures of racial bias during interracial contexts. Functional magnetic resonance imaging (fMRI) represents one prominent approach where the magnitude of amygdala activation, which corresponds to the psychological state of fear, is assessed (Hart, Whalen, Shin, McInerny & Fisher, 2000; Phelps et al., 2000). Hart et al. (2000) and Phelps et al (2000) were the first to evaluate amygdala activation in response to images of members of their own race (i.e., in-group) relative to images of members of a different race (i.e., out-group). Both teams of researchers hypothesized that there would be a stronger amygdala response among participants viewing racially dissimilar faces relative to those viewing racially similar faces. Hart and colleagues measured amygdala responses of Black and White participants while they viewed pictures of both Black and White faces (i.e., in-group and out-group stimuli). Hart et al. found that both Black and White participants demonstrated greater fear, as demonstrated by more pronounced amygdala activation, when viewing out-group versus in-group faces. Following a similar approach, Phelps et al. found that the strength of the amygdala response among White participants was significantly greater when viewing pictures of a Black face relative to a White face. Phelps et al. (2000) also provided evidence of the utility of the amygdala response as an implicit measure of racial bias. Specifically, these researchers found that the strength of participants' amygdala response was associated with IAT scores and startle blink response -- alternative measures of implicit racial bias. At the same time, findings from this study revealed that the strength of the amygdala response was uncorrelated with the modern racism scale (MRS), an explicit measure of racism.
Vanman and colleagues (1997, 2004) used facial electromyography (EMG) to evaluate implicit affective responses toward Blacks. EMG captures both valence and intensity of affective reactions (Blascovich & Mendes, 2010). Facial EMG assesses increased activity of the zygomaticus major (the muscle that produces a smile) and the corrugators supercilii (i.e., the muscle above the eye that furrows the brow). More pronounced activation of the zygomaticus major and corrugators supercilii have been reliably indexed to correspond to self-report measures of positive and negative affect, respectively (Cacioppo, Petty, Losch, & Kim, 1986). In an initial study, Vanman and colleagues (1997) captured facial EMG responses of White participants while they imagined a cooperative interaction with either a White or Black partner. Afterwards, participants were asked to rate the likability of their interaction partner as well as complete a modern racism measure. Across three studies, it was found that corrugator supercilii (brow muscles) activation, indicating negative affect, was stronger when participants were asked to imagine they were working with a Black partner compared to a White partner. This pattern of findings was found despite Whites reporting they liked the imagined Black partner more than the White partner. Additionally, it was found that higher modern racism moderated EMG activation such that higher MRS scores corresponded to stronger corrugator supercilii activation (i.e., negative affect).

In a follow-up study, Vanman et al. (2004) concluded that facial EMG as measures of implicit affect may also predict discriminatory behavior better than implicit and explicit measures of racial attitudes. Participants in their study completed an explicit measure of modern racism (MRS), motivation to control prejudice and a race-based IAT (i.e., measuring implicit attitudes toward Blacks). Afterwards, a subset of participants were randomly assigned to evaluate the credentials of either a White or Black candidate (of the same sex) for a prestigious teaching
fellowship. In a second, ostensibly independent study occurring two weeks later, facial EMG responses of participants were recorded while viewing White and Black faces. Though participants' IAT and MRS scores were uniformly low and not predictive of biased selection, differences in facial EMG response to pictures of Black and White faces reliably predicted candidate selection. Specifically, results revealed that a more pronounced activation of the zygomaticus major (cheek) muscle while viewing White relative to Black faces, indicating relatively more positive affect toward Whites, was predictive of selecting a White candidate over a Black candidate. According to Vanman and colleagues, the finding that affective, but not self-report or implicit stereotype measures (i.e., MRS, IAT) predicted candidate choice indicates the relative strength of implicit affective measures in predicting discriminatory behavior. While these studies offer sound evidence for the utility of physiological measures in the investigation of racial biases, they are limited as they do not provide an opportunity to examine the ongoing and evolving affective processes operating during actual interracial interactions between Whites and Blacks. Consequently, the findings have limited applicability to real world situations (Mendes et al. 2012).

**The Biopsychosocial (BPS) Model of Challenge and Threat**

The biopsychosocial (BPS) model and methodological approach overcomes the shortcomings inherent in the above methodologies in that it provides researchers with the ability to examine responses during actual and ongoing interracial interactions. The BPS model, drawn from early psychophysiological theories (Deinstbier, 1989; Obrist, 1980), classifies the cardiovascular response markers that map onto challenge and threat psychological states. Challenge and threat psychological states result from conscious and unconscious evaluations of individuals’ perceived personal resources relative to perceived situational demands in motivated
performance situations (Blascovich & Tomaka, 1996; Blascovich & Mendes, 2000). Contexts that are goal-relevant and elicit active cognitive and behavioral responses by an individual embody motivated performance situations. The extent to which the quality of an individual’s performance offers information about one's self-worth (e.g., competence) determines the goal relevance of a situation (Blascovich et al., 2001; Mendes et al., 2002). As such, a person will experience little motivation in situations offering minimal or no information about the self or progress toward a self-relevant goal (Mendes et al., 2002; 2010).

Challenge states result when perceived resources meet or outweigh perceived contextual demands, whereas threat states occur when demands of a situation are greater than perceived personal resources (Blascovich & Mendes, 2000; Mendes et al., 2002). Perceived danger, uncertainty, and required effort constitute sources of contextual demand, whereas personality traits, external support and context relevant knowledge and abilities represent perceived resources (Mendes et al., 2002). According to Blascovich and colleagues (2000; 2001), resource and demand evaluations are dynamic in that evaluations fluctuate according to the manner in which the motivated performance situation unfolds. For instance, upon the start of a motivated situational task, a person may exhibit a threat response if the individual perceives the initial demands of the situation to outweigh perceived personal resources (Mendes et al., 2002). Yet, subsequent success may lead an individual to perceive an increase in personal resources (i.e., knowledge and skill). This, in turn, may lead a person to determine that personal resources meet the demands of the current situation, resulting in a shift to a challenge state (Blascovich et al., 2000).
Physiological Markers of Challenge and Threat

Blascovich and Tomaka (1996) have outlined the physiological response markers that map onto and psychological challenge and threat states during motivated performance situations. According to Blascovich and Tomaka, a challenge state is characterized by an increase in cardiac efficiency. Sympathetic-adrenal-medullary (SAM) axis activation underlies challenge response patterns. SAM release increases cardiac performance by facilitating increased heart rate (HR) and increased cardiac output (CO) as measured by blood volume (Blascovich & Mendes, 2000). At the same time, an increase in epinephrine released by the adrenal medullary system produces vasodilation, which allows for an overall reduction in total peripheral resistance (TPR). On the other hand, threat is marked by pronounced cardiac inefficiency, which is driven by the concurrent activation of SAM and the pituitary-adrenal-cortex (PAC). As with challenge, SAM activation leads to increased HR during threat response. However, PAC activation counters these effects as it causes vasoconstriction and increased TPR. Increased TPR, in turn, mutes overall CO and leads to inefficient blood flow to the periphery of the body.

Blascovich and Mendes (2000) have delineated an analytic approach to differentiate physiological (i.e., cardiovascular) response patterns that correspond to psychological challenge and threat states. Specifically, this approach starts with the calculation of change (i.e., reactivity) scores, which are determined by subtracting participants’ mean HR, TPR, and CO responses during the last two minutes of the baseline period from the mean CV (i.e., HR, TPR and CO) responses during the first two minutes of a task period. Blascovich, Seery, Mugridge, Norris, and Weisbuch (2004) note, several scholars argue against the use of change scores given psychometric concerns such as low reliability and unclear meaning (see Cronbach & Furby, 1970; Edwards, 1993; 1994; 2002). Nevertheless, the use of change scores as a measure of
reactivity should be used as absolute differences in HR, CO and TPR during task relative to baseline have a specific meaning within the BPS model. That is, change score patterns mark specific psychological states; challenge and threat states (Blascovich et al., 2004). Even more, it is important to use change scores, as it is the most common metric used in psychophysiological research in general the BPS model, specifically (Blascovich, et al., 2004; Llabre, Spitzer, Saab, Ironson, & Schneiderman, 1991). Thus, its use allows for a direct comparison across studies. Finally, Llabre et al.’s (1991) has shown that psychometric concerns about the reliability of change scores are negligible concerns when evaluating physiological measures.

Once change scores are calculated, a test of task engagement (i.e., motivated performance situation) is then conducted and confirmed by finding significant increases in HR during the task period compared to baseline period. Task engagement is carried out first as it is a precondition of both challenge and threat reactivity. Given evidence for task engagement is found, a test of challenge and threat response is carried out by comparing the relative differences in cardiovascular reactivity (i.e., change scores) between the experimental conditions.

The BPS Model and Intergroup Interactions

Blascovich et al. (2001) and Mendes et al. (2002) borrowed postulates from prominent intergroup research and adapted them to the BPS model to evaluate the role of challenge and threat during interracial interactions. Drawing from this body of research, BPS scholars proposed that Whites perceive greater demand during interactions with Blacks as such interactions heighten feelings of danger, perceptions of uncertainty and required effort (Blascovich et al., 2001). Specifically, Blascovich et al. (2000; 2001) and Mendes et al. (2002) highlight work by Stephan and Stephan (2000) and Wilder (1993) revealing that intergroup contact (e.g., with Blacks) tends to provoke anxiety, which in turns leads to negative psychological states and
perceptions of danger among Whites. In line with assertions put forward by SDT scholars, Blascovich and colleagues (2001) argue that Whites may perceive that Blacks are dangerous as their inferior status signals competition and a concomitant threat to the dominant position of Whites in the social and economic hierarchy (Sidanius & Pratto, 1999).

BPS scholars further assert that intergroup interactions amplify uncertainty and increased effort among Whites. According to Blascovich et al. (2001), Whites’ higher uncertainty stems, in part, from their limited and circumscribed interactions with Blacks (Fiske, 1993; Jones, Farina, Hastrof, Markus, Miller & Scott, 1984; Tropp & Pettigrew, 2006). Blascovich and colleagues (2001) further propose that Whites tend to perceive interactions with Blacks as effortful. Not surprisingly, greater uncertainty is expected to contribute to Whites’ perception of effort during such interactions. However, Blascovich et al. (2001) also propose that greater effort may stem from a White person’s desire to appear non-prejudiced. This motivation may result in Whites’ putting forth greater effort in order to actively monitor and suppress expressions of discomfort, dislike or disgust during interactions with Blacks (Littleford, Wright, Sayoc-Parial, 2005; Richeson & Shelton, 2007). Indeed, research shows that the active suppression of negative and the amplification of positive attitudes and behaviors is common (Richeson & Shelton, 2007) and may be especially strong among those who are racially biased (Shelton, Richeson, Salvatore & Trawalter; 2005). Thus, the effort dedicated to appear non-prejudiced may contribute to the perceived situational demands and consequent threat response of Whites. Alternatively, Blascovich et al. (2001) suggest that Whites may exhibit more effort during interactions in an attempt to justify and protect the superiority of Whites relative to Blacks (Sidanius & Pratto, 1999; Sidanius et al., 2007). For example, an ODM (i.e., typically, a White male) might work
harder to identify weaknesses in a highly qualified Black (e.g., asking more follow-up questions) relative to a White job candidate.

Blascovich et al. (2001, Study 3) and Mendes et al. (2002) were the first to apply the BPS model to interactions between Blacks and Whites. Both research teams carried out the same procedure wherein they randomly assigned White participants to interact with a confederate partner who was either Black or White and depicted as either socioeconomically disadvantaged or advantaged. At the start of each study, participants exchanged background information (e.g., hometown, college major, activities) with their partner. Afterwards, participants and confederates were escorted into separate rooms by the two researchers. Upon being seated in the room, the researchers attached the cardiovascular measurement equipment to the participant so that physiological measures could be gathered. Afterwards, participants completed two interaction tasks. The first was the preparation and presentation of a speech that would be reviewed by their partner. The second was a collaborative word-finding task completed via an intercom system. In addition to providing cardiovascular data, participants were asked to indicate their perceived effort and stress after each task. Following the word finding task, participants were also asked to evaluate their partner on various traits (i.e., attractive, creative, friendly, independent, intelligent, likable, and trustworthy) as well as assess their own and their partners' performance on the word-finding task. Additionally, confederates were asked to indicate the extent of eye contact, positive behavior and friendliness that participant exhibited toward them.

Blascovich et al. (2001, Study 3) revealed that White participants interacting on a collaborative word finding task with a Black, a low SES confederate, or a low SES Black confederate exhibited a cardiovascular threat response, while participants collaborating with a White, high SES or high SES White confederate exhibited a cardiovascular challenge response.
However, the speech task engendered less consistent results. That is, while interactions with low and high SES confederates resulted in cardiovascular threat and challenge responses, respectively, confederate race did not impact physiological responding. Blascovich and colleagues suggested that the anticipated effect for race may not have occurred during the speech task because this task involved less task interdependence and interaction than the word finding task. Mendes et al. (2002) subsequently incorporated a video feed for the interaction partners across both tasks and found that both race and SES reliably impacted cardiovascular challenge and threat responding. Results showed that participants interacting with a Black and/or low SES partner demonstrated a cardiovascular threat response and those interacting partners with White and/or high SES partners experienced a challenge response.

As noted above, BPS scholars (e.g., Mendes et al., 2002) state that Whites exert more effort during interracial interactions, which may be motivated by Whites’ desire to appear non-prejudiced or to protect their high status relative to Blacks (Sidanius & Pratto, 1999). Results by Blascovich et al. (2001) and Mendes et al. (2002) imply that Whites may be largely motivated to appear non-prejudiced during interactions with Blacks. Across both studies, White participants’ self-reported stress levels and perceived effort were unaffected by the race of confederates (Blascovich et al., Study 3, 2001; Mendes et al., 2002). Moreover, Blascovich et al. (2001, Study 3) found that trait ratings of White and Black partners were not significantly different, while Mendes et al. (2002) found that Black partners were rated significantly more friendly, likable, intelligent, trustworthy, hardworking, and independent than White confederate partners. Additional correlational analysis of dependent measures revealed that the relationship between likability ratings and physiological responding differed depending on the race of the confederate (Mendes et al., 2002). Among participants interacting with a White confederate, a positive
relationship between likability and cardiovascular challenge responding was found. In contrast, likability predicted higher cardiovascular threat responses among participants interacting with a Black confederate. Confederates ratings of participant behavior toward them corresponded to trait ratings such that Black confederates were more likely than White confederates to report that participants behaved positively toward them.

Finally, both studies found that participants interacting with Blacks identified significantly fewer words than those interacting with Whites (Blascovich et al., 2001; Mendes et al. 2002). The pattern of poorer performance on the word finding task among Whites interacting with Blacks relative to other Whites align with findings by Richeson and colleagues (Richeson, Trawalter & Shelton, 2005; Richeson & Trawalter, 2005). Across several studies, Richeson and Trawalter (2005) and Richeson and colleagues (2005) have shown that White participants’ performance on cognitive tasks is impaired when interacting with Blacks relative to Whites, which they contend occurs because their cognitive resources are dedicated to hiding their prejudice. In these studies, Richeson et al. (2005) asked participants to complete a Stroop task after interacting with either a White or Black partner. A Stroop task asks participants to indicate the font color of a series of words (e.g., red) that are also the name of colors (e.g., blue). Executive control (i.e., cognitive functioning) is tested when color names differ from the font color of the word because participants must control their tendency to respond with the color name instead of the font color. Richeson et al. (2005) and Richeson and Trawalter (2005) found that Whites performed worse on the Stroop task after interacting with a Black compared to a White partner. Richeson and Trawalter (2005) also found that participants who interacted with Blacks and held stronger concerns about appearing prejudice performed even worse on the Stroop task than those with weaker concerns about appearing prejudiced. In light of this research,
Blascovich et al. and Mendes et al.'s findings for the word finding task may have occurred because the resources and effort participants employed to behave in a non-prejudiced manner may have taken up needed resources to perform well on the word finding task.

Subsequent research by Littleford, et al. (2005) examined and found support for Stephan and Stephan’s (2000) intergroup anxiety model, which postulates that Whites experience greater anxiety, as measured by changes (i.e., increases) in diastolic blood pressure (DBP) and systolic blood pressure (SBP)\(^1\), during interactions with Blacks than Whites. Littleford et al. also examined whether anxiety during interactions with Blacks, measured physiologically, is positively associated with Whites' positive behaviors toward Blacks. To test this, they asked coders, who were unaware of the study hypothesis, to evaluate participants' behaviors toward their interaction partners. In line with findings from Mendes et al. (2002), results showed that participants' experienced increased anxiety during the interaction, and that greater anxiety and discomfort were associated with more positive behavior toward Blacks.

**Contact and Comfort Familiarity as a Moderator of Uncertainty and Threat**

Intergroup scholars have long argued that greater previous contact and comfort with racial out-group members can minimize anxiety and threat during interracial interactions (Allport, 1954; Tropp & Pettigrew, 2006; Stephan & Stephan, 2000; Wilder, 1993). Blascovich et al. (2000; 2001) and Tropp and Pettigrew (2006) propose that contact increases one's familiarity with and expectations about out-group members and concurrently engenders lower uncertainty about how to behave during interracial interactions. Blascovich et al. (2001, Study 3) also evaluated the potential impact of Whites participants' previous contact with Blacks on physiological threat responding during an interracial interaction. In line with expectations, 

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\(^1\) The choice of physiological measures adhere to suggestions by Blascovich (2000), who highlights that changes in diastolic blood pressure (DBP) and systolic blood pressure (SBP) might serve as a crude measure of physiological arousal (i.e., anxiety) during interracial interactions.
Blascovich and colleagues found that past contact with Blacks moderated cardiovascular threat response, such that those with greater contact experienced lower cardiovascular threat relative to those with less previous contact.

Using an alternative approach, Mendes, Blascovich, Hunter, Lickel and Jost (2007) examined the impact of contact and familiarity on cardiovascular threat responding during intergroup interactions. Namely, Mendes and colleagues (2007) evaluated whether out-group interaction partners who violated behavioral expectations (e.g., group stereotypes) would engender stronger physiological threat responses among participants than those who conformed to behavioral expectations. Mendes et al. (2007) reasoned that interactions with expectancy-violating out-group members would mute the effect of previous contact, leading to greater uncertainty, effort and consequent physiological threat responding.

