

Excluded emotions: The role of anger in antisocial responses to ostracism

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Abstract

In this article, we examined the role of anger in the link between social exclusion and antisocial behavior. We compared the effects of anger to another negative emotion, sadness. In Study 1, social exclusion was associated with feelings of anger, and anger was associated with antisocial behavior. In contrast, sadness was not associated with antisocial behavior. In Study 2, feelings of anger were manipulated by excluding participants for either a fair or unfair reason. Unfairly excluded participants were more angry and were more likely to engage in antisocial behavior than fairly excluded participants. Implications for the study of emotions in the context of social exclusion are discussed.

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A common experience that is dreaded by many young schoolchildren is the creation of teams for a game. Sometimes, teams are created by children choosing each other one by one. The children chosen immediately are happy. Those who are chosen later, after waiting through many picks, are relieved. However, some children are never chosen at all. This kind of social rejection is usually accompanied by negative affect (Buckley, Winkel, & Leary, 2004; Williams, Cheung, & Choi, 2000, but see Twenge, Cantanese, & Baumeister, 2002), but in what form? One can imagine a child feeling sad, but it is also conceivable that the child feels angry. Just as it is important to know how the excluded children feel, it is also important to know how they behave in response to the exclusion. Do they lash out at their classmates? Or, do they try to ingratiate themselves with the other children?

Throughout life, people are included and excluded. These social events play an important role in people's

emotional well-being (Baumeister & Leary, 1995; Leary, 2001), and have also been implicated in playing a role in antisocial behaviors such as bullying, spousal abuse, and school shootings (Leary, Twenge, & Quinlivan, 2006, but see Williams & Sommer, 1997 for a different view). As such, it is important to understand the emotions that result from exclusion, especially if they play a role in antisocial responses to exclusion. In this paper, we examine the effect of exclusion on the specific emotions of anger and sadness, and investigate the role these emotions play in determining the effects of exclusion.

Exclusion, affect, and antisocial behavior

Previous research on behavioral responses to social exclusion has found that although sometimes exclusion can increase prosocial behaviors (e.g. behaviors designed to help or increase affiliation with another), other times exclusion can foster antisocial behaviors (e.g. behaviors designed to harm another). For example, some studies have shown that ostracized individuals will engage in pro-

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social behaviors such as doing favors for others (Williams & Sommer, 1997) or conforming to group attitudes (Williams, Cheung, & Choi, 2000). However, other studies document antisocial responses to ostracism (Buckley et al., 2004; Twenge, Baumeister, Tice, & Strucke, 2001; Twenge & Campbell, 2003). In these studies excluded individuals blasted an innocent target with longer and more intense white noise (Twenge et al., 2001) or forced an innocent target to eat larger quantities of unpleasant hot sauce than individuals who were not excluded (Warburton, Williams, & Cairns, 2003).

These conflicting patterns have led researchers to consider what variables might predict when exclusion results in antisocial behavior and when it does not. Some researchers have considered the effect of partner characteristics on responses to exclusion, and found that excluded individuals will respond more prosocially towards new interaction partners (Maner, DeWall, Baumeister, & Schaller, 2007). Another approach has been to examine whether affect might play a role. Although some have found that exclusion results in negative emotions such as anger (Buckley et al., 2004; Williams et al., 2000, 2002), other researchers have not found such an effect, leading them to suggest that exclusion results in emotional numbness or withdrawal, leading to a lack of empathy and prosocial behavior (DeWall & Baumeister, 2006; Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007; Twenge, Cantanese, & Baumeister, 2003). Even when researchers have found exclusion to affect emotional responses, participants' behavioral responses are not mediated by affect (Buckley et al., 2004; Twenge et al., 2001, 2002, 2003). Thus, some have concluded that although negative affect can be a result of ostracism, it is not the mechanism involved in the relationship between exclusion and antisocial versus prosocial behavior (Baumeister, Twenge, & Nuss, 2002; Buckley et al., 2004; Twenge et al., 2001, 2002, 2003).

