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Understanding the Diverse Responses of the Socially Excluded: Exclusion Construals Moderate Aggressive vs. Affiliative Responses to Exclusion

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Understanding the Diverse Responses of the Socially Excluded: Exclusion Construals

Moderate Aggressive vs. Affiliative Responses to Exclusion

by

Allison Smith

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Understanding the Diverse Responses of the Socially Excluded: Exclusion Construals Moderate Aggressive vs. Affiliative Responses to Exclusion

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Abstract

We examined how construals shape responses to social exclusion (i.e. people's tendencies to behave antisocially vs. prosocially following rejection). We suggest that individuals who experience exclusion as a *threat to self* will respond aggressively after rejection, whereas those who construe exclusion as a *loss of something desired* will be likely to respond prosocially. In Study 1, we measured construal-relevant individual differences, manipulated exclusion, and measured the extent to which the construal-relevant individual differences moderated responses to exclusion. In Study 2, we directly manipulated construal and then measured the extent to which this moderated responses to exclusion. While support was limited in Study 1, Study 2 revealed that self-threat-primed excluded individuals were most likely to respond aggressively, whereas loss-primed excluded were more likely to respond affiliatively, post rejection. Overall, construals matter in terms of interpreting an exclusion experience and causing subsequent behavior.

Understanding the Diverse Responses of the Socially Excluded: Exclusion

Construals Moderate Aggressive vs. Affiliative Responses to Exclusion

An abundance of evidence suggests that social exclusion powerfully affects people's social cognition, emotion, and behavior. Most scholars assume that the effects of social exclusion are powerful because exclusion threatens a fundamental human need: The need to belong (Baumeister & Leary, 1990). Although it is clear that social exclusion has powerful effects, what is less clear is what the effect will be in any specific instance. The reason is that the research literature suggests vastly different responses following a bout of rejection. Some work suggests that social exclusion fosters prosocial emotions and behaviors such as a tendency to view others favorably and seek relationship with them, whereas other work suggests that exclusion fosters antisocial emotions and behaviors such as anger and aggression. Below, we will review the literature concerning these divergent responses to social exclusion.

Our goal is to illuminate factors that affect whether exclusion gives rise to a pro- or anti-social response.[1] Toward that end, we propose that there are two different construals one can generate in response to an exclusion experience: *self-threat* ("This is an insult to my sense of status and worth") vs. *loss of something desired* ("This means that I will not experience the pleasure of togetherness"). Individuals who experience exclusion as a threat to self will be more apt to respond aggressively after rejection, whereas those who construe exclusion as a loss of something desired will be more likely to respond prosocially. We test these ideas in two studies described below. Before

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[1] It should be noted that here the term "prosocial" is meant to reflect diverse, positive ways of relating to others (e.g., helping, cooperating, seeking connection), and does not necessarily imply altruism or "purely other-oriented" motives.

proposing those studies, we first review literature concerning the diverse effects of social exclusion.

Positive Responses to Exclusion: Affiliation

Gardner, Pickett, and Brewer (2009) consider the need to belong as an all-encompassing human drive that influences cognitive responses, suggesting that if this need is not met and fully satiated, the endeavor towards affiliation begins. Gardner et al. specifically look at how social memory is affected by social experiences of belonging versus rejection. Through a round of experiments, participants were accepted or rejected in a chat room experience where they either received responses of social approval and affirmation from four confederates or were left out of the conversation completely. They were then asked to read various diary entries of a same-sex student describing daily events as part of an alleged impression formation task. Gardner and colleagues found that rejected individuals had an increased sensitivity towards any explicitly social event (both interpersonal and collective) during a surprise recall task, and valence of the event did not matter. Gardner et al. interpret this memory bias as suggesting that when the need to belong is threatened, there is a consequent attunement to and preservation of drive-relevant information. Presumably, this cognitive bias exists in the service of helping the individual gain social fulfillment, attuning him or her to need-relevant phenomena.

Maner and colleagues (2007) found related evidence when they tested their "social reconnection hypothesis." They argued that experiencing social exclusion increases one's motivation to form new social bonds. Across six experiments in which participants experienced one of a variety of forms of social exclusion (e.g. recall of a

personal rejection experience, receiving false feedback indicating a future alone, being told that no one wanted to work with them in a group), socially excluded participants were more interested in meeting others, preferred to work with others rather than alone, held more optimistic attitudes about others, and gave more monetary rewards to novel partners. These patterns support the idea that the socially excluded are looking for ways to connect with others. There was also evidence of moderating effects. Specifically, excluded individuals took a positive view of novel individuals but *not* of rejectors, and these positive views were most likely when the excluded individual was low in fear of negative evaluation and expected to interact with the novel individual.

The need to belong seems to be a driving force in the social world, where, if threatened or depleted, individuals look to refill their sense of belonging. However, rejection not only causes one to become especially attuned to social reconnection, but can also cause negative consequences such as overt aggression.

Negative Consequences of Social Exclusion: Aggression

Leary et al. (2006) provide an extensive review of the literature on social exclusion and aggression. Among other things including reviews of laboratory studies, they looked behind the scenes of recent school shootings, proposing that such violence and aggression were precipitated by some form of social rejection, be it bullying and teasing, ostracism, or romantic rejection. Through a case study investigation which involved obtaining information from past news reports, the authors documented whether rejection was involved in 15 recent school shootings and also identified other potential contributors to school violence among those who had been rejected. A powerful example

of this can be seen in the Columbine school shooting, where both perpetrators had been severely bullied and ostracized by other students and explicitly claimed that their killing of 13 people was retribution for how they had been treated. Across the 15 cases, it was clear that social rejection was a strong contributor, as the perpetrator(s) had been maliciously teased (e.g., regularly called despicable names) in 12 of the 15 incidents.

Moving into the lab, Twenge et al. (2001) suggest a link between social exclusion and aggression towards both an instigator and a neutral third party. In a series of experiments, participants first experienced one of two exclusion/acceptance manipulations: false feedback ostensibly from a personality test that foretold their future experiences (e.g., you will spend your future alone, you will spend your future in close relationship with others), or through immediate social rejection by peers (e.g. a getting acquainted task where everyone vs. no one expressed interest in working with them on a subsequent task). Participants were then asked to write an essay about abortion, and they received either criticism, praise, or no evaluation on their essay. Once they were issued feedback, participants had the opportunity to aggress towards their criticizer/praiser, or, in some cases, towards an innocent victim through either blasts of aversive white noise (Bushman & Baumeister, 1998) or by rating the target for a potential job opening. Results indicated that socially excluded people aggressed more towards someone who insulted them both by giving them more negative job evaluations and by delivering to them louder blasts of aversive noise. Those who had praised the excluded, however, were not targets of their aggression. However, socially excluded individuals, compared to those who were included, also showed higher levels of aggression towards innocent third persons who were not involved in the slighting and who had not aggravated them in any

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way. These findings then suggest that socially excluded people may be likely to aggress towards innocent others as a result of their experienced rejection.

Aggressive tendencies following exclusion are further evidenced in Warburton, Williams, and Cairns (2003) work on ostracism and control. They propose that one possible reason for an aggressive response following ostracism is the sheer *lack of control* felt by the rejected individual. Thus, they hypothesized that altering the level of control felt within an individual could be a moderator of aggressive responding to ostracism. Participants were either ostracized or included during a ball tossing game prior to experiencing a series of blasts of aversive, white noise. Some participants had control over the onset of the noise while others had no control. Aggression was then measured by the amount of hot sauce participants allocated to a stranger who did not like spicy foods, knowing the stranger would have to consume the entire portion. Ostracized participants without control allocated more than four times as much hot sauce as any other group, illustrating higher levels of aggression when control is frustrated. Interestingly, ostracized participants who reestablished control were less aggressive than the ostracized that lacked control, and this decreased level of aggression was similar to the level depicted by the included individuals. Accordingly, thwarting one's sense of control plays a significant role in aggressive responding to ostracism, where restoring control leads to a decrease in aggressive tendencies.

Dewall, Twenge, Gritter, and Baumeister (2009) propose that excluded individuals behave aggressively due to a perception of ambiguous information as hostile, consequently suggesting that such hostile cognitions are mediating the link between social exclusion and aggression. In an initial study aimed to show that social exclusion

creates a hostile cognitive bias, participants were either personally rejected through a peer-interaction video task (i.e. told that their partner no longer wanted to work with them on a subsequent task after viewing the participant's introduction clip), or were told that their partner had to leave early because he or she was late for a meeting (serving as the control condition). Next participants were asked to rate pairs of words for similarity, where some words were distinctly aggressive (i.e. blood, fight, gun) and others were ambiguous (i.e. alley, night, red). Results indicated that people who were interpersonally rejected made higher similarity ratings for the aggressive-ambiguous word pairs compared to participants in the control condition. Thus, the activation of hostile cognitions increases dramatically after interpersonal rejection.

More importantly, in another study Dewall and colleagues found this hostile cognition bias to be mediating the effect of social exclusion on aggression, where socially excluded individuals were behaving aggressively towards others because they first perceived ambiguous information as hostile. Participants were first rejected or accepted through false feedback (future alone vs. future together, as above). Then, to measure hostile cognitive bias, participants were asked to read an essay supposedly written by and about another participant in the lab, and then they rated the degree to which they perceived that other participant's ambiguous actions (e.g., "I bought a mechanical toothbrush but had to get my money back from the clerk right away because it wasn't the right one.") as hostile. Participants were then given the opportunity to aggress towards that other participant. Specifically, participants were asked to evaluate whether the other participant would be a viable candidate for a highly competitive research position for which he or she was applying. Results indicated that the socially excluded perceived the

other participant's s actions as significantly more hostile and also responded more aggressively when evaluating the other participant for the research position as compared to those in the belonging and control groups. However, full mediation by hostile cognitions of the rejection-aggression link was only found when participants aggressed towards the other participant, whereas in a separate study, this mediation effect diminished when the aggression was directed towards a *completely* neutral target.

On another note, Reijntjes et al. (2010) suggest *alienation*, defined as "a sense of separation or estrangement from society, significant others, and the self" (Reijntjes et al., 2010), moderates the effect of peer rejection on aggression. Alienated youth may experience feelings of powerlessness and meaninglessness, thereby thwarting such basic human needs as control and meaningful existence. Because aggression tends to follow suit, the authors had sufficient reason to believe that alienation is associated with increased aggression. To test this association, Reijntjes and colleagues first collected measures of alienation among youth (M= 11.5 years). At a follow up study, participants engaged in an internet "survivor" game in which they completed a profile about their hobbies and things they liked and disliked about themselves, which would ostensibly be evaluated by peer judges. Participants in the rejection condition received feedback that was mostly negative in nature, whereas those in the acceptance condition received positive feedback. Participants were then given an opportunity to aggress towards the peer judges (e.g. through money allocation or posting visible comments about the judges). Results revealed that those who were rejected were more aggressive than the accepted individuals. More importantly, alienation was shown to moderate this effect,

where rejected individuals who were high in alienation were the most aggressive participants.

