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Ostracism and Antisocial Behavior: The Role of Perceived Justice, Entitlement, and Anger

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The University of Southern Mississippi

OSTRACISM AND ANTISOCIAL BEHAVIOR: THE ROLE
OF PERCEIVED JUSTICE, ENTITLEMENT AND ANGER

by

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A Thesis

Submitted to the Graduate School
of The University of Southern Mississippi
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for the Degree of Master of Arts

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ABSTRACT

OSTRACISM AND ANTISOCIAL BEHAVIOR: THE ROLE OF PERCEIVED

JUSTICE, ENTITLEMENT AND ANGER

by Christopher Jeffrey Nathanael Lustgraaf

August 2015

Recent research has demonstrated that antisocial behavior following a general ostracism experience is mediated by increased feelings of entitlement (Poon, Chen, & DeWall, 2013) and anger (Chow, Tiedens, & Govan, 2008). However, this prior research has failed to determine whether ostracism in general leads to antisocial behavior, or only ostracism that is perceived of as unfair or unjust. The purpose of the current study was to manipulate the perceived fairness of the ostracism experience (fair or unfair) and assess participants' antisocial behavioral intentions (i.e., dishonest intentions). It was hypothesized that an unfair ostracism experience (compared to a fair ostracism or control experience) would lead to more antisocial behavior, specifically dishonest behavioral intentions, which would be mediated by increased feelings of anger and entitlement. In two studies, participants completed an essay task to prime an ostracism experience (fair or unfair), or a negative control experience on a between-participants basis, and then completed measures assessing their sense of entitlement, feelings of anger, and likelihood of behaving dishonestly. Contrary to our hypotheses, unjust ostracism participants did not report greater dishonest behavioral intentions, anger, or sense of entitlement compared to just ostracism and control participants. Interestingly, however, Study 1 found that *just* ostracism may actually decrease dishonest intentions, and Study 2

demonstrated that ostracism, in general, results in an increase in other-directed, but not self-directed, anger. We provide potential theoretical explanations for our unsupported predictions as well as unanticipated significant findings.

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CHAPTER I

INTRODUCTION

An extensive body of empirical evidence collected over the past two decades has documented numerous responses to the experiences of ostracism, social rejection, and social exclusion (see Williams, 2007 for a review). Whereas some research has documented adaptive responses to social exclusion, such as increased prosocial behavior toward novel interaction partners (Maner, DeWall, Baumeister, & Schaller, 2007) and non-conscious behavioral mimicry (Lakin, Chartrand, & Arkin, 2008), other research has documented more negative responses to rejection, such as aggression (Twenge, Baumeister, Tice, & Stucke, 2001) and dishonest behavior (Poon et al., 2013). The documentation of such a broad (and sometimes inconsistent) series of responses to social exclusion suggests that some aspect of the exclusion experience itself might be responsible for moderating the likelihood of responding in either a prosocial or antisocial manner following rejection.

In the current study, it was hypothesized that one aspect of the rejection experience that may determine whether responses to rejection are more or less aggressive and antisocial is the perceived fairness of the rejection experience, a factor understudied in this area of inquiry. Specifically, it was hypothesized that it is only when rejection is perceived of as unfair by the victim that it should produce antisocial tendencies. Furthermore, it was hypothesized that antisocial behavior (i.e., dishonest behavioral intentions) following unfair experiences of ostracism would be mediated by increased feelings of entitlement and anger. Below, we review the variable findings with respect to

responses to social rejection as well as why perceived fairness might be an important moderator of these responses.

Responses to Ostracism

Various species rely on social groups for survival. As humans have arguably the most complex social structure, individuals in our species have a fundamental need to establish and maintain social relationships (Whiten, Hinde, Laland, & Stringer, 2011). Feeling like a part of one's respective social groups can enhance perceptions of security, facilitate reproductive opportunities, and positively contribute to both physical and mental health (Baumeister & Leary, 1995). However, various factors may lead one to be ostracized. Williams (2007) defines ostracism as "ignoring and excluding individuals or groups by individuals or groups" (p. 427). From an evolutionary perspective, it is likely that our ancestors ostracized group members who threatened the success of the group as a whole. These threats would have included those individuals who exhibit disease cues (e.g., pox or lesions), or those considered to be poor social exchange partners (e.g., free riders). Additionally, exclusion may have been adaptively employed to establish connections with other social groups for the purpose of intergroup competition and exploitation (Kurzban & Leary, 2001).

As a consequence, individual group members likely evolved the capacity to be hypersensitive to ostracism cues in order to maintain group membership and thereby promote their survival (and subsequently facilitate reproductive opportunities). From a signal detection theory framework, individuals are more likely to act in response to potential ostracism cues that are not present (false alarms) than to not take action in response to cues that are present (misses). In essence, it is much more detrimental to be

rejected due to a failure to act rather than acting unnecessarily in response to cues misperceived to be potential signs of rejection (see Pashler & Wixted, 2002 for a review of signal detection theory). In the face of differential costs associated with each type of response (i.e., cost of perceiving an ostracism cue where none actually exists versus failing to notice an ostracism cue where one is actually present), organisms with psychological mechanisms designed to be more likely to make the least costly error—namely, responding in an affiliative way to an erroneous ostracism cue rather than failing to respond to an actual ostracism event—would have more effectively maintained social relationships (Williams, 2007).

Additionally, research has shown that not only is social rejection an aversive experience to be avoided whenever possible, but also that social rejection shares some of the same neural pathways as physical pain (Macdonald & Leary, 2005). A study by Eisenberger and Lieberman (2004) showed that individuals who were excluded from a ball-tossing game showed heightened activation of the dorsal anterior cingulate cortex (a brain area that plays a key role in physical pain) compared to participants who were included in the game. This experience of physical pain as a result of ostracism may lead individuals to respond very efficiently to potential rejection cues, thus aiding in the maintenance of social ties.

Due to the aversive nature of the ostracism experience, it seems reasonable that individuals would be especially motivated to engage in prosocial actions to regain group membership following social ostracism. In fact, some studies have supported this argument. For example, nonconscious behavioral mimicry is a phenomenon in which individuals tend to unknowingly mimic subtle nonverbal behaviors of interaction

partners. This mimicry leads to greater feelings of 'liking' on behalf of the individual being mimicked (Chartrand & Bargh, 1999). Research by Lakin and colleagues (2008) showed that individuals who were excluded in an initial interaction engaged in more nonconscious behavioral mimicry in a subsequent interaction than those who were included. Additionally, ostracized individuals have been shown to exhibit greater desire to meet new people (Maner et al., 2007) and greater levels of conformity (Williams, Cheung, & Choi, 2000). Each of these behaviors appears to be a prosocial response to the experience of ostracism enacted in order to form or reestablish valuable social connections.

On the other hand, a variety of research has documented antisocial responses to ostracism. These responses manifest themselves in a variety of ways. For example, Twenge and colleagues (2001) demonstrated that individuals who had been ostracized by an interaction partner behaved more aggressively toward the individual who had excluded them as well as a neutral other. In this case, the aggression took the form of negative job evaluations and aversive noise blasts. Research by Poon and colleagues (2013) demonstrated that individuals who recalled a time that they had been excluded felt greater levels of entitlement and reported higher amounts of dishonest behavioral intentions. Similarly, Warburton, Williams, and Cairns (2006) showed that participants who were ostracized in a ball-tossing task allocated more hot sauce to another participant whom they knew did not like spicy foods. The purpose of the present study was to reconcile these disparate findings by demonstrating that the perceived unfairness of the rejection experience may be a primary factor in explaining antisocial reactions to

ostracism, and that such antisocial reactions would be mediated by increased feelings of anger and entitlement for unfairly ostracized individuals.

The Role of Anger and Entitlement in Ostracism

In an initial exploration into varied responses to social exclusion, a handful of recent studies have attempted to establish which factors might influence whether social rejection leads to prosocial versus antisocial responses, as well as the mechanisms potentially implicated in producing these responses. For example, Poon and colleagues (2013) established that entitlement mediated the effect of ostracism on dishonest intentions. In a series of five experiments, they employed multiple techniques to induce feelings of rejection, including a simple ostracism recollection task, the recollection of a work-related experience, and participation in an online ball-tossing game. Across their studies, they found that the experience of ostracism led individuals to display heightened dishonest behavioral intentions as well as more actual dishonest behavior than individuals in their control conditions. In their final three experiments, mediation analyses showed that entitlement mediated the effect of ostracism on both dishonest intentions and dishonest behavior; that is, ostracism increased participants' sense of entitlement, which in turn led to heightened dishonest behavioral intentions (and actual dishonest behavior). A particular strength of their research was the establishment of a negative control condition. Specifically, they showed that individuals who recalled a time they were rejected exhibited more entitlement and dishonesty than individuals who recalled an experience of social inclusion or physical pain. Thus, these particular antisocial responses (dishonest behavior and dishonest intentions) following ostracism seem to be due to the ostracism experience itself rather than a general negative experience.

Additionally, research by Chow et al. (2008), using a different manipulation of social ostracism, found evidence for a different mediating variable: anger. In their first study, individuals excluded from a ball-tossing game reported higher levels of anger, which mediated the effect of ostracism on antisocial behavior; specifically, increased allocation of unlikable snacks to the individuals who had ostensibly excluded them. In their second study, the researchers attempted to manipulate anger by ostracizing individuals for an anger-inducing (gender-based) or non-anger-inducing (poor performance) reason. They demonstrated that anger mediated the effect of ostracism on dishonest behavior, but only for those individuals in the anger-inducing condition. This research offers initial evidence that the nature of the ostracism experience, specifically, ostracism that elicits anger, may play an integral role in prompting antisocial responses to rejection (specifically, aggression towards the rejecter).