In this paper, we propose that previous researchers have not uncovered the emotional link between rejection and antisocial behavior because the relationship may be due to feelings of anger specifically, rather than negative feelings in general. Consistent with this possibility, the studies that have found a negative emotional response to exclusion all included measures of anger, whereas in studies where emotional responses were not affected by exclusion, the scales used did not directly measure anger (e.g. the Brief Mood Introspection Scale, BMIS, Mayer & Gaschke, 1988 and the Positive and Negative Affect Scale, PANAS, Watson, Clark, & Tellegen, 1988, but see Twenge et al., 2003, Study 1 for an exception). In addition, in studies that have not found emotions to play a mediating role, negative emotion terms have typically been lumped together to make a negative affect scale (e.g. Twenge et al., 2001, 2002). Although using a composite measure of negative affect is often empirically justifiable in the sense that the negative emotion terms are highly correlated, it may nonetheless miss an important part of the psychology of social exclusion.

Anger has a distinct cognitive, motivational, and behavioral profile from other negative emotions (Berkowitz & Harmon-Jones, 2004; Lerner & Tiedens, 2006). Research on the effects of emotion on cognition and behavior has repeatedly demonstrated that specific negative emotions can have radically different effects. For example, anger is associated with the desire to “move against” another person or obstacle by fighting or harming it (Frijda, Kuipers, & ter Schure, 1989; Roseman, Wiest, & Swartz, 1994), whereas sadness is associated with helplessness (Frijda et al., 1989). Similarly, many researchers have found that anger has a particularly strong relationship with aggressive, antisocial behavior compared with other negative emotion states (Averill, 1982, 1983).

In this paper, we suggest that anger specifically, rather than negative emotion generally, may explain when instances of exclusion result in antisocial behavior. We argue that when exclusion results in feelings of anger, antisocial behavior is more likely to occur. We provide evidence for this perspective in two studies. In the first, we show that spontaneous feelings of anger in response to ostracism predict the likelihood of an anti- versus prosocial response. In the second study, we compare two kinds of ostracism—one intended to produce anger and the other to be painful but not angering—and show that the angering version results in greater aggression. In both studies, we measured anti- versus prosocial response by allowing participants to choose snacks for other participants. They were given an array of choices, some of which were attractive (e.g. chocolate chip cookies) and others that were unattractive (e.g. prunes). We considered the allocation of undesirable snacks to be instances of antisocial behavior and the allocation of desirable snacks to be instances of prosocial behavior.

Study 1

Study 1 tested the hypothesis that participants who feel angry after being socially excluded will respond with antisocial behavior. We also contrasted the effects of anger with another negative emotion, sadness, which is often considered a prototypic negative emotion (Feldman Barrett & Russell, 1998; Forgas, 2003; Russell & Carroll, 1999), to highlight the effects of anger on antisocial responses. Participants were either included or excluded from an online ball tossing game. After playing the game, participants were asked a series of questions about their emotional states. To measure antisocial behavior, we then asked participants to choose a snack for their ball tossing partners.

Pilot study

To determine which snacks would be used as a measure of anti- versus prosocial behavior, we ran a pilot study as part of a mass testing session at a private California university, for which participants were paid \$20. We asked

127 (77 females, 46 males, 4 unreported) participants with ages ranging from 16 to 33 ($M = 20.56$, $SD = 2.25$) to rate how appealing they thought a variety of snacks would be for a typical student, such as peanuts, popcorn, and Hershey's kisses (1 = not at all, 7 = very). Participants' highest rated snacks were chocolate chip cookies, potato chips, and M&M candies ($M = 4.49$, $SD = 1.29$). Snacks that were considered moderately appealing were peanuts, granola bars, and Hershey's kisses ($M = 4.05$, $SD = 1.05$). Participants' lowest rated snacks were saltine crackers, prunes, and raisins ($M = 3.23$, $SD = 1.23$). Paired sample t -tests revealed that participants thought that the highly appealing snacks were significantly more appealing than both moderately appealing snacks ($t(126) = 3.93$, $p < .001$) and unappealing snacks ($t(126) = 8.21$, $p < .001$). Unappealing snacks were significantly less appealing than moderately appealing snacks ($t(126) = 6.76$, $p < .001$).

