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Examining the relationship between experiences of discrimination and psychological reactance

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EXAMINING THE RELATIONSHIP BETWEEN EXPERIENCES OF DISCRIMINATION AND PSYCHOLOGICAL REACTANCE

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Abstract

Psychological reactance is a motivational state caused by a perceived threat to an individual's freedom to behave as he or she chooses. In this state individuals are motivated to restore the perception of freedom. Past research on reactance has suggested that it is possible that repeatedly experiencing a reactive state may contribute to increasing trait reactance, which is the individual's general tendency to experience reactance in a given situation. Research on discrimination has suggested that experiencing discrimination may induce a reactive state, but has not empirically tested that idea. Study 1 hypothesized that there would be a positive correlation between the amount of discrimination perceived by an individual and the individual's level of trait reactance. Study 2 hypothesized that participants asked to recall a discriminatory event would experience more state reactance than those in the control condition. Study 1's hypothesis was supported by correlations between the Perceived Discrimination Scale (Dowd, Milne, &Wise, 1991), the Therapeutic Reactance Scale, the Hong Psychological Reactance Scale (Hong, 1992) and the majority of the Hong subscales. A subjective measure of discrimination experienced due to group membership was also correlated with the same reactance scales. Study 2's hypothesis was also supported when participants asked to recall a discriminatory incident scored significantly higher on cognitive and emotional measures designed to assess state reactance. Together the findings of both studies suggest that experiencing state reactance repeatedly throughout an individual's life leads to an increase in that individual's level of trait reactance. If trait reactance is a result of discriminatory experiences then, such information could help inform the therapeutic treatment of clients likely to have experienced discrimination.

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Examining the Relationship Between Experiences of Discrimination and Psychological Reactance

Mark Twain once wrote, “The more things are forbidden, the more popular they become” (Twain & In Paine, 1971). This quote provides an example of the theory of psychological reactance (Brehm, 1966) which seeks to explain, among other things, why people are motivated to pursue things which are denied them. For example, it can help us understand what motivates people to starve themselves to death in order to gain access to voting or to risk imprisonment to gain the right to freely choose a seat on a bus. Such actions seem illogical because they risk many concrete benefits for little apparent concrete gain. However, psychological reactance theory suggests that such actions are logical in that they are a result of an innate drive that motivates individuals to protect and preserve freedoms they feel they are entitled to (Brehm, 1966; Brehm, & Brehm, 1981).

Reactance theory states that when individuals’ freedoms are threatened, directly or indirectly, they enter a motivational state in which they will work to regain or protect those freedoms (Brehm, 1966). Reactance is especially probable in situations where the individual has a strong sense of entitlement to those freedoms (Brehm, 1966; Brehm & Brehm, 1981). American citizens may feel this way about access to voting; this sense of entitlement is so strong that it is labeled a right and is legally mandated to be given to all eligible citizens. However, while reactance theory addresses individual situations, it does not address what happens when a person experiences this psychological state repeatedly in situations throughout his or her life, such as when a person is repeatedly denied a freedom they feel strongly entitled to. It may be that when individuals experience a state of reactance recurrently throughout their lifespans, they become more prone to

experiencing reactance independent of the situation. If so, reactance could become a stable part of an individual's personality.

The main purpose of the proposed studies was to examine whether people who perceive having experienced more discrimination are more likely to experience this state of reactance independent of the situation. This propensity to experience reactance is termed trait reactance and has been shown to vary between individuals. A secondary purpose was to examine whether experiencing a discriminatory event causes individuals to experience a reactive state.

A better understanding of psychological reactance could be useful in a number of ways. For example, reactance has been shown to be related to factors that interfere with therapy such as resistance in therapy, reluctance to disclose personal information, and the label of being a 'difficult client' (Dowd & Sanders, 1994). It is likely that if trait reactance stems from experiences with discrimination then multicultural counseling skills and an understanding of psychological reactance theory could enhance the therapeutic relationship. Such information could also be used to inform psychological treatment of minority clients who display resistance in therapy and reluctance to disclose personal information, thus increasing the potential benefits they would receive in a therapeutic setting.

State Reactance

Reactance theory states that when a person's freedom to perform a physical or mental activity is threatened or eliminated, that person will enter a cognitive and emotional state of reactance in which he or she is motivated to restore or protect his or her freedoms (Brehm, 1966). This motivational state of reactance is referred to as state

reactance and is theorized to be an aversive motivational state with energizing qualities (Brehm & Brehm, 1981).

Recently, however, Dillard and Shen (2005) operationalized state reactance as a combination of specific negative emotions related to anger and negative cognitions. Their data supported conceptualizing state reactance as "an intermingling of negative cognition and anger" with the two so interwoven that "their effects cannot be disentangled" (Dillard & Shen, 2005, p. 160). They further found that both anger and cognitions contributed equally to the reactive state. The authors concluded that "it is possible to use a combination of self-report cognitive and emotional measures to create a more or less direct index of reactance" (Dillard & Shen, 2005, p. 160). Following Dillard and Shen (2005), others have successfully measured state reactance as an amalgamation of anger and negative cognitions (Quick & Stephenson, 2007a, 2008; Rains & Turner, 2007).

The main goal of individuals experiencing state reactance is to restore the sense that they still have freedom to choose how they behave (Brehm, 1966). The most direct method of restoring freedoms involves intentionally selecting the prohibited option, such as an individual intentionally violating a law he or she feels is unjust. However, freedoms may also be restored indirectly (Behnm, 1966) in a number of different ways. This may be accomplished by denigrating the source of the threat (Kohn & Barnes, 1977; Schwarz, Frey, & Kumpf, 1980), such as claiming that an employee who refused to help a woman due her religious practices was actually incompetent or was unaware of the business's policies. An individual may also restore their freedoms by denying the existence of the threat (Worchel & Andreoli, 1974; Worchel, Andreoli, & Archer, 1976).

For example, an African American man could state that he was able to join an exclusive club if he chose to, but he simply has no interest in doing so. Freedoms may also be restored by exercising a different freedom to regain feelings of control and choice, such as a woman asserting that she actually prefers to shop at a different store after being denied access to a business (Wicklund, 1974). Being in a reactive state may also cause an individual to increase their preference for the threatened choice, increasing their motivation to regain this choice and by doing so, restore their sense of freedom (Brehm, Stires, Sensenig, & Shaban, 1966; Hammock & Brehm, 1966). This is the method of freedom restoration that would lead to things such as protests and legal actions to restore access to voting. Regardless of the method chosen, the intent of these actions is to restore the person's perception that they are free to act in any way they choose, regardless of whether this is actually the case (Brehm, 1966).

