THE IMPACT OF SOCIAL COMPARISONS ON STEREOTYPE THREAT FOR BLACK COLLEGE STUDENTS ATTENDING PREDOMINANTLY WHITE COLLEGES AND UNIVERSITIES

by

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A dissertation submitted in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in Psychology

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2016
ABSTRACT

The Impact of Social Comparisons on Stereotype Threat for Black College Students Attending Predominantly White Colleges and Universities

by

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This study was conducted to examine the impact of various social comparisons on stereotype threat for Black college students attending predominantly White colleges and universities (PWCUs). Additionally, explored was whether the student’s Black racial identity would moderate the relationship between social comparison and academic achievement. Social comparison theory posits that to gain an accurate self-evaluation, individuals compare themselves to others who are similar; therefore, for Black college students attending PWCUs their comparison is most likely to occur with White students. Stereotype threat is being at risk of confirming a negative stereotype about one’s group membership. Participants were 144 self-identified Black college students (including bi- and multiracially identified individuals), currently enrolled in college in the U.S. Data were collected in four phases, with the fourth phase utilizing a participant panel. The study was available for 7 months and was self-administered online through a popular survey software. Participants completed self-report measures, read statistics from the National Center for Education Statistics (NCES), completed two academic tasks, and
viewed a slideshow presentation of images. Data patterns were similar for the White and neutral conditions and were similar for the matched minority and unmatched minority conditions; therefore, participants in the White comparison condition and neutral condition were grouped together to form one subordinate group (i.e., racial nonminority intervention group), and participants in the racially matched and unmatched minority comparison conditions were grouped together to form another subordinate group (i.e., racial minority intervention group). Results indicated a statistically significant effect for time by condition, $F(1, 142) = 4.776, p = .030$, partial $\eta^2 = .033$, with the racial nonminority group showing a greater impact on stereotype threat. Stereotype threat was positively impacted at a rate greater for the racial nonminority group than for the racial minority group.
PUBLIC ABSTRACT

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Despite increasing college enrollment rates for Black individuals, college completion rates remain dismal, thus the achievement gap between Black and White students remains in effect. One reason which may contribute to low completion rates for Black college students is stereotype threat. Stereotype threat is when an individual is at risk of confirming a negative stereotype about their group membership. For Blacks attending college, the threat would be related to academic underachievement. However, the impact of stereotype threat is highly individualized and an individual’s Black racial identity may impact stereotype threat for certain individuals.

Social comparison theory suggests that to gain an accurate self-evaluation, individuals compare their abilities and opinions of themselves to individuals who are similar to them. For Black students attending predominantly White colleges and universities that comparison is most likely to occur with a White student given the college’s demographic makeup. Engaging in such a comparison, however, could elicit stereotype threat. This study examined the impact of various social comparisons on stereotype threat, and further examined whether black racial identity impacted the relationship between social comparison and academic achievement.
Results indicated that stereotype threat was impacted the greatest for individuals whose social comparisons visibly appeared to be White, followed by those who did not receive an intervention, followed by those whose social comparisons visibly appeared to be Black, and followed by those whose social comparisons visibly appeared to belong to racial/ethnic minority groups other than Black. Additionally, Black racial identity did not appear to impact the relationship between social comparison and academic achievement. As opposed to having a social comparison who visibly appeared to be Black serve as a role model, the comparison served to further stereotype threat.
DEDICATION

This is dedicated to the memory of my momma, Catherine, and brother, Clarence, because both of you were a part of the sacrifice but neither of you will be a part of the "success." WE could not have done it without each other.

Dessay
ACKNOWLEDGMENTS

First and foremost, I would like to thank God. I would also like to thank my major professor, Dr. Melanie Domenech Rodriguez. Melanie, it has been a long road for me and you have walked with me all the way; you have been EVERYTHING AND MORE to me throughout this process, and I would not be where I am or who I am without you! I would like to thank my dissertation committee Dr. Scott Bates, Dr. Azenett Garza, Dr. Donna Gilberton, and Dr. Eduardo Ortiz. Quite possibly you all are the best committee EVER! Through everything you have provided me with such encouragement and support. I constantly felt your hopes for me to succeed, and from the bottom of my heart, I thank each of you. Dr. Carolyn Barcus, thank you for always being there for me. Even when I would not reach out for help, I found comfort in knowing that I could reach out to you. I would like to extend a thank you to the faculty of the combined psychology doctoral program for giving me the opportunity to accomplish this lifelong goal. I would like to say a special thank you to all of the beautiful people who I have been blessed to know, who have continually supported me, and who at times stood for me when I was too tired to stand for myself. Last, but certainly not least, to my family – WE did it!

Odessia Knowles
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CHAPTER I

INTRODUCTION

In the U.S., college enrollment rates for ethnic minority students continue to increase. The U.S. Department of Education, National Center for Education Statistics (NCES, 2013b) reported that from 1976 to 2011, the percentage of Black college students increased from 10% to 15%. Although enrollment rates of Blacks have increased, college completion rates for ethnic minority students remain dismal. In Fall 2006, the 4-year completion rates for first-time, full-time students seeking bachelor’s degrees was 21% for Blacks as compared to 43% for their White counterparts (NCES, 2013a). Several hypotheses have been made regarding this achievement gap, including the negative impact of stereotype threat.

“Stereotype threat is being at risk of confirming, as self-characteristic, a negative stereotype about one’s group” (Steele & Aronson, 1995, p. 797). Steele and Aronson (1995) coined the term in their study of first and second year Black and White college students. Results suggested that Black undergraduates performed worse on standardized tests than White undergraduates when race was emphasized, but when race was not emphasized Blacks performed comparably (Steele & Aronson, 1995). Hundreds of studies have been conducted to test this phenomenon since 1995. Several meta-analyses have been published to summarize the wealth of information that has been found (Logel, Walton, Spencer, Peach, & Mark, 2012; Nguyen & Ryan, 2008; Picho, Rodriguez, & Finnie, 2013; Stoet & Geary, 2012; Walton & Cohen, 2003). In addition to short-term performance issues, research suggests that stereotype threat can lead to long-term
educational or social inequalities (Schmader, Johns, & Barquissau, 2004). For example, the persistent disparity in academic achievement between Black and White college students has been linked to lifetime consequences including limited opportunities in employment and lower earnings (Lee, 2002).

Stereotype threat can affect anyone who has a group membership in which a stereotype-based expectation is that of poor performance; however, the impact of the stereotype threat varies and is highly individualized. Not all Black college students have the same connectedness to their Black racial identity, therefore not all Blacks will be impacted the same by the stereotype pertaining to their race and academic underachievement (Armenta, 2010; Davis, Aronson, & Salinas, 2006). A strong racial identity may augment stereotype threat causing additional distress, whereas a less strong racial identity may function as a buffer. Particularly for Blacks with strong racial identities attending predominantly White colleges or universities (PWCUs), the availability of a social comparison of the same race may moderate the negative impact of stereotype threat. A PWCU is an institution of higher learning in which Whites encompass 50% or more of the students enrolled (Brown & Dancy, 2010), and in the U.S. a significant number of higher education establishments remain as such.

In his theory of social comparison, Festinger (1954) proposed that to gain an accurate self-evaluation, individuals compare their abilities and opinions of themselves to others who are fairly similar; when a similar individual is not available, the comparison occurs to the next available individual. For Blacks attending PWCUs, the opportunity for this comparison to occur with a student who is racially similar is less likely than a
comparison to a student who is White. However, the comparison with a White student may potentially further support the stereotype threat of Blacks academic underachievement. Black college students might benefit from social comparison with an individual who is racially similar, that provides a more positive view of Blacks in college, and whom could serve as a more accurate base for self-evaluation.

While research suggests various methods to reduce stereotype threat, some methods may prove to be more helpful than others for particular individuals or in particular contexts. Research supports methods such as reframing the task (Quinn & Spencer, 2001; Spencer, Steele, & Quinn, 1999), deemphasizing threatened social identities (Ambady, Paik, Steele, Owen-Smith, & Mitchell, 2004; Stricker & Ward, 2004), and encouraging self-affirmations (Cohen, Garcia, Apfel, & Master, 2006; Schimel, Arndt, Banko, & Cook, 2004). To date, no studies have examined the impact of different social comparisons for Black college students attending PWCU in attenuating or accentuating stereotype threat conditions. The present study sought to fill this gap.
CHAPTER II
REVIEW OF LITERATURE

This literature review is divided into five primary sections: (a) information on enrollment and graduation rates for racial/ethnic minority college students (b) information on stereotype threat, particularly meta-analytic findings specific to racial/ethnic minority college students and academics, (c) social comparison theory, (d) Black racial identity, specifically information pertaining to the multidimensional model of racial identity (MMRI), and (e) summary and research questions for the current study.

Racial/Ethnic Minority College Enrollment and Graduation Rates

NCES (2013b) reported that from 1976 to 2011 there was an increase in the percentage of college students who identified as Latino (4% to 14%), Asian/Pacific Islander (2% to 6%), Black (10% to 15%), and American Indian/Alaska Native (0.7% to 0.9%); whereas, a decrease was reported in the percentage of students who identified as White (84% to 61%). Thus a demographic shift has occurred on college campuses during the past 35 years, in which there is an increasing percentage of racial/ethnic minorities and a decreasing percentage of White students. Despite these changes in enrollment, White students continue to have the highest graduation rates. For the 2006 starting cohort, 4-year completion rates for first-time, full-time Bachelor’s degree seeking students was as follows: 42.6% Whites, 20.5% Blacks, 29.2% Latinos, 45.8% Asian/Pacific Islander, and 21.9% American Indian/Alaska Native (NCES, 2013a). Whereas the majority of colleges and universities in the U.S. consist primarily of individuals who
identify as White, some colleges are comprised primarily of individuals who identify as Black. According to the U.S. Department of Education, a historically Black college and university (HBCU) as one in which the primary focus is on educating Black students (U.S. Dept. of Education, White House Initiative on HBCU, 2002). Approximately 11% of all Black college students attend an HBCU, with 20% of Bachelor degrees awarded to Black students coming from these institutions (Toldson & Cooper, 2014). In 2012, it was estimated that Black college student 6-year graduation rates at HBCUs ranged from 1% to 73% depending upon the institution (Toldson & Cooper, 2014). Finances has been an issue consistently noted as a possible contributing factor to lower graduation rates at HBCUs, whereas underperformance has been frequently noted as a possible contributing factor at non-HBCUs. One possible variable contributing to Black college student underperformance may be stereotype threat.

**Stereotype Threat**

Stereotype threat has its groundings in the field of social psychology. The concept was first introduced by Steele and Joshua (1995), and has since become one of the most widely studied topics within the field. In stereotype threat situations, an individual identifies with a social group which has a negative stereotype pertaining to its group membership. The individual is then at risk of confirming the negative stereotype related to that group membership.

Steele and Aronson (1995) conducted a sequence of experiments to study stereotype threat with Black and White undergraduate students attending Stanford
University. The purpose of the first experiment was to examine whether Black students would underperform relative to White students when stereotype threat was elicited. Results indicated that Black students did perform significantly worse on the academic task when stereotype threat was elicited. The second experiment attempted to further the understanding of stereotype threat by examining whether anxiety induced by evaluation apprehension was effecting stereotype-threatened participants, and whether greater anxiety would be associated with increased time spent on test questions. Results from this experiment showed no difference on the measure of general anxiety, but showed that an increase in time to answer questions did occur. To gain further knowledge about how stereotype threat functioned, a third experiment was conducted to examine: (a) cognitive activation surrounding the stereotype, (b) ability-related self-doubt, (c) motivation to dissociate from the stereotype, and (d) the endorsement of self-handicapping excuses. Findings showed that Blacks in the stereotype threat condition produced more race related sentence completions and more self-doubt related completions. In addition, these participants were found to be most avoidant and endorsed more self-handicapping excuses (i.e., hours of sleep, ability to focus, test unfairness). Lastly, a fourth experiment was conducted to examine whether stereotype threat alone was disrupting participants’ performance. By priming racial identity, the authors found that stereotype threat still occurred for Black college students.

Since Steele and Aronson’s (1995) initial article on stereotype threat, researchers have made significant contributions to expanding knowledge on the concept. Several meta-analyses have been published to summarize some of these findings. Three meta-
analyses related to stereotype threat, racial/ethnic minority groups, and academics have been published (Nadler & Clark, 2011; Nguyen & Ryan, 2008; Walton & Spencer, 2009), as well as one review of the literature (Logel et al., 2012).

Nadler and Clark (2011) conducted a meta-analysis of 16 published and unpublished articles, consisting of 23 studies, to examine whether the effects of stereotype threat varied based on ethnicity (Black or Latino) and experimental methodology. Specifically, Nadler and Clark hypothesized that: (a) there would be higher test scores for participants in stereotype threat conditions when interventions negate the stereotype threat, (b) Blacks would be more affected than Latinos by stereotype threat and would experience larger improvements when the threat was removed as evidenced by a difference in effect sizes, (c) poorer performance would occur with participants tested in mixed race groups as compared to participants who were tested alone, and (d) there would be a larger effect size when explicit activation of stereotype threat was used as opposed to when implicit activation techniques were used. Results indicated no significant differences between Blacks and Latinos, or with varying methodologies, suggesting stability in the construct of stereotype threat across race/ethnicity and experimental variations.

Nguyen and Ryan (2008) conducted a meta-analysis with 76 published and unpublished articles, which consisted of 116 studies. The purpose of their meta-analysis was to replicate and expand upon prior knowledge learned in Walton and Cohen’s (2003) meta-analysis of stereotype lift. The five ways in which they sought to do this was to: (a) include more studies, (b) examine differences in effects between race/ethnicity-based and
gender-based stereotypes, (c) utilize a more stringent classification to examine stereotype threat activation or removal as a moderator, (d) include test difficulty as a moderator, and (e) examine nonindependent data points in a more standardized manner (Nguyen & Ryan, 2008). The authors found an overall effect size of mean $d = .26$, greater effect size in the race/ethnicity-based groups ($ds = .32$) compared to the gender-based group ($ds = .21$), poorer performance by stereotype threatened racial/ethnic minorities when tests were highly difficult (mean $d = .43$) than when tests were moderately difficult (mean $d = .18$), moderately explicit stereotype threat activating cues produced the largest mean effect size (mean $d = .64$) compared to the blatant and subtle cues, and racial/ethnic minorities performed better when subtle stereotype threat removal strategies were used (mean $d = .38$) as opposed to explicit removal strategies (Nguyen & Ryan, 2008).

Walton and Spencer (2009) conducted two meta-analyses to test for underperformance and latent ability, and to examine interventions to reduce stereotype threat in school environments. The 39 identified articles for inclusion for the first meta-analysis consisted of participants of various ages (kindergarten through college), stereotyped groups (women, Blacks, Latinos), and took place in five countries (Canada, France, Germany, Sweden, and the U.S.). Results regarding underperformance indicate that participants in the stereotyped groups performed worse (mean $d = .48$) than participants in nonstereotyped groups (Walton & Spencer, 2009). Results regarding latent ability (an underestimate of their ability based on their prior performance) suggest that stereotyped groups performed better (mean $d = .18$) than nonstereotyped groups (Walton & Spencer, 2009). This indicates that stereotype threat undermines performance. Three
intervention experiments aimed at reducing stereotype threat for Black American students were utilized for their second meta-analysis. Results suggest underperformance \((d = .27)\) and latent ability \((d = .17)\) when compared to their White counterparts (Walton & Spencer, 2009), as evidenced by those receiving the intervention versus those not receiving the intervention.

Academic underachievement occurs for non-Asian racial/ethnic minority students (Logel et al., 2012; Nadler & Clark, 2011; Nguyen & Ryan, 2008; Walton & Spencer, 2009). Studies suggest that academic abilities of non-Asian racial/ethnic minority group members were present, although their grades and test scores reflected lower academic achievement (Logel et al., 2012; Walton & Spencer, 2009). In addition, Logel et al. reported on implications for college admissions, understanding that non-Asian racial/ethnic minorities experience stereotype threat in academics, thus their academic abilities are not evident in their academic performance.

Both Logel et al. (2012) and Walton and Spencer (2009) discussed findings related to a stereotype-safe environment, which would allow for racial/ethnic minority students’ latent abilities to emerge. Without these interventions racial/ethnic minority students would continue to underperform academically. In a stereotype-safe environment, non-Asian racial/ethnic minorities can perform better than non-stereotyped students and/or at a level commensurate with their past performances in non-stereotype threatening situations (Logel et al., 2012; Walton & Spencer, 2009). Nadler and Clark (2011) reported similar findings in their meta-analysis in which Black and Latino students performed comparably academically to their White counterparts under conditions which
eliminated stereotype threat. Specifically, Nguyen and Ryan (2008) reported non-Asian racial/ethnic minorities benefitted more from subtle or indirect stereotype threat removal (e.g., showing television commercials with women in stereotypical roles) rather than from direct or explicit removal (giving a handout with information favoring women).

The presence of White students in academic contexts could serve as an implicit activation of stereotype threat, however, Nadler and Clark (2011) found no difference in their presence, or in the implicit versus explicit activation of stereotype threat. In contrast, Nguyen and Ryan (2008) found differences in cues activating stereotype threat. Moderately explicit cues produced the largest mean effect size in comparison to blatant and subtle cues (Nguyen & Ryan, 2008). Whether the presence of White students was a factor that elicited stereotype threat in Black college students is unclear. It is not uncommon for Black college students attending PWCUs, to be the only Black student in their surroundings (i.e., lecture), thus these students regularly may compare themselves and their progress to White students. Based upon Festinger’s (1954) theory of social comparison, it is expected that these comparisons occur as a way to gain an accurate assessment of self.

Social Comparison Theory

Social comparison theory was originally proposed by Festinger (1954). The theory posited that individuals compare themselves to other individuals as a way to appraise and evaluate their own abilities, and thus form opinions about themselves based on these comparisons. Nine hypotheses were originally proposed in Festinger’s initial
theory of social comparison.