Following the same procedure carried out by Blascovich et al. (2001) and Mendes et al. (2002), Mendes et al. (2007) conducted three studies in which participants interacted with either an expectancy-confirming or expectancy-violating out-group partner during a speech delivery and word finding task. In the first and second study, White participants were randomly assigned to interact with either a White or Latino/a partner who was either high or low SES. Interactions with a low SES Latino/a or high SES White partner served as the expectancy-confirming conditions, while interactions with a high SES Latino/a or low SES White partner served as the expectancy-violating conditions. In the third study, expectancy-violating behavior was manipulated by randomly assigning a participant to interact with an Asian American confederate who spoke with either a local or southern accent. This represented expectancy-confirming and violating behavior, respectively.
In Study 1, participants' physiological responses, self-reported stress and effort and perceptions of performance quality were assessed after each task. Results for the expectancy violation manipulation did not yield any effects on the speech task. However, during the word finding task, participants interacting with expectancy-violating partners exhibited a physiological threat response, whereas those interacting with an expectancy-confirming partner exhibited a challenge response. Additionally, participants interacting with an expectancy-violating partner reported greater stress compared to those working with an expectancy-confirming partner. No other differences were found as a function of expectancy violation.

In Study 2, video feeds were added to both tasks to allow the interaction partners to see and hear each other. The authors reasoned that the visual feed would heighten the realism and affective intensity of the interracial interaction. After each task, physiological responses, self-reported stress, effort, participants’ evaluation of their teams' performance on the word finding task, actual performance on the word finding task (for the word finding task only) and trait ratings (e.g., likability) of confederates were assessed. Confederates were also asked to rate how positively the participant behaved toward them. As expected, across both tasks, participants interacting with expectancy-violating partner displayed stronger cardiovascular threat responses than participants interacting with expectancy-confirming partner. Furthermore, participants in the expectancy-violating condition rated the quality of their teams' performance lower, performed worse on the word finding task, and rated their partners as less likable than those in the expectancy-confirming condition. Notably, low SES White (i.e., expectancy-violating) confederates reported that participants were significantly less pleasant toward them than high SES White (i.e., expectancy-confirming) confederates reported. Though not significant, Latinos/as described as high SES confederates (i.e., expectancy-violating) indicated that
participants behaved less positively toward them then Latinos/as confederates described as low SES (i.e., expectancy-confirming).

In Study 3, Mendes and colleagues randomly assigned participants to interact with an Asian American confederate who spoke with either a southern or local accent, representing expectancy-violating and conforming behavior, respectively. In addition to the measures used in Study 2, the researchers also incorporated behavioral observations of participants during the word-finding task. That is, independent raters, unaware of the study hypotheses, rated body movement (e.g., nodding), positive nonverbal behavior (e.g., smiling, nodding), and body orientation (e.g., leaning toward a confederate) of participants. Additionally, raters assessed the overall positive and negative affect participants exhibited using the PANAS scale (Watson, Clark & Tellegen, 1988). It was hypothesized that participants interacting with an expectancy-violating partner during the word finding task would display greater avoidant behavior. Avoidant behaviors were operationalized as orienting one’s body away from the interaction partner, exhibiting less body movement (i.e., freezing) and smiling less. In line with hypotheses, participants interacting with an expectancy-violating partner demonstrated greater cardiovascular threat, attributed more negative traits to their partners (i.e., confederate), and perceived their teams' performance worse on the word finding task than participants interacting with an expectancy-confirming partner. In addition, participants interacting with an expectancy-violating partner exhibited less body movement and more negative behavior (e.g., less smiling) than participants interacting with expectancy-confirming partners. No differences were found for body orientation. However, Mendes et al. (2007) surmised that the non-significant findings for body orientation may have been due to the restrictive seating arrangement of the experimental setting. Finally, coder ratings revealed that participants in the expectancy-violating condition
manifested less positive affect toward their interaction partner than those in the expectancy-confirming condition. However, ratings of negative affect did not differ as a function of the expectancy manipulation.

Physiological threat responding in face of status loss

Intergroup researchers have examined the effect of other factors that might signal a disruption to the existing social group hierarchy and consequent threat responding. In particular, scholars have proposed that the intensity of threat and intergroup discrimination is especially influenced by the stability of group status differences (Pratto & Shih, 2000). Recent research by Scheepers et al. (2009) directly examined how the stability of intergroup status differences affected physiological threat responses of higher status group members. Scheepers and colleagues argued that high status individuals are more attuned to hierarchy stability in that instability signals their position in the hierarchy might be compromised. To test this notion, Scheepers et al. designed two studies in which participants were randomly assigned to situations in which their advantage in the intergroup status hierarchy was either stable or unstable.

In the first study, Scheepers et al. used a minimal group exercise wherein all participants were informed that their scores on a questionnaire (ostensibly) categorized them as a holistic (compared to detailed) thinker. Afterwards, participants completed a reaction time task and were informed that holistic thinkers (i.e., participants' in-group) performed better on the reaction time task than detailed thinkers (i.e., the participants' out-group). Reaction time performance provided participants with information about the superiority (i.e., higher status) of their in-group (i.e., holistic thinkers) relative to an out-group (i.e., detailed thinkers). Participants were then informed that their performance on the first reaction time task was either a weak or strong predictor of performance on a second reaction time task. The predictive ability of performance on the first

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2 All participants were told that they were holistic thinkers.
task operationalized status stability. Differences in SBP (i.e., increases) and pulse pressure (PP; increases in pressure between diastolic pressure and systolic pressure) were measured to evaluate threat response. Changes in SBP and PP were calculated by subtracting the baseline measures from the post manipulation measures. Participants were also asked to complete measures of positive and negative affect after the status stability manipulation. In support of the proposed hypotheses, those assigned to the unstable status condition demonstrated significantly higher pulse pressure and marginally higher SBP compared to those exposed to the stable status condition. Participants in the unstable status condition also reported being more upset and hostile than participants in the stable condition. Moreover, increases in SBP and PP were positively correlated with self-reported negative affect, but were unrelated to positive affect. Overall, the findings indicate that status instability induced subjective (e.g., feeling hostile and upset) and objective (e.g., PP) threat responses among high status members.

The second study involved an interaction between male and female participants, representing higher and lower status group members, respectively. Scheepers et al. (2009) had participants debate three topics. The participants first debated a neutral topic regarding the legalization of drugs. Thereafter, participants were asked to debate about maternity leave workplace practices that took either a conservative or progressive stance. In the conservative condition, participants were asked to discuss the merits of having mothers stay home after childbirth, whereas in the progressive condition, they were asked to discuss the merits of increasing subsidies for childcare in order to facilitate mothers returning to work after childbirth. The conservative and progressive topics were expected to manipulate participants’ perceptions of the stability and instability of traditional gender role and status differences, respectively. Participants were randomly assigned to discuss these topics in a same gender (i.e., intra-group)
or different gender (i.e., intergroup) dyad. As before, differences in SBP and PP were measured to evaluate threat response. After the discussion, participants were also asked to complete a modern sexism scale (MSS) and attitudes toward affirmative action. It was hypothesized that males interacting with female partners (but not male partners) would demonstrate higher cardiovascular threat during discussion of topics that threatened traditional gender status differences (i.e., the progressive topic). At the same time, females interacting with male partners (but not female partners) would experience greater threat responses when discussing topics that preserved status differences between males and females (the conservative topic). It was also hypothesized that males would show significantly stronger modern sexist views and females would show higher endorsement of affirmative action goals when interacting with intra-group (i.e., same gender) partners relative to inter-group (i.e., different gender) partners.

The results showed that male physiological reactivity was significantly stronger than female reactivity when discussing the progressive topic, but not the neutral or conservative topics. Furthermore, males showed stronger PP and SBP reactivity (i.e., increases), indicating more severe threat, when discussing a progressive topic with a female compared to a male partner. However, the topics discussed did not impact physiological reactivity among females. Additionally, results showed that males were less willing to endorse their support for gender status differences (i.e., modern sexism) while completing the modern sexism scale in the presence of females relative to males. At the same time, females were less likely to endorse affirmative action in the presence of males relative to other females. Scheepers et al. (2009) concluded that the findings for males’ physiological reactivity suggest that the progressive topic was threatening as it challenged the stability of the existing gender hierarchy and higher status position of males. Moreover, the results show that males are conscious that open support for
gender hierarchy differences is an unpopular and unshared view among females. As a result, males reserved their open support for gender hierarchy in the presence of others who were more likely to share the same views (i.e., males). Taken together, results from both studies provide support that high status members become threatened when a situation signals that the relative superiority and higher status of the in-group may be weakened. Further, they actively monitor their open displays of prejudice and endorsement of group differences.

Summary

The collective evidence from psychophysiological research shows that Whites experience pronounced physiological threat reactivity in situations with Blacks (Blascovich et al., 2001; Littleford et al., 2005; Mendes et al., 2002). Interestingly, though Whites are threatened, they suppress their negative feelings and, in some cases, express more positive affect and behavior toward Blacks than Whites (Blascovich et al., 2001; Littleford et al., 2005; Mendes et al., 2002). Additionally, threat and effort may negatively impact Whites' performance on cognitive tasks (i.e., word finding task) when interacting with Blacks relative to other Whites. Indeed, research suggests that Whites’ poorer performance on cognitive tasks may be the result of cognitive depletion due to greater efforts diverted to appear non-prejudiced (see Shelton et al., 2005).

However, a more complex pattern of results emerge when examining the effect of contact (i.e., familiarity) and stability of the status hierarchy on threat. Blascovich et al.'s (2001) initial findings showed that contact, which leads to increased out-group familiarity, may lower the threat response among Whites during interracial interactions. Yet, later findings indicate that greater contact may only reduce threat and negative behavior when out-group members (i.e., Blacks) meet behavioral and social expectations (e.g., stereotypes, Mendes et al., 2007). A similar pattern emerges when examining the stability of the group status hierarchy. That is,
dominant group members are less threatened during intergroup interactions when contextual information indicates the status advantage of their in-group is more stable than when it is less stable (Mendes et al., 2007; Scheepers et al., 2009).

These divergent patterns of threat responding and behavior align with expectations outlined by SDT, which maintains that high status individuals are more likely to detect and react negatively to any signal that the existing group status hierarchy may be disrupted (Duckitt, 2006; Sidanius & Pratto, 1999). Even more, those with higher SDO are expected to experience greater threat, and as a consequence, exhibit more negative attitudes and behavior while interacting with a competitive out-group (Sidanius et al., 2007). However, SDT researchers have not directly measured whether these patterns of response can be attributed to threat. In light of this, the BPS approach was adopted to provide a more direct estimation of the role of threat in these situations and advance SDT research. At the same time, incorporating SDO and SDT theory into BPS will advance BPS theory. That is, while the BPS model clearly maintains that dispositional traits influence cardiovascular measures of challenge and threat responding, especially during intergroup interactions, few studies up to this point have examined the influence of dispositions (i.e., biases) in inter-group contexts. In the next chapter, I describe the current study, which evaluated whether experienced threat occurs during interactions with a competitive out-group member as well as examine how SDO might moderate threat reactivity and consequent discrimination.
Chapter 5: Summary and Proposed Hypotheses

The underrepresentation of Blacks in desirable jobs that offer social and economic mobility is a major source of group-based inequity and oppression as it closes off access to valuable economic and social resources that might help facilitate their advancement in society (Sidanius & Pratto, 1999). Scholars often propose that the under-representation of Blacks in management and executive roles, those which confer the highest economic and social rewards, plays a central role in sustaining and widening the power and status differences between Whites and Blacks in the broader social system (DiTomaso, Past & Parks-Yancy, 2007; Haley & Sidanius, 2005).

The first goal of the current dissertation was to investigate a potential cause of employment discrimination against Blacks, with a specific focus on discrimination that might impact their representation in senior level roles. I have drawn from SDT to explain the pattern of management underrepresentation experienced by Blacks. While SDT scholars would argue that any non-dominant group (i.e., women, Latinos) challenging the status hierarchy would elicit a threat response and discrimination by dominant group members, the focus of the current study was on Black males as they are the target of the greatest amount and most severe forms of employment discrimination (see Capman, 2011; Tomaskovic-Devey & Stainback, 2007). According to SDT, dominant group members more typically hold stronger SDO views, are more motivated to protect the relative advantage of their in-group vis-a-vis subordinate out-groups that challenge the status hierarchy (e.g., Pratto et al., 2006; Sidanius et al., 2007). In the current study, I tested the assertion that high SDO individuals experience stronger threat and show a greater propensity to defend their groups' status and resources (i.e., discriminate) when confronted with an out-group that challenges their position in the existing social order. Though scholars highlight that ODM’s bias negatively impact the employment prospects of Blacks in management roles (see
Reskin, 1998), no studies have examined the influence of bias during a highly critical stage of the career advancement process – the employment interview. Importantly, threat and bias may be particularly influential since the economic downturn in the late 2000s, which led to the most pervasive and persistent loss of jobs since World War II and has since heightened the competition for jobs across industries (Goodman & Mance, 2011).

A second goal of the current study was to provide a more direct measure of threat by incorporating psychophysiological (e.g., cardiovascular) measures based on the BPS framework. The inclusion of these measures is important, as SDT scholars have proposed that threat among dominant group members leads to discrimination against Blacks (Quist & Resendez, 2002). Specifically, high SDO individuals are believed to experience heightened threat in the presence of out-group members as they liken the world to a zero-sum game, wherein out-group gains represent in-group losses (Duckitt, 2006; Pratto & Shih, 2000). Yet, the evidence linking threat to SDO and discrimination has been mostly supported by self-report or behavioral measures. While a step in the right direction, these approaches are known to be susceptible to socially desirable responding. Thus, the current study addresses the limitation of prior research as psychophysiological measures are not susceptible to conscious biases and thus, provide clearer evidence for the role of threat. At the same time, the inclusion of SDO adds to research examining the BPS model (i.e., challenge and threat) during interracial interactions. That is, only two studies to date have investigated how individual differences (e.g., personality, values, and beliefs) might influence challenge and threat responding among dominant group members (see Blascovich et al., 2001, Study 2; Dover, Major, & Kaiser, 2016 for exceptions). While the aforementioned studies have examined the influence of out-group contact (Blascovich et al., 2001) and prejudice (e.g., modern racism, motivation to control prejudice, systems justifying
beliefs; Dover, et al., 2016), none have investigated how SDO might moderate cardiovascular challenge and threat response in intergroup settings. Thus, this research adds to this literature by evaluating whether SDO moderates challenge and threat responding of ODMs during interactions with Blacks.

Proposed study and hypotheses

Participants completed a simulated interview with a Black male candidate (a confederate) who was applying for an entry-level or a management-level position, representing low and high status job roles, respectively. Prior to the interview, participants were provided with job and candidate information and asked to choose additional interview questions to ask the candidate. During the interview, physiological reactivity (i.e., cardiovascular) and non-verbal behaviors exhibited by the interviewer were assessed. After the interview, the participants were asked to rate the candidate and indicate whether or not they would select the candidate for the position.

The collective evidence indicates that individuals tend to experience anxiety and threat during interactions with Blacks (Blascovich et al., 2001; Doerr, Plant, Kuntsman & Buck, 2011; Mendes et al., 2002; Stephan & Stephan, 2000). Yet, the underlying cause of threat might differ depending on a person’s prejudice or disposition (i.e., SDO). Researchers show that low prejudice (i.e., low SDO) individuals may experience anxiety and threat because they may be concerned with appearing or acting prejudiced or because they lack previous experience or contact with an out-group; in this case, Blacks (Devine, 2003; Doerr et al., 2011; Blascovich et al., 2001). At the same time, it is also reasonable to expect that a low SDO individual might be more inclined to form friendships and have greater exposure to Blacks. SDO research has previously been shown to predict other life choices and socialization patterns; that is, one’s friendships, academic major or career choice (Poteat, Espelage, & Green, 2007; van Laar,
Sidanius, Rabinowitz, & Sinclair, 1999). Accordingly, given the possibility they have greater and likely more positive contact, low SDO individuals may also be likely to demonstrate a challenge response during interaction with Blacks (Plant & Monteith, 1993).

Unlike low SDO individuals, threat among high SDO individuals within intergroup contexts is driven by concerns about intergroup competition and loss of material and social resources (Duckitt, 2000; Jackson & Esses, 2000). Thus, high SDO individuals were expected to experience more pronounced threat when they were embedded in a social context perceived to be highly competitive or when the context signaled that their group’s high status position was being challenged (e.g., Quist & Resendez, 2002; Sidanius et al., 2007). Similarly, BPS findings show that dominant group members display more severe cardiovascular threat reactivity when interacting with an expectancy-violating out-group member (e.g., high SES Latino) or when their group’s status is portrayed as unstable (Mendes et al., 2007; Scheepers et al., 2009). From these findings, I reasoned that a Black candidate applying for a management position would be viewed as an expectancy violation as well as a symbol of intergroup competition for valued resources among dominant group members who are ODMs (e.g., particularly White males), especially those with higher SDO. This, in turn, would lead to higher cardiovascular threat reactivity and discrimination against Blacks. Thus, I proposed the following hypotheses for threat reactivity:

**H1:** A main effect for job status on relative threat reactivity was expected such that participants who interview a Black candidate for a managerial job (i.e., higher status) would show stronger threat reactivity than those who interview a candidate for an entry-level job (i.e., lower status).
H2: A main effect for SDO was also hypothesized, wherein participants with higher SDO were expected to demonstrate greater threat reactivity relative to participants with lower SDO.

H3: An interaction between SDO and job status was also predicted for threat reactivity, wherein relative threat reactivity will be magnified when high SDO participants interview a Black candidate for a management compared to an entry-level job. No threat reactivity differences across low and high status jobs were expected among low SDO participants. See Figure 1 for a graphical presentation of the predicted outcome (see Figure 1).

Previous research has shown that dominant group members (e.g., Whites-Males) generally behave more positively toward non-dominant group members (e.g., Blacks) than toward other in-group members during face to face interactions (e.g. Blascovich et al., 2001; Littleford et al., 2005). However, research also suggests that Whites become less positive toward Blacks when the context signals that the intergroup status hierarchy may be unstable (e.g., Mendes et al, 2007; Scheepers et al, 2009). In an interview context, exceedingly negative tone is less likely to occur, as ODMs are aware that such behavior can be readily interpreted as unlawful and discriminatory. However, limiting expressions of positivity (e.g., warmth and engagement) offers a more covert means of discriminating against Blacks in that it provides a less hospitable interview climate (e.g., chilling effect). Accordingly, I predicted the following:

H4: A main effect for job status on behavior toward the candidate was expected.

Participants who interviewed a candidate for a management role were expected to show less positive engagement and warmth (based on coder observations and
confederate ratings) than those who interviewed a Black candidate for an entry-level job.

**H5:** A main effect for SDO was expected. Participants with higher SDO were expected to show less positive engagement and warmth toward a Black candidate than those with lower SDO.

