



Social Exclusion and the Desire to Reconnect

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Abstract

People have a fundamental need to belong that, when satisfied, is linked to a variety of indicators of well-being. The current article discusses what happens when social relationships go awry, namely through social exclusion. It seeks to resolve discrepancies in the literature by proposing that responses to social exclusion depend primarily on the prospect of social acceptance. When people feel socially excluded, they want to regain acceptance and thus may respond in ways that can help them do so. When the possibility of acceptance is not forthcoming, however, socially excluded people become selfish and antisocial. Evidence for this pattern was found at behavioral, cognitive, and biological levels. The motivation to gain acceptance may drive people to engage in negative health behaviors, such as smoking. Thus, excluded people demonstrate sensitivity to possible social acceptance, but they can exude an air of selfishness and hostility when there is no possibility of satisfying their need to belong.

Social Exclusion and the Desire to Reconnect

Over the course of human evolutionary history, people have depended on others for much of their well-being. People who were motivated to form positive and lasting relationships with others survived and reproduced, whereas loners and hermits generally did not. As human cultural systems progressed, dependence on others continued to grow. In most modern cultures, people do not cook the food they eat, knit the clothes they wear, or build the homes in which they live. Other people meet these needs. Given the tremendous benefits associated with social connection, experiencing social exclusion strikes at the core of well-being. Yet, there is some disagreement regarding how people respond to social exclusion.¹

The current article seeks to resolve these discrepancies by reviewing classic and contemporary research showing that responses to social exclusion depend on the prospect of social acceptance. Social exclusion occurs when people feel left out, snubbed, or otherwise rejected. People feel socially excluded when they are made to feel that they do not belong in a relationship or to a group. Because social exclusion poses such a serious threat to well-being, it should influence a wide variety of responses. When people feel socially excluded, they may respond in ways that can gain them acceptance. When the possibility of acceptance is not forthcoming, however, socially excluded people may become selfish and even antisocial.

The paper consists of five sections. First, we review theoretical models of belongingness that emphasize the importance of the desire for acceptance in driving responses to social exclusion. Second, we discuss evidence that socially excluded people engage in selfish and antisocial behaviors when there is no palpable promise of acceptance, but they behave unselfishly and prosocially when doing so can earn them acceptance. Third, we demonstrate that social exclusion influences cognitive responses to ward off potential threats and to approach potential new friends. Fourth, we discuss evidence that biological

responses to social exclusion depend on whether people wish to approach or avoid potential new friends. The final section reviews recent evidence that the desire for reconnection can lead socially excluded people to engage in unhealthy behaviors that may earn them acceptance. All five sections highlight the importance of the prospect of acceptance in understanding responses to social exclusion.

Theoretical Models of Belonging that Emphasize the Prospect of Acceptance

There is an extensive tradition in psychology that having a few positive and lasting relationships enhances well-being. James (1890), Freud (1930/1961), Maslow (1968), Deci and Ryan (1985), and others have argued that belongingness is a crucial aspect of human motivation. This section reviews three theoretical frameworks—the need to belong theory, the stages of coping theory (SCT), and the multimotive model of social exclusion—that emphasize the importance of the desire for social reconnection in shaping responses to social exclusion.

Need to belong theory

Despite the rich theoretical tradition emphasizing the importance of belongingness, there has not been a formal test of the hypothesis that people have a fundamental need to belong until recently. In a highly influential article, Baumeister and Leary (1995) proposed that people have a pervasive drive to have positive social connections marked by stability and mutual concern. This need to belong is rooted in evolutionary history and has consequences for a wide variety of psychological processes. Across a large number of studies, a lack of social connection influenced emotional and cognitive responses, and negatively impacted health, adjustment, and well-being. More recent evidence supports the need to belong theory by showing a link between a lack of social connection and negative outcomes. For example, social exclusion impacts the body in a similar manner as physical pain—with increased activation in brain regions associated with physical pain (e.g., dorsal anterior cingulate cortex, anterior insula) that are attenuated with a physical pain suppressant (DeWall, MacDonald, et al., 2010; Eisenberger, Lieberman, & Williams, 2003).

Baumeister and Leary (1995) argued that thwarting the need to belong should produce goal-directed behavior aimed at satisfying it. Just as hunger causes people to work for food, depriving people of their need to belong should cause them to pursue strategies designed to obtain social acceptance. Crucially, the opposite may also be true. Satiating the need to belong should reduce people's willingness to expend effort to gain acceptance, much in the same way that people will not work hard for food on a full stomach. The implication is that socially excluded people may be highly sensitive to potential sources of social acceptance and thus engage in behaviors that may restore their need to belong. In the absence of a palpable promise of acceptance, socially excluded people should lose their willingness to engage in the same behaviors because doing so will not satisfy their need to belong. On the flipside, satiating the need to belong should reduce the motivation to engage in behaviors linked to gaining acceptance.

Stages of coping theory