The intensity of this motivational state is mediated by a number of factors. One factor is how important the threatened freedom is to the individual (Brehm, 1966). The most important freedoms to an individual are those that reactance theory calls "free behaviors," which are defined as deeply held freedoms an individual feels strongly entitled to (Brehm, 1966; Brehm & Brehm, 1981). These free behaviors almost always lead to strong reactance when threatened, whereas less important freedoms are likely to lead to weaker reactance. For example, being denied access to a television station will probably arouse weaker reactance for most Americans than being denied access to a voting booth. A second factor affecting reactance is the reason for and the duration of the restrictions. Reactance is increased when the restrictions on freedom are seen as unfair, invalid, and/or likely to remain in place in the future (Behmn, 1966). A restriction such

as being denied access to a store for one day because of maintenance would likely cause less reactance than being denied access indefinitely because of skin color.

Trait Reactance

A more recent extension of reactance research is the idea of reactance as a personality trait. Trait reactance is the likelihood of an individual experiencing state reactance differs from person to person (Brehm & Brehm, 1981; Dowd, Milne, & Wise, 1991). Research has found that increased trait reactance is reliably associated with characteristics such as need for autonomy and independence, nonconformity, rebelliousness, and rejection of authority (Buboltz, et al., 2003, Hong & Faedda, 1996; Miller, Burgoon, Grandpre, & Alvaro, 2006). Trait reactance has also been found to be related to certain personality traits, such as being less trusting, more vigilant, more prone to anxiety and worry, more concerned about personal control, and more suspicious/distrustful of others (Brehm & Brehm, 1981; Buboltz et al., 1999; Dowd et al., 1994; Dowd & Wallbrown, 1993).

While these findings provide support for reactance being an individual difference, they do not account for the source of these differences. The purpose of the current study was to explore one possible source of the individual differences. This study examined the idea that experiencing state reactance through experiences of discrimination repeatedly throughout one's lifetime could increase the individual's general sensitivity and reaction to perceived threats. This increased sensitivity could be the mechanism behind an increase in trait reactance.

Reactance and Discrimination

According to reactance theory, in order to experience state reactance repeatedly throughout a person's life, a person would need to perceive him or herself as repeatedly having his or her freedoms and choices unfairly limited (Brehm, 1966). Individuals who perceive these repeated and unjust restrictions as happening to them would be likely to feel that they are being discriminated against. In support of this assertion, Seemann and colleagues (Seemann, Buboltz, Jenkins, Soper, & Woller, 2004, p. 173) proposed that "minority group members may develop relatively high levels of reactance, compared with majority group members, because of constantly defending personal freedoms within a majority-oriented society." This was supported by their findings of a main effect of ethnicity on participants' scores on the Therapeutic Reactance Scale (TRS) (Dowd et al., 1991, Seemann et al. 2004), a measure of trait reactance, with African Americans scoring significantly higher in trait reactance than Caucasians (c.f., Jonason, 2007).

Seemann et al. (2004) also suggested that because minority groups within the United States are exposed to the same cultural influences as Caucasian Americans, such as being educated in the same schools, the freedoms they value and would be motivated to protect should be very similar. However, many minorities experience discrimination within American society and so their attempts to exercise those internalized values may be restricted (Cross, 1995; Sue et al., 1998). These repeated restrictions of freedoms could encourage the development of reactance (Brehm, 1966). If this is the case, then the amount of discrimination an individual has experienced should correlate with their level of trait reactance.

Reactance and Group Identification

According to reactance theory, one of the methods individuals who are experiencing reactance can employ to address the reactive state is to increase the value they place on another freedom which is not restricted (Wicklund, 1974). Based on this, it could be that an individual who increases the value he or she places on the customs and beliefs of a group he or she feels accepted by could reduce the intensity of the reactive state aroused when he or she experiences discrimination. Such an increase in valuation of beliefs could be displayed as an increase in individuals' identification with their group.

Support for the idea that identification with a group can influence the effects of discrimination on individuals' reactance can be found in the Rejection Identification model of Branscombe, Schmitt, and Harvey (1999). Their research suggests that experiences of discrimination have less negative impact on minority group members if they intensify their identification with their minority group (Branscombe et al., 1999). For example, if a woman from an ethnic minority group is told her body type does not fit the majority stereotype of attractiveness, she may label the majority standards unrealistic and instead judge her appearance based on what is considered attractive within her group.

As a result, individuals may develop strong group identification partly as a buffer against the negative experiences of discrimination, which could ultimately reduce reactance effects from discrimination. In other words, individuals who more strongly identify with a group that is frequently discriminated against may be less reactive as they have found a method of successfully dealing with their reactance. If that is the case, then there would be an interaction between group identification and perceived discrimination on trait reactance, such that more discrimination experiences would only result in higher

trait reactance for individuals who do not identify strongly with their group. Those who identify strongly with their group may be partially protected against reactance effects.

Reactance and Mastery

In addition to group identification, the variable of learned helplessness may play a role in the development of trait reactance. Restriction of freedoms, if severe enough, can cause individuals to enter a state of learned helplessness in which they feel that they have no control over their lives and therefore no ability to make choices (Wortman, & Brehm, 1975). Individuals who feel that they have less control over their lives could experience less reactance in a situation that limits their freedoms as they would not feel strongly entitled to those freedoms, which would lessen the reactive state (Brehm, 1966; Brehm & Brehm, 1981). Such individuals could therefore be less reactive to discriminatory experiences as they may not feel that they are entitled to the choice being denied them. The present investigation examines mastery, the opposite of a learned helplessness tendency as the length of the only learned helplessness measure found caused concern about fatigue effects. I predicted that there would be an interaction between mastery and discrimination on trait reactance, such that more discrimination experiences would only result in higher trait reactance for individuals who are higher in mastery and so feel they have more control over their lives.

The Current Investigation

Reactance theory states that when individuals' freedoms are threatened, directly or indirectly, they will work to regain or protect those freedoms (Brehm, 1966). However, it does not address what happens when a person experiences this psychological state repeatedly in situations throughout their life. It may be that when an individual

experiences a state of reactance repeatedly throughout their lifespan, he or she would become more prone to experience reactance independent of the situation, which we refer to as trait reactance. Discrimination could cause an individual to feel that he or she has been repeatedly denied access to freedoms. Based on the previous research, I predicted that the perceived level of discrimination and trait reactance would be positively correlated. This was tested in Study 1 by having participants complete measures of perceived discrimination and trait reactance. Group identification and personal mastery were also assessed for two reasons. First, because of their potential role in reactance effects, I wanted to partial out their influence when examining the relationship between discrimination and reactance. Second, because people with stronger identification or higher mastery might have different reactive responses to discrimination, I tested for possible interactions involving each of the two variables.

In order to test the hypothesis that discrimination *causes* reactance, Study 2 sought to use a discrimination priming task in order to determine whether a state of reactance could be induced. The general priming technique was based on the autobiographical mood induction of Baker and Gutterfreund (1993), who found that written prompts asking participants to recall specific emotional events (sad or happy) were successful in inducing a desired mood. Since state reactance is composed of negative emotions and cognitions (Dillard & Shen, 2005), a measure based on the cognitive method of mood induction would be sufficient to test hypotheses involving this concept. It was hypothesized that participants asked to recall an incident of discrimination would score higher on measures of state reactance than those asked to recall a control incident.

