

SOCIAL DOMINANCE ORIENTATION AND RIGHT WING AUTHORITARIANISM AS  
PREDICTORS OF PREJUDICE AND DISCRIMINATION AGAINST MUSLIMS

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## ABSTRACT

The purpose of this study was to examine the effects of social dominance orientation (SDO) and right wing authoritarianism (RWA) on discrimination in the face of a threat to either resources or in-group identity. SDO can be viewed as the attitudinal manifestation of realistic conflict theory (RTC) while RWA can be viewed as that of social identity theory (SIT). An online survey was administered to 631 college students assessing prejudice, SDO, and RWA. Emails were sent from a fictitious campus organization to 503 participants who agreed to be contacted for a subsequent study. The emails manipulated either a threat to resources by offering a scholarship or a threat to in-group identity by offering an invitation to join a culturally based campus club and were incorrectly addressed to a male target with either a Muslim or European-American name. It was made clear that if the email had been sent in error, it was necessary to return it to the source or the recipient would lose his chance to receive these opportunities. Return rates were recorded as a behavioral measure of discrimination. Overall, it was expected that more emails addressed to the European American target would be returned than emails addressed to the Muslim target (H1). Based on RCT, it was also expected that in the face of a threat to resources (scholarship offer) participants high in SDO would be less likely to return emails addressed to the Muslim target than participants high in RWA (H2). Finally, based on SIT, it was expected that in the face of a threat to in-group identity (membership invitation), participants high in RWA would be less likely to return emails addressed to the Muslim target than participants high in SDO (H3). In both instances interactions were anticipated between the target

and the attitudinal measure (SDO or RWA). Although the results were not statistically significant for the hypotheses, marginally significant results were observed and some interesting trends were noted. Additionally, prejudice against Muslims was found to have significant effects on email return rates.

## DEDICATION

This thesis is dedicated to everyone who helped me and guided me through the trials and tribulations of creating this manuscript. In particular, I would like to thank my husband John Sipperley, without whose support I would not have even had the courage to apply to graduate school. And, I would like to thank my father, Dr. Robert M. Sutton, who always instilled in me a desire to pursue a doctorate. Thank you both for believing in me when I could not, and for supporting me when I lacked the strength to do so myself. You both raise me up to more than I can be. I would like to thank my mother, Patty Colvert Sutton, who always pushed me to strive for my best and never accepted anything less. And, most of all, this document is dedicated to my son John Robert Sipperley. Bear, I hope that it serves as a reminder that it is never too late to accomplish your goals and as an example of tenacity and the value of completing a difficult task in order to reap the highest rewards. I love you more than everything!

## LIST OF ABBREVIATIONS AND SYMBOLS

$\alpha$	Cronbach's alpha index of internal consistency
B	Logistic regression coefficient
$\bar{X}$	Mean
$p$	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
$\chi^2$	Computed value of a Chi Square calculation
$R^2$	Variance explained by the regression model
$SD$	Standard deviation
$t$	Computed value of $t$ test
$F$	Computed value of an $F$ -test
<	Less than
=	Equal to

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## INTRODUCTION

Fundamentally, humans are a social species, encounter great difficulty reproducing and surviving outside of a group context (Caporael, 2007). Group membership benefits both the group (Sober & Wilson, 1998; Wilson & Sober, 1994) and the individuals within the group (Cottrell & Neuberg, 2005). According to anthropologists, hardships presented by our evolutionary past compelled humans to create highly interdependent and cooperative groups (Leakey & Lewin, 1977). Evolutionarily, humans were better able to acquire more resources (i.e., food, water, shelter, and mates) and to accomplish essential goals (i.e., reproduction and self-protection) within a group context than individually (Cottrell & Neuberg, 2005). Thus, it has been argued that interdependent group living is the most important adaptation in human history (Barchas, 1986; Brewer, 1979; Brewer & Caporael, 1990; Leakey, 1978). It protects people from environmental dangers while allowing the group to exploit environmental opportunities (Cottrell & Neuberg, 2005).

While there are a great many benefits to group membership, it can also entail many costs, especially to those who are disenfranchised. The process of group formation makes it possible to select group members based on cultural variation and to structure populations on the basis of cultural cues (Richerson & Boyd, 1998). Such group categorization of others also leads to self-categorization (Turner, Hogg, Oaks, Reicher, & Wheterel, 1987). Thus, groups develop distinctive characteristics. As a result, groups perceive themselves in terms of “us” in contrast to the other “them” (Turner, et al., 1987), or in-groups and out-groups, resulting in patterns of in-group cooperation and out-group hostility (Richerson & Boyd, 1998). Although increased

competition can yield greater preference for the in-group while increasing hostility for the out-group (LeVine & Campbell, 1972), competition is not necessary for the genesis of such hostility (Tajfel, Billig, Bundy, & Flament, 1971). Research has shown that the only thing necessary to create intergroup conflict is the awareness of belonging to a group, or self-awareness of social identity (Brewer, 1979).

Making the distinction between in-groups and out-groups also leads to stereotyping, or making generalizations about groups. Such generalizations can prove to be quite useful because, according to Allport (1979), “we cannot weigh each object in the world by itself. Rough and ready rubrics, however coarse and broad, have to suffice” (Allport, 1979, p. 7). But, stereotyping is one of the most important determinants of prejudice (Castano, Yzerbyt, Bourguignon, & Seron, 2002), which has been defined as “an aversive or hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to that group” (Allport, 1979, p. 7). Sometimes such generalizations are simply misconceptions created when information is encoded or organized incorrectly, but if these erroneous preconceptions can be corrected with the presentation of conflicting evidence, there is no prejudice; prejudgments only become prejudices if they cannot be reversed in the face of new information (Allport, 1979).

Prejudice can prove somewhat harmless if it is kept to the holder and not expressed or acted upon. Discrimination can have much more serious social implications. Discrimination is the active expression of prejudice ranging all the way from simply verbally expressing feelings to avoiding members of unfavorable groups to actually inflicting harm on them (Allport, 1979). Both prejudice and discrimination can lead to intergroup conflict.

### *Realistic Conflict Theory and Social Identity Theory*

The two most prominent theories used to explain the psychological basis of intergroup conflict are realistic conflict theory (Campbell, 1965; Sherif, 1966) and social identity theory (Tajfel & Turner, 1979). Realistic conflict theory proposes that conflicts arise between groups as a result of competition over access to limited resources. The theory was borne of the seminal Robber's Cave experiments conducted by Muzafer and Carolyn Sherif (Sherif, Harvey, White, Hood, & Sherif, 1961).

The experiments were conducted in 1948 at a boys' camp in Connecticut and in 1954 at a Boy Scout camp inside the Robber's Cave State Park in Oklahoma, which was a former hideout for infamous outlaws such as Jesse James and Belle Starr. In each instance, 24 boys ages 11 and 12, who were as mentally stable and homogeneous as possible, were carefully selected to spend the summer at an overnight boys' camp. In Connecticut, all 24 boys arrived at the camp together and were given time to interact and to form friendships. Within a few days the boys were divided into two groups, taking special care to break up dyads of "best friends" as rated by the campers. In Oklahoma, the boys arrived at the Boy Scout camp already assigned to two groups in separate buses and were not initially aware of the other group's presence.

In the second phase, each of the two groups functioned cohesively in competition with the other. Leaders emerged, division of labor was self-assigned, and social pressure was brought to bear to ensure that everyone functioned for the benefit of his own group. During this period, previous "best" friendships were forgotten and loyalties to the new group were cemented, but hostilities towards the other group were manifest and prolific. Sporting competitions became acrimonious, banners were burned, logo flags were forcibly taken, and cabins were ransacked. In Oklahoma, group identity was so engrained that the two groups gave themselves the monikers

“The Rattlers” and “The Eagles.” It became quite evident to the experimenters, who had disguised themselves as the camp staff that measures had to be taken to reduce hostilities.

In the final phase, attempts were made to bring harmony to the groups. They were made to eat together or to engage in mutual entertainment, but rather than promoting consonance, the groups took these opportunities to hurl insults and objects at each other. It was clear that simply forcing interaction was not working. The experimenters then created situations in which the groups had to work together to fulfill super-ordinate goals for the good of the whole camp. For example, at the camp in Oklahoma, they all contributed to restoring a failed water supply to the campgrounds and to getting a stalled supply truck started so that food could be delivered. This strategy was so successful that all of the boys demanded to be returned home in the same bus, and when they stopped for a snack, the one group who had prize money left over from the intergroup competitions treated the other to milkshakes.

The basis for intergroup conflict in the Robber’s Cave experiments and for realistic conflict theory, overall, is competition for resources. As hunter/gatherers transitioned from following their food to producing their food (the Neolithic Revolution) they were able to settle in a single location where water was, hopefully, abundant, and food production could be concentrated. However, as civilizations expanded, they came into conflict with others over access to resources in the same area. Additionally, lack of spontaneous mobility made for an attractive target for outside invaders. These situations made for real or perceived threats of one group towards another. Such threats result in hostility towards the out-group and solidarity amongst the in-group, complete with increased awareness of in-group identity, reduction in defections from the in-group, and greater censorship and punishment against potential or actual defectors and deviants; in short, out-group threats increase in-group ethnocentrism, thereby

increasing the likelihood that the in-group will engage in conflict with the out-group (Campbell, 1965). Thus, the implication of realistic conflict theory is that if groups are not competing for resources, intergroup conflict should not occur. However, research shows that competition is not a prerequisite for intergroup conflict. Simply classifying people as members of an in-group or out-group is sufficient to cause conflict (Brewer, 1979; Tajfel et al., 1971).

To account for the strong effects of categorization, social identity theory proposes that a person develops a self-perception that arises from “the individual’s knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership” (Tajfel, 1972, p. 292). Additionally, people “prefer a positive self-image to a negative self-image” (Tajfel, 1981, p. 45). In order to increase self-esteem, people can either enhance the status of any in-group to which they belong and/or denigrate the status of any out-group (Tajfel & Turner, 1979). This occurrence is a three step process. First, we categorize people, including ourselves, into groups. In so doing, it is possible to establish proper behavior based upon group norms. Second, we begin to identify with groups to which we belong and begin to adopt their social norms. At this point, our own self-esteem will begin to become bound up with the group. Finally, out-groups become perceived as relevant groups for comparison to our own on the bases of similarity, proximity, and situational salience. In order to maintain self-esteem, we need to compare favorably with any comparison groups. “The aim of differentiation is to maintain or achieve superiority over an out-group on some dimension,” (Tajfel & Turner, 1979, p. 41). Once two groups have identified themselves as rivals, they are forced to compete so that their members can maintain self-esteem; thus competition is the result of competing identities (Tajfel & Turner, 1986). The best way to reduce intergroup conflict that is based on

social identity is through the creation of super-ordinate identities that transcend individual group identities (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993).

### *Social Dominance Orientation and Right Wing Authoritarianism*

Based on Realistic Conflict Theory and Social Identity Theory, it is evident that intergroup conflict can be the result of either competition for resources or the enhancement of one's own group to the detriment of others. Two social factors, social dominance orientation (Sidanius, Pratto, Martin, & Stallworth, 1991) and right wing authoritarianism (Altemeyer, 1998) may help to further explain the connections between the aforementioned conflict theories and prejudice (Dru, 2007). In previous studies, social dominance orientation and right wing authoritarianism were primary predictors of prejudice; they accounted for more than 50% of the variance in prejudice, and no other variables beyond these were found to significantly explain any additional variance (Altemeyer, 1998; McFarland & Adelson, 1996). Although both social dominance orientation and right wing authoritarianism correlate with prejudice (Dru, 2007; Heaven & Quintin, 2003), it is also not possible to confound the two because there is consistently no correlation between them (Dru, 2007; Heaven & Connors, 2001). Recent studies also indicate that they are not considered to be personality dimensions, but rather they are large sets of social beliefs and attitudes (Duckitt, 2001; Stone, Lederer, & Christie, 1993). Social dominance orientation and right wing authoritarianism present two separate motivational goal-schemas for prejudice (Duckitt, 2001). The motivational schema for social dominance orientation involves dominance and superiority between groups for the purpose of "winning," while the right wing authoritarianism involves traditionalism and adherence to in-group norms through control and security.

Social dominance orientation (SDO) is the extent to which an individual wishes for the domination and superiority of his or her own in-group at the expense of other out-groups (Sidanius, et al., 1991). Individuals who are high in social dominance orientation will favor ideologies and policies that maintain their own group's superiority and access to resources while simultaneously maintaining other groups' inferiority (Pratto, Sidanius, Stallworth, & Malle, 1994). Additionally, these individuals are more likely to be prejudiced against out-groups and endorse discriminatory actions against out-group members. Thus, the type of prejudice and discrimination exhibited in the context of realistic conflict theory is instrumental in maintaining a social dominance orientation (Scheepers, Spears, Doojse, & Manstead, 2002). Therefore, social dominance orientation is a predilection towards intergroup competition (Dru, 2007).

Right wing authoritarianism (RWA) is a co-variation of three attitudinal clusters including submission to authority, conventionalism, and authoritarian aggression (Altemeyer, 1998). According to Altemeyer, individuals who are high in right wing authoritarianism strongly believe in submission to established, legitimate authorities and maintenance of the social norms, or conventions, which those authorities endorse. They also believe in aggression against any person or group targeted by the authorities who have been determined to be deviants. These individuals base their beliefs on what the authorities have deemed to be correct rather than independent, critical appraisal, and the nature of these beliefs is often religious. Such approaches lend themselves to inconsistencies, which are compounded by the fact that these individuals tend to be highly ethnocentric and to surround themselves only with others of like mind. Right wing authoritarians are in a constant state of fear because they view the world as a dangerous place that is on the brink of teetering into an abyss of self-destruction brought about by its own "evil" ways. To prevent this outcome they instigate aggression against others, themselves, using

violence that they consider excusable because they are acting from a position of superior righteousness. Therefore, prejudice and discrimination serve an identity function, as suggested by social identity theory, exercised by those high in right wing authoritarianism (Scheepers, et al., 2002). In short, right wing authoritarianism is an orientation towards maintaining in-group norms (Dru, 2007).