1. There exists, in human organism, a drive to evaluate his opinions and his abilities. (p. 117)

2. To the extent that objective, non-social means are not available, people evaluate their opinions and abilities by comparison respectively with the opinions and abilities of others. (p. 118)

3. The tendency to compare oneself with some other specific person decreases as the difference between his opinion or ability and one’s own increases. (p. 120)

4. There is a unidirectional drive upward in the case of abilities which is largely absent in opinions. (p. 124)

5. There are non-social restraints which make it difficult or even impossible to change one’s ability. These non-social restraints are largely absent for opinions. (p. 125)

6. The cessation of comparison with others is accompanied by hostility or derogation to the extent that continued comparison with those persons implies unpleasant consequences. (p. 129)

7. Any factors which increase the importance of some particular group as a comparison group for some particular opinion or ability will increase the pressure toward uniformity concerning the ability or opinion within that group. (p. 130)

8. If persons who are very divergent from one’s own opinion or ability are perceived as different from oneself on attributes consistent with the divergence, the tendency to narrow the range of comparability becomes stronger. (p. 133)

9. When there is a range of opinion or ability in a group, the relative strength of the three manifestations of pressures toward uniformity will be different for those who are close to the mode of the group than for those who are distant from the mode. Specifically, those close to the mode of the group will have stronger tendencies to change the positions of others, relatively weaker tendencies to narrow the range of comparison and much weaker tendencies to change their own position compared to those who are distant from the mode of the group. (p. 134)

Advancements to social comparison theory have been made which include downward comparisons (Wills, 1981) and motivations related to social comparison.
Research suggests variability in that both upward and downward comparisons indicating that an individual can be effected either positively or negatively by either (Wills, 1981), and personal attributes may account for some of the variability (Goethals & Darley, 1977). One such personal attribute may be an individual’s racial identity.

**Black Racial Identity**

A number of models have been proposed to conceptualize Black American racial identity (Marks, Settles, Cooke, Morgan, & Sellers, 2004). No consensus has been reached on neither the conceptualization, nor how to measure the construct (Constantine, Richardson, Benjamin, & Wilson, 1998). Cross (1971) proposed one of the first and most popular models of Black racial identity development: The Nigrescence model, translated to mean “the process of becoming Black.” This linear, developmental model looked at the progression a Black individual underwent as they moved toward a healthy Black racial identity. The five stages of the Nigrescence model included: pre-encounter, encounter, immersion, emersion, and internalization (Cross, 1971). Since its original inception, revisions and updates to the model have occurred to account for research findings and developments in the Black racial identity literature (Cross & Fhagen-Smith, 2001), specifically the model changed to address the shift in understanding that Blacks self-esteem does not change but rather their worldview, ideology and/or value system changes (Cross, 1991). In contrast to this linear type of model, others have proposed multidimensional models of Black racial identity (e.g., the multidimensional model of

The Multidimensional Model of Racial Identity (MMRI) defines Black racial identity as “the significance and qualitative meaning that individuals attribute to their membership within the Black racial group within their self-concept” (Sellers et al., 1998, p, 23). The MMRI proposes four dimensions of Black racial identity: salience, centrality, ideology, and regard (Sellers et al., 1998). Salience and centrality refer to the significance of race in the individual’s self-perception; ideology and regard refer to what it means to the individual to be a member of the Black racial group (Sellers et al., 1998). According to the MMRI, salience is situation specific, whereas centrality, ideology, and regard are stable, thus Sellers et al. proposed that only the stable dimensions should be measured when examining Black racial identity. The Multidimensional Inventory of Black Racial Identity (MIBI) was created to do just that (Sellers, Rowley, Chavous, Shelton, & Smith, 1997).

**Purpose and Objectives**

The purpose of this study was to examine the impact that different social comparisons may have on stereotype threat for Black college students attending PWCUs. The primary focus of this study was to examine whether stereotype threat for Black college students attending PWCUs would change based upon differing social comparisons presented in the study. This study then attempted to answer the question of whether the degree of Black racial identity had a relationship with the race/ethnicity of the social comparison as evidenced by changes in academic scores.
Research Questions and Hypotheses

For this study there will be four conditions, one condition will be the control condition, one condition will provide comparisons who appear visibly to be Black (racially matched), one condition will provide comparisons who appear visibly to be of racial/ethnic minority groups other than Black (unmatched minority), and one condition will provide comparisons who appear visibly to be White. See the procedures section for a more in depth explanation of the conditions in the study.

RQ1. What is the impact of three different kinds of social comparison on stereotype threat for Black college students?

H1a: Black students in the racially matched comparison will perform better on an academic achievement task than students in the unmatched minority and White comparison conditions. It is hypothesized that seeing individuals who visibly appear similar to the participants will impact academic achievement the greatest (i.e., decrease or remove stereotype threat).

H1b: Black students in the unmatched minority comparison will perform better on an academic achievement task than students in the White comparison condition. It is hypothesized that participants will be more impacted from seeing other racial/ethnic minorities than they will with White individuals.

H1c: Black students in the White comparison will perform as poorly as or worse than students in the no comparison condition. It is hypothesized that no change will occur in the no comparison condition since stereotype would have been elicited, but no comparison provided to produce an impact. It is additionally hypothesized that participants in the White comparison condition may perform worse on the task because they may serve as a further elicitation for stereotype threat.

RQ2. How does the participant’s degree of Black racial identity play a role in the relationship between social comparison and academic achievement?

H2: Black racial identity will moderate the relationship between social
comparison and academic achievement such that Black students with stronger racial identities will show preference to racially matched comparison, followed by preference for unmatched minority, followed by White and/or no comparison conditions as evidenced by their change in achievement scores.
CHAPTER III

METHODS

This chapter includes the methods used in the study, including a description of the procedure, participants, setting, sample and power, and instruments used.

Procedures

Recruitment

Recruitment efforts took place in four phases. Institutional Review Board (IRB) approval was obtained for initial survey, as well as for the amendments required for the subsequent phases (Utah State University, IRB approval 6215). Phase one of recruitment occurred solely in Utah, started October 5, 2015 and ended December 4, 2015. Recruitment efforts included (a) the use of personal contacts located in Utah, which yielded additional contacts, (b) contacting identified individuals in specific departments on college campuses who were most likely to have contact with Black college students in Utah (i.e., multicultural centers/diversity programs, athletics, first year centers), and (c) the use of social media. These efforts resulted in seven participant attempts at completing the survey, with two surveys completed.

In an attempt to increase participation, recruitment efforts were modified to include Black college students nationally (phase two). Phase two recruitment began December 5, 2015 and ended February 18, 2016. Recruitment efforts were the same as phase one except that contacts located outside of Utah were also deployed for assistance, and national groups/organizations were contacted (i.e., Association of Black
Psychologists). These efforts resulted in 19 participant attempts at completing the survey, with one completed survey.

Modifications were again considered to allow for increased participation in the survey (phase three). Phase three consisted of a modification to racial/ethnic inclusion/exclusion criteria, to allow individuals who identified as White and/or Asian (along with Black) to be eligible to participate in the survey. Participants who identified as White and/or Asian were not initially eligible for the survey since the stereotype of academic underperformance did not extend to these particular groups. However, after reexamining the literature on stereotype threat, it was found that in general other studies examining the variable had not included such strict criteria thus for the purposes of our study it did not seem warranted. In addition to this modification, an incentive was added as a means to increase participation. Participants were given the opportunity to be entered into a raffle to win a $25 e-gift card (with a one in four chance of winning). Participants were given 10 e-gift card options to choose from: Amazon, Starbucks, Brinker, Gap Options, Domino, Whole Foods Market, JCPenney, Airbnb, Gamestop, and Sephora. Recruitment efforts continued to occur nationally and the same strategies for recruitment as previously used were employed (i.e., personal contacts, social media, national groups/organizations). Efforts began on February 19, 2016, and ended on April 18, 2016. These efforts resulted in 36 participant attempts at completing the survey and nine completed surveys.

After 6 months of great difficulty securing the necessary sample, there was a significant shift in recruitment strategy. Phase four utilized a Qualtics panel for the
recruitment of participants. Recruitment began on April 19, 2016, and ended on May 11, 2016. These efforts resulted in 1,921 attempted surveys and 132 completed surveys. The total for all four phases of recruitment yielded 144 participants across a 7-month period of time.

Participants who were being recruited into the study were informed that the study was examining how college students of color performed on academic tasks after watching a video. The rationale for the use of deception was so that the intervention was not unknowingly mitigated through participant knowledge.

**Screening and Pre-Experimental Activities**

Participants first completed the Screening Form (see Appendix B) to determine their eligibility into the study. Eligible individuals then completed the Demographics Form (see Appendix C) and the Multidimensional Inventory of Black Identity (MIBI; see Appendix D), which served to collect general demographic characteristics and information regarding participants’ Black racial identity. The MIBI was completed at this stage in the process given that it may potentially serve as an implicit activation for elicit stereotype threat.

**Eliciting Stereotype**

Once the pre-experimental activities were completed, all participants were shown slides with statistics from the NCES pertaining to the achievement gap between Black and White college students (see Table 1). The final slide of the presentation contained the following statement: “Black college students are underachieving compared to their White
19

Table 1

National Center for Education Statistics

<table>
<thead>
<tr>
<th>Slide</th>
<th>NCES statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In a recent year, the SAT - Critical Reading mean scores of college-bound high school seniors who were Black was 431, while the mean scores for seniors who were White was 527.</td>
</tr>
<tr>
<td>2</td>
<td>In that same year, the SAT - Mathematics mean scores of college-bound high school seniors who were Black was 429, while the mean scores for seniors who were White was 534.</td>
</tr>
<tr>
<td>3</td>
<td>Also during that year, the SAT - Writing mean scores of college-bound high school seniors who were Black was 418, while the mean scores for seniors who were White was 515.</td>
</tr>
<tr>
<td>4</td>
<td>Over a recent 36 year span, the percentage of Black students enrolled in college increased from 10% to 15%.</td>
</tr>
<tr>
<td>5</td>
<td>While, the percentage of White students enrolled in college decreased from 84% to 60%.</td>
</tr>
<tr>
<td>6</td>
<td>For a recent starting cohort, the 4-year graduation rate for first-time, full-time Black students seeking Bachelor degrees was 21%.</td>
</tr>
<tr>
<td>7</td>
<td>For the same cohort, the 4-year graduation rate for first-time, full-time White students seeking Bachelor degrees was 43%.</td>
</tr>
<tr>
<td>8</td>
<td>That same cohort's 5-year graduation rate for first-time, full-time Black students seeking Bachelor degrees was 36%.</td>
</tr>
<tr>
<td>9</td>
<td>And their 5-year graduation rate for first-time, full-time White students seeking Bachelor degrees was 60%.</td>
</tr>
<tr>
<td>10</td>
<td>The 6-year graduation rate for that cohort of first-time, full-time Black students seeking Bachelor degrees was 41%.</td>
</tr>
<tr>
<td>11</td>
<td>While their 6-year graduation rate for first-time, full-time White students seeking Bachelor degrees was 63%.</td>
</tr>
<tr>
<td>12</td>
<td>In a recent year, White students received 66% of the Associate degrees awarded.</td>
</tr>
<tr>
<td>13</td>
<td>For that same year, Black students received 14% of the Associate degrees awarded.</td>
</tr>
<tr>
<td>14</td>
<td>In that same year, White students received 73% of the Bachelor degrees awarded.</td>
</tr>
<tr>
<td>15</td>
<td>While Black students received 10% of the Bachelor degrees awarded.</td>
</tr>
<tr>
<td>16</td>
<td>Moreover, White students received 73% of the Master degrees awarded that year.</td>
</tr>
<tr>
<td>17</td>
<td>And Black students received 13% of the Master degrees awarded that year.</td>
</tr>
<tr>
<td>18</td>
<td>Also during that year, White students received 74% of the Doctoral degrees awarded.</td>
</tr>
<tr>
<td>19</td>
<td>Whereas, Black students received 7% of the Doctoral degrees awarded.</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Slide</th>
<th>NCES statistic</th>
</tr>
</thead>
</table>
| 20   | Across degree types, White students received the majority of the degrees that were awarded:  
66% of Associate degrees  
73% of Bachelor degrees  
73% of Master degrees  
74% of Doctoral degrees |
| 21   | While Black students received fewer of the degrees that were awarded:  
14% of Associate degrees  
10% of Bachelor degrees  
13% of Master degrees  
7% of Doctoral degrees |
| 22   | Over a recent 24 year period of time, the percentage of 25- to 29-year olds who attained Bachelor degrees or higher increased for Whites from 26% to 41%. |
| 23   | During that same 24 year period of time, the percentage of 25- to 29-year olds who attained Bachelor degrees or higher increased for Blacks as well, from 13% to 22%. |
| 24   | However, the gap between Whites and Blacks in the rate of attaining Bachelor degrees or higher widened from 13 to 18 percentage points. |

counterparts! This study is concerned with how much race impacts a Black identified student’s performance on problems requiring verbal reasoning abilities.” The purpose of this slideshow presentation was to serve as an explicit activation for stereotype threat.

Participants were then given 10 minutes to engage in the first academic task (see Appendix E). Prior to the start of this study, the academic tasks were piloted to gauge the amount of questions college students could answer in a 10-minute period of time (Utah State University, IRB approval 6270). Twelve college students (an amount which was 10% of the proposed sample size for this study) completed the pilot measure. The maximum amount of questions answered during the 10-minute time frame was 29 ($M = 20.67$, $SD = 5.79$, range $= 10-29$). Given this information, forty questions were provided to participants during the academic tasks sections. The questions were gather from free online practice GRE tests (i.e., http://www.test-guide.com/free-gre-practice-tests.html).
Experimental Conditions

Once the initial academic task was completed, participants were then randomly sorted into one of four conditions: racially matched comparison, unmatched minority comparison, White comparison, and no comparison. The randomizer feature in Qualtrics was utilized to complete this randomization process. Participants in the racially matched comparison, unmatched minority comparison, and White comparison viewed images of individuals wearing graduation attire (i.e., cap and gown), whereas participants in the no comparison/control condition viewed neutral images which included no people and consisted scenery (see Appendix F for images used in all conditions). Participants in the racially matched comparison condition primarily viewed images of individuals wearing graduation attire who visibly appeared to be Black. Participants in the unmatched minority comparison condition primarily viewed images of various racial/ethnic minorities wearing graduation attire. The images in the White comparison condition were primarily of individuals wearing graduation attire who visibly appeared to be White. In each condition, 30 images were shown to participants. Except for the no comparison condition, for which all of the images were of neutral scenery, 60% of the images shown were of that specific condition (i.e., Black graduates in the racially matched condition) whereas the other 40% were of individuals not belonging to that condition (i.e., White graduates in the racially matched condition). Specifically, in the neutral condition there were six images of autumn, six images of summer, six images of winter, six images of spring, and six images of animals in nature. Specifically, in the three comparison conditions, participants viewed 12 images of individuals and six images of groups of
people that fit within the specific condition (i.e., visibly appearing White in the White condition), two images of a multi-ethnic group (the same across the conditions), and 10 images from the other two social comparison conditions (i.e., White and unmatched minority as part of the racially matched condition). Each condition had stereotype threat elicited but only three of the conditions (racially matched, unmatched minority, and White) had a social comparison.

Participants in the social comparison conditions were shown a presentation with the images that fit within their respective conditions, while participants in the no social comparison condition were presented with images of neutral scenery. Participants in all conditions were then given 10 minutes to engage in the academic task. Lastly, participants were debriefed regarding various aspects of the study (i.e., deception used in the study). All tasks and times by condition are summarized in Table 2.

Table 2

Participant Task Analysis (in minutes)

<table>
<thead>
<tr>
<th>Task</th>
<th>Racially matched</th>
<th>Unmatched minority</th>
<th>White</th>
<th>Neutral scenery</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening form</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Determine eligibility</td>
</tr>
<tr>
<td>Demographics form, MIBI</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>Baseline data</td>
</tr>
<tr>
<td>NCES statistics</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Elicit stereotype threat</td>
</tr>
<tr>
<td>Academic task</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>Dependent variable</td>
</tr>
<tr>
<td>Social comparison or scenic images</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>Independent variable</td>
</tr>
<tr>
<td>Academic task</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>Dependent variable</td>
</tr>
<tr>
<td>Debrief</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>Important aspects of study</td>
</tr>
<tr>
<td>Total participation time</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>
Participants

Participants for this study were self-identified Black students primarily enrolled at PWCU in the U.S. A total of 144 college students participated in the study, with all participants endorsing a Black racial/ethnic identity. Participants were eligible if they self-identified as belonging to more than one racial/ethnic group as long as one of their racial/ethnic identities was Black. Some participants identified as belonging to more than one race/ethnicity endorsing White (n = 8), American Indian/Alaskan Native (n = 3), Native Hawaiian/Pacific Islander (n = 1), and Latino/a (n = 3). There were 27 men and 117 women in the sample. The majority of participants endorsed that they were in their third year (n = 38), with 25 participants in their first year, 37 in their second year, 14 in their fourth year, 16 in their fifth year or beyond, and 14 identifying as graduate students.

Nearly one quarter of the sample (n = 35, 24.3%) endorsed that they had taken a GRE practice test, and 24 participants reported that they had taken the GRE. The majority of participants endorsed they did not have a learning disability (n = 141). Participants reported grade point averages (GPA) ranged from 0.00 to 4.00 (M = 3.22, SD = 0.577). In addition to attending college, 85 participants endorsed that they were employed. Participants hailed from 30 states and the District of Columbia. The highest concentration of participants was in Florida (n = 19) and Texas (n = 14). No state had greater than 15% of participants located there. Six participants were located at a historically Black college or university (HBCU), three did not identify their college, and the remainder were enrolled at non-HBCU’s (n = 135). Participants endorsed 76 majors, with the highest endorsements related to business related majors (n = 19; i.e., business, business
management, business administration). Across the four conditions, there were 39 individuals in the racially matched condition, 30 individuals in the unmatched minority condition, 39 in the White condition, and 36 in the neutral condition. See Tables 3 and 4 for participant demographic information.