In the following studies, only highly appealing and unappealing snacks were given as snack choices.

Method

Participants

A total of 75 individuals (44 women, 31 men) ranging in age from 18 to 54 years ($M = 21.21$, $SD = 5.26$) participated in an ostensibly interactive computer mediated game, and then completed a questionnaire about their experience. Participants were recruited from an email list, maintained by a private California university, of individuals interested in participating in research studies. As payment, each participant received \$5.

Procedure

Before entering the lab, participants walked past a large bowl containing a variety of appealing and unappealing snacks, as identified in the pilot study. Participants were then seated in front of computers in semi-private cubicles. They were told that the researchers were interested in how people formed impressions of others when the only interaction was computer mediated. To achieve the experience of computer interaction, participants played *Cyberball* (Williams et al., 2000), a virtual game of catch, with two other participants who were taking the study at the same time in another room. Unbeknownst to the participants, the two other players were computer generated.

The *Cyberball* game consisted of 30 throws. Participants in the *Included* condition were included in the game—that is, the throws were evenly distributed between the three players. Participants in the *Excluded* condition were initially included with 2 throws, but subsequently not thrown the ball. After completing the *Cyberball* portion of the study, participants were asked to complete a questionnaire about their experience. They were then asked to choose snacks for their *Cyberball* partners. When the study was complete, participants were thoroughly debriefed, thanked, and paid.

Dependent measures

Manipulation check. To measure exclusion, participants were asked to rate their agreement with the following statements: “I was excluded” and “I was ignored” (1 = Not at all, 5 = Very much, $\alpha = .98$).

Anger. To measure participants' feelings of anger, they were asked to rate their agreement with the statement, “I felt angry” (1 = Not at all, 5 = Very much).

Sadness. To measure participants' feelings of sadness, they were asked to rate their agreement with the statement, “I felt sad” (1 = Not at all, 5 = Very much).

Antisocial response. To assess antisocial behavior, participants could choose either an appealing or unappealing (as identified by the pretest) snack for their two interaction partners. Appealing snack choices consisted of chocolate chip cookies, potato chips, and M&M candies. Unappealing snack choices were raisins, saltine crackers, and prunes. There were several of each snack available such that each decision included all snack choices. Participants' choices were then recoded as having given one unappealing snack (1), two unappealing snacks (2), or no unappealing snacks (0).

Results

Participant gender did not moderate any of the following effects, and are not included in the analyses below.

Manipulation checks

To check that the ostracism manipulation was successful, we conducted a t -test across conditions on participants' feelings of inclusion. Participants in the Excluded condition reported feeling significantly more excluded ($M = 4.90$, $SD = .29$) than participants in the Included condition ($M = 1.99$, $SD = .90$, $t(73) = 19.30$, $p < .001$).

Anger and antisocial behavior

Participants in the Excluded condition were significantly angrier ($M = 2.71$, $SD = 1.41$) than participants in the Included condition ($M = 1.40$, $SD = .59$, $t(73) = 5.15$, $p < .001$). Participants in the Excluded condition were also significantly more likely to give unappealing snacks to their partners ($M = 1.49$, $SD = .85$) than participants in the Included condition ($M = .45$, $SD = .71$, $t(73) = 5.72$, $p < .001$). Further, the angrier participants felt, the more likely they were to give unappealing snacks ($r = .60$, $p < .001$).

To test the possibility that feelings of anger mediated the relationship between condition and antisocial behavior, we regressed anger on snack giving behavior, controlling for the effects of exclusion condition. The analysis revealed that when the effects of anger were taken into account, the effect of exclusion on antisocial behavior decreased sig-

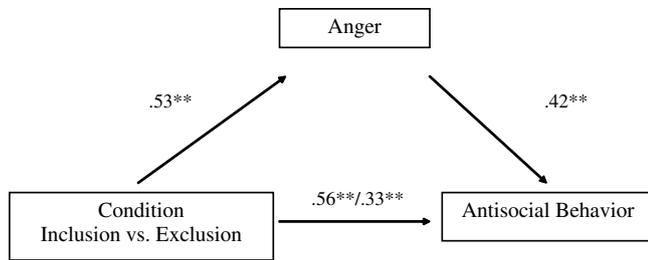


Fig. 1. Mediation analysis of anger on the relationship between Condition and antisocial behavior (Study 1). Note. Standardized β coefficients reported.

nificantly, although it remained a significant predictor ($z = 3.23, p < .005$, see Fig. 1).