The Social Dominance Orientation Scale (Pratto, et al., 1994) measures SDO, and RWA can be measured with the Right Wing Authoritarianism Scale (Altemeyer, 2006). Research studies using these measures in relation to prejudice and discrimination have been analyzed primarily with correlational and structural equation modeling procedures (Dru, 2007; Heaven & Quintin, 2003), but there has been very little evidence in the literature of an attempt to establish a causal, behavioral relation to these attitudes (Dru, 2007). In an effort to address this shortcoming, Dru (2007) attempted to examine these two constructs with an experimental design. He had all participants complete both the Social Dominance Orientation Scale and the Right Wing Authoritarianism Scale. He then divided the participants into two groups that were primed with a paragraph describing a fictional group of people who were motivated by either competition or group-based values and norms. Finally, he had participants answer questions regarding their degree of prejudice against various ethnic groups. He demonstrated that social dominance orientation and right wing authoritarianism correlate with prejudice differently based upon the way in which membership to a social group is primed. If membership was primed on the basis of competitive group membership, social dominance orientation correlated with prejudice, but right wing authoritarianism did not. If membership was primed on the basis of group-based values, right wing authoritarianism was correlated with prejudice, but social dominance orientation was not. Dru concluded that improved research regarding these issues

should “extend in an experimental direction the potential effects of right wing authoritarianism and social dominance orientation on prejudice and their connection to fundamental inter-group processes” (p. 883). One such enhancement would be to examine behavioral measures of discrimination rather than self-report measures.

### *Lost Email Technique*

In an effort to further demonstrate causality, this study attempted to validate social dominance orientation as a predictor of discrimination when the subject is presented with a resource-based threat. It also attempted to establish right wing authoritarianism as a predictor of discrimination when the subject is presented with a membership-based threat. To do so, a modern variation of Milgram’s “lost letter” study (1977), “the lost email” (Stern & Faber, 1997), was utilized. In Milgram’s original experiment (1977), addressed and stamped letters were “accidentally” dropped in public places, and the rates at which someone picked them up and dropped them in the mail were measured. The letters were addressed to individuals at either socially favorable organizations, such as medical research facilities, or socially unfavorable organizations, such as Communist or Nazi groups (in reality, all were addressed to the same location). He found that most of the letters bound for people at propitious institutions were mailed, but most of the letters bound for stigmatized institutions were not. The “lost letter” technique provided a behavioral measure of attitude because, unlike self-report, the “lost letter” required action on the part of the participant.

Howitt and McCabe (1978) reported a similar result using misdirected letters with the racial/ethnic identity of the target as the predictor. Letters that were addressed to either English or Irish recipients were erroneously mailed to English households, and their return rates were

measured. Overall, the return rates for letters addressed to Irish households were lower than for letters addressed to English households.

Since the original “lost letter” studies were conducted, electronic mail, or email, has become widely used, and is even more commonplace than traditional letters (Richardson, 2002). Stern and Faber (1997) were able to establish that the “lost-email” method, in which an email is “accidentally” sent to the wrong recipient who is then asked to reply if it was received erroneously, can provide a valid measure of attitudes. Furthermore, Bushman and Bonacci (2004) found, specifically, that use of the “lost email” technique provides behavioral evidence of discrimination against Muslims. For participants high in prejudice, they were less likely to return a “lost email” if it contained information that the intended “recipient,” a Muslim student, had won a scholarship, but were more likely to return it if the email stated that the “recipient” had not won.

The use of the “lost email” technique has four distinct advantages (Bushman & Bonacci, 2004). First, email communication is now so ubiquitous that receiving one in error is not considered to be anomalous, so suspicion on the part the recipient would not be raised. Second, unlike a laboratory setting, individuals responding to email may not be as readily aware that they are being observed as participants in an experiment, thus they may be more likely to respond in a realistic way. This is very important when studying prejudice, because there is so much normative pressure to behave in a socially desirable manner, particularly in the United States (Dunton & Fazio, 1997; Plant & Devine, 1998). If they are not aware of being observed, participants might monitor their behavior less closely and act with greater veracity, especially in a format that is high in anonymity. Third, since overt race-based discrimination is extremely rare, the “lost email” allows for the measurement of more subtle forms of discrimination that

might not otherwise be expressed due to social desirability and demand characteristics. Finally, purposefully failing to return an email mirrors other subtle discriminatory behavior that exists in the “real world” such as not returning a phone call; in both cases, the social ramifications for such discrimination are small.

### *Prejudice and discrimination against Muslims*

Although prejudice against African Americans, women, and Jews has been well documented and thoroughly studied, one form of prejudice that is relatively new and on the rise in the U.S. is that against Muslims. Anti-Muslim sentiment began building in the United States during the 1980’s and 1990’s following such incidents as the Iran Hostage Crisis in 1979, the bombing of Pan-Am flight 103 over Lockerby, Scotland in 1988, the first attempted bombing of the World Trade Center in New York in 1993, and the attack on the USS Cole in 2000. But it reached a new crescendo after the attacks by Al Qaeda on the United States on September 11, 2001. A 2006 USA Today/Gallup poll revealed strong anti-Muslim feelings among a substantial minority of respondents. Thirty nine percent of respondents reported prejudicial feelings against Muslims, and the same percent supported requiring all Muslims, including American citizens, to carry a special ID card as a means of preventing a future terrorist attack. Additionally, 22% reported that they would not want a Muslim as a neighbor, and nearly one third believed that all Muslims are sympathetic to Al Qaeda. More recently, according to The Pew Forum on Religion and Public Life (2009), eight years following the attacks on September 11, 2001, 58% of American adults polled perceived Muslims as subject to “a lot” of discrimination, more than any other religious group in the U.S. In fact, of all examined groups, only one other ranked higher; 63% of respondents reported that homosexuals experience “a lot” of discrimination. Sixty-five percent also said that Islam is either “very different” or “somewhat different” from their own

beliefs, with levels of perceived religious similarity among other religions being associated with significantly more favorable views toward members of those religions. Furthermore, 38% of respondents said that Muslims were more likely to encourage violence than members of other faiths. Finally, a Gallup Center for Muslim Studies report (2010) found that 43% of Americans expressed feeling prejudice against Muslims and 31% said that their opinion of Islam is, “not favorable, at all.” If the attitudinal disposition of prejudice against Muslims is so prevalent in our society, then it could lead to discrimination against them.

And, there is evidence of increased discrimination. According to the New York Times (Green house, 2010), record numbers of Muslims have reported workplace discrimination ranging from co-workers calling them “terrorists” or “Osama,” to disallowing the wearing of head scarves, and employers not allowing periodic breaks for prayer times. In the year ending September 30, 2009, 803 workplace discrimination complaints were filed with the federal Equal Employment Opportunity Commission, up 20% from the previous year and 60% from 2005. Although Muslims only make up 2% of the U.S. population, the number of complaints filed by them in 2009 accounted for nearly 25% of all religious discrimination complaints filed that year. The following year, that number rose to 1490, and in 2011, it had risen to 4151 (Greenberg, 2013). And the EEOC has found enough merit in these complaints to have filed lawsuits against companies as prominent as Abercrombie and Fitch and Sheraton Hotels (Greenhouse, 2010). Additionally, a majority of Muslim college students perceive that prejudice and discrimination against Muslims is common in their institutions for higher learning (Omeish, 1998). A Pew Research Center Study (2013) has found that 49% of Muslim Americans view negative attitudes, prejudice, and discrimination against Muslims to be the greatest problem that they face in America, today. And, there have been 800 incidents of violence, threats, vandalism, and arson

against Muslim targets reported to the U.S. Department of Justice since the September 11, 2001 attacks (Kennedy, 2011).

### *Attitudes and Behaviors*

From its infancy, attitudes have been a central tenant of social psychology, with early writers defining social psychology as the scientific study of attitudes (Thomas & Znaniecki, 1918). In 1935, Gordon Allport wrote, “The concept of attitude is probably the most distinctive and indispensable concept in contemporary American social psychology” (p. 198); in 1954, he went on to state that the concept of attitude is, “the primary building stone in the edifice of social psychology” (p. 45). This assertion was reiterated by Kelman (1974) who wrote, “In the years since publication of Allport’s paper, attitudes, if anything, became even more central in social psychology” (p.310). Attitudes have been defined as, “a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related,” (Allport, 1935, p.810) “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor,” (Eagly & Chaiken, 1998, p.1), or simply, “likes and dislikes” (Bem, 1979, p.14). The codification of attitudes began as early as 1928 when Thurstone attempted to create the first quantitative measure of attitudes in the form of a psychometric attitude scale towards church. Once the concept of attitudes was firmly embedded in the field, these early psychologists assumed a direct relation between attitude and behavior and developed numerous theories to explain how attitude influences behavior, including how prejudice influences discrimination. The concepts of balance theory (Heider, 1946) and consistency theory (Osgood & Tannenbaum, 1955) would suggest that they might. Balance theory (Heider, 1946) asserts that our drive towards psychological balance motivates us to maintain cognitive consistency which,

over time, preserves our values and beliefs. Consistency theory (Osgood & Tannenbaum, 1955), along with Festinger's cognitive dissonance theory (1957), asserts that humans strive for a balanced state of cognitions and behaviors, and if they are inconsistent, the person experiences a state of imbalance, or dissonance, which is viscerally unpleasant and must be ameliorated (Treppe, 2008). In other words, we need to live in a world that is coherent, consistent, fits together, and makes sense, and when it does not, we feel uneasy and wish to take steps to reduce that discomfort. Therefore, if we hold a negative disposition toward a group of people, it would be inconsistent not to behave towards them in an adverse manner; negative attitudes would yield negative behaviors, or more specifically, prejudice would lead to discrimination.

### *Present Study*

The focus of the current study was an examination of prejudice and discrimination against Muslims. Prejudice against other groups such as African Americans, Jews, and women has been a major focus of research for several decades, but comparatively, anti-Muslim prejudice is a fairly recent phenomenon. There is also a great deal of social pressure not to demonstrate prejudice or discrimination against the aforementioned groups, but this is less so in the case of Muslims; in some circles it could possibly even be considered a sign of "patriotism."

The purpose of this study was to investigate experimentally the effects of a threat to resources or a threat to identity on discrimination against Muslims. The study used the "lost-email" technique employed by Bushman and Bonacci (2004) to demonstrate discrimination against Muslims, while also experimentally demonstrating, as did Dru (2007), that such discrimination is specifically related to individual differences in social dominance orientation and right wing authoritarianism, depending upon the threat mechanism. Prior to administration of the "lost email" manipulation, prejudice against Muslims as the out-group, social dominance

orientation and right wing authoritarianism were assessed. Then participants were assigned to one of four groups which received a “lost email.” Both the type of email (threat to resources or threat to in-group identity) and the intended target of the email (Muslim or American of European descent) were manipulated. Participants were asked to return the “lost email” if it had been sent to the wrong person in error, which it inevitably was.

## HYPOTHESES

It was predicted that there would be a main effect of discrimination against the out-group (H1). In this case the out-group was Muslims, and their group status was confirmed by measuring prejudice against them. The return rates for lost emails addressed to a European American target were projected to be higher than for emails addressed to a Muslim target, thus demonstrating discrimination against Muslims. However, it was expected that this effect would be moderated by the motivational agent for prejudice (social dominance orientation or right wing authoritarianism) depending upon the threat presented (threat to resources or threat to group identity). If a threat to resources was presented, participants who were high in social dominance orientation were anticipated to be more likely to discriminate against the out-group target than participants who were high in right wing authoritarianism (H2). However, if a threat to identity was presented, participants who were high in right wing authoritarianism were anticipated to be more likely to discriminate against the out-group target than participants who were high in social dominance orientation (H3). In both instances an interaction between target and social attitude (SDO or RWA) was expected.

## METHODS

### *Participants*

Using the Power Analysis and Sample Size (PASS) software from NCSS (Hintze, 2008), which uses formulas derived by Hsieh, Block, and Larsen (1998), it was determined that in order to obtain a power of .80, the total sample size should be 398, assuming a baseline probability for return of “lost emails” sent to the in-group target of 20%, and a probability of return for emails sent to the out-group target of 10%. Considering that Study 1 in the Stern and Faber investigation (1997) saw a return rate of 19% and Study 2 saw a return rate of 29% for emails in which the target was the out-group, this would be a conservative, but fair, estimate. Therefore, a target sample size of 400 participants was set, and they were to be evenly divided into four groups for a sample size of approximately 100 per cell. A random number generator was used to determine which type of email each participant would receive. Following IRB approval (Appendix A), students were recruited from the University of Alabama Psychology Subject Pool to participate. Participants received credit towards fulfillment of the research requirement for Psychology 101. Emails were sent to 501 participants (143 male and 358 female). Of those, 407 participants were White, 61 were Black, 14 were Hispanic, 10 were Asian, and 9 self-identified as “other.” Average age among participants was 19.