Perceptions of Fairness Related to the Ostracism Experience

As noted above, antisocial responses to ostracism seem to be mediated by increased feelings of anger and entitlement. What has yet to be determined by ostracism research is what aspect of the ostracism experience is responsible for invoking the anger and entitlement that ultimately drive antisocial responses. The concept of fairness or unfairness, as it relates to the ostracism experience, is an important consideration, and has yet to be addressed in almost all of the existing literature. Whether or not the experience of ostracism is perceived of as just or unjust (i.e., fair or unfair) may explain when ostracism produces the sense of entitlement and the emotion of anger that have been implicated in antisocial responses to rejection in past research (e.g., Chow et al., 2008; Poon et al., 2013). For example, Smart Richman and Leary (2009) recently addressed the

issue of unfair treatment and anger. They cite research demonstrating that unfair treatment leads to angry reactions. This holds true for situations in which nothing is tangibly at stake, but an individual's image or self-esteem is threatened. These authors hypothesized that it is when ostracism is perceived of as unfair that it should produce antisocial responses; however, this hypothesis was not specifically tested. Individuals who are excluded for unfair or nebulous reasons should feel a variety of emotions (anger, entitlement, etc.) and then act in a way that promotes their own well-being.

Furthermore, research also indicates that perceptions of injustice can increase feelings of entitlement, such as a sense that one is not being listened to or is being treated disrespectfully (Miller, 2001). Two principal components of entitlement are identified: 1) interpersonal sensitivity, which is the belief that one is "entitled to polite and respectful treatment from others" (p. 531), and 2) accountability, which is the belief that one is "entitled to explanations and accounts" (p. 531). Thus, when individuals perceive an experience as unjust or unfair, it leads to increased feelings of anger and entitlement, both of which have been documented as mediators of antisocial responses to rejection.

Consistent with this logic, Tuscherer and colleagues (revise and resubmit) asked individuals to recall a time in which they were ostracized justly, unjustly, or to recall their previous day (control condition). They found that unfair ostracism led individuals to report greater antisocial intentions. While these authors demonstrate that unfair ostracism may be primarily responsible for antisocial responses to rejection, their research did not identify whether increased anger, entitlement, or both were mechanistically responsible for increased antisocial tendencies following unjust ostracism.

Present Research

The goal of the present research was to integrate previous research investigating antisocial responses to rejection by testing the hypothesis that it is only when ostracism is deemed unfair that individuals will demonstrate increased antisocial tendencies, and these elevated antisocial tendencies will be mediated by increases in perceived entitlement and anger. Although previous research has confirmed portions of these predictions, no research has yet tested this entire model, particularly regarding perceptions of injustice. For example, although Chow and colleagues (2008) found that ostracism related to anger produced angry emotions, which mediated increases in aggression, these authors did not specifically manipulate the ostracism experience to be just or unjust; rather, their aim was to manipulate anger in the rejection experience, which may only partially explain antisocial responses to social rejection. Furthermore, although Poon and colleagues (2013) demonstrate that ostracism leads to a heightened sense of entitlement, which mediates increased dishonest (antisocial) reactions to social rejection, these authors did not manipulate the perceived fairness of the ostracism experience to determine whether only ostracism that is perceived of as unfair leads to a heightened sense of entitlement and subsequent antisocial behavior. Finally, although Tuscherer and colleagues (revise and resubmit) demonstrate that unfair ostracism leads to increased antisocial tendencies, they did not identify a specific mechanism associated with injustice that leads to antisocial behavioral intentions.

As such, the current study intended to extend these findings in a number of important ways. First, this study integrates the previous findings by manipulating the perceived fairness of the ostracism experience (Tuscherer et al., in press) and including a negative control condition (Poon et al., 2013; based on the results of Pilot Study 2).

Furthermore, the current study includes both an antisocial behavioral outcome as a dependent measure—specifically dishonest behavioral intentions—and two potential mediators; specifically, sense of entitlement and sense of anger (Poon et al., 2013 and Chow et al., 2008, respectively). It was hypothesized that 1) compared to just ostracism and a negative control experience, unjust ostracism will lead to increased dishonest behavioral intentions, 2) compared to just ostracism and a negative control experience, unjust ostracism will lead to an increased sense of entitlement and anger and 3) this increased sense of entitlement and anger will mediate dishonest behavioral intentions for participants in the unjust ostracism condition.

Study Overview

To test these hypotheses, participants were randomly assigned to one of three writing tasks which served as motivational primes: just ostracism, unjust ostracism (Tuscherer et al., in press), or a negative affect control condition on a between-participants basis (Poon et al., 2013). Participants then completed a manipulation check to ensure that the manipulation was effective at eliciting feelings of ostracism (Poon et al., 2013), a self-report measure of anger (Chow et al., 2008), a measure assessing their current sense of entitlement (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004), a measure of their intentions to behave dishonestly (Poon et al., 2013) as well as demographic information. To validate some of the materials for this study, two pilot studies were conducted to identify 1) the most effective control condition for this study (i.e., whether to use a negative affect control condition or neutral affect control condition), 2) an effective measure of entitlement, and 3) an effective measure of

dishonest behavioral intentions for the current study sample. These pilot studies are reported below.

CHAPTER II

PILOT STUDY 1

Pilot Study 1 served as a replication of Poon et al. (2013)—specifically their Experiment 3—in order to assess which measures of entitlement and dishonest behavior to use for the primary study.

Method

Participants

146 participants participated for partial course credit or extra credit, including 30 men and 116 women (Mean age=21.10 years, *SD* age=4.60 years). Twelve participants were excluded for failing to adhere to the instructions of the essay task (i.e., those who failed to recall a related experience or indicated that they were not bothered by ostracism). Thus, the final sample included 134 participants.

Materials and Procedure

The materials for this study consisted of a task to manipulate the experience of social rejection as well as a variety of questionnaires. First, participants were presented with a writing prime on a between-participants basis, asking them to recall a time they were rejected from a group or a time they had experienced physical pain (Poon et al., 2013). The specific writing primes consisted of the following prompts:

Ostracism Prime: Think about a time you were excluded from a group (e.g., group of friends, teammates, organizations you belong to) and how it made you feel. Provide a description of this experience in the space below. Please provide as much detail as possible, writing for approximately five minutes, before continuing with the experiment.

Physical Pain Prime: Think about a time you experienced physical pain and how it made you feel. Provide a description of this experience in the space below. Please provide as much detail as possible, writing for approximately five minutes, before continuing with the experiment.

Participants also completed a two-item ostracism manipulation check (“I feel excluded” and “I feel ignored;” 1=*Strongly Disagree*; 7=*Strongly Agree*, see Appendix A), a measure of entitlement (Appendix B; Campbell et al., 2004) and a hypothetical negotiation task as a measure of dishonest intentions (Appendix C; Poon et al., 2013). A demographic form was included as well (Appendix D).

Undergraduate participants were recruited using SONA systems and provided with an online link to the study. Each participant provided informed consent for their participation. After completing the writing task they had been randomly assigned to (ostracism or physical pain), participants then completed the exclusion manipulation check, entitlement questionnaire, hypothetical negotiation procedure (which assessed dishonest behavioral intentions), and demographic form. Finally, participants were presented with a debriefing form and thanked for their participation.

Results

Manipulation Check

The two items of the manipulation check were significantly correlated, $r(132)=.86, p<.01$; therefore, they were aggregated for each participant to create a single item, where higher values corresponded to greater feelings of being ignored and excluded. The results of the manipulation check were significant, $t(132)=2.91, p<.01, d=.50$, suggesting that the manipulation of ostracism was effective. Specifically,

participants in the ostracism condition ($M=3.12$, $SD=1.88$) felt more excluded and ignored than participants in the physical pain condition ($M=2.28$, $SD=1.46$).

Entitlement

Because the entitlement scale was reliable ($\alpha=.86$), we averaged participants' responses into a composite entitlement score, where higher values indicated a greater sense of entitlement. An independent samples t -test was conducted to compare the effect of condition (social exclusion vs physical pain) on overall entitlement. The results were not significant, $t(132)=.77$, $p=.45$, $d=.13$; specifically, participants' sense of entitlement in the social pain condition ($M=3.79$, $SD=1.18$) did not differ from participants' sense of entitlement in the physical pain condition ($M=3.64$, $SD=1.08$), although the group means were in the predicted direction. We also analyzed the impact of the ostracism manipulation across the individual entitlement questions, to determine whether the manipulation of social exclusion impacted participants' responses differently for certain questions (See Table 1 for these analyses).

Table 1

Effect Sizes for all Entitlement Items

	<i>Ostracism Mean (SD)</i>	<i>Physical Pain Mean (SD)</i>	<i>Statistic</i>	<i>Cohen's D (Effect Size)</i>
Item 1 ("I honestly feel I'm just more deserving than others.")	3.18 (1.74)	2.59 (1.44)	$p=.03$	0.37
Item 3 ("If I were on the Titanic, I would deserve to be on the first lifeboat.")	3.38 (1.66)	3.09 (1.65)	$p=.31$	0.18
Item 4 ("I demand the best because I'm worth it.")	3.82 (1.86)	3.54 (1.79)	$p=.39$	0.15

Table 1 (continued).