Aggression Vs. Affiliation

These findings suggest great variability in the responses of the socially excluded. Indeed, prosocial and antisocial responses to social rejection are quite possible. What existing literature does not do is provide any coherent understanding of why exclusion sometimes increases affiliative tendencies yet other times increases aggression. Thus, discovering why the excluded may be particularly aggressive vs. affiliative towards others is the next step to understanding such diverse behavior. Below we elaborate a model of how construals of the exclusion experience moderate responses to that experience. Broadly speaking, our model fits with cognitive appraisal approaches to emotional responding. Therefore, we begin with a brief overview of cognitive appraisal approaches.

Patterns of Cognitive Appraisal Affect Emotion and Subsequent Decision Making

The most fundamental notion offered by cognitive appraisal approaches is that human emotions are ultimately rooted in cognitive appraisals of experienced events or circumstances. According to Lazarus (1991), an appraisal is "an evaluation of the significance of knowledge about what is happening for our personal well-being" (354). It is individual differences in what we deem important and accompanying personal knowledge that shape the appraisals that ultimately elicit emotion (Lazarus, 1991). In other words, individual construal, or appraisal, of social situations causes distinct emotional reactions (Lazarus, 1991).

One influential model of the cognitive appraisal process comes from Smith and Ellsworth (1985). They proposed six underlying, cognitive dimensions that are crucial for the appraisal process: Certainty, pleasantness, attentional activity, control, anticipated effort, and responsibility. Each emotion that an individual experiences (i.e. anger, surprise, sadness, joy, etc.) is constructed of a systematic combination of appraisals on these six dimensions. For instance, the emotion of "surprise" occurs when underlying appraisals of a situation include high pleasantness, little expenditure of effort, and much uncertainty. So, while not everyone will experience "surprise" under the same "objective" circumstances, the underlying appraisal dimensions that constitute surprise hold true for everyone. Smith and Ellsworth find that even two negative emotions like fear and contempt actually differ among their underlying appraisal dimensions—both may be highly unpleasant, but fear involves high uncertainty while contempt includes more certainty about the situation, causing diverse outcomes and reactions.

After a particular emotional reaction occurs, the next step is to examine how that emotion systematically affects future behavior. Lerner and Keltner (2000) do just that, looking specifically at the patterns of behavior that arise following particular appraisals and their consequent emotions. Thus, the authors suggest that emotions strongly impact subsequent judgments and decisions that relate to the appraisal of the situation. Lerner and Keltner (2001) illuminate existing patterns among appraisal of situations, elicited emotion, and subsequent behavior. They found differing patterns of risk behavior associated with both dispositional and induced feelings of anger and fear. Although both emotions are negatively valenced, they arise out of different appraisals. Anger happens when the situation is perceived as certain with great individual control. Fear happens

when the situation is perceived as highly uncertain with great situational control. These distinct appraisals contribute to quite divergent patterns of subsequent behavior. Specifically, anger led to optimistic risk taking while fear provoked more risk-aversive decisions. Thus, although both emotions appear to be negative on the surface, their underlying dimension patterns differ, which essentially leads to differing reactions. Along those same lines and relating to the present studies, the differing emotions that are elicited after an appraisal of the rejection experience (e.g. feelings of anger vs. sadness) will dictate subsequent behavior (prosocial vs. antisocial).

In sum, our work fits with the general idea that emotional and behavioral reactions to "objective stimuli" are mediated by an appraisal process in which the individual subjectively assigns meaning on particular emotion-relevant dimensions. Although individuals may appraise a given environment in unique and subjective manners, causing different emotions in different individuals, cognitive appraisal theories maintain that underlying appraisal dimensions that give rise to emotions are a constant. Thus, individuals can cognitively appraise an experience of rejection differently, depending upon the pattern of underlying dimensions that are generated during the experience. This, in turn, means one episode of rejection can potentially have multiple consequences, due to differential emotions that arise from the appraisal of rejection among individuals. It is important to note that our construal theory fits with the general idea of cognitive appraisal theories, yet our model does not incorporate the identical underlying appraisal dimensions to any existing theory.

The Role of Exclusion Construals in Shaping Responses to Exclusion

With this cognitive appraisal approach in mind, we propose that there are at least two distinct construals that can be made regarding an instance of social exclusion. First, sometimes exclusion will be construed primarily as a threat to the self (e.g., I'm not respected). We predict that such *self-threat construals* would elicit emotions such as anger, thereby energizing antisocial responses to exclusion. In contrast, we propose that other times exclusion will be construed primarily as a loss of something desired (e.g., what I desire and need is far away from me or unobtainable). We predict that such *loss construals* would elicit feelings such as sadness, thereby energizing more positive responses to exclusion, such as seeking new friends. Thus, an initial, subjective appraisal of the rejection experience as either self-threat or loss will produce particular emotions and, ultimately, patterns of behavior that flow from such emotions.

Only once these underlying construals are unveiled will the responses of the socially excluded become clearer. Accordingly, below we propose two studies that will examine how exclusion construals shape responses to exclusion. The approach in Study 1 will be to measure individual differences that we expect to influence how participants construe the experience of social exclusion, expose participants to such an experience, and finally measure the extent to which the construal-relevant individual difference variables moderate responses to the exclusion experience. In contrast, the approach in Study 2 will be to directly manipulate how people construe the experience of social exclusion and then measure the extent to which this manipulation moderates responses to an exclusion experience. Our major prediction across both studies is that construals of the

exclusion experience—whether rooted in individual differences- or experimentally manipulated—will moderate whether people respond to it prosocially or antisocially.

Study 1: Individual Differences in Narcissism and Anxious Attachment Shape Exclusion Construals and Consequent Responses to Exclusion

As noted above, Study 1 measures individual differences that we expect to affect how people construe an exclusion event. This means that we need to focus on individual differences that should increase self-threat construals and, separately, individual differences that should increase loss construals.

First, what individual differences might be relevant to self-threat construals? Based on existing literature, we expect that narcissism is relevant to such construals. Although not much of the existing literature focuses on social exclusion per se, it does strongly suggest that narcissists have an exaggerated tendency to interpret other's negative responses as self-threats.

Baumeister, Smart, and Boden (1996) present an extensive review of evidence for heightened aggression following threats among narcissists. Narcissists regard themselves as superior to others, hold inflated views of the self, and are accordingly deeply invested in those favorable self-opinions. If others resist or contest their view, thereby threatening the narcissist's ego, aggression and violence ensue. Thus, it is when such favorable views of self are challenged that narcissists become aggressive in attempt to regain their status and control in the given situation (Baumeister, Smart, & Boden, 1996). Powerful examples of the link between narcissism and aggression are seen in everyday life, where

several studies of murder, assault, rape, and domestic violence suggest that threatened egotism plays a strong role in such violence.

An example of this relation in a lab setting comes from Bushman and Baumeister (1998). They asked participants to first write a short essay on abortion, on which they would later receive feedback on from an ostensible partner. Half of the participants were subjected to "ego-threat," where they received a negative evaluation of their essay (e.g. "This is one of the worst essays I've ever read!"), while the other half received positive feedback on their essay (e.g. "No suggestions, great essay!"). After participants received the evaluation from their ostensible partner, they took part in a competitive reaction time task—the "noise blaster" game—with that partner. Every time their partner lost in the game, the participant was able to blast him or her with aversive white noise at the intensity and duration of his or her choosing, thus serving as a measure of aggressive behavior. Results indicated that those who received negative evaluations were more aggressive than those given positive feedback. More notably, the highest levels of aggression were found in the ego-threat condition among narcissists. This is consistent with the possibility that narcissists are very sensitive to self-threats and respond aggressively towards ego-threat perpetrators.

Martinez, Zeichner, Reidy, and Miller (2008) provided evidence that narcissists also show displaced aggression in response to negative evaluations. In their study, participants competed against an opponent in another cubicle in a reaction time task. Displaced aggression was measured through the use of a bogus electric shock system, where participants had the opportunity to shock their opponent for every wrong response given, at the shock level of their choosing. Before starting the game, participants were

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instructed to write an essay, and were told this would be evaluated using a computerized assessment tool. Participants then received one of the three types of feedback (e.g., positive, negative, delayed), which directly compared their essay to their opponent's essay. In the delayed feedback condition, participants did not receive feedback until after the reaction time task, thereby leaving them with uncertainty about the quality of their essay. Finally, the participants took part in the reaction time task. A positive relationship between narcissism and displaced aggression was found, and this effect was strongest for those who received delayed feedback. Thus, when the ego-threat situation is ambiguous in nature (e.g. delayed feedback condition), narcissists are likely to aggress against innocent third parties, suggesting that even the potential for a damaged ego is strong enough to elicit aggression towards neutral people.

Other research has looked at the phenomenon of interest to us: How do narcissists respond to social rejection or exclusion? Twenge and Campbell (2003) had a small group of participants arrive at the lab and interact for 15 minutes before a subsequent task, and each participant was then asked who they wanted to work with on the following task. Half of the participants in the study were then told that no one had chosen to work with them (rejection condition) while the other half of the participants were told that everyone wanted to work with them on the next task (acceptance condition). Participants then played the noise blaster game with a participant who was making up the experiment (an innocent third party), rather than someone in the initial interaction group. Results indicated that after rejection, narcissists were indeed more aggressive than non-narcissists towards an innocent third party, and this did not hold true following social acceptance. Thus, high narcissism is related to increased aggression after social rejection, which

suggests the narcissism-ego-threat combination to be of particular threat to the general population, and not just towards the instigator.

Because individuals who are narcissistic may interpret a stint of rejection as a threat to their heightened ego, engagement in aggressive and antisocial behaviors will likely occur in order to reassure others (as well as themselves) that they still hold power and "superiority." However, distinguishing the exact way in which exclusion is construed will lead to more precise understanding of why narcissists tend to aggress, as merely assuming a threat to their egos as the cause of aggression is not enough to tackle the bigger picture. Distinguishing that having exclusion construed as *self-threat*, even among non-narcissists, as what is causing aggression post-rejection is vital for implementing intervention among the socially excluded (See Figure 1 for path model). With such discovery, positive intervention could lead to decreases in aggression among narcissists and non-narcissists alike.

Next, we consider what individual differences might be relevant to loss construals. We will measure two constructs: Need to Belong and Anxious Attachment Style.

As mentioned earlier, an unfulfilled need to belong gives rise to affiliatory behavior, with evidence suggesting that individuals will ingratiate others in order to gain acceptance and a sense of belonging. Williams, Chung, and Choi (2000) illustrate this phenomenon through a study involving ostracism and consequent conformity to a group. Through the use of an Internet website created specifically for this experiment, the authors first threatened participants' basic need for belonging using a cyber-ostracism,

ball toss game. The participants were randomly assigned to either the ostracism condition (e.g. never receiving the ball) or the inclusion condition (e.g. receiving the ball 33% of the time). After completing the cyberball game, participants took part in a perception task, where they were all "randomly" assigned to be the sixth respondent in a new group for making perceptual judgments. Participants completed various trials of viewing geometric shapes and matching them to complex figures in which they were embedded, where they would respond only after viewing the unanimously incorrect responses of the other ostensible members. Results revealed that ostracized individuals conformed more to the group than included individuals. Thus, individuals with a threatened need to belong found a way to replenish their need through conforming to a new group, suggesting a drive for affiliation.