Sadness and antisocial behavior

We ran similar analyses with feelings of sadness. Participants in the Excluded condition reported feeling significantly more sad ($M = 2.14, SD = 1.22$) than participants in the Included condition ($M = 1.53, SD = .96, t(73) = 2.46, p < .05$). Anger and sadness were positively correlated ($r = .49, p < .001$). However, there was no relationship between feelings of sadness and snack giving behavior ($r = .17, p = .15$).

Discussion

Study 1 provided preliminary evidence that individuals who feel angry when excluded will react with antisocial behavior. Individuals who were excluded from a ball tossing game were more likely to feel angry and to choose unappealing snacks for their playing partners than included individuals. Feelings of sadness did not predict snack giving behavior, suggesting that it is feelings of anger specifically involved in the link between exclusion and antisocial responses. In Study 1, the specific relationship between anger and antisocial responses to exclusion was examined with correlational methods. In the next study, we attempted to manipulate an angry response to ostracism in order to better test the causal relationship between this specific emotional response and antisocial behavior.

Study 2

In Study 2, our goal was to manipulate individuals' levels of anger after being excluded. Previous research has shown that people feel angry when they think they have been treated unfairly (Berkowitz & Harmon-Jones, 2004). For example, surveys in which people describe their anger experiences indicate that anger co-occurs with a sense that something is illegitimate or unjust (Mikula, Scherer, & Athenstaedt, 1998; Roseman, 1991). Thus, in Study 2, we manipulated participants' reactions to ostracism by exposing them to ostracizing experiences that they would perceive to be more or less fair.

It has been suggested that anger is the primary emotional response when individuals experience unjust gender-based discrimination (Crocker & Major, 1994; Mackie, Devos, & Smith, 2000; Mikula et al., 1998). Thus, for the purpose of manipulating reactions to ostracism, we told participants that they were either excluded based on their gender or that they were excluded because they were perceived as less skilled. We expected that individuals who were ostracized on the basis of their gender would feel that they had been treated more unfairly than individuals who were not ostracized due to their gender, and that unfairly ostracized participants would be more likely to feel angry and engage in antisocial behavior.

Method

Participants

A total of 69 participants (39 women, 30 men) with ages ranging from 18 to 66 ($M = 32.45, SD = 10.65$) completed an online study. Participants were recruited from an email list, maintained by a private California university, of individuals interested in participating in research studies. As payment, each participant received a \$5 gift certificate from an online retailer.

Procedures and manipulation

Participants were emailed links to an experimental website and told that the researchers were interested in how individuals formed impressions of others when the only interaction was computer mediated. Participants were told that they would be participating in an online game of Dodgeball, and that teams needed to be made in order to play the game. The teams would be made up of participants who were logged into the experiment at the same time; however, unbeknownst to the participants, the other participants were all computer generated. All "real" participants were then given an identifying number to maintain anonymity (number 1123), and were shown the identifying numbers of 10 other "participants" with whom they would be playing (ostensibly making a total of 11 participants). Participants were prompted to write a short description about themselves to help aid others in making the teams, and then shown the self-written descriptions of the other "participants."

All participants were then told, "In this section, the program will randomly choose two players to begin the team picking process. These players will make their picks first. Then the selected players will make the next selections for their teams. Those chosen will make the next selections, and so on. At this time, please recall the players that you would like to choose, and be prepared to give your pick." The computer program then "chose" two "participants," who did not choose the actual participant. This process repeated itself until teams of 5 had been created, and the actual participant had not been chosen for a team (and thus, the participant had been excluded by all other participants in the game).