	<i>Ostracism Mean (SD)</i>	<i>Physical Pain Mean (SD)</i>	<i>Statistic</i>	<i>Cohen's D (Effect Size)</i>
Item 9 (“I feel entitled to more of everything.”)	3.05 (1.52)	2.87 (1.47)	$p=.49$	0.12
Item 2 (“Great things should come to me.”)	4.14 (1.73)	3.99 (1.65)	$p=.61$	0.09
Item 8 (“Things should go my way.”)	3.78 (1.37)	3.76 (1.62)	$p=.94$	0.01
Item 6 (“I deserve more things in my life.”)	4.95 (1.52)	4.94 (1.69)	$p=.96$	0.01
Item 5 (“I do not necessarily deserve special treatment.”)	3.30 (1.74)	3.44 (1.70)	$p=.49$	-0.08
Item 7 (“People like me deserve an extra break now and then.”)	4.48 (1.63)	4.53 (1.66)	$p=.88$	-0.03

Table 1 shows that the three items with the greatest effect sizes were item 1 ($d=.37$), item 3 ($d=.18$) and item 4 ($d=.15$). In general, most items in the entitlement measure demonstrated rather low effect sizes. However, Item 1 demonstrated a significant difference between the ostracism and physical pain conditions in the predicted direction.

Dishonest Intentions

An independent samples t -test was conducted to determine the effect of condition (social exclusion vs physical pain) on dishonest intentions. The results of this analysis were not significant, $t(132)=.06$, $p=.95$, $d=.01$; specifically, the mean dishonest intentions score for participants in the social exclusion condition ($M= 76.67$, $SD=27.98$) did not differ from participants in the physical pain condition ($M=76.38$, $SD= 26.98$), although the means were in the predicted direction.

Discussion

Although the results of Pilot Study 1 confirmed that our manipulation of social exclusion was effective, our measure to assess differences in entitlement across conditions was not entirely effective; however, one item of the scale showed a reliable difference between the social exclusion and control conditions in the predicted direction, indicating that this item may be a valuable measure of entitlement in the primary study. Furthermore, the measure of dishonest behavioral intentions was ineffective, since it did not document differential dishonest intentions across the experimental conditions. As such, a second pilot study was conducted to test additional materials for assessing entitlement and dishonest behavioral intentions.

CHAPTER III

PILOT STUDY 2

Because the 9-item entitlement scale and dishonest behavioral intentions measure from Pilot Study 1 were largely ineffective, Pilot Study 2 included a different measure of entitlement, dishonest behavioral intentions, as well as an additional control condition (no affect control condition) to determine the most effective experimental manipulations and measures for testing the current proposal's main hypotheses.

Method

Participants

242 participants participated for partial course credit or extra credit, including 55 men and 185 women (Mean age of 20.30, $SD=3.53$ years). Thirteen participants were excluded for not following the directions of the writing prime task (i.e., those who failed to recall a related experience or indicated that they were not bothered by ostracism).

Materials and Procedure

The materials for this study included the writing prime task from Pilot Study 1, but with an additional control condition along with the ostracism and physical pain conditions. The control condition prime is listed below:

Control Prime: In the space below, provide a description of your day yesterday. Please provide as much detail as possible, writing for approximately five minutes, before continuing with the experiment.

The same two-item exclusion manipulation check (“I feel excluded” and “I feel ignored”) was employed. This study also utilized a six-item measure of entitlement (Appendix E) and a four item measure of dishonest intentions (Appendix F)—both drawn from Poon and colleagues (2013; Studies 3 and 1, respectively)—and a demographic form (Appendix D).

The procedure for this experiment was similar to that utilized in Pilot Study 1. Participants were recruited using SONA systems, and provided with an online link to the study. All participants provided informed consent prior to their participation. Participants in the social exclusion condition were asked to think about a time they had been excluded from a group and write about the experience in as much detail as possible. Participants in the physical pain condition were asked to think about a time they had experienced physical pain and then write about the experience in as much detail as possible. In this study, we also included a control condition in which participants were simply asked to write about their experiences on the previous day. Participants then completed an exclusion manipulation check followed by the entitlement questionnaire and the measure of dishonest behavioral intentions. In this study, participants were asked to consider how likely they would be to behave dishonestly in four scenarios: 1) Falsify resume in a job application, 2) keep cash from a wallet lying on the street, 3) steal exam paper, 4) copy another’s essay (for all scenarios, 1=*not at all likely*; 7=*very likely*). Following these procedures, participants completed a demographic form, were presented with a debriefing form, and thanked for their participation.

Results

Manipulation Check

The two items of the manipulation check were significantly correlated, $r(225)=.90, p<.01$; therefore, they were aggregated for each participant to create a single item (with higher values being associated with greater feelings of being ignored and excluded). A one-way between-subjects ANOVA revealed that our manipulation of ostracism was effective, $F(2, 226)=5.70, p<.01, \eta_p^2=.051$. LSD post-hoc tests revealed that participants in the ostracism condition ($M=3.25, SD=1.80$) felt more excluded and ignored than participants in the physical pain condition ($M=2.35, SD=1.57$), $p<.01, d=.53$, and the control condition ($M=2.54, SD=1.75$), $p=.01, d=.40$. Additionally, feelings of exclusion were not different for those in the control condition ($M=2.54, SD=1.75$) as compared to the physical pain condition ($M=2.35, SD=1.57$), $p=.48, d=.11$. Given that the effect size for the difference between the ostracism and physical pain conditions was descriptively larger than for the difference between the ostracism and no affect control condition, this analysis serves as preliminary evidence that the physical pain condition may be a more effective control condition.

Entitlement

Because the entitlement measure was reliable ($\alpha=.93$), we averaged participants' responses into a composite entitlement score, where higher values reflected a heightened sense of entitlement. A one-way between-subjects ANOVA was conducted to compare the effect of condition (social exclusion, physical pain, control) on overall entitlement. As in Pilot Study 1, the results were non-significant, $F(2,225)=1.11, p=.33, \eta_p^2=.01$. To further assess why this measure did not align with our hypotheses, item-by-item analyses

were conducted (See Table 2). Table 2 also shows that the two items with the greatest effect sizes were item 5 ($\eta_p^2=.02$) and item 2 ($\eta_p^2=.01$). As in Pilot Study 1, the effect sizes were generally small. Although none of the differences were statistically reliable, the difference between exclusion and physical pain was marginally different for Item 5 ($p=.06$) and was trending toward significance for Item 6 ($p=.09$) in the predicted direction (see Table 3 for post-hoc results).

Table 2

Effect Sizes for all Entitlement Items

	<i>Ostracism Mean (SD)</i>	<i>Physical Pain Mean (SD)</i>	<i>Control Mean (SD)</i>	<i>Partial Eta Squared (Effect Size)</i>	<i>Statistic</i>
Item 5 (“I deserve better in my life than others to compensate for my sufferings.”)	3.01 (1.80)	2.50 (1.41)	2.72 (1.60)	0.02	$p=.15$
Item 2 (“I am entitled to get more resources than others.”)	3.30 (1.83)	2.86 (1.62)	2.90 (1.57)	0.01	$p=.22$
Item 6 (“I feel entitled to more of everything than others.”)	2.86 (1.70)	2.42 (1.41)	2.58 (1.54)	0.01	$p=.23$
Item 4 (“I honestly feel I’m just more deserving than others.”)	3.00 (1.69)	2.61 (1.48)	2.90 (1.72)	0.01	$p=.32$
Item 3 (“I am entitled not to suffer too much.”)	3.41 (1.67)	3.31 (1.77)	3.02 (1.64)	0.01	$p=.34$
Item 1 (“I am entitled to gain more than others.”)	3.16 (1.74)	2.95 (1.59)	2.93 (1.52)	0.004	$p=.63$

Table 3

LSD Post-Hoc Results

Item	Post-Hoc Comparisons		Statistic
Item 1 (“I am entitled to gain more than others.”)	Exclusion (<i>M</i> =3.16, <i>SD</i> =1.74)	Physical Pain (<i>M</i> =2.95, <i>SD</i> =1.59)	<i>p</i> =.43
		Control (<i>M</i> =2.93, <i>SD</i> =1.51)	<i>p</i> =.38
Item 2 (“I am entitled to get more resources than others.”)	Exclusion (<i>M</i> =3.30, <i>SD</i> =1.83)	Physical Pain (<i>M</i> =2.86, <i>SD</i> =1.62)	<i>p</i> =.12
		Control (<i>M</i> =2.90, <i>SD</i> =1.57)	<i>p</i> =.15
Item 3 (“I am entitled not to suffer too much.”)	Exclusion (<i>M</i> =3.41, <i>SD</i> =1.67)	Physical Pain (<i>M</i> =3.31, <i>SD</i> =1.77)	<i>p</i> =.71
		Control (<i>M</i> =3.02, <i>SD</i> =1.64)	<i>p</i> =.16
Item 4 (“I honestly feel I’m just more deserving than others.”)	Exclusion (<i>M</i> =3.00, <i>SD</i> =1.67)	Physical Pain (<i>M</i> =2.61, <i>SD</i> =1.48)	<i>p</i> =.15
		Control (<i>M</i> =2.90, <i>SD</i> =1.72)	<i>p</i> =.71
Item 5 (“I deserve better in my life than others to compensate for my sufferings.”)	Exclusion (<i>M</i> =3.01, <i>SD</i> =1.80)	Physical Pain (<i>M</i> =2.50, <i>SD</i> =1.41)	<i>p</i> =.06
		Control (<i>M</i> =2.72, <i>SD</i> =1.60)	<i>p</i> =.26
Item 6 (“I feel entitled to more of everything than others.”)	Exclusion (<i>M</i> =2.86, <i>SD</i> =1.70)	Physical Pain (<i>M</i> =2.42, <i>SD</i> =1.41)	<i>p</i> =.09
		Control (<i>M</i> =2.58, <i>SD</i> =1.54)	<i>p</i> =.28

Dishonest Intentions

Because the individual items assessing dishonest intentions were reliable ($\alpha=.76$), participants' responses were averaged into a composite dishonest behavioral intentions score, where higher values indicated greater dishonest behavioral intentions. A one-way between-subjects ANOVA, with condition (social exclusion, physical pain, control) as the independent variable revealed a marginally significant effect of condition, $F(2,225)=2.75, p=.07, \eta_p^2=.02$. Analysis revealed that Levene's test of Homogeneity of Variance was violated, and therefore post-hoc analyses were conducted using Games-Howell corrections. This analysis showed that individuals in the social exclusion condition ($M=2.58, SD=1.84$) were marginally more likely to indicate dishonest intentions than those in the physical pain condition ($M=1.99, SD=1.15$), $p=.06, d=.38$. Additionally, there was no significant difference in dishonest intentions between individuals in the physical pain condition ($M=1.99, SD=1.15$) compared to those in the control condition ($M=2.31, SD=1.49$), $p=.19, d=.24$. Finally, there was no difference between those in the exclusion condition ($M=2.58, SD=1.84$) compared to those in the neutral control condition ($M=2.31, SD=1.49$), $p=.29, d=.16$. Given that dishonest behavioral intentions were significantly different between the social exclusion and physical pain conditions in the predicted direction, this provides additional evidence that the physical pain condition is best suited to be the control condition for the primary study (considering that the social exclusion and neutral control conditions did not differ significantly in dishonest behavioral intentions).