**H6:** A two-way interaction between SDO and job status was predicted, such that those with stronger SDO beliefs were expected to show less positive engagement and warmth toward the candidate interviewing for a management compared to an entry-level job. No differences were expected for those with lower SDO beliefs (see Figure 2).

Another covert method of discrimination against Blacks may be found in the type of questions interviewers ask candidates. As indicated by van der Zee, Bakker and Bakker (2002) and Macan (2009), fully structured interviews, where the same questions are asked across every candidate are rarely practiced. Rather, it is more common for interviewers to select different questions across different candidates (van der Zee et al, 2002). This practice allows interviewer biases to affect the type of questions asked during the interview. Thus, following the same logic presented for Hypotheses 7 through 9, I predicted the following patterns would emerge:

**H7:** A main effect for job status on question selection was expected, wherein participants interviewing a candidate for a management role were expected to ask more difficult questions than those interviewing a candidate for an entry-level role.

**H8:** A main effect for SDO was expected, such that individuals with higher relative to lower SDO were expected to ask more difficult questions.
**H9:** A two-way interaction between SDO and job status was predicted as well, such that those with stronger SDO beliefs were expected to ask more difficult questions of the candidate interviewing for a management compared to entry-level job. No difference in question difficulty was expected for those with lower SDO beliefs (see Figure 3).

A similar pattern of results was expected for ratings of the qualification and competence of the candidate. Mendes et al (2002) has shown that Whites tend to offer more positive ratings of Black interaction partners relative to White interaction partners. Yet, as with behavior, individuals embedded in contexts that signal instability in the intergroup status structure, particularly among those holding stronger SDO views, evaluate out-group members more negatively than those in situations where the intergroup status structure is viewed as more stable (Mendes et al., 2007). Thus, I hypothesized the following:

**H10:** A main effect for job status on candidate evaluations was expected, such that participants rating of the candidate interviewing for a management role would be lower than those interviewing the candidate for an entry-level role.

**H11:** A main effect for SDO was also expected, wherein individuals with higher relative to lower SDO would provide more negative ratings of the candidate.

**H12:** A two-way interaction between SDO and job status was predicted, such that those with stronger SDO beliefs would provide lower ratings to the candidate interviewing for the management relative to the entry-level job. No difference in ratings was expected for those with lower SDO beliefs (see Figure 4).

Finally, given the pattern of underrepresentation found in previous research (Tomaskovic-Devey & Stainback, 2007), I expected that the candidate would be selected at a
lower rate for the management relative to the entry-level role. This effect would be amplified among those high compared to low in SDO.

**H13:** A main effect for job status on the likelihood of selecting the candidate was expected, such that participants would select the candidate for a management-level role at a lower rate than the candidate for an entry-level role.

**H14:** A main effect for SDO was expected, such that participants with higher SDO would select the candidate at a lower rate than participants with lower SDO.

**H15:** An interaction between SDO and job status was predicted, such that those with stronger SDO beliefs would select the candidate interviewing for the management role at a lower rate than a candidate interviewing for the entry-level role. No difference in selection rates was expected among those with lower SDO beliefs (see Figure 5).
Chapter 6: Pilot Studies

Two pilot studies were carried out to create stimulus materials that were used in the main study. The goal of the first pilot study was to develop two job descriptions that were significantly different in terms of perceived status and authority. The goal of the second pilot study was to create two candidate resumes for the main study; the first resume was developed to represent a candidate that fulfilled the requirements of the entry-level job (i.e., low status), whereas the second resume was crafted so that the candidate fulfilled the requirements of the management-level job (i.e., high-status). I also carried out this study to ensure that the resumes in both conditions were rated near the middle of the rating scale to mitigate ceiling and floor effects. A secondary goal of the second pilot study was to develop a pool of seven interview questions that differed in the level of difficulty.

Pilot Study 1: Job Description Pilot

Method

Participants

Forty-five management and psychology undergraduate students from a large Northeastern college were recruited to participate in the pilot study.

Materials

Job Descriptions. Two job titles and associated job descriptions were created, one that was tailored to depict an entry level role (i.e., Marketing Assistant; low-status), and another that was developed to depict a management level job role (i.e., Marketing Vice President; high-status). See Appendix A to review the final job descriptions.

Measures
Perceived Job Status. The perceived job status of each job title and description was assessed by asking participants to rate the level of influence, status, power, authority, and responsibility associated with each job title and description. Participants responded to the items using a 7-point Likert response scale, which were anchored such that higher numbers reflected higher levels of each construct (e.g., 1 = low power; 7 = high power).

Perceived Salary. Participants were also asked to select the salary they would associate with each job title and description. Participants responded to the salary item using a 15-point Likert response scale that ranged from 1 = less than $30,000 per year to 15 = greater than $100,000 per year, where each point on the Likert scale represented a $5,000 increment (e.g., $35,000) in salary per year.

Procedures

Data were collected using Qualtrics survey software. Participants logged into the Qualtrics survey and after providing their consent, were randomly assigned to receive either the Marketing Assistant (entry-level) or Marketing Vice President (management-level) job title and description. After reviewing the job title and description, participants were asked to rate the job description along the dimensions described above.

Results

Internal consistency reliability estimates for the five items were sufficiently high ($\alpha = .94$), so the five items were averaged to provide a composite measure of perceived status. Results from an independent samples t-test indicated that the Marketing Assistant ($M = 4.15, SD = 0.98$) was perceived as lower in status (e.g., influence, power) than the Marketing Vice President job ($M = 5.63, SD = 0.97$), $t (43) = 5.08, p < .001, d = 1.51$. The analysis of perceived salary associated with each job title and description revealed that participants selected a significantly
lower salary for the Marketing Assistant (M=$49,782.50, SD=$10,054.20) relative to the Marketing Vice President (M=$83,571.50; SD=$22,646.35), t(42) = 6.49, p < .001, d = 1.98.

Discussion. Results of this pilot study indicate that the perceived status of the job roles were significantly different, such that the Marketing Vice President was perceived to possess significantly more status and garnered a higher salary than the Marketing Assistant. These job titles and descriptions were subsequently used in the second pilot study.

Pilot Study 2: Resume and Interview Question Development

Method

Participants

Sixty management and psychology undergraduate students from a large Northeastern college were recruited to participate in the pilot study.

Materials

Job descriptions. The job descriptions for the Marketing Assistant and Marketing Vice President job titles developed during the first pilot study were used during this pilot study.

Candidate Resumes. Two candidate resumes were created where one resume was developed to meet the requirements of the Marketing Assistant (low status) job title and description and the second resume was developed to meet the requirements of the Marketing Vice President (high status) job title and description. The name of the candidate that was used during the main study was also presented at the top of the resume (i.e., Jamal Robinson). See Appendix B for final candidate resumes.

Interview Questions. Thirty-five interview questions, varying in the level of difficulty, were initially developed for this pilot. Three additional questions, crafted from
participants’ suggestions, were created to add easier interview questions to the pool of questions.

Measures

Candidate Quality. Participants rated the quality of the candidate resumes according to three items: “overall qualifications” (1 = Not at all qualified to 7 = Very qualified); “suitability as a potential hire” (1 = Not at all suitable to 7 = Very suitable) and “competence to perform the job” (1 = Not at all competent to 7 = Very competent).

Interview Question Difficulty. Participants were asked to review and rate the difficulty of each interview questions along a 7-point scale ranging from 1 (Very easy) to 7 (Very difficult).

Procedures

Participants signed up through the Sona-System website and were first presented with and informed consent document to review and complete online. Once signed, participants were directed to a separate Qualtrics survey, where they were randomly assigned to receive either a Marketing Assistant or a Marketing Vice President job description. Participants then reviewed a resume that was crafted to meet the qualifications of the job title and description they were randomly assigned to review. After reviewing the materials, participants rated the resume along the dimensions outlined above and provided qualitative feedback about their ratings.

After completing the resume task, participants were directed to a separate Qualtrics survey where they were asked to complete an unrelated task. Specifically, they were asked to review a set of interview questions and provide their rating of the easiness or difficulty of each question. The order in which questions were presented was randomized across participants to control for order effects.

Results
Candidate Quality. An independent samples t-test was conducted to ensure that the candidate ratings did not differ between the two job title conditions. Results showed that there were no significant differences between job titles on ratings of overall qualifications, \( t(58) = 0.40, \text{n.s.} \), suitability \( t(58) = .49, \text{n.s.} \), and competence \( t(58) = 0.28, \text{n.s.} \). An examination of the descriptive statistics revealed that the ratings for the Marketing Assistant resume were close to the mid-point of the scale and there was a good distribution. Specifically, the statistics for each dimension were: overall qualifications (M=4.75, SD = 1.22), suitability (M=4.81, SD=1.26), and competence (M=4.88, SD=1.26). Descriptive statistics revealed that the ratings for the Marketing Vice President resume were also near the mid-point of the scale for overall qualifications (M=5.00, SD = 1.05), suitability (M=5.00; SD=1.20), and competence (M=5.21; SD=1.13).

Interview Question Difficulty. Each of the thirty-eight interview questions were first subjected to an independent samples t-test to ensure that there were no significant differences between the two job status conditions in ratings of interview question difficulty. Difficulty ratings did not differ significantly between job-status questions (all ps \( \geq .05 \)). As a result, all analyses of interview question difficulty ratings were conducted across job status conditions. Next, I reviewed the mean and standard deviation of each interview question prior to carrying out the repeated measures ANOVA analysis (see Table 1 for the means and standards deviations of each interview question). Ten interview questions, including the five of the easiest and five of the most difficult interview questions, were selected to be included in the repeated measures ANOVA analysis. This approach was taken to aid in the interpretation of the post-hoc comparisons. Items at the middle of the scale were not included as an examination of the means and standard
deviation suggested that none of the items would be significantly different from the easiest and most difficult items.

A Mauchly’s W test was conducted with the ten items as repeated measures. ANOVAs are susceptible to violations of the assumption of sphericity. Sphericity is the condition where the variances of the differences between all combinations of related groups (i.e. interview questions) are assumed to be equal. It is akin to homogeneity of variances in a between-subjects ANOVA. The Mauchly's Test revealed that the assumption of sphericity had been violated, $\chi^2 (44) = 98.42, p < .001$. When a violation occurs, it is likely that the estimates of significant differences among interview question ratings may have been inflated and using the standard F-test estimates increased the Type-1 error rate (i.e. false rejection of the null). As a result, an omnibus test of differences between interview question ratings was estimated using a Greenhouse-Geisser sphericity ($\epsilon = .422$) adjustment. This adjustment minimized the risk of Type-1 error by correcting the degrees of freedom and requiring the F-statistic to meet a higher critical value to demonstrate significance. Taking this into account, an omnibus test of differences among the interview questions revealed that the interview question ratings of difficulty were significantly different, $F (3.8, 91.2) = 16.94, p < .001$.

Next, pairwise comparisons of the 10 interview questions chosen for the analyses were evaluated using a conservative Bonferroni correction. Results revealed that the difficult interview questions selected for the analysis were not rated significantly more difficult than all of the other difficult interview questions and the easy interview questions selected were not significantly different from the other easy interview questions, but each of the difficult and easy interview questions were significantly different from each other (see Table 1 to review the interview questions and descriptive statistics). Two of the interview questions identified as
easy were subsequently removed as they were considered highly similar to two other easy interview questions selected for the main study; the interview questions that were retained were rated as easier than the similar interview questions that were removed. To provide more balance in the final sample interview questions, one item from the difficult interview question pool was removed from the final interview question pool used in the main study. As a result, seven items, four rated as difficult and three rated as easy, were selected for use in the main study (see Appendix C).

Discussion. Results of this pilot study indicated that the candidate resumes developed for the low and high status job roles were not significantly different from each other and the ratings were near the middle of the rating scale across rating dimensions. Seven interview questions were identified for use in the main study; three items that were rated as easy and four items that were rated as difficult. Each of the four difficult items were found to be significantly more difficult than each of the three easy items, but the interview questions that were designated as easy and difficult were not significantly difficult from each other.
Chapter 7: Main Study

Overview

The main study was conducted over two phases. During Phase 1, participants completed on-line measures of SDO, comfort with other racial and ethnic groups, career aspirations, work experience, and demographic and health background measures. During Phase 2, participants took part in a lab experiment that was conducted on the college campus. During the experimental session of Phase 2, participants interviewed a Black male confederate (actor) who played the role of a candidate interviewing for either an entry (low-status) or management-level (high-status) job. All participants were informed that they would play the role of an interviewer and that their selection for the role was based on their responses to the career aspirations measure and prior work history. To increase the perceived importance of the study further, participants were informed that the person they would be interviewing would be applying for a similar role in the coming weeks. All participants were instructed to ask a predetermined set of interview questions, but were also provided with an opportunity to select an additional set of questions to ask, given time permitted. Participants’ cardiovascular reactivity and nonverbal behavior were recorded during the interview. After the interview, participants evaluated the candidate and completed manipulation checks. After the interview ended, confederates provided ratings of participants’ positive engagement and warmth.

Method

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3 I required that there be a minimum of a two-day gap between completing Phase 1 measures and participating in the Phase 2 lab study.
Participants

Undergraduate management and psychology students from a large Northeastern college were recruited to participate in the pilot study. G*Power 3 software was used to conduct power analyses (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang & Buchner, 2007). Results of the power analysis indicated that 68 participants were needed to achieve an 80 percent chance of correctly rejecting a false null hypothesis with a medium effect size ($\eta^2=.15$) (Blascovich et al., Study 1, 2001; Mendes, et al., 2002). In exchange for participation, participants either received credit towards the mandatory research requirement or a monetary payment of $15. Data for this study was collected from June 2014 through May 2016.

Eighty-eight undergraduate students participated in the main study. Fifty-three participants were male and 35 participants were female. Among the male participants, 20 were White, 1 was Black, 22 were Asian, Native Hawaiian or other Pacific Islander, 7 were Hispanic/Latino and 3 were Multiracial/other. Among the female participants, 10 were White, 3 were Black, 15 were Asian, Native Hawaiian or other Pacific Islander, 3 were Latino/Hispanic and 4 were multiracial/other. Seventy-five percent of the sample was born in the United States. The mean age (in years) of participants was just over twenty-three years old ($M = 23.16$ years, $SD = 7.26$ years). All of the participants in the sample were currently enrolled in a bachelor degree program. Seventy-four percent were pursuing a Bachelor of Business Administration (BBA) degree, whereas the remaining 26% were pursuing a Bachelor of Arts (BA) degree. Sixty-one percent of participants reported having full-time work experience. The average full-time work experience of participants was just over two and a half years ($M=2.55$ years, $SD = 5.42$ years). Under half of the participants (48.9%) reported being employed in either a part time or full-time job role during the time in which they completed the study.
It should be noted that a goal of this study was to recruit only White males (who have lived in the United States for at least five years) given that this demographic group represents those who typically occupy management and leadership roles (Lyness, 2002). Unfortunately, this goal was not achieved for two reasons. First, the psychology and management participant pool (and the college campus) included a very small number of White males who also lived in the United States for at least five years. Secondly, a focus on White males increased the likelihood of suspicion regarding the purpose of the study. For these reasons, the recruitment effort was expanded to include all racial and gender groups. Nevertheless, the predictions of the current study should hold with the current, ethnically diverse sample, as research by Sidanius and Pratto (1999) and Snellman and Ekehammar (2005) have shown that the influence of SDO on threat, prejudice and discrimination against a subordinate out-group is consistent across ethnic groups. That is, those with higher SDO, regardless of ethnic group membership, are likely to be threatened by subordinate outgroups that are competitive and threaten the dominant group's status position as well as the hierarchal arrangement of the existing social system (Sidanius & Pratto, 1999).

**Design**

The study employed a between-subjects experimental design, where job status (entry vs. management-level) and a continuous measure of participants’ SDO served as the between subject variables.

**Phase 1**

**Procedure**

Participants completed the *Phase 1* measures by selecting a secure webpage link located on the Qualtrics secure server, which was made available to participants after they registered for
the study on the Sona-System participant pool management system. Upon selecting the link, participants were directed to the Phase 1 study consent form housed on the Qualtrics website. On the first page of the Qualtrics survey, participants were provided with a detailed explanation of the expectations for completing Phase 1 and Phase 2 of the study. On the subsequent page, they were provided with a digital consent form to complete prior to completing the Phase 1 measures. Once participants signed and submitted the consent form, they were directed to a separate Qualtrics survey where they completed the Phase 1 measures.

**Measures**

The following questionnaires were administered to participants. Unless otherwise noted, all items were rated on 7-point Likert type scales with options ranging from 1 (strongly disagree) to 7 (strongly agree). Given a sufficiently high reliability of .70 or higher, items within each scale were averaged, with higher scores indicating greater endorsement of the construct. A list of all self-report items administered in this study is included in Appendix D.

*Social Dominance Orientation.* SDO (Pratto et al., 2006) was measured using a sixteen-item scale created by Sidanius et al. (1994) and Pratto et al. (2006). Eight of the 16 items assessed overt support for Group-Based Dominance (e.g., “In getting what your group wants, it is sometimes necessary to use force against other groups.”). The remaining eight items measured the degree to which a person is opposed to group-based equality; termed Anti-Egalitarianism (e.g., “We should do what we can to equalize conditions for different groups.”). Disagreement with these items indicated Anti-Egalitarianism. These items were reverse coded and then averaged with the group-based dominance items to create a composite score of SDO (α=.90). Cronbach’s alpha was calculated for each subscale (noted above) and demonstrated good internal consistency (α=.88 and .89, respectively). The two sub-scales were also averaged to create
separate composite score; one that measured anti-egalitarianism beliefs and another that measured (overt) group-dominance beliefs separately. These composites were created to conduct exploratory analyses of each sub-dimension of SDO.

**Career Aspirations.** A measure of career aspirations was created for this study and was used to assess participants’ aspirations about their future job roles and career (e.g., aspirations for a management level role, having a job with a high level of authority). This questionnaire was included in the study as a means of justifying participants’ selection as the interviewer during lab experiment in *Phase 2* of the study. Internal consistency of the measure exceeded acceptable standards ($\alpha = .91$).

**Racial and Ethnic Group Comfort.** Racial and Ethnic Group Comfort was measured with six items from the Other-Group Orientation subscale of Phinney’s (1992) Multigroup Ethnic Identity measure. The items were used to assess how much participants enjoyed being around people of a different races or ethnicities (e.g., “I enjoy being around people from racial or ethnic groups other than my own.”) and the frequency with which participants spent time with people from different races or ethnicities (e.g., “I often spend time with people from different racial or ethnic groups other than my own.”). This measure was included as a control variable to account for the diversity and cross race/ethnic contact characteristic of the college campus in which the current study took place. The internal consistency of this measure was .82.