Table 3

*General and Educational Participant Information*

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Condition 1</th>
<th>Condition 2</th>
<th>Condition 3</th>
<th>Condition 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
<td>3</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Female</td>
<td>31</td>
<td>27</td>
<td>28</td>
<td>31</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>American Indian</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Black</td>
<td>39</td>
<td>30</td>
<td>39</td>
<td>36</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Latino/a</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Year in college</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>5</td>
<td>13</td>
<td>11</td>
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<tr>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5+</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Graduate student</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolled full-time</td>
<td>33</td>
<td>24</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>College is HBCU</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>GRE prep test taken previously</td>
<td>13</td>
<td>4</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>GRE taken previously</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Employed</td>
<td>19</td>
<td>16</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Learning disability</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 4

*Age and GPA Ranges for Participants*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Age Range</th>
<th>Age M</th>
<th>Age SD</th>
<th>GPA Range</th>
<th>GPA M</th>
<th>GPA SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18 – 69</td>
<td>26.36</td>
<td>9.76</td>
<td>0.0 – 4.0</td>
<td>3.22</td>
<td>0.73</td>
</tr>
<tr>
<td>2</td>
<td>18 – 41</td>
<td>24.53</td>
<td>6.01</td>
<td>2.0 – 4.0</td>
<td>3.32</td>
<td>0.49</td>
</tr>
<tr>
<td>3</td>
<td>18 – 58</td>
<td>26.72</td>
<td>8.68</td>
<td>1.7 – 4.0</td>
<td>3.27</td>
<td>0.53</td>
</tr>
<tr>
<td>4</td>
<td>18 – 45</td>
<td>25.75</td>
<td>7.70</td>
<td>2.18 – 3.90</td>
<td>3.09</td>
<td>0.50</td>
</tr>
<tr>
<td>Overall</td>
<td>18 – 69</td>
<td>25.92</td>
<td>8.24</td>
<td>0.0 – 4.0</td>
<td>3.22</td>
<td>0.58</td>
</tr>
</tbody>
</table>

**Setting**

The study was conducted online through Qualtrics. Qualtrics is a survey software used for conducting online research. The study was online from October 5, 2015, until May 11, 2016. Participants were able to access the study from any computer with access to the internet by going to the provided website. The Letter of Information was provided as a Microsoft Word document through Qualtrics and was available to be saved and/or printed for later reference to all participants (see Appendix A). All other materials were available through Qualtrics and was presented by way of Qualtrics features (i.e., instead of viewing a video, the auto advance feature as utilized to change images shown to participants).

**Sample and Power**

A statistical power analysis was preformed using G*Power 3.1 to conduct an a priori power analysis. The effect size was set at .32 and was used based on meta-analytic
findings of Nguyen and Ryan (2008). Alpha was set at .05 and power at .80 for four groups. A total sample size suggested to detect statistical significance was 112, which required 28 participants in each of the four conditions. To allow for expected attrition or exclusion of participants (i.e., excessive missing data) 124 participants were planned to be recruited into the study.

**Instruments**

**Screening Form**

The Screening Form was used to determine an individual’s eligibility into the study. For phases one and two of recruitment, the Screening Form consisted of four yes/no questions, and for phases three and four, the Screening Form consisted of three yes/no question. Consistent across all phases of recruitment, participants had to be currently enrolled at a college/university in the U.S. (except during phase one the college had to be located in the state of Utah), identify as Black, and be at least 18 years of age. During phases one and two, in addition to the aforementioned, participants also could not identify as White and/or Asian.

**Demographic Form**

The purpose of the Demographic Form was to obtain relevant information about each participant in the study. The Demographic Form included two sections: Part I – General Information and Part II – Educational Information. In phase two, a question was added to gather college location information. This information was compared against published lists to determine whether an institution was an HBCU or not. In phase three,
an additional question was added to gather information related to whether participants who endorsed multiple racial/ethnic identities felt that one of their identities was most salient at this time.

**Black Racial Identity**

The Multidimensional Inventory or Black Identity (MIBI) was developed to measure Black racial identity in Black college students and adults. The measure examined three stable dimensions of Black American racial identity: centrality, regard, and ideology (Sellers et al., 1998). Seven subscales exist within the measure: (1) centrality, (2) private regard, (3) public regard, (4) assimilation, (5) humanist, (6) oppressed minority, and (7) nationalist. Items were rated on a 7-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (7). Since the MIBI was based upon a multidimensional model, it is inappropriate to calculate a composite score. The measure in its entirety was given to participants; however, only scores from the centrality dimension were used to measure the degree of Black racial identity. The centrality scale was used because it measures the significance of race in an individual’s definition of self, which in connection to stereotype threat might tap into the degree in which an individual views themselves as a member of the stereotyped group. The regard and ideology dimensions measures the meaning that individuals give to what is attributed to being Black. Cronbach’s alpha for the centrality dimension for the sample at a PWCU was .78 and was .77 for the full sample which included both a PWCU and a HBCU (Sellers et al., 1997). Reliabilities for this sample were adequate (see Table 5).
Table 5

Multidimensional Inventory of Black Racial Identity Subscale Information for Current Study

<table>
<thead>
<tr>
<th>MIBI subscale</th>
<th>n</th>
<th>Items</th>
<th>Observed range</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrality</td>
<td>126</td>
<td>8</td>
<td>1.25 – 7.00</td>
<td>4.901</td>
<td>1.199</td>
<td>-2.463</td>
<td>-0.019</td>
<td>.836</td>
</tr>
<tr>
<td>Private regard</td>
<td>137</td>
<td>6</td>
<td>3.17 – 7.00</td>
<td>6.177</td>
<td>0.898</td>
<td>-6.048</td>
<td>2.440</td>
<td>.835</td>
</tr>
<tr>
<td>Public regard</td>
<td>134</td>
<td>6</td>
<td>1.00 – 6.50</td>
<td>3.422</td>
<td>1.148</td>
<td>0.455</td>
<td>-1.260</td>
<td>.775</td>
</tr>
<tr>
<td>Assimilation</td>
<td>135</td>
<td>9</td>
<td>1.67 – 7.00</td>
<td>5.090</td>
<td>0.908</td>
<td>-3.756</td>
<td>2.162</td>
<td>.750</td>
</tr>
<tr>
<td>Humanist</td>
<td>132</td>
<td>9</td>
<td>3.22 – 7.00</td>
<td>5.276</td>
<td>0.867</td>
<td>-1.308</td>
<td>-1.057</td>
<td>.726</td>
</tr>
<tr>
<td>Oppressed minority</td>
<td>129</td>
<td>9</td>
<td>2.67 – 7.00</td>
<td>5.009</td>
<td>0.978</td>
<td>-1.690</td>
<td>-0.915</td>
<td>.782</td>
</tr>
<tr>
<td>Nationalist</td>
<td>135</td>
<td>9</td>
<td>1.56 – 7.00</td>
<td>3.969</td>
<td>1.049</td>
<td>1.876</td>
<td>-0.348</td>
<td>.811</td>
</tr>
</tbody>
</table>

Academic Achievement

Participants completed two sets of academic tasks. Participants had available up to 40 verbal reasoning questions to answer per academic task, and were given 10 minutes per academic task to complete as many of the questions as possible. The academic task questions were taken from various GRE prep tests found online. The same questions were provided to all participants. The questions made available to participants during pre-intervention were not the same questions made available to participants during post-intervention. The raw score was determined by adding the number of correct responses, with some questions requesting more than one response (i.e., select the two answer choices). Academic task score variable was not normally distributed across each of the four conditions. Table 6 contains information related to the academic tasks.
Table 6

*Academic Task Information for Current Study*

<table>
<thead>
<tr>
<th>Task #</th>
<th>N</th>
<th>Items</th>
<th>Possible range</th>
<th>Observed range</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>144</td>
<td>40</td>
<td>0.00-67.00</td>
<td>3.00 – 48.00</td>
<td>19.889</td>
<td>10.585</td>
<td>3.144</td>
<td>-0.262</td>
</tr>
<tr>
<td>2</td>
<td>144</td>
<td>40</td>
<td>0.00-69.00</td>
<td>0.00 – 54.00</td>
<td>22.167</td>
<td>13.287</td>
<td>0.460</td>
<td>-2.915</td>
</tr>
</tbody>
</table>
CHAPTER IV
RESULTS

This study examined the relationships between social comparison, participant Black racial identity, and stereotype threat (measured by change score on an academic task). The study sought to answer two primary research questions, and this chapter will provide the results of analysis in attempting to answer these questions. The first question was related to whether providing Black college students with differing social comparisons would impact stereotype threat. Researchers hypothesized that: (a) Black students in the racially matched comparison would perform better on an academic task than students in the unmatched minority or White comparison conditions, (b) Black students in the unmatched minority comparison would perform better on an academic task than students in the White comparison condition, and (c) Black students in the White comparison condition would perform as poorly or worse than students in the no comparison condition. The second research question examined in which way a participant’s degree of Black racial identity may be related to the relationship between social comparison and academic achievement. Researchers hypothesized that: Black racial identity would moderate the relationship between social comparison and academic achievement such that Black students with stronger racial identities would show preference to racially matched comparisons, followed by preference for unmatched minorities, followed by White and/or no comparison as evidenced by a change in their achievement scores.

Two analyses were conducted to answer the research questions in the study. To
determine whether variations in social comparison by race/ethnicity impacted stereotype threat, analysis of variance (ANOVA) was conducted to analyze the group means of the four conditions in the study. Analysis of covariance (ANCOVA) was conducted to test the moderation in research question two. Only data from the three comparison groups were used to test whether racial identity moderates the relationship between social comparison and academic achievement.

**Research Question I**

To begin answering the first research question, a one-way ANOVA was conducted (with academic task 1 score as the dependent variable and the condition as the factor) to ensure that there were no differences at time 1 in performance on the academic task. There was homogeneity of variances, as assessed by Levene’s test for equality of variances ($p = .262$). There was no significant differences between intervention groups on academic task 1 performance, $F(3, 140) = .432, p = .731$. Tukey posthoc analyses confirmed no significant difference between groups on performance on academic task 1.

The hypotheses of the first research question were tested with a two-way mixed ANOVA. A two-way mixed ANOVA assumes: (a) a continuous dependent variable; (b) one categorical between-subjects factor (i.e., the four conditions in the study: racially matched, unmatched minority, White, and neutral); and (c) one categorical within-subjects factor (i.e., academic task 1 and academic task 2 in the study). The other five assumptions are: (a) there should be no significant outliers in any cell of the design; (b) the dependent variable should be approximately normally distributed in every cell of the
design; (c) there should be homogeneity of variances; (d) there is homogeneity of covariances (multisample sphericity); and (e) the assumption of sphericity is met. If data violates (i.e., fail) one or more of these five assumptions, options for ways to proceed may include: (a) making corrections to the data so that it no longer violates the assumptions; (b) using an alternative statistical test; or (c) proceeding with analysis even when the data violates certain assumptions.

Data violated the first assumption as well as the second assumption. There were three outliers in the academic task 1 group, with scores that were higher than should be expected for the testing group. Test to verify normal distribution of academic task 1 and academic task 2 showed significant skew and kurtosis (see Table 7). Academic task 1 and academic task 2 were transformed using a square root transformation. With this transformation, skew values ranged from -1.606 to 1.253 and kurtosis values ranged from -1.513 to 0.057. Following this transformation, there were no outliers, as assessed by examination of studentized residuals for values greater than ±3; there was homogeneity of variances, as assessed by Levene’s test of homogeneity of variance (academic task 1, \( p = .262 \); AT2, \( p = .462 \)); and there was homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (\( p = .466 \)). Sphericity was not tested because there were only two levels of the repeated measures.

A 2 (academic task) x 4 (condition) repeated measures ANOVA with performance as the within-subjects variable and condition as the between-subjects variable showed no significant effect for time by condition, \( F(3, 140) = 1.620, p = .187 \), partial \( \eta^2 = .034 \), thus main effects were explored. There was a significant main effect for
Table 7

*Scale Characteristics by Condition*

<table>
<thead>
<tr>
<th>Academic performance</th>
<th>Condition</th>
<th>Scale</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>Time 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Racially matched</td>
<td>21.26</td>
<td>11.60</td>
</tr>
<tr>
<td></td>
<td>Unmatched minority</td>
<td>20.43</td>
<td>11.70</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>18.90</td>
<td>9.29</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>19.03</td>
<td>10.01</td>
</tr>
<tr>
<td></td>
<td>Time 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Racially matched</td>
<td>22.10</td>
<td>14.15</td>
</tr>
<tr>
<td></td>
<td>Unmatched minority</td>
<td>20.40</td>
<td>13.34</td>
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<td></td>
<td>White</td>
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<tr>
<td></td>
<td>Neutral</td>
<td>22.89</td>
<td>12.47</td>
</tr>
</tbody>
</table>

Conceptual considerations and data patterns (see Figure 1) suggested that the four intervention conditions could be grouped into two superordinate categories. Reducing the number of groups from four groups to two groups provided more statistical power to detect differences between groups, thus the White and neutral conditions were combined into one group with 75 participants (racial nonminority intervention group) and the racially matched and unmatched minority conditions were combined into another group with 69 participants (racial minority intervention group). A 2 (academic task) x 2 (condition) Repeated Measures ANOVA with academic task scores as the within-subjects’ variable and condition as the between-subjects’ variable was conducted.

time, $F(1, 140) = 7.281$, $p = .008$, partial $\eta^2 = .049$. There was no significant main effect for condition, $F(3, 140) = 0.077$, $p = .972$, partial $\eta^2 = .002$. 

Conceptual considerations and data patterns (see Figure 1) suggested that the four intervention conditions could be grouped into two superordinate categories. Reducing the number of groups from four groups to two groups provided more statistical power to detect differences between groups, thus the White and neutral conditions were combined into one group with 75 participants (racial nonminority intervention group) and the racially matched and unmatched minority conditions were combined into another group with 69 participants (racial minority intervention group). A 2 (academic task) x 2 (condition) Repeated Measures ANOVA with academic task scores as the within-subjects’ variable and condition as the between-subjects’ variable was conducted.
Figure 1. Repeated measures ANOVA for four conditions.

There was a statistically significant effect for time by condition, $F(1, 142) = 4.776$, $p = .030$, partial $\eta^2 = .033$. The difference reflects the small difference in scores from time one to time two for the racial minority intervention group ($M_{T1} = 20.900$, $SD_{T1} = 11.566$; $M_{T2} = 21.362$, $SD_{T2} = 13.726$) compared to the racial nonminority intervention group which showed a greater difference ($M_{T1} = 18.960$, $SD_{T1} = 9.580$; $M_{T2} = 22.907$, $SD_{T2} = 12.918$; see Figure 2).

**Research Question II**

To answer research question two a Repeated Measures ANCOVA was conducted. The MIBI scale used to measure Black racial identity was the centrality scale. A “reflect
and square root$^*$ transformation was applied because the scale was negatively skewed. Following this transformation, skew was 0.263 and kurtosis was -1.052, both falling within normal limits. There was no significant effect for time by condition, $F(3, 124) = 1.486, p = .222$, partial $\eta^2 = .035$, thus main effects were explored. In contrast to the Repeated Measures ANOVA reported in relation to research question 1, the main effect for time was not significant, $F(1, 124) = 3.465, p = .065$, partial $\eta^2 = .027$. There also were no significant main effects for condition, $F(3, 124) = 0.165, p = .920$, partial $\eta^2 = .004$ or centrality, $F(1, 124) = 1.137, p = .288$, partial $\eta^2 = 0.009$.

Following posthoc analyses in research question 1, a repeated measures ANCOVA was conducted with two time points on academic tasks as the within-subjects’ variable, two conditions as between-subjects’ variable, and the centrality scale as a
covariate (see Figure 3). There was a statistically significant effect for time by condition, $F(1, 126) = 3.915, p = .050$, partial $\eta^2 = .030$. There was no significant time by centrality interaction, $F(1, 126) = 1.921, p = .168$, partial $\eta^2 = .015$. There were also no significant main effects for time, $F(1, 126) = 3.317, p = .071$, partial $\eta^2 = .026$, centrality $F(1, 126) = 1.100, p = .269$, partial $\eta^2 = .009$, or condition $F(1, 126) = 0.051, p = .822$, partial $\eta^2 = .000$.

**Figure 3.** Repeated measures ANCOVA.
CHAPTER V
DISCUSSION

This study was conducted to examine stereotype threat in Black college student populations. The study examined stereotype threat, academic achievement, Black racial identity, and social comparisons in Black college students attending primarily PWCUs nationally. The purpose of this study was to test the efficacy of an intervention related to stereotype threat for Black college students attending PWCUs. Data were collected from the Fall 2015 academic semester into the Spring 2016 academic semester, through Qualtrics. Bi- and multi-racial individuals were eligible to participate so long as one racial/ethnic identity held was Black. Findings from the study, along with limitations and future direction for research will be discussed.

Summary

The two proposed analyses were conducted to determine whether variations in social comparison by race/ethnicity impacted stereotype threat, and whether Black racial identity moderated the relationship between social comparison and academic achievement. The four conditions were determined to be two subordinate groups, with racially matched and unmatched minority conditions combining to form the racial minority intervention group, and White and neutral conditions combining to form the racial nonminority intervention group. The combining of these groups provided more statistical power to detect differences between the groups. Participants in the racial nonminority intervention group increased their scores at a rate greater than those in the
racial minority intervention group, which indicated a greater positive impact on stereotype threat. There was no evidence which suggested that Black racial identity impacted the relationship between social comparison and academic achievement.