Discussion

The results of the second pilot study aided in the identification of an effective assessment of dishonest behavioral intentions to utilize as an index of antisocial behavior for the current proposal. Furthermore, this study revealed that a negative affect control condition (i.e., physical pain) may serve as a more effective control condition compared to a neutral affect control condition, based on the marginally significant difference in dishonest behavioral intentions documented between the social and physical pain conditions (no difference in dishonest behavioral intentions emerged when comparing the social pain to the neutral affect control condition). Finally, this study identified a potential additional entitlement question to include in the current research (specifically, Entitlement Item 5, see Appendix H). We combined this item with Entitlement Item 1 from Pilot Study 1 (see Appendix B), to create an entitlement measure for the proposed research.

CHAPTER IV

STUDY 1

As noted above, the key purpose of the present study was to determine how the perceived (un)fairness of an ostracism experience influences individuals' sense of entitlement, feelings of anger, and dishonest behavioral intentions. Participants were randomly assigned to recall either a fair ostracism experience, unfair ostracism experience, or a physical pain experience, and then completed measures assessing their sense of entitlement, feelings of anger, and dishonest behavioral intentions. We hypothesized that recalling an unfair ostracism experience should lead to a greater report of feelings anger, entitlement, and dishonest intentions. Additionally, it was hypothesized that self-reported anger and entitlement would mediate the relationship between unjust ostracism and dishonest intentions. This relationship should not be observed for those in the fair ostracism or physical pain conditions.

Method

Participants

213 participants participated for partial course credit, including 33 men, 179 women and 1 participant who did not disclose their gender (Mean age of 21.89, $SD=6.56$ years). Twenty-eight participants were excluded for not following the instructions of the essay task (i.e., participants who failed to recall a related experience or reported they are not bothered by rejection). This led to a sample consisting of 185 participants, including 26 men, 158 women, and 1 participant who did not disclose their gender (Mean age of 22.01 years, $SD=6.77$ years) which met our established goal of 180 participants.

Materials and Procedure

Participants were recruited using SONA systems, and received partial course credit. After providing informed consent, participants were randomly assigned to one of three conditions on a between-participants basis: just ostracism, unjust ostracism, or physical pain. Specifically, participants were asked to write an essay in which they recalled a personal experience in which they were rejected for something they had done wrong (just ostracism), a time they were rejected even though they had done nothing wrong (unjust ostracism), or a time they had experienced physical pain (physical pain). Participants then completed questionnaires assessing their feelings of rejection, anger, and entitlement, as well as a self-report of dishonest intentions and demographic information (see Appendices D-I). Specifically, the entitlement measure used in the current study consisted of two items: one item from Pilot Study 1, in which there was a significant difference between the ostracism and physical pain conditions (Item 1, $p=.03$; “I honestly feel I’m just more deserving than others.”), and one item from Pilot Study 2, in which there was a marginally significant difference between the ostracism and physical pain conditions (Item 5, $p=.06$; “I deserve better in my life than others to compensate for my sufferings.”). The anger measure was a single-item measure identical to that used by Chow and colleagues (2008; “I felt angry.”). The dishonest intentions measure was a four-item measure identical to that used by Poon and colleagues (2013) and validated in Pilot Study 2. After completing all of these procedures, participants were debriefed and thanked for their participation.

Results

Manipulation Check

The two manipulation check items (“I felt excluded” and “I felt ignored”) were significantly correlated, $r(183)=.86, p<.01$. Therefore, these two items were aggregated to create a single composite item, with higher values indicating greater feelings of being excluded and ignored. A one-way between-subjects ANOVA revealed a significant effect of condition, $F(2,182)=21.44, p<.01, \eta_p^2=.19$. However, because Levene’s test of Homogeneity of Variance was violated, $F(2,182)=5.81, p<.01$, post-hoc analyses were conducted using the Games-Howell correction. These post-hoc tests revealed that participants in both the just and unjust ostracism conditions felt more excluded and ignored than those in the physical pain condition, $ps<.01, ds=1.09$ and 1.03 , respectively (see Table 4 for descriptive statistics). There was no significant difference between participants in the just and unjust ostracism conditions, $p=.96, d=.05$. Thus, as expected, both just and unjust ostracism resulted in greater feelings of being excluded/ignored than did the manipulation of physical pain.

Entitlement

Because the two entitlement items were significantly correlated, $r(183)=.63, p<.01$, they were aggregated into a composite entitlement score, with higher values indicating a greater sense of entitlement. Contrary to the hypothesis that unjust ostracism would lead to increased perceptions of entitlement compared to just ostracism and physical pain, a one-way between-subjects ANOVA indicated that the impact of condition on entitlement perceptions was not significant, $F(2,182)=.084, p=.92, \eta_p^2=.001$ (see Table 4 for descriptive statistics).

Anger

A one-way between-subjects ANOVA, with condition as the independent variable, revealed that there was a significant effect of condition on self-reported anger, $F(2,182)=17.11, p<.01, \eta_p^2=.16$ (see Table 4 for descriptive statistics). Additionally, Levene's test of Homogeneity of Variance was violated, $F(2,181)=13.11, p<.01$. Therefore, post-hoc tests were conducted using Games-Howell corrections. This analysis revealed that participants in the just and unjust ostracism conditions reported significantly greater anger than those in the physical pain condition, $ps<.01, ds=.96$ and $.75$, respectively; however, there was no significant difference between the just and unjust ostracism conditions, $p=.38, d=.24$. These results were inconsistent with this study's prediction that unjust ostracism would produce greater anger than just ostracism.

Dishonest Intentions

Due to the acceptable reliability of the dishonest intentions questionnaire ($\alpha=.72$), an average dishonest intentions score was calculated for each participant, where higher values indicated greater endorsement of dishonest behavioral intentions. Although it was predicted that unjust ostracism would lead to greater dishonest intentions than just ostracism or physical pain, the one-way between-subjects ANOVA revealed no significant impact of condition on dishonest behavioral intentions, $F(2,182)=1.66, p=.19, \eta_p^2=.02$ (see Table 4 for descriptive statistics).

Table 4

Study 1, Analysis 1

	Just Ostracism	Unjust Ostracism	Physical Pain
Manipulation Check	4.21 (1.85)	4.12 (1.87)	2.46 (1.31)
Entitlement	2.42 (1.30)	2.43 (1.44)	2.33 (1.35)
Anger	5.54 (1.58)	5.15 (1.60)	3.71 (2.19)
Dishonest Intentions	1.67 (.88)	1.83 (1.25)	1.87 (1.19)

Note: This table displays the means for each group, with standard deviations in parenthesis.

Study 1 Alternative Analysis

While some participants were initially excluded for failing to follow the instructions of the essay writing prime task, it is worth noting that many participants may not have fully recalled an ostracism or physical pain experience due to the fact that they wrote a relatively short essay. Indeed, a visual inspection of participants' essays revealed that many individuals only wrote a few sentences when responding to the writing prompt, which is inconsistent with the instruction to write for approximately five minutes.

Therefore, an additional analysis was conducted that excluded participants who wrote shorter essays in order to determine whether or not the results would be influenced by the length of the essays written by participants. In essence, we sought to identify the participants whose responses would have reflected high fidelity to the instructions of the writing prompts to try to determine if our hypotheses were better supported. Specifically, Linguistic Inquiry and Word Count Software (LIWC; Pennebaker, Francis, & Booth, 2001) was used to calculate the word count of participants' essays.

Participants

Given that the mean essay length was 104.57 words, we excluded from the analysis participants whose essays were shorter than 100 words (N=101). The final

sample consisted of 84 participants (just ostracism=22; unjust ostracism=32; physical pain=30), including 7 men, 76 women, and 1 participant who did not disclose their gender (Mean age of 22.10 years, $SD=7.26$ years).

Results

Manipulation Check

A one-way between-subjects ANOVA revealed that there was a significant impact of writing prime condition on self-reported feelings of being excluded and ignored, $F(2,82)=6.61, p<.01, \eta_p^2=.14$. Additionally, Levene's test of Homogeneity of Variance was violated, $F(2,81)=3.41, p=.04$. As such, Games-Howell corrections were used in post-hoc analyses and revealed that those in the just ostracism and unjust ostracism conditions indicated greater feelings of being excluded and ignored than those in the physical pain condition, $ps<.01, ds=.86$ and $.87$ respectively (see Table 5 for descriptive statistics). There was no significant difference between those in the just ostracism and unjust ostracism conditions, $p=.96, d=.08$. This suggests that our manipulations of social exclusion were effective.