**Demographic variables.** Participants were asked to report their race/ethnicity, gender, age in years, education attainment, major or concentration (if applicable), full time work experience in years, current employment status, level of their current position or most recent position (e.g., entry-level, management, executive), and the industry of their current employer.

**Health questionnaire.** Participants were asked to report whether they were being treated for chronically low or high blood pressure. Participants were also provided with an open-ended...
question which asked participants to indicate and describe any pre-existing heart conditions they might have. Participants who responded affirmatively to these measures were allowed to participate in Phase 2 of the study, but cardiovascular measures were not measured as these abnormalities would influence their cardiovascular reactivity measures.

*Phase 2*

*Procedure*

An experimenter (of the same sex as the participant) greeted the participant and directed him or her to a desk upon arrival in the laboratory. Participants were then seated in front of a computer monitor, which was adjacent to the physiological measurement instruments. An integrated video camera and microphone positioned at the top of the computer monitor recorded verbal and nonverbal behaviors during the interview. The experimenter then verbally reviewed the physiological recording procedures with the participant in detail. Once reviewed, the researcher verbally confirmed with each participant that the participant understood that the study was not medical research and the experimenter did not have medical training that would allow him or her to diagnose or treat any medical conditions. Once participants provided verbal consent, they were provided a written consent form to review and sign.

Participants were then provided with a cover story about the purpose of the study and their selection into the role as the interviewer. Specifically, the experimenter explained that organizations are increasingly conducting interviews using computer-mediated processes (e.g., Skype, Web-X, and Microsoft Lync). The experimenter then explained that the study sought to understand the comfort level of interviewers and interviewees while engaged in a computer-

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4 Three experimenters collected data during *Phase 2*. I was the primary experimenter. I trained two doctoral student experimenters, one male and one female, over two in-person training sessions to ensure they would consistently and accurately carry out the procedures. In addition, the experimenters were provided with written procedures to refer to, as needed.
mediated employment interview. Participants were told that they would play the role of the interviewer based on their responses to the career aspirations measure and work background items they completed during Phase 1 of the study. They were informed that the person they would interview was entering the job market in the coming weeks and that this experience would help the interviewee prepare for his or her upcoming interviews. Afterwards, the experimenter explained that he or she would use sensitive cardiovascular measurement to measure their responses to the computer mediated interview. The experimenter then taped small electrodes to the center of the participant’s back, right collarbone, and lower left ribcage. Additionally, an inflatable cuff was placed around the participant’s left wrist to assess hemodynamic changes in blood pressure. Once the electrodes were properly connected and calibrated, the experimenter explained to participants that he or she would need to sit quietly and with minimal movement for five minutes to ensure baseline physiological measures could be clearly recorded.

After baseline cardiovascular measures were collected, the experimenter provided participants with a paper copy of either an entry or management-level job title and description and a resume of the African-American candidate. Participants were randomly assigned to either the entry or the management-level job role and were provided the appropriate job description and resume. The name of the candidate (i.e., Jamal Robinson) was included at the top of the resume. The name was chosen based on research by Bertrand and Mullainathan (2004) indicating that this was a prototypical name for a Black male. Participants were then provided with six standard interview questions and were instructed to ask the candidate the questions in the exact language and same order as they were presented on the paper. Participants were also provided with seven additional interview questions of varying difficulty (see Appendix C) and were then instructed to select the three questions they would like to ask at the end of the interview, given time was
available. Participants were provided with up to 10 minutes to review the materials, select the interview questions, and prepare for the interview session. Afterwards, the experimenter informed participants that the interview would begin and would last 5-10 minutes. The experimenter then left the physiological recording area in which the interview would take place, but remained in the same lab space. The confederate appeared on the computer screen and the interview proceeded until the participants asked all six questions or after 10 minutes had passed. In all cases the experimenter interrupted the interview session, indicated that the time was up and stopped the video/audio recording (all participants completed the interview in less than 10 minutes\(^5\)). Upon completion of the interview session, participants sat quietly for 5 minutes with the cardio equipment continuing to record cardiovascular responses. Once the five minutes had passed, the experimenter terminated the recording of cardiovascular activity and provided the participant with the dependent measures, which included the candidate rating and selection measures. Upon completion of the rating and selection task, the electrodes and tape were removed. Finally, participants were probed for any suspicion about the goals of the study and then verbally debriefed about the study and deception involved.

*Confederates Selection and Training*

Two Black males were recruited as confederates for this study. Each confederate was only provided with the standard questions and responses to memorize. The questions and responses were developed to completely address each interview question. The principal investigator conducted two mock interview sessions with each confederate to ensure he was able to accurately and consistently answer the responses to the standard interview questions. The script was also placed atop the computer screen (similar to a teleprompter). See Appendix E to review the interview script.

\(^5\) The mean interview time was 5 minutes and 32 seconds.
**Measures**

**Manipulation check.** Participants were asked to respond to three items to assess the effectiveness of the job status manipulation. Participants were first asked to indicate whether the job title they were interviewing for was an entry-level or a managerial-level job role. They were also asked to rate the influence and control conferred by the job title and description. Influence and control were rated along a 7-point scale ranging from 1 (low influence/control) to 7 (high influence/control).

**Physiological reactivity.** Noninvasive procedures for measuring psychophysiological reactivity measures (outlined by Sherwood, et al., 1990) were used to capture all cardiac and hemodynamic data (i.e., blood pressure recordings). Continuous cardiac performance was measured with impedance cardiographic (i.e., ZKG) and electrocardiographic (i.e. ECG) recordings. ZKG was assessed by examining basal thoracic impedance ($Z_0^b$) and the first derivative of basal impedance ($dZ/dt$). A basal and derivative impedance measure was captured by placing two pairs of tetrapolar aluminum/mylar tape electrodes on participants. The two inner electrodes were placed at the base of each participant’s neck and torso (i.e., thoracic-xiphisternal junction) and two outer electrodes were placed on the neck and abdomen of participants. The inner and outer electrodes were placed roughly 3cm apart. A 4mAAC100 kHz current was passed through the two outer electrodes and recorded the basal impedance from the two inner electrodes ($Z_0^b$) and the first derivative of the outer electrodes (i.e., $dZ/dt$). ECG recordings were captured by placing the right lead on the collarbone and the left lead on the left side of the sternum below the ribcage. Continuous blood pressure measurements were captured using a blood pressure monitor placed along the radial artery of the nondominant arm. Measurement of
blood pressure change was taken continuously throughout the study. The BIOPAC MP150 was used to collect and score the cardiac and hemodynamic data.

Three cardiovascular measures were used to confirm engagement and differentiate challenge and threat response patterns (Blascovich & Tomaka, 1996; Blascovich, Seery Mugridge, Norris, & Weisbuch, 2004). For all measures, reactivity scores were calculated by subtracting the last two minutes of the baseline resting measures of cardiac response from the first two minutes of the measures of cardiac response during the interview period. Heart rate (HR), the number of heartbeats per minute, was measured to evaluate task engagement. Cardiac output (CO), defined as the amount of blood being ejected from the heart (i.e., left ventricle) into the arterial system in liters per minute (i.e., l/m) were measured. Finally, the amount of overall vasoconstriction or vasodilatation occurring in the arterial periphery was gathered as a measure of total peripheral resistance (TPR). TPR was estimated from blood pressure and CO using the following formula: (mean arterial pressure/ CO) × 80 (Sherwood et al., 1990).

Judges’ behavioral ratings. Ratings of participants’ demeanor while interacting with the confederate during the interview was also evaluated. Participants’ behaviors were recorded via a video and microphone embedded within the all-in-one computer. Out of the 88 participants who participated, 10 refused to be recorded and an additional 9 participants were lost due to recording errors. As a result, 69 recordings were rated. Four trained observers (i.e., two male and two female) rated participants’ verbal and non-verbal behaviors during the first three minutes of the interview. The first three minutes of the video and audio recordings were the focus of this analysis to ensure that ratings of the behaviors overlapped with the period in which the cardiovascular response analysis took place. The recordings viewed by the observers did not include the confederate’s verbal or nonverbal behaviors. Observers rated each participant on six
adjectives pairs, which were borrowed from Littleford, et al.’s (2005) intergroup interaction research. The adjective pairs were disengaged–engaged, unfriendly–friendly, cold–warm, uncomfortable–comfortable, silent–talkative, and submissive–dominant. Responses were indicated along 7-point Likert scales (e.g., 1 = completely disengaged to 7 = very engaged).

All observers were provided with two in-person training sessions. In the first session, observers viewed three recordings and discussed the behaviors that exemplified each trait pair. Each observer independently rated 20 of the 69 recordings. A second calibration session was conducted where behaviors were reviewed and discrepancies were discussed. Observers then independently reviewed and rated the remaining 49 recordings. The inter-rater reliability for the ratings of the 69 recordings was estimated using an intraclass correlation coefficient (ICC) for the 4 raters on each of the 6 adjectives pairs. The ICC analysis was specified to estimate consistency across raters. The effective reliabilities (average measure ICC) for ratings of engagement, friendliness, warmth, comfort, talkativeness, and dominance were high (α = .83, .82, .81, .80, .84, and .85 for each trait, respectively). Observer ratings were then averaged to create a composite score for each adjective-pair. A principal components factor analysis (PCA) of the average scores with an orthogonal rotation (i.e., varimax) was then carried out. A factor loading was considered practically significant if it was .40 or higher on a factor (Hair, Black, Babin & Anderson, 2010). Results revealed a two-factor structure. Notably, the factor loading for friendliness and dominance exceeded .70 on the first factor, and loaded slightly above .40 on the second factor. Nevertheless, based on guidance by Gaskin (2016), these dimensions were included as part of the first factor as the difference in factor loadings for these dimensions exceeded .20. All other items loaded onto only one of the two factors. Collectively, the two factors accounted for 70.9% of the variance; where the eigenvalue for the first factor was 2.70
and the eigenvalue for the second factor was 1.56. The warm, friendly and dominant ratings (i.e., negatively related) loaded onto the first factor, whereas engaged, comfortable and talkative loaded onto the second factor. Given these results, the adjectives were averaged to create a composite score of participants’ warmth and positive engagement toward the confederate.

*Confederate behavioral ratings.* Confederates rated the behavior of each participant using the same six adjective pairs rated by the observers. As with observer ratings, a PCA with an orthogonal rotation (i.e., varimax) was carried out to assess whether the items load onto the warmth and positive engagement factors. Unlike the observer ratings, the PCA analysis revealed one-factor, which accounted for 72.2% of the variance. Thus, the scores on the 6 adjective pairs were averaged to create a composite score of positive engagement ($\alpha = .92, M = 4.65; SD = 1.30$).

*Interview Question Difficulty.* Discrimination was also measured by analyzing the proportion of difficult interview questions participants selected to ask the candidate. Participants were informed that they might have an opportunity to ask the candidate additional questions beyond the standard set of interview questions provided, given time permitted. They were then provided with seven interview questions that were coded (developed during Pilot 2, see Table 1) as easy or difficult (i.e., 0=easy, 1=difficult) and asked to select the three questions they would ask the candidate. The proportion of difficult items that were selected to ask the candidate was tabulated. Accordingly, proportion of difficult interview questions that were selected by participants would range from 0%, 33%, 66%, and 100%.

*Candidate Evaluations.* Participants rated the candidate’s overall qualification along a 7-point scale ranging from 1 (Not at all Qualified) to 7 (Very Qualified), the candidate’s suitability as a potential hire 1 (Not at all Suitable) to 7 (Very Suitable) and competence to perform the job
1 (Not at all Competent) to 7 (Very Competent). Internal consistency was high ($\alpha = .87$).

Accordingly, the three items were then averaged to form a composite rating of candidate qualifications.

*Candidate selection.* Discrimination in selection was evaluated by asking participants to indicate whether they would hire the candidate for the role. A lower selection ratio (i.e., percent) indicated greater discrimination.
Chapter 8: Results

Descriptive statistics, including means, standard deviations, and correlations for each of the study variables are presented in Table 2 and 3. Table 2 includes the correlations for the sample that was included in the cardiovascular threat response analyses. Table 3 displays the correlations for the full sample of participants who were included in the analyses for all other outcomes of interest (e.g., candidate ratings).

Job Status Manipulation Check. All participants responded to manipulation check measures after responding to all dependent measures. Every participant correctly identified the job title (i.e., status) that they were conducting an interview for during the session (i.e., Marketing Assistant, Marketing Vice President). Additionally, participants rated the candidate for the Marketing Vice President condition as having significantly more control over decisions ($M = 5.93; SD = 1.73$) than the candidate for the Marketing Assistant job condition ($M = 4.80; SD = 1.54$); $t(1, 85) = 3.20, p = .002$. Similarly, participants rated the Marketing Vice President as having significantly more influence over strategy ($M = 5.89; SD = 0.88$) than those participants in the Marketing Assistant condition ($M = 5.29; SD = 1.08$); $t(1, 85) = 2.86, p = .002$.

Cardiovascular scoring and analytic strategy. Following work by Blascovich, et al. (2004) and Blascovich & Tomaka (1996), cardiovascular reactivity for HR, CO, and TPR was calculated by subtracting the mean of the last two minutes of the baseline period from the mean of the first two minutes of the interview. First, to confirm task engagement, an examination of whether the average HR during the interview was significantly higher than the baseline period was conducted (see Blascovich et al., 2004). Then, a single index of challenge and threat was calculated by converting TPR and CO reactivity values into Z-scores for each participant. Z-
scores were then weighted such that TPR Z-scores were provided a weight of +1 and CO Z-scores were weighted with a -1 and then summed. Thus, higher scores on this index represented greater threat relative to challenge reactivity and was a reflection of underlying SAM versus PAC activation (Blascovich, et al., 2004; Weisbuch, Seery, Ambady, & Blascovich, 2009).

Six of the 88 participants did not consent to the physiological recordings. Data for an additional twenty-one participants could not be used due to equipment failure (e.g., blood pressure machine failure; this was discovered after data collection was terminated and analyses commenced). Five participants reported that they were being treated for blood pressure and hence did not have physiological measures recorded. The mechanical failures and attrition resulted in a total of 56 participants with usable physiological data. Thus, there were 27 participants in the entry and 29 participants in the management-level condition.

**Baseline differences.** A multivariate test for differences in baseline HR, TPR, and CO as a function of job status condition and SDO was conducted. Results revealed no significant main effects for job status on baseline measures of HR, TPR or CO (all $F_s \leq 0.77$, all $p_s \geq .38$) and no significant main effects for SDO on TPR or HR (all $F_s \leq 0.58$, all $p_s \geq .45$). However, it was found that SDO was associated with significantly higher CO baseline values, $F(1, 52) = 4.80$, $p = .03$. No significant interactions were observed for any of the baseline measures (all $F_s \leq 1.98$, all $p_s \geq .17$). As baseline CO differed by SDO, all tests of cardiovascular reactivity included the baseline CO as a covariate.

**Task Engagement.** Results of a paired sample t-test indicated that the mean HR during the interview was significantly greater than zero ($M = 5.12$, $SD = 6.48$), $t(55) = 5.91$, $p < .001$. This result offers evidence that participants were engaged in the interview task.
Threat reactivity. A hierarchical regression analyses was carried out to explore whether participants’ cardiovascular threat reactivity during the interview differed as a function of job status (H1), SDO (H2) and the interaction between SDO and job status (H3). Step 1 included several control variables. Specifically, I included participants’ race (i.e., non-White, White), gender (i.e. female, male), and whether or not the participant was a business major. The inclusion of these variables was guided by prior SDO findings, which has shown that these individual differences are associated with different SDO levels (Sidanius & Pratto, 1999; Sidanius, van Laar, Levin & Sinclair, 2003). Additionally, the confederate with whom participants interacted with was added as a control to account for potential confederate effects (e.g., differences in interview performance, confederate physical features). Self-reported exposure and comfort with other groups was also included as a control variable in Step 1 as it may be associated with lower threat (Blascovich, et al., 2001, Study 3; Tropp & Pettigrew, 2006). Finally, following procedures outlined by Townsend, Major, Sawyer and Mendes (2010), participants’ baseline CO was added as a control to account for potential confounds of the baseline CO differences on the magnitude of CV reactivity. In Step 2, a mean centered SDO and job status was entered. Finally, the interaction between the mean centered SDO score and job status was entered at Step 3. No support was found for H1, H2 or H3; the effects of job status, SDO and the interaction between job status and SDO on participants’ threat responding were not significant (all ts ≤ 1.57, all ps ≥ .13; see Table 4).

Interviewer Behaviors, Interview Questions, Ratings and Selection Decisions

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6 While theoretically relevant, results revealed that the control variables included were not significantly predictive of threat. Accordingly, a separate test was conducted without the control variables included in Step 1. However, as with the main analysis, none of the predictors significantly predicted threat responding.
Interviewer behavior. It was proposed that participants would behave less positively when interviewing a Black candidate for a management (i.e., lower positive engagement and warmth) than for an entry-level role (H4). Furthermore, it was proposed that participants with higher SDO would behave less positively toward the candidate than low SDO participants (H5). Finally, it was predicted that high SDO participants interviewing a Black candidate for a management role would behave significantly less positive than high SDO participants interviewing a Black candidate for an entry-level role whereas there would be no difference in behavior among low SDO participants across job status conditions (H6).

A hierarchical multiple regression analysis was carried out to test these hypotheses. I included participants’ race, gender, whether or not the participant was a business major, the study confederate, and comfort with other groups as control variables in Step 1. I also included work experience and current employment status (i.e., dummy coded) as controls as it was expected that full-time work experience (and likely experience with interviewing) and current employment might influence one’s interview behaviors. Specifically, participants who have full-time work experience or are currently employed may be more adept at monitoring and regulating their behavior to act in a professional manner. Furthermore, the exposure to professional work contexts and the qualifications needed for employment might lead these participants to provide evaluations that are more stringent. In Step 2, the mean centered SDO and job status (i.e., entry-level vs. manager-level) predictors were added. Finally, the interaction term of the centered SDO and job status condition was added in Step 3. These steps were carried out on three separate dependent variables. The first two dependent variables were observer ratings of participants’ warmth and positive engagement toward candidates. The third dependent measure was confederates’ rating of participants’ positive engagement toward them during the interview. No
significant effects for SDO, job status condition or the interaction between SDO and job status condition on either observer ratings or confederate ratings. Therefore, no support was found for Hypothesis 4 through 6 (all \( ts \leq 0.78 \); all \( ps \geq .44 \); see Table 5-7).\(^7\)

**Question difficulty.** A main effect for job status (H7) was expected, wherein participants interviewing a Black candidate for a management role would ask a greater proportion of difficult questions than participants interviewing a Black candidate for an entry-level role. A main effect for SDO was also expected (H8), such that high SDO participants were expected to select a greater proportion of difficult interview questions than low SDO participants. Finally, an interaction was expected such that the impact of SDO on the proportion of difficult interview questions chosen would be significant for the management role but not the entry-level role (H9). The same analytic approach used for H4-H6 was employed for these analyses. As with behavioral ratings, no significant effects for SDO, job status or the interaction between SDO and job status (all \( ts \leq 1.05 \); all \( ps \geq .29 \); see Table 8).