Study 1

The Proposed Research

The purpose of this study was to examine whether there is a correlation between participants' perceived level of personal discrimination against themselves and their level of trait reactance. Participants reported their experiences with being discriminated against and completed two measures of trait reactance.

Method

Participants

Seventy-nine college student participants were recruited from psychology courses at Eastern Washington University. However, data from 1 of the 79 participants were eliminated based on the strong possibility that the participant failed to follow instructions on at least one of the tasks and the equally strong possibility of acquiescence on at least one other task. The individual's responses to the lifetime discrimination measure were exceedingly unrealistic, given his age, which undermined confidence in the rest of the data collected from the individual. The final sample of participants had an average age of 21.63 (*SD* 4.56) and the sample was 46% males and 53% females, with 71% Caucasians, 11% Latinos/Latinas, 9% of mixed ethnicity, 7% African American, 1% Asian, and 1% Arabic. They participated in exchange for credit in a psychology class.

Design

The design was correlational, with scores on the Perceived Discrimination Scale (PDS) (Ryff & Almeida, 2004) being correlated with scores on the Therapeutic Reactance Scale (TRS) (Dowd, Milne, & Wise, 1991) and scores on Hong Psychological

Reactance Scale (HPRS) (Hong, 1992; Hong & Page, 1989) to test the main hypothesis. Scores on a modified Multidimensional Inventory of Black Identity (MIBI) Centrality Subscale (a measure of group identification) and the Pearlin Mastery Scale were partialed out to examine resulting correlations between perceived discrimination and reactance. Possible interactions between group identification or mastery and discrimination on reactance were also examined on an exploratory basis.

Procedure

The materials used were compiled into packets containing one copy of each of the measures, in the order they are described in the materials section. Students who agreed to participate were given a questionnaire packet after they had completed an in-class exam. Participants were each given one packet and were instructed to complete the questionnaire packet and then insert it in an envelope with other completed packets for anonymity. Afterwards, they were debriefed, thanked, and dismissed.

Materials

Perceived Discrimination Scale (PDS): The PDS (Ryff & Almeida, 2004) has two parts. The first section consisted of 11 items intended to assess lifetime incidents of perceived discrimination. This section included items such as "You were not hired for a job" and "You were prevented from renting or buying a home in the neighborhood you wanted." Participants were asked to write down the number of times each incident has happened to them during their lifetime with the total number of incidents summed. However, data from this first part of the Perceived Discrimination Scale (PDS) was excluded as it proved to be of questionable validity due to some apparent participant

confusion in following the instructions for the measure. However, three measures of discrimination remained, including Part 2 of the PDS.

Items on the 9-item second part of this scale included "You are treated with less respect than other people" and "You are called names or insulted." Participants were asked to indicate how often on a day-to-day basis they experienced these situations with responses ranging from 1, *never*, to 5, *always*. Participants' scores were totaled to achieve a final score for analysis ($M = 2.19$, $SD = 0.60$). The second portion of the PDS was used as the primary measure of discrimination. This section concluded with a question asking the participants to estimate what percentage of the discrimination they experience is a "direct result of such things as race, ethnicity, gender, age, religion, disability, physical appearance, sexual orientation, or other group-related characteristics" ($M = 45.50$, $SD = 36.84$). These served as a supplemental measure of perceived discrimination.

Group Discrimination Measure: Between the two sections of the PDS was another (9-item) measure intended to assess whether or not the discrimination being reported was due to group membership. Participants were asked to indicate on a scale from 1, *never*, to 7, *always*, how often each group category on a provided list had contributed to them being discriminated against. The groups listed were: Race/Ethnicity, Gender, Religion, Age, Physical appearance, Sexual orientation, Physical Disability, Psychological Disability and Other, with a space provided for the participant to write in any other group. Data from this measure were averaged to create a single final score ($M = 2.26$, $SD = 1.70$). The percentage of negative events attributed to group membership and the measure assessing the impact of group membership on participants' experiences

with discrimination were used as secondary measures of discrimination to help provide additional validity support for any findings involving the primary (PDS) discrimination measure.

Group Identification: The Multidimensional Inventory of Black Identity (MIBI) Centrality Subscale (Sellers, Smith, Shelton, Rowley, & Chavous, 1998) was used to assess group identification. The 8-item MIBI subscale assesses the extent to which being African American is central to the respondents' definition of him or herself. It was used with the term "Black" replaced with "a member of this group." Participants were instructed to select the group membership that they felt contributed most to them being discriminated against and to respond based on their feelings toward that particular group. Items on this scale included "In general, being a member of this group is an important part of my self-image" and "Being a member of this group is an important reflection of who I am." Participants were asked to rate how strongly they agree or disagree with each statement using a 7-point Likert scale with responses ranging from 1, *strongly disagree* to 7, *strongly agree*. Participants' scores were averaged to obtain a final score ($M = 4.15$, $SD = 1.16$, $\alpha = .74$).

Pearlin Mastery Scale: The Pearlin Mastery Scale (Pearlin, Lieberman, Menaghan, & Mullan, 1981) was used to assess the level of control participants felt they had over their lives. It consists of 7 items including "I often feel helpless in dealing with the problems of life" (reversed) and "Sometimes I feel that I'm being pushed around in life" (reversed). Responses on these items were averaged to create an overall mastery score ($M = 3.26$, $SD = 0.52$, $\alpha = .73$).

Therapeutic Reactance Scale (TRS): The TRS was a 28-item measure developed by Dowd, Milne, and Wise (1991). Items on this scale included "I am very open to solutions to my problems from others" (reversed), "I enjoy 'showing up' people who think they are right" and "I consider myself more competitive than cooperative." Participants were asked to rate how strongly they agree or disagree with each statement using a 4-point Likert scale with responses ranging from 1, *strongly agree* to 4, *strongly disagree*. Participants' responses were averaged to obtain a single score (M = 2.49, SD = 0.27, α = .66) (Dowd, Milne, &Wise, 1991) and then divided into four factors for further analysis (Buboltz, Thomas, & Donnel, 2002). These factors were labeled Resentment of Authority (M = 2.01, SD = 0.56, α = .68), which reflected a person's resistance to being controlled by authority figures, Susceptibility to Influence (M = 2.81, SD = 0.50, α = .55), which represented how open an individual is to influence from others, Avoidance of Conflict (M = 1.88, SD = 0.56, α = .07), which represented an individual's willingness to go along with others and avoid disagreement, and Preservation of Freedom (M = 3.10, SD = 0.52, α = .48), which reflected individuals' desire to state their opinions and have things in agreement with their beliefs (Buboltz, Thomas, & Donnel, 2002).