Entitlement

A one-way between-subjects ANOVA revealed that there was no impact of condition on feelings of entitlement, $F(2,82)=.35, p=.71, \eta_p^2=.01$ (see Table 5 for descriptive statistics). Contrary to our initial hypothesis that unjust ostracism would lead to greater feelings of entitlement, these results suggest that unjust ostracism did not lead to a greater sense of entitlement than recollection of a just ostracism or a control experience. Furthermore, the fact that neither just nor unjust ostracism produced a

greater sense of entitlement compared to the control condition is inconsistent with previous research (Poon et al., 2013).

Anger

The one-way between-subjects ANOVA on this single item measure revealed that there was a significant impact of condition of self-reported anger, $F(2,82)=9.64$, $p<.01$, $\eta_p^2=.19$; however, as with the first analysis, the pattern was not consistent with the primary hypothesis. While both those in the just ostracism and unjust ostracism conditions reported significantly greater anger than those in the physical pain condition ($p<.01$, $d=1.11$; $p<.01$, $d=.82$), there was no significant difference between the just and unjust ostracism conditions ($p=.24$, $d=.35$). (see Table 5 for descriptive statistics).

Dishonest Intentions

A one-way between-subjects ANOVA showed that there was no significant effect of condition on participants' dishonest intentions, $F(2,82)=2.32$, $p=.11$, $\eta_p^2=.05$ (see Table 5 for descriptive statistics). An analysis of homogeneity of variance revealed that this assumption was violated, $F(2,81)=4.50$, $p=.01$. Although this omnibus analysis was non-significant, we conducted follow-up tests using the Games-Howell correction (due to the violation of homogeneity of variance), as the omnibus analysis was trending toward significance ($p=.11$). Interestingly, those in the just ostracism condition reported significantly lower dishonest intentions than those in the unjust ostracism and physical pain conditions, $ps=.05$, $ds=.64$. There was no significant difference between those in the unjust ostracism and physical pain conditions, $p=.99$, $d=.02$. This suggests that rather than unjust ostracism leading to an *increase* in dishonest intentions, it may be the case

that just ostracism leads to a *decrease* in dishonest intentions, at least in the context of this alternative analysis.

Table 5

Study 1, Alternative Analysis

	Just Ostracism	Unjust Ostracism	Physical Pain
Manipulation Check	4.30 (2.20)	4.13 (1.81)	2.70 (1.47)
Entitlement	1.84 (.99)	2.05 (1.19)	2.08 (1.08)
Anger	5.55 (1.77)	4.94 (1.70)	3.40 (2.06)
Dishonest Intentions	1.28 (.40)	1.94 (1.41)	1.97 (1.46)

Note: This table displays the means for each group, with standard deviations in parenthesis.

Mediational Analyses

Although the between-subjects effects for the impact of condition on the mediating variables (entitlement and anger) and the key outcome variable (dishonest intentions) were not consistently statistically significant, we conducted additional analyses to assess the mediational pathway between these variables using Model 4 of Hayes' (2013) PROCESS macro (1000 bootstrap samples). This analysis is important, as research indicates that it is valuable to estimate an indirect effect, even if individual pathways in the model are not significant (Hayes, 2009). We conducted these mediational analyses for both the primary and secondary analyses in both Study 1 and Study 2. None of these models yielded significant patterns of mediation, nor did they yield information beyond the analyses reported in the text. As such, the results of these mediational tests are not reported.

Study 1 Discussion

While the results of Study 1 did not support the initial hypotheses, there were two particularly interesting findings that emerged which we determined warranted conducting

a follow-up study. First, feelings of anger were higher in both of the ostracism conditions relative to the physical pain condition (see Tables 4 and 5). However, the two ostracism conditions were not significantly different from each other. Although it may be sensible for both just and unjust ostracism to produce elevated feelings of anger, we had hypothesized that anger would be significantly higher for participants in the unjust compared to just ostracism conditions. It may have been the case that our assessment of anger was not nuanced enough to capture differences between the just and unjust ostracism conditions. Specifically, it may be the case that the anger produced by unfair ostracism is anger that is directed toward other people (because they have unfairly treated the participant), whereas the anger produced by fair ostracism is anger that is directed toward the self (for engaging in behaviors that made the ostracism experience seem justified; Tangney, Wagner, Fletcher, & Gramzow, 1992). Thus, Study 2 included measures that assessed self-versus other-directed anger to test this additional hypothesis.

Second, and perhaps more interestingly, Study 1 found that participants in the just ostracism condition reported significantly lower dishonest behavioral intentions than those in the unjust ostracism and physical pain conditions, at least when assessing participants whose essays were longer (Study 1 Alternative Analysis). Therefore, it seems that rather than a sense of injustice leading to an *increase* in dishonest intentions, it may be the case that a sense of justice leads to a *decrease* in dishonest intentions. Thus, an additional goal of Study 2 was to determine if this pattern of findings from Study 1 regarding dishonest behavioral intentions replicated in a more diverse sample of participants.

Thus, Study 2 included additional assessments of anger, specifically participants' self-versus other-directed anger (Appendix J) and included a more diverse sample of participants (using Amazon's Mechanical Turk online recruitment tool). It was predicted that if our original hypotheses were correct, unjust ostracism participants would display higher dishonest behavioral intentions than just ostracism and control participants, greater feelings of entitlement, and more other-directed anger. Furthermore, feelings of entitlement and other-directed anger would mediate dishonest behavioral intentions for unjust ostracism participants. Alternatively, if the Study 1 finding that just ostracism participants displayed lower dishonest behavioral intentions compared to unjust ostracism and control participants replicated, this finding would potentially be mediated by greater self-directed anger for just ostracism participants than unjust and control participants. In essence, just ostracism participants' anger toward themselves may lead them to display reduced dishonest intentions, in order to correct for their behavioral that resulted in ostracism in the first place. In fact, making amends for perceived transgressions is a common phenomenon in both humans and non-human primates (Silk, 1998).

CHAPTER V

STUDY 2

The purpose of this additional data collection was to investigate self-reported feelings of anger in more detail. Specifically, in addition to being asked about general feelings of anger, participants were asked whether the situation they recalled made them angry at themselves or angry at the other individuals involved (see Appendix J for specific items). This study was identical to the initial study in all other respects.

Method

Participants

219 participants were provided monetary compensation (\$.30) for their participation via Amazon's Mechanical Turk program. This is an online program run through Amazon.com that allows participants from across the world to participate in research experiments. Data collected using this source have been shown to be very reliable, and even more generalizable, given the greater diversity of the subject population (Buhrmester et al., 2011). For our purposes, participation was limited to individuals within the United States to ensure proper comprehension of the research tasks. We also only included participants who were currently enrolled in a college or university because two of the four dishonest behavioral intentions were related to cheating in a school setting. 23 participants were excluded for not following the essay task instructions (i.e., participants who failed to recall a related experience or reported they are not bothered by rejection). The final sample consisted of 196 participants (Mean age=25.82, $SD=7.03$; 82 men, 114 women).

Materials and Procedure

The materials and procedure for this study were identical to Study 1, with the exception of the anger questionnaire (see Appendix J) and the recruitment of participants through Amazon's Mechanical Turk Survey Tool. After providing informed consent, participants were randomly assigned to one of three conditions: just ostracism, unjust ostracism, or physical pain. They were asked to write an essay in which they recalled a personal experience in which they were rejected for something they had done wrong (just ostracism), a time they were rejected even though they had done nothing wrong (unjust ostracism), or a time they had experienced physical pain (physical pain). Participants then completed questionnaires assessing their feelings of rejection, anger, and entitlement, as well as a self-report of dishonest intentions and demographic information. Finally, participants were debriefed and thanked for their participation.

Results

Manipulation Check

Correlational analysis revealed that the two manipulation check items ("I felt excluded" and "I felt ignored") were significantly correlated, $r(194)=.74, p<.01$. Therefore, they were combined into a single item, with higher scores indicating greater feelings of being excluded and ignored. A one-way between-subjects ANOVA showed that our manipulation of ostracism via the essay prime was effective, $F(2, 192)=31.82, p<.01, \eta_p^2=.25$ (see Table 6 for descriptive statistics). Specifically, LSD post-hoc comparisons showed that those in the just ostracism and unjust ostracism conditions felt significantly more excluded and ignored than those in the physical pain condition,

$ps < .01$, $ds = 1.12$ and 1.20 respectively. There was no significant difference between those in the just ostracism and unjust ostracism conditions, $p = .42$, $d = .16$.

Entitlement

Correlational analysis revealed that the two entitlement items were significantly correlated, $r(194) = .70$, $p < .01$. Therefore, they were aggregated into a single item for assessment of entitlement, where higher values indicated a greater sense of entitlement. A one-way between-subjects ANOVA revealed that there was little impact of writing prime condition on feelings of entitlement, $F(2,192) = 1.02$, $p = .36$, $\eta_p^2 = .01$ (see Table 6 for descriptive statistics). As in Study 1, these results contradict our initial hypothesis that unjust ostracism would lead to greater feelings of entitlement compared to just ostracism and physical pain.

General anger

To maintain consistency with Study 1, participants were asked to indicate their anger in general as a result of the situation they recalled. A one-way between-subjects ANOVA revealed that there was a significant impact of condition on self-reported general anger, $F(2,192) = 18.56$, $p < .01$; however, the pattern was inconsistent with this study's hypotheses. As in Study 1, LSD post-hoc tests revealed that both just and unjust ostracism led to greater feelings of anger than did physical pain, $ps < .01$, $ds = .79$ and $.97$ respectively. There was no significant difference between the just and unjust ostracism conditions, $p = .47$, $d = .14$. This pattern, while inconsistent with our initial hypotheses, is consistent with Study 1 in which both just and unjust ostracism conditions reported significantly greater anger than the physical pain condition.