**Candidate evaluations.** I proposed a main effect for job status such that participants interviewing a Black candidate for a management role would rate the candidate lower than participants interviewing a candidate for an entry-level role (H10). I also anticipated that high SDO participants would rate a candidate lower than low SDO participants (H11). Finally, I proposed that these main effects would be qualified by an interaction such that higher SDO participants would rate the candidate for the management role significantly lower than the candidate for the entry-level role, whereas lower SDO participants would not be influenced by the job status manipulation (H12). The same analytic approach was carried out for this outcome. Similar to previous hypotheses tests, no significant effects for SDO, job status condition or the

\(^7\) As with the prior analyses, the control variables were not significantly predictive of behavior. Again, a separate test was conducted without the control variables included in Step 1 and none of the predictors significantly predicted behavior.
interaction between SDO and job status condition were found (all $t_s \leq 1.47$, all $p_s \geq .15$; see Table 9).

I also evaluated the influence of SDO on ratings of all of the dimensions or competencies of the candidate; specifically, qualifications, competence, and suitability. The decision to evaluate these dimensions separately was based on the reasoning that ODMs more typically look at specific competencies to aid in their hiring decisions in addition to an overall score. Thus, an examination of each dimension would provide a more realistic correspondence with practice. However, no significant effects for SDO, job status or the interaction between SDO and job status were found (all $t_s \leq 1.31$; all $p_s \geq .19$).

Candidate selection. It was expected that a candidate interviewing for a management-level role would be selected at a significantly lower rate than a candidate interviewing for an entry-level role (H13). Similarly, I also expected that participants with higher SDO would select a Black candidate at a lower rate than participants with lower SDO (H14). Finally, I propose that those with stronger SDO beliefs would select the Black candidate interviewing for a management role at a lower rate compared to candidates interviewing for an entry-level role, whereas selection differences are not expected by job status among low SDO participants (H15). Following steps outlined for my prior analyses, a hierarchical logistic regression analysis was conducted to test H13 through H15. Again, no support for the proposed hypotheses was found (all $\beta_s \leq .49$; all $p_s \geq .24$).

Exploratory Analyses

Exploratory analyses were conducted to investigate the two sub-scales of SDO; Anti-Egalitarianism and Group-Based Dominance (Pratto et al., 2006). Though not heavily investigated, these sub-dimensions are presumed to represent two facets that underlie the overall
SDO construct (Pratto, et al., 2006). Anti-Egalitarianism (SDO-AE) measures a persons’ opposition to group equality, which is manifested in support for ideologies (e.g., meritocracy) and social policies (e.g., anti-affirmative-action) that limit out-groups’ access to power, resources and status and surreptitiously widen group-based inequities. Group-based dominance (SDO-GD) is characterized by overt and aggressive behaviors toward out-groups in the service of worsening the circumstances and hierarchical position of the out-group. Ho, Sidanius, Pratto, Levin, Thomsen, Kteily, & Sheehy-Skeffington (2012) recently examined the correlates of these subscales and found that SDO-AE was a better predictor (relative to SDO-GD) of support for ideologies and policies that stifle the advancement of subordinate out-groups, usually justified through political and economic arguments. Alternatively, SDO-GD was a better predictor of support for overt aggression and prejudice (e.g., overt racism) against subordinate groups (relative to SDO-AE).

SDO – Anti-Egalitarianism

First, the effects of SDO-AE, job status and the interaction between SDO-AE and job status were examined for all outcome variables. The control variables and analytical procedures were identical to those described above.\(^8\) Results revealed a marginally significant main effect for SDO-AE on cardiovascular threat \( (b = .32, t(47) = 2.00, p = .05) \), and a marginally significant interaction between SDO-AE and job status on cardiovascular threat \( (b = -.36, t(46) = -1.70, p = .09) \) (see Table 10). To further probe this effect, a simple slopes analysis was conducted. The results are presented in Figure 6. Among participants in the low-status condition, the relationship between SDO-AE and threat was positive \( (b = .53, t (19) = 2.78, p = .01) \). Among those in the high-status condition, the relationship between SDO-AE and threat was slightly negative \( (b = - .03, t (21) = 0.13, p = .90) \).

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\(^8\) Baseline CO was included as a control as SDO-AE was associated with higher CO at baseline.
An analysis of the remaining dependent variables yielded only one marginally significant effect. Specifically, a marginally significant main effect for SDO-AE was found for the composite rating of overall candidate quality (e.g., qualifications, competence, and suitability), $b = -0.23, t(76) = -1.94, p = .06$. Those who hold stronger SDO-AE views rated Black candidate as being of lower quality than those holding weaker SDO-AE views. However, results of the analyses revealed that there was not a significant effect of job status. Likewise, no significant interaction between job status and SDO-AE on overall candidate ratings was found (all $t$s ≤ .05, all $p$s ≥ .96). As with the main analyses, I evaluated the influence of SDO-AE on participants’ ratings of the candidates’ qualifications, competence, and suitability. Though SDO-AE did not predict ratings of qualifications and competence (all $t$s ≤ 1.30, all $p$s ≥ .11), it did significant predict ratings of candidate suitability, $b = -0.25, t(76) = -2.11, p = .04$.

**SDO – Group-Based Dominance Sub-dimension**

The same analytical steps were carried out for the sub-dimension of SDO-GD. However, neither SDO-GD nor the interaction between SDO-GD and job status were significantly associated with the outcome variables (all $t$s ≤ 1.35, all $p$s ≥ .18).

In summary, I evaluated hypotheses investigating the influence of SDO, job status, and the interaction between SDO and job status on discrimination against Black candidates. Taken together, the results of these tests revealed no support for my main hypotheses. However, subsequent exploratory analyses revealed that the SDO scale sub-dimension of SDO-AE was marginally predictive of threat and discrimination in ratings of Black candidates, whereas the SDO scale sub-dimension of SDO-GD was not (see Table 11 to review the main and exploratory analyses by subgroup). In the next chapter, I will discuss possible reasons for these findings and their theoretical and practical implications.
Chapter 9: Discussion

Despite greater oversight and countless attempts by organizations as well as the government to eliminate employment discrimination against Blacks, equal access to valued job roles for this group remains elusive, especially for Black males (Byars-Winston, Fouad, & Wen, 2015; Parks-Yancy, 2006; Stainback & Tomaskovic-Devey, 2009). Sociologists, psychologists, and economists, among others have articulated numerous causes for the employment disparities faced by Blacks across the workforce (Dovidio & Gaertner, 2000; Leslie, King, Bradley & Hebl, 2008; Lyness, 2002; Wilson, 1997, 2012; Wilson et al., 1999). These perspectives have shed light on important factors impeding Black candidates’ access to valued employment opportunities, particularly management and leadership roles. These factors include preference for similar others (Brewer, 1999; Kantar, 1977), group based stereotypes (Fiske, Cuddy, Glick, & Yu, 2002), individual prejudice (Brief et al., 2000; Dovidio & Gaertner, 2000; McConahay, 1983) and institutional racism (Pager & Shepherd, 2008).

More recently, industrial and organizational psychologists have started to apply SDT as an explanatory framework for understanding the employment disparities of Blacks as well as other non-dominant groups (Capman, 2011; Michinov et al., 2003; Simmons et al, 2015; Umphress et al., 2008). Studies have been guided by a central tenet of SDT, which states that employment settings are one of the three major “arcs” of oppression where group-based inequity originates and is perpetuated (Sidanius & Pratto, 1999). Specifically, theorists underscore the role of ODMs social dominance beliefs (i.e., SDO) in the perpetuation of inequitable outcomes that disfavor and lead to greater employment discrimination against non-dominant groups (e.g., Blacks) (Sidanius & Pratto, 1999). Indeed, findings from existing studies demonstrate that SDO is associated with worse employment outcomes (e.g., lower ratings and selection) for Black
candidates (Capman, 2011; Michinov et al., 2003; Umphress et al., 2008). Yet, less is known about whether and how SDO beliefs held by ODMs might impede access to management and leadership roles. In fact, only one study has shown that individuals with higher SDO display more pronounced discrimination when asked to evaluate and select a Black candidate for a leadership relative to a non-leadership role (Simmons et al., 2015).

The current study was conducted to build upon the existing research investigating SDO in employment contexts and to clarify the role of SDO in the perpetuation of Blacks’ underrepresentation in management and leadership roles. Specifically, I put forth and tested the hypothesis that those with stronger SDO views would be more threatened by a Black candidate seeking employment in a management relative to a non-management role as it would signify a potential threat to the dominant groups’ position in the existing social and organizational hierarchy. I also reasoned that higher SDO individuals would exhibit more pronounced discrimination against a Black candidate who was applying for a management relative to a non-management role. These ideas were developed from research showing that individuals with higher SDO tend to view the world as a competitive place, are more vigilant to threats to the social hierarchy and stifle attempts to disrupt the existing social hierarchy and the dominant groups’ position (Dover et al., 2016; Duckitt, 2001; Perry et al., 2015; Pratto et al., 2006; Sidanius et al., 2007).

To test these propositions, an experimental study was developed whereby participants were recruited to play the role of a recruiter and asked to interview a Black male candidate (i.e., confederate) who was interviewing for either a low or high status job role. Physiological reactivity (i.e., a direct measure of challenge and threat), warmth and positivity during the interview, and employment decisions (e.g., ratings) as a function of SDO were examined. In the
following sections, I review results of the study. I then discuss the theoretical and practical implications of findings and those resulting from exploratory analyses. Finally, I discuss the limitations and strengths of the current study and suggest directions for future research.

**Review and Interpretation of Results**

Overall, support for the proposed hypotheses was not found. Given prior findings demonstrating that SDO was predictive of threat, prejudice and discrimination, a definitive explanation for the lack of significant findings is difficult to offer. A possible reason may be the characteristics of the sample involved in the study. That is, the college campus during the time in which the study took place was (and continues to be) very ethnically diverse. Specifically, 33% of the student body was White, 40% Asian, 15% Hispanic/Latino and 11% Black in the 2015-16 academic year (Baruch College Facts at a Glance, 2015). Thus, it is possible that the students on the college campus in general and in this study in particular were less threatened by interactions with other racial/ethnic group members (e.g., Blacks) given their unusually high levels of contact and friendships with individuals from different racial/ethnic groups. Indeed, the current sample reported having frequent and positive contact with other racial/ethnic groups. Specifically, the mean on the other group orientation scale for this sample was quite high ($M = 5.62$, on a scale from 1 to 7). Only 4 out of the 88 participants (i.e., 5%) in the sample fell below the midpoint on this scale (i.e., indicated a negative view other groups). This unique characteristic of the current sample may have contributed to the lack of significant findings (e.g., threat responding, lower displays of positive engagement and warmth, etc.). In support of this explanation, researchers have shown that positive and frequent contact with out-group members leads to greater comfort and less negativity toward out-groups (Blascovich et al., 2001; Page-Gould, Mendoza-Denton, & Tropp, 2008; Tropp & Pettigrew, 2006).
Another possible cause for the null findings in the current study might have been the characteristics of the confederates. Specifically, a review of the recordings showed that the confederates used in this study behaved in a very warm, engaging and professional manner. This may have attenuated the threat experienced and the negative ratings provided by participants. Additionally, the two confederates differed in their skin tone such that one confederate had a darker complexion and the other had a lighter complexion. The complexion of the lighter skin confederate might have attenuated the relationship between SDO and threat and SDO and discrimination. Indeed, research by Harrison and Thomas (2009) found that White participants preferred to hire a lighter skin candidate relative to a darker skin candidate. Research by Marira (2014) showed that Black participants also showed preference for light skin relative to darker skin Black candidates.

The non-significant findings may have also occurred because I developed and tested my hypotheses using the overall SDO construct to predict discrimination against Black candidates. A focus on the sub-dimensions of SDO (e.g., Anti-Egalitarianism and Group-Based Dominance) might have been more appropriate for the current study. As previously described, SDO is made up of an anti-egalitarianism (SDO-AE) and a group dominance (SDO-GD) sub-dimension (Ho et al., 2012). SDO-AE signifies opposition to group-based equality and support for policies and tactics that exclude subordinate (e.g., Blacks) groups from accessing resources and/or pathways to a higher social (or economic) position in society. Alternatively, SDO-GD captures the aspect of SDO that corresponds to more overt and aggressive support for group-based hierarchies and behaviors that maintain them (e.g., overt racism, discrimination). Research has demonstrated that despite being highly correlated, the predictive utility of these two sub-dimensions varies depending on the context of the intergroup setting (Ho et al., 2012).
Given this possibility, I carried out exploratory analyses to evaluate the predictive utility of these sub-dimensions in an employment interview and selection context. I reasoned that one sub-dimension would be a better predictor of outcomes relative to the other sub-dimension. That is, on the one hand, overt acts (and support) of discrimination in the workplace are highly discouraged and subject to negative social and legal consequences (Kravitz, 2008). Thus, group dominance motives (i.e., SDO-GD) may not influence responses and behaviors (e.g., overt discrimination) in this context. Conversely, SDO-AE and the desire to prevent out-groups from equal opportunities and resources (i.e., high-status jobs) may be more relevant in employment contexts as they are likely to be more associated with strategies that covertly sustain the existing group hierarchy. That is, this motive is more likely to engender behaviors that rely less on blatant acts of oppression, in favor of strategic approaches for preventing devalued out-groups from access to prized jobs and opportunities.

Overall, the pattern of results from this exploratory analysis suggested that focusing on SDO-AE, and not SDO-GD, may be a more fruitful approach when investigating discrimination in the workplace. As anticipated, results revealed that stronger SDO-GD views were not predictive of any of the outcomes. This finding aligns with expectations that this sub-dimension has less predictive utility in employment contexts as blatant acts of discrimination are taboo in employment settings. However, I did find that SDO-AE was a marginally significant predictor of threat responding, such that those with stronger (relative to weaker) SDO-AE beliefs exhibited greater threat responding than those with lower SDO-AE. Though speculative, it may be that greater threat responses among those with stronger SDO-AE views might have been driven by concerns about equal access to valued jobs by an out-group member and its threat to the existing social and employment hierarchy.
Furthermore, I found an interaction between SDO-AE and job status. However, contrary to expectations, the pattern of results revealed that higher SDO-AE was positively associated with higher threat responding when interviewing a Black candidate for the low-status (i.e., Entry-Level/Marketing Assistant) but not a high-status (i.e., Management/Vice President of Marketing) job role. It is unclear why this pattern of results was found. One possible explanation for this pattern may be that the participants may have been more threatened by a Black candidate (or any out-group candidate) applying for and acquiring an entry-level role as the job was more relevant (than a Vice President role) to the type of job the participants might be applying for in the very near future. Research by Mendes, Blascovich, Major and Seery (2001) provides possible support for this explanation. Mendes et al. examined threat response as a function of downward and upward social comparison with similar (i.e., in-group) versus dissimilar (i.e., out-group) others (Study 2). They found that participants experienced a more pronounced threat response when an out-group member outperformed them on a self-relevant task relative to when an in-group member outperformed them on the same task. In the current study, the candidate profile (e.g., resume) was developed so that the candidate clearly met the requirements of the current job role and demonstrated success in similar roles. In addition, the candidate provided clear and relevant responses to the interview questions. Thus, it is possible that participants perceived their own academic and employment record and interview performance as paling in comparison to the candidate they were interviewing. The relative merit of the candidate’s resume may have been especially threatening for a person with stronger SDO-AE views as it may have signaled that an out-group member might have a greater likelihood of gaining access to a valued entry point in the workforce (i.e., valued resource). While possible, additional information, such as
participants’ academic and detailed employment history, desired occupation, and upcoming employment goals would be needed to evaluate this possible explanation.

What is also noteworthy is that SDO-AE was marginally predictive of discriminatory behaviors (i.e., ratings) that were less subject to verification (i.e., more subjective). That is, those with higher SDO-AE views provided lower overall ratings of the candidate (composed of ratings of qualifications, competence and suitability) than those who held weaker SDO-AE views, regardless of the status of the job. Exploratory analyses were conducted to evaluate whether SDO-AE would predict ratings of the candidates on each of the separate rating dimensions (i.e., qualifications, competence and suitability). These steps were taken to approximate actual hiring practices; that is, recruiters and hiring manager often evaluate all dimensions or competencies of a candidates, rather than an overall score when evaluating a candidates’ quality and fit. Results showed that those who held stronger (relative to weaker) SDO-AE views did not provide lower candidate ratings of competence and qualifications, but stronger SDO-AE views did predict significantly lower ratings of candidates’ suitability. These patterns of findings for candidate ratings corresponds to work by Dovidio and Gaertner (2000), who found that Black candidates were given worse evaluations and were less likely to be recommended for a job than White candidates when the candidates were of average qualifications (i.e., ambiguous), but not when the candidates’ qualifications were very high (i.e., unambiguous). According to Dovidio and Gaertner (2000), participants may have found it difficult to discriminate (i.e., provide lower ratings) against Black candidates when they were clearly qualified, but much easier when the qualifications of the candidate was average (i.e., less certain or ambiguous).

With these findings in mind, the above patterns might indicate that participants with stronger SDO-AE views may have rated the candidate in a strategic manner whereby they
provided lower ratings to candidates on the less objective quality (i.e., suitability), but not for qualities that were more objective or unambiguous. Specifically, participants were provided with resumes that were crafted through pilot work so that the candidates met the requirements of the job role. Thus, the qualifications and competence of the candidates were less ambiguous and less amenable to rating the candidate poorly. Conversely, an evaluation of the candidates’ suitability was more open to interpretation and more amenable to rating the candidate poorly. Thus, those with stronger SDO-AE views (relative to those with weaker SDO-AE views) may have felt there was more latitude to rate the candidate more poorly on this dimension relative to those with weaker SDO-AE views.

In summary, the current findings were consistent with Ho et al. (2012; 2015), who proposed that the predictive value of the SDO subdimensions may be dependent on the intergroup context at hand. With this in mind, in my exploratory analyses, I reasoned that SDO-GD might be a poor predictor of discrimination in this setting as it is more strongly related to overt acts of discrimination and such acts are both prohibited and social undesirable in work settings. Alternatively, SDO-AE might be a good predictor of discrimination in the workplace as it is more associated with subtle act and decisions that suppress equal access to resources and power (i.e., high values jobs). The results of my exploratory analyses highlighted that SDO-AE might be a better predictor of discrimination in the workplace relative to SDO-GD. However, this conclusion is submitted with caution, as the results for SDO-AE in the exploratory analyses were mostly marginally significant. Further research should investigate SDO-AE and SDO-GD in employment contexts to clarify their relative predictive value.