Hong Psychological Reactance Scale (*HPRS):* This study used the 14-item version of the HPRS (Hong, 1992; Hong & Page, 1989) developed and recommended by Hong and Faedda (1996). Items included "I become angry when my freedom of choice is restricted" and "I resist the attempts of others to influence me." Participants indicated their agreement to each statement on a scale from 1, *disagree completely*, to 5, *agree completely*. Participants' responses were averaged to create an overall score (M = 2.91, SD = 0.50, α = .77) and then divided into four factors as recommended by Brown,

Finney, and France (2011). These factors were labeled Emotional Response Toward Restricted Choice (M = 3.81, SD = 0.73, α = .65), which represented an individual's desire to make free and independent choices, Reactance to Compliance (M = 2.47, SD = 0.80, α = .71), which represented reactance towards complying with the wishes of others, Resisting Influence From Others (M = 2.83, SD = 1.10, α = .57), which reflected participants' reactance towards others influencing their behavior, and Reactance Towards Advice and Recommendations (M = 2.24, SD = 0.71, α = .53), which represented reactance towards others imposing their advice and suggestions (Hong & Faedda, 1996). Research by Brown, Finney, and France (2011) has suggested that it is not appropriate to use only the overall score on the HPRS due to the multidimensional nature of reactance, so each of the subscales was also analyzed separately.

Demographic Data Sheet: The final questionnaire in the packet was a demographic data sheet asking for information such as the participant's age, gender, and ethnicity. Participants were also asked to write down what they believed to be the purpose of the study to assess suspicion.

Results

The hypothesis that perceived level of discrimination and trait reactance would be positively correlated was supported as the PDS was found to be positively correlated both with the Therapeutic Reactance Scale (TRS) and the Hong Psychological Reactance Scale (HPRS) (see first column of Table 1). Correlations between the PDS and the TRS subscales of Resentment of Authority, Susceptibility to Influence, Avoidance of Conflict, and Preservation of Freedom were also assessed, however only Resentment of Authority was found to be correlated with the PDS (see Table 1). Positive correlations between the

PDS and the HPRS subscales of Emotional Response Toward Restricted Choice, Reactance to Compliance, and Reactance Towards Advice and Recommendations were also found (see Table 1). The PDS was also found to be negatively correlated with the Pearlin Mastery Scale, but unrelated to the group identification measure (see Table 1).

The PDS correlations were analyzed again with the Pearlin Mastery Scale or the group identification measure controlled for (see Table 2). When the Pearlin Mastery Scale was controlled for, the PDS was correlated with the same scales and subscales with two exceptions; the TRS subscale of Resentment of Authority was no longer significantly correlated with the PDS, while the TRS subscale of Preservation of Freedom became significantly correlated with the PDS (see Table 2). Although group identification was not related to PDS, we wanted to examine whether accounting for the variance in group identification or mastery would influence any of the observed relationships. When the group identification scores were controlled for, the PDS was correlated with the same scales and subscales (see Table 2). Thus, accounting for variance in group identification or mastery made little or no overall difference in the observed relationships.

When the discrimination measure assessing the impact of group membership on participants' experiences with discrimination was analyzed, it was found to be correlated with the same scales and subscales of reactance as the PDS, however, it was not related to the Pearlin Mastery Scale (see Table 1).

The third measure of discrimination, the percentage of negative events attributed to group membership, was found to be positively correlated with the TRS subscale Resentment of Authority, the HPRS, the HPRS subscale Reactance Towards Advice and Recommendations and to overall Hong score (see Table 1).

Possible interactions between group identification or mastery and perceived discrimination on reactance were also explored. An analysis examining the group identification factor found a significant group identification × PDS interaction, $F(1, 71) = 4.09$, $p = .047$ on the TRS subscale Avoidance of Conflict. As seen in Figure 1, higher levels of perceived discrimination were linked to higher participant scores on the TRS subscale Avoidance of Conflict, but only for participants with lower group identification. For participants with higher levels of group identification, the level of perceived discrimination was not related to their Avoidance of Conflict subscale scores. This partially supported the prediction that stronger group identification would buffer participants against the negative reactive effects of discrimination, but the pattern also illustrated generally higher reactance scores among those who identify strongly with their group.

The possibility that discrimination may affect reactance only among high mastery participants was also examined. Analyses involving mastery found a significant Pearlin Mastery Scale × PDS interaction, $F(1, 74) = 8.68$, $p < .004$ on the TRS subscale Reactance to Advice and Recommendations (see Figure 2). Higher levels of perceived discrimination were associated with higher scores on the HPRS subscale Reactance to Advice and Recommendations, but only for participants with lower mastery levels. The subscale scores for those with higher mastery were not linked to the level of perceived discrimination. A similar analysis of the mastery variable also found a similar Pearlin Mastery Scale × Group Discrimination interaction, $F(1, 74) = 5.65$, $p = .020$ on the HPRS subscale Reactance to Advice and Recommendations (see Figure 3). Again, higher PDS scores were associated with higher scores on the Reactance to Advice and

Recommendations subscale but only for participants with lower mastery scores. The subscale scores for those higher in mastery were not related to their PDS scores. These findings generally support the hypothesis that lower mastery levels would reduce the intensity of the reactive state and so slow the development of trait reactance.

Discussion

Study 1 found that there was a positive relationship between the level of discrimination an individual experiences and the level of psychological reactance they report. However, there was only one relationship between the level of discrimination reported and the TRS subscales with the TRS subscale of Resentment to Authority. That subscale, which was related to all of our measures of discrimination, is composed of questions that relate most directly to reactance theory.

The lack of correlations between discrimination and the other TRS subscales may be due to the fact that the TRS was designed for use in therapeutic settings and its subscales may measure subtly different constructs than those present in the general population. Support for this is found in the fact that the majority of the HPRS scales did correlate with the amount of discrimination reported. The HPRS was developed for use with the general population, its psychometric properties have received considerable study, and it has been employed in numerous studies (Dillard & Shen, 2005; Hellman & McMillin, 1995; Hong, 1992; Hong, Giannakopoulos, Laing, & Williams, 2001; Joubert, 1990; Joubert, 1992).

Another possible explanation for the lack of results on the TRS subscales is the low internal consistency reliability of several of the subscales. In this study, none of the TRS subscales had a reliability score above the .80 cutoff commonly used in

psychological research. The subscale Resentment of Authority, which was related to all of the discrimination measures, had the highest reliability with a score of .68, which may have helped reveal its correlation with discrimination. Another explanation is that there is something qualitatively different about the subscale Resentment of Authority, which makes it more likely to result from more frequent discrimination, such as the fact that it asks about police specifically.

Moreover, given the low reliability of the other subscales, the validity of those scores may be questionable. The HPRS subscales also had reliability indices less than .80, but were generally higher than those of the TRS. There is also disagreement between researchers about how these different measures should be interpreted and which items should be used to create subscales. Overall, this suggests that further testing of the psychometric properties of both measures may be needed.