Self-Directed and Other-Directed anger

Given that all participants were asked about their feelings of anger toward themselves as well as their feelings of anger about others, a 2 (self versus other anger) x 3 (just ostracism, unjust ostracism, physical pain) mixed model ANOVA, with repeated measures over the first factor, was conducted to determine the effect of writing prime condition on individual perceptions of anger (directed toward oneself or others) in the recollection of an ostracism experience. The results of this analysis revealed a main effect of anger type, $F(1,192)=5.75, p=.02., \eta_p^2=.03$, such that regardless of condition, participants reported greater overall feelings of anger directed towards others than anger directed towards the self. There was also a main effect of condition, $F(2,192)=17.43, p<.01, \eta_p^2=.15$. LSD post-hoc tests demonstrated that, regardless of anger type, participants in both the just and unjust ostracism conditions reported greater anger than those in the physical pain condition, $ps=.01$ and $.03, ds=.80$ and $.86$, respectively. There was no significant difference between those in the just ostracism and unjust ostracism conditions, $p=.79, d=.02$. Importantly, there was a significant interaction between condition and anger type, $F(2,192)=21.67, p<.01, \eta_p^2=.18$ (see Table 6 for descriptive statistics for these two variables). To better understand this interaction, separate analyses of self-directed anger and other-directed anger were conducted to understand the impact of the writing prime condition.

Self-Directed Anger

A one-way between-subjects ANOVA, with self-directed anger as the dependent measure, revealed no significant effect of condition, $F(2,192)=1.04, p=.36, \eta_p^2=.01$ (see Table 6 for descriptive statistics). Therefore, the hypothesis that just ostracism would lead

to greater feelings of self-directed anger than unjust ostracism was not supported. These results suggest that there is little link between perceptions of fairness in the ostracism experience and subsequent feelings of anger directed toward oneself.

Other-Directed Anger

A one-way between-subjects ANOVA on other-directed anger showed that there was a significant impact of condition on this variable, $F(2,192)=42.30, p<.01, \eta_p^2=.31$ (see Table 6 for descriptive statistics). Additionally, Levene's test of Homogeneity of Variance was violated, $F(2,192)=3.54, p=.03$. As such, post-hoc tests using Games-Howell corrections were used to account for this violation. These tests showed that those in both the just ostracism and unjust ostracism conditions reported significantly more other-directed anger than those in the physical pain condition, $ps<.01, ds=1.1$ for both comparisons. There was no significant difference between those in the just and unjust ostracism conditions, $p=.16, d=.34$. However, these results are also not consistent with this study's new hypothesis. Specifically, unjust ostracism did not lead to greater anger towards others relative to just ostracism. In fact, it seems that regardless of perceptions of fairness, ostracism in general leads to anger directed toward the other individuals responsible for rejecting the person.

Dishonest Intentions

Once again, this scale was shown to be reliable, $\alpha=.82$. Therefore, the four items were aggregated into a single composite score, in which higher values reflect greater feelings of dishonest behavioral intentions. A one-way between-subjects ANOVA showed that there was little impact of condition on dishonest intentions, $F(2,193)=.38, p=.68, \eta_p^2=.004$ (see Table 6 for descriptive statistics). Thus, the results of this analysis failed to

provide evidence for our initial hypothesis that unjust ostracism would lead to more dishonest behavioral intentions compared to just ostracism and physical pain. This analysis also failed to replicate the surprising finding from Study 1 in which just ostracism led to reduced dishonest behavioral intentions compared to unjust ostracism and physical pain.

Table 6

Study 2, Analysis 1

	Just Ostracism	Unjust Ostracism	Physical Pain
Manipulation Check	4.77 (1.45)	5.01 (1.64)	3.03 (1.65)
Entitlement	3.06 (1.54)	3.01 (1.42)	2.73 (1.34)
General Anger	5.32 (1.53)	5.53 (1.36)	4.01 (1.76)
Self-Anger	4.35 (2.10)	3.83 (1.92)	4.05 (1.94)
Other-Anger	5.03 (1.93)	5.60 (1.43)	2.93 (1.88)
Dishonest Intentions	2.78 (1.98)	2.78 (1.85)	3.02 (1.91)

Note: This table displays the means for each group, with standard deviations in parenthesis.

Study 2: Alternative Analysis

As with Study 1, an additional analysis was conducted to determine whether essay length would influence tests of our hypotheses. The same essay length exclusion criterion was used for this analysis as was used in the alternative analysis of Study 1, given that the average essay length was very similar (in this case, Mean Essay Length=97.22, $SD=60.00$). The purpose of this additional analysis was to determine whether or not longer essays (and as a result better “quality” essays) would produce different results than those who wrote shorter essays.

Participants

In this analysis, consistent with the logic of the alternative analysis conducted in Study 1, an additional 119 participants were excluded for falling below the average essay length limit (Mean Essay Length=97.22 words, $SD=60.00$). As a result, the final sample consisted of 32 men and 45 women (just ostracism=22, unjust ostracism=23, physical pain=32; Mean age=26.47, $SD=8.24$).

Results

Manipulation Check

A one-way between-subjects ANOVA again showed that our manipulation of ostracism via the essay prime was effective, $F(2,74)=12.97$, $p<.01$, $\eta_p^2=.26$ (see Table 7 for descriptive statistics). Specifically, LSD post-hoc tests revealed that those in the just ostracism and unjust ostracism conditions felt significantly more excluded and ignored than those in the physical pain condition, $ps<.01$, $ds=1.13$ and 1.21 , respectively. Additionally, there was no significant difference between those in the just and unjust ostracism conditions, $p=.73$, $d=.10$.

Entitlement

A one-way between-subjects ANOVA revealed that there was little impact of writing prime condition on feelings of entitlement, $F(2,74)=1.02$, $p=.36$, $\eta_p^2=.01$ (see Table 7 for descriptive statistics). As in Study 1, these results do not provide support for our hypothesis that unjust ostracism would lead to greater feelings of entitlement.

General anger

A one-way between-subjects ANOVA revealed that there was a significant effect of condition on self-reported general anger, $F(2,74)=6.10$, $p<.01$; however, the pattern

was inconsistent with this study's hypotheses. LSD post-hoc tests revealed that both the just and unjust ostracism conditions exhibited greater feelings of general anger than the physical pain conditions, $p_s=.01$, $d_s=.78$ and $.84$ respectively (see Table 7 for descriptive statistics). There was no significant difference between those in the just and unjust ostracism conditions, $p=.96$, $d=.02$. This pattern, while inconsistent with our initial hypotheses, is consistent with Study 1, and the first analysis of this study in which both the just and unjust ostracism conditions reported significantly greater anger than the physical pain condition.

Self-Directed and Other-Directed anger

Given that all participants were asked about their feelings of anger toward themselves as well as their feelings of anger about others, a 2 (self versus other anger) x 3 (just ostracism, unjust ostracism, physical pain) mixed model ANOVA, with repeated measures over the first factor, was conducted to determine the effect of writing prime condition on individual perceptions of anger (directed toward oneself or others) in the recollection of an ostracism experience. Unlike this study's first analysis, the results of this analysis revealed that there was no main effect of anger type, $F(1,73)=.67$, $p=.42$, $\eta_p^2=.01$. However, there was still a main effect of condition, $F(1,73)=4.55$, $p=.01$, $\eta_p^2=.11$. LSD post-hoc tests examining the main effect of condition demonstrated that similar to general anger, participants in both the just and unjust ostracism conditions reported greater anger than those in the physical pain condition, regardless of anger type, $p_s=.02$ and $.03$, $d_s=.63$ and $.66$, respectively. There was no significant difference between those in the just ostracism and unjust ostracism conditions, $p=.79$, $d=.08$. Importantly, this analysis again revealed a significant interaction between anger type and condition,

$F(2,73)=5.27, p=.01, \eta_p^2=.13$ (see Table 7 for descriptive statistics for these two variables). To better understand the interaction between anger type and condition, separate analyses of self-directed anger and other-directed anger were conducted.

Self-Directed Anger

A one-way between-subjects ANOVA with self-directed anger as the dependent measure revealed that there was little difference between the three conditions, $F(2,74)=1.31, p=.28, \eta_p^2=.03$ (see Table 7 for descriptive statistics). Therefore, the hypothesis that just ostracism would lead to greater feelings of self-directed anger than unjust ostracism was not supported. These results again suggest that there is little link between perceptions of fairness in the ostracism experience and subsequent feelings of anger directed toward oneself.

Other-Directed Anger

A one-way between-subjects ANOVA on other-directed anger showed that there was a significant effect of condition, $F(2,74)=8.71, p<.01, \eta_p^2=.19$ (see Table 7 for descriptive statistics). Additionally, Levene's test of Homogeneity of Variance was violated, $F(2,73)=3.56, p=.03$. Games-Howell post-hoc corrections showed that those in both the just ostracism and unjust ostracism conditions reported significantly more other-directed anger than those in the physical pain condition, $ps<.05, ds=.68$ and 1.22 respectively. There was no significant difference between those in the just and unjust ostracism conditions, $p=.21, d=.37$. These results are also not consistent with this study's new hypothesis, given the fact that unjust ostracism did not lead to greater anger directed towards others relative to just ostracism. Despite differential perceptions of fairness in the recalled ostracism experience, both those in the just and unjust ostracism conditions

indicated similar levels of anger towards the others involved in the ostracism experience. Therefore, it seems that ostracism leads to increased feelings of anger towards others, regardless of whether or not that rejection was justified.