**Issues with Recruitment**

Yancu, Lee, Witherspoon, and McRae (2011) published an article separate from their original study which described their difficulties with the recruitment of Black college students into their study, thus based upon this study and others similar to it which noted difficulties with recruitment (i.e., Diaz, Mainous, McCall, & Geesey, 2008) it was known prior to the start of the study that the recruitment process may be difficult given this study’s focus on Black college students. However, the recruitment of participants proved to be a laborious and minimally fruitful endeavor until a company was hired to provide a panel of participants for the study. The recruitment process began by focusing on students only attending college in one particular state. This state was chosen because of the likelihood that all universities within the state would be PWCUs (state’s White racial makeup was approximately 90% of the population), because of the homogeneity of the state (i.e., race, religion) thus the potential to decrease the need to run covariates during analysis, and because the researchers had multiple personal contacts at various universities throughout the state. Several changes were adapted to increase participation (i.e., less stringent inclusion/exclusion criteria, incentive added), yet minimal progress occurred. After 6 months of recruiting, and less than 10% of the proposed sample collected, a company was hired to recruit participants into the study. The company
provided 132 completed survey after approximately one month of recruiting, with their efforts indicating a seven percent completion rate.

The company reported a total of 1,926 recorded responses, with only 132 completed surveys (6.85% completion rate). During the first three phases of data collection, there were 62 attempted surveys with 12 completions (19.35% completion rate). Given the low completion rate that occurred during the phase that resulted with the bulk of the sample (phase four), along with the noted usage of a company to recruit these participants, the sample for this study may be biased and may not be fully representative of the general population of Black students in college.

Multiple hypothesis can be made regarding the recruitment difficulties faced in conducting this study. The survey was approximately 40 minutes in length, which could have deterred participation and/or prevented them from completing it. The survey set out to elicit stereotype threat by introducing several cues (both implicit and explicit), thus participants may have chosen to discontinue participation due to discomfort/distress experienced. Additionally, documentation such as the book *Medical Apartheid* (Washington, 2006) has been written to shed light on the mistreatment of Blacks in medical experimentation in the U.S., thus trust may also have been a factor contributing to difficulties with the recruitment of Black participants into this study. While I attempted to overcome any potential trust barriers by appealing on a personal level (i.e., providing personal contact information, links to the researcher’s webpage that contained pictures along with other information, signing documentation with the identification that the researcher herself identified as Black), recruitment results remained minimal.
Results

The results for this study did not coincide with the researcher’s hypotheses. Findings revealed a similarity between the academic task change scores between the White and neutral conditions, and between the racially matched and unmatched minority conditions. It can be said that participants were impacted by the White intervention similarly to how participants were impacted by the neutral intervention. One hypothesis for this is that since individuals are accustomed to seeing White individuals succeed, instead of the condition further creating stereotype threat, it felt “normal” for participants. Thus the changes in academic achievement looked similarly to those seen in the neutral condition. Given that individuals at PWCUs do not regularly see individuals who visibly look like them (i.e., high numbers of racial/ethnic minorities), it can be hypothesized that the interventions in the racially matched and unmatched minority conditions provided an intervention that was not “realistic.” Additionally, the intervention may have seemed “unrealistic,” because participants were told at the beginning of the study that Blacks underperform in comparison to Whites and were shown several statistics that supported this statement. Therefore, instead of these conditions providing role models and drastically increasing academic achievement (i.e., minimizing or decreasing stereotype threat), it can be hypothesized that the conditions may have further emphasized race and served as an implicit cue to further elicit stereotype threat.

The racially matched condition was hypothesized to provide the participants with a role model. However, instead of the study providing two cues to elicit stereotype threat (MIBI, and the NCES slideshow) and one intervention where participants in the racially
matched condition would receive a role model, it appears that the study provided three
cues for stereotype threat. It appears that what the researcher thought could be in an
intervention for stereotype threat, in fact served as an implicit cue to further elicit
stereotype threat. The greatest change occurred in the racial nonminority intervention
groups (combined White and neutral conditions), which did not highlight racial/ethnic
minority racial identity, thus did not further elicit stereotype threat. No research studies
were found which examined the usage of multiple cues for stereotype threat, thus future
research could examine the utility and impact of such strategies.

**Stereotype Threat and Online Modality**

Much research has been conducted on stereotype threat, including research
specific to how stereotype threat can be elicited in individuals. However, no studies were
found which discussed a research project through which stereotype threat was elicited
and intervened upon through an online modality. Thus at the start of this study, it was
unknown whether the modality of choice (online) would suffice in eliciting and
intervening on stereotype threat. Stereotype threat can be elicited through either implicit
or explicit cues, therefore, this study employed both cues given the study’s online nature.
Specifically, the MIBI was completed prior to the interventions to serve as an implicit
cue for stereotype threat because it highlights Black racial identity. Additionally, a
sentence was added to the end of the NCES statistics, which served as an explicit cue for
stereotype threat because it specifically called attention to the stereotype of Black
underachievement. It can be hypothesized that the interventions provided impacted
academic achievement as evidenced by the changes in scores from time one administration to time two administration, although as noted previously the changes were not in line with what the researchers originally hypothesized.

The lack of experimental control when conducting online research may have also impacted this study. The study was available online for a period of seven months, and participants could take the survey when and where they wanted. The estimated total participation time for the survey was 40 minutes, however, the average participation time was 64 minutes (range 13.55 minutes – 731.65 minutes). It is unknown what factors contributed to the wide range of completion time for participants, and whether outside participants were engaging in stimuli while completing the survey.

Limitations and Implications for Future Research

The state of affairs in the U.S. and inability to control for or fully know the extent of the impact of it on participants is one limitation of this study. Currently various images and stories of brutality against Black Americans are constantly on the news and in social media. While suspicious deaths of Blacks were making headlines for several years (i.e., Oscar Grant in 2009, Trayvon Martin in 2012), beginning in 2014 with the deaths of individuals such as Tamir Rice, Eric Garner, and Michael Brown, Blacks began making mainstream media on a regular basis for the brutality against them. Cases continued to receive news and social media coverage leading up to and throughout the time that this study was conducted (i.e., Walter Scott, Freddie Gray, Sandra Bland), and have continued through current day to flood media outlets. Several college campuses were also making
news as their universities fell into unrest related to incidents of discrimination and racial tension found on college campuses. Campaigns such as I too Am Harvard (2014) and Being Black at the University of Michigan (2014), and protests at several universities began to surface (i.e., University of Missouri, Yale University, Princeton University). Additionally, the Black Lives Matter movement is active at this point in history, and a controversial individual is currently leading for the Republican presidential nomination (i.e., Donald Trump). It is not possible to know the degree of impact that these historical moments are having on Black college students, if at all. A study that incorporates a measure that could account for this impact may provide deeper understanding to Black college student’s experiences.

The majority of the sample identified as women (117 women, 27 men). Black women college enrollment rates are the highest across races and genders, and more college degrees are conferred (associate, bachelor, master, doctoral) to Black women than to any other group of women. On the other hand, Black men college enrollment and completion rates are significantly lower. It is unknown how the intersectionality of race and gender impacts stereotype threat, particularly in regards to academic achievement. Future research may consider examining the intersectionality present given the currently shifted demographic makeup of college campuses.

The literature suggests that an institution is considered to be a PWCU if 50% or greater of the student population identifies as White. In considering the concept of critical mass, a more meaningful examination may be to consider racial demographics as a continuous variable rather than a categorical concept.
Several issues surrounding methodological concerns are worth noting. Academic tasks were a combination of questions found through online GRE practice tests, thus the degree of difficulty between academic task one may not be commensurate with the degree of difficulty of academic task two. Additionally, for participants who have taken GRE practice tests online, some of the questions may have been familiar to them. Future research could provide measures that have similar degrees of difficulty for academic tasks at time one and time two. The small sample size in the study limited interpretations, and future research could increase the sample size to increase power. Because the study focused solely on Black college students, results are not generalizable to other racial/ethnic minority groups. Future research could examine the impact of the intervention on stereotype threat in other racial/ethnic minority groups. For this study, participants self-identified as Black and self-identified as college students, and none of the demographic information collected was verified. With the usage of the company to recruit participants, it is unknown exactly how participants were recruited into the study thus it is possible that the sample may be skewed. For the MIBI, a column was added which provided participants the option to choose not to respond to an item. While this option was provided as a consideration of safety, when analyzing results, the items were coded as missing data and thus excluded from MIBI scores. While this is being noted as a limitation for this study, the researcher deemed it more appropriate to prove the option than to “force” participants into answering questions that they did not feel comfortable answering. Participants were able to skip ahead on the auto-advanced sections of the survey (i.e., images for intervention, and academic tasks) because the online tool used
would not allow for the removal of the “next button” for only these specific questions. Therefore, it is possible that not all participants spent the entire three minutes receiving the intervention, or the entire 10 minutes on each academic task. Future research may utilize a different data collecting software program that provides this option.

**Conclusions**

In conclusion, this study examined an intervention for Black college students attending PWCUs. Academic achievement scores increased at a greater rate for individuals in the racial nonminority intervention group than for the individuals in the racial minority intervention group. Black racial identity appears to not have an impact on social comparison preference.
REFERENCES


Appendix A

Letter of Information
LETTER OF INFORMATION

Academic Tasks and College Students of Color

Introduction/Purpose. Melanie M. Domeniuch Rodriguez, Ph.D. and Odessa Knowles, M.S. in the Department of Psychology at Utah State University are conducting a research study to learn more about the impact of watching different videos on Black students’ academic achievement. You have been asked to take part because you are enrolled at a college or university in Utah and may hold an identity that is Black. There will be approximately 124 total participants in this research. This research is part of Ms. Knowles’ Doctoral Dissertation.

Procedures. If you agree to be in this research study, you will complete various self-report assessments about yourself and your education, you will watch a presentation, watch a video, and complete academic tasks online using Qualtrics. The entire process should take approximately 45 minutes.

Risks. Participation in this research study may involve some added risks or discomforts. These include an increase in level of distress from the experimental material (e.g., watching videos or presentation) and fatigue from completion of self-report measures. Although not expected, if you do experience significant levels of distress, you may stop your participation. Because you will be participating at a place of your own choosing, the research team is unable to provide meaningful protection of your privacy. It is suggested that you choose a location that is private and is away from others. You may discontinue participation at any time and without penalty if you feel your privacy interests are being infringed upon.

Benefits. Students will not experience direct benefits from this study outside the opportunity to learn about research study procedures in the process of participation. This study may provide data to support the use of a simple technique that can be used by students of color in completing academic tasks.

Explanation & offer to answer questions. Prior to the start of participation in this study, Odessa Knowles will be available to explain this research study to you and answer your questions. You may reach Odessa at (801) 690-1038 or by email at O.Knowles@aggiemail.usu.edu. If you have other questions or research-related problems, you may also reach Dr. Domeniuch Rodriguez at (435) 797-3059 or by email at Melandia.Domeniuch@usu.edu.

Voluntary nature of participation and right to withdraw without consequence. Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without consequence or loss of benefits. Your data may be excluded from analyses without your consent by the investigator if there are not sufficient data in your record to help answer the research questions.

Confidentiality. Research records will be kept confidential, consistent with federal and state regulations. Only the investigator and student researcher will have access to the data which will be kept in a locked file cabinet in a locked room or in an encrypted, password protected Box.com folder to maintain confidentiality. To protect your privacy, no personal, identifiable information will be collected.

IRB Approval Statement. The Institutional Review Board for the protection of human participants at Utah State University has approved this research study. If you have any questions or concerns about your rights or a research-related injury and would like to contact someone other than the research team, you may contact the IRB Director at (435) 797-0567 or email irb@usu.edu to obtain information or to offer input.
LETTER OF INFORMATION
Academic Tasks and College Students of Color

Investigator Statement. "I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered."

Melanie M. Domenech Rodriguez, Ph.D.
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Student Researcher
801-690-1038
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LETTER OF INFORMATION
Academic Tasks and College Students of Color

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Procedures. If you agree to be in this research study, you will complete various self-report assessments about yourself and your education, you will watch a presentation, watch a video, and complete academic tasks online using Qualtrics. The entire process should take approximately 45 minutes.

Risks. Participation in this research study may involve some added risks or discomforts. These include an increase in level of distress from the experimental material (e.g., watching videos or presentation) and fatigue from completion of self-report measures. Although not expected, if you do experience significant levels of distress, you may stop your participation. Because you will be participating at a place of your own choosing, the research team is unable to provide meaningful protection of your privacy. It is suggested that you choose a location that is private and is away from others. You may discontinue participation at any time and without penalty if you feel your privacy interests are being infringed upon.

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Voluntary nature of participation and right to withdraw without consequence. Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without consequence or loss of benefits. Your data may be excluded from analyses without your consent by the investigator if there are not sufficient data in your record to help answer the research questions.

Confidentiality. Research records will be kept confidential, consistent with federal and state regulations. Only the investigator and study researcher will have access to the data which will be kept in a locked file cabinet in a locked room or in an encrypted, password protected Box.com folder to maintain confidentiality. To protect your privacy, no personal, identifiable information will be collected.

IRB Approval Statement. The Institutional Review Board for the protection of human participants at Utah State University has approved this research study. If you have any questions or concerns about your rights or a research-related injury and would like to contact someone other than the research team, you may contact the IRB Director at (435) 797-0567 or irb@usu.edu to obtain information or to offer input.
LETTER OF INFORMATION

Academic Tasks and College Students of Color

Investigator Statement: "I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered."

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Academic Tasks and College Students of Color

Introduction
You are invited to participate in a research study conducted by Melanie M. Domenech Rodríguez, a Professor in the Department of Psychology, and Odessa Krowles, a Ph.D. student in the Department of Psychology at Utah State University. The purpose of this research is to learn more about the impact of watching different videos on Black students' academic achievement.

This form includes detailed information on the research to help you decide whether to participate in this dissertation study. Please read it carefully and ask any questions you have before you agree to participate.

Procedures
Your participation will involve the completion of various self-report assessments. You will be asked about yourself and your education. You will also watch a presentation, a video, and then to complete an academic task on Qualtrics, a secure, online survey platform. After you have completed this task, you will be directed to a completely different survey, where you will enter your email address for a chance to win one of 31 e-gift cards, each worth $25. We anticipate that 124 people will participate in this research study, and that your total participation will take approximately 45 minutes.

Risks
This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. The foreseeable risks or discomforts include some distress from viewing the videos or presentation, and perhaps fatigue from completion of the self-report measures. You may also feel frustrated with the academic tasks. Finally, loss of privacy or confidentiality is always a risk of research participation. In order to minimize those risks and discomforts, the researchers encourage you to stop your participation if you experience significant distress. To maximize your privacy, the researchers encourage you to complete this research in a private location. The researchers will make every effort to ensure your information remains confidential — more information about that is provided below. If you have a bad research-related experience or are injured in any way during your participation, please contact the principal investigator of this study right away at (435) 797-3000 or melanie.domenech@usu.edu.

Benefits
There is no direct benefit to you for participating in this research study. More broadly, this study will help the researchers learn more about techniques that can be used by students of color in completing academic tasks.

Confidentiality
The researchers will make every effort to ensure that the information you provide as part of this study remains confidential. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study.

We will collect your information through the secure online survey platform, Qualtrics. This information will be securely stored in a restricted access folder on Box.com, an encrypted, cloud-based storage system. If you win the e-gift card drawing, your identifying information will be stored separately as a record of payment for seven years, the timeframe USU must keep all documentation related to payments. At no time will your identifying information be linked to your Qualtrics responses. This form will be kept for three years after the study is closed, and then it will be destroyed.
It is unlikely, but possible, that others (Utah State University, or state or federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

**Voluntary Participation & Withdrawal**

Your participation in this research is completely voluntary. If you agree to participate now and change your mind later, you may withdraw at any time by contacting the PI or the student researcher, whose information is listed below. If you choose to withdraw after we have already collected information about you, we may be limited in our ability to remove your data, because we will be collecting it without any identifying information.

The researchers may choose to terminate your participation in this research study if you do not complete the procedures.

**Payment**

For your participation in this research study, you will be given an opportunity to enter your email address in a drawing for one of 31 e-gift cards worth $25 each. Your email address entry will not be linked to the responses you enter in the self-report assessments or academic task responses. You do not need to enter the drawing to participate in this research.

**IRB Review**

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at (435) 797-3059 or melanie.domenach@usu.edu. If you have questions about your rights or would simply like to speak with someone other than the research team, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Melanie Domenach Rodríguez, Ph.D.
Principal Investigator
(435) 797-3059; melanie.domenach@usu.edu

Odessia Knowles, M.S.
Student Investigator
(801) 650-1038; o.knowles@aggiemail.usu.edu
LETTER OF INFORMATION

Academic Tasks and College Students of Color

Introduction/ Purpose. Melanie M. Domenech Rodriguez, Ph.D. and Odessia Knowles, M.S. in the Department of Psychology at Utah State University are conducting a research study to learn more about the impact of watching different videos on Black students' academic achievement. You have been asked to take part because you are enrolled at a college or university and may hold an identity that is Black. There will be approximately 124 total participants in this research. This research is part of Ms. Knowles' Doctoral Dissertation.

Procedures. If you agree to participate in this research study, you will complete various self-report assessments about yourself and your education, you will watch a presentation, watch a video, and complete academic tasks online using Qualtrics. The entire process should take approximately 45 minutes.

Risks. Participation in this research study may involve some added risks or discomforts. These include an increase in level of distress from the experimental material (e.g., watching videos or presentation) and fatigue from completion of self-report measures. Although not expected, if you do experience significant levels of distress, you may stop your participation. Because you will be participating at a place of your own choosing, the research team is unable to provide meaningful protection of your privacy. It is suggested that you choose a location that is private and is away from others. You may discontinue participation at any time if you feel your privacy interests are being infringed upon.

Benefits. You will not experience direct benefits from this study outside the opportunity to learn about research study procedures in the process of participation. This study may provide data to support the use of a simple technique that can be used by students of color in completing academic tasks.