Laskin, Chartrand, and Arkin (2008) provide further evidence for refilling a frustrated need to belong after experiencing rejection. These authors delve below the conscious surface and show that more low-cost, automatic, and nonconscious tactics (i.e. mimicry) can, too, achieve affiliatory satisfaction. In one study, Laskin and colleagues first employed the cyberball game described above, creating an included and an excluded group. Next, participants were given the task to describe photographs to a novel partner (e.g. a confederate) who had never seen the photos. The confederate steadily moved her foot throughout the task interaction with the participant. Results indicated that excluded individuals mimicked the confederate's foot movement more so than included individuals, suggesting a nonconsious recovery from exclusion. In a similar, second study, excluded individuals who were excluded by an ingroup member were found to mimic an ingroup confederate more than an outgroup confederate, suggesting selectivity

for who the excluded are likely to mimic. Thus, it is more beneficial for an excluded individual to mimic an ingroup member in order to re-establish their status within the group and replenish that vital need to belong.

Twenge et al. (2007) explore other ways to restore a thwarted need to belong. They suggest that, if given the chance, rejected people look for ways to replenish their sense of belonging. If they are successful this causes a decrease in aggressive behavior following rejection, and an increase in affiliatory behavior. To test this notion, Twenge et al. employed two different manipulations that were intended to reestablish a sense of social connection in those who had been excluded. In a round of studies, participants were made to feel either included or excluded by participating in a getting acquainted task (i.e., some were picked to work in a group while others were not). After this experience some participants were given a bag of candy from an ostensible peer while others were not. Finally, the researchers measured aggression through the noise blast game. Results indicated that those who were rejected and received a newfound social connection did not differ in their aggression level from those who were accepted. In another study, Twenge et al. found evidence that writing about a social connection (i.e. family member or best friend) after experiencing rejection also had the effect of reducing aggression. What these results suggest is that experiencing even a brief replenishment of social connectedness after being rejected (i.e. receiving a bag of candy, writing about a close relationship) is enough to eliminate rejection-related aggression.

In all these studies, it is assumed but not directly tested that a thwarted need to belong underlies the tendency toward increased affiliation, and that the mediating process is something like the loss construal we described above. In our Study 1, we will test this

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more directly by measuring individual differences in Need to Belong, showing that those high in Need to Belong respond more affiliatively to exclusion than do those low in Need to Belong, and that this increased affiliation is mediated by loss construals of the exclusion experience.

Related to having an unsatiated need to belong, having an *anxious attachment style* leaves individuals with a constant thirst for affiliation and attention and chronic worry about others disconnecting from one's self (Tidwell, 1996; Mikulincer & Nachshon, 1991). Indeed, it could be argued that those high in anxious attachment have a chronic "loss mindset" that governs their thinking about relationships. Individuals who are classified as anxiously attached may feel a strong desire to affiliate after being rejected, which in turn may cause them to seek friends, in order to assure that they are not being entirely "abandoned." Because anxiously attached individuals are characterized as being needy and obsessive in their relationships, exuding extreme dependence on anxiety about rejection, such an affiliative response follows suit with the typical characteristics of anxiously attached individuals (Hazan & Shaver, 1987).

Thus, we propose that those who are classified as *anxiously attached* adults will be likely to construe social exclusion as loss, and would therefore be particularly likely to respond affiliatively following rejection. Thus, relational anxiety plays a moderating role in the exclusion experience where, in accordance with anxious attachment style characteristics, individuals will strive for affiliation after rejection (See Figure 2 for path model).

Method

Participants

One hundred twenty-two Lehigh University undergraduate students completed this study for course credit in their Introductory Psychology course. The final sample included ninety-nine participants (56 female). Seven participants were removed due to technical issues (e.g. the computer froze), 13 were removed due to high levels of suspicion, and three were removed due to a failure to take the experiment seriously (e.g., pressing the space bar rather than entering actual responses during the computer-based portion of the study).

Procedure

Pretest. At the beginning of the semester, students attended a pretest session. Three key measures given during the pretest tap the constructs we expected to moderate construals of, and hence reactions to, the experience of social exclusion. First, we administered the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). This 40-item measure gauges one's sense of superiority and entitlement. This measure is a forced-choice questionnaire on which each item comprises two statements (e.g., non-narcissistic—"I prefer to blend in with the crowd" vs. narcissistic—"I like to be the center of attention."), and participants select which of the two statements reflects them best. These items were then scored according to Raskin and Terry to form a single index of narcissism. Each narcissistic choice was given two points, whereas each non-narcissistic item was given one point. The items were then averaged, with high numbers indicating high levels of narcissism (in the pretest sample: $M = 1.43$; $SD = .16$; $\alpha = .81$).

The pretest also included the Experiences in Close Relationships scale (ECR; Brennan et al., 1998), which measures dispositional tendencies toward anxiety and avoidance in adult attachment styles. Of interest to us, the scale includes 17 items that tap one's anxiety about intimate relationships partners (e.g., "I worry that romantic partners won't care about me as much as I care about them"; "I do not often worry about being abandoned" (reversed)). Participants rated these items using a 7-point scale with endpoints labeled *Strongly Disagree* (1) and *Strongly Agree* (7). These items were averaged to form one index of anxious attachment (in the pretest sample: M= 3.39; SD= .97; α =.89).

We also included the Need to Belong Scale (Leary et al., 2005), which measures one's desires to belong and connect with others. The Need to Belong Scale (NTB) comprises nine items that assessed one's desire to connect with others (e.g., "I need to feel that there are people I can turn to in times of need" and "I do not like being alone."). Participants responded to all nine items using a 5-point scale with endpoints labeled *Strongly Disagree* (1) and *Strongly Agree* (5). After proper reverse scoring of certain items, these items were averaged to form one index of Need to Belong (in the pretest sample: M= 3.51; SD= .59; α =.72).

Participants also completed a measure of chronic social exclusion. Miller's (1995) Social Exclusion Scale comprises 9 items measuring one's general sense of feeling left out and rejected (e.g., "I often feel like an outsider in social gatherings,"; "I often wish that I were more liked and included by others."). Participants responded to all nine items using a 5-point scale with endpoints labeled *Strongly Disagree* (1) and *Strongly Agree* (5). After reverse scoring appropriate items, these items were averaged to form one index

of chronic social exclusion (in the pretest sample: $M= 2.28$; $SD= .73$; $\alpha =.90$). This measure was included so we could examine whether a sense of chronic exclusion (as in Reijntjes et al., 2010) moderates reactions to a specific exclusion experience in the lab.

See Appendix A for copies of all the pretest measures.

Follow up. At least two weeks after the initial pretest, students returned to complete the second phase of the study. After providing informed consent, participants learned that they would be participating in a study that examines the ways in which people interact via computers versus face-to-face communication. All participants were asked to take part in a 5 minute chat room conversation with two other ostensible participants who did not actually exist (this procedure was adapted from Gardner, Pickett, & Brewer, 2000). The participant was placed in an individual cubicle with a computer and was told that he or she will be connected into a chat room with other participants who are in other cubicles. The chat room conversation was, in actuality, a simulated computer chat designed to present bogus communication with the two other people. At the start of the chat, participants were instructed that one "participant" (not the actual participant) was given a list of questions to start the chat conversation. The first question asked the participants for their opinion on texting while driving, and then the conversation strategically evolves after that initial question.

The chat room discussion functioned as the social exclusion manipulation. Thus, participants were randomly assigned to one of two conditions: *social acceptance* vs. *social exclusion*. Participants in the social acceptance condition were heavily involved in the chat room conversation, receiving acknowledgment and approval throughout the

discussion (e.g., "Yes, I completely agree with you!"). Participants in the social

exclusion condition were excluded from the conversation as the two simulated

participants broke off into a dyad discussing a unique commonality (i.e. both live in the

same apartment building), addressing only each other and ignoring the actual participant.

Immediately after the discussion, participants were asked to rate their reactions on

items designed to tap *self-threat construals* and *loss construals*. Items were preceded by

the prompt "Please indicate how much you feel the following emotions right now" and

participants rated each item on a 7-point scale with endpoints labeled *definitely don't feel*

this way (1) and *definitely feel this way* (7). The self-threat items included: *disrespected*,

slighted, *belittled*, *insulted*, *ignored*, *pissed off*, and *angry*. The loss items included: *sad,*

disconnected, *hurt, wounded*, *friendless*, and *alone*. Following data collection, the affect

items were combined to create indices of self-threat (M= 2.45; SD= 1.53; α =.93) and

loss (M= 2.45; SD= 1.44; α =.90).

Choice of Face-to Face Task: Aggress or Affiliate? Upon completion of the

chat room discussion and ratings, and following our cover story, participants were asked

to select the final face-to-face task that most interests them. They were given a piece of

paper with two task choices and asked to select which one they would like to participate

in. This selection served as our primary measure of aggressive versus affiliative

orientation. One task option was labeled *Noise Blaster Game* and is described using the

language in Appendix B. The other task option was labeled *Things in Common Game* and

is described using the language in Appendix B. Thus, participants' choices provided

information about whether their predominant motivation after the chat room was a

"desire to blast someone" or a "desire to connect with someone."

Evaluation of Transfer Applicant. After participants made their selection, they completed an ancillary task ostensibly for another study while the experimenter prepared the supposed last, face-to-face task (i.e., the Noise Blaster or Things in Common game). For this task, which also measured relevant dependent variables, participants were asked to rate a prospective student (serving as a neutral target) who wishes to transfer to Lehigh in the coming semester. Participants were given a description of the candidate that was neutral in tone (e.g. this candidate has a 3.0 GPA, is interested in Arts and Sciences, personable, hardworking, and organized). Then, participants completed an evaluation form on which they rated the candidate on a scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree)* on various statements. The ratings formed two separate indices. One cluster of items tapped *derogatory responses* (e.g. "This person does not deserve to be a student at Lehigh"). The second cluster of items tapped *affiliative responses* to the applicant (e.g. "I would be willing to host this person for a weekend at Lehigh"). Based on prior work, we have reason to believe that these items measure two underlying dimensions of responding (e.g. DeWall et al., 2009, Maner et al., 2007). See Appendix B for these dependent measures.

For the first cluster of items, after appropriate reverse scoring such that higher scores indicated more derogatory ratings, a single score indexing derogatory responding was formed by averaging ratings across the four items ($M = 3.46$; $SD = .93$; $\alpha = .73$). For the second cluster of items, a single score indexing affiliative responding was formed by averaging ratings across the four items, with high scores indicating higher affiliation tendencies ($M = 4.78$, $SD = .98$, $\alpha = .72$).