## *Measures*

*Prejudice.* Prejudice was measured with a modified version of the Anti-Semitism Scale (Levinson & Sanford, 1944) which was used in the previous Bushman and Bonacci (2004) study that utilized the “lost email” technique to examine prejudice against Muslims. While the original scale consisted of 22 items and only measured negative sentiment towards Jews, the revised scale retained 11 items that could be generalized to any ethnic, racial or religious groups (Appendix B). In order to minimize demand characteristics, participants were asked to evaluate several groups. Items were answered on a 10-point scale ranging from 1 (Strongly Disagree) to 10 (Strongly Agree) and included items such as, “There is something different and strange about (*ethnic group*), one never knows what they are thinking and planning,” and “If I knew that I had been assigned to live in a dorm room with a (*ethnic group*), I would ask to change rooms.” Questions were asked about Caucasian, African American, Hispanic, Asian, Muslim, and Jewish sub-groups yielding a 66-item scale. Responses for each sub-group are summed across the 11 items to create a prejudice score for that group with higher numbers indicating a greater degree of prejudice.

*Social Dominance Orientation Scale (Pratto, et al., 1994).* The Social Dominance Orientation Scale consists of 16 items in which participants rated each statement on a 7-point scale ranging from 1 (Very Negative) to 7 (Very Positive) and included items such as, “It is okay for some groups to have more of a chance in life than others,” and “To get ahead in life, it is sometimes necessary to step on other groups.” Responses on all items are summed with higher scores indicating a greater degree of Social Dominance Orientation. The scale has a demonstrated typical internal consistency of over  $\alpha=.80$ . (See Appendix C).

*Right Wing Authoritarianism Scale (Altemeyer, 2006).* The Right Wing Authoritarianism Scale consists of 22 statements which participants rated on an 8-point scale ranging from 1 (Very Strongly Disagree) to 8 (Very Strongly Agree) and included items such as, “The established authorities generally turn out to be right about things while the radicals and protestors are usually just “loud mouths” showing off their ignorance,” and “The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.” Responses on all items are summed with higher scores indicating a greater degree of Right Wing Authoritarianism. It typically demonstrates internal consistency above  $\alpha = .90$ . (See Appendix D).

*Pilot Study*

To determine if the “lost-email” technique would yield adequate results for analysis, a pilot study was conducted. Online surveys were administered to 463 volunteers through the Psychology Subject Pool website. Two hundred eighty six emails were sent to survey participants who indicated that they would be willing to participate in future studies. The results are reported in Table 1.

**Table 1.** Return Rates: Percentages for Emails Sent

	<b>SCHOLARSHIP OFFER</b>	<b>MEMBERSHIP INVITATION</b>
<b>Muslim</b>	42.5%	22.8%
<b>European</b>	48.0%	18.8%

Of the 80 scholarship offers sent to Muslims, 34 were returned, while 24 of the 50 scholarship offers sent to European Americans were returned. Of the 92 membership invitations sent to Muslims 21 were returned while 12 of the 64 membership offers sent to European

Americans were returned. The overall return rate for all groups was 32%. A chi square test of association found that the difference between the return rates for Muslim targets and return rates for European American targets was not significantly different than predicted for the null hypothesis for either the scholarship condition,  $X^2(1) = 0.109$ ,  $p = .74$ , or the membership invitation condition,  $X^2(1) = 0.467$ ,  $p = .49$ .

To be able to make good approximations, cells must contain a minimum of five participants. In this case, the smallest cell contained 12 subjects, which is well above the required minimum. Therefore, the response rate for “lost emails” being returned is more than adequate to be able to analyze the data, and it was determined that the current study would proceed forward using the proposed methodology.

### *Procedure*

*Part 1.* In the first part of the study, 631 students from the University of Alabama’s Psychology Subject Pool completed all of the aforementioned measures (Anti-Semitism Scale, Social Dominance Orientation Scale, and Right Wing Authoritarianism Scale) online in a survey format. Consent was obtained before participants began the online survey, and debriefing was provided when the survey was completed. If participants had any concerns, they had the ability to contact the researcher via email. To select participants for the second part of the study, participants in the first part of the study were asked a series of questions regarding their amenability to participating in future studies, including phone, mail, door-to-door, and email. Nearly 80% (79.7%) of all participants who participated in part one consented to be contacted for future studies.

*Part 2.* Each of the 501 participants who agreed to be contacted by email for future studies received an email in which the target had a name implying that the person to whom the

email was sent was either an out-group Muslim student (Abdullah Mohammed) or an in-group European American student (John Roberts) at the University of Alabama. The emails offered the target either a scholarship (Appendix E) or an invitation to become a charter member of a cultural group that supports the ideals of either “American” or “Muslim” culture (Appendix F). A random number generator was used to determine what type of email (scholarship offer or membership invitation) each participant received and to which kind of target (Muslim or European American). All emails sent were “lost,” that is “accidentally” sent to the “wrong” recipient.

Two hundred fifty four of the emails sent offered a scholarship to the target recipient with 128 targeted to an out-group Muslim student and 126 targeted to an in-group European American student, thereby manipulating an out-group threat for resources (scholarship opportunities) to the in-group. Scholarship offers represented a threat to resources which was expected to trigger discrimination against the out-group in participants scoring high on the Social Dominance Orientation Scale. Likewise, 247 of the emails sent extended an invitation to become a charter member of a new student cultural organization celebrating either Muslim (out-group) or American (in-group) culture with 122 targeted to an out-group Muslim student and 125 targeted to an in-group European American student, thereby manipulating a threat to in-group identity. Membership invitations to join a Muslim cultural group represented a threat to in-group identity which was expected to trigger discrimination against the out-group among participants scoring high on the Right Wing Authoritarianism Scale. Counts of emails sent are presented in Table 2.

**Table 2.** Counts of types of emails sent to targets as broken down by condition.

	<b>Muslim Target</b>	<b>American Target</b>	<b>Total</b>
<b>Scholarship Offer</b>	128	126	254
<b>Membership Invitation</b>	122	125	247
<b>Total</b>	250	251	501

All emails were clearly delineated as being of a time-sensitive nature. There was a five day window of time during which the intended recipient was to respond, thus, if the recipient was not the intended target, a quick return was necessary. It was communicated that if a response was not received in a timely manner, then the offers would be made to a different student. The dependent variable was whether or not the participant returned the “lost email.”

At the conclusion of this phase of the study, all participants who were sent any “lost email” were debriefed by email notifying them that the “lost emails” were part of a research study and that no such offers existed (Appendix G). The debriefing email explained the study and contained experimenter contact information in case the participant had any questions.

## RESULTS

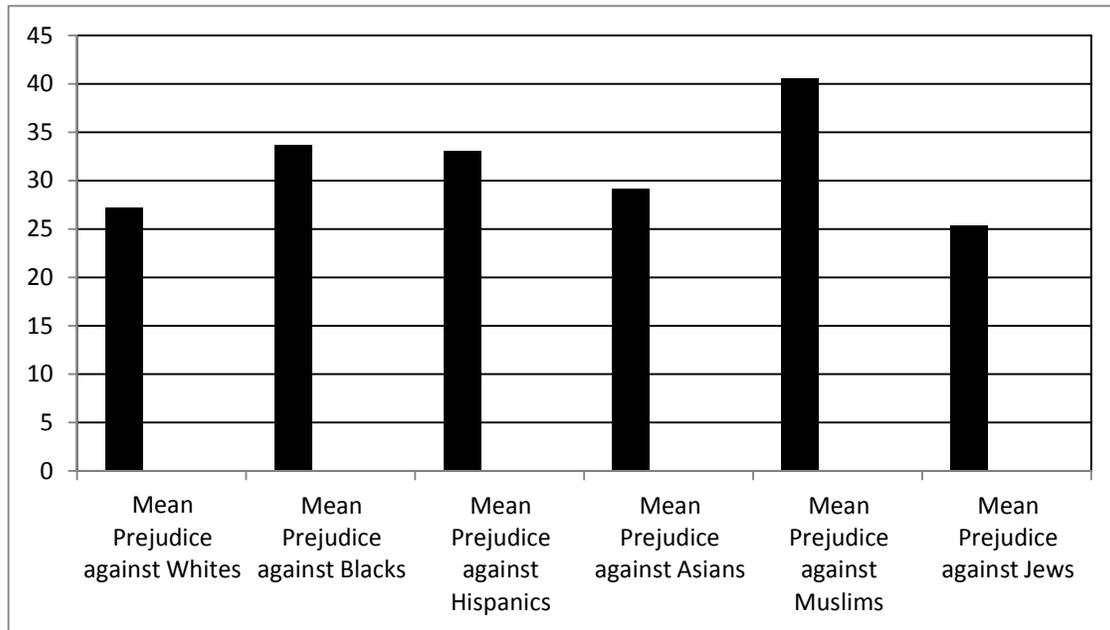
Means and standard deviations for individual racial target groups on the Anti-Semitism Scale are presented in Table 3 and Figure 1.

**Table 3.** Means and standard deviations for the Anti-Semitism Scale.

	<b>Mean</b>	<b>Standard Deviation</b>
Prejudice against Whites	27.16	12.32
Prejudice against Blacks	33.71	20.32
Prejudice against Hispanics	33.02	20.49
Prejudice against Asians	29.10	17.25
Prejudice against Muslims	40.50	24.53
Prejudice against Jews	25.29	15.42
Total Prejudice	31.46	16.02

Higher scores indicate a greater degree of prejudice against that group.  
Range 11-110

**Figure 1.** Mean prejudice scores for the Anti-Semitism Scale by target races.



According to a repeated subjects factor analysis of variance there were significant differences in prejudice scores by race of target on the Anti-Semitism Scale,  $F(5, 494) = 130.25$ ,  $p < .001$ . Prejudice against each minority group was significantly different from prejudice against whites with the highest prejudice being against Muslims at 40.50, 13.34 points higher. Bushman and Bonacci (2004) found a mean prejudice against Muslims among college-age introductory Psychology students of 29.40 (16.8) which was also the highest score reported. Least differences squared pairwise comparisons demonstrated that across all racial target comparisons, Muslims elicited significantly more prejudice than any other racial group. This increase was maintained regardless of the race of the participant, with no significant difference in prejudice against Muslims between races,  $F(4, 496) = .72$ ,  $p = .58$ . Prejudice scores against Blacks and Hispanics were not significantly different from each other, but all other groups were significantly different from each other. Mean score differences in prejudice between the individual racial target groups on the Anti-Semitism Scale are presented in Table 4.

**Table 4.** Mean prejudice score differences between target groups for the Anti-Semitism Scale.

	Black	Hispanic	Asian	Muslim	Jewish
White	-6.55**	-5.86**	-1.94*	-13.34**	1.88**
Black	-	.69	4.62**	-6.79**	8.43**
Hispanic	-	-	3.93**	-7.48**	7.74**
Asian	-	-	-	-11.40**	3.81**
Muslim	-	-	-	-	15.22**

\*  $p$ -value  $< .01$ , \*\*  $p$ -value  $< .001$

The mean scores and standard deviations for SDO and RWA were  $\bar{X} = 47.07$  (19.56) and  $\bar{X} = 123.63$  (35.81), respectively. There was a high degree of internal consistency for both the SDO scale ( $\alpha = .92$ ) and the RWA scale ( $\alpha = .93$ ). Pratto, et al. (1994) report an average SDO score among college students of 2.96. When means were averaged in this sample, the average SDO score was 2.23. Altemeyer (2006) reports that his introductory Psychology college

students average 75 on his RWA scale. Means and standards deviation for SDO and RWA are presented in Table 5.

**Table 5.** Means and standard deviations for SDO and RWA scales

	<b>Mean</b>	<b>Standard Deviation</b>
<b>Social Dominance Orientation Scale</b>	47.07	19.56
<b>Right Wing Authoritarianism Scale</b>	123.62	35.81

Higher scores indicate greater degree of SDO & RWA  
 SDO scale range: 16 – 112  
 RWA scale range: 22-176

There was a significant difference in SDO scores by sex,  $F(1, 500) = 10.32, p < .001$ , with men scoring 6.16 points higher than women, and participant race,  $F(4, 496) = 2.82, p = .025$ , with Asians ( $n = 10$ ) scoring the highest at 2.4 points above the group mean and blacks ( $n = 61$ ) scoring the lowest at 7.46 points below the group mean, but there was no significant difference by sex,  $F(1, 500) = .85, p = .36$ , or race,  $F(4, 496) = .712, p = .58$ , in RWA scores.

*Hypothesis 1.* To test H1, that there would be a main effect of discrimination against the out-group (Muslims), the file was split for examination of type of email (scholarship offer vs. membership invitation). Then a cross-tabulation with a chi-square test of association was used to compare return rates for each target group to determine if they were significantly different.

Return rates for emails across targets are presented in Table 6.