Explanation & offer to answer questions. Prior to the start of participation in this study, Odessia Knowles will be available to explain this research study to you and answer your questions. You may reach Odessia at (801) 690-1038 or by email at O.Knowles@aggiemail.usu.edu. If you have other questions or research-related problems, you may also reach Dr. Domenech Rodriguez at (435) 797-3059 or by email at Melanie.Domenech@usu.edu.

Payment/Compensation. The researchers have paid Qualtrics to recruit and compensate participants. Qualtrics is responsible for payment to participants, and before agreeing to participate in this study, you should already be aware of how many points you will earn for participation.

Voluntary nature of participation and right to withdraw without consequence. Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without consequence or loss of benefits. Your data may be excluded from analyses without your consent by the investigator if there are not sufficient data in your record to help answer the research questions.

Confidentiality. Research records will be kept confidential, consistent with federal and state regulations. Only the investigator and student researcher will have access to the data which will be kept in a locked file cabinet in a locked room or in an encrypted, password protected Box.com folder to maintain confidentiality.
LETTER OF INFORMATION

Academic Tasks and College Students of Color

IRB Approval Statement. The Institutional Review Board for the protection of human participants at Utah State University has approved this research study. If you have any questions or concerns about your rights or a research-related injury and would like to contact someone other than the research team, you may contact the IRB Director at (435) 797-0567 or irb@usu.edu to obtain information or to offer input.

Investigator Statement. "I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered."

Melanie M. Domenech-Rodriguez, Ph.D.
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435-797-3059
melanie.domenech@usu.edu

Odessa Knowles, M.S.
Student Researcher
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Appendix B

Screening Form
Screening Form (Phase One)

1) Are you currently enrolled at a college/university located in the state of Utah?
   Yes  No

2) Are you 18 years or older?
   Yes  No

3) Is your racial/ethnic identity Black?
   Yes  No

4) Do you identify as White or Asian?
   Yes  No
Screening Form (Phase Two)

1) Are you currently enrolled at a college/university?
   Yes    No

2) Are you 18 years or older?
   Yes    No

3) Is your racial/ethnic identity Black?
   Yes    No

4) Do you identify as White or Asian?
   Yes    No
Screening Form (Phase Three and Four)

1) Are you currently enrolled at a college/university?
   Yes  No

2) Are you 18 years or older?
   Yes  No

3) Is your racial/ethnic identity Black?
   Yes  No
Appendix C

Demographic Form
Demographic Form (Phase One)

Part I: General Information

1) Age: _____

2) Biological sex: (circle one) Female  Male

3) Race/Ethnicity: (circle all that apply)
   White  Black
   American Indian/Alaskan Native  Native Hawaiian/Pacific Islander
   Asian  Latino
   International  Other: ____________________

4) Currently employed:  Yes  No

   * If YES, how many hours per week are spent working for pay? _____

Part II: Educational Information

1) Year of high school graduation/Year GED obtained: _____

2) Name of college/university: ________________________

3) College enrollment: (circle one)  Full-time  Part-time

4) Year in college: (circle one)
   First  Second  Third  Fourth
   Beyond Fourth  Graduate

5) Do you have a learning disability: (circle one)  Yes  No

6) Current overall grade point average (GPA): _____

7) Current major: ________________________

8) Have you ever taken the GRE?: (circle one)  Yes  No

9) Have you ever taken a GRE practice test?: (circle one)  Yes  No
Demographic Form (Phase Two)

Part I: General Information

1) Age: _____

2) Biological sex: (circle one)       Female       Male

3) Race/Ethnicity: (circle all that apply)
   White
   American Indian/Alaskan Native
   Asian
   International
   Black
   Native Hawaiian/Pacific Islander
   Latino
   Other: ____________________

4) Currently employed:       Yes       No
   * If YES, how many hours per week are spent working for pay? _____

Part II: Educational Information

1) Year of high school graduation/Year GED obtained: _____

2) Name of college/university: ______________________

3) City and state where college/university is located: _______________

4) College enrollment: (circle one)       Full-time       Part-time

5) Year in college: (circle one)
   First       Second       Third       Fourth
   Beyond Fourth       Graduate

6) Do you have a learning disability: (circle one)       Yes       No

7) Current overall grade point average (GPA): _____

8) Current major: _______________

9) Have you ever taken the GRE?: (circle one)       Yes       No

10) Have you ever taken a GRE practice test?: (circle one)       Yes       No
Demographic Form (Phases Three and Four)

Part I: General Information

1) Age: _____

2) Biological sex: Female Male

3) Race/Ethnicity: (circle all that apply)
   - White
   - Black
   - American Indian/Alaskan Native
   - Native Hawaiian/Pacific Islander
   - Asian
   - Latino
   - Other: ____________________

4) If you identify as more than one race/ethnicity, please indicate whether you feel that one of your racial/ethnic identities is more salient at this point in your life.
   - Yes (please indicate which race/ethnicity feels most salient currently)
   - No
   - N/A

5) Currently employed: Yes No

   * If YES, how many hours per week are spent working for pay? _____

Part II: Educational Information

1) Year of high school graduation/Year GED obtained: _____

2) Name of college/university: ____________________

3) City and state where college/university is located: _______________

4) College enrollment: (circle one) Full-time Part-time

5) Year in college: (circle one)
   - First
   - Second
   - Third
   - Fourth
   - Beyond Fourth
   - Graduate
6) Do you have a learning disability: (circle one)  Yes  No
7) Current overall grade point average (GPA): _____
8) Current major: _______________
9) Have you ever taken the GRE?: (circle one)  Yes  No
10) Have you ever taken a GRE practice test?: (circle one)  Yes  No
Appendix D

The Multidimensional Inventory of Black Identity (MIBI)
The Multidimensional Inventory of Black Identity (MIBI)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, being Black has very little to do with how I feel about myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. It is important for Black people to surround their children with Black art, music, and literature.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Black people should not marry interracially.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. I feel good about Black people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Overall, Blacks are considered good by others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. In general, being Black is an important part of my self-image.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I am happy that I am Black.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. I feel that Blacks have made major accomplishments and advancements.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. My destiny is tied to the destiny of other Black people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. Blacks who espouse separatism are as racists as White people who also espouse separatism.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. Blacks would be better off if they adopted Afrocentric values.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. Black students are better off going to schools that are controlled and organized by Blacks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. Being Black is unimportant to my sense of what kind of person I am.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. Black people must organize themselves into a separate Black political force.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. In general, others respect Black people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16. Whenever possible, Blacks should buy from other Black businesses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Neutral</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>17. Most people consider Blacks, on the average, to be more ineffective than other racial groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. A sign of progress is that Blacks are in the mainstream of America more than ever before.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I have a strong sense of belonging to Black people.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. The same forces which have led to the oppression of Blacks have also led to the oppression of other groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. A thorough knowledge of Black history is very important for Blacks today.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Blacks and Whites can never live in true harmony because of racial differences.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Black values should not be inconsistent with human values.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I often regret that I am Black.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. White people can never be trusted where Blacks are concerned.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Blacks should have the choice to marry interracially.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Blacks and Whites have more commonalities than differences.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Black people should not consider race when buying art or selecting a book to read.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Blacks would be better off if they were more concerned with the problems facing all people than just focusing on Black issues.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Being an individual is more important than identifying oneself as Black.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. We are all children of a higher being, therefore, we should love people of all races.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Neutral</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>---</td>
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<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>32. Blacks should judge Whites as individuals and not members of the White race.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. I have a strong attachment to other Black people.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. The struggle for Black liberation in America should be closely related to the struggle of other oppressed groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. People regardless of their race have strengths and limitations.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Blacks should learn about the oppression of other groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Because America is predominantly white, it is important that Blacks go to White schools so that they can gain experience interacting with Whites.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Black people should treat other oppressed people as allies.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Blacks should strive to be full members of the American political system.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. Blacks should try to work within the system to achieve their political and economic goals.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. Blacks should strive to integrate all institutions which are segregated.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. The racism Blacks have experienced is similar to that of other minority groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. Blacks should feel free to interact socially with White people.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44. Blacks should view themselves as being Americans first and foremost.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45. There are other people who experience racial injustice and indignities similar to Black Americans.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Neutral</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>46. The plight of Blacks in America will improve only when Blacks are in important positions within the system.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. Blacks will be more successful in achieving their goals if they form coalitions with other oppressed groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. Being Black is an important reflection of who I am.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49. Blacks should try to become friends with people from other oppressed groups.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50. The dominant society devalues anything not White male oriented.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51. Being Black is not a major factor in my social relationships.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52. Blacks are not respected by the broader society.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53. In general, other groups view Blacks in a positive manner.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54. I am proud to be Black.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55. I feel that the Black community has made valuable contributions in this society.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56. Society views Black people as an asset.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix E

Academic Tasks
### Academic Task 1

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question</th>
</tr>
</thead>
</table>
| 1               | **For each blank, select one entry *per column* from the column of choices. Fill all blanks in the way that best completes the text.**  
|                 | Today Wegener's theory is (column 1: A, B, or C) ___; however, he died an outsider treated with (column 2: D, E, or F) ___ by the scientific establishment.  
|                 | A. unsupported  D. reverence  
|                 | B. unchallenged  E. disdain  
|                 | C. undervalued  F. impartiality  |
| 2               | **For each blank, select one entry from the column of choices. Fill all blanks in the way that best completes the text.**  
|                 | The revolution in art has not lost its steam; it ___ on as fiercely as ever.  
|                 | A. trudges  
|                 | B. meanders  
|                 | C. edges  
|                 | D. ambles  
|                 | E. rages  |
| 3               | **Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.**  
|                 | As a teacher of young children, I always find the last few days before summer vacation trying, because the students are especially _____.  
|                 | A. restive  
|                 | B. coordinated  
|                 | C. unruly  
|                 | D. ingenious  
|                 | E. abnormal  
|                 | F. charitable  |
| 4               | **Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.**  
|                 | Over the course of his life, Cliff has worked in the circus, flown planes as a stunt pilot, and had a number of other _____.  
|                 | A.  
|                 | B.  
|                 | C.  
|                 | D.  
|                 | E.  
|                 | F.  |
A. unorthodox
B. commonplace
C. flamboyant
D. unconventional
E. ordinary
F. charming

5 Read the following passage and answer the question

Technology is rapidly expanding the scope of capabilities for both professional and personal use; such is the case with smart phones. Professionals now have devices available to them capable of digital media, internet access, phone communication, multi-person scheduling and office tools for documents and presentations. Business people that are often mobile may maximize the use of these critical features on smart phones. Individuals who simply enjoy the luxury of multi-function devices often use these devices for frivolous pursuits such as downloading catchy ring tones, instant messaging about the latest gossip and looking up the world record for most cans crushed on one’s head during the Superbowl. This fusion of capabilities and increased availability of such devices could be a sign of a growing blend in society between work and personal life, or individuals could simply be taking a luxurious approach to their connectivity in personal lives.

The term “frivolous” implies that the author

A. is fascinated by the endless capabilities on smart phones.
B. hopes that technology ceases to expand its scope.
C. believes that the average individual does not need a smart phone.
D. has a smart phone.
E. wants to see more developments added to smart phone technology.

6 Read the following passage and answer the question

A sanctuary may be defined as a place where Man is passive and the rest of Nature active. Till quite recently Nature had her own sanctuaries, where man either did not go at all or only as a tool-using animal in comparatively small numbers. But now, in this machinery age, there is no place left where man cannot go with overwhelming forces at his command. He can strangle to death all the nobler wild life in the world to-day. To-morrow he certainly will have done so, unless he exercises due foresight and self-control in the mean time.

There is not the slightest doubt that birds and mammals are now being killed off much faster than they can breed. And it is always the largest and noblest forms of life that suffer most. The whales and elephants, lions and
eagles, go. The rats and flies, and all mean parasites, remain. This is inevitable in certain cases. But it is wanton killing off that I am speaking of to-night. Civilized man begins by destroying the very forms of wild life he learns to appreciate most when he becomes still more civilized. The obvious remedy is to begin conservation at an earlier stage, when it is easier and better in every way, by enforcing laws for close seasons, game preserves, the selective protection of certain species, and sanctuaries.

I have just defined a sanctuary as a place where man is passive and the rest of Nature active. But this general definition is too absolute for any special case. The mere fact that man has to protect a sanctuary does away with his purely passive attitude. Then, he can be beneficially active by destroying pests and parasites, like bot-flies or mosquitoes, and by finding antidotes for diseases like the epidemic which periodically kills off the rabbits and thus starves many of the carnivora to death. But, except in cases where experiment has proved his intervention to be beneficial, the less he upsets the balance of Nature the better, even when he tries to be an earthly Providence.

It can be inferred that the passage is

A. part of an article in a scientific journal
B. extracted from the minutes of a nature club
C. part of a speech delivered to an educated audience
D. a speech delivered in a court of law
E. from a polemical article published in a magazine

Each occupation has its own ___; bankers, lawyers and computer professionals, for example, all use among themselves language which outsiders have difficulty following.

A. merits
B. disadvantages
C. rewards
D. jargon
E. problems

___ by nature, Jones spoke very little even to his own family members.

A. Garrulous
B. Equivocal
C. Taciturn
D. Arrogant
E. Gregarious

9 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Always a _____ man, Richard had no patience with his brother’s get-rich-quick schemes and often advised him to settle down with a respectable career.

A. fatuous
B. practical
C. insipid
D. florid
E. pragmatic
F. reckless

10 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

An only child whose parents were often away from home for work, Alison recalls her childhood as very _____.

A. sociable
B. solitary
C. friendless
D. insular
E. anecdotal
F. authoritative

11 Read the following passage and answer the question

But man is not destined to vanish. He can be killed, but he cannot be destroyed, because his soul is deathless and his spirit is irrepressible. Therefore, though the situation seems dark in the context of the confrontation between the superpowers, the silver lining is provided by amazing phenomenon that the very nations which have spent incalculable resources and energy for the production of deadly weapons are desperately trying to find out how they might never be used. They threaten each other, intimidate each other and go to the brink, but before the total hour arrives they withdraw from the brink.

The main point from the author's view is that
The first and most important rule of legitimate or popular government, that is to say, of government whose object is the good of the people, is therefore, as I have observed, to follow in everything the general will. But to follow this will it is necessary to know it, and above all to distinguish it from the particular will, beginning with one's self: this distinction is always very difficult to make, and only the most sublime virtue can afford sufficient illumination for it. As, in order to will, it is necessary to be free, a difficulty no less great than the former arises — that of preserving at once the public liberty and the authority of government. Look into the motives which have induced men, once united by their common needs in a general society, to unite themselves still more intimately by means of civil societies: you will find no other motive than that of assuring the property, life and liberty of each member by the protection of all. But can men be forced to defend the liberty of any one among them, without trespassing on that of others? And how can they provide for the public needs, without alienating the individual property of those who are forced to contribute to them? With whatever sophistry all this may be covered over, it is certain that if any constraint can be laid on my will, I am no longer free, and that I am no longer master of my own property, if any one else can lay a hand on it. This difficulty, which would have seemed insurmountable, has been removed, like the first, by the most sublime of all human institutions, or rather by a divine inspiration, which teaches mankind to imitate here below the unchangeable decrees of the Deity. By what inconceivable art has a means been found of making men free by making them subject; of using in the service of the State the properties, the persons and even the lives of all its members, without constraining and without consulting them; of confining their will by their own admission; of overcoming their refusal by that consent, and forcing them to punish themselves, when they act against their own will? How can it be that all should obey, yet nobody take upon him to command, and that all should serve, and yet have no masters, but be the more free, as, in
apparent subjection, each loses no part of his liberty but what might
be hurtful to that of another? These wonders are the work of law. It
is to law alone that men owe justice and liberty. It is this salutary
organ of the will of all which establishes, in civil right, the
40 natural equality between men. It is this celestial voice which
dictates to each citizen the precepts of public reason, and teaches
him to act according to the rules of his own judgment, and not to
behave inconsistently with himself. It is with this voice alone that
political rulers should speak when they command; for no sooner does
45 one man, setting aside the law, claim to subject another to his
private will, than he departs from the state of civil society, and
confronts him face to face in the pure state of nature, in which
obedience is prescribed solely by necessity.

The author's attitude to law in this passage is best conveyed as

A. respect for its inalienable authority
B. extolling its importance as a human institution
C. resignation to the need for its imposition on the majority
D. acceptance of its restrictions
E. praise for its divine origin

13 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

Biological clocks are of such (column 1: A, B, or C) ___ adaptive value to living organisms, that we would expect most organisms to (column 2: D, E, or F) ___ them, and, indeed, we find that such clocks are virtually (column 3: G, H, or I) ___.

A. meager D. eschew G. ubiquitous
B. ambivalent E. possess H. unknown
C. clear F. select I. compulsory

14 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

The revolutionaries working to improve the lives of the peasants faced an (column 1: A, B, or C) ___ task; the peasants were the least (column 2: D, E, or F) ___ of all people, bound by tradition and (column 3: G, H, or I) ___ by superstitions.

A. unwarranted D. free G. rejected
B. uphill E. reactionary H. obscured
C. unacceptable F. enthralled I. fettered
15 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

I think his employees would look on him more favorably if his emails to them were not always so _____.

A. terse
B. nonsensical
C. communicative
D. abrupt
E. outrageous
F. colorful

16 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Although some people find her ____ off-putting, I see her as delightfully odd.

A. eccentricities
B. gregariousness
C. idiosyncrasies
D. machinations
E. imbecility
F. frivolity

17 Read the following passage and answer the question

Greek mythology is a vehicle that uses mythological characters and creatures to teach people about the dangers, beauties and possible outcomes of life. In many myths, characters face moral dilemmas involving honor and practicality. The protagonists of epics face creatures that represent values and challenges such as respect, temptation and redemption. How has Greek mythology inevitably evolved with time and new story tellers? Scholars that have interpreted Greek mythology seek to maintain the universal values conveyed in these stories, while ensuring the validity of adapting these stories to their own distinct cultures. It is up to each reader to seek their own truths and learn from epic Greek mythology as best they can.