Empathic Concern. Finally, participants completed the empathic concern subscale from the Interpersonal Reactivity Index (IRI; Davis, 1996), a measure of dispositional compassion. Past research conducted by Smith and Gill (2009) suggested that chronically excluded individuals are capable of compassionate responding (contra Twenge et al. 2001), and, in fact, show a tendency to be more compassionate than chronically included individuals towards suffering others. This propensity, they suggested, is due to a heightened sensitivity towards others who are suffering from *social pain*. Similarly, we reasoned, a simple reminder of exclusion via the chat room manipulation could activate familiar, enduring feelings of suffering within the chronically excluded, and being in touch with one's own suffering could boost one's sense of concern for the suffering of others (i.e., empathic concern). For this reason, we included the empathic concern scale of the IRI as a measure of compassion feelings in response to the suffering of others. This measure comprised 7 items which participants rated on a scale ranging from 0 (*does not describe me well*) to 4 (*describes me very well*). Items include "I often have tender, concerned feelings for people less fortunate than me" and "I would describe myself as a pretty soft-hearted person." After reverse scoring appropriate items, the ratings were averaged to form one index of empathic concern, where high scores indicate greater empathic concern ($M = 2.84$, $SD = .66$, $\alpha = .82$).

To conclude, participants were thanked and thoroughly debriefed.

Results

Prosocial and Antisocial Responses to the Chat Room Experience

Game choice, applicant evaluations, and empathic concern were all analyzed

using various regression analyses. As a general rule, the following logistic regressions were performed in a step-wise fashion, and only the steps in which significant results occurred are reported.

Game Choice. A first prediction was that narcissism would moderate responses to social exclusion, such that narcissism shows a positive relation with choosing the aggressive task in the social exclusion condition but not in the social acceptance condition. We tested this using binary logistic regression analysis. We regressed game choice (0 = affiliate; 1 = aggress) on sex^2, narcissism, social exclusion, and the exclusion by narcissism interaction. Prior to analysis, all continuous variables were centered around their respective means. When the main effects were entered at step one, the model was significant, χ^2 (3, N= 89) = 8.62, p = .035. Results indicated a marginal main effect of sex, χ^2= 3.418, β= -.428, e^b = .65, t=-1.85, p=.064. When averaging across narcissism and exclusion, the odds of a male choosing the aggressive task were 2.35 times the odds of a female selecting that task. The exclusion by narcissism interaction was entered at step two and was nonsignificant, disconfirming our prediction. In step two the main effect of sex was reduced in magnitude to p = .093, and all other main effects remained non-significant.

Our second prediction was that anxious attachment would moderate responses to social exclusion, such that anxious attachment is positively related to choosing the affiliation task in the social exclusion condition but not in the social acceptance condition. Once again, we tested this using binary logistic regression analysis. We

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^{2} Participant sex was included as a predictor after preliminary analysis revealed that is was predictive of game choice.

regressed game choice on sex, anxious attachment, social exclusion, and the interaction

of exclusion and anxious attachment. When all the first three predictors were entered at

step one, the model was significant, χ^2 (3, N= 89) = 10.798, p = .013. With further

examination of this analysis, chi-square was significant for sex (χ^2= 3.897, β= -.456, e^b =

.63, t=-1.97, p= .048), such that the odds of a male choosing the aggressive task were

2.49 times the odds of a female selecting that task, when averaging across anxious

attachment and exclusion. When the exclusion by anxious attachment interaction were

entered at step 2, results also indicated a marginal exclusion by anxious attachment

interaction, χ^2= 3.543, β= .476, e^b = 1.61, t= 1.88, p = .06. The pattern underlying this

interaction supported our predictions and can be seen in Figure 3. As can be seen there, a

simple effects test reveals that following exclusion, those high in anxious attachment

showed a higher likelihood of choosing the affiliation task as compared to those low in

anxious attachment, χ^2= 6.323, β= -1.033, e^b = .356, t= -2.51, p = .012. However, both

high and low anxiously attached individuals were likely to choose the affiliation task

after being included (t< 1). All other effects were nonsignificant.[3]

Applicant Evaluations. Applicant evaluations were analyzed as a dependent

variable in various linear regressions using the same predictors mentioned above. Across

all these regression analyses, there was a smattering of effects, but they did not amount to

a meaningful or interpretable pattern in light of the conceptual analysis we have offered

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[3] Additional analyses were done in which chronic exclusion was included. We tested for its interactions with manipulated exclusion, narcissism, anxious attachment, and sex (e.g. "Do chronically excluded narcissists respond differently than chronically included narcissists?"). We found very little of note. Also, because main effects of chronic exclusion were not found, it was unnecessary to control for it in further analyses.

(nor did they challenge our analyses). For this reason, applicant evaluations will not be discussed any further.

Need to Belong. The need to belong was also analyzed as a dependent variable in several linear regressions using the aforementioned predictors. It was not a significant predictor in any analyses and will therefore not be discussed further.

Empathic Concern. Next, we performed linear regression analyses using empathic concern as an indicator of a prosocial response following the chat room experience. We did not find any main effects or interactions involving narcissism or anxious attachment. But, we did find an interesting pattern in the analysis including chronic exclusion. In particular, when we regressed empathic concern on sex, manipulated exclusion, chronic exclusion, and the interaction of manipulated and chronic exclusion, we found a main effect of sex ($t(84) = 3.45$, $p = .001$, $\beta = .456$), with females showing greater empathic concern than males, and also a marginal exclusion by chronic exclusion interaction , $t(84) = -1.90$, $p = .060$ ($\beta = -.177$).

To explore this interaction, we conducted simple slope analyses using the *Interaction* program (Soper, 2009; see Figure 4 for graph). Specifically, we looked at the moderating effect of chronic exclusion on the relationship between manipulated exclusion and empathic concern. There was a marginal effect of the exclusion manipulation among chronically excluded individuals ($t(85)= -1.29$, $p = .09$), and the trend suggests that chronically excluded individuals were *higher* in empathic concern following the chat room exclusion compared to those low in chronic exclusion. There was a non-significant reversal of this pattern in the included condition. The most

interesting thing about this weak pattern is that it suggests the chronically excluded are

responding with prosocial feelings to the exclusion experience. This pattern opposes what

is typically found among chronically excluded individuals—that being extreme forms of

aggression and hostility (Leary, Twenge, & Quinlivan, 2006). One possibility here is that

being reminded of their chronic suffering via the exclusion manipulation renders the

chronically excluded at least temporarily more sensitive to the suffering of others. In

contrast, because the exclusion manipulation does not touch a type of familiar suffering

for the chronically included, it cannot increase their sense of compassion. Alternatively,

this pattern might have occurred because the chronically excluded are striving to think

positively about themselves and maintain a positive self-concept after exclusion.

Chronically included individuals who are excluded via manipulation may not be

engaging in the same protective behavior because they may not have as highly developed

coping skills for handling exclusion as those who are chronically excluded.

Potential Mediators of Responses to Exclusion: Self-Threat and Loss Construals

After analyzing prosocial and antisocial responses to the chat room experience,

we analyzed the indexes we had created to tap self-threat and loss construals.

Self-threat Construal. We predicted that narcissism would moderate the

tendency to construe social exclusion as a threat to self. More specifically, we expected

that narcissism would show a strong positive relation to our self-threat variable in the

social exclusion condition but not in the social acceptance condition. We tested this

prediction using multiple regression analysis where we regressed the self-threat index on

narcissism, social exclusion, and their interaction. Results revealed a significant

narcissism main effect ($t(85) = -1.973$, $p = .052$, $\beta = -1.390$), yet the pattern was opposite

of expectations. The effect suggests that as narcissism levels increased, feelings of self-

threat decreased, averaging across exclusion. Results also revealed a main effect of

exclusion ($t(85) = -8.714$, $p < .001$, $\beta = -1.047$), such that excluded individuals

experienced more feelings of self-threat than included individuals after that chat

experience. Also, an exclusion by narcissism interaction was found, $t(85) = 2.369$, $p =$

.020 ($\beta = 1.668$).

To interpret this interaction, we once again used simple slope analyses (see Figure

5 for graph). Specifically, we looked at the moderating effect of exclusion on the

relationship between narcissism and self-threat. For the excluded individuals, directly

contrary to our prediction, higher levels of dispositional narcissism were associated with

decreased feelings of self-threat, $t(85) = -3.09$, $p = .003$. Narcissism was unrelated to self-

threat emotions for those who were included ($t < 1$).[4] Because this pattern of results did

not coincide with any of the patterns we found for pro- or anti-social responses above, we

did not conduct analyses of mediation.

Loss Construal. We predicted that anxious attachment tendencies would

moderate the tendency to construe exclusion in terms of loss. More specifically, we

expected that anxious attachment tendencies would show a strong positive relation to our

loss construal variable in the social exclusion condition but not in the social acceptance

condition. To test this, we regressed the loss index on anxious attachment, social

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[4] Although not in our initial predictions, for thoroughness we regressed the self-threat index on anxiety, social exclusion, and their interaction. Results only indicated a similar main effect of exclusion, ($t(85) = -8.373$, $p = .000$, $\beta = -1.047$), in the same direction as just described.

exclusion, and their interaction. Results revealed a main effect of exclusion ($t(85)$= -7.052, $p < .001$, $\beta = -.881$), such that excluded individuals experienced more feelings of loss than included individuals, averaging across anxiety.[5] Such an effect is naturally expected of excluded individuals, and therefore not of particular interest to us. All other effects in this analysis were nonsignificant. Because this pattern of results did not coincide with any of the patterns we found for pro- or anti-social responses above, we did not conduct analyses of mediation.[6]

Discussion

Study 1 sought to show how individual differences affect the ways in which people construe an exclusion event and how these construals shape subsequent tendencies toward pro- or anti-social responding to the exclusion. Overall, there was limited amount of support for our predictions.

Our most interesting finding suggests that anxious attachment levels moderate one's likelihood of choosing the affiliation task over the aggressive task after exclusion. Specifically, high anxious attachment was associated with a higher likelihood of choosing the affiliation task after being excluded, compared to those low in anxious attachment. However, in the included condition, both high and low anxiously attached individuals

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[5] Although not in our initial predictions, for thoroughness we regressed the loss index on narcissism, social exclusion, and their interaction. Results only indicated a similar main effect of exclusion, ($t(85) = -7.247$, $p =.000$, $\beta = -.879$), in the same direction as described.

[6] Another element of our argument is that the self-threat and loss indexes would be predictive of game choices. Thus, we regressed game choice on self-threat and loss emotions, separately, in two logistic regressions. Both of these regressions were nonsignificant, ($p=.568$ and $p=.797$, respectively), and therefore do not lend any support to our predictions.

were likely to choose the affiliation task. We can interpret the responses of the anxiously attached as reaffirming their need for connection after experiencing exclusion.