**Table 6.** Return rates across targets for emails.

	<b>Scholarship Offer Emails Returned</b>	<b>Membership Invitation Emails Returned</b>	<b>Total Emails Returned</b>
<b>Muslim Target</b>	38/128 (29.69%)	26/122 (21.31%)	64/250 (25.60%)
<b>American Target</b>	29/126 (23.02%)	26/125 (20.80%)	55/251 (21.91%)
<b>Total</b>	67/254 (26.37%)	52/247 (21.05%)	119/501 (23.75%)

The smallest cells contained 26 subjects, which is well above the required minimum of five. Therefore, the return rate for “lost emails” is more than adequate to be able to analyze the data. A chi-square test of association indicates that the difference between the return rates of the scholarship offer being sent to the two target groups was not significantly different than predicted for the null hypothesis,  $\chi^2 (1, N = 254) = 1.46, p = .26$ . A chi-square test of association indicates that the difference between the return rates of the membership invitation being sent to the two target groups was not significantly different than predicted for the null hypothesis,  $\chi^2 (1, N = 247) = .010, p = .92$ . In fact, in this case, the return rates were nearly identical. Log linear analysis for emails returned offering a scholarship showed that there were no significant differences for sex,  $\chi^2 (1) = .020, p = .89$ , or race,  $\chi^2 (4) = 2.11, p = .72$ . Log linear analysis for emails returned offering an invitation to a cultural club showed that there were no significant differences for sex,  $\chi^2 (1) = .003, p = .96$ . But, there was a difference among races,  $\chi^2 (4) = 13.65, p = .008$ , with more blacks returning cultural invitations sent to Muslim targets than to the American targets and more Hispanics returning cultural invitations to American targets than to Muslim targets. But, it bears mentioning that only four blacks and two Hispanics returned cultural invitations, at all. With numbers so small, it is difficult to draw any conclusions. When

Chi-square analysis was conducted for white subjects only, there was no difference in email return rates for either scholarship offers,  $\chi^2 (1, 204) = 1.37, p = .24$ , or membership invitations,  $\chi^2 (1, 203) = .088, p = .77$ .

*Hypothesis 2.* Participants who were high in social dominance orientation were predicted to be more likely to discriminate against an out-group target than participants who were high in right wing authoritarianism if a threat to resources was presented (H2). It was expected that in the face of a threat to resources such as a scholarship offer, those participants who scored higher on the SDO scale would be more likely to discriminate against Muslim targets than against American targets by not returning the scholarship offer, thus depriving an out-group member of that resource. RWA scores were not expected to have any effect on return rates for emails that offered a scholarship. Because the outcome was a dichotomous variable (did vs. did not return the “lost email”), all analyses of the total model employed logistic regression with the file split based upon type of email sent (scholarship offer vs. membership invitation). To examine H2, a logistic regression was run with target of email (Muslim vs. American), social dominance orientation scores, and an interaction between the two as predictors for the return of scholarship offers. Then the process was repeated substituting right wing authoritarianism for social dominance orientation. There were no significant interactions or main effects for either social dominance orientation or right wing authoritarianism regardless of the target to which it was sent. Results of the logistic regression analysis are presented in Table 7.

**Table 7.** Logistic regression for emails sent with a scholarship offer.

		<b>B (S.E.)</b>	<b>Wald</b>	<b>Sig.</b>
	<b>Target of Email</b>	.337 (.29)	1.35	.25
<b>Social Dominance Orientation</b>	<b>SDO</b>	-.016 (.01)	2.44	.12
	<b>Target x SDO Interaction</b>	.399 (.29)	1.89	.17
	<b>Target of Email</b>	.328 (.29)	1.28	.26
<b>Right Wing Authoritarianism</b>	<b>RWA</b>	-.010 (.01)	2.93	.09
	<b>Target x RWA Interaction</b>	.333 (.31)	1.19	.28

B = Unstandardized regression coefficient

Wald = Test of statistical significance of the B. The Wald test calculates a z-score which is then squared.

In the SDO model, there was no significant difference in return rates whether the target was Muslim or American; thus, there was no main effect for target of email when a scholarship offer was made. Likewise, there was no significant difference in return rates whether SDO scores were high or low; thus, there was no main effect for SDO scores when a scholarship offer was made. Finally, when resources were threatened by offering a scholarship to an out-group, there were no significant differences in return rates for lost email scholarship offers regardless of target or SDO scores; thus, there was no significant interaction between target of email and SDO scores. The lack of significance for all predictors in the model for RWA scores when a scholarship offer was made was as expected, although the main effect for RWA was marginal. According to the Nagelkerke R<sup>2</sup>, the model for SDO scores only explains 2.4% of the variance in

email return rates for scholarship offers while the model for RWA scores only accounts for 2.5% of the variance.

*Hypothesis 3.* Participants high in right wing authoritarianism were anticipated to be more likely to discriminate against an out-group target than participants high in social dominance orientation, if a threat to group identity was presented (H3). It was expected that in the face of a threat to in-group identity, such as an offer to join a group based upon cultural affiliation, participants who scored higher on the RWA scale would be more likely to discriminate against Muslims than against the Americans by not returning the culturally-based membership offer, thus depriving an out-group member of that affiliation. SDO scores were not expected to have any effect on return rates. Thus, a logistic regression was run with target of email (Muslim vs. American), right wing authoritarian scores, and an interaction between the two as predictors for email return of membership invitations. Then the process was repeated substituting social dominance orientation for right wing authoritarianism. Results are presented in Table 8.

**Table 8.** Logistic regression for emails sent with a membership invitation.

		<b>B (S.E.)</b>	<b>Wald</b>	<b>Sig.</b>
	<b>Target of Email</b>	.028 (.32)	.01	.93
<b>Right Wing Authoritarianism</b>	<b>RWA</b>	-.004 (.01)	.42	.52
	<b>Target x RWA Interaction</b>	.475 (.31)	2.31	.13
	<b>Target of Email</b>	.054 (.32)	.03	.87
<b>Social Dominance Orientation</b>	<b>SDO</b>	-.021 (.01)	2.74	.10
	<b>Target x SDO Interaction</b>	.122 (.34)	.13	.72

B = Unstandardized regression coefficient

Wald = Test of statistical significance of the B. The Wald test calculates a z-score which is then squared.

In the RWA model, there was no significant difference in return rates whether the target was Muslim or American; thus, there was no main effect for target of email when a culturally-based membership invitation was offered. Likewise, there was no significant difference in return rates whether RWA scores were high or low; thus, there was no main effect for RWA scores when an invitation to a group based upon cultural affiliation was extended. Finally, when resources were threatened by offering a membership invitation to an out-group, there was no significant difference in return rates regardless of target or RWA scores; thus, there was no significant interaction between target of email and RWA scores. The lack of significance for all predictors in the model for SDO scores when a membership invitation was made was as expected. According to the Nagelkerke  $R^2$ , the model for RWA scores only explains 1.8% of the variance in email return rates for membership invitations, while the model for SDO scores only

accounts for 2.8% of the variance. In summation, there were no significant interactions or main effects for either right wing authoritarianism or social dominance orientation, regardless of target to which it was sent. In an effort to eliminate the effect of any racial differences, the previous analyses were repeated filtering out all participants who were not white. No significance was found in any analysis.

*Supplemental Analyses.* As an exploratory measure, two large logistic regressions were conducted with all predictors and possible interactions entered into the model for scholarship offers and for membership invitations. The amount of variance explained for return rates in the model for scholarship offers increased to 19.1% and the amount of variance explained in the model for membership invitations increased to 19.7%. However, out of 31 predictors, only a main effect for RWA was observed in the model for scholarship offers,  $B (.38) = -.77$ ,  $Wald = 4.04$ ,  $p = .045$ . Such a main effect was already seen to be marginally significant in the original analysis. In the model for membership invitations, a main effect of prejudice against Muslims was observed,  $B (.42) = -.98$ ,  $Wald = 5.155$ ,  $p = .02$ . As will be noted later, this is a main effect that was already observed when supplemental analyses were conducted using prejudice against Muslims as a predictor. Additionally, there were two three-way interactions that proved to be significant. One was target of email by SDO by RWA,  $B (.61) = 1.23$ ,  $Wald = 4.16$ ,  $p = .04$ , and the other was prejudice against Muslims by SDO by RWA,  $B (.40) = -.84$ ,  $Wald = 4.34$ ,  $p = .04$ . However, these analyses proved to be exceedingly complex and difficult to interpret. What is more, with so many predictors in the two models, a Bonferroni correction was necessary to prevent a Type I error. The required p-value calculated for these models was .016. Since the lowest p-value reported in these analyses was .02, the Bonferroni correction rendered them

insignificant. And, at any rate, while more variance was explained by these analyses, they did not do much to elucidate the previous findings.

To more closely examine possible effects of more extreme conditions, a median split divided SDO, RWA, and prejudice against Muslims scores into low and high categories and return rates were examined. Results are presented in Table 9.

**Table 9.** Email Return rates by low and high scores on SDO, RWA & prejudice against Muslims.

		<b>Scholarship Offer</b>		<b>Membership Invitation</b>	
		<b>Muslim Target</b>	<b>American Target</b>	<b>Muslim Target</b>	<b>American Target</b>
<b>Social Dominance Orientation</b>	<b>Low</b>	24 (36.9%)	15 (24.6%)	15 (25.4%)	18 (25.7%)
	<b>High</b>	14 (22.2%)	14 (21.5%)	11 (17.5%)	8 (14.5%)
<b>Right Wing Authoritarianism</b>	<b>Low</b>	26 (38.2%)	15 (24.2%)	14 (23.8%)	11 (17.5%)
	<b>High</b>	12 (20.0%)	14 (21.9%)	12 (19.1%)	15 (24.2%)
<b>Prejudice Against Muslims</b>	<b>Low</b>	23 (39.0%)	18 (26.9%)	15 (25.4%)	15 (22.1%)
	<b>High</b>	15 (21.2%)	11 (18.6%)	11 (17.5%)	11 (19.3%)

Chi-square tests of association were conducted to examine the differences in email return rates between low and high scores for each measure across each target under each threat condition. Results are presented in Table 10.

**Table 10.**  $\chi^2$  test of association for email return rates across targets and threat conditions for low and high scores on measures of SDO, RWA, and prejudice against Muslims.

	Scholarship Offer		Membership Invitation	
	Muslim Target	American Target	Muslim Target	American Target
<b>Social Dominance Orientation</b>	3.312	.165	1.152	2.332
<b>Right Wing Authoritarianism</b>	5.078*	.096	.398	.860
<b>Prejudice Against Muslims</b>	4.531*	1.197	1.152	.143

\*p < .05

When a scholarship offer was made to a Muslim target, participants were significantly less likely to return the email if they scored high in RWA or high in prejudice against Muslims compared to those who scored low in RWA or low in prejudice against Muslims.

*Prejudice.* In order to more closely examine the role that prejudice might play in return rates of emails, a one-way analysis of variance was conducted comparing the prejudice against Muslims scores for participants who did return the emails to those who did not return the emails depending upon the target and the threat condition. Results are presented in Table 11.

**Table 11.** Mean prejudice scores against Muslims based upon return of email & ANOVA scores.

		<b>Muslim Target</b>	<b>American Target</b>
		$\bar{x}$ (SD)	$F$ -score ( <i>df</i> )
<b>Overall Email Return Rate</b>	<b>Did Return</b>	35.84 (20.76)	6.82 (1, 500)*
	<b>Did Not Return</b>	45.13 (25.70)	35.47 (23.05)
<b>Email Return Rate for Scholarship Offer</b>	<b>Did Return</b>	37.58 (22.27)	2.47 (1, 500)
	<b>Did Not Return</b>	44.82 (24.44)	39.04 (24.36)
<b>Email Return Rate for Membership Invitation</b>	<b>Did Return</b>	33.31 (18.46)	4.47 (1, 500)*
	<b>Did Not Return</b>	45.43 (26.96)	36.48 (23.22)

\*p<.05

There was significantly more prejudice against Muslims demonstrated by participants who did not return emails sent to Muslim targets than participants who did return those emails, with participants who did not return emails sent to Muslim targets scoring 9.29 points higher in prejudice against Muslims, but there was no significant difference in prejudice against Muslims for those participants who did not return emails sent to American targets when compared to those who did. For participants who received an email offering a scholarship offer, there was no difference in prejudice against Muslims demonstrated by participants who did not return emails sent to either Muslim or American targets when compared to participants who did return those emails. But, for participants who received an email offering an invitation to a cultural club, there

was a significant difference in prejudice, with participants who did not return emails sent to Muslim targets scoring 12.12 points higher in prejudice against Muslims compared to those who did return the emails. However, there was no significant difference in prejudice against Muslims for those participants who did not return emails sent to American targets when compared to those who did. There was no significant difference in prejudice against Muslims between the sexes,  $t(499) = .83, p = .41$ .

Even though no predictions were made regarding prejudice against Muslims scores and discrimination, separate logistic regressions were run with target of email (Muslim vs. American), prejudice against Muslim scores, and an interaction between the two as predictors for email return of either scholarship invitations or membership invitations. Results are presented in Table 12.