According to the author’s description, which of the following is most likely to be a message from Greek mythology?

A. Love is difficult, but it will last if the lovers are meant to be together.
The article “Shock therapy for mental patients will be reviewed” continues the ignorant tradition of demonizing electroconvulsive therapy (ECT) in the media (the very use of the anachronistic and misleading phrase “shock therapy” is unwarranted) without presenting the compelling reasons for its continued use. Most of the facts and quotations in the article, including the gratuitous final paragraph about pigs in an abattoir, are simply taken from an article by Davar in “Issues in Medical Ethics”, without questioning whether Davar’s presentation of the issue is an unbiased and scientifically accurate one. What Ms. Davar, and by extension Ms. Jain, has done is simply cite authorities who agree with her point of view, quote statistics without context, use an abundance of negative adjectives, and ignore outright the empirically proven benefits (often life-saving) of ECT in many categories of mentally-ill patients. This is shabby and irresponsible medical journalism. While this is not the place to dispute, point-by-point, Ms. Davar’s presentation of her position and Ms. Jain’s repetition of it, I would like to quote, to counter their negative emphasis, from Andrew Solomon’s widely read, intensively researched, highly respected book, *The Noonday Demon: An Anatomy of Depression*. Solomon writes: “Antidepressants are effective [against major depression] about 50 percent of the time, perhaps a bit more; ECT seems to have some significant impact between 75 and 90 percent of the time... Many patients feel substantially better within a few days of having an ECT treatment – a boon particularly striking in contrast to the long, slow process of medication response. ECT is particularly appropriate for the severely suicidal – for patients who repeatedly injure themselves and whose situation is therefore mortally urgent – because of its rapid action and high response rate, and it is used in pregnant women, the sick, and the elderly, because it does not have the systemic side effects or drug-interaction problems of most medications.” There are, indeed, problems with the administration of ECT,
especially in a country like India with its poor health infrastructure. It would be foolish to deny that the practice is subject to abuse (as Solomon and numerous Indian writers report). The continued use of “direct” ECT (without the use of an anesthetic) is certainly a matter of concern – and a concerted effort to implement national guidelines making “modified” ECT (using an anesthetic) mandatory is as necessary as it is laudatory. But we can all do without more pieces of journalism which perpetuate the myth that ECT is a medically unjustified, indeed barbaric practice, tantamount to torture. This ignorant view, equally prevalent in the West as it is in India, has more to do with movies like One Flew Over The Cuckoo’s Nest than with scientific fact.

The author’s makes his point primarily by

A. offering a particular authority as a counterview
B. attaching one author's lack of social responsibility
C. criticizing the mindset of medical journalists
D. a reasoned discussion of the merits and demerits of a therapy
E. offering an objective evaluation

19. **For each blank, select one entry from the column of choices. Fill all blanks in the way that best completes the text.**

Many people at that time believed that spices help preserve food; however, Hall found that many marketed spices were ___ bacteria, molds, and yeasts.

A. devoid of
B. teeming with
C. improved by
D. destroyed by
E. active against

20. **For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.**

If there is nothing to absorb the energy of sound waves, they travel on (column 1: A, B, or C) ___, but their intensity (column 2: D, E, or F) ___ as they travel further from their source.

A. indefinitely  D. alleviates
B. eratically      E. diminishes
C. slowly        F. mitigates
### Question 21

Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Although he had a(an) _____ career in academia, he decided to retire early and live as a recluse in a cabin in the woods.

- A. failed
- B. illustrious
- C. esteemed
- D. comical
- E. unproductive
- F. fortunate

### Question 22

Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Years ago, before industries moved in and the population surged, this area was known for its ____ beauty.

- A. pasteurized
- B. pastoral
- C. urban
- D. surreal
- E. bucolic
- F. verdant

### Question 23

**Read the following passage and answer the question**

Disequilibrium at the interface of water and air is a factor on which the transfer of heat and water vapor from the ocean to the air depends. The air within about a millimeter of the water is almost saturated with water vapor and the temperature of the air is close to that of the surface water. Irrespective of how small these differences might be, they are crucial, and the disequilibrium is maintained by air near the surface mixing with air higher up, which is typically appreciably cooler and lower in water vapor content. The turbulence, which takes its energy from the wind mixes the air. As the speed of wind increases, so does the turbulence, and consequently the rate of heat and moisture transfer. We can arrive at a detailed understanding of this phenomenon after further study. The transfer of momentum from wind to water, which occurs when waves are formed is an interacting-and complicated phenomenon. When waves are made by the wind, it transfers important amounts of energy-energy, which is consequently not available for the production of turbulence.
This passage principally intends to:

A. resolve a controversy.
B. attempt a description of a phenomenon.
C. sketch a theory.
D. reinforce certain research findings.
E. tabulate various observations.

24 Read the following passage and answer the question

The tale of Piltdown Man, the most infamous forgery in the contentious detective story of the origins of mankind, began in 1912. On December 18 that year Charles Dawson, a well-known amateur British archaeologist, and Arthur Smith Woodward, of the British Museum of Natural History, announced the discovery of some amazing human fossils. The remains comprised nine pieces of skull, a broken jaw with two teeth in place, a few stone tools, and some animal bones, all of which had been discovered on a farm near Piltdown Common in Sussex.

When pieced together the skull looked distinctly human. Although Piltdown Man, as the hominid became known, had unusually thick bones, the brain case was large and rounded. There was no sign of prominent brow ridges or other apelike features. However, the shape of the jaw bone resembled that of an ape. The only human characteristic of this jaw was the wear on the two molars, which were ground down flat, as is frequently true of hominids who eat tough or abrasive foods, such as seeds. In other words the creature had the jaw of an ape and the skull of Homo sapiens. The primitive stone tools found with these remains suggested a remote age for Piltdown Man, perhaps the Early Pleistocene or even the Late Pliocene. (In 1912 experts thought the Pliocene lasted from 1 million to 600 000 years ago. Scientists now date it to between 5 million and 1.7 million years ago.) This date was also supported by some animal bones found with Piltdown Man.

To most scientists of the time, Piltdown Man fulfilled a prediction made by the pioneering evolutionist Charles Darwin, who had believed that humans and the apes could be connected genetically through a still undiscovered creature. Most significantly, it was half-human in precisely the feature that was then accepted as the most important difference between humans and the apes - the brain. At this time there was little fossil evidence to contradict the idea that the brain was among the first of the human features to evolve. As time went on, however, Homo erectus fossils were found in Java and China, while in South Africa the australopithecines
were being discovered. All these fossils had human-like jaws and teeth and relatively small brains in contrast to Piltdown Man's large cranium and apelike jaw. The large brain simply did not fit with the rest of the fossil evidence. By 1948 scientists knew that bones buried in the earth gradually absorb fluorine. The older a bone, the more fluorine it contains. When the Piltdown materials were tested for fluorine, the skull and jaw fragments turned out to be much younger than the Early Pleistocene animal bones with which the skull had been found.

Scientists were now very suspicious. In 1953 all the Piltdown material was tested for its authenticity. Not only was the recent age of the jaw and skull confirmed, but the jaw proved to be that of a modern orangutan, with the teeth filed down in a quite obvious manner to imitate wear on human teeth. But the forger had not stopped there. A bone tool found with the remains had been made in recent times with a steel knife, which leaves different marks than does a stone flake or axe. The tools, as well as the animal bones, had been taken from different archaeological sites.

Once the forgery was exposed by modern scientific analysis the mystery was no longer where Piltdown Man came in human evolution but who was responsible for the hoax, and why? Although Dawson, the discoverer of most of the Piltdown material, is frequently singled out as the person responsible for this practical joke, there is no definite proof and the question is far from settled.

The animal bones found buried with the Piltdown Man were all of the following except

A. shown to be genuinely Pleistocene
B. more recent than first thought
C. unconnected with the human remains
D. deliberately planed at the site
E. originally from the Piltdown site

For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

This recent evaluation of two artists whose works even experts find difficult to (column 1: A, B, or C) ___, reveals a surprising (column 2: D, E, or F) ___ in their temperaments: Palmer was reserved and courteous, Frazer (column 3: G, H, or I) ___ and boastful.
The intellectual flexibility inherent in a multicultural nation has been (column 1: A, B, or C) ___ in classrooms where emphasis on British-American literature has not reflected the cultural (column 2: D, E, or F) ___ of our country.

A. inculcated  D. unanimity  
B. encouraged  E. diversity  
C. stifled  F. aspirations

Ginger had always impressed me as a very able woman, but it was not until she experienced personal difficulties that I realized how truly _____ she is.

A. self-absorbed  
B. apathetic  
C. capable  
D. formidable  
E. defenseless  
F. lethargic

Michael was completely unprepared for notoriety when his bestselling memoir of life in Hollywood in the 1960s _____ him to fame.

A. catapulted  
B. debunked  
C. disoriented  
D. ambulated  
E. thrust  
F. acknowledged

Swimming has developed from a primal mode of movement to an advanced hobby and competitive sport. Exercising nearly every muscle group,
swimming is a rigorous sport and requires intense training. In competitions swimmers typically contend for the fastest time to complete a certain distance by performing a specific swimming stroke. Also, swimmers work to build endurance and an ability to swim over long distances. Because swimming has developed into a highly intricate competitive sport, where one wrong technique can disqualify a participant, it is interesting to ponder how the sport will evolve for people in the future, either advancing into a progressive purpose or regressing to a primal mode of movement.

The structure of this passage could be best described in what way?

A. An activity narrowed to a specific purpose and expanded to consider future implications.
B. An activity narrowed to a specific purpose and expanded to consider future deviations.
C. A hypothesis tested against certain conditions, developed into a larger thesis.
D. An activity and its purposes are explained.
E. A supposition regarding the prospect of an activity, analyzed for viability

Read the following passage and answer the question

Should we really care for the greatest actors of the past could we have them before us? Should we find them too different from our accent of thought, of feeling, of speech, in a thousand minute particulars which are of the essence of all three? Dr. Doran's long and interesting records of the triumphs of Garrick, and other less familiar, but in their day hardly less astonishing, players, do not relieve one of the doubt. Garrick himself, as sometimes happens with people who have been the subject of much anecdote and other conversation, here as elsewhere, bears no very distinct figure. One hardly sees the wood for the trees. On the other hand, the account of Betterton, "perhaps the greatest of English actors," is delightfully fresh. That intimate friend of Dryden, Tillatson, Pope, who executed a copy of the actor's portrait by Kneller which is still extant, was worthy of their friendship; his career brings out the best elements in stage life. The stage in these volumes presents itself indeed not merely as a mirror of life, but as an illustration of the utmost intensity of life, in the fortunes and characters of the players. Ups and downs, generosity, dark fates, the most delicate goodness, have nowhere been more prominent than in the private existence of those devoted to the public mimicry of men and women. Contact with the stage, almost throughout its history, presents itself as a kind of touchstone, to bring out the bizarrerie, the theatrical tricks and contrasts, of the actual world.

The doubt referred to in the passage concerns whether
A. the stage personalities of the past would appeal on a personal level to people like the author.
B. their contemporaries would have understood famous actors.
C. the acting of famous stage personalities would appeal to us today.
D. Garrick was as great as he is portrayed.
E. historical records can reveal personality.

31 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

Unwilling to admit that they had been in error, the researchers tried to ___ their case with more data obtained from dubious sources.

A. ascertain  
B. buttress  
C. refute  
D. absolve  
E. dispute

32 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

Archaeology is a poor profession; modest sums are available for excavating sites and even more (column 1: A, B, or C) ___ amounts for preserving the excavations. As a result many sites that are still to reveal even a fraction of their potentially vital information have been (column 2: D, E, or F) ___ and left to the forces of Nature. Re-opening such sites in the future will be all but (column 3: G, H, or I) ___.

A. paltry  
B. controversial  
C. abundant  
D. abandoned  
E. overworked  
F. denuded  
G. trivial  
H. impossible  
I. rewarding

33 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

The defendant’s history of drug use and mental health issues was used very effectively by the prosecution, who made it a(an) _____ part of their case.

A. integral  
B. fundamental  
C. superfluous  
D. tangential  
E. insensitive  
F. regulatory
Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Unfortunately, the long-term _____ of using such pesticides was not known at the time, and many farmers used them widely without fully understanding their harmful properties.

A. benefits
B. implications
C. advantages
D. alacrity
E. avarice
F. ramifications

Read the following passage and answer the question

Geese can often be seen grazing in coastal salt marshes. Unfortunately, their intense grazing removes the grassy covering, exposing marsh sediment; this increases evaporation, which in turn increases salt concentration in marsh sediments. Because of this increased concentration, regrowth of plants is minimal, leading to increased erosion, which leads to a decrease in the fertile topsoil, leading to even less regrowth. In time, the salt marsh becomes a mudflat. This process challenges one of the most widely held beliefs about the dynamics of salt-marsh ecosystems: supposedly, consumers such as geese do not play a large role in controlling the productivity of marsh systems. Rather, the standard view claims, marshes are controlled by bottom-up factors, such as nutrients and physical factors.

The author discusses “the standard view” most likely in order to identify a view that

A. explains the occurrence of the chain of events described in the passage
B. provides a summary of the chain of events described in the passage
C. is called into question by the chain of events described in the passage
D. advocates reassessment of the widely held belief described in the passage
E. is undermined by the widely held belief described in the passage

Read the following passage and answer the question

Historian F. W. Maitland observed that legal documents are the best—indeed, often the only—available evidence about the economic and social history of a given period. Why, then, has it taken so long for historians to focus systematically on the civil (noncriminal) law of early modern (sixteenth- to eighteenth-century) England? Maitland offered one reason:
the subject requires researchers to “master an extremely formal system of pleading and procedure.” Yet the complexities that confront those who would study such materials are not wholly different from those recently surmounted by historians of criminal law in England during the same period. Another possible explanation for historians’ neglect of the subject is their widespread assumption that most people in early modern England had little contact with civil law. If that were so, the history of legal matters would be of little relevance to general historical scholarship. But recent research suggests that civil litigation during the period involved artisans, merchants, professionals, shopkeepers, and farmers, and not merely a narrow, propertied, male elite. Moreover, the later sixteenth and early seventeenth centuries saw an extraordinary explosion in civil litigation by both women and men, making this the most litigious era in English history on a per capita basis.

The author of the passage mentions the occupations of those involved in civil litigation in early modern England most likely in order to

A. suggest that most historians’ assumptions about the participants in the civil legal system during that period are probably correct
B. support the theory that more people participated in the civil legal system than the criminal legal system in England during that period
C. counter the claim that legal issues reveal more about a country's ordinary citizens than about its elite
D. illustrate the wide range of people who used the civil legal system in England during that period
E. suggest that recent data on people who participate in early modern England's legal system may not be correct

For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

The student was extremely foolhardy; he had the ___ to question the senior professor's judgment.

A. wisdom
B. temerity
C. interest
D. trepidation
E. condescension

For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

It is a common complaint that people today have a short attention span. But is it that people are (column 1: A, B, or C) ___ if the television camera...
(column 2: D, E, or F) ___ a view, or is it that the (column 3: G, H, or I) ___ from one angle to another has trained the viewer to expect variety?

A. satisfied  D. lingers over  G. constant shift  
B. fascinated  E. cuts short  H. delay in moving 
C. impatient  F. rapidly changes  I. inability to move

39 Select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

In the more undeveloped, isolated parts of the country, farmers still practice the simple, time-honored techniques of their _____.

A. descendants  
B. forebears  
C. technicians  
D. ancestors  
E. mentors  
F. germination

40 Select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

The intrusion of big business into education has only ____ the problems facing educators in the United States.

A. compounded  
B. ameliorated  
C. benighted  
D. leavened  
E. exacerbated  
F. alleviated
### Academic Task 2

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<td>For each blank, select one entry from the column of choices. Fill all blanks in the way that best completes the text.</td>
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With his sub-four minute mile Bannister broke a psychological barrier, and inspired thousands of others to attempt to overcome seemingly ____ hurdles.

A. insurmountable  
B. inane  
C. trivial  
D. traumatic  
E. ineffable

| 2               | For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text. |

Ricks has written extensively not only on the poetry of such (column 1: A, B, or C) ___ figures in English poetry as Milton and Housman, but also on the less obviously (column 2: D, E, or F) ___ lyrics of Bob Dylan.

A. obscurantist  
B. arcane  
C. established  
D. canonical  
E. popular  
F. judicious

| 3               | Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning. |

The prize competition was ___ as a showcase for new technology, but instead the competition was marred by disqualifications and disputes.

A. disappointing  
B. conceived  
C. touted  
D. heralded  
E. promising  
F. required

| 4               | Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning. |

The new institute provides intensive postgraduate teaching to a wide range of students, in the hope that these students will use their knowledge to boost
the country's ___ economy.

A. languishing
B. emerging
C. booming
D. domestic
E. bankrupt
F. flagging

5 Read the following passage and answer the question

A sanctuary may be defined as a place where Man is passive and the rest of Nature active. Till quite recently Nature had her own sanctuaries, where man either did not go at all or only as a tool-using animal in comparatively small numbers. But now, in this machinery age, there is no place left where man cannot go with overwhelming forces at his command. He can strangle to death all the nobler wild life in the world to-day. To-morrow he certainly will have done so, unless he exercises due foresight and self-control in the mean time.

There is not the slightest doubt that birds and mammals are now being killed off much faster than they can breed. And it is always the largest and noblest forms of life that suffer most. The whales and elephants, lions and eagles, go. The rats and flies, and all mean parasites, remain. This is inevitable in certain cases. But it is wanton killing off that I am speaking of to-night. Civilized man begins by destroying the very forms of wild life he learns to appreciate most when he becomes still more civilized. The obvious remedy is to begin conservation at an earlier stage, when it is easier and better in every way, by enforcing laws for close seasons, game preserves, the selective protection of certain species, and sanctuaries.