*Limitations and Suggestions for Future Research*
As with all lab studies, the current study had limitations. As detailed above, the first limitation of the current study was the sample recruited. At the outset of the study, the goal was to recruit White-males as this group best approximated incumbents in organizational management and leadership roles (Lyness, 2002). However, recruitment of this demographic group was especially difficult in the current setting as the proportion of White males in the participant pool was small (see discussion above). Additionally, while only a few participants indicated that they suspected the study was concerned with race, those that did, informed the investigators during the debriefing sessions that only recruiting White males might make the intent of the study salient to participants. Thus, in order to improve recruitment and minimize suspicion, the recruitment approach was modified to include males and females across all races and ethnicities. While this approach met those goals, the participants included in the study did not match the race/ethnicity and gender profile of typical incumbents in leadership and management roles; that is, White-males (Lyness, 2002).

The demographic profile of participants in the current study also differed from the samples recruited in prior research studies investigating cardiovascular threat during interactions with Blacks (e.g., Blascovich et al., 2001; Mendes et al., 2002) and prejudice and discrimination against Blacks (e.g., Dovidio & Gaertner, 2000). That is, whereas prior studies included nearly all White participants, only 14.3% were White males in the cardiovascular threat analysis and 22.7% were White males for the remaining analyses. Even more, nearly all (i.e., over 90%) of the participants included in study sample reported that they were comfortable around and had frequent contact with individuals from different racial/ethnic groups. Again, as mentioned, the lack of threat and negativity found among the participants in the current study fits with the postulates of other researchers, who have shown that frequent and positive contact with out-
group members is associated with lower discomfort and negative views during intergroup contact situations, particularly with devalued out-groups (see Blascovich et al., 2001; Tropp & Pettigrew, 2006). Taken together, the demographic characteristics and participants’ experience with other racial/ethnic groups differed substantially from samples in prior research and this may have contributed to the current null findings. A potential future study that would better evaluate this explanation as well as more appropriately test the hypotheses of the current study would be to carry out this study with White-males or on a college campus where the student population was less diverse (i.e., predominantly White). Another potential future study would be to examine the hypotheses of the current study using gender, as opposed to race/ethnicity, as the intergroup target group.

A second limitation of this study was the restriction of non-verbal and verbal behaviors of participants. Specifically, the cardiovascular measures required that electrodes be placed on participants’ neck, front ribcage, lower back, and collarbone and the blood pressure cuffs placed on participants’ wrist. They were also instructed by the experimenters to minimize their movements to ensure that recordings could be captured accurately. Additionally, participants were only allowed to ask the standard questions and listen to the candidate’s responses. Thus, while the placement of the cardiovascular equipment (e.g. electrodes) and the instructions to minimize movements improved the collection of cardiovascular data, it also restricted participants from moving and gesturing naturally during the interview. Furthermore, the structured interview protocol severely limited participants’ speaking time, their opportunity to ask unique questions (e.g., follow-up or probing questions) and any other conversational patterns that might typically occur during employment interviews. Taken together, these aspects of the study paradigm may have limited the variability in participants’ positive engagement and
warmth. This, in turn may have limited the prediction of non-verbal and verbal behavioral patterns by participants as a function of SDO as well as the other predictors.

Future studies that seek to evaluate non-verbal discriminatory behaviors while also investigating threat responding might employ alternate psychophysiological measures of threat that do not impose restrictions on bodily movements. Recent research by Koslov and Mendes (2012) represents one possible approach. In their study, they collected cortisol measures (i.e., a threat index) by collecting a saliva sample after White participants interacted with a Black confederate. With this approach, they were able to record participants unrestricted non-verbal behaviors during the interaction (e.g., leaning forward or backward, making hand gestures) while also collecting measures that correspond to threat responding. Future research, in which ongoing threat responding is measured along with non-verbal behavior throughout an interracial (or other) interaction, might also employ newer wireless psychophysiological equipment that allows participants to move more freely with less concern about movement artifacts that might lead to errors when collecting cardiovascular measures (Biopac, 2016). Finally, future studies might take an alternate approach to evaluating non-verbal and verbal behaviors than those taken in the current study. That is, in the current study I sought to understand the general climate (e.g., overall positive engagement and warmth) that participants created during the interview. This approach was taken as I was interested in the potential “chilling effect” a participant might create that may send a message to the candidate that they would not want to work with the participant or in the organization. I adopted Littleford, et al.’s (2005) approach to measuring non-verbal behavior, which captured the overall impression an interaction partner elicited (i.e., positive engagement and friendliness). The study by Koslov and Mendes (2012) also provides a measurement approach that might better capture behavioral nuances. Specifically, they asked
independent raters to measure the frequency of observable positive behaviors over a fixed time period such as the frequency of smiles, nodding, and positive or affirming statements (e.g., “great”, “wonderful”). This approach might be more amenable to capturing behavior of participants that are constrained by the physiological equipment and an interview study script.

A third limitation of this study was the sensitivity of the psychophysiological measurement equipment. That is, the cardiovascular response measures for twenty-one participants were lost due to equipment failure (e.g., blood pressure, impedance cardiographic recordings). Thus, the unusable cardiovascular data limited the power to detect significant effects for SDO, status and the interaction between SDO and status on the prediction of threat.

A fourth limitation was the physical space of the study setting. Specifically, the cardiovascular equipment (e.g., electrode cables, BP monitor and cuff) and the desktop computer with the physiological data collection hardware and software (i.e., AcqKnowledge) were located in the same room where the participant carried out the interview. Because the experimenter needed to monitor the physiological response recordings throughout the study session, the experimenters needed to be seated in the same room in which the study took place. While a room divider was placed in the room to provide visual privacy, the experimenter was still able to hear the interview. While necessary to monitor the physiological data collection, the presence of another person may have also caused participants to exhibit less negative behaviors and attitudes toward the Black confederate. Indeed, research by Castelli and Tomelleri (2008) has shown that individuals’ are more likely to reduce their negative responses toward Blacks when in the presence of another person than when alone. These researchers argued that in the presence of others, people act in ways that appear to be non-prejudiced as it is considered normative behavior. Thus, in the current study, the presence of the experimenter in the room may have also
caused participants to behave in a less discriminatory manner and react positively toward the candidate. Future studies should ensure that the data acquisition hardware and software are situated in an adjacent room so the experimenter is not in the same room where the study is taking place.

A fifth limitation of the current study may have been the use of a web-based, virtual interview. The decision to conduct the interview over the Internet was guided by practical considerations. Specifically, the internet based interview was carried out to aid in recruiting as it provided for greater scheduling flexibility for confederates. Additionally, it provided an integrated platform for recording the verbal and non-verbal behaviors of both participants and confederates. Though helpful operationally, this medium might have affected the ratings provided by participants. On the one hand, it may have detracted from the realism of interview in the eyes of participants. This may have made the study paradigm less externally valid. Use of a virtual interview might have also led to artificially inflated ratings. Research by Chapman and Webster (2001) showed that participants rated candidates who were interviewed with computer-mediated technology more positively than candidates who were interviewed in-person. To account for the possible limitations of this study paradigm, future studies might investigate the impact of SDO within live, in-person interviews.

A sixth possible limitation of this study may be the characteristics of the confederates. While efforts were made to ensure that the two confederates behaved in a similar manner and shared similar physical characteristics, logistical considerations and the availability of Black male confederates limited my ability to recruit confederates who shared similar physical and behavioral displays. Specifically, one confederate had a dark complexion, whereas the other had a lighter complexion. Furthermore, a review of the recordings showed that the confederates
showed some differences in their demeanor. Together, these differences may have attenuated the findings for the influence of SDO on threat and discrimination. Future studies should ensure that one confederate is used to eliminate any potential confounds caused by the characteristics of different confederates.

The number of statistical tests carried out in the current study is a seventh possible limitation of this study. That is, my exploratory analysis evaluated several moderators that might have affected my results (e.g., race, gender, confederate, and experimenter, and job experience). Given the number of statistical tests carried out, it is possible that the marginal findings for the SDO-AE may have occurred due to the sheer number tests carried out (i.e., family-wise error). As a result, the exploratory findings should be considered with caution until future studies have replicated the findings for SDO-AE.

An eighth limitation of the current study is that I did not ask participants to provide an explanation for their ratings and selection decisions. As a result, I was unable to evaluate alternative reasons for the null findings. A future study should ask participants to provide a rationale for their ratings.

A final limitation involved the development of only two categories of difficult interview questions; easy and difficult. I was only able to identify seven questions (out of nearly forty items that were piloted) that were significantly different with respect to perceived difficulty. Of the seven questions, four were rated as difficult and three were rated as easy questions. The easy and difficult questions were perceived to be significantly different from each other, but were also not significantly different from the other difficult and easy questions, respectively. As I was not able to identify questions with medium difficulty that were significantly different from both easy
and difficult items, the ability to detect significant differences in choosing difficult interview questions may have been limited.

*Theoretical Implications*

Despite the limitations and lack of support for the proposed hypotheses, the current study does offer some insights for theory. First, I developed a rarely employed paradigm to investigate employment discrimination against Blacks. That is, participants engaged in a simulated face-to-face interview with a Black candidate. This approach diverges from traditional investigations, which most often use paper people (i.e., candidate profiles or resumes) to investigate employment discrimination against Blacks and other minority candidates. Landy (2008) has argued that the traditional paradigm is too far removed from real work settings and does not inform theory about how prejudice, stereotypes and discrimination unfolds in actual work contexts. The paradigm in the current study was developed to be more ecologically valid and offer greater insight into the incidence and expression of prejudice, stereotypes and discrimination in this setting. Future studies should continue to develop paradigms that more closely approximate work settings and situations as doing so will likely provide more keen insights into the degree and type of prejudice and discrimination that exists in employment contexts.

Second, the finding that SDO-AE (marginally) predicted threat and lower candidate ratings informs Social Dominance Theory. Specifically, the finding that SDO-AE, but not SDO-GD predicted discrimination bolsters the views of Ho et al. (2012), who propose that SDO is best represented as two dimensions and that the utility of each dimension depends on the context of the intergroup settings. Though marginal, findings in the current study point to the greater utility of SDO-AE in employment settings. These patterns highlight the need to conduct additional
studies that investigate how SDO-AE and SDO-GD influence behaviors and decisions in work and employment settings. Furthermore, future studies should recruit White-males for these studies as they are typically ODMs in organizational settings.

A third contribution to theory is the finding that SDO-AE predicted threat and discrimination despite the sample being largely non-White. Specifically, it adds to the notion of consensual agreement within SDT, which is the view that social dominance beliefs influence the hierarchy enhancing behaviors of all groups in a society, not just dominant group members. In other words, the structure and maintenance of a hierarchical system is dependent on consensual agreement of member of all groups (Pratto & Sidanius, 1999). Most studies of SDT investigate how dominant groups suppress the social and economic advances of subordinate groups. This position is largely taken as dominant group members have more power and resources to impede subordinate groups’ progress. However, few studies examine how other subordinate groups (relative to the dominant group) might also stifle the advances of groups at the bottom of the hierarchy. Thus, this study contributes to the literature in that it highlights how social dominance views (i.e., SDO-AE) of other, non-dominant group members also maintain group-based inequity. It also highlights the need for further investigations of how SDO among non-dominant group members, those who are not part of the most dominant group, might also behave in hierarchy enhancing ways.

Practical Implications

The findings of the current study also have implications for practice. Specifically, the finding that SDO-AE was predictive of lower candidate ratings, in particular, suitability ratings, highlights the need for organizations to place greater rigor around employment selection processes (i.e., resume screening and interviews) as well as exhibit greater scrutiny of the hiring
decisions and factors that ODMs use to hire and promote candidates. One possible approach to achieve this would be to require all hiring managers to provide justification for their ratings of candidates and hiring decisions (Ford, Gambino, Lee, Mayo & Ferguson, 2004). Similarly, organizations might incorporate diversity metrics into their performance management system wherein diversity hiring and promotion decisions are incorporated into a manager's overall performance rating (Catalyst, 2009). An additional practical opportunity is for organizations to develop, implement and train human resources professionals and hiring managers to use only job related qualifications for employment decisions (see Campion, Palmer & Campion, 1997). This approach might minimize the influence of non-job-related criteria (e.g., fit or suitability) on employment decisions about qualified (minority) candidates.

Organizations may also reduce the incidence of discrimination by having policies and practices that support a culture of diversity and inclusion. This might include actively recruiting and hiring individuals who are high on openness to experiences and agreeableness as these personality traits are associated with lower generalized prejudice and social dominance orientation (Altemeyer, 1998; Heaven, Organ, Supavadeeprasit, & Leeson, 2006).

Finally, the lack of effects for the full SDO measure in the current sample may indicate that greater and more positive contact with other racial/ethnic groups might be effective means of reducing prejudice in discrimination. This speaks to suggestions by Avery, Richeson, Hebl and Ambady (2009) who state that organizations might benefit from developing programs that provide all employees with opportunities to engage in structured interracial interactions in order to raise awareness, increase comfort, reduce stereotypes and develop friendships among different groups.

Conclusion
This study sought to incorporate intergroup theory to organizational research to predict and explain why Black-males are underrepresented in management and leadership roles. Unlike previous research, this study also sought to understand the role of intergroup threat by capturing physiological responding in an employment context. While the results of the study largely failed to support the a priori predictions, the exploratory results did highlight that research on SDT might be advanced by investigating the influence of its subdimensions on discrimination in the workplace. Additionally, the results of the study highlight the need to investigate and clarify how all groups contribute to the maintenance of the inequitable hierarchical social systems.
Table 1

Pilot Study 2 Interview Questions (Sorted in descending order of the mean difficulty rating; questions used in the main study are bolded)

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you knew a product you were marketing has an adverse impact on the public or consumer, how would you go about marketing the product?</td>
<td>57</td>
<td>4.79</td>
<td>1.37</td>
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<td>What would you do if a social activist group found a marketing campaign you helped develop was offensive?</td>
<td>57</td>
<td>4.75</td>
<td>1.12</td>
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<td>What customer experience strategies are disrupting the status quo in our industry?</td>
<td>55</td>
<td>4.69</td>
<td>1.30</td>
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<td>Based on your research, what is the greatest weakness in our current marketing strategy?</td>
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<td>4.60</td>
<td>1.13</td>
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<td>If you were given two tasks, one is time sensitive from your director, the other is not time sensitive, but is from the CEO. Which task would you complete first? Why?</td>
<td>57</td>
<td>4.42</td>
<td>1.50</td>
</tr>
<tr>
<td>How long would it take for you to make a meaningful contribution to our company? Why?</td>
<td>57</td>
<td>4.35</td>
<td>1.36</td>
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<tr>
<td>Can you give me an example of marketing plan that did not work out as you had planned?</td>
<td>57</td>
<td>4.30</td>
<td>1.38</td>
</tr>
<tr>
<td>What is your greatest failure, and what did you learn from it?</td>
<td>56</td>
<td>4.18</td>
<td>1.31</td>
</tr>
<tr>
<td>What do you consider the 3 most important aspects of successful marketing campaigns?</td>
<td>56</td>
<td>4.14</td>
<td>1.26</td>
</tr>
<tr>
<td>Question</td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
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<td>-------------------------------------------------------------------------</td>
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<tr>
<td>What factors do you consider the most important when attempting to influence consumer behavior?</td>
<td>56</td>
<td>4.13</td>
<td>1.16</td>
</tr>
<tr>
<td>How and when do you evaluate your marketing campaigns?</td>
<td>56</td>
<td>3.96</td>
<td>1.18</td>
</tr>
<tr>
<td>Do you subscribe to a particular marketing belief or methodology? If so, what is it?</td>
<td>56</td>
<td>3.96</td>
<td>1.22</td>
</tr>
<tr>
<td>How would you approach a co-worker who has not completed a task that he or she promised to carry out?</td>
<td>57</td>
<td>3.96</td>
<td>1.03</td>
</tr>
<tr>
<td>How would you identify target customers in your marketing plan?</td>
<td>57</td>
<td>3.93</td>
<td>1.24</td>
</tr>
<tr>
<td>What evidence do you use to find out if a marketing plan is succeeding?</td>
<td>56</td>
<td>3.93</td>
<td>1.20</td>
</tr>
<tr>
<td>What was the greatest challenge that you faced in a previous job? How did you solve or approach this problem?</td>
<td>57</td>
<td>3.89</td>
<td>1.35</td>
</tr>
<tr>
<td>What aspect(s) of working in a marketing career do you like the least?</td>
<td>57</td>
<td>3.88</td>
<td>1.17</td>
</tr>
<tr>
<td>What steps do you take when developing a marketing plan?</td>
<td>57</td>
<td>3.86</td>
<td>1.33</td>
</tr>
<tr>
<td>What's your ideal company?</td>
<td>27</td>
<td>3.85</td>
<td>1.49</td>
</tr>
<tr>
<td>What experience or skills do you feel make you more deserving of this job than other candidates?</td>
<td>57</td>
<td>3.82</td>
<td>1.47</td>
</tr>
<tr>
<td>What information would you use to find out if your marketing plan is working?</td>
<td>56</td>
<td>3.80</td>
<td>1.20</td>
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<tr>
<td>If you were hired for this position, what do you feel would be the reason or reasons that you were hired for the job?</td>
<td>57</td>
<td>3.79</td>
<td>1.37</td>
</tr>
<tr>
<td>Question</td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>What is your greatest achievement in your career, up to now?</td>
<td>57</td>
<td>3.79</td>
<td>1.35</td>
</tr>
<tr>
<td>What role do you feel PR play in marketing communications?</td>
<td>57</td>
<td>3.72</td>
<td>1.25</td>
</tr>
<tr>
<td>What is the difference between marketing a service and marketing a product?</td>
<td>57</td>
<td>3.68</td>
<td>1.32</td>
</tr>
<tr>
<td>Why do you want to work for this organization?</td>
<td>57</td>
<td>3.63</td>
<td>1.46</td>
</tr>
<tr>
<td>What did you like most about your career in marketing?</td>
<td>56</td>
<td>3.61</td>
<td>1.44</td>
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<tr>
<td>Least?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>What social media platforms do you think are most effective for marketing a product? Why?</td>
<td>57</td>
<td>3.54</td>
<td>1.32</td>
</tr>
<tr>
<td>How important do you feel it is to communicate with the sales team?</td>
<td>57</td>
<td>3.51</td>
<td>1.51</td>
</tr>
<tr>
<td>How would you prefer to distribute and manage information?</td>
<td>57</td>
<td>3.47</td>
<td>1.27</td>
</tr>
<tr>
<td>For example, internet, print media. Why?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What experience in your previous roles has helped prepare you for this role?</td>
<td>57</td>
<td>3.40</td>
<td>1.18</td>
</tr>
<tr>
<td>What are the advantages of online advertising over traditional advertising?</td>
<td>57</td>
<td>3.39</td>
<td>1.39</td>
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<tr>
<td>Why are you interested in this job?</td>
<td>57</td>
<td>3.26</td>
<td>1.47</td>
</tr>
<tr>
<td>When were you most satisfied in your career?</td>
<td>57</td>
<td>3.26</td>
<td>1.30</td>
</tr>
<tr>
<td>Please describe what you did in your previous role?</td>
<td>57</td>
<td>3.02</td>
<td>1.40</td>
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<tr>
<td><strong>Tell me about your proudest achievement.</strong></td>
<td>26</td>
<td>2.92</td>
<td>1.50</td>
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<td><strong>What were the responsibilities of your last position?</strong></td>
<td>27</td>
<td>2.78</td>
<td>1.70</td>
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<tr>
<td><strong>How did you learn about this job?</strong></td>
<td>57</td>
<td>2.72</td>
<td>1.52</td>
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Table 2

Intercorrelations (Cardiovascular Analyses)

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<tr>
<td>2</td>
<td>Male (0=No, 1=Yes)</td>
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<td>3</td>
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<td>.22</td>
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<td>5.70</td>
<td>1.07</td>
<td>-.08</td>
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<td>5</td>
<td>Confederate</td>
<td>56</td>
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<td>-.58**</td>
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<td>.14</td>
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<td>.02</td>
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<td>7</td>
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<td>56</td>
<td>3.08</td>
<td>1.08</td>
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<td>.27*</td>
<td>.39**</td>
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<td>8</td>
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* p < 0.05; ** p < 0.01. All significance levels are based on two-tailed tests.