Dishonest Intentions

A one-way between-subjects ANOVA showed a trending, but nonsignificant impact of condition on dishonest behavioral intentions, $F(2,74)=2.31, p=.11, \eta_p^2=.06$ (see Table 7 for descriptive statistics). As such, we performed exploratory post-hoc LSD tests to determine if there were differences between any of the conditions. These tests revealed that those in the just and unjust ostracism reported marginally (or trending) lower levels of dishonest behavioral intentions, relative to those in the physical pain condition, $ps=.06$ and $.11, ds=.53$ and $.42$, respectively. These findings do not support our original hypothesis that unjust ostracism would lead to greater dishonest behavioral intentions than just ostracism or physical pain. These findings also do not entirely replicate our finding from Study 1, demonstrating that just ostracism would lead to reduced dishonest behavioral intentions compared to unjust ostracism and physical pain. Although just ostracism did lead to less dishonest behavioral intentions than physical pain, unjust ostracism also led to somewhat reduced dishonest behavioral intentions compared to physical pain. Furthermore, participants' report of dishonest behavioral intentions did not significantly differ between just ostracism and unjust ostracism, as they did in Study 1; however, the means for each of these conditions were directionally consistent with the results of Study 1's alternative analysis, such that dishonest behavioral intentions were descriptively lower in the just ostracism condition compared

to the unjust ostracism condition. We discuss the importance of determining the reliability of this finding in future research in the general discussion section.

Table 7

Study 2, Analysis 2

	Just Ostracism	Unjust Ostracism	Physical Pain
Manipulation Check	4.64 (1.60)	4.80 (1.64)	2.78 (1.69)
Entitlement	2.57 (1.28)	2.35 (1.49)	2.23 (.99)
General Anger	5.45 (1.92)	5.48 (1.73)	4.03 (1.71)
Self-Anger	4.64 (2.34)	3.65 (1.80)	4.03 (2.02)
Other-Anger	4.60 (2.32)	5.35 (1.67)	3.13 (1.96)
Dishonest Intentions	2.27 (.98)	2.40 (1.20)	3.05 (1.84)

Note: This table displays the means for each group, with standard deviations in parenthesis.

Study 2 Discussion

The purpose of Study 2 was to investigate feelings of anger by using a more nuanced measure that assessed the target of participants' feelings of anger (anger directed toward oneself or directed toward others). It was hypothesized that recollection of a just ostracism experience would lead to an increase in anger directed at oneself, while recollection of an unjust ostracism experience would lead to an increase in anger directed toward the other individuals involved in the experience. Additionally, it was predicted that if our original hypothesis was correct, recalling an unjust ostracism experience would lead to more dishonest behavioral intentions than recollection of a just ostracism or a control experience, and that this relationship would be mediated by increased other-directed anger and a greater sense of entitlement for unjustly ostracized participants. Alternatively, if the results revealed by our first study were accurate, we hypothesized that recollection of a just ostracism would lead to reduced dishonest behavioral

intentions, relative to unjust ostracism and a control experience, and this relationship would potentially be mediated by increased self-directed anger.

Although neither of these hypotheses were supported, some interesting findings did emerge. Consistent with the results of Study 1, those in both the just ostracism and unjust ostracism conditions reported greater general anger, relative to those in the physical pain condition. Additionally, participants in both ostracism conditions reported a greater sense of other-directed anger compared to participants in the physical pain condition; however, self-directed anger did not differ significantly across the experimental conditions. This suggests that it may be very difficult for individuals to look past their anger at the other individuals involved in the rejection experience and accurately account for their own culpability in regards to the situation that led to their ostracism. Furthermore, just ostracism once again led to somewhat reduced dishonest behavioral intentions, relative to the physical pain condition; however, just ostracism participants did not report reduced dishonest behavioral intentions compared to unjust ostracism participants. These results obtained in Study 2 seem to suggest that while those who recollect a just ostracism experience may indicate directionally lower levels of dishonest behavioral intentions (as initially hypothesized in Study 2), those who recollect an unjust ostracism experience do not report greater dishonest behavioral intentions (as hypothesized throughout the course of this program of research).

CHAPTER VI

GENERAL DISCUSSION

The goal of the current program of research was to extend past findings, which have demonstrated that the general experience of ostracism results in antisocial behavior, such as dishonest intentions, an effect that has been shown to be mediated by an increased sense of entitlement (Poon et al., 2013) and anger (Chow et al., 2008). We hypothesized that a particular aspect of the ostracism experience, specifically perceptions of fairness or unfairness, is primarily responsible for previous findings relating ostracism to dishonest behavior, anger, and entitlement. We hypothesized that compared to just ostracism or a control experience, it is ostracism that is perceived as unjust that 1) increases feelings of entitlement, 2) increases feelings of anger, 3) increases dishonest behavioral intentions, and 4) that the increases in anger and entitlement following unjust ostracism are responsible for increased dishonest behavioral intentions (compared to just ostracism and a control experience). These hypothesis were based on previous research linking the general experience of unfairness to increased anger, entitlement, and antisocial behavior, respectively (e.g., Miller, 2001; Smart Richman & Leary, 2009). We tested this general framework in two studies, with two unique samples of participants, using multiple analytic strategies. Specifically, participants were asked to recall a time they were excluded from a group for something they had done wrong (just ostracism), a time they were excluded even though they had done nothing wrong (unjust ostracism), or a time they had experienced physical pain. Participants then completed measures related to their feelings of anger, sense of entitlement, and dishonest behavioral intentions. Across both studies, none of our primary hypotheses were empirically supported.

Nonetheless, across both studies, there were several interesting findings that emerged that warranted preliminary theoretical explanations. In Study 1, we found that participants in the just and unjust ostracism conditions reported equivalently greater feelings of anger than participants in the physical pain condition. Because we had predicted that unjust ostracism would produce more anger than both the just ostracism and control conditions, we subsequently hypothesized that our original assessment of anger, which simply asked participants how angry they were in general, may have been too simplistic to capture the various kinds of anger produced by unjust and just ostracism, respectively. Specifically, we hypothesized that perhaps an ostracism experience resulting from something that one has done wrong (just ostracism) might lead to more anger directed toward the self, while an ostracism experience that occurs regardless of any wrongdoing by the victim (unjust ostracism) might lead to anger directed toward the others responsible for the rejection (Tangney et al., 1992).

Additionally, Study 1 also revealed the surprising finding that participants in the just ostracism condition reported reduced dishonest behavioral intentions, relative to participants in the unjust ostracism and physical pain conditions (Study 1 Alternative Analysis). While inconsistent with our initial prediction that unjust ostracism would lead to an increase in dishonest behavioral intentions, these results suggest that rather than a sense of injustice leading to an *increase* in dishonest intentions, it may be the case that a sense of justice leads to a *decrease* in dishonest intentions. Given this pattern of results, a second study was conducted to explore these findings with greater specificity.

As such, Study 2 included an assessment of self-directed and other-directed anger to determine if just ostracism would lead to greater self-directed anger, and unjust

ostracism would lead to greater other-directed anger. Furthermore, if our original prediction that unjust ostracism would result in greater dishonest behavioral intentions than just ostracism or physical pain was empirically supported in Study 2, we hypothesized that greater levels of other-directed anger (and perhaps entitlement) would mediate increased dishonest intentions for unjustly ostracized participants. Alternatively, if the results of our first study were empirically supported in Study 2, such that just ostracism leads to reduced dishonest intentions compared to unjust ostracism and physical pain, then we also expected that reductions in dishonest intentions for participants in the just ostracism condition would be mediated by an increase in self-directed anger. Contrary to these predictions, Study 2 found that just and unjust ostracism produced equivalently higher levels of other-directed anger than physical pain; participants' report of self-directed anger did not differ across conditions. Furthermore, just ostracism again resulted in marginally reduced dishonest intentions compared to physical pain, but did not differ from unjust ostracism (although the means were consistent with the pattern observed in Study 1; see Study 2 Alternative Analysis).

The fact that both the just and unjust ostracism participants reported greater general anger (Studies 1 and 2) and other-directed anger (Study 2) than participants in the physical pain condition suggests that individuals view the other people involved in their rejection experience as primarily responsible for their ostracism plight, regardless of whether they imagine an instance of fair or unfair ostracism. Perhaps this is a defensive strategy these individuals use to protect the self upon experiencing rejection; specifically, individuals are motivated to maintain a positive self-concept and in the face of a negative experience (such as ostracism), may be motivated to locate the cause of the negative

experience and assign responsibility for that experience to an external source, in order to maintain a more positive self-concept (Rudman, Dohn, & Fairchild, 2007).

Furthermore, although we predicted that unjust ostracism would lead to greater dishonest behavioral intentions than just ostracism or physical pain, Study 1 found that participants in the just ostracism condition reported *reduced* dishonest behavioral intentions compared to unjust ostracism and physical pain condition participants. Although Study 2 did not replicate this finding faithfully, it did show that dishonest behavioral intentions were descriptively lower in the just ostracism condition compared to the unjust and physical pain conditions. One potential reason as to why this finding did not replicate across studies may have been due to the characteristics of the participant samples in each study. Study 1 participants were all university participants who were participating in the study for partial course credit. As such, our measure of dishonest behavioral intentions may have been more relevant to these participants, given that half of the questions were about dishonest behavior in the context of a school setting. Although we tried to obtain a comparable sample of college students from Amazon's Mechanical Turk survey tool, the two samples may not have been entirely comparable. Indeed, one notable difference between our samples was the average age of participants. Specifically, the average age of participants in Study 1 ($M=21.89$ years, $SD=6.56$) was significantly younger than the average age of participants in Study 2 ($M=26.11$, $SD=7.34$), $t(427.002)=6.30$, $p<.01$. This difference suggests that the sample utilized in Study 2 included more individuals who would have been non-traditional students with differing life experiences from participants recruited from our sample in Study 1, and could potentially help to explain the divergent findings across the two studies.