At this time, participants were told that the other participants were asked to write why they had not chosen the participant. In order to manipulate feelings of anger, a “randomly” selected answer was shown to the participant. Male participants in the *unfair exclusion* condition saw, “i [sic] didn’t pick player 1123 because he’s a guy and guys aren’t team players.” Female participants in the *unfair exclusion* condition saw, “i [sic] didn’t pick player 1123 because she’s a girl and girls aren’t good at computer games or dodgeball.” Both male and female participants in the *fair exclusion* condition saw, “i [sic] didn’t pick player 1123 because their [sic] statement came up last, which makes me think they [sic] aren’t very fast.”

All participants were told that because they had not been chosen to be on a team, they would be rerouted to the post game questionnaire, which consisted of questions about their experience. After completing the questionnaire, participants were asked to choose a snack for three other participants from their session. They then read a thorough debriefing statement and provided their email addresses for payment and postal address to receive their snack choice.

Dependent variables

Perceptions of fairness. To measure participants’ perceptions of how fairly they had been treated, they were asked to indicate their agreement with the statement, “I think the other players treated me fairly” (1 = Strongly disagree, 7 = Strongly agree).

Anger. To measure participants’ anger, they were asked to indicate their agreement with the statement, “I felt angry” (1 = Strongly disagree, 7 = Strongly agree).

Sadness. To measure participants’ feelings of sadness, they were asked to indicate their agreement with the statement, “I felt sad” (1 = Strongly disagree, 7 = Strongly agree).

Antisocial behavior towards rejecters. To assess participants’ antisocial behavior, we asked participants to choose a snack for three randomly chosen participants from their session. As in Study 1, they then chose between unappealing and appealing snack choices for the other players. Each decision included all the snack choices, which were identical to those used in Study 1. Participants’ snack choices were then coded as having given one, two, three, or no unappealing snacks.

Snack choice intentions. After making each choice, participants were also asked to explain why they had chosen that particular snack for each of their partners. These answers were content coded to explore whether snack choices were driven by a desire to aggress against the individuals who had excluded them. Two coders who were blind to the experimental condition of the participants coded each answer for how much the participant wanted to retaliate against the partner by giving them an undesirable snack

Table 1
Means, standard deviations, and correlations for variables in Study 2

Variable	<i>M</i>	<i>SD</i>	1	2	3
Perceived fairness	2.97	2.04			
Anger	3.16	2.15	-.54**		
Sadness	3.29	2.00	-.23	.56**	
Antisocial behavior	1.09	1.19	-.49**	.51**	.14

Note. ** $p < .01$.

(1 = Not at all, 5 = Extremely). The inter-class correlation (ICC) for coders’ ratings of the desire to retaliate was .92.

Results and discussion

Gender did not moderate any of the following effects, and the data were collapsed across gender in the following analyses.¹ Correlations between variables are presented in Table 1.

Path analyses

We used AMOS to estimate a path model with measured variables. We began with a model that included both sadness and anger. Specifically, the model had causal paths from our manipulation to perceptions of fairness, from fairness to anger, sadness, and aggressive behavior, and from anger and sadness to aggressive behavior. This model did not fit the data well. The χ^2 value indicated that the model produced a variance–covariance matrix that was significantly different from the original variance–covariance matrix found from the data, $\chi^2(4, N = 69) = 13.63$, $p < .01$. The other fit indices also indicated a poor fit: Comparative Fit Index (CFI) = 3.4, Adjusted Goodness of Fit Index (AGFI) = .73, and Root Mean Square Error of Approximation (RMSEA) = .19.

Examination of the parameter estimates indicated that sadness was not a good predictor of aggressive behavior ($\beta = -.02, p = .81$). To further demonstrate that sadness does not cause aggressive behavior, we removed sadness from the model, and compared this model to our previous model. Elimination of the sadness variable from the model significantly improved the model fit, $\Delta\chi^2(2, N = 69) = 11.95$, $p < .005$. This model was an excellent fit to the data, with fit indices: Comparative Fit Index (CFI) = 1.0, Adjusted Goodness of Fit Index (AGFI) = .94, and Root Mean Square Error of Approximation (RMSEA) = .00, see Fig. 2. Taken together, these results provide strong evidence for our prediction that sadness is not involved in aggressive behavior in response to social exclusion.