¹MA: Marketing Assistant (Low Status), VP: Vice President of Marketing (High Status)
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<tr>
<td>11. Engagement (R)</td>
<td>69</td>
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<td>.25*</td>
<td>.21</td>
<td>.29*</td>
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<td>.02</td>
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<tr>
<td>12. Friendly (R)</td>
<td>69</td>
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<td>.04</td>
<td>-.05</td>
<td>.30</td>
<td>.58**</td>
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</tr>
<tr>
<td>13. Difficult Interview Questions</td>
<td>69</td>
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<td>0.37</td>
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<td>-.15</td>
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<td>-.05</td>
<td>-.16</td>
<td>.12</td>
<td>.04</td>
<td>-.12</td>
<td>.00</td>
<td>-.24*</td>
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</tr>
<tr>
<td>14. Selection</td>
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<td>-.07</td>
<td>-.12</td>
<td>.17</td>
<td>-.20</td>
<td>-.15</td>
<td>-.07</td>
<td>-.05</td>
<td>-.16</td>
<td>.12</td>
<td>.04</td>
<td>-.12</td>
<td>.00</td>
<td>-.24*</td>
<td></td>
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</tr>
<tr>
<td>15. Salary</td>
<td>88</td>
<td>9.01</td>
<td>3.63</td>
<td>.40**</td>
<td>.09</td>
<td>-.01</td>
<td>.02</td>
<td>.07</td>
<td>-.03</td>
<td>.12</td>
<td>.53**</td>
<td>.22*</td>
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<td>.01</td>
<td>.03</td>
<td>-.04</td>
<td>.07</td>
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<tr>
<td>16. Overall Candidate Rating</td>
<td>88</td>
<td>5.28</td>
<td>0.98</td>
<td>-.15</td>
<td>.07</td>
<td>.25*</td>
<td>-.14</td>
<td>-.16</td>
<td>.05</td>
<td>-.02</td>
<td>-.10</td>
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<td>-.14</td>
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<td>-.05</td>
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<td>.36**</td>
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<tr>
<td>17. Candidate Qualifications</td>
<td>88</td>
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<td>-.01</td>
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<td>-.10</td>
<td>-.15</td>
<td>.02</td>
<td>-.04</td>
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<td>-.03</td>
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<td>.01</td>
<td>-.07</td>
<td>.31**</td>
<td>.38**</td>
<td>.89**</td>
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</tr>
<tr>
<td>18. Candidate Competency</td>
<td>88</td>
<td>5.43</td>
<td>1.10</td>
<td>-.07</td>
<td>-.08</td>
<td>.09</td>
<td>-.28**</td>
<td>-.07</td>
<td>-.17</td>
<td>.08</td>
<td>-.03</td>
<td>-.04</td>
<td>-.07</td>
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<td>-.01</td>
<td>.37**</td>
<td>.30**</td>
<td>.92**</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>19. Candidate Suitability</td>
<td>88</td>
<td>5.22</td>
<td>1.14</td>
<td>-.03</td>
<td>-.19</td>
<td>.11</td>
<td>-.23*</td>
<td>-.20</td>
<td>-.10</td>
<td>.03</td>
<td>.02</td>
<td>-.13</td>
<td>.01</td>
<td>-.13</td>
<td>.08</td>
<td>-.07</td>
<td>.43**</td>
<td>.29**</td>
<td>.88**</td>
<td>.64**</td>
<td>.70**</td>
</tr>
</tbody>
</table>

* p < 0.10; ** p < 0.05; *** p < 0.01. All significance levels are based on two-tailed tests.

1 White: 0=non-White, 1=White; 2 Male: 0=Female, 1=Male; 3 Business Major: 0=Non-Business Major, 1=Business Major; 4 Currently Employed: 0=Not Employed, 1=Employed; 5 Confederate: 0=Confederate 1, 1=Confederate 2; 6 Job Status: 0=Low Status, 1=High Status; 7: C: Confederates’ ratings of positive engagement;
R: Observers ratings of positive engagement and friendliness; Selection: 0=Not Selected, 1=Selected.
### Table 4

**Summary of Hierarchical Regression Analysis of Threat Responding (N = 56)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>-0.36</td>
<td>0.65</td>
<td>-0.08</td>
<td>-0.66</td>
<td>0.67</td>
<td>-0.15</td>
<td>-0.62</td>
<td>0.68</td>
<td>-0.14</td>
</tr>
<tr>
<td>Male (0=No, 1=Yes)</td>
<td>0.78</td>
<td>0.81</td>
<td>0.2</td>
<td>0.39</td>
<td>0.83</td>
<td>0.10</td>
<td>0.37</td>
<td>0.84</td>
<td>0.09</td>
</tr>
<tr>
<td>Confederate</td>
<td>-0.66</td>
<td>0.71</td>
<td>-0.16</td>
<td>-1.18</td>
<td>0.77</td>
<td>-0.29</td>
<td>-1.18</td>
<td>0.78</td>
<td>-0.29</td>
</tr>
<tr>
<td>Business Major (0=No, 1=Yes)</td>
<td>-0.46</td>
<td>0.61</td>
<td>-0.11</td>
<td>-0.76</td>
<td>0.64</td>
<td>-0.19</td>
<td>-0.83</td>
<td>0.65</td>
<td>-0.20</td>
</tr>
<tr>
<td>Other Group Orientation</td>
<td>0.08</td>
<td>0.26</td>
<td>0.05</td>
<td>0.10</td>
<td>0.26</td>
<td>0.06</td>
<td>0.08</td>
<td>0.26</td>
<td>0.05</td>
</tr>
<tr>
<td>Baseline Cardiac Output</td>
<td>-0.81</td>
<td>0.66</td>
<td>-0.24</td>
<td>-1.00</td>
<td>0.67</td>
<td>-0.29</td>
<td>-0.99</td>
<td>0.68</td>
<td>-0.29</td>
</tr>
<tr>
<td>SDO</td>
<td>-</td>
<td></td>
<td></td>
<td>0.50</td>
<td>0.32</td>
<td>0.27</td>
<td>0.71</td>
<td>0.43</td>
<td>0.38</td>
</tr>
<tr>
<td>Job Status (0=MA, 1=VP)</td>
<td>-</td>
<td></td>
<td></td>
<td>0.48</td>
<td>0.54</td>
<td>0.13</td>
<td>0.48</td>
<td>0.54</td>
<td>0.13</td>
</tr>
<tr>
<td>SDO X Job Status</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.37</td>
<td>0.52</td>
<td>-0.15</td>
</tr>
<tr>
<td>(R^2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F) for change in (R^2)</td>
<td>0.08</td>
<td></td>
<td></td>
<td>0.14</td>
<td></td>
<td></td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** SDO was centered at its means.

\*† \(p < 0.10; \ast p < 0.05; \ast\ast p < 0.01\). All significance levels are based on two-tailed tests.

\[\text{MA: Marketing Assistant (Low Status), VP: Vice President of Marketing (High Status)}\]

Bolded numbers represent the hypotheses tested.
Table 5

Summary of Hierarchical Regression Analysis for Confederates’ Evaluation of Participants’ Positive Engagement (N = 88)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>-0.06</td>
<td>0.16</td>
<td>-0.04</td>
</tr>
<tr>
<td>Male (0=No, 1=Yes)</td>
<td>-0.34</td>
<td>0.18</td>
<td>-0.30</td>
</tr>
<tr>
<td>Confederate</td>
<td>-0.23</td>
<td>0.21</td>
<td>-0.18</td>
</tr>
<tr>
<td>Business Major (0=No, 1=Yes)</td>
<td>0.05</td>
<td>0.16</td>
<td>0.04</td>
</tr>
<tr>
<td>Other Group Orientation</td>
<td>0.11</td>
<td>0.07</td>
<td>0.19</td>
</tr>
<tr>
<td>Work Experience (in Years)</td>
<td>0.02</td>
<td>0.03</td>
<td>0.09</td>
</tr>
<tr>
<td>Employment Status (0=No, 1=Yes)</td>
<td>0.23</td>
<td>0.15</td>
<td>0.20</td>
</tr>
<tr>
<td>SDO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDO X Job Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Status (0=MA, 1=VP)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SDO X Job Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.19</td>
<td></td>
<td>.21</td>
</tr>
</tbody>
</table>

Note: SDO was centered at its means.

$\dagger p < 0.10; \ast p < 0.05; \ast\ast p < 0.01$. All significance levels are based on two-tailed tests.

$^1$MA: Marketing Assistant (Low-Status), VP: Vice President of Marketing (High-Status)

Bolded numbers represent the hypotheses tested.
Table 6

Summary of Hierarchical Regression Analysis for Raters’ Evaluation of Participants’ Positive Engagement (N = 69)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
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<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>0.04</td>
<td>0.19</td>
<td>0.02</td>
<td>0.04</td>
<td>0.20</td>
<td>0.02</td>
<td>0.01</td>
<td>0.21</td>
</tr>
<tr>
<td>Male (0=No, 1=Yes)</td>
<td>0.22</td>
<td>0.21</td>
<td>0.15</td>
<td>0.23</td>
<td>0.24</td>
<td>0.16</td>
<td>0.22</td>
<td>0.24</td>
</tr>
<tr>
<td>Confederate</td>
<td>0.05</td>
<td>0.25</td>
<td>0.03</td>
<td>0.06</td>
<td>0.27</td>
<td>0.04</td>
<td>0.05</td>
<td>0.27</td>
</tr>
<tr>
<td>Business Major (0=No, 1=Yes)</td>
<td>0.21</td>
<td>0.19</td>
<td>0.14</td>
<td>0.22</td>
<td>0.20</td>
<td>0.15</td>
<td>0.23</td>
<td>0.20</td>
</tr>
<tr>
<td>Other Group Orientation</td>
<td>0.23</td>
<td>0.09</td>
<td>0.33*</td>
<td>0.23</td>
<td>0.09</td>
<td>0.33*</td>
<td>0.23</td>
<td>0.09</td>
</tr>
<tr>
<td>Work Experience (in Years)</td>
<td>0.05</td>
<td>0.03</td>
<td>0.19</td>
<td>0.05</td>
<td>0.03</td>
<td>0.19</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>Employment Status (0=No, 1=Yes)</td>
<td>0.17</td>
<td>0.18</td>
<td>0.12</td>
<td>0.16</td>
<td>0.19</td>
<td>0.12</td>
<td>0.17</td>
<td>0.19</td>
</tr>
<tr>
<td>SDO</td>
<td></td>
<td></td>
<td></td>
<td>-0.01</td>
<td>0.10</td>
<td>-0.02</td>
<td>-0.07</td>
<td>0.14</td>
</tr>
<tr>
<td>Job Status (0=MA, 1=VP)</td>
<td>0.01</td>
<td>0.18</td>
<td>0.01</td>
<td>0.03</td>
<td>0.18</td>
<td>0.02</td>
<td>0.10</td>
<td>0.17</td>
</tr>
<tr>
<td>SDO X Job Status</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.23</td>
<td></td>
<td></td>
<td>.23</td>
<td></td>
<td>.23</td>
<td>.23</td>
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</tr>
<tr>
<td>$F$ for change in $R^2$</td>
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<td></td>
<td>0.00</td>
<td></td>
<td>0.01</td>
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</tr>
</tbody>
</table>

Note: SDO was centered at its means.

† $p < 0.10; * p < 0.05; ** p < 0.01$. All significance levels are based on two-tailed tests.

1MA: Marketing Assistant (Low Status), VP: Vice President of Marketing (High-Status).

Bolded numbers represent the hypotheses tested.
Table 7

Summary of Hierarchical Regression Analysis for Raters’ Evaluation of Participants’ Friendliness (N = 69)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>-0.06</td>
<td>0.16</td>
<td>-0.04</td>
</tr>
<tr>
<td>Male (0=No, 1=Yes)</td>
<td>-0.34</td>
<td>0.18</td>
<td>-0.30</td>
</tr>
<tr>
<td>Confederate</td>
<td>-0.23</td>
<td>0.21</td>
<td>-0.18</td>
</tr>
<tr>
<td>Business Major (0=No, 1=Yes)</td>
<td>0.05</td>
<td>0.16</td>
<td>0.04</td>
</tr>
<tr>
<td>Other Group Orientation</td>
<td>0.11</td>
<td>0.07</td>
<td>0.19</td>
</tr>
<tr>
<td>Work Experience (in Years)</td>
<td>0.02</td>
<td>0.03</td>
<td>0.09</td>
</tr>
<tr>
<td>Employment Status (0=No, 1=Yes)</td>
<td>0.23</td>
<td>0.15</td>
<td>0.20</td>
</tr>
<tr>
<td>SDO</td>
<td>0.05</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Job Status (0=MA, 1=VP)</td>
<td>0.10</td>
<td>0.15</td>
<td>0.09</td>
</tr>
<tr>
<td>SDO X Job Status</td>
<td>0.01</td>
<td>0.14</td>
<td>0.02</td>
</tr>
</tbody>
</table>

R²                                    | .19  | .19  | .19  |
F for change in R²                    | 1.96 | 0.38 | 0.01 |

Note: SDO was centered at its means.
† p < 0.10; * p < 0.05; ** p < 0.01. All significance levels are based on two-tailed tests.
1MA: Marketing Assistant (Low-Status), VP: Vice President of Marketing (High-Status).
Bolded numbers represent the hypotheses tested.
Table 8

Summary of Hierarchical Regression Analysis for Proportion of Difficult Questions Selected (N = 88)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>0.14</td>
<td>0.09</td>
<td>0.17</td>
<td>0.14</td>
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<td>0.17</td>
<td>0.15</td>
<td>0.09</td>
<td>0.18</td>
</tr>
<tr>
<td>Male (0=No, 1=Yes)</td>
<td>0.10</td>
<td>0.10</td>
<td>0.14</td>
<td>0.09</td>
<td>0.11</td>
<td>0.12</td>
<td>0.09</td>
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<td>0.11</td>
<td>0.11</td>
<td>0.08</td>
<td>0.11</td>
<td>0.10</td>
<td>0.09</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td>Business Major (0=No, 1=Yes)</td>
<td>-0.01</td>
<td>0.09</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.09</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.09</td>
<td>-0.02</td>
</tr>
<tr>
<td>Other Group Orientation</td>
<td>0.01</td>
<td>0.04</td>
<td>0.03</td>
<td>0.01</td>
<td>0.04</td>
<td>0.03</td>
<td>0.01</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>Work Experience (in Years)</td>
<td>0.02</td>
<td>0.02</td>
<td>0.18</td>
<td>0.03</td>
<td>0.02</td>
<td>0.19</td>
<td>0.03</td>
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<td>0.21</td>
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<tr>
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<td>-0.15</td>
<td>0.09</td>
<td>-0.20</td>
<td>-0.15</td>
<td>0.09</td>
<td>-0.20</td>
</tr>
<tr>
<td>SDO</td>
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<td>0.05</td>
<td>0.07</td>
<td>0.07</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Status (0=MA, 1=VP)</td>
<td>-0.04</td>
<td>0.09</td>
<td>-0.05</td>
<td>-0.04</td>
<td>0.09</td>
<td>-0.06</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SDO X Job Status</td>
<td>-0.09</td>
<td>0.08</td>
<td>-0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.09</td>
<td></td>
<td></td>
<td>.09</td>
<td></td>
<td></td>
<td>.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$ for change in $R^2$</td>
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<td></td>
<td></td>
<td>1.12</td>
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</tr>
</tbody>
</table>

Note: SDO was centered at its means.

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$. All significance levels are based on two-tailed tests.

$^1$MA: Marketing Assistant (Low-Status), VP: Vice President of Marketing (High-Status).

Bolded numbers represent the hypotheses tested.
Table 9

Summary of Hierarchical Regression Analysis for Participants’ Rating of Candidates (N = 88)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>0.04</td>
<td>0.22</td>
<td>0.02</td>
</tr>
<tr>
<td>Male (0=No, 1=Yes)</td>
<td>-0.47</td>
<td>0.25</td>
<td>-0.23</td>
</tr>
<tr>
<td>Confederate</td>
<td>-0.05</td>
<td>0.27</td>
<td>-0.02</td>
</tr>
<tr>
<td>Business Major (0=No, 1=Yes)</td>
<td>0.29</td>
<td>0.22</td>
<td>0.14</td>
</tr>
<tr>
<td>Other Group Orientation</td>
<td>-0.14</td>
<td>0.10</td>
<td>-0.15</td>
</tr>
<tr>
<td>Work Experience (in Years)</td>
<td>-0.02</td>
<td>0.04</td>
<td>-0.05</td>
</tr>
<tr>
<td>Employment Status (0=No, 1=Yes)</td>
<td>-0.52</td>
<td>0.22</td>
<td>-0.27*</td>
</tr>
<tr>
<td>SDO</td>
<td>-0.18</td>
<td>0.12</td>
<td>-0.18</td>
</tr>
<tr>
<td>Job Status (0=MA, 1=VP)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SDO X Job Status</td>
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<td></td>
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<tr>
<td>$R^2$</td>
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<td>.17</td>
<td>.17</td>
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<tr>
<td>$F$ for change in $R^2$</td>
<td>1.95</td>
<td>1.09</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Note: SDO was centered at its means.