On the HPRS, only the subscale of Resisting Influence From Others was unrelated to any of the discrimination measures. This may be due to the fact that these questions deal with others attempting to persuade rather than force an action or idea on an individual and as a result may be less closely associated with discrimination. Persuasion attempts are still thought to be sufficient to provoke reactance in most individuals (Hong & Faedda, 1996) but the reactance elicited by persuasion may be weaker than the reactance elicited by stronger pressures. Another possibility may be that the college population may be more accustomed to influence from others due to their experiences in academic settings. Academic institutions have a tradition of presenting students with a broad range of ideas and attitudes as well as the arguments supporting those ideas, so

participants drawn from such an institution may not perceive attempts to persuade them as threats to their freedom.

It was further hypothesized, based on the research of Branscombe et al. (1999), that participants' identification with a group that is regularly discriminated against may lessen the impact of discrimination on trait reactance. The current study did not support this hypothesis, however there was one interaction involving group identification. Specifically, group identification was found to interact with the PDS on the TRS subscale Avoidance of Conflict. Despite its name, this subscale refers to an individual's tendency to resist going along with others even if it leads to disagreements. High scores on this scale are characteristic of individuals who are less likely to avoid conflict. Participants' scores on this subscale were linked to perceived discrimination only if the participant was higher in group identification, not the lower identification group as predicted. Those with lower group identification were higher in reactance regardless of their level of perceived discrimination. This suggests that those with lower group identification are less likely to avoid conflict by conforming regardless of their personal experiences with discrimination. One possible explanation is that those who identify strongly with their group are more likely to avoid conflict because their self-concepts are more closely tied to their group membership and they may be more likely to avoid conflict in order to maintain group stability. However, repeatedly experiencing discrimination may eventually overwhelm their interest in group stability and lead to less avoidance of conflict.

Based on Brehm's (1966) seminal work, it was hypothesized that feelings of mastery could play a role in the development of trait reactance as those with a less

developed sense of competency would react less strongly to having their freedoms threatened by discrimination. If this was the case, higher levels of perceived discrimination would only lead to higher trait reactance for individuals with higher mastery levels. This hypothesis was based on the idea that low mastery individuals could perceive themselves as having fewer rights to make choices and so be less reactive when their choices were limited by discrimination. The current study did not support this hypothesis, though two interactions involving mastery were found. On the TRS subscale Reactance Against Advice and Recommendations, mastery scores interacted with the PDS and with the discrimination based on group membership measure. In both cases, the reported level of discrimination was associated with higher reactance scores only for those who were lower in mastery. Participants who were higher in mastery reported similar levels of reactance on the subscale regardless of their perceived level of discrimination. It may be that individuals who are higher in mastery feel more able to disregard advice and so do not see it as an attempt to limit their freedom. This would prevent them from entering a reactive state related to advice and so would not lead to the development of higher trait reactance in this area. In contrast, perhaps those low in mastery become more reactive in response to discrimination because it is more threatening to them, given they feel they have less control over their circumstances.

One limitation of Study 1 was that it was correlational in nature, so while relationships were found between discrimination and reactance, causation could not be established. It may be that people who are higher in trait reactance are also more likely to perceive themselves as being discriminated against, and it is not the discrimination that is increasing their reactance level. In order to address this limitation, Study 2 was

performed in order to help determine if discrimination in fact causes reactance. Study 2 used a priming task to induce the emotional and cognitive state caused by discrimination in order to assess whether discrimination is a cause of reactance.

Study 2

The Proposed Research

The purpose of this study was to examine whether the recollection of being discriminated against had an effect on participants' level of state reactance. Participants were asked to write about either an experience where they were discriminated against or an event unrelated to discrimination and given a measure of state reactance that involved listing their thoughts and describing their emotions. I predicted that participants in the discrimination condition would report higher state reactance, both in the form of reactive cognitions and reactive emotions, than those in the control condition.

Method

Participants

Eighty five participants were recruited from students on the campus of Eastern Washington University. Data from nine participants were excluded due to participants recording more thoughts related to the study itself during the thought-listing task than to the event they were asked to recall. The resulting sample of participants had an average age 21.06 (*SD* 3.68) with 31 males and 45 females, consisting of 71% Caucasians, 9% of mixed ethnicity, 5% Latino, 5% African American, 3% Asian, 3% Native American, 3% Middle Eastern, and 1% Pacific Islander. They participated in exchange for course credit in a psychology class.

Design

The design was a 2 × 2 Mixed Model ANOVA, with the two levels of the between subjects variable involving a discrimination prime (recalling a discriminatory event) or a control condition (recalling the last television program or movie they watched for more than 30 minutes) while the valence of thoughts reported (positive or negative) was a within- subjects variable.

Procedure

The same procedure was used to administer the questionnaires as in Study 1.

Materials

Priming Task: The first section of the packet contained a page asking participants to spend 5 to 10 minutes writing about either an incident in which they personally experienced discrimination or to write about the last time they watched television for thirty minutes or longer.

For those in the discrimination condition, a definition of discrimination was provided in the instructions. They were also given the option to write about an instance of discrimination they knew of that they felt they could relate to in some way if they had not personally experienced discrimination or were uncomfortable discussing their personal experiences. Several written prompts were also provided, such as "When did the event occur? Please include the year, month, and time of day if possible" and "What occurred? Please describe the event in detail including what occurred directly before and after the event." The page also contained several blank lines indicating where the participants were to write about their experience. Finally, they were asked to indicate if

they personally experienced the event by circling the appropriate provided response of either "I was present for this event" or "I was not present for this event."

Those in the control condition were also provided with prompts, including "When was this? Please include the date and time of day if possible" and "What did you watch? Please include as much detail about the show(s) as possible including characters, plot, setting, etc." They were also given a number of blank lines to provide their responses on.

Cognitions: The second portion of the packet contained another scale used by Dillard and Shen (2005), in which participants were asked to write any thoughts or emotions they had while recalling either the incident of discrimination or the television program they watched. They were then asked to rate those cognitions and emotions as positive, neutral, or negative. The percentage of each participant's total recorded thoughts that were positive and the percentage of thoughts that were negative were computed. The percentages of neutral thoughts were not analyzed for either condition.

Reactive Emotions: A 12-item scale based on one developed by Dillard and Shen (2005) was used to measure emotions associated with state reactance. The scale asked participants to rate the amount of each of the 12 different emotions listed that they felt when recalling either the discriminatory incident or the last time they watched television using a scale from 1, *none of this feeling*, to 5, *a great deal of this feeling*. The items "Angry", "Aggravated", "Irritation," and "Annoyed" were the only items scored. Scores from these four items were averaged together to produce a final score (Dillard & Shen, 2005). These negative emotions were found to have high reliability ($\alpha = .94$, $M = 2.69$, $SD = 1.33$).

Therapeutic Reactance Scale (TRS): The TRS (Dowd, Milne, & Wise, 1991) was used as a measure of trait reactance and was included so that its variance could be accounted for when examining the effects of the discrimination prime on state reactance. Once again, participants' responses were averaged to obtain an overall score ($M = 2.42$, $SD = .33$, $\alpha = .81$).