¹ Due to the wide range in age, we conducted analyses to explore the effects of age on the effects of exclusion. Although none of the effects reported in this paper are moderated by age, the older participants were, the less likely they were to report feeling either sad, $r = -.39$, $p < .01$, or angry about being excluded, $r = -.35$, $p < .01$.

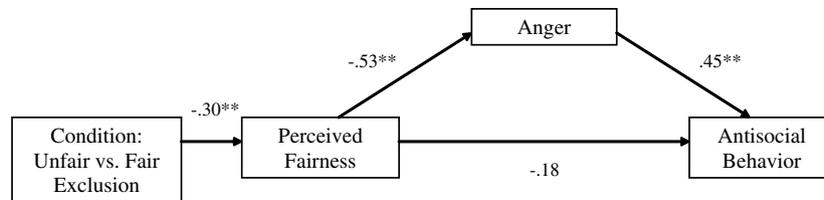


Fig. 2. Path analysis of the effects of Fairness Condition on perceived fairness, anger, and antisocial behavior (Study 2). *Note.* Standardized β coefficients reported.

The resulting model provides evidence that our manipulation of fairness affected how fairly participants thought others had treated them, and in turn affected how angry they were. Perceptions that they had been treated unfairly caused participants to feel angry, which led them to behave antisocially towards those who had excluded them. In addition, a model testing the link between perceptions of fairness and antisocial behavior indicated that the path was significant, ($\beta = -.41, p < .01$). However, the inclusion of the anger variable to the path reduced the effect of fairness on antisocial behavior to nonsignificance ($\beta = -.18, p = .13$), suggesting that anger mediates the relationship between perceptions of fairness and aggressive behavior ($z = 3.03, p < .005$).

Antisocial intentions

Our operationalization of antisocial behavior was giving others unappealing snacks such as saltines or prunes. Although this is certainly not the cruelest of human behavior, it was an approach that was ethical. Yet, because giving another person saltines or prunes is not overtly hostile, we sought additional evidence that people's snack choices reflected a hostile vs. benevolent motivation. In order to see if participants intended to aggress against those who had excluded them, we used the coders' ratings of participants' desires to retaliate and conducted an independent samples *t*-test across the fairness manipulation. The results indicated that participants experienced their snack choices as a way to aggress against those toward whom they were angry. Participants' reasons for their snack choices were more retaliatory against their partners when the participants were unfairly excluded ($M = 2.51, SD = 1.35$) than when they were fairly excluded ($M = 1.84, SD = 1.17, t(66) = 2.24, p < .05$). Consider, for example the explanation one participant gave as to why he chose prunes for another participant: "Because he's a jerk." Another participant wrote, "I hope to give them prunes as a laxative. Then they'll be nice!" These results provide evidence that anger resulted in a desire to harm the other, rather than just a willingness to withhold positive outcomes.

In sum, Study 2 provided additional support for the hypothesis that ostracized individuals will engage in antisocial behaviors to the extent that they feel angry, but not depending on how sad they feel. When induced to feel angry about their ostracism, participants were more likely

to choose unappealing snacks for other individuals who had excluded them.

General discussion

Why does social rejection sometimes lead to prosocial behavior and sometimes lead to antisocial behavior? In this paper, we suggested that when people feel angry about being rejected, they are more likely to respond with antisocial behavior.

Previous research on the emotional link between ostracism and antisocial behavior has generally concluded that negative affect is not the mediator of the relationship (Baumeister et al., 2002; Buckley et al., 2004; Twenge et al., 2001, 2002). The present research indicates that this conclusion is premature; the results reported here suggest that previous researchers were unable to uncover emotion's role in the link between social exclusion and antisocial behavior because they had not specified *which* negative emotion in particular would drive the relationship.