**Table 12.** Logistic regression for prejudice scores.

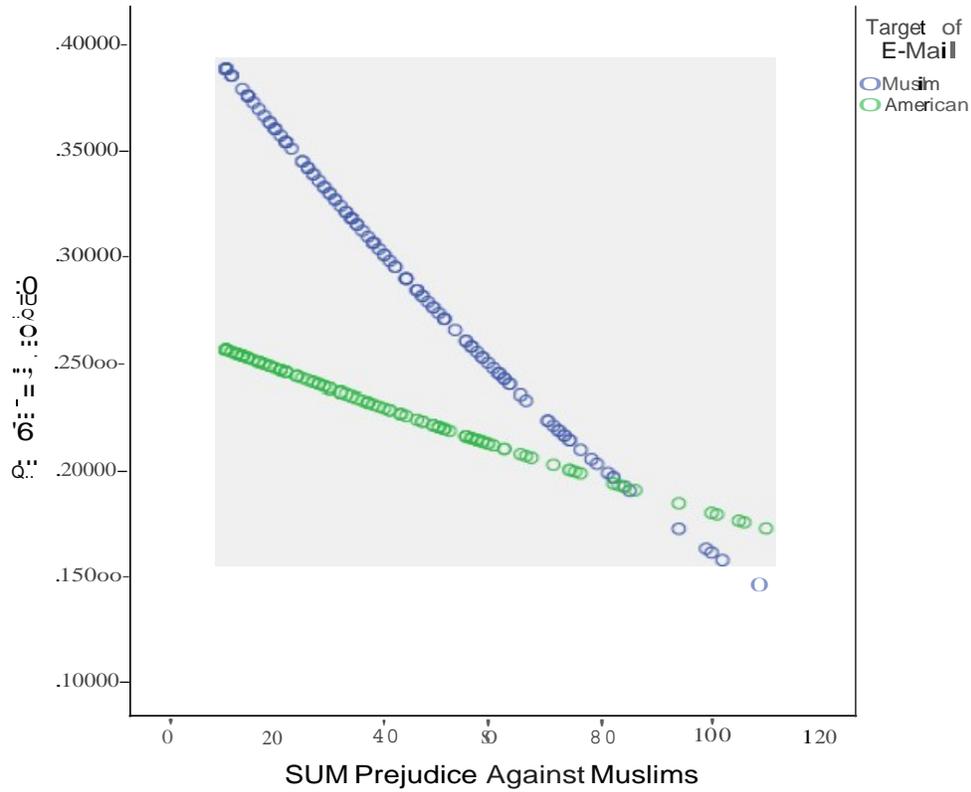
		<b>B (S.E.)</b>	<b>Wald</b>	<b>Sig.</b>
	<b>Target of Email</b>	.380 (.289)	1.74	.19
<b>Scholarship Offer</b>	<b>Prejudice Against Muslims</b>	-.013 (.009)	2.42	.12
	<b>Target x Prejudice Interaction</b>	.208 (.308)	.458	.50
	<b>Target of Email</b>	.555 (.591)	.881	.35
<b>Membership Invitation</b>	<b>Prejudice Against Muslims</b>	-.021 (.010)	4.35	.04
	<b>Target x Prejudice Interaction</b>	.013 (.014)	.829	.36

B = Unstandardized regression coefficient

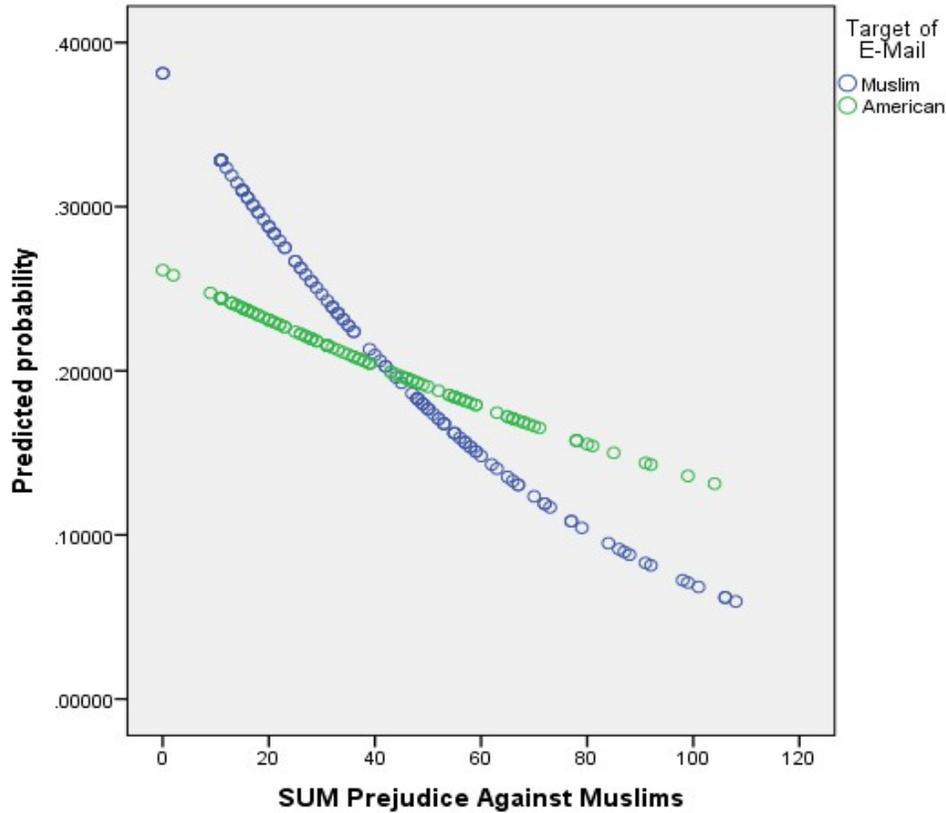
Wald = Test of statistical significance of the B. The Wald test calculates a z-score which is then squared.

Results for predicted probabilities are presented visually in Figures 2 and 3.

Figure 2. Predicted probabilities for email return rates for Muslim and American Targets when a scholarship is offered as measured on the Anti-Semitism Scale, prejudice against Muslims sub-scale, as estimated from the data



**Figure 3.** Predicted probabilities for email return rates for Muslim and American Targets when a culturally based membership invitation is offered as measured on the Anti-Semitism Scale, prejudice against Muslims sub-scale, as estimated from the data.



There was no significant interaction between target of the email and prejudice against Muslim scores, regardless of the threat condition that was presented to the participants, although there was a significant main effect for prejudice when participants were offered a membership invitation which is demonstrated in the graphs; for both scholarship offers and membership invitations, as prejudice scores increased, the likelihood of returning emails decreased. Although not significant, the graphs indicate that this trend was greater for Muslim targets than for American targets. In the scholarship offer condition, the return rates for the American target dropped from just over 25% to just below 20%, but there was a much more drastic drop for the

Muslim target from almost 40% to just below 15%. In the membership invitation condition, the return rate for the American target dropped from just over 25% to almost 10%, but the return rates for the Muslim target fell from nearly 40% to the single digits. According to the Nagelkerke  $R^2$ , the model for prejudice against Muslim scores only explains 2.5% of the variance when a threat to resources, in the form of a scholarship offer, is presented, and only 3.5% of the variance when a threat to group identity, in the form of a culturally based membership invitation, is presented.

## DISCUSSION

In this study, Hypothesis 1 was not supported. Participants were as likely to return the “lost email” if the target was Muslim as they were if the target was American. Neither H2, nor H3 was supported. Return rates were not significantly higher for in-group American targets than for out-group Muslim targets when access to resources was threatened, even if SDO scores increased. Likewise, when a membership invitation was extended to participants, return rates were not significantly higher for in-group American targets than for out-group Muslim targets when membership affiliation was threatened, even if RWA scores increased.

However, the group against whom the greatest prejudice was expressed was Muslims, which was significantly greater than prejudice against any other group, racial or ethnic. Similar results were also found in the Howitt and McCabe (1978) study. As in the current study, although there was no difference in attitude towards the out-group (Irish) between recipients who did or did not return the lost letters sent to the in-group targets (English), there was significantly greater prejudice against the out-group (Irish) for those participants who did not return letters addressed to out-group recipients (Irish) compared to those who did return the letters. And, like Howitt and McCabe, this study also found a relation between prejudice against the out-group and lower return rates for letters addressed to that group. Participants who did not return emails were found to score an average of 9.29 points higher in prejudice against Muslims than those who did return emails. Chi square analysis determined that there was a significant difference in the return rates of scholarship offers between participants who were high in prejudice against Muslims

compared with participants who were low in prejudice. And, logistic regression found that there was a main effect for prejudice against Muslims when the email extended a culturally based membership invitation, with those who did not return the email scoring an average of 12.12 points higher in prejudice against Muslims. However, it should be noted that prejudice scores against Muslims only accounted for 2.9 % of the variance in email return rates, so while the effect is statistically significant, it is very small.

Overall, these results do not seem to support the connection between attitude and behavior, and more specifically, between prejudice and discrimination. After all, if the subjects in the present study indicated such a high degree of prejudice against Muslims in relation to other minority groups, shouldn't there have also been a corresponding degree of discrimination exhibited? Despite the innate intuition of this connection, there have been problems demonstrating it from the very beginning. In 1934, LaPiere visited 250 hotels, restaurants, auto-camps, and tourist homes with a Chinese couple, and in all but a single instance, they were accepted and, in some cases, treated with exemplary service. However, six months later, he followed up each visit with a questionnaire asking whether or not they accepted Chinese guests in their establishment. Of the 128 that responded, 92% of the establishments answered in the negative; only one percent said that they would, and the other seven percent claimed that it would depend upon the circumstances. Clearly, for the owners of these establishments, there was a disconnect between their attitudes and their behaviors. Repeated studies on the attitude-behavior connection (Canary & Seibold, 1984; Fishbein & Ajzen, 1975; Schuman, & Johnson, 1976; and Wicker, 1969) and the prejudice-discrimination connection (Brigham, 1971; Duckitt, 1992; Ehrlich, 1973; and Levin & Levin, 1982) have ended with what McGuire called, "the scandal of the field for half a century" (McGuire, 1985, p. 251), namely that most studies yield

very low correlations between attitude and behavior, or prejudice and discrimination, with attitudes accounting for only 10% of the variance in predicting behavior, at best (Wicker, 1969). In fact, Deutscher (1966, 1973) went so far as to claim that there is no theoretical reason to expect congruity between thought and actions and every reason to expect divergence. Even meta-analysis of 53 studies (Schutz & Six, 1996) only found a significant mean correlation between prejudice and discrimination of  $r = .286$ , concluding that, “only rarely is prejudice a valid predictor for social discrimination” (p. 457). All of these negative findings led to a shift away from the question of whether or not attitudes predict behavior (Trepts, 2008) towards the more complex question of when do attitudes predict behavior (Cialdini, Petty, & Cacioppo, 1981; Eagly & Himmelfarb, 1978).

Later research has demonstrated that numerous variables intervene to attenuate the direct relation between attitude and behavior. In their meta-analysis, Schutz and Six (1996) found that although discrimination was positively correlated with prejudice, the relation between prejudice and discrimination *intention* was higher at  $r = .368$ , and the relation between discrimination intention and discrimination was  $r = .488$ . Ajzen’s (1985, 1991) theory of planned behavior is an attempt to integrate a set of predictive variables into a single conceptual framework in order to explain the attitude-behavior relation. It is based upon the earlier theory of reasoned action (Fishbein & Ajzen, 1975) which says that behavioral intention is preceded by one’s attitude towards performing a behavior, or attitude towards action, one’s belief that the important people in his/her life expect that he/she will perform that behavior, or normative beliefs, and the motivation to comply with those normative beliefs (Albrecht & Carpenter, 1976). The theory of planned behavior added the dimension of perceived behavioral control, or how easy or difficult to perform one perceives the behavior to be. The more favorable the attitude towards the

behavior and subjective norm and the greater the perceived behavioral control, the stronger the actor's intention to engage in the behavior should be; and if given sufficient degree of actual control, one should be expected to carry out the behavior if given the opportunity (Ajzen, 2002).

In this study, it is possible that because the participants were a college-aged, post-civil rights era cohort, they may have been more sensitive to the inherent discrimination in the experiment. Having been taught their entire lives that racial or ethnic discrimination is wrong and having been made more and more aware of examples of indirect discrimination, they very well might have felt that not returning the emails and denying the Muslim targets the rewards of having received them was simply wrong. Thus, it is possible that they were missing several key antecedents to the behavior. As discrimination is now so socially unacceptable, they could lack both the favorable attitude and subjective norm towards it; in fact, the favorable attitude and subjective norm are in an opposing direction, and that, coupled with their own perceived control over whether or not they returned the email, should strengthen the likelihood that participants would not discriminate. Terry, Gallios, and McCamish (1993) have noted that attitudes have more predictive power if they are social markers for the group with which one identifies, and Hogg and Vaughan (1998) further assert that the more strongly one associates with a group the more likely it is that the individual will act on the group's shared actions. Furthermore, when people form attitudes based on indirect, rather than direct, experiences and are unable to strengthen those associations by repeatedly expressing those attitudes, they fail to spontaneously access the evaluation of an object upon mere exposure (Fazio, Powell, & Herr, 1983). Being members of the post-civil rights millennial generation, for whom racism was not as direct nor regularly expressed, it is very possible that participants were tapping into a shared sense of equality and greater social sensitivity and egalitarianism. It is possible that if an older cohort

were utilized, we would have seen more significant results as their upbringing might have yielded more favorable attitudes and subjective norms towards discrimination. However, more research is necessary to determine whether or not the findings in this study are the result of a cohort effect.

In both cases, however, it is behavioral intention, or one's readiness to perform a behavior, and not behavior itself, that is being measured. Fishbein and Ajzen assert that the best predictor of behavior is behavioral intention (1975). They also found across ten studies that attitude towards action, normative beliefs and motivation had an average multiple correlation of  $r = .81$  and accounted for 66% of the variance in behavioral intention. Thus, the thrust of Fishbein and Ajzen's work is the prediction of behavioral intention, rather than the traditional sort of overt behaviors that social researchers are most concerned with (Albrecht & Carpenter, 1976). While the behavioral intention equation yields impressive coefficients, we are still faced with the problem of knowing what factors intervene between behavioral intention and behavior that might strengthen or weaken that relation (Albrecht & Carpenter, 1976). We are left with the juxtaposition of what people say they will do and what they actually do. It is possible that we have not yet discovered the way to properly measure the attitude-behavior/prejudice-discrimination relation or that the relation does not even exist in any truly meaningful way.