Demographic Data Sheet: The same demographic sheet as that used in Study 1 was included in this study. After turning in the envelope that contained their questionnaires, participants were thanked, debriefed, and dismissed.

Results

Participants' data were analyzed using a 2 × 2 Mixed Model ANOVA with the priming task as a between-subjects variable and the percentage of thoughts reported (positive or negative) as a within- subjects variable. The only significant effect found was the predicted interaction, $F(1, 72) = 30.72$, $p < .001$. As seen in Figure 4, participants in the discrimination condition reported a significantly higher percentage of negative cognitions, $t(75) = 7.00$, $p < .001$ and a significantly lower percentage of positive cognitions than those in the control condition $t(75) = 4.55$, $p < .001$. The interaction remained, $F(1, 74) = 41.51$, $p < .001$, even when participants' scores on the TRS were controlled for by adding it in as a covariate. The TRS was not a significant covariate.

Those in the discrimination condition ($M = 3.42$, $SD = 1.16$, $N = 43$) also scored higher on the reactive emotion measure than those in the control condition ($M = 1.78$, $SD = 0.92$, $N = 34$), $t(75) = 6.74$, $p < .001$. This remained the case even when the data from the nine excluded participants were included, $t(84) = 7.05$, $p < .001$. These findings

supported the hypothesis that participants in the discrimination condition would report higher state reactance than those in the control condition.

Discussion

As hypothesized, participants in the discrimination condition responded with significantly higher levels of reactive emotions and negative cognitions than participants in the control group. This supports the idea that experiences of discrimination do cause individuals to enter a reactive state and is consistent with Brehm's (1966) work on reactance, especially in regards to freedom being restricted and perceived invalidity of the restrictions being important to the strength of the reactive state. If this is the case, then the differences seen in trait reactance could be due to individuals' experiences with having their freedoms repeatedly and unreasonably restricted, which, in turn, could be perceived as discrimination.

The finding regarding positive cognitions is also consistent with Brehm's (1966) work as reactance was conceptualized as a state intended to motivate an individual into a new physical or mental action. Given this, positive cognitions and emotions should be lower in individuals experiencing state reactance as they should find the experience inherently dissatisfactory and would be expected to have negative cognitions as a result of this dissatisfaction.

The tools for measuring this reactance state were first developed by Dillard and Shen (2005) and the current study supported the validity of their measures. The effects of perceived discrimination on both negative cognitions and specific reactive negative emotions support the concept that state reactance is, at least partially, composed of these two components. The main effect of discrimination on positive cognitions also supports

this, as it provides evidence that this was a negative state rather than a more general state of excitation, which is consistent with reactance theory (Brehm, 1966).

General Discussion

This research examined whether individuals who experience discrimination experience the psychological state of reactance and whether experiencing discrimination may result in developing the characteristic of trait reactance. The first study found that the level of discrimination an individual experiences and his or her level of trait reactance are positively correlated. This supports the hypothesis that repeatedly experiencing discrimination may cause an individual's level of trait reactance to increase. Also in Study 1, perceived discrimination was found to be correlated with resistance to being controlled by authority figures, the desire to make free and independent choices, reactance towards complying with the wishes of others, and reactance towards others imposing their advice and suggestions. Some findings of Study 1 suggest that these patterns may be particularly strong for individuals with weaker group identification and stronger mastery. However, because only a few interactions were observed, future research is needed to further examine these potentially mediating variables.

The assumption that discrimination results in reactance was not specifically addressed in Study 1. To remedy this, the specific cause-effect relationship was tested in Study 2. According to the findings of Study 2, when individuals experience discrimination they do enter a reactive state. Priming an instance of discrimination resulted in emotions and negative cognitions which are consistent with reactance (Dillard & Shen, 2005). This probably occurs because discriminatory behavior threatens the ability of the individual being discriminated against to freely behave as they choose and

when an individual's freedoms are threatened, directly or indirectly, they will work to regain or protect those freedoms (Brehm, 1966).

Taken together, Study 1 and Study 2 suggest that repeatedly experiencing state reactance over the course of a person's life leads to a person having a higher level of trait reactance than someone who has not experienced state reactance as frequently. If this is the case, then individual differences in trait reactance are due, at least in part, to individual differences in lifetime experiences. This would also suggest that trait reactance levels are to some degree dependent on societal conditions, such as the prevalence of discrimination in a given region. This would also explain why some studies on trait reactance have found a main effect of race (Seemann et. al., 2004) while others have not (Jonason, 2007). The populations of these studies were drawn from different geographic regions and so may have had significantly different experiences with discrimination. Based on the current research, a sample drawn from an area with historically high discrimination would be expected to find higher trait reactance in minority populations than a sample drawn from an area without such historical conditions. Additional research should further expand on the role of discriminatory experiences in the development of trait reactance.

While the current research was an important step forward in research regarding psychological reactance, there are a number of limitations that should be noted. One such limitation is that the measures of reactance and discrimination used in Study 1 could benefit from further study and refinement. With regard to the discrimination measures, the first part of the PDS proved unusable due to a combination of difficulties with the instructions and the fact that it was not perfectly applicable to a college population. The

lifetime incidents of discrimination it assessed (e.g., being prevented from renting or buying a home in a desired neighborhood) may be more appropriate for an older and more experienced population than traditional college students.

With regard to the reactance measures, the TRS may not have been the most appropriate instrument for use with this population as it was designed for therapeutic populations. Moreover, the reliability of both reactance measures, especially the TRS, were less than optimal, which somewhat limits the interpretations of these results. However, currently these are the only two measures of trait reactance commonly used in research. Additional research and refinement of the TRS and HPRS would likely be beneficial to the future use of these assessment devices.

This research and further research in this area are important as psychological reactance has been shown to be related to factors that interfere with therapy, such as resistance in therapy, reluctance to disclose personal information, and the label of being a 'difficult client' (Dowd & Sanders, 1994). If trait reactance is a result of discriminatory experiences, then such information could help inform the treatment of clients likely to have experienced discrimination. One possible application could be the development of techniques that help prevent or reduce the increase in reactance as a result of discrimination.

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Table 1

Correlations Between PDS Discrimination Measure and Primary Predictor Variables

Variable	PDS	Group	Variable Dis%
1. TRS Average	.26*	.23*	.22
2. TRS Resentment of Authority	.24*	.23*	.26*
3. TRS Susceptibility to Influence	.03	.02	.12
4. TRS Avoidance of Conflict	.09	−.02	.11
5. TRS Preservation of Freedom	.17	.15	.11
6. Hong Average	.39**	.37**	.27*
7. Hong Emotional Response Toward Restricted…	.34**	.26*	.19
8. Hong Reactance to Compliance	.28**	.34**	.21
9. Hong Resisting Influence From Others	.18	.15	.06
10. Hong Reactance Towards Advice and Rec	.29**	.37**	.36**
11. Group Identification	.01	.11	.02
12. Pearlin Mastery Scale	−.28**	−.19	−.17

Note. *$p < .05$, **$p < .01$.