When looking at our indexes of self-threat and loss construals, we found no evidence supporting our predictions. Indeed, the relation of narcissism to self-threat construals was opposite of what we had predicted: Rather than narcissists feeling especially self-threatened after an exclusion experience, they reported especially low levels of self-threat following exclusion. One possible explanation for such a reversal is that narcissists are engaging in self-protection, denying any feelings of disrespect and threat in order to maintain their superior status. Related to this "defensiveness" interpretation, upon further investigation we found that narcissists were less likely to believe that the chat room was real, regardless of whether they were included or excluded.[7] Disbelieving potential social feedback seems like another self-protection strategy. So, perhaps narcissists were defensive in this study, but not in a way that could be tapped by our explicit measures.

Beyond the reversal of our prediction discovered among narcissists, our construal measures yielded little information. In general, it seems that the measures were lacking in some important ways. Most crucially, further analysis did not support the assumption that these emotion words were tapping two distinct construals. Rather than participants distinctly feeling self-threatened vs. a sense of loss, excluded individuals sensed more

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[7] We logistically regressed belief (0=disbelief, 1= belief) on narcissism, exclusion, and their interaction. Results revealed a significant main effect of narcissism, χ^2= 4.740, β= -3.881, e^b = .021, t= 11.83, p= .029, such that narcissists were .02 times more likely than non-narcissists to disbelieve the chat room experience.

general negative emotion overall.[8,9] This overall negative emotion could be due to the way in which the emotion words were presented to participants during data collection. Individuals rated emotion words one at a time as they appeared on the screen, which could lead to a more abstract feeling of emotional negativity, instead of recognizing the distinction between the two types of words. Presenting similar word groupings together so individuals can clearly distinguish which type of negative emotion they feel may alleviate this problem in future studies. Thus, individuals may have had a difficult time signifying their emotions as a feeling of self-threat vs. loss due to the word presentation format.

Although not in our specific predictions, we interestingly found that empathic concern was heightened for those who suffer from chronic exclusion and were also excluded in the chat room. Research literature typically suggests increased aggression among the chronically excluded; however, the opposite occurred. Such increased prosocial tendencies could reflect an attempt to counteract the negative emotions brought on by the exclusion experience. Alternatively, because the chronically excluded population at a college campus may not be reflective of the severely, chronically excluded populace that does not attend college, our sample may only be capturing a small window of chronically excluded individuals in which aggressive tendencies are generally reduced. Rather than aggressing, these excluded individuals are especially sensitive to the suffering of others, expressed in terms of their increased empathic concern. Overall then,

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[8] All 13 negative emotion words were entered into a principle axis analysis. Factor analyses revealed that the negative emotion words load on to one factor, with factor loadings ranging from .645 to .943.

[9] For thoroughness, positive emotions were also regressed on individual difference variables, exclusion, and their interactions. Main effects of exclusion were found, $p < .001$ for both analyses, such that included experienced more positive emotions than excluded.

these analyses reflect some individual differences moderation in the exclusion experience. Although narcissism was not a big contender, anxious attachment did moderate reactions to exclusion in line with our initial expectations.

Study 2: Direct Manipulation of Self-Threat and Loss Construals Affect Consequent Responses to Exclusion

In Study 1, we measured individual difference variables that we expected to shape construals of social exclusion. In Study 2, we took an experimental approach and directly manipulated self-threat vs. loss construals to examine whether such a manipulation would produce changes in responses to social exclusion.

Method

Participants

Ninety Lehigh University undergraduate students completed this study for course credit in their Introductory Psychology course. The final sample included 83 participants (29 female). Seven participants were removed due to high levels of suspicion. In this experiment, all of the participants appeared to be taking the tasks seriously, and therefore no participants were removed for this reason (as they were in Study 1).

Procedure

After providing informed consent, participants learned that they will be participating in a study on "cognitive fluency and its effect on communicating by means of computers." In actuality, the "cognitive fluency" task was our construal priming task. Then, like in Study 1, exclusion was manipulated through the same chat room discussion

task, and self-threat and loss construals were measured. Finally, as in Study 1, participants selected a face-to-face task—Noise Blaster or Things in Common—and rated a neutral student applicant for our dependent measures.

Priming of exclusion construals. First, participants took part in a computer-based task in which they were asked to unscramble a series of short sentences as fast as possible. The purpose of this task was framed as "measuring cognitive fluency," but in reality the purpose was for participants to be primed with a certain mindset. Participants were randomly assigned to conditions in which the sentences primed the concept of status/respect or the concept of belonging/loss. Thus, the scrambled sentences were related concepts that we expected to contribute to either a *self-threat construal* or to a *loss construal* upon contact with an exclusion experience. See Appendix C for the priming sentences. To make the cover story more credible, the participants' unscrambling times appeared on the computer screen between trials.

Chat room, task choice, and evaluation of transfer applicant. Once the prime was complete, participants engaged in a chat room discussion with two other alleged participants, just as in Study 1. As in Study 1, we manipulated exclusion vs. acceptance between participants. Upon completion of the chat, participants, like in Study 1, rated their construals on our self-threat and loss indexes. Next, just as in Study 1, participants were presented with a choice of face-to-face task, which was either aggressive or affiliative in nature, providing us with one measure of the dependent variable. Finally, participants were asked to rate a prospective transfer student (same as Study 1), once again tapping aggression and affiliative motives.

Just as in Study 1, following data collection, the construal items were combined to create indices of self-threat ($M=2.67$; $SD=1.51$; α =.92) and loss ($M=2.59$; $SD=1.30$; α =.84).

For the applicant derogation items, after appropriate reverse scoring such that higher scores indicated greater derogation, an index was formed by averaging ratings across the four items ($M=3.34$; $SD=1.08$; α = .83). For the second cluster of items, a total affiliation tendency score was formed by averaging ratings across the four items, with high scores indicating higher affiliation tendencies ($M=4.69$, $SD=.90$, α = .60).

Results

Prosocial and Antisocial Responses to the Chat Room Experience

Game Choice. We predicted that, following exclusion, those in the self-threat construal condition would show a relative preference for the aggressive task whereas those in the loss construal condition would show a relative preference for the affiliative task. We tested these predictions using binary logistic regression analysis. We regressed game choice (0 = affiliate; 1 = aggress) on sex, construal, exclusion, and the construal by exclusion interaction. All main effects were entered at step one, and the model was significant, χ^2 (3, N= 83) = 8.941, p = .030. With further examination of this analysis, chi-square was significant for exclusion (χ^2= 6.560, β= -.609, e^b = .554, t= -2.56, p= .010), such that excluded were more likely to choose the aggressive game than included individuals. More specifically, when averaging across sex and construal, the odds are 3.38 times higher for excluded individuals to select the aggressive task compared to included individuals.

More interestingly, when the interaction was entered at step two, our findings revealed a marginal construal by exclusion interaction, $\chi^2 = 2.719$, $\beta = -.392$, $e^b = .676$, $t = -1.65$, p= .099. The interaction can be seen in Figure 6. As can be seen in the plot, in the inclusion condition most participants chose the affiliation task and this did not vary as a function of the construal manipulation (t<1). In contrast, within the exclusion condition, although there was a general shift toward choosing the aggressive task, this effect was especially marked in the self-threat condition, $\chi^2 = 3.889$, $\beta = .663$, $e^b = 1.941$, $t = 1.97$, p= .048. Thus, these results support our prediction that construals will affect responses to exclusion.

Applicant Evaluations. We predicted parallel findings for applicant evaluations. That is, we expected that in the exclusion condition those in the self-threat construal condition would engage in more applicant derogation as compared to those in the loss construal condition. We tested these predictions using linear regression analyses. We first regressed sex, construal, exclusion, and the construal by exclusion interaction on the averaged derogation items (calculated as mentioned above). Results indicated a main effect of construal ($t(78) = 1.968$, $p = .053$, $\beta = .228$), such that those primed with a self-threat mindset displayed more derogation of the applicant than those primed with the loss mindset. All other effects were nonsignificant.

We also expected that in the exclusion condition those in the loss construal condition would engage in more affiliative responding to the applicant than would those in the self-threat construal condition. To test this, we regressed sex, construal, exclusion, and the construal by exclusion interaction on the aggregated affiliation items. Similarly, we found a main effect of construal ($t(78) = -2.716$, $p = .008$, $\beta = -.254$), such that those

primed with a loss mindset displayed more affiliation towards the applicant than those primed with a self-threat mindset. Also, a main effect of sex was revealed ($t(78) = 2.428$, $p = .017$, $\beta = .476$), where females were more affiliative towards the applicant than males. All other effects were nonsignificant.

Potential Mediators of Responses to Exclusion: Self-Threat and Loss Construals

Next, we examined whether our priming manipulation produced the expected effects on our self-threat and loss items.

Self-threat Construal. We regressed sex, construal, exclusion, and the construal by exclusion interaction on self-threat emotions (averaged as described above). Results revealed a main effect of exclusion ($t(79) = -9.79$, $p < .001$, $\beta = -1.12$), such that excluded individuals experienced more self-threat emotions than included individuals. All other effects were nonsignificant.

Loss Construal. Next we regressed sex, construal, exclusion, and the construal by exclusion interaction on the loss emotions (averaged as described above). Results indicated a main effect of exclusion ($t(79) = -7.645$, $p < .001$, $\beta = -.851$), such that excluded individuals experienced more loss emotions than included individuals. All other effects were nonsignificant.

Because the construal manipulation did not interact with the exclusion manipulation—as it did for game choices—it does not make sense to test for mediation of the effects on game choices by our self-threat or loss indexes.

Discussion

In Study 2, we took an experimental approach and directly manipulated self-threat vs. loss construals. Consistent with predictions, we found a marginal interaction suggesting that excluded individuals primed with self-threat construals were more aggressive (e.g. they more likely to choose the aggressive game), compared to excluded individuals in the loss condition, who were less likely to aggress. More specifically, this construal effect among those who were excluded suggests that although all excluded individuals were more likely to choose the aggressive task compared to included individuals, those who were primed with the self-threat construal opted for the aggressive game 80% of the time, compared to about 60% of the time in the loss condition. Overall, these analyses are consistent with our expectation that excluded individuals would be most aggressive when first primed to think in terms of self-threat, and less aggressive when primed with loss, at least in terms of game choice. Our construal priming manipulation, on the other hand, did not produce the expected effects on our self-threat and loss items. What was discovered, as in Study 1, were main effects of exclusion, such that excluded tended to feel more feelings of self-threat and loss. Similar to Study 1, factor analysis revealed these emotion words loading on to one, general negative emotion factor, with factor loadings ranging from .503 to .885. This then suggests that because there were significant differences in game choice due to the manipulation, but no effects involving construal and exclusion on the construal emotions, it is possible that our measure used to tap emotions was again, lacking validity. Therefore, it is possible to construe exclusion in two distinct mindsets as reflected in the game choice data, but we need to consider alternative means of directly assessing construals. This limitation is

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discussed further in the next section.