There are several other possible explanations for the lack of findings in this study. One such problem might be a lack of specificity resulting in measurement problems. Measures of attitude and behavior have the greatest correspondence when they match on action, target, context and time dimension, and the more an attitude corresponds to the behavioral criterion, the greater its predictive ability (Cialdini, et. al, 1981). The more general the attitude measure, the weaker its relation to a specific behavior; as specificity of the attitude measure increases, so does

its correlation to a specific behavior (Eagly & Himmelfarb, 1978). For this study, the three attitude measures questioned general attitudes about out-groups, but the behavior was very specific. This could possibly be improved by implementing greater specificity in the attitude questionnaires. But, there is an inherent potential problem in this resolution. Fishbein & Ajzen (1975) attempted to overcome this difficulty by measuring attitude towards performing a specific behavior, not attitude towards the target of the behavior, as was done in the current study (i.e., attitude towards engaging in specific behaviors towards blacks, not attitudes towards blacks, themselves), but in order to yield impressive findings, the attitude measure and its corresponding behavioral intention must be so specific that it becomes difficult to generalize from those specific situations to other similar situations (Albrecht & Carpenter, 1976).

There were other potential sources of measurement problem in the current study. One is the possibility that participants were not sensitive to the racial/ethnic identity of the target. In the current methodology this might be a difficult thing to decipher (i.e., to which ethnic/racial group did the target seem to belong?), but it might have been possible to include such questions in the debriefing email that was sent as a follow up to the participants. Another source might have involved timing. It has been found that there is a higher correlation between attitude and behavior the closer in time that the behavior follows the attitude measure (Davidson & Jaccard, 1979; Schwartz, 1978). In this study, there was a period of two to eight weeks between administration of the attitude questionnaires and sending of the the emails. The first part of the study was online from the beginning of the semester until about three weeks before the semester ended. After removing participants who did not wish to continue with the second part and assigning those who did into groups, the emails were sent about two weeks after the first part of the study had closed. This delay might have adversely affected the results, especially for those

students who had completed the surveys early on. However, the attitudes measured in this study would have been expected to remain fairly stable and unlikely to fluctuate over this time span.

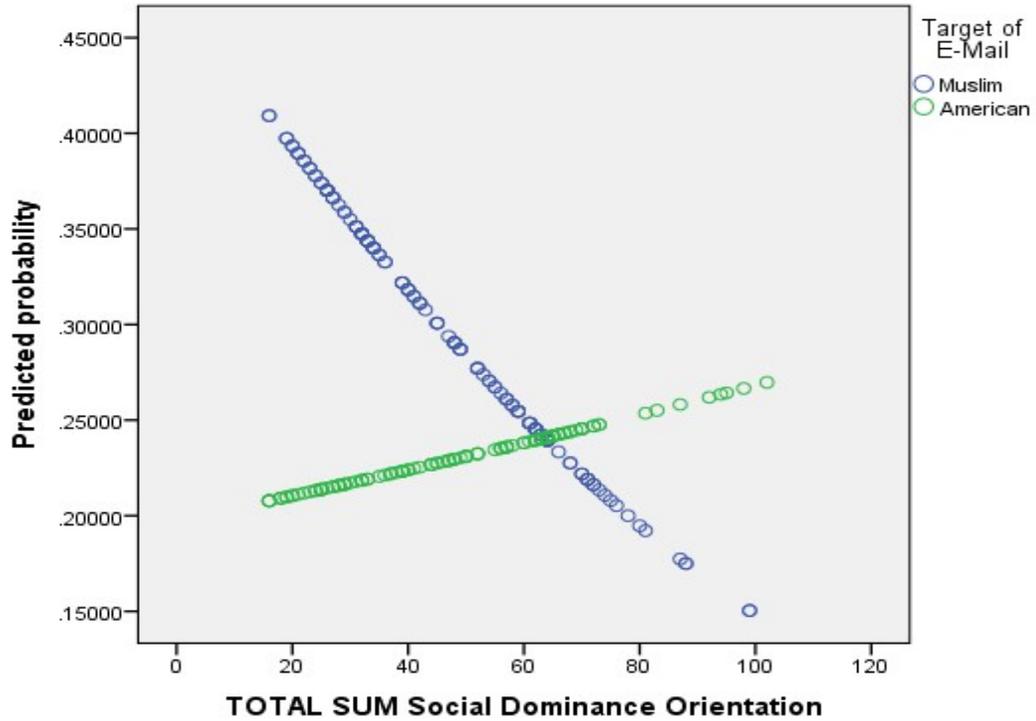
There might have also been some manipulation problems. It is possible that the threat manipulations were not intense or imminent enough. If they had been more direct, personally consequential, or severe the participants might have internalized the threat more and reacted with greater discrimination in an attempt to protect their own interests. In truth, whether or not the target received the intended email did not directly affect any of the participants, but had the threat been more personally relevant, like preventing them from obtaining a resource such as housing or employment or preventing them from associating with their own affiliated groups such as greek organizations, the results might have proven quite different.

Finally, the utilization of college students as the sample in this study might have contributed to a lack of findings. It is possible that instead of seeing in-group Americans and out-group Muslims, the participants viewed all targets as students, first, making the targets one of them, a member of the in-group of college students. If this were the case, the result could have been student bonding, which would have created a super-ordinate identity for the target, thereby neutralizing the identity threat. There might have also been a desire not to impede the ability of students in need of scholarship money to be able to pay for school as anyone attending college might require, thus creating a super-ordinate goal which might have negated the resource threat. According to social identity theory, the best way to reduce conflict is to create a super-ordinate identity for both in-group and out-group members (Gaertner, et. al, 1993), and according to realistic conflict theory (Sherif, et. al, 1961) the best way to reduce conflict is to create a super-ordinate goal. Thus, if students viewed targets as one of their own, the study might have inadvertently fostered situations which had the opposite effects of those intended.

Additionally, because the sample was comprised of college students, education and income level might have been the confounding factors. Research shows that there is a negative influence of both education and income on prejudice, with education level exerting a greater influence than income, across various countries (Carvacho, et. al, 2013). So, it is likely that college students would be less likely to discriminate than those with lower levels of education; thus, if this study were conducted with a less educated cohort, it is possible that the results would have been more significant.

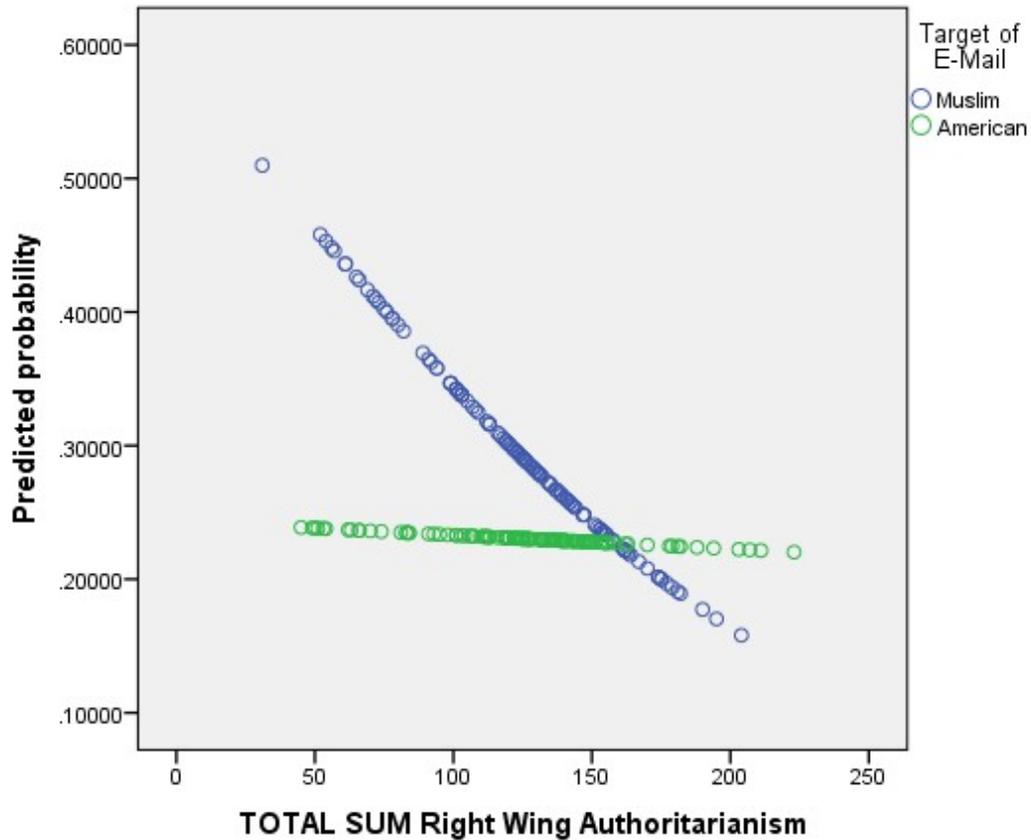
However, despite the lack of significance, there are some interesting trends. In the model for scholarship offers, there were slightly more returned emails for American targets than for Muslim targets as SDO scores increased. (See Figure 4). The return rates for the American target actually increased from around 20% to just above 25%, but the return rates for the Muslim target decreased from over 40% to 15%.

**Figure 4.** Predicted probabilities for email return rates for Muslim and American Targets when a scholarship is offered as measured on the SDO scale as estimated from the data.



This subtle trend is actually consistent with expectations. But, no interaction was expected for this model when examining RWA scores, and although it is not statistically significant, a trend appears to exist. (See Figure 5). The return rates for the American target remained nearly flat at just over 20%, but the return rates for the Muslim target also fell from 50% to nearly 10%.

**Figure 5.** Predicted probabilities for email return rates for Muslim and American Targets when a scholarship is offered as measured on the RWA scale as estimated from the data.

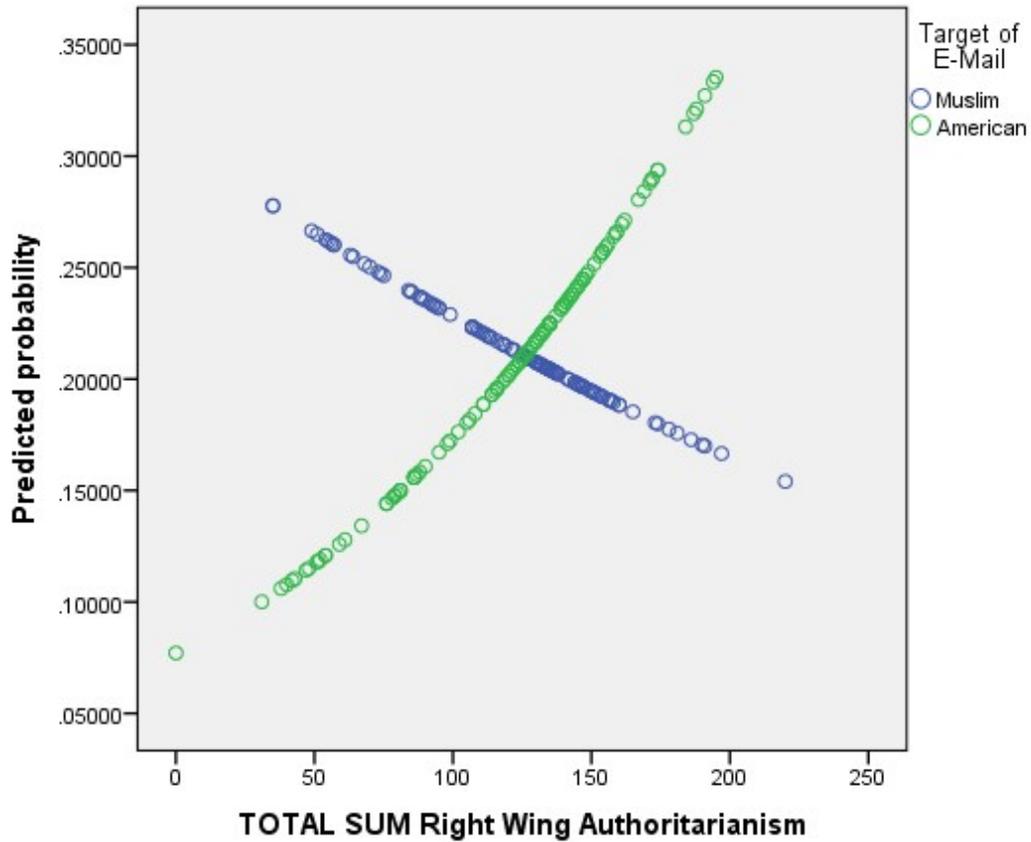


It is possible that when resources are threatened, what is important is the target, not the degree of social dominance orientation or right wing authoritarianism. Perhaps in-group members simply do not wish to share their resources with out-group members, regardless of the circumstances; thus, when access to resources is threatened, participants are more likely to discriminate against an out-group, particularly one against whom they demonstrate a great deal of prejudice. According to Hofstede (1984), there are four dimensions of culture, one of which is the individualist/collectivist dimension. Individualistic cultures promote initiative, personal achievement, and the right of the individual at the expense of the larger, collective group. It stands to reason that the emphasis of the individual's rights over the group's rights would be

exacerbated when that group is an out-group. Examination of the individualistic/collectivistic dimension among 40 countries found that the United States scored the highest on individualism (Hofstede, 1984). So, regardless of SDO or RWA, the rugged, individual American pulls him or herself up by the bootstrap to achieve success relying upon self, not others. And once that goal is met, the rewards are also individually enjoyed, not shared with the group, and certainly not with members of an out-group. Thus, regardless of SDO or RWA scores, those students who did not return the scholarship offers might have done so simply because as members of an individualistic culture, they do not wish to share knowledge of scholarship money with other members of the group, especially members of an out-group.