Table 2

Correlations Between PDS Discrimination Measure and Primary Predictor Variables Controlling for Mastery or Group Identification

Variable	Variable Mastery	Variable Identity
1. TRS Average	.27*	.24*
2. TRS Resentment of Authority	.22	.23*
3. TRS Susceptibility to Influence	.11	.01
4. TRS Avoidance of Conflict	.08	.09
5. TRS Preservation of Freedom	.25*	.15
6. Hong Average	.36**	.39**
7. Hong Emotional Response Toward Restricted…	.35**	.33**
8. Hong Reactance to Compliance	.23*	.27*
9. Hong Resisting Influence From Others	.18	.20
10. Hong Reactance Towards Advice and Rec	.25*	.29**

Note. *$p < .05$, **$p < .01$.

Figure 1

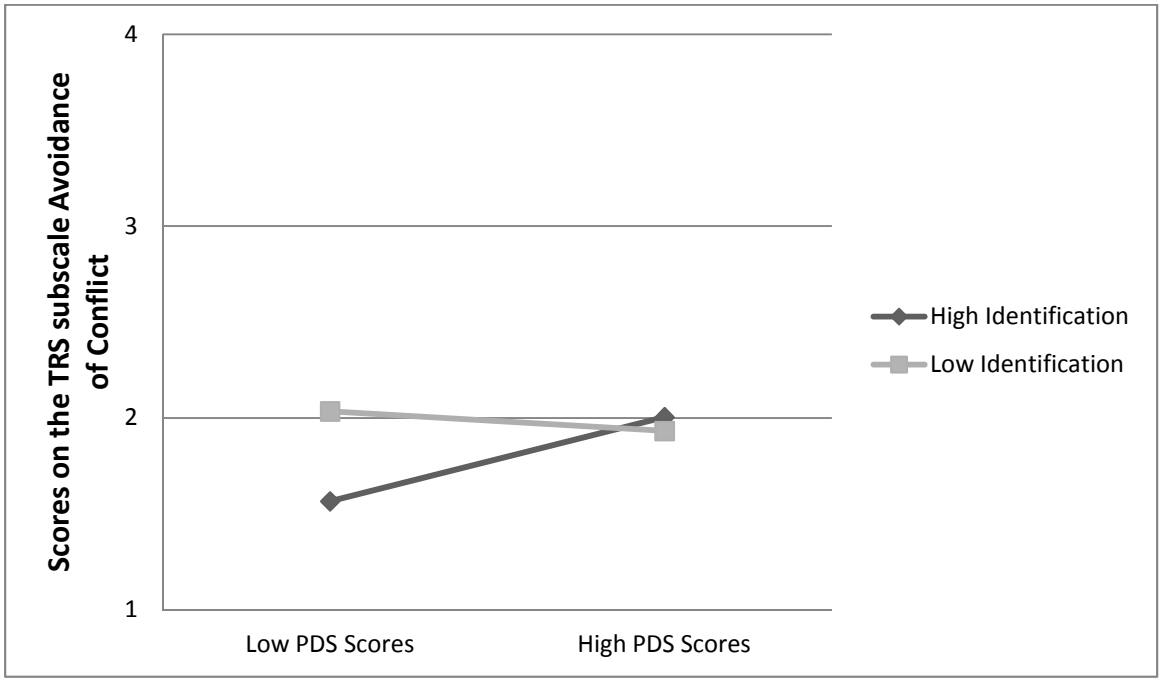

Figure 1. Interaction of Group Identification and PDS on TRS subscale Avoidance of Conflict

Note. A higher TRS-Avoidance of Conflict score indicates higher reactance.

Figure 2

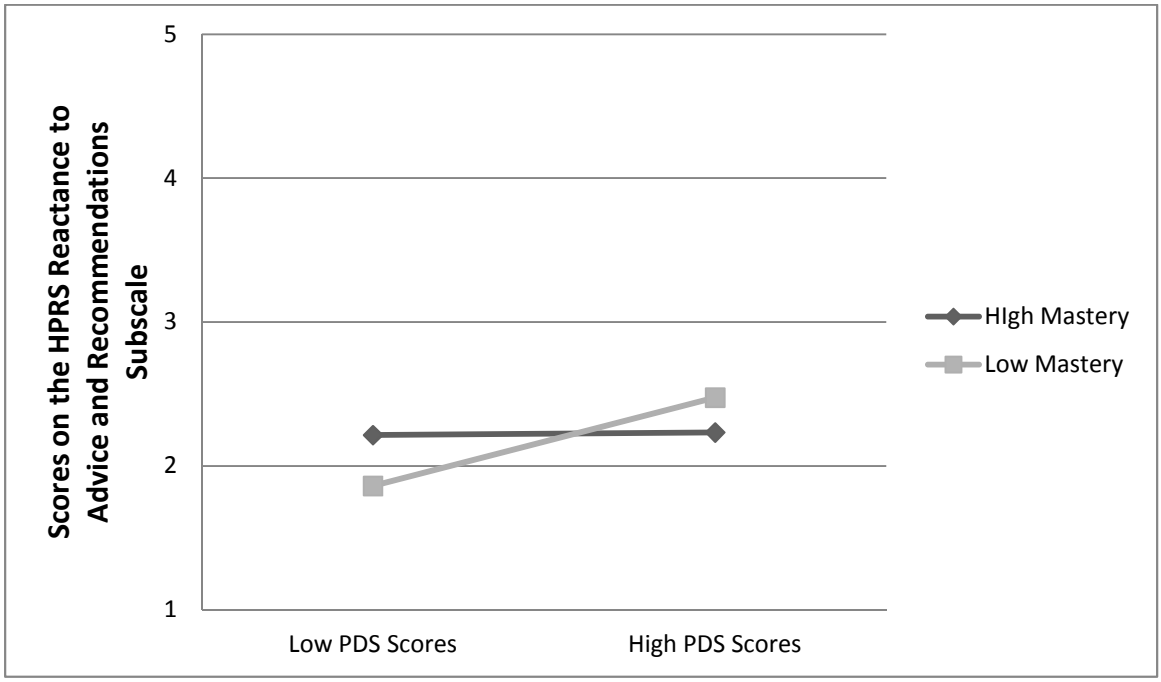

Figure 2. Interaction of Mastery and PDS on HPRS subscale Reactance to Advice and Recommendations