Although this finding indicating that just ostracism leads to reduced dishonest behavioral intentions (compared to unjust ostracism and physical pain) was not consistently replicated across both studies, and would benefit from subsequent replication, it is worth considering the theoretical implications of this finding. Given that participants who are justly ostracized know that the reason for their ostracism was due to their own inappropriate behavior, they also know how to potentially remedy the situation. Perhaps one way of initiating this process of reaffiliation is by displaying prosocial behavior (or less antisocial behavior, as suggested by the current study) as a means of correcting previous transgressions, or to appear more attractive to future affiliation partners (see Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001). Although beyond the scope of the current study, future research might investigate whether justly ostracized persons are motivated to behave prosocially towards those who rejected them, whereas unjustly ostracized participants are only motivated to behave prosocially towards those individuals who were not involved in the unfair ostracism experience.

While the unanticipated findings reported above are potentially interesting and worthy of future empirical investigation, it is also important to address why the current studies were unable to replicate the general findings of both Poon and colleagues (2013) and Chow and colleagues (2008), both of whom found that ostracism resulted in increased feelings of anger, entitlement, and antisocial behavior. Specifically, we hypothesized that our unfair ostracism condition should have been similar, if not identical, to these authors' general ostracism condition, and that our just ostracism condition should be similar to their control condition (i.e., physical pain condition). In both of our studies, unjust ostracism only differed from the control condition with respect

to feelings of anger, which was consistent with previous research. However, unjust ostracism did not differ from the control condition with respect to entitlement and dishonest intentions. Furthermore, the just ostracism condition was significantly different from the control and unjust ostracism condition with respect to dishonest intentions (Study 1) and significantly different from the control condition with respect to anger (Studies 1 and 2). Given that our second pilot study was able to replicate Poon and colleagues (2013) general finding that ostracism leads to increased entitlement (at least for a few of the entitlement items) and dishonest behavioral intentions, and Study 1 used the same participant pool as our pilot studies (albeit with different participants), it is difficult to make the case that methodological differences are responsible for these potential null findings.

A notable difference between our own studies and Poon and colleagues (2013) was the nature of the participant samples utilized, which may have introduced an unintended cultural difference. Specifically, several of the participant samples utilized by Poon and colleagues (2013) were made up largely of students at a Hong Kong based university in China. Past research indicates that individuals from Asian cultures have a higher academic achievement motivation that is driven by fear of academic failure, much more so than individuals from Western cultures, such as the United States (Eaton & Dembo, 1997). Thus, individuals from Asian cultures may have more motivation to engage in dishonest behavior in academic achievement domains compared to individuals from Western cultures (due to a greater fear of academic failure). It is therefore possible that ostracism is more likely to lead to increased dishonest intentions for individuals from Asian cultures. Because academic achievement motivation and fear of academic failure

is lower in Western cultures, ostracism may not be as powerful of a motivation to engage in dishonest behaviors associated with academic achievement. Given that half of our individual items used to assess dishonest intentions were related to academic achievement (specifically, Items 3 and 4), this measure may not have been as salient or relevant to participants in our sample (even though they were all students), and therefore it may help explain why we did not see any increases in dishonest intentions following fair or unfair ostracism. However, this explanation is speculative, and future research should be conducted to determine the reliability of past findings that ostracism leads to increased entitlement and dishonest behavioral intentions.

Finally, it is worth noting that participants may have had much more difficulty imagining a just ostracism experience compared to an unjust ostracism experience. This was reflected in how many participants were excluded across conditions, based on the mean length of the essays they provided. In Study 1, after filtering out participants who failed to adhere to the essay task instructions, as well as those who provided essays that were notably shorter than the average essay length for the sample, more participants in the just ostracism condition were removed from the analysis as compared to those in the unjust ostracism and physical pain conditions. Although this effect was less noticeable in Study 2, it does seem to suggest that participants may have had a difficult time conceptualizing ostracism as a fair experience that resulted from something they had done wrong. This is intuitive, given that ostracism is often perceived as an unfair experience (Williams, 2007), and therefore perceptions of one's own culpability may be less salient to individuals in such situations. Indeed, this logic is corroborated by our findings for self and other-directed anger in Study 2. Specifically, just and unjust

ostracism did not produce differential levels of self-directed anger compared to physical pain; however, they did produce equivalently higher levels of other-directed anger compared to physical pain. Thus, when individuals are rejected, they tend to automatically assume others are more culpable than they are. Future research should be conducted to explore how people conceptualize just and unjust ostracism and assess the situational characteristics that make each of these experiences unique.

Conclusion

Our hypotheses that unfair ostracism would lead to increased anger, entitlement, and dishonest behavioral intentions compared to fair ostracism and a physical pain control experience, and that increased dishonest behavioral intentions for unjust ostracism participants would be mediated by increased feelings of entitlement and anger were not empirically supported. Unexpectedly, both unjust and just ostracism led to increased general anger (Studies 1 and 2) and other-directed anger (Study 2) compared to physical pain. Additionally, just ostracism led to significantly (Study 1) and descriptively (Study 2) reduced dishonest behavioral intentions compared to unjust ostracism and physical pain. Future research would benefit from further investigating the reliability of these findings and identifying specific theoretical reasons for their occurrence.

APPENDIX A

Exclusion manipulation check for proposed study (Poon et al., 2013)

1. I feel excluded.

2. I feel ignored.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

APPENDIX B

Psychological Entitlement Scale (Campbell et al., 2004)

1. I honestly feel I'm just more deserving than others.
2. Great things should come to me
3. If I were on the Titanic, I would deserve to be on the first lifeboat.
4. I demand the best because I'm worth it.
5. I do not necessarily deserve special treatment.
6. I deserve more things in my life.
7. People like me deserve an extra break now and then.
8. Things should go my way.
9. I feel entitled to more of everything.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

APPENDIX C

Dishonest Behavioral Intentions: Hypothetical Negotiation Scenario (Poon et al., 2013)

“Imagine you are hiring a new employee for a job opening. You have been instructed to negotiate the lowest salary possible. The potential candidate has indicated that they would like to stay in the same job for at least two years, and would accept a lower salary for a verbal commitment of job stability. You have received information that the job is certain to be eliminated in 6 months. The applicant does not know this information, and there is no other suitable applicant at this time. If you can negotiate the salary below a certain amount, you will receive an end of the year bonus; failure to fill the position quickly will negatively affect your annual performance review.

Please indicate how likely you would be to tell the candidate the true information if he or she specifically asked about job security.”

Participants indicated their percentage of likelihood that they would provide the job candidate with accurate information. Therefore, the scale ranged from 0% to 100%.

APPENDIX D

Demographic Information

1. Please indicate your sexual orientation.
2. Please indicate your sex.
3. Please indicate your age.
4. Please indicate your race.
5. Please indicate your current relationship status.
6. Please provide us with any comments you may have.

APPENDIX E

Entitlement Questionnaire (Poon et al., 2013)

1. I am entitled to gain more than others.
2. I am entitled to get more resources (e.g., money, time, or opportunities) than others.
3. I am entitled not to suffer too much.
4. I honestly feel I'm just more deserving than others.
5. I deserve better in my life than others to compensate for my sufferings.
6. I feel entitled to more of everything than others.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

APPENDIX F

Dishonest Behavioral Intentions Scenarios (Poon et al., 2013)

“Imagine you find yourself in the following situations.

On scale of 1 to 9, please indicate the extent to which you would behave dishonestly.”

1. Falsify your resume in a job application.
2. Keep the cash from a wallet lying on the street.
3. Steal an exam paper.
4. Copy someone else’s essay.

1

2

3

4

5

6

7

8

9

Definitely
would not

Definitely
would

APPENDIX G

Writing primes for proposed study (Tuscherer et al., revise and resubmit; Poon et al., 2013)

Just ostracism prime: “Think about a time you were excluded from a group (e.g., group of friends, teammates, organizations you belong to) for something you had done wrong, and how it made you feel. Provide a description of this experience in the space below. Please provide as much detail as possible, writing for approximately five minutes, before continuing with the experiment.”

Unjust ostracism prime: “Think about a time you were excluded from a group (e.g., group of friends, teammates, organizations you belong to) even though you had done nothing wrong, and how it made you feel. Provide a description of this experience in the space below. Please provide as much detail as possible, writing for approximately five minutes, before continuing with the experiment.”

Physical pain prime: “Think about a time you experienced physical pain and how it made you feel. Provide a description of this experience in the space below. Please provide as much detail as possible, writing for approximately five minutes, before continuing with the experiment.”

APPENDIX H

Entitlement Questionnaire for Proposed Study

1. I honestly feel I'm just more deserving than others.
2. I deserve better in my life than others to compensate for my sufferings.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

APPENDIX I

Item assessing level of anger for proposed study (Chow et al., 2008)

1. I felt angry.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

APPENDIX J

Anger Questionnaire for Study 2

1. I felt angry.
2. I felt angry at myself
3. I felt angry at the other individuals involved.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

APPENDIX K

Institutional Review Board Approval Notice

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

INSTITUTIONAL REVIEW BOARD
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NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: R13100406
PROJECT TITLE: Ostracism, Perceived Injustice, and Entitlement
PROJECT TYPE: Renewal of a Previously Approved Project
RESEARCHER(S): Donald Sacco, Ph.D.
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 10/27/2014 to 10/26/2015
Lawrence A. Hosman, Ph.D.
Institutional Review Board

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