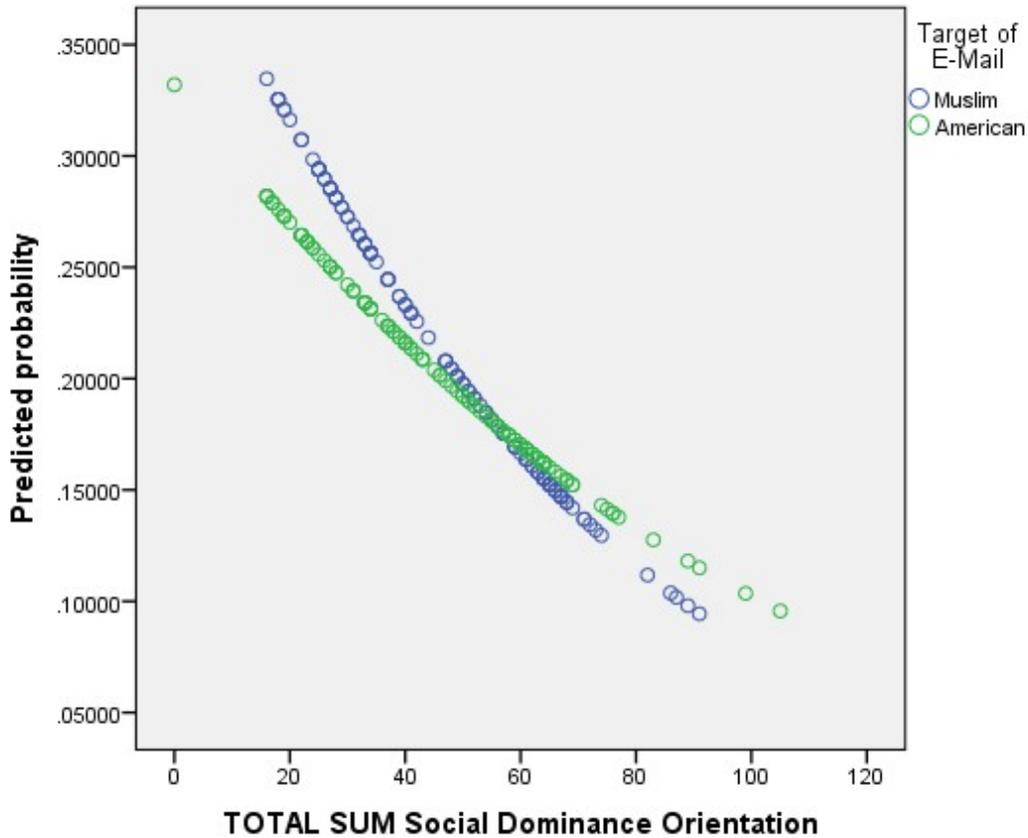
Yet, when examining the model for membership invitation, although again not significant, the expectations were seen in the pattern. There was an interaction for number of membership invitation emails returned for Americans vs. Muslims when RWA scores increased. (See Figure 6.) The return rate for the American target increased from around 8% to nearly 35% while the return rate for the Muslim target decreased from nearly 30% to 15%.

**Figure 6.** Predicted probabilities for email return rates for Muslim and American Targets when a culturally-based membership invitation is offered as measured on the RWA scale as estimated from the data.



As expected, return rates for American targets increased and return rates for Muslims decreased as RWA scores increased. However, as expected, there was no differential for return rates between the two target groups in the model as SDO scores increased. (See Figure 7). There was a drop in return rates for both targets from almost 35% to just below 10%, and the interaction, while following the typical pattern of being greater for the Muslim target, is very slight.

**Figure 7.** Predicted probabilities for email return rates for Muslim and American Targets when a culturally based membership invitation is offered as measured on the SDO scale as estimated from the data.



What defied expectation, however, was that, instead of return rates remaining flat, they declined for both groups as SDO scores increased. Perhaps, people high in SDO somehow view collective members in a group, any group regardless of affiliation, as a threat to resource access that they, as non-members, are denied.

Assuming that the potential problems that contributed to a lack of findings could be overcome, there are some interesting future directions for research. The study could be conducted using a Muslim population. Because American culture is so consumer-driven and based on individual achievement, it would be expected that the first model using a threat to resources would exert a greater influence with an American cohort. Muslim cultures, on the

other hand, are founded in a basis of strong religious identity, so it might stand to reason that the second model, which threatens the identity of the in-group, would yield greater results.

It would also be interesting to examine the relations of nationalism, a competitive identification with a nation that entails an “us-first” orientation, and patriotism, an attachment to one’s country which values in-group norms, to SDO and RWA, respectively, and how they would relate to discrimination against an out-group that is based outside the country of focus.

Finally, it might be intriguing to examine the relation of moral disengagement to discrimination against those who threaten access to resources or in-group identity. Moral disengagement has already been found to mediate the relations of SDO and RWA with support for engagement in war, with SDO most strongly associated with dehumanizing and blaming the victim, and RWA mostly strongly associated with moral justification (Jackson & Gaertner, 2010). Examination of moral disengagement in relation to SDO and RWA with discrimination against an out-group warrants further investigation.

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## APPENDIX A IRB

### Approval Letter

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects



August 13, 2012

Marnie Sutton  
Department of ISSR  
College of Arts & Sciences  
Box 870216

Re: IRB Application # 12-009 "The Effects of Social Dominance Orientation and Right Wing Authoritarianism in the Face of Threats to Resources and Identity"

Dear Ms. Sutton:

The University of Alabama IRB has received the revisions requested by the full board on 7/20/12. The board has reviewed the revisions and your protocol is now approved for a one-year period. Please be advised that your protocol will expire one year from the date of approval, 7/20/12.

If your research will continue beyond this date, complete the IRB Renewal Application by the 15<sup>th</sup> of the month prior to project expiration. If you need to modify the study, please submit the Modification of An Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure Form.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Please use reproductions of the IRB approved stamped consent/assent forms to obtain consent from your participants.

Good luck with your research.

Sincerely,



358 Rose Administration Building  
Box 870127  
Tuscaloosa, Alabama 35487-0127  
(205) 348-8461  
FAX (205) 348-7189  
TOLL FREE (877) 820-3066

Stuart Usdan, PhD.  
Chair, Non-Medical Institutional Review Board  
The University of Alabama

APPENDIX B Anti-  
Semitism Scale

	Strongly Agree					Strongly Disagree				
	1	2	3	4	5	6	7	8	9	10
<b>1.</b> Caucasians have moral standards that they apply in their dealing with each other, but with NON White Americans, they are unscrupulous, ruthless, and undependable.										
<b>2.</b> There is something different and strange about Caucasians, one never knows what they are thinking and planning.										
<b>3.</b> A major fault of Caucasians is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.										
<b>4.</b> It is wrong for Caucasians and NON Caucasians to intermarry.										
<b>5.</b> For Caucasians who have immigrated to and live in America, their first loyalty is to their home country rather than to America.										
<b>6.</b> If there are too many Caucasians in America, our country will be less safe.										
<b>7.</b> I can hardly imagine myself voting for a Caucasian who is running for an important political office.										
<b>8.</b> One general fault of Caucasians is their over-aggressiveness and strong tendency to display their own looks, manners and customs										
<b>9.</b> You can't trust a group of young Caucasian men together because they are probably up to criminal or delinquent activity.										
<b>10.</b> In order to maintain a nice residential neighborhood it is best to prevent Caucasians from living in it.										
<b>11.</b> If I knew I had been assigned to live in a dorm room with a Caucasian, I would ask to change rooms.										
<b>12.</b> African Americans have moral standards that they apply in their dealing with each other, but with NON African-Americans, they are unscrupulous, ruthless, and undependable										
<b>13.</b> There is something different and strange about African Americans, one never knows what they are thinking and planning.										
<b>14.</b> A major fault of African Americans is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.										
<b>15.</b> It is wrong for African Americans and NON African Americans to intermarry.										
<b>16.</b> For African Americans who have immigrated to and live in America, their first loyalty is to their home country rather than to America.										

<b>17.</b> If there are too many African Americans in America, our country will be less safe.	1	2	3	4	5	6	7	8	9	10
<b>18.</b> I can hardly imagine myself voting for an African American who is running for an important political office.	1	2	3	4	5	6	7	8	9	10
<b>19.</b> One general fault of African Americans is their over-aggressiveness and strong tendency to display their own looks, manners and customs	1	2	3	4	5	6	7	8	9	10
<b>20.</b> You can't trust a group of young African American men together because they are probably up to criminal or delinquent activity.	1	2	3	4	5	6	7	8	9	10
<b>21.</b> In order to maintain a nice residential neighborhood it is best to prevent African Americans from living in it.	1	2	3	4	5	6	7	8	9	10
<b>22.</b> If I knew I had been assigned to live in a dorm room with an African American, I would ask to change rooms.	1	2	3	4	5	6	7	8	9	10
<b>23.</b> Hispanics have moral standards that they apply in their dealing with each other, but with NON Hispanics, they are unscrupulous, ruthless, and undependable	1	2	3	4	5	6	7	8	9	10
<b>24.</b> There is something different and strange about Hispanics, one never knows what they are thinking and planning.	1	2	3	4	5	6	7	8	9	10
<b>25.</b> A major fault of African Hispanics is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.	1	2	3	4	5	6	7	8	9	10
<b>26.</b> It is wrong for Hispanics and NON Hispanics to intermarry.	1	2	3	4	5	6	7	8	9	10
<b>27.</b> For Hispanics who have immigrated to and live in America, their first loyalty is to their home country rather than to America.	1	2	3	4	5	6	7	8	9	10
<b>28.</b> If there are too many Hispanics in America, our country will be less safe.	1	2	3	4	5	6	7	8	9	10
<b>29.</b> I can hardly imagine myself voting for an Hispanic who is running for an important political office.	1	2	3	4	5	6	7	8	9	10
<b>30.</b> One general fault of Hispanics is their over-aggressiveness and strong tendency to display their own looks, manners and customs	1	2	3	4	5	6	7	8	9	10
<b>31.</b> You can't trust a group of young Hispanic men together because they are probably up to criminal or delinquent activity.	1	2	3	4	5	6	7	8	9	10
<b>32.</b> In order to maintain a nice residential neighborhood it is best to prevent Hispanics from living in it.	1	2	3	4	5	6	7	8	9	10
<b>33.</b> If I knew I had been assigned to live in a dorm room with a Hispanic, I would ask to change rooms.	1	2	3	4	5	6	7	8	9	10
<b>34.</b> Asians have moral standards that they apply in their dealing with each other, but with NON Asians, they are unscrupulous, ruthless, and undependable	1	2	3	4	5	6	7	8	9	10
<b>35.</b> There is something different and strange	1	2	3	4	5	6	7	8	9	10

about Asians, one never knows what they are thinking and planning.										
<b>36.</b> A major fault of Asians is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.	1	2	3	4	5	6	7	8	9	10
<b>37.</b> It is wrong for Asian and NON Asians to intermarry.	1	2	3	4	5	6	7	8	9	10
<b>38.</b> For Asians who have immigrated to and live in America, their first loyalty is to their home country rather than to America.	1	2	3	4	5	6	7	8	9	10
<b>39.</b> If there are too many Asians in America, our country will be less safe.	1	2	3	4	5	6	7	8	9	10
<b>40.</b> I can hardly imagine myself voting for an Asian who is running for an important political office.	1	2	3	4	5	6	7	8	9	10
<b>41.</b> One general fault of Asians is their over-aggressiveness and strong tendency to display their own looks, manners and customs	1	2	3	4	5	6	7	8	9	10
<b>42.</b> You can't trust a group of young Asian men together because they are probably up to criminal or delinquent activity.	1	2	3	4	5	6	7	8	9	10
<b>43.</b> In order to maintain a nice residential neighborhood it is best to prevent Asians from living in it.	1	2	3	4	5	6	7	8	9	10
<b>44.</b> If I knew I had been assigned to live in a dorm room with an Asian, I would ask to change rooms.	1	2	3	4	5	6	7	8	9	10
<b>45.</b> Muslims have moral standards that they apply in their dealing with each other, but with NON Muslims, they are unscrupulous, ruthless, and undependable	1	2	3	4	5	6	7	8	9	10
<b>46.</b> There is something different and strange about Muslims, one never knows what they are thinking and planning.	1	2	3	4	5	6	7	8	9	10
<b>47.</b> A major fault of Muslims is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.	1	2	3	4	5	6	7	8	9	10
<b>48.</b> It is wrong for Muslims and NON Muslims to intermarry.	1	2	3	4	5	6	7	8	9	10
<b>49.</b> For Muslims who have immigrated to and live in America, their first loyalty is to their home country rather than to America.	1	2	3	4	5	6	7	8	9	10
<b>50.</b> If there are too many Muslims in America, our country will be less safe.	1	2	3	4	5	6	7	8	9	10
<b>51.</b> I can hardly imagine myself voting for a Muslim who is running for an important political office.	1	2	3	4	5	6	7	8	9	10
<b>52.</b> One general fault of Muslims is their over-aggressiveness and strong tendency to display their own looks, manners and customs	1	2	3	4	5	6	7	8	9	10
<b>53.</b> You can't trust a group of young Muslim men together because they are probably up to criminal or delinquent activity.	1	2	3	4	5	6	7	8	9	10
<b>54.</b> In order to maintain a nice residential neighborhood it is best to prevent Muslims	1	2	3	4	5	6	7	8	9	10

from living in it.										
<b>55.</b> If I knew I had been assigned to live in a dorm room with a Muslim, I would ask to change rooms.	1	2	3	4	5	6	7	8	9	10
<b>56.</b> Jews have moral standards that they apply in their dealing with each other, but with NON Jews, they are unscrupulous, ruthless, and undependable	1	2	3	4	5	6	7	8	9	10
<b>57.</b> There is something different and strange about Jews, one never knows what they are thinking and planning.	1	2	3	4	5	6	7	8	9	10
<b>58.</b> A major fault of Jews is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.	1	2	3	4	5	6	7	8	9	10
<b>59.</b> It is wrong for Jews and NON Jews to intermarry.	1	2	3	4	5	6	7	8	9	10
<b>60.</b> For Jews who have immigrated to and live in America, their first loyalty is to their home country rather than to America.	1	2	3	4	5	6	7	8	9	10
<b>61.</b> If there are too many Jews in America, our country will be less safe.	1	2	3	4	5	6	7	8	9	10
<b>62.</b> I can hardly imagine myself voting for a Jew who is running for an important political office.	1	2	3	4	5	6	7	8	9	10
<b>63.</b> One general fault of Jews is their over-aggressiveness and strong tendency to display their own looks, manners and customs	1	2	3	4	5	6	7	8	9	10
<b>64.</b> You can't trust a group of young Jewish men together because they are probably up to criminal or delinquent activity.	1	2	3	4	5	6	7	8	9	10
<b>65.</b> In order to maintain a nice residential neighborhood it is best to prevent Jews from living in it.	1	2	3	4	5	6	7	8	9	10
<b>66.</b> If I knew I had been assigned to live in a dorm room with a Jew, I would ask to change rooms.	1	2	3	4	5	6	7	8	9	10