Our findings suggest that anger is a link between ostracism and antisocial behavior. Studies 1 and 2 demonstrate that ostracized individuals are more likely to behave in an antisocial manner when they feel angry about their exclusion. In Study 1, we found that excluded individuals were more likely to feel angry than included individuals, that excluded individuals were more likely to behave antisocially, and that anger mediates the effect of exclusion on antisocial behavior. Study 2 showed that individuals induced to feel angry about their ostracism were more likely to behave in an antisocial manner than individuals who were ostracized, but not induced to feel angry. In both studies, we tested whether sadness played a similar role and found that it did not.

The differences between sadness and anger in producing antisocial responses are important because much of the research on emotions in the context of social exclusion has relied on the distinction between positive and negative emotions, but not differences among discrete negative emotions. In highlighting anger's unique role in the link between social exclusion and antisocial behavior, our results dovetail with those found in research on emotion and cognition that indicate that negative emotions are distinct experiences with distinct effects (Bodenhausen, Sheppard, & Kramer, 1994; Lerner & Keltner, 2000; Lerner & Tiedens, 2006; Tiedens, 2001; Tiedens & Linton, 2001).

Thus, our results suggest that the complexity in individuals' responses to social exclusion may be due to the complexity and variability of negative affect in general.

The present project was designed to illuminate one mechanism—specific negative emotions, such as anger—through which we will be able to predict when and why individuals will respond to social exclusion with antisocial behavior. Future research may be able to use the cognitive and behavioral “profiles” associated with different negative emotions to predict when and why individuals will feel certain emotions after social exclusion. For example, in addition to concerns about justice, dimensions such as responsibility (i.e. the extent to which self, other, and environment are responsible for the outcome), control (i.e. the extent to which self, other, and environment influence the course and outcomes of the situation), and certainty (i.e. the extent to which one is confident about the causes and consequences of the event) are also major determinants of emotional experience in general, and are highly related to anger (Weiner & Graham, 1984). As such, these dimensions are also likely to influence how individuals respond to social exclusion.

Investigating social exclusion from an emotions perspective also hints at other emotions that will be predictive of how individuals respond to social exclusion. It is possible that other negative emotions, such as guilt, will emerge as mediators of the link between exclusion and prosocial behavior. Previous research indicates that when individuals believe that they have behaved in an inappropriate manner that resulted in a negative outcome, they feel guilty. Thus, people who feel guilty often engage in reparative behaviors, such as apologizing or in some way undoing the harm that was done (Iyer, Leach, & Crosby, 2003; Tangney, 1991). In the context of social exclusion, if individuals feel guilty about being ostracized, it is possible that they will attempt to ingratiate themselves back into the good graces of the group by behaving prosocially.

Previous research on violent behaviors such as adolescent bullying and spousal abuse has indicated that many violent individuals have experienced chronic social rejection (Leary et al., 2006). There is reason to believe that chronic aggression, compounded with social rejection, may aggravate an already emotionally painful experience. For example, chronically aggressive individuals who are angry are more likely to make hostile inferences about ambiguous interpersonal information (Tiedens, 2001). Aggressive people who make hostile inferences are also more likely to engage in antisocial behavior (Carver, Ganellen, Froming, & Chambers, 1983; Dodge & Crick, 1990). Thus, it is possible that chronically aggressive individuals are likely to engage in a vicious cycle of being socially rejected, feeling angry and responding antisocially, interpreting ambiguous situations as further rejection and hostility, thereby continuing the pattern. This possibility is particularly suggestive for researchers who are interested in social rejection's role in social problems such as adolescent and adult violence.

Conclusion

Our present findings suggest that the emotions that individuals feel in response to social exclusion play a large role in determining their behavioral response to the exclusion. Specifically, individuals who feel angry at being excluded are more likely to engage in antisocial behaviors. By illuminating the role of emotions in the link between social exclusion and antisocial behavior, our research indicates that in order to effectively remedy some of the social problems arising from exclusion, we will need to pay attention to the specific interpretations and emotions of excluded individuals.

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