† p < 0.10; * p < 0.05; ** p < 0.01. All significance levels are based on two-tailed tests.

1MA: Marketing Assistant (Low- Status), VP: Vice President of Marketing (High-Status).

Bolded numbers represent the hypotheses tested.
Table 10

*Summary of Hierarchical Regression Analysis of Threat Responding by SDO–Anti-Egalitarianism Sub Scale (N = 56)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>White (0=No, 1=Yes)</td>
<td>-0.36</td>
<td>0.65</td>
<td>-0.46</td>
<td>0.64</td>
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<td>0.63</td>
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<tr>
<td>Male (0=No, 1=Yes)</td>
<td>0.78</td>
<td>0.81</td>
<td>0.48</td>
<td>0.81</td>
<td>0.66</td>
<td>0.80</td>
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<tr>
<td>Confederate</td>
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<td>-1.07</td>
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<td>-0.79</td>
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<td>-0.95</td>
<td>0.62</td>
</tr>
<tr>
<td>Other Group Orientation</td>
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<td>0.26</td>
<td>0.04</td>
<td>0.25</td>
<td>0.10</td>
<td>0.25</td>
</tr>
<tr>
<td>Baseline Cardiac Output</td>
<td>-0.81</td>
<td>0.66</td>
<td>-1.17</td>
<td>0.68</td>
<td>-1.07</td>
<td>0.67</td>
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<td>SDO-AE</td>
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<td>0.30</td>
<td>0.32*</td>
<td>-0.34†</td>
<td>-0.95</td>
<td>0.62</td>
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<tr>
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<td>0.11</td>
<td>0.37</td>
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<td>0.10</td>
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<tr>
<td>SDO X Job Status</td>
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<td></td>
<td></td>
<td></td>
<td>-0.89</td>
<td>0.53</td>
</tr>
<tr>
<td>$R^2$</td>
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<td></td>
<td>.14</td>
<td></td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>$F$ for change in $R^2$</td>
<td>0.74</td>
<td></td>
<td>1.46</td>
<td></td>
<td>0.53</td>
<td></td>
</tr>
</tbody>
</table>

*Note: SDO was centered at its means.*

† $p < 0.10; * p < 0.05; ** p < 0.01$. All significance levels are based on two-tailed tests.

1MA: Marketing Assistant (Low Status), VP: Vice President of Marketing (High-Status).

Bolded numbers represent the hypotheses tested.
### Table 11

**Summary of Regression Analysis by Demographic Group**

<table>
<thead>
<tr>
<th>Hypothesis Test</th>
<th>Males</th>
<th>Females</th>
<th>White</th>
<th>Non-White</th>
<th>Confederate-Light Skin</th>
<th>Confederate-Dark Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>β</td>
<td>N</td>
<td>β</td>
<td>N</td>
<td>β</td>
</tr>
<tr>
<td>SDO – Threat</td>
<td>33</td>
<td>.36</td>
<td>23</td>
<td>.43</td>
<td>14</td>
<td>.40</td>
</tr>
<tr>
<td>SDO – Warmth (R)</td>
<td>34</td>
<td>.04</td>
<td>31</td>
<td>.11</td>
<td>18</td>
<td>-.40</td>
</tr>
<tr>
<td>SDO – Positive Engagement (R)</td>
<td>34</td>
<td>-.22</td>
<td>31</td>
<td>-.00</td>
<td>18</td>
<td>-.81*</td>
</tr>
<tr>
<td>SDO – Positive Engagement (C)</td>
<td>34</td>
<td>.03</td>
<td>31</td>
<td>-.09</td>
<td>18</td>
<td>-.75†</td>
</tr>
<tr>
<td>SDO – Candidate Rating</td>
<td>51</td>
<td>-.17</td>
<td>35</td>
<td>-.14</td>
<td>28</td>
<td>-.45†</td>
</tr>
</tbody>
</table>

† \( p < 0.10 \); * \( p < 0.05 \); ** \( p < 0.01 \). All significance levels are based on two-tailed tests.
**Figure 1.**

Proposed physiological threat as a function of job status and SDO.

**NOTE:** All variables are expressed as change scores from resting levels of responses. Cardiac output (CO) in liters per minute.
Figure 2.

Proposed positive engagement and warmth as a function of job status and SDO

![Graph showing positive behavior as a function of job status and SDO]

- Low SDO
- High SDO
Figure 3.

Proposed ratio of difficult questions as a function of job status and SDO
Figure 4.

Proposed candidate ratings as a function of job status and SDO
Figure 5.

Proposed candidate selection rate as a function of job status and SDO
Figure 6

*Interaction between SDO-AE and Job Status on Cardiovascular Threat (N = 56)*

![Graph showing interaction between SDO-AE and job status on cardiovascular threat.](graph)

- **Challenge/Threat Index**: Vertical axis ranging from -5 to 5.
- **SDO - AE**: Horizontal axis ranging from -1 S.D. to +1 S.D.
- **Low-Status** and **High-Status** lines indicating different trajectories of cardiovascular threat based on SDO-AE and job status.
Appendix A

Entry and Management-level Job Descriptions

*Low Status*

**Marketing Assistant**

Support marketing campaigns by assisting with execution tactics and strategy, compiling client data, formatting client data, and reporting information and materials.

**Reporting to:** Marketing Project Lead

**Job Responsibilities**

1. Update Consumer Rating Reports (DK score for FY14 priority titles) by compiling, consolidating, formatting, and summarizing information.
2. Co-ordinate with our creative agency on VIP Kit program creative, design and production schedule.
3. Assist with execution tactics and communications (VIP mailers, Social media postings, acquiring credentials, etc.).
4. Support campaign management team with miscellaneous efforts (Online Media Network, Global Media + Online Video Buying program).
5. Assist with campaign tracking and research information by collecting, analyzing, and summarizing client data and trends.
6. Monitor key company and management announcements/changes and makes corresponding department intranet site updates.
**Required Qualifications**

1. Associated required, Bachelor's degree in marketing, communications or related area preferred.
2. Approximately 2-4 years of marketing experience
3. Proficiency/experience in Microsoft (including Word, PowerPoint and Excel).
4. Proficiency/experience with Content Management Systems, Photoshop and HTML a plus.
5. Strong project management and organizational skills.
6. Detail-oriented; adherence to the highest standards of accuracy and quality.
7. Strong writing skills and ability to communicate effectively with all levels of employees and management.
High Status

Marketing Vice President

Responsible for leading the development and creation of integrated direct marketing campaign strategies that support the profitable sales growth, customer acquisitions and retention.

Reporting to: Senior Vice President of Marketing

Job Responsibilities

1. Development of channel marketing plans, prospect and customer segmentation strategies to drive relevant messaging and product targeting.

2. Management and execution of marketing and communications program including events, PR, web, direct marketing, communications, and other activities to build brand awareness and drive demand and optimize ROI performance.

3. Work cross functionally to deliver marketing strategies with detail project specifications and providing end to end project management.

4. Measure performance and identify improvement – design and analyze relevant reports, testing, and evaluate performance across various marketing approaches to identify opportunities to improve efficiencies.

5. Manage a team of marketing professionals, including recruiting, selecting, orienting, training and evaluating and rewarding performance of team members.

Required Qualifications

1. MBA in marketing, communications or related area.
2. Approximately 5-8 years of marketing experience.

3. 3-5 years of marketing supervisory experience.

4. Ability to develop strong contacts in both the business community and media.

5. Knowledgeable of service offerings, industry capabilities and marketing best practices.

6. Ability to write original copy based on a solid understanding of our business products.

7. Consistently bring ideas to the leadership to improve work methods or address challenges.

8. Excellent attention to detail.

9. Ability to manage multiple priorities to meet deadlines
Appendix B

Resumes

Entry and Management-level Candidate Resumes

*(Low Status)*

**Objective**
To obtain a senior level position in Account Management focusing on Social Media Marketing

**Summary of Qualifications**
- A skilled public speaker with an ability to connect to and engage individuals in a variety of industries
- An energetic team member, known for determination and meeting quarterly marketing goals.
- 3 years of experience as a results oriented, client-centric professional with quantitative analysis skills

**Professional Experience**

2012-present

**Pinnacle Marketing**

**New Clientele Assistant**

*New York, NY*

- Created protocol checklist and monitoring systems in order to increase clientele retention, prospective customer response rates and annual revenue.
- Monitored local and offsite marketing branches to ensure compliance with company policies.
- Organized project management and strategy for marquee national accounts.
- Recommended new research software, which increased research productivity by over 80% in the first year.

2010-2012

**ONE Marketing**

**Assistant Marketing Specialist**

*Jersey City, NJ*

- Partnered with leads of brand units to brainstorm new Marketing, brand name and revenue opportunities.
- Organized market area product displays to ensure product exposure and boost sales.
- Reviewed databases and publications in order to contact prospective clients and forward promising leads to Marketing Manager.
- Booked venue and company accommodations for the 4th Annual Expert Marketing Managers Conference.

**Education**

B.B.A., Haverford College, 2010

**References** (available upon request)
(High Status)

Objective
To obtain a marketing management position with an organization where I can utilize my skills and experience to improve the organization market position, increase profitability, and enhance growth.

Summary of Qualifications
Accomplished, senior marketing professional with broad marketing experience, encompassing strategic planning, research, interactive marketing, creative development, media planning & buying and visual merchandising.

Professional Experience
2010-presenter Taylor Marketing Associates
Associate Marketing Director San Diego, CA
- Led the development and implementation of annual marketing plans and media strategies that resulted in consistent sales increases, improved efficiency and accelerated sales growth and profitability.
- Spearheaded targeted neighborhood marketing programs for various clients resulting in an average of 16%+ net sales gain across client groups.
- Increased franchisee participation in national and local marketing.
- Established New Social Media Department, which centralized internet marketing efforts and increased unique impressions by approximately 85% per client.
- Built entirely new staff of four marketing professionals.

2008-2010 The Buford Group
Marketing Manager Sacramento, CA
- Worked with social media, branding, research and account executives to form engaging new marketing campaigns to capture additional exposure for client products.
- Spearheaded the testing and rollout of a private label, retail-financing program that resulted in incremental sales of over $10 million for regional client.
- Developed and implemented consumer research designed to improve results of our sales promotions.
- Increased annual vendor co-op fund by over 50%, in less than two years.
- Conducted comprehensive audits of northeastern clientele in order to monitor profitability.
- Negotiated Internet pay per click price ads for northeastern regional accounts.
- Researched possible new business leads and categorized leads in prospective business catalogue.

2006-2008 Various Associate Marketing Roles

Education
B.B.A., Dickinson College, 2004
M.B.A. LaSalle University, 2006

References (available upon request)
Appendix C

Final Pilot Study 2 Interview Questions

1. If you knew a product you were marketing has an adverse impact on the public or consumer, how would you go about marketing the product?

2. What would you do if a social activist group found a marketing campaign you helped develop was offensive?

3. What customer experience strategies are disrupting the status quo in our industry?

4. Based on your research, what is the greatest weakness in our current marketing strategy?

5. Tell me about your proudest achievement.

6. How did you learn about this job?

7. What were the responsibilities of your last position?
Appendix D

Phase 1 Measures

SDO Scale (Pratto, et al, 2006; *=reverse coded)

1. Some groups of people are just more worthy than others
2. In getting what your group wants, it is sometimes necessary to use force against other groups
3. It’s OK if some groups have more of a chance in life than others
4. To get ahead in life, it is sometimes necessary to step on other groups
5. If certain groups of people stayed in their place, we would have fewer problems
6. It’s probably a good thing that certain groups are at the top and other groups are at the bottom
7. Inferior groups should stay in their place
8. Sometimes other groups must be kept in their place
9. It would be good if all groups could be equal*
10. Group equality should be our ideal*
11. All groups should be given an equal chance in life*
12. We should do what we can to equalize conditions for different groups *
13. We should increase social equality *
14. We would have fewer problems if we treated different groups more equally*
15. We should strive to make incomes more equal*
16. No one group should dominate in society*
Other Group Orientation Scale (Phinney, 1992; *=reverse coded)

1. I like meeting and getting to know people from other racial or ethnic groups than my own.
2. I sometimes feel it would be better if different racial or ethnic groups didn’t try to mix together.*
3. I often spend time with people from different racial or ethnic groups other than my own.
4. I don’t try to become friends with people from other racial or ethnic groups.*
5. I am involved in activities with people from other racial or ethnic groups.
6. I enjoy being around people from racial or ethnic groups other than my own.

Career Aspirations and Expectations Questionnaire

1. I plan to obtain positions that will utilize my technical skills.
2. I have a desire to advance to a position in management.
3. I would enjoy doing the things that managers do.
4. I expect to eventually obtain a position with a high level is of authority and power.
5. I hope to obtain a position that will provide me with challenging work.
6. I plan to seek job roles that will enable me to strengthen my management skills.
7. I would like to be in a position in which I manage a team of employees.
8. Being in a management or supervisory role is important to me.
9. Rapidly advancing to higher organizational levels is important to me.
10. Having a job with high prestige and social status is important to me.
11. I expect that my future job roles will require me to conduct job interviews.
12. Interviewing and selecting employees that will work for me is an important part of being a manager.

13. I expect that I will eventually be in a role where I will manage a department budget.

14. I expect that I will eventually be responsible for determining the pay of employees.
Appendix E

**Demographic Items**

What is your Race/Ethnicity (please select one)?:

- [ ] White, not Hispanic
- [ ] Black or African America
- [ ] American Indian/Alaskan Native
- [ ] Asian, Native Hawaiian or other Pacific Islander
- [ ] Multi-racial (more than one race)
- [ ] Hispanic/Latino
- [ ] Other ____________________

Country of Citizenship?

- [ ] Categorical Responses: Argentina – Venezuela

If you were born outside the United States, how many years have you resided in the United States? __________

What is your age (in Years): Range of 18 - 90 years or older

What is your sex (please select one):

- [ ] Male
- [ ] Female

Have you earned an Undergraduate Degree?

- [ ] Yes
- [ ] No

- [ ] Currently pursuing an Undergraduate degree
If applicable, what Undergraduate Degree did you or will you earn?

☐ BA
☐ BS
☐ BFA
☐ BBA
☐ Other ___________

Please indicate your Undergraduate major/concentration: ____________________________

Do you have Full time work experience?

☐ Yes
☐ No

How many years of full time work experience have you had in total?

☐ Continuous measure from: 6 months –greater than 50 years.

What is the level of the job you currently hold or most recently held?

☐ Hourly employee (e.g., bank teller, clerk, waiter, nurse's aid, etc.)
☐ Entry-level manager or supervisor (supervising non-management employees)
☐ Middle-level manager
☐ Upper middle manager (e.g., department head, superintendent, regional manager)
☐ Executive (e.g., vice president, director, division head, business unit head)
☐ Top management (e.g., chief executive, president, chief operating officer)
☐ Other (or not relevant in my situation)

What is your current employment status?

☐ self-employed
☐ currently employed in an organization
☐ unemployed
☐ retired
☐ leave of absence
☐ unpaid or volunteer position

Indicate the main industry of your primary employment:

☐ Agriculture
☐ Mining
☐ Utilities
☐ Construction
☐ Manufacturing
☐ Trade (wholesale or retail)
☐ Information
☐ Finance
☐ Insurance
☐ Real estate
☐ Professional, scientific, or technical services
☐ Education
☐ Health care or social services
☐ Art, entertainment, or recreation
☐ Accommodation or food services
☐ Public administration
☐ Other ________________
Appendix F

Interview Script

**Interview Question 1:** Tell me a bit about yourself and your career and interests?

**Interview Question 1 Answer:** Energetic, a great communicator, and a team player. My strong interest in marketing began in college where my current mentor introduced me to the world of marketing in an introductory marketing course. It was during that course that I was introduced to the full scope of the marketing profession, including consumer research, brand development, and the art of delivering a successful marketing pitch. Of course, my interest in marketing has been strengthened and refined over the years. For example, today, I am incredibly interested in how companies can use web tools and social media to better market themselves, which is something I wasn’t as interested in earlier in my career.

**Interview Question 2:** What influenced you to choose this career?

**Interview Question 2 Answer:** In my opinion, marketing is one of, if not the most, important aspects of a business’s performance and long-term survival. Therefore, as someone who feels most successful when making others successful, I know that a career in marketing would most certainly be rewarding and fulfilling to me. I also love the fast-paced and ever-changing environment of the marketing profession. As businesses are always looking for the next competitive advantage, a career in marketing would certainly require a lot of innovation and out-of-the-box thinking that would make for an exciting and sometimes unpredictable workday — and a little fun, too.

**Interview Question 3:** What quality or attribute do you feel will most contribute to your career success?
Interview Question 3 Answer: Flexibility/Adaptability…Being able to adapt to not only the unpredictable demands of the job on a daily basis (e.g., individual vs. teamwork approach; working overtime), but also the demands of the external environment (e.g., technological advances, competitor shifts, etc.)

Interview Question 4: What did you like or dislike about your previous job?

Interview Question 4 Answer: I really liked the people and work climate of my previous job. It was a very friendly and fun atmosphere and I actually enjoyed going into work each morning. I felt the leadership team was great as well. However, what I disliked about my previous job is the limited potential for growth and development. I honestly didn’t feel challenged enough in my role, and was therefore unable to reach my full potential because of the lack of challenge and very limited room for advancement in the company. While I did enjoy working there and appreciated the skills I developed while with the company, I feel my skill set can be better utilized elsewhere, where my capabilities are more recognized and there is opportunity for growth.

Interview Question 5: Do you prefer to work independently or on a team?

Interview Question 5 Answer: As my professional experiences have required me to work both independently and on a team, I can honestly say that I equally enjoy both in order to get the job done. In reviewing the current role, I can see the similarities to my previous positions where there were some assignment and responsibilities that may require a great deal of independent work and research (e.g., consumer research) and other tasks where a team effort was the most appropriate (e.g., developing and executing a marketing pitch). Therefore, I believe I’d be able to fulfill the demands of the job without any problem.

Interview Question 6: How would your friends describe you?
Interview Question 6 Answer: Open-minded – Learning is a lifelong commitment, and in my short life I’ve realized that there is always somebody smarter with a better way of doing things; therefore, I must always remain open to that possibility and not be threatened by it.

Reliable/Team Player – I take my responsibilities and my reputation very seriously. If I say I’m going to do something, I’m going to do it.
References