## APPENDIX C

### Social Dominance Orientation Scale

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Neither Disagree nor Agree
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

<b>1.</b> Some groups of people are simply inferior to other groups of people.	1	2	3	4	5	6	7
<b>2.</b> In getting what you want, it is sometimes necessary to use force against other groups.	1	2	3	4	5	6	7
<b>3.</b> It is okay if some groups have more of a chance in life than others.	1	2	3	4	5	6	7
<b>4.</b> To get ahead in life, it is sometimes necessary to step on other groups.	1	2	3	4	5	6	7
<b>5.</b> If certain groups stayed in their place, we would have fewer problems.	1	2	3	4	5	6	7
<b>6.</b> It is probably a good thing that certain groups are at the top and other groups are at the bottom.	1	2	3	4	5	6	7
<b>7.</b> Inferior groups should stay in their place.	1	2	3	4	5	6	7
<b>8.</b> Sometimes other groups should be kept in their place.	1	2	3	4	5	6	7
<b>9.</b> It would be good if groups could be equal.	1	2	3	4	5	6	7
<b>10.</b> Group equality should be our ideal.	1	2	3	4	5	6	7
<b>11.</b> All groups should be given an equal chance in life.	1	2	3	4	5	6	7
<b>12.</b> We should do what we can to equalize conditions for different groups.	1	2	3	4	5	6	7
<b>13.</b> Increased social equity if beneficial to society.	1	2	3	4	5	6	7
<b>14.</b> We would have fewer problems if we treated people more equally.	1	2	3	4	5	6	7
<b>15.</b> We should strive to make incomes as equal as possible.	1	2	3	4	5	6	7
<b>16.</b> No group should dominate in society.	1	2	3	4	5	6	7

## APPENDIX D

### Right Wing Authoritarianism Scale

- 1 = Very Strongly Disagree
- 2 = Strongly Disagree
- 3 = Moderately Disagree
- 4 = Slightly Disagree
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree
- 8 = Very Strongly Agree

<b>1.</b> The established authorities generally turn out to be right about things, while the radicals and protesters are usually just “loud moths” showing off their ignorance.	1	2	3	4	5	6	7	8
<b>2.</b> Women should have to promise to obey their husbands when they get married.	1	2	3	4	5	6	7	8
<b>3.</b> Our country desperately needs a might leader who will do what has to be done to destroy the radical new ways and sinfulness that are running us.	1	2	3	4	5	6	7	8
<b>4.</b> Gays and lesbians are just as healthy and moral as anybody else.	1	2	3	4	5	6	7	8
<b>5.</b> It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noise rabble rousers in our society who are trying to create doubt in people’s minds.	1	2	3	4	5	6	7	8
<b>6.</b> Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.	1	2	3	4	5	6	7	8
<b>7.</b> The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.	1	2	3	4	5	6	7	8
<b>8.</b> There is absolutely nothing wrong with nudist camps.	1	2	3	4	5	6	7	8
<b>9.</b> Our country needs free thinkers who have the courage to defy traditional ways, even if this upsets many people.	1	2	3	4	5	6	7	8
<b>10.</b> Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs.	1	2	3	4	5	6	7	8
<b>11.</b> Everyone should have their own lifestyles, religious beliefs, and sexual preferences, even if it makes them different from everyone else.	1	2	3	4	5	6	7	8
<b>12.</b> The “old-fashioned ways” and the “old-fashioned values” still show the best way to live.	1	2	3	4	5	6	7	8
<b>13.</b> You have to admire those who challenged the law and the majority’s views by protesting for women’s abortion rights, for animal rights, or to abolish school prayer.	1	2	3	4	5	6	7	8
<b>14.</b> What our country needs is a strong determined leader who will crush evil and take us back to our true path.	1	2	3	4	5	6	7	8
<b>15.</b> Some of the best people in our country are those who are challenging the government, criticizing government and are ignoring the “normal way things are supposed to be done.”	1	2	3	4	5	6	7	8
<b>16.</b> God’s laws about abortion, pornography and marriage	1	2	3	4	5	6	7	8

must be strictly followed before it is too late, and those who break them must be strongly punished.								
<b>17.</b> There are many radical and immoral people in our country today who are trying to ruin it for their own godless purposes, whom the authorities should put out of action.	1	2	3	4	5	6	7	8
<b>18.</b> A “woman’s place” should be wherever she wants to be. The days when women are submissive to their husbands and such social conventions belong in the past.	1	2	3	4	5	6	7	8
<b>19.</b> Our country will be great if we honor the ways of our forefathers, do what the authorities tell us to do, and get rid of the “rotten apples” who are ruining everything.	1	2	3	4	5	6	7	8
<b>20.</b> There is no “one right way” to live life; everybody has to create their own way.	1	2	3	4	5	6	7	8
<b>21.</b> Homosexuals and feminists should be praised for being brave enough to defy “traditional family values.”	1	2	3	4	5	6	7	8
<b>22.</b> This country would work a lot better if certain groups of troublemakers would just shut up and accept their group’s traditional place in society.	1	2	3	4	5	6	7	8

## APPENDIX E

### Sample Email: Scholarship Offer

If this email was sent to someone other than the addressed recipient in error please return it immediately to the Institute for Scholarship and Societal Relations. Without its return, we cannot know that an error was made, and will assume that the offer has been rejected.

To: Abdullah Mohammed (John Roberts)  
From: The University of Alabama  
Institute for Scholarship and Societal Relations  
Re: Scholarship

Dear Mr. Mohammed (Roberts),

Congratulations! Due to your outstanding contributions to the University of Alabama and your expressed interest in our program, we would like to extend a scholarship to you on behalf of the University of Alabama Institute for Scholarship and Societal Relations for the 2012-13 academic year. Because funds for this new scholarship are so limited, it is imperative that you respond to this email no later than Friday, November 3rd by 5:00 p.m.; if you do not, we will assume that our offer has been rejected, and we will be required to retract the offer and extend it to another student.

Thank you in advance,

Lynn Sipperley  
The University of Alabama  
Institute for Scholarship and Societal Relations

If this email was sent to someone other than the addressed recipient in error please return it immediately to the Institute for Scholarship and Societal Relations. Without its return, we cannot know that an error was made, and will assume that the offer has been rejected

## APPENDIX F

### Sample email: Membership Invitation

If this email was sent to someone other than the addressed recipient in error please return it immediately to the Office of Curricular and Cultural Advancement. Without its return, we cannot know that an error was made, and will assume that the offer has been rejected.

To: Abdullah Mohammed (John Roberts)  
From: The University of Alabama  
Institute for Scholarship and Societal Relations  
Re: Exclusive Invitation

Dear Mr. Mohammed (Roberts),

Congratulations! Due to your outstanding contributions to the University of Alabama and your expressed interest in our program, we would like to invite you to be a charter member of the newly founded Association for Muslim (American) Cultural Advancement, an organization designed to promote the ideals of Muslim (American) thought and philosophy. Because space for this new organization is so limited, it is imperative that you respond to this email no later Friday, November 7th by 5:00 p.m.; if you do not, we will assume that our offer has been rejected, and we will be required to retract the offer and extend it to another student.

Thank you in advance,

Lynn Sipperley  
The University of Alabama  
The Institute for Social Science Research

If this email was sent to someone other than the addressed recipient in error please return it immediately to the Institute for Scholarship and Societal Relations. Without its return, we cannot know that an error was made, and will assume that the offer has been rejected.

## APPENDIX G

### Debriefing (Following *Part Two*)

A few weeks ago, you completed a series of questionnaires for a study in the Psychology 101 Subject Pool entitled “*The Effects of Social Dominance Orientation and Right Wing Authoritarianism in the Face of Threats to Resources and Identity.*” On that questionnaire, you indicated that you would not mind if we contacted you for future studies and provided us with your email address. As a result, you recently received a “lost email” in which an email addressed to someone else was “accidentally” sent to your email account. The email either offered the intended recipient a scholarship or an invitation to join a new student group. In actuality, the email was part of a study that we are conducting. Because you indicated that you would be willing to participate in a future study, we included you in our study.

Before we explain the study further, please note that you have received an additional 0.5 credits towards fulfillment of your Psychology 101 research requirement for your participation in this second part of the study, whether or not you returned the lost email. (You previously received 1.0 credit when you completed the questionnaires.)

First, we want you to know that there is no such person as Lynn Sipperley at the University of Alabama Institute for Social Science Research or any such scholarship or new student group as those indicated in the emails. We made these up for our study. We wanted to know whether people would let us know that they received the mistaken email. For some people, the content of the email let the recipient know that they had won a scholarship. For other people, the content of the email let the recipient know that they were invited to join a new student organization. We also changed the name of the recipient of the scholarship or invitation just to see if that would make a difference. We wanted to see if the content of the emails would affect how likely people would be to return a “lost-email” that had been “accidentally” sent to them. We also wanted to know how these factors interact with individual traits like Social Dominance Orientation (a strong desire to want one’s in-group to win over an out-group) and Right Wing Authoritarianism (a strong tendency to see one’s in-group identity as better than an out-group) to affect the likelihood of returning the lost email.

We want to assure you that there are no “right” or “wrong” answers. Some people return the emails; most do not (in past studies, return rates have typically ranged from 15% – 19%). We know that some people might not have opened the lost email at all. We also know that there are lots of reasons for not returning a stray email that are not related to these traits we were looking at in our study. Some people may not open their email all that often. Other people are hesitant to open or reply to an email that is from an unknown person because they don’t want to be spammed with junk mail or contaminate their computer with a virus. We just want to see if the factors in our study increase or decrease the likelihood of return over and above all the other things that affect the likelihood of returning the email. If we can see some patterns in how all these factors interact with each other, we may be able to say something about subtle or unintentional sources of prejudice against out-group members that would be difficult to detect by simply asking people what they think they would do in hypothetical situations. Being able to

observe a behavior, even one as simple as responding to a lost email, makes the study much stronger than if we only used questionnaires.

We are sorry for misleading you, but we could not tell you what we were doing until now. If we told people ahead of time what the point of the experiment was, then some people might have done whatever they thought we wanted them to do, or they might have done the exact opposite just to show us that we can't figure them out. When people try to second-guess what we are doing and behave differently than they would in real life, it messes up our results because the behavior is not natural, then. Because the whole point of this study is to find out how people would naturally behave, we hope you understand the need for conducting the study in this way, without fully informing you at that start.

We want to assure you that your decision to, or not to, respond to the "lost email" will be kept completely confidential. Once we begin analyzing the data from this study, no names or any other identifying information will be attached (your information will be assigned a coded number that is completely unidentifiable), so we won't ever know what you personally did. You will also never be personally identified in any reports of this research, and all reports will present data in aggregated form, such as percentages and means. We are also *not* keeping your email address, or any other identifying information, on file and will not share it with anybody else. However, now that you have been informed about the purpose of the study, if you wish for your data to be removed from our file, you may contact the researcher to have us do so.

The researchers are available to answer any questions you may have regarding your participation. You can reach Marnie Sutton at [mlsutton1@crimson.ua.edu](mailto:mlsutton1@crimson.ua.edu) or (205) 348-4346 or Debra McCallum at [dmccallu@ua.edu](mailto:dmccallu@ua.edu) or (205) 348-3820 for questions about the experiment or to ask to have your data removed from the results. If you have any questions or concerns about your rights as a research participant, please contact Ms. Tanta Myles, the University of Alabama Research Compliance Officer, at (205) 348-8461 or 1-877-820-3066. You may also ask questions, make suggestions, or file complaints through the IRB Outreach website at [http://osp.ua.edu/site/PRCO\\_Welcome.html](http://osp.ua.edu/site/PRCO_Welcome.html). You may email the Research Compliance Office at [participantoutreach@bama.ua.edu](mailto:participantoutreach@bama.ua.edu).

Your participation in this study is greatly appreciated. Since prior knowledge about the details of the study might influence the response of future participants, we would greatly appreciate it if you did not discuss the study with any potential participants.