I have just defined a sanctuary as a place where man is passive and the rest of Nature active. But this general definition is too absolute for any special case. The mere fact that man has to protect a sanctuary does away with his purely passive attitude. Then, he can be beneficially active by destroying pests and parasites, like bot-flies or mosquitoes, and by finding antidotes for diseases like the epidemic which periodically kills off the rabbits and thus starves many of the carnivora to death. But, except in cases where experiment has proved his intervention to be beneficial, the less he upsets the balance of Nature the better, even when he tries to be an earthly Providence.

The author implies that his first definition of a sanctuary is

A. totally wrong
Read the following passage and answer the question:

Technology is rapidly expanding the scope of capabilities for both professional and personal use; such is the case with smartphones. Professionals now have devices available to them capable of digital media, internet access, phone communication, multi-person scheduling and office tools for documents and presentations. Businesspeople that are often mobile may maximize the use of these critical features on smartphones. Individuals who simply enjoy the luxury of multi-function devices often use these devices for frivolous pursuits such as downloading catchy ring tones, instant messaging about the latest gossip and looking up the world record for most cans crushed on one’s head during the Superbowl. This fusion of capabilities and increased availability of such devices could be a sign of a growing blend in society between work and personal life, or individuals could simply be taking a luxurious approach to their connectivity in personal lives.

What is the purpose of the conclusion sentence?
A. Draw a conclusion about what we know smartphones can do.
B. Assume where technology is headed and how it will affect society.
C. Comment on human connectivity through the use of smartphones.
D. Predict how the government will regulate and guide future technology.
E. Present two possible explanations for the growing popularity of smartphones.

For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

People who seek advice from (column 1: A, B, or C) ___ often find that what they are told can seem true, because these seekers of information attribute significance to some predictions and ignore others. The mind seeks to make sense of predictions that, in themselves, have no (column 2: D, E, or F) ___ value, and thus it becomes difficult to prove that the forecasts are (column 3: G, H, or I) ___.

A. experts       D. special       G. genuine
B. philosophers  E. general       H. specious
C. clairvoyants  F. legal         I. accurate
Stress-induced amnesia is a rare and (column 1: A, B, or C) ___ phenomenon; it strikes the patient apparently without warning and the memory loss can be as (column 2: D, E, or F) ___ as that induced by (column 3: G, H, or I) ___ trauma.

A. devastating  D. generic  G. unexpected  
B. venial  E. limited  H. mental  
C. pervasive  F. complete  I. physical

9 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Like other metaphors, the "book of Nature" has two facets: it is ___ but if taken literally, it may mislead.

A. heuristic  
B. perceptive  
C. poetic  
D. insightful  
E. prosaic  
F. iconoclastic

10 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

The increasing interactivity emerging in the latest computer systems means that the traditional view of the computer as a ___ of information now unduly limiting.

A. gleaner  
B. transformer  
C. processor  
D. producer  
E. repository  
F. cache

11 Read the following passage and answer the question

The first and most important rule of legitimate or popular government, that is to say, of government whose object is the good of the people, is therefore, as I have observed, to follow in everything the general will. But to follow this will it is 5 necessary to know it, and above all to distinguish it from the particular will, beginning with one's self: this distinction is always very difficult to make, and only the most sublime virtue
can afford sufficient illumination for it. As, in order to will, it is necessary to be free, a difficulty no less great than the former arises — that of preserving at once the public liberty and the authority of government. Look into the motives which have induced men, once united by their common needs in a general society, to unite themselves still more intimately by means of civil societies: you will find no other motive than that of assuring the property, life and liberty of each member by the protection of all. But can men be forced to defend the liberty of any one among them, without trespassing on that of others? And how can they provide for the public needs, without alienating the individual property of those who are forced to contribute to them? With whatever sophistry all this may be covered over, it is certain that if any constraint can be laid on my will, I am no longer free, and that I am no longer master of my own property, if any one else can lay a hand on it. This difficulty, which would have seemed insurmountable, has been removed, like the first, by the most sublime of all human institutions, or rather by a divine inspiration, which teaches mankind to imitate here below the unchangeable decrees of the Deity. By what inconceivable art has a means been found of making men free by making them subject; of using in the service of the State the properties, the persons and even the lives of all its members, without constraining and without consulting them; of confining their will by their own admission; of overcoming their refusal by that consent, and forcing them to punish themselves, when they act against their own will? How can it be that all should obey, yet nobody take upon him to command, and that all should serve, and yet have no masters, but be the more free, as, in apparent subjection, each loses no part of his liberty but what might be hurtful to that of another? These wonders are the work of law. It is to law alone that men owe justice and liberty. It is this salutary organ of the will of all which establishes, in civil right, the natural equality between men. It is this celestial voice which dictates to each citizen the precepts of public reason, and teaches him to act according to the rules of his own judgment, and not to behave inconsistently with himself. It is with this voice alone that political rulers should speak when they command; for no sooner does one man, setting aside the law, claim to subject another to his private will, than he departs from the state of civil society, and confronts him face to face in the pure state of nature, in which obedience is prescribed solely by necessity.

The paradox in line 28 is resolved according to the author when an individual
A. submits to the rule of law and thus is at liberty to do anything that does not harm another person  
B. behaves according to the natural rights of man and not according to imposed rules  
C. agrees to follow the rule of law even when it is against his best interests  
D. belongs to a society which guarantees individual liberty at all times  
E. follows the will of the majority

12  **Read the following passage and answer the question**

But man is not destined to vanish. He can be killed, but he cannot be destroyed, because his soul is deathless and his spirit is irrepressible. Therefore, though the situation seems dark in the context of the confrontation between the superpowers, the silver lining is provided by amazing phenomenon that the very nations which have spent incalculable resources and energy for the production of deadly weapons are desperately trying to find out how they might never be used. They threaten each other, intimidate each other and go to the brink, but before the total hour arrives they withdraw from the brink.

The phrase 'Go to the brink' in the passage means
A. retreating from extreme danger.  
B. declare war on each other.  
C. advancing to the stage of war but not engaging in it.  
D. negotiate for peace.  
E. commit suicide.

13  **For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.**

The publishers, unwilling to (column 1: A, B, or C) ___ the entire risk, insisted that the author pay half the cost of the initial print run of his (column 2: D, E, or F) ___ new book.

A. hedge  
B. shoulder  
C. mitigate

D. unexceptionable  
E. controversial

14  **For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.**

Science advances (column 1: A, B, or C) ___ as (column 2: D, E, or F) ___ change abruptly and we are forced to stop and reorient ourselves to view old information in new ways.

A. exponentially  
D. paradigms
Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Turing’s life exerts a powerful and ___ effect on writers – the combination of the highly intellectual and the personally dramatic is hard to resist.

A. abiding  
B. pervasive  
C. perennial  
D. irresistible  
E. unmitigated  
F. multifaceted

Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

As a result of his regimented upbringing, that left him unable to see the nuances of complex situations, he was often accused of being ___.

A. indecisive  
B. tyrannical  
C. obtuse  
D. boorish  
E. xenophobic  
F. imperceptive

Read the following passage and answer the question

The article “Shock therapy for mental patients will be reviewed” continues the ignorant tradition of demonizing electroconvulsive therapy (ECT) in the media (the very use of the anachronistic and misleading phrase “shock therapy” is unwarranted) without presenting the compelling reasons for its continued use. Most of the facts and quotations in the article, including the gratuitous final paragraph about pigs in an abattoir, are simply taken from an article by Davar in “Issues in Medical Ethics”, without questioning whether Davar’s presentation of the issue is an unbiased and scientifically accurate one. What Ms. Davar, and by extension Ms. Jain, has done is simply cite authorities who agree with her point of view, quote statistics without context, use an abundance of negative adjectives, and ignore outright the empirically proven benefits (often
15 life-saving) of ECT in many categories of mentally-ill patients. This is shabby and irresponsible medical journalism. While this is not the place to dispute, point-by-point, Ms. Davar’s presentation of her position and Ms. Jain’s repetition of it, I would like to quote, to counter their negative emphasis, from Andrew Solomon’s widely read, intensively researched, highly respected book, *The Noonday Demon: An Anatomy of Depression*. Solomon writes: “Antidepressants are effective [against major depression] about 50 percent of the time, perhaps a bit more; ECT seems to have some significant impact between 75 and 90 percent of the time… Many patients feel substantially better within a few days of having an ECT treatment – a boon particularly striking in contrast to the long, slow process of medication response. ECT is particularly appropriate for the severely suicidal – 30 for patients who repeatedly injure themselves and whose situation is therefore mortally urgent – because of its rapid action and high response rate, and it is used in pregnant women, the sick, and the elderly, because it does not have the systemic side effects or drug-interaction problems of most medications.”

There are, indeed, problems with the administration of ECT, especially in a country like India with its poor health infrastructure. It would be foolish to deny that the practice is subject to abuse (as Solomon and numerous Indian writers report). The continued use of “direct” ECT (without the use of an anesthetic) is certainly a matter of concern – and a concerted effort to implement national guidelines making “modified” ECT (using an anesthetic) mandatory is as necessary as it is laudatory. But we can all do without more pieces of journalism which perpetuate the myth that ECT is a medically unjustified, indeed barbaric practice, tantamount to torture. This ignorant view, equally prevalent in the West as it is in India, has more to do with movies like *One Flew Over The Cuckoo’s Nest* than 50 with scientific fact.

The author’s attitude towards ECT is best described as a

A. determined neutrality
B. mild criticism
C. wholehearted approbation
D. qualified approval
E. laudatory justification
Read the following passage and answer the question

Greek mythology is a vehicle that uses mythological characters and creatures to teach people about the dangers, beauties and possible outcomes of life. In many myths, characters face moral dilemmas involving honor and practicality. The protagonists of epics face creatures that represent values and challenges such as respect, temptation and redemption. How has Greek mythology inevitably evolved with time and new story tellers? Scholars that have interpreted Greek mythology seek to maintain the universal values conveyed in these stories, while ensuring the validity of adapting these stories to their own distinct cultures. It is up to each reader to seek their own truths and learn from epic Greek mythology as best they can.

Which word best describes the author’s account of Greek mythology?
A. idealistic  
B. pessimistic  
C. dubious  
D. critical  
E. mysterious

For each blank, select one entry from the column of choices. Fill all blanks in the way that best completes the text.

The game of chess is an example of a(n) ___ information system: the pieces sit inertly on the board until the players move them according to known rules.

A. interactive  
B. passive  
C. cybernetic  
D. disruptive  
E. logistic

For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

A highly intelligent person often thinks (column 1: A, B, or C) ___; a few snippets of information can trigger a (column 2: D, E, or F) ___ conclusion that might not stand up to closer, and (column 3: G, H, or I) ___, scrutiny.

A. too deeply  
B. too warily  
C. too quickly  
D. firm  
E. labored  
F. hasty  
G. slower  
H. precipitous  
I. overt

Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.
It is paradoxical that String Theory inspires such widespread respect when it is so ____ that few could ever hope to master its claims.

A. intractable  
B. confusing  
C. elevated  
D. arcane  
E. obscure  
F. rigorous

**22 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.**

Those with a reputation for ____ behavior seldom inspire respect: unwavering adherence to a viewpoint is more admired than flexibility.

A. capricious  
B. bombastic  
C. dogmatic  
D. fickle  
E. honorable  
F. stalwart

**23 Read the following passage and answer the question**

The tale of Piltdown Man, the most infamous forgery in the contentious detective story of the origins of mankind, began in 1912. On December 18 that year Charles Dawson, a well-known amateur British archaeologist, and Arthur Smith Woodward, of the British Museum of Natural History, announced the discovery of some amazing human fossils. The remains comprised nine pieces of skull, a broken jaw with two teeth in place, a few stone tools, and some animal bones, all of which had been discovered on a farm near Piltdown Common in Sussex.  

When pieced together the skull looked distinctly human. Although Piltdown Man, as the hominid became known, had unusually thick bones, the brain case was large and rounded. There was no sign of prominent brow ridges or other apelike features. However, the shape of the jaw bone resembled that of an ape. The only human characteristic of this jaw was the wear on the two molars, which were ground down flat, as is frequently true of hominids who eat tough or abrasive foods, such as seeds. In other words the creature had the jaw of an ape and the skull of *Homo sapiens*. The primitive stone tools found with these remains suggested a
20 remote age for Piltdown Man, perhaps the Early Pleistocene or even the Late Pliocene. (In 1912 experts thought the Pliocene lasted from 1 million to 600,000 years ago. Scientists now date it to between 5 million and 1.7 million years ago.) This date was also supported by some animal bones found with Piltdown Man.

To most scientists of the time, Piltdown Man fulfilled a prediction made by the pioneering evolutionist Charles Darwin, who had believed that humans and the apes could be connected genetically through a still undiscovered creature. Most significantly, it was half-human in precisely the feature that was then accepted as the most important difference between humans and the apes - the brain. At this time there was little fossil evidence to contradict the idea that the brain was among the first of the human features to evolve.

As time went on, however, *Homo erectus* fossils were found in Java and China, while in South Africa the australopithecines were being discovered. All these fossils had human-like jaws and teeth and relatively small brains in contrast to Piltdown Man's large cranium and apelike jaw. The large brain simply did not fit with the rest of the fossil evidence. By 1948 scientists knew that bones buried in the earth gradually absorb fluorine. The older a bone, the more fluorine it contains. When the Piltdown materials were tested for fluorine, the skull and jaw fragments turned out to be much younger than the Early Pleistocene animal bones with which the skull had been found.

Scientists were now very suspicious. In 1953 all the Piltdown material was tested for its authenticity. Not only was the recent age of the jaw and skull confirmed, but the jaw proved to be that of a modern orangutan, with the teeth filed down in a quite obvious manner to imitate wear on human teeth. But the forger had not stopped there. A bone tool found with the remains had been made in recent times with a steel knife, which leaves different marks than does a stone flake or axe. The tools, as well as the animal bones, had been taken from different archaeological sites.

Once the forgery was exposed by modern scientific analysis, the mystery was no longer where Piltdown Man came in human evolution but who was responsible for the hoax, and why? Although Dawson, the discoverer of most of the Piltdown material, is frequently singled out as the person responsible for this practical joke, there is no definite proof and the question is far from settled.
The scientists of the time made which of the following mistakes

A. believed the fossil discoveries would reveal much about human origins
B. had preconceived ideas about what features an early hominid should have
C. followed the ideas of Darwin in the face of counterevidence
D. incorrectly judged the size of the brain
E. failed to examine other fossil evidence available at the time

24 Read the following passage and answer the question

Disequilibrium at the interface of water and air is a factor on which the transfer of heat and water vapor from the ocean to the air depends. The air within about a millimeter of the water is almost saturated with water vapor and the temperature of the air is close to that of the surface water. Irrespective of how small these differences might be, they are crucial, and the disequilibrium is maintained by air near the surface mixing with air higher up, which is typically appreciably cooler and lower in water vapor content. The turbulence, which takes its energy from the wind mixes the air. As the speed of wind increases, so does the turbulence, and consequently the rate of heat and moisture transfer. We can arrive at a detailed understanding of this phenomenon after further study. The transfer of momentum from wind to water, which occurs when waves are formed is an interacting-and complicated phenomenon. When waves are made by the wind, it transfers important amounts of energy-energy, which is consequently not available for the production of turbulence.

The wind over the ocean usually does which of the following according to the given passage?
I. Leads to cool, dry air coming in proximity with the ocean surface.
II. Maintains a steady rate of heat and moisture transfer between the ocean and the air.
III. Results in frequent changes in the ocean surface temperature.
A. I only
B. II only
C. I and II only
D. II and III only
E. I, II, and III

25 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

Major philosophical (column 1: A, B, or C) ___ about morality, identity and rationality, for example, can often be (column 2: D, E, or F) ___ by thought experiments: short and simple expositions that pose an abstract and complex problem in a concrete manner with all the (column 3: G, H, or I)
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<th>26</th>
<th>For each blank, select one entry from the column of choices. Fill all blanks in the way that best completes the text.</th>
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<td>All good comic writers use humor to ____, not to side-step the problems of human behavior.</td>
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<td>A. amuse  B. avert  C. juxtapose  D. confront  E. solve</td>
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<th>27</th>
<th>Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.</th>
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<td>The courtiers of the time had to be ____ in order to survive in an atmosphere where the least sign of rebellion could lead to banishment or worse.</td>
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<td>A. taciturn  B. fawning  C. docile  D. self-serving  E. upright  F. servile</td>
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<th>28</th>
<th>Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.</th>
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<td>Forgiveness was fine in theory, but she had trouble in accepting a religion that would allow ____ evil-doers access to heaven.</td>
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<td>A. repentant  B. contrite  C. blatant  D. venial  E. pardoned  F. recalcitrant</td>
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<th>29</th>
<th>Read the following passage and answer the question</th>
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<td>____ factors removed.</td>
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<td>A. certitudes  B. dilemmas  C. dogmas  D. mimicked  E. illuminated  F. evoked  G. extraneous  H. inherent  I. pivotal</td>
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</table>
Should we really care for the greatest actors of the past could we have them before us? Should we find them too different from our accent of thought, of feeling, of speech, in a thousand minute particulars which are of the essence of all three? Dr. Doran's long and interesting records of the triumphs of Garrick, and other less familiar, but in their day hardly less astonishing, players, do not relieve one of the doubt. Garrick himself, as sometimes happens with people who have been the subject of much anecdote and other conversation, here as elsewhere, bears no very distinct figure. One hardly sees the wood for the trees. On the other hand, the account of Betterton, "perhaps the greatest of English actors," is delightfully fresh. That intimate friend of Dryden, Tillatson, Pope, who executed a copy of the actor's portrait by Kneller which is still extant, was worthy of their friendship; his career brings out the best elements in stage life. The stage in these volumes presents itself indeed not merely as a mirror of life, but as an illustration of the utmost intensity of life, in the fortunes and characters of the players. Ups and downs, generosity, dark fates, the most delicate goodness, have nowhere been more prominent than in the private existence of those devoted to the public mimicry of men and women. Contact with the stage, almost throughout its history, presents itself as a kind of touchstone, to bring out the bizarrerie, the theatrical tricks and contrasts, of the actual world.