General Discussion

Prior research suggests vastly different responses following a bout of rejection, with responses ranging from anti-social aggression to prosocial affiliation and praise of others. We set out to unveil the causes of such diverse responses to exclusion by examining how such responses depend on whether one construes the exclusion as a *self-threat* or a *loss*. Just as cognitive appraisal theories suggest, emotions ultimately arise after initial appraisals of experienced events, and those emotions cause diverse subsequent behavior. Thus, we proposed that individuals who experience exclusion as a threat to self will be more likely to respond aggressively after rejection, whereas those who construe exclusion as a loss of something desired will be more apt to respond prosocially.

We tested this idea both correlationally and experimentally. In Study 1 we measured individual differences that we expected to influence how participants construed the experience of social exclusion (i.e., narcissism and anxious attachment style), exposed participants to such an experience, measured self-threat vs. loss construals, and finally measured the extent to which the construal-relevant individual difference variables moderated responses to the exclusion experience. We anticipated that individuals high in narcissism would likely construe an experience of exclusion in terms of self-threat, leading to antisocial behavior, while anxiously attached individuals would likely construe exclusion in terms of loss, causing subsequent affiliative behavior. In Study 2, we directly manipulated how people construed the experience of social exclusion, measured self-

threat vs. loss construals, and then measured the extent to which this manipulation moderated responses to an exclusion experience.

When looking at the role that individual differences played in Study 1, we found no evidence to support our predictions regarding narcissism. Narcissism did not moderate responses to exclusion, nor was it related to an increased tendency to construe exclusion as a threat to self. In fact, narcissists reported less self-threat following exclusion than did non-narcissists (discussed further below). The evidence was more supportive of our predictions regarding anxious attachment. Specifically, following exclusion, individuals high in anxious attachment were more likely to choose the affiliative (rather than the aggressive) game than were those low in anxious attachment, whereas anxious attachment was unrelated to game choices in the inclusion condition. We interpret this as fitting our predictions because anxiously attached individuals presumably have a heightened fear of loss experiences, thus moving them towards reconnection and affiliation with others. Despite this seeming consistency with our predictions, we found no evidence that anxious attachment was related our direct index of loss construal.

With respect to our manipulation of construals in Study 2, we found that individuals who were excluded and who had been primed to construe their exclusion in terms of self-threat were more likely to choose the aggressive (rather than affiliative) game than were those who were excluded but had been primed to construe their exclusion in terms of loss. As in Study 1, however, our direct indexes of self-threat and loss construals proved insensitive: Those in the self-threat prime condition did not score higher on our self-threat index than did those in the loss prime condition, and those in the

loss prime condition did not score higher on our loss index than did those in the self-threat condition.

Across Studies 1 and 2, then, our predictions received moderate support if we simply examine game choices: Anxious attachment was associated with affiliative responses to exclusion, and a self-threat prime produced more aggressive responses than did a loss prime. In contrast, our attempts to directly measure the extent to which participants' construed exclusion in self-threat or loss frames were unsuccessful. The lack of success is evident in a couple of ways. First, our indexes were not related to our construal-relevant individual difference variables nor to our experimental manipulation of construals. Second, although we had intended to measure two distinct dimensions of construal, the factor analyses presented above revealed that our items tapped just one factor: Positive vs. negative emotional response. Given the facts that one of our two individual difference measures moderated responses to exclusion in the predicted manner, as did our experimental manipulation, the lack of results involving construal measures seems likely to be due to the fact that the construal measures were lacking validity.

Accordingly, one limitation of these studies is the imprecise measures used to tap construals of exclusion. Because the emotion words did not reflect a clear distinction between feelings of self-threat and feelings of loss, using these factors in analyses renders results rather ambiguous. For future studies of this sort, implicit measures of emotion, like Word Stem Completion (DeWall and Baumeister, 2007) or coding of facial affect (Keltner, Moffitt, Stouthamer-Loeber, 1995), may be a more suitable and less obvious way of assessing construals. For the word stem completion task, individuals are shown

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the first few letters of a word, and must then fill in the blanks however they see fit. The word stems are created to guarantee that they can be completed to form emotion words. Thus, an individual's current emotional state would most likely be expressed through his or her word formations (e.g. one who chooses to complete the fragment "FE _ _" as FEAR, and "AL_ _ _" as ALONE would likely be experiencing those emotions). Another such implicit measure involves studying one's facial reactions and coding them appropriately, which may reveal systematic differences between construal groups.

If our construal measures are lacking validity, what can be said about the narcissism and self-threat finding that emerged? At first glance, the narcissism findings were surprisingly opposite from what we expected based on previous research findings. That is, prior research suggests that narcissists act aggressively due to a threatened ego, as Bushman and Baumeister (1998) found highest levels of aggression associated with ego-threatened narcissists. However, in our study, narcissists reported less self-threat following exclusion than did non-narcissists. Thus, it is plausible that narcissists were self-presenting and therefore not succumbing to or acknowledging any negative emotions, be it self-threat or not, in order to maintain their status and control over the situation. Non-narcissists, on the other hand, more easily expressed such negative emotions. Related to this potential self-presentation and "defensiveness" effect, narcissists were less likely to believe in the chat room in general, suggesting a potential for disregarding the exclusion experience and the associated feelings. Although defensiveness and denial are plausible effects of this study, our explicit measures were unable to reveal such exact effects. Thus, additional implicit measures like the ones described above, could better capture these effects in future studies.

Interestingly enough, we did not find distinct behavioral differences among narcissists and anxiously attached individuals in evaluating the potential transfer student in Study 1. Displaying antisocial or affiliative behavior towards a neutral third party following exclusion is a contentious topic, where some research shows evidence for such displacement of behavior (Martinez, Zeichner, Reidy, and Miller, 2008; Twenge and Campbell, 2003), and others show diminishing effects towards innocent others (Dewall, Twenge, Gritter, and Baumeister, 2009). Given that our results coincide with the latter, individuals may have had a weakened feeling of rejection or emotion by the time the evaluation occurred, and did not feel the need to disparage, or reach out to, a person whom they were not going to interact with immediately. Because the transfer student was not an immediate perpetrator of the exclusion experience, she therefore had no significance to participants. Thus, they did not extend such aggression or affiliation.

In relation to Study 2, there was strictly a main effect of construal prime condition on transfer applicant evaluations, such that individuals in the self-threat condition evaluated the applicant more negatively than did those in the loss condition. However, because this priming effect did not interact with exclusion, we cannot say that feeling "self-threatened" per se, is what caused the negative ratings of the applicant, because actually feeling self-threatened would only be present alongside experiencing exclusion. With further examination of the actual priming statements, one can see that participants in the self-threat condition were essentially primed with the importance of status and respect. Thus, perhaps applicant derogation happened in that condition because participants were motivated to ensure their own high status position. In the case of the loss construal condition where connection and belonging concepts were primed,

participants were more affiliative towards the transfer student. Consequently, a potential student joining the school shows up on the radar of individuals who were exposed to status or togetherness concepts, where their evaluations can really affect future goals and outcomes.

Finally, additional theoretical issues remain open for future research. It may be of value to include other individual differences that might predict construal responses in future studies, such as one's belief about human nature. If an individual is likely to believe that all humans are inherently selfish and aggressive beings (viewing such qualities as adaptive and necessary for survival), he or she may be more likely to interpret exclusion in a threatening manner and to respond in an aggressive fashion to ensure one's own success. On the other hand, one aspect that may lead individuals to construe exclusion in terms of loss is a collectivistic mindset. People from collectivistic societies tend to value togetherness and interdependence, and such cultural values often shape cognitive appraisals of situations, emotions, and future behavior (Markus and Kitayama, 1991). Thus, collectivistic individuals may experience exclusion in terms of a loss of connectedness, where they would then respond in a way that maintains harmonious relationships and interactions.

Not only should other potential individual difference moderators be examined, but future research should also address responses to a variety of exclusion situations. Thus, another limitation of our study is the generalizability of our findings due to the single circumstance of exclusion that we tested. Although our chat room exclusion manipulation turned out to work quite well, this was just one type of exclusion, and thus these findings are not a global indication of responses that may arise from other manipulations of

exclusion (i.e. receiving false feedback, recalling a personal exclusion event, not being picked to work in a group, etc.). Also, the type of exclusion in the chat room involved individuals being ignored and left out, which differs from other, more direct types of social exclusion, such a teasing, bullying, disrespecting, or physically displacing someone from a group, which may all lead to different patterns of construal and responses. However, we chose to have the excluded participants ignored rather than denounced or rejected in the chat room to allow for individual interpretation of the event (in the case of Study 1). Had we directly rejected or disrespected the excluded individuals, there may have been more distinct findings for construals of self-threat vs. loss. Thus, for future studies, it is of utmost importance to test a variety of exclusion experiences in order to further disentangle construals and response patterns.

In conclusion, research thus far neglects to examine the reasons *why* individuals respond in vastly different ways after an experience of exclusion. We took the first step to break down potential, underlying moderators of exclusion, those being self-threat and loss construals. Although we did not find exact evidence of construal emotions moderating behavior, results in both studies provide some evidence of differentiated construal of exclusion, and thus lead us to conclude that such construals matter in terms of interpreting an exclusion experience and causing subsequent pro-social and anti-social behavior. Improved construal measures and the inclusion of other individual differences in future studies will further disentangle the exclusion story. Revealing such reasons why responses occur lends predictive power for real life exclusion cases, allowing for improved intervention and a potential decrease in large-scale, aggressive incidents (i.e. school shootings). For those who construe social exclusion as a personal threat,

interventions—e.g., cognitive therapy—aimed at changing those construals would be

potentially beneficial for reducing negative responding. Learning to construe rejection in

a positive manner (or, at least, a "not so negative" manner), devoid of self-blame,

alongside a boost of confidence, can dramatically alter one's self-concept, improve

morale, and build character. Overall, unveiling these construals and discovering the

motivations behind the diverse responses of the excluded will help pave the way for

enhancing the quality of life for the socially excluded, as well as protecting the lives of

others.

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Figure Captions

Figure 1. Prediction path model of self-threat construal variable mediating the relation

between narcissism and aggression within the social exclusion condition

Figure 2. Prediction path model of loss construal mediating the relation between anxious

attachment and affiliation within the social exclusion condition

Figure 3.Probability of choosing the aggressive task as a function of exclusion and

anxiety.

Figure 4.Empathic concern as a function of manipulated exclusion and chronic exclusion

Figure 5.Self-threat as a function of narcissism and exclusion

Figure 6. Probability of choosing the aggressive task a function of exclusion and

construal.

Figure 1.