Figure 3

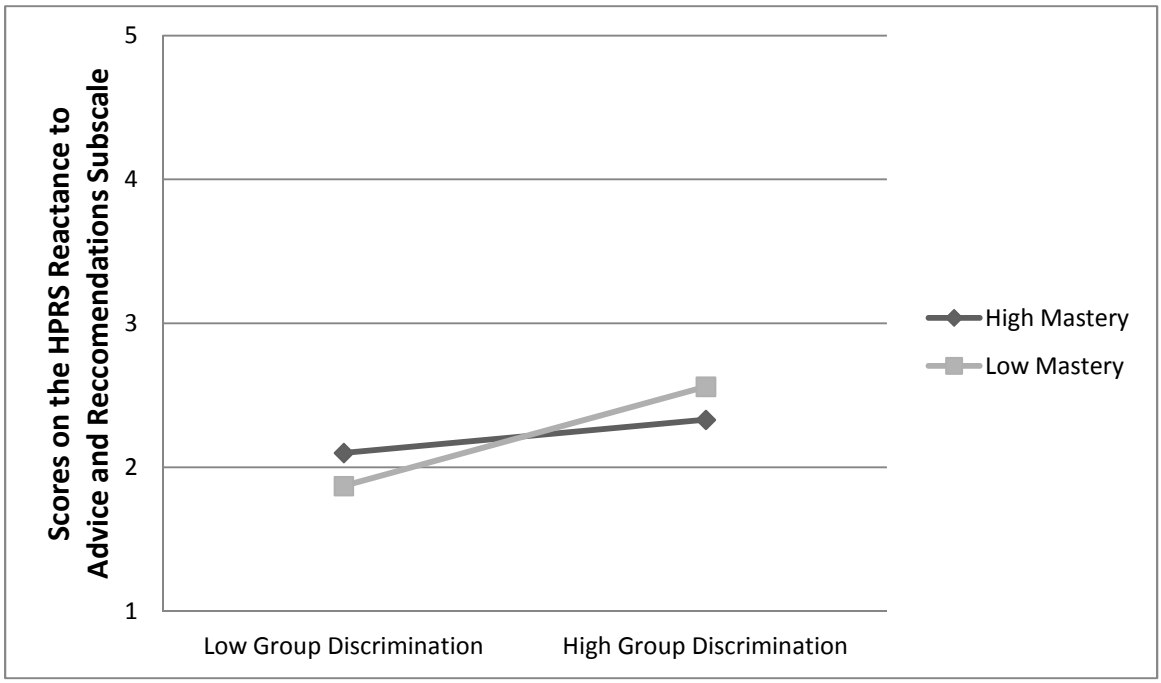

Figure 3. Interaction of Mastery and Perceived Discrimination Based on Group Membership on HPRS subscale Reactance to Advice and Recommendations

Figure 4

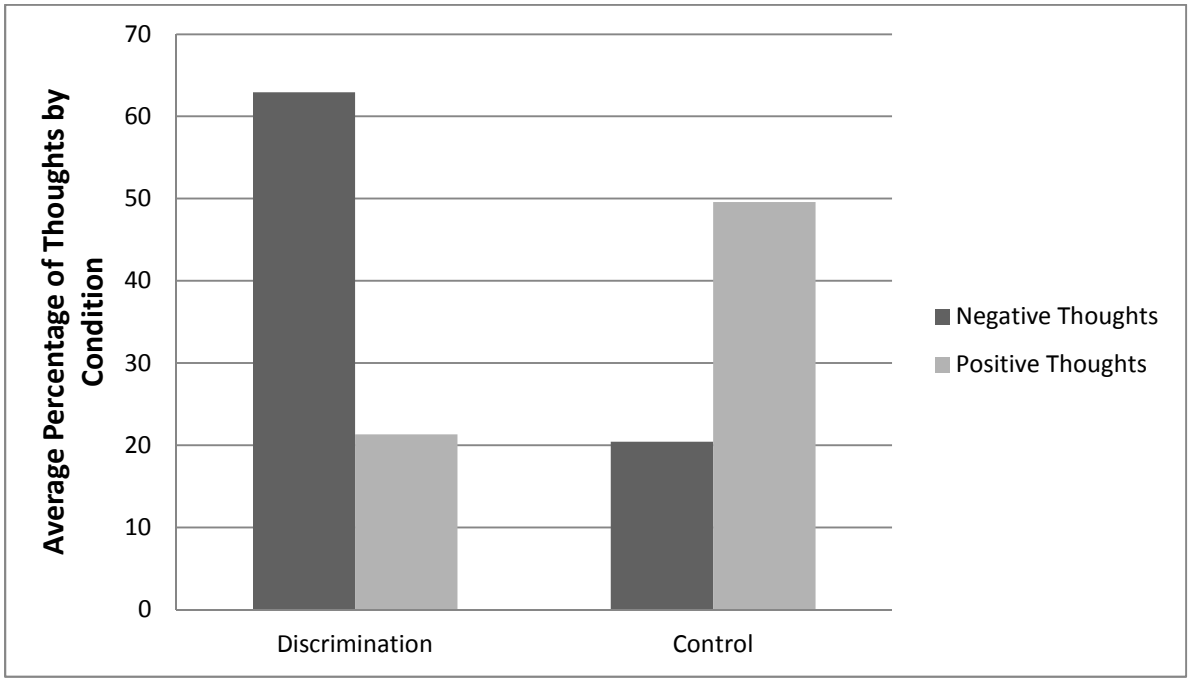

Figure 4. Percentage of positive and negative cognitions by experimental condition.

APPENDIX A

Eastern Washington University

at Cheney and Spokane

MEMORANDUM

To: Nathaniel Wareham, Department of Psychology, 151 MAR

From: Sarah Keller, Chair, Institutional Review Board for Human Subjects Research

Date: May 25, 2011

Subject: Review of HS-3792 *Discrimination and Reactance*

Human subjects protocol HS-3792 *Discrimination and Reactance* has been reviewed and determined to be exempt from further review according to federal regulations for the Protection of Human Subjects under CFR Title 45, Part 46.101(b)(1-6), conditional upon the changes listed below being made and approved. Research qualifying for an exemption is valid for a period of one year, to May 25, 2012. If you wish to continue gathering data for the study after that date, you must file a Renewal of Approval application *prior to its expiration*, otherwise the project will be closed and you would need to submit a new application for IRB review if you wish to continue the research.

A signed, approved copy of your application is enclosed.

Before you begin:

1. Please revise your recruiting blurb to include your name and contact information in addition to Dr. El-Alayli's. Also, it should include information as to when and where to go if they want to. Are you in fact going to have more than one data gathering session? In general, we need more detail about your recruiting and also an estimate of how many subjects you are hoping to have. We will need a copy of your revised recruiting notice and a memo clarifying your procedure.

If subsequent to initial approval the research protocol requires minor changes, the Office of Grant and Research Development should be notified of those changes. Any major departures from the original proposal must be approved by the appropriate IRB review process before the protocol may be altered. A Change of Protocol application must be submitted to the IRB for any substantial change in protocol.

If you have additional questions please contact me at 359-7039; fax 509-359-2474; email skeller@ewu.edu. It would be helpful if you would refer to HS-3792 if there were further correspondence as we file everything under this number. Thank you.

cc: A.El-Alayli
R.Galm
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VITA

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Myers, T., Harding, C., Schroeder, D., Wareham, N., Cysensky, C., Leech, S., Islam-Zwart, K. (2009). The relationship of cognitive load and emotional intelligence to malingering performance. Poster Presentation. Western Psychological Association Conference. Portland, OR.