In the expression "One hardly sees the wood for the trees," the author apparently intends the word *trees* to be analogous to

A. features of Doran's language style.
B. details learned from oral sources.
C. personality of a famous actor.
D. details of Garrick's life.
E. stage triumphs of an astonishing player.

**Read the following passage and answer the question**

Swimming has developed from a primal mode of movement to an advanced hobby and competitive sport. Exercising nearly every muscle group, swimming is a rigorous sport and requires intense training. In competitions swimmers typically contend for the fastest time to complete a certain distance by performing a specific swimming stroke. Also, swimmers work to build endurance and an ability to swim over long distances. Because swimming has developed into a highly intricate competitive sport, where one wrong technique can disqualify a participant, it is interesting to ponder how the sport will evolve for people in the future, either advancing into a progressive purpose or regressing to a primal mode of movement.

Which of the following situations would fulfill the author’s prophecy for
swimming?
A. Humans settling on the moon use swimming techniques to move through space.
B. Swimming remains a competitive Olympic sport.
C. Animals, including amphibians, begin to swim instinctively upon birth, as a dominant genetic trait.
D. People swim in home and community pools to relax and exercise.
E. Fish begin swimming at unprecedented speeds and extend the average life span.

31 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

When staying in a hotel, Bernard would arrange for his valet to bring him his newspaper in the dining room so that everyone would realize that he had a manservant; this (column 1: A, B, or C) ___ embarrassed his nephew who, though equally rich, preferred a more (column 2: D, E, or F) ___ lifestyle.

| A. ostentation | D. opulent |
| B. arrogance   | E. libertine |
| C. dissimulation | F. understated |

32 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

Although he was finally (column 1: A, B, or C) ___, the years of (column 2: D, E, or F) ___ tore apart his social circle, ruined his health and (column 3: G, H, or I) ___ his mind.

| A. incriminated | D. dedication | G. sharpened |
| B. vindicated    | E. self-doubt | H. deranged |
| C. acclaimed     | F. suspicion  | I. mellowed |

33 Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

The Countess dressed with a (an) ___ elegance which seemed to proclaim to the world just how distinguished she was.

A. studied
B. pronounced
C. ingenuous
D. understated
E. mannered
F. rococo

34 Select the two answer choices that, when used to complete the sentence,
fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

It is a waste of time to ___ someone so dimwitted; he is too dull to recognize your barbs.

A. disparage
B. ridicule
C. lampoon
D. laud
E. enlighten
F. train

Read the following passage and answer the question

Historian F. W. Maitland observed that legal documents are the best—indeed, often the only—available evidence about the economic and social history of a given period. Why, then, has it taken so long for historians to focus systematically on the civil ( noncriminal ) law of early modern (sixteenth- to eighteenth-century) England? Maitland offered one reason: the subject requires researchers to “master an extremely formal system of pleading and procedure.” Yet the complexities that confront those who would study such materials are not wholly different from those recently surmounted by historians of criminal law in England during the same period. Another possible explanation for historians’ neglect of the subject is their widespread assumption that most people in early modern England had little contact with civil law. If that were so, the history of legal matters would be of little relevance to general historical scholarship. But recent research suggests that civil litigation during the period involved artisans, merchants, professionals, shopkeepers, and farmers, and not merely a narrow, propertied, male elite. Moreover, the later sixteenth and early seventeenth centuries saw an extraordinary explosion in civil litigation by both women and men, making this the most litigious era in English history on a per capita basis.

The passage suggests that the history of criminal law in early modern England differs from the history of civil law during that same period in that

A. is of more intellectual interest to historians and their readers
B. has been studied more thoroughly by historians
C. is more relevant to general social history
D. involves the study of a larger proportion of the population
E. does not require the mastery of an extremely formal system of procedures
### 36 Read the following passage and answer the question

Geese can often be seen grazing in coastal salt marshes. Unfortunately, their intense grazing removes the grassy covering, exposing marsh sediment; this increases evaporation, which in turn increases salt concentration in marsh sediments. Because of this increased concentration, regrowth of plants is minimal, leading to increased erosion, which leads to a decrease in the fertile topsoil, leading to even less regrowth. In time, the salt marsh becomes a mudflat. This process challenges one of the most widely held beliefs about the dynamics of salt-marsh ecosystems: supposedly, consumers such as geese do not play a large role in controlling the productivity of marsh systems. Rather, the standard view claims, marshes are controlled by bottom-up factors, such as nutrients and physical factors.

According to the passage, which of the following is a widely held belief about geese?

A. They are not often seen grazing in coastal salt marshes.
B. They are not the primary consumers in salt-marsh ecosystems.
C. They play only a minor role in the productivity of salt-marsh ecosystems.
D. They are the primary determinants of which resources will thrive in coastal salt marshes.
E. They control the productivity of salt-marsh ecosystems through a bottom-up process.

### 37 For each blank, select one entry per column from the column of choices. Fill all blanks in the way that best completes the text.

As Gerard (column 1: A, B, or C) ___ the (column 2: D, E, or F) ___ that greeted his work, he became increasingly smug.

- A. repudiated
- B. humbly accepted
- C. basked in
- D. accolades
- E. opprobrium
- F. lack of interest

### 38 For each blank, select one entry from the column of choices. Fill all blanks in the way that best completes the text.

An artist’s preliminary sketches are often a ___ of a subject; on the basis of these sketches the artist makes a decision on his or her approach to the final painting.

- A. reconnaissance
- B. caricature
- C. vignette
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<td>39</td>
<td>Select the <strong>two</strong> answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.</td>
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<td>The teacher was so abstracted that she gave a ____ evaluation of what was really an interesting solution to the problem she had set.</td>
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|   | A. philosophical  
|   | B. cursory  
|   | C. detailed  
|   | D. considered  
|   | E. perfunctory  
|   | F. tangential |

| 40 | Select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning. |
|   | Punishment for transgressions of the law ceases to have a deterrent effect if the punishment is frequently ____. |
|   | A. arbitrary  
|   | B. changed  
|   | C. waived  
|   | D. lenient  
|   | E. commuted  
|   | F. applied |
Appendix F

Images for Conditions
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<th>Image</th>
<th>Condition</th>
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CURRICULUM VITAE

ODESSIA KNOWLES
Utah State University
Department of Psychology
2810 Old Main Hill
Logan, UT 84322-2810
(435) 797-8282
o.knowles@aggiemail.usu.edu

EDUCATION

Ph.D.  Utah State University, Logan, UT
2016  Combined Clinical, Counseling, and School Psychology (APA approved)
      Dissertation: The Impact of Social Comparisons on Stereotype Threat for Black College Students Attending Predominantly White Colleges and Universities
      Major Professor: Melanie M. Domenech Rodríguez, Ph.D.

M.S.  Utah State University, Logan, UT
2013  Psychology
      Major Professor: Melanie M. Domenech Rodríguez, Ph.D.

B.S.  Eastern Washington University, Cheney, WA
2002  Counseling, Educational, and Developmental Psychology

LICENSURE

2013-present  Associate Clinical Mental Health Counselor Extern, Utah. License # 8592071-6010

CLINICAL EXPERIENCE

2015-2016  Doctoral Psychology Intern
University of Texas at Dallas, Student Counseling Center (APA approved site), Richardson, TX
Responsibilities: Provide individual and couple counseling. Co-facilitator of Healthy Relationships and Personal Growth interpersonal process groups, and Healthy U skills focused group. Complete intake assessments and provide crisis intervention services. Provide practicum student supervision. Serve as liaison to the Multicultural Center, providing consultation and outreach presentations. Engagement in specialized training in acceptance and commitment therapy (ACT) and counseling center administration, particularly related to veteran populations on college campus. Provide outreach programming, as well as the creation, marketing, and execution of an intern group outreach project. Participate in clinical group supervision and staff meetings as a member of a multidisciplinary team.
Supervisor (primary): Andreka Peat, Psy.D.

2014-2015  Practicum Student Counselor
Counseling/Clinical Psychology Practicum
Reed College, Health and Counseling Services, Portland, OR
Responsibilities: Provide individual therapy to undergraduate college students. Co-facilitator of the women of color group. Engage in consultations and outreach services including the facilitation of diversity talks. Provide training to students involved in student groups/organizations (i.e., sexual assault prevention and response (SAPR) advocates).
Supervisor: Marina Valdez, Ph.D.

2014  Graduate Student Counselor
(Summer)
Graduate Training Program in Feminist Multicultural Counseling
University of Utah, Women’s Resource Center, Salt Lake City, UT
Responsibilities: The feminist multicultural counseling training program consisted of both clinical and didactic components. The didactic component of the training program include engagement in the Feminist Multicultural Psychotherapy course and the completion of the 40-hour rape and sexual assault advocacy training. Knowledge gained from the psychotherapy course and advocate training were integrated into the clinical components of the training program. The clinical component consisted of the provision of individual therapy to college students and staff/faculty. Co-facilitator of body politics and women of color groups for college students, staff, faculty, and community members. Engagement in outreach, mentoring and advocacy for elementary, middle, and high school girls in the Go Girlz program, and for undergraduate students involved in the Dungy Leadership Institute.
Supervisors: Donna Hawxhurst, Ph.D., and Kristy Bartley, Ph.D.

2013-2014  Graduate Student Therapist
Bear River Head Start, Logan, UT
Responsibilities: Provide consultation, individual and group therapy services to various household members (i.e., siblings, parents, grandparents) of the children who were receiving head start services. Offer community based, in-home, face-to-face and telehealth services. Conduct classroom observations and assist teachers with child behavioral interventions. Provide consultations, presentations and staff trainings on mental health issues related to their students and families concerns. Supervisor: Melanie M. Domenech Rodríguez, Ph.D.

2013-2014  Practicum Student Therapist
Integrated Practicum with Adults, Adolescents, and Children
Utah State University, Psychology Community Clinic, Logan, UT
Responsibilities: Provide individual and family therapy, psychological testing/assessments, and consultations services. Conduct intake interviews and DSM-V diagnosing. Co-facilitate psych-educational groups at InTech Collegiate High School.
Supervisors: Sue Crowley, Ph.D., Jenna Glover, Ph.D., Carolyn Barcus, Ed.D. and Scott DeBerard, Ph.D.

2013  Practicum Student Therapist
(Summer)
Utah State University, Psychology Community Clinic, Logan, UT
Responsibilities: Provide individual therapy and psychological testing/assessments. Conduct intake interviews and DSM-IV diagnosing.
Supervisor: Scott Deberard, Ph.D.

2008-2009  Practicum Student Psychologist
Clinical Child/School Psychology Practicum
Utah State University, Clinical Services, Logan, UT
Responsibilities: Intakes, psychological testing/assessments, DSM-IV diagnosing, family meetings, case presentation, interdisciplinary team member.
Supervisor: Robert Cook, Ph.D.

2007  Practicum Student Therapist
(Spring)
Utah State University, Psychology Community Clinic
Responsibilities: Intakes, evaluations, assessments, individual therapy, family therapy, DSM-IV diagnosing.
Supervisor: Melanie M. Domenech Rodríguez, Ph.D.

RESEARCH EXPERIENCE

2013  Graduate Research Assistant
Utah State University, National Center for Hearing Assessment and Management
Responsibilities: Writing manuscript, coding data, analysis of national data set, meetings.

2011  
**Graduate Research Assistant**  
Utah State University, Center for Women and Gender  
*Responsibilities:* Writing sections of grant proposal, gather data for grant proposal, editing grant proposal, conducting focus groups, meetings, research.

2009-2009  
**Staff Research Associate – Household Interviewer**  
University of Utah, Department of Pediatrics, National Children’s Study  
*Responsibilities:* Conduct interviews in participant homes, utilize language line, data entry, meetings.

2007-2009  
**Graduate Research Assistant**  
Utah State University, Early Intervention Research Institute, Champions for Inclusive Communities Project  
*Responsibilities:* Research, conference presentation, youth interviews, community interviews, writing, conference calls, meetings.

2006-2007  
**Graduate Research Assistant**  
Utah State University, Center for Epidemiological Studies, Cache County Study on Memory, Health and Aging  
*Responsibilities:* Post-mortem Dementia Questionnaire, data entry, peer edits, ratings, meetings.

**PRESENTATIONS**


**TEACHING EXPERIENCE**

2014-2015  
**Graduate Teaching Assistant**
Utah State University, Logan, UT
Psychology 3660: Educational Psychology for Teachers
Responsibilities: Teaching assistant for online undergraduate courses.
Grading weekly tasks (tests/quizzes, exams, discussions, assignments) and providing feedback to students through Canvas.
Supervisors: Carrie Madden

2014-2015 Graduate Teaching Assistant
Utah State University, Logan, UT
Psychology 1730: Strategies for Academic Success
Responsibilities: Teaching assistant for online undergraduate courses. Grading weekly assignments and providing feedback to students through Canvas.
Supervisor: Beth Walden, Ph.D. (Spring) and Su Lin Nelson (Fall)

2010 Graduate Teaching Assistant
(Fall) Utah State University, Logan, UT
Psychology 6290: Diversity Treatment and Assessment
Responsibilities: Teaching assistant for graduate school counseling program course. Grading of assignments submitted through Blackboard.
Supervisor: Carolyn Barcus, Ed.D.

2006-2007 Graduate Teaching Assistant
Utah State University, Logan, UT
American Indian Support Project
Psychology 5200: Introduction to Interviewing and Counseling
Responsibilities: Office hours, grading, lecturing, organize social events.
Supervisor: Carolyn Barcus, Ed.D.

OTHER PROFESSIONAL EXPERIENCE

2011-2013 YouthBuild Success Coach
Ogden-Weber Applied Technology College
Responsibilities: Build and maintain relationships with community partners and other community agencies. Recruit students into YouthBuild program. Provide case management and advocacy for students. Help students identify and overcome barriers to remain in program. Teach leadership and life skills to students.
Supervisor: Jennifer Streker
2010-2011  **Support Group Leader**  
Utah State University, Psychology Department  
*Responsibilities:* Implement and organize graduate student lead departmental peer support groups.

2007-2008  **Mentor**  
Utah State University, America Reads Program  
*Responsibilities:* Mentor at risk middle school youth in all subject areas, role model, plan activities, meetings.  
Supervisor: Kandice Moss

2004-2006  **Children’s Counselor, Youth Counselor and Outreach Educator, Community Specialist-Youth**  
Houston Area Women’s Center, Houston, TX  
*Responsibilities:* Provide individual and group counseling to children and teen survivors of domestic and sexual violence. Supervisor of Teen Advisory Board. Outreach and presentations to the community on issues pertaining to domestic and sexual violence, including topics such as oppression and privilege, gender inequalities and gender roles, healthy and unhealthy relationships, analysis of culture (e.g., music, media).  
Supervisors: Debbie Okrina, LMSW, Donna Aldridge, B.A.

**PROFESSIONAL ACTIVITIES**

**University:**

10/2008  **Guest Lecturer:** Multicultural Issues  
Psychology 4240: Multicultural Psychology  
Utah State University, Logan UT  
Instructor: Elisaida Méndez, M.A.

03/2008  **Guest Lecturer:** Gender Issues  
Psychology 6290: Diversity Treatment and Assessment  
Utah State University, Logan UT  
Instructor: Carolyn Barcus, Ed.D.

02/2008  **Guest Lecturer:** Acculturation Process  
Psychology 6290: Diversity Treatment and Assessment  
Utah State University, Logan UT  
Instructor: Carolyn Barcus, Ed.D.

11/2007 & 11/2006  **Guest Lecturer:** Diversity Considerations in Working with African-American Individuals
Psychology 4240: Multicultural Psychology
Utah State University, Logan UT
Instructor: Elisaída Méndez, M.A.

Community:

Community Abuse Prevention Services Agency (CAPSA)

FELLOWSHIPS, SCHOLARSHIPS, HONORS, AND AWARDS

2014-2015 Fredrick Q. Lawson Fellowship, Utah State University, Emma Eccles Jones College of Education and Human Services ($4,500)

2014-2015 Carolyn Barcus Diversity Scholarship, Utah State University, Psychology Department ($1,000)

2013-2014 PEO Scholarship, Utah State University, Center for Women and Gender ($654)

2013-2014 Rick Q. Lawson Scholarship, Utah State University, Emma Eccles Jones College of Education and Human Services ($10,000)

2013 Enhancement Award, Associated Students of Utah State University ($4,000)

2012-2013 Martin Luther King Jr. Fellowship, Utah State University, Graduate School ($5,000)

2011-2012 Vera Carter Lewis Scholarship, Utah State University, Center for Women and Gender ($1,010)

2011 Peter Krantz Research Travel Award, Utah State University, Psychology Department ($300)

2011 Travel Award, Utah State University, Graduate Student Senate ($300)

2008-2009 Martin Luther King Jr. Fellowship, Utah State University, Graduate School ($7,000)

2008-2009 T. Clair & Enid Johnson Brown Scholarship, Utah State University, College of Education and Human Services ($1,600)

2008-2009 Luna Robertson Brite Endowment, Utah State University, Women’s Center for Lifelong Learning ($2,790)
2008-2009  Neil L. & Cathy Anderson Scholarship, Utah State University, Women’s Center for Lifelong Learning ($190)

2008  Travel Award, Utah State University, Graduate Student Senate ($300)

2002  Lifetime Member, Psi Chi: The National Honor Society in Psychology

1999-2002  Dean’s List, Eastern Washington University

PROFESSIONAL AFFILIATIONS

2013-present  Association for Women in Psychology
2007-present  Student Member, American Psychological Association
2006-2008  Student Member, Association of Black Psychologists
2004-2006  Texas Council on Family Violence
2004-2006  Texas Association Against Sexual Assault