Figure 2.
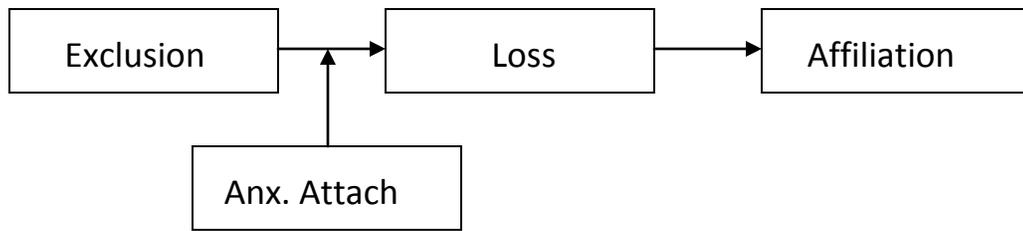
Figure 3.
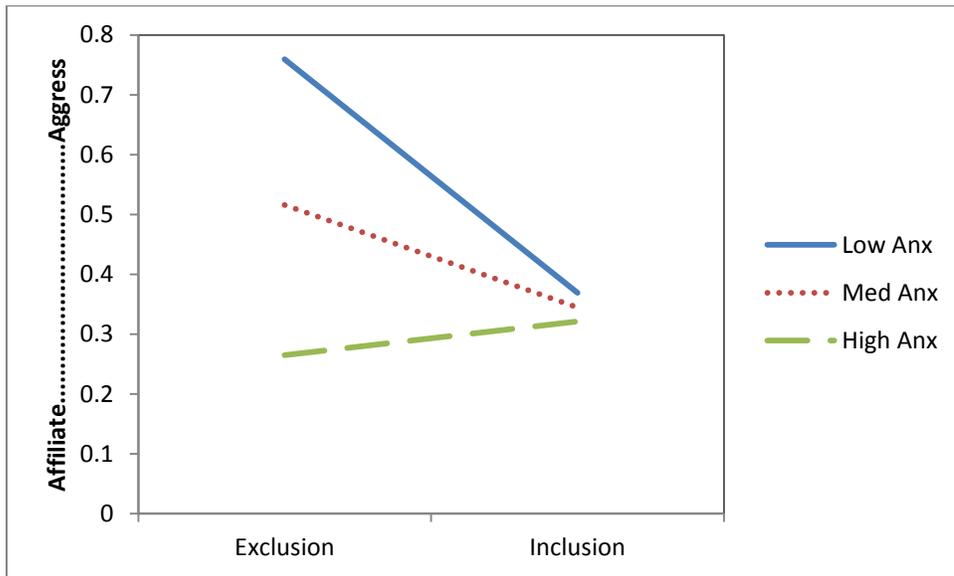
Figure 4.
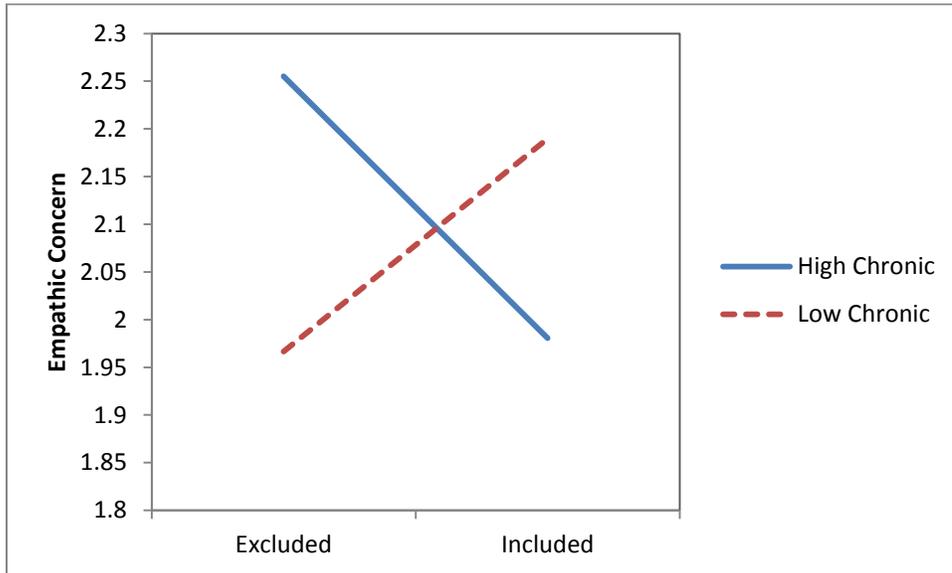
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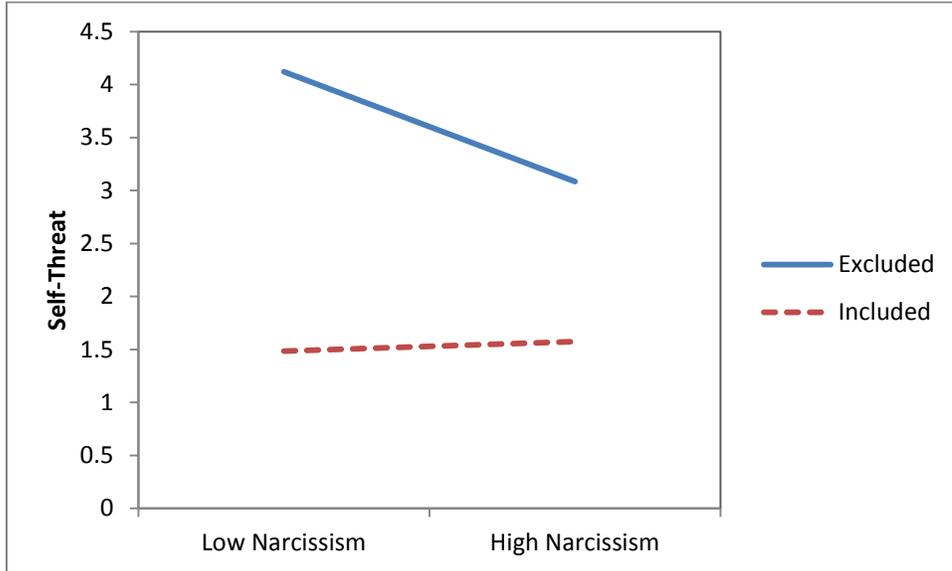
Figure 6.
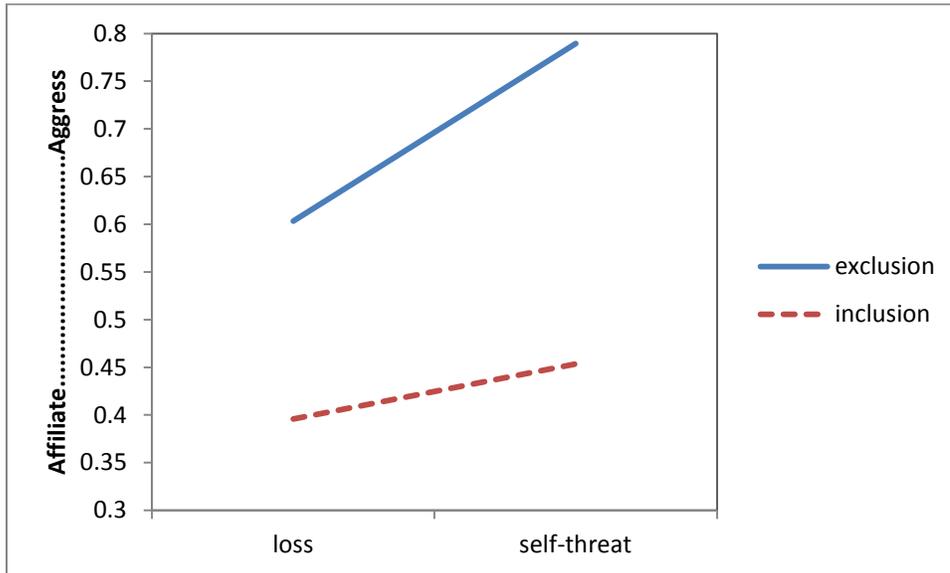
Appendix A: Pretest Measures

NPI

> *Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by **circling the letter "A" or "B"** to the left of each item.*

1.   A I have a natural talent for influencing people.

       B I am not good at influencing people.

2.   A Modesty doesn't become me.

       B I am essentially a modest person.

3.   A I would do almost anything on a dare.

       B I tend to be a fairly cautious person.

4.   A When people compliment me I sometimes get embarrassed.

       B I know that I am good because everybody keeps telling me so.

5.   A The thought of ruling the world frightens the hell out of me.

       B If I ruled the world it would be a much better place.

6.   A I can usually talk my way out of anything.

       B I try to accept the consequences of my behavior.

7.   A I prefer to blend in with the crowd.

       B I like to be the center of attention.

8.   A I will be a success.

       B I am not too concerned about success.

9.   A I am no better or no worse than most people.

       B I think I am a special person.

10.   A I am not sure if I would make a good leader.

       B I see myself as a good leader.

11. A I am assertive.

     B I wish I were more assertive.

12. A I like having authority over people.

     B I don't mind following orders.

13. A I find it easy to manipulate people.

     B I don't like it when I find myself manipulating people.

14. A I insist upon getting the respect that is due me.

     B I usually get the respect that I deserve.

15. A I don't particularly like to show off my body.

     B I like to display my body.

16. A I can read people like a book.

     B People are sometimes hard to understand.

17. A If I feel competent I am willing to take responsibility for making decisions.

     B I like to take responsibility for making decisions.

18. A I just want to be reasonably happy.

     B I want to amount to something in the eyes of the world.

19. A My body is nothing special.

     B I like to look at my body.

20. A I try not to be a show off.

     B I am apt to show off if I get the chance.

21. A I always know what I am doing.

     B Sometimes I am not sure of what I am doing.

22. A I sometimes depend on people to get things done.

     B I rarely depend on anyone else to get things done.

23. A Sometimes I tell good stories.

     B Everybody likes to hear my stories.

24. A I expect a great deal from other people.

     B I like to do things for other people.

25. A I will never be satisfied until I get all that I deserve.

B I take my satisfactions as they come.

26. A Compliments embarrass me.

B I like to be complimented.

27. A I have a strong will to power.

B Power for its own sake doesn't interest me.

28. A I don't very much care about new fads and fashions.

B I like to start new fads and fashions.

29. A I like to look at myself in the mirror.

B I am not particularly interested in looking at myself in the mirror.

30. A I really like to be the center of attention.

B It makes me uncomfortable to be the center of attention.

31. A I can live my life in any way I want to.

B People can't always live their lives in terms of what they want.

32. A Being an authority doesn't mean that much to me.

B People always seem to recognize my authority.

33. A I would prefer to be a leader.

B It makes little difference to me whether I am a leader or not.

34. A I am going to be a great person.

B I hope I am going to be successful.

35. A People sometimes believe what I tell them.

B I can make anybody believe anything I want them to.

36. A I am a born leader.

B Leadership is a quality that takes a long time to develop.

37. A I wish somebody would someday write my biography.

B I don't like people to pry into my life for any reason.

38. A I get upset when people don't notice how I look when I go out in public.

B I don't mind blending into the crowd when I go out in public.

39.   A I am more capable than other people.

          B There is a lot that I can learn from other people.

40.   A I am much like everybody else.

          B I am an extraordinary person.

ECR

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you <u>generally experience relationships</u>, not just in what is happening in a current relationship. Respond to each statement by filling-in-the-blank with a number from the scale below to indicate how much you agree or disagree with the statement.

1------------2------------3------------4------------5------------6------------7

Strongly   **Strongly**

Disagree   **Agree**

_____ (1) I'm afraid that I will lose my partner's love.

_____ (2) I often worry that my partner will not want to stay with me.

_____ (3) I often worry that my partner doesn't really love me.

_____ (4) I prefer not to show a partner how I feel deep down.

_____ (5) I feel comfortable sharing my private thoughts and feelings with my partner.

_____ (6) I worry that romantic partners won't care about me as much as I care about them.

_____ (7) I find it easy to depend on romantic partners.

_____ (8) It's easy for me to be affectionate with my partner.

_____ (9) My partner really understands me and my needs.

_____ (10) I often wish that my partner's feelings for me were as strong as my feelings for him or

        her.

_____ (11) I worry a lot about my relationships.

_____ (12) I find it difficult to allow myself to depend on romantic partners.

_____ (13) When my partner is out of sight, I worry that he or she might become interested in

        someone else.

_____ (14) When I show my feelings for romantic partners, I'm afraid they will not feel the same

        about me.

_____ (15) I prefer not to be too close to romantic partners.

_____ (16) I get uncomfortable when a romantic partner wants to be very close.

_____ (17) I find it relatively easy to get close to my partner.

_____ (18) I rarely worry about my partner leaving me.

_____ (19) My romantic partner makes me doubt myself.

_____ (20) I am very comfortable being close to romantic partners.

_____ (21) I don't feel comfortable opening up to romantic partners.

_____ (22) I do not often worry about being abandoned.

_____ (23) I usually discuss my problems and concerns with my partner.

_____ (24) I find that my partner(s) don't want to get as close as I would like.

_____ (25) It's not difficult for me to get close to my partner.

_____ (26) Sometimes romantic partners change their feelings about me for no apparent reason.

_____ (27) My desire to be very close sometimes scares people away.

_____ (28) It helps to turn to my romantic partner in times of need.

_____ (29) I tell my partner just about everything.

_____ (30) I'm afraid that once a romantic partner gets to know me, he or she won't like who I

really am.

_____ (31) It makes me mad that I don't get the affection and support I need from my partner.

_____ (32) I worry that I won't measure up to other people.

_____ (33) My partner only seems to notice me when I'm angry.

_____ (34) I talk things over with my partner.

_____ (35) I am nervous when partners get too close to me.

_____ (36) I feel comfortable depending on romantic partners.

Need to Belong Scale

(Leary, Kelly, Cottrell, & Schreindorfer, 2005)

Instructions: For each of the statements below, indicate the degree to which you agree or disagree with the statement by writing a number in the space beside the question using the scale below:

>   1 = Strongly disagree
>
>   2 = Moderately disagree
>
>   3 = Neither agree nor disagree
>
>   4 = Moderately agree
>
>   5 = Strongly agree

_____ 1. If other people don't seem to accept me, I don't let it bother me.

_____ 2. I try hard not to do things that will make other people avoid or reject me.

_____ 3. I seldom worry about whether other people care about me.

_____ 4. I need to feel that there are people I can turn to in times of need.

_____ 5. I want other people to accept me.

_____ 6. I do not like being alone.

_____ 7. Being apart from my friends for long periods of time does not bother me.

_____ 8. I have a strong need to belong.

_____ 9. It bothers me a great deal when I am not included in other people's plans.

_____ 10. My feelings are easily hurt when I feel that others do not accept me.

Social Exclusion Scale

Please read each item below. Fill-in-the-blank next to each item with the response from the scale below that best reflects your thoughts and feelings about your social relationships.

1---------------2---------------3---------------4---------------5

Strongly   **Neutral**   **Strongly**

Disagree   **Agree**

____ (1) I often feel like an outsider in social gatherings.

____ (2) I often feel excluded, ignored, or rejected by others.

____ (3) I often feel like I'm *not* sought out by others for social activities.

____ (4) I feel like I'm liked and accepted by others.

____ (5) People often seek out my company.

____ (6) I sometimes think that other people do *not* find me desirable to be with.

____ (7) I would say that I am a reasonably popular person.

____ (8) I often feel lonely and left out.

____ (9) I often wish that I were more liked and included by others.

Appendix B: Dependent Measures

Face-to-Face Task Choice

Noise Blaster Game

For this task, you will be paired with a randomly chosen partner with who you'll interact for 10 minutes. The two of you will compete in a reaction time game. You will sit next to each other at a computer and you'll each be hooked up to separate headphone sets. Generally speaking, you'll each be asked to press a button as fast as possible on each trial of the game. If you beat your partner to the button press, you have the opportunity to "blast" him or her with noise in his or her headphones. You will have the power to determine both the intensity and duration of the noise that your partner will hear.

Things in Common Game:

For this task, you will be paired with a randomly chosen partner with whom you'll interact for ten minutes. The two of you will discuss your likes, dislikes, hobbies, and other interests. The goal of the conversation will be to identify what the two of you have in common. As commonalities are identified, you'll work together to rate these interests on their level of importance in both of your lives.

Evaluation of Transfer Applicant:

Karen is a transfer candidate who just completed her second year at a local college. She wishes to transfer to Lehigh for the start of the next semester. Karen is a well-rounded student, has a 3.0 cumulative GPA, and is interested in Arts and Sciences. She is very personable, hardworking, and organized, and these qualities are evident through her involvement in the school newspaper and social action club.

Please rate Karen on the following items using the scale below:

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

_____ This person does not deserve to be a student at Lehigh.

_____ The applicant is friendly.

_____ I'm not sure this person is bright enough to excel at this school.

_____ I would be willing to show her around and talk to her about Lehigh.

_____ This person would not be able to handle the coursework here.

_____ The applicant is open-minded.

_____ The applicant would fit right in at Lehigh.

_____ I would be willing to host this person for a weekend at Lehigh.

APPENDIX C: Exclusion Construal Primes

To Prime Self-Threat Construal

- No one respects him

- Someone has to lose

- Her peers admire her

- I want to be top dog

- It's not fun at the bottom

- He is so popular

- She's better than the rest

- Everyone wants to be his friend

- I am a winner

- He is a loser

- Being the best is important

- It won't rain on my parade

To Prime Loss Construal

- He felt so alone

- She was sad without him

- Being together feels good

- I want to connect

- People need to bond

- Friendship is important

- We are social animals

- People need social support

- She leans on his shoulder

- Closeness means happiness

- Togetherness is important in life

- He wants to be accepted

Filler

- The cat drinks milk

- He checked the mail

- The world is a busy place

- She loves to drink tea

- Homework is not fun

- Every day is something new

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EDUCATION

MAY 2011   Masters of Science in Social Psychology
                  LEHIGH UNIVERSITY, BETHLEHEM, PA

MAY 2009   Bachelor of Arts in Psychology
                  LEHIGH UNIVERSITY, BETHLEHEM, PA

HONORS

2009-2010   Presidential Scholarship
2009   Graduated with High Honors and Departmental Honors
2005-2009   Dean's List, Lehigh University

RESEARCH INTERESTS

♦ Bases of Prosocial Behavior: focus on compassion
♦ Diverse Responses to Social Exclusion: antisocial and prosocial responses

PROFESSIONAL PRESENTATIONS

Smith, A.K. & Gill, M. J. (January, 2011) *The Socially Excluded: Aggressive, Emotionally Numb, and Compassionate?* Poster presented at the annual meeting of the Society for Personality and Social Psychology. San Antonio, TX.

Smith, A. K & Gill, M.J. (May, 2010) *The Interplay of Social Exclusion, Social Explanations, and Perspective Taking in Fostering Sympathy.* Poster presented at the annual meeting of the Association for Psychological Science. Boston, MA.

Smith, A. K. & Gill, M.J. (April, 2009). *The Interplay of Social Exclusion, Social Explanations, and Perspective Taking in Fostering Sympathy.* Paper presented at LVAIC Conference. DeSales University, Center Valley, PA.

RESEARCH EXPERIENCE

SEPTEMBER 2010-APRIL 2011   **MASTER'S THESIS,** Lehigh University, Department of Psychology, Bethlehem, PA

- *Exclusion Construals Moderate Aggressive vs. Affiliative Responses to Exclusion*
- Designed and coordinated studies using MediaLab; ran SPSS analyses
- Supervisor: Michael Gill, Ph.D.

JUNE 2010-AUGUST 2010   **SUMMER RESEARCH ASSISTANT**, Lehigh University, Department of Psychology, Bethlehem, PA

- *Prejudice Signaling*
- Helped Design and coordinate studies; explored survey data, conducted SPSS analyses
- Supervisor: Dominic Packer, Ph.D.

SEPTEMBER 2009-APRIL 2010   **FIRST YEAR PROJECT**, Lehigh University, Department of Psychology, Bethlehem, PA

- *The Diverse Responses of the Socially Excluded*
- Designed and coordinated study; guided lab assistants with data collection, conducted SPSS analysis
- Supervisor: Michael Gill, Ph.D.

APRIL 2010   **GRADUATE RESEARCH ASSISTANT,** Lehigh University, Department of Psychology, Bethlehem, PA

- *Consistent Contributors*
- Collected computer data from students
- Supervisor: Dominic Packer, Ph.D., and Michael Gill, Ph.D.

SEPTEMBER 2008-MAY 2009   **Psychology Honors Thesis,** Lehigh University, Department of Psychology, Bethlehem, PA

- *The interplay of social exclusion, social explanations, and perspective taking in fostering sympathy and prosocial behavior*
- Developed study and collected data from 120 Lehigh students
- Supervisor: Michael Gill, Ph.D.

TEACHING EXPERIENCE

Spring 2011   Personality

Fall 2010   Experimental Research Methods and Laboratory- Teaching Assistant (20 students)

  ♦ worked closely with student groups on the design and execution of experimental projects; analyzed data; graded short answer exams and short writing assignments

Spring 2010   Social Psychology- Teaching Assistant (90 students)

Fall 2009   Introduction to Psychology- Teaching Assistant (150 students)

Fall 2009   Introduction to Psychology- Guest Lecturer (3 classes)

PROFESSIONAL SERVICE

SEPTEMBER 2010-MAY 2011   **COLLOQUIUM RECEPTION ORGANIZER,** Lehigh University, Bethlehem, PA

  ♦ Buy food and organize receptions for the department following talks

APRIL 2010   **JUDGE,** LVAIC, Moravian College, Bethlehem, PA.

  ♦ Judged undergraduate poster presentations at the annual conference

AFFILIATIONS

2009-present   Eastern Psychological Association (student affiliate)
2010-present   Association for Psychological Science (student affiliate)
2010-present   Society for Personality and Social Psychology
2006-2009   Phi Beta Kappa Honors Society
2005-2009   National Society of Collegiate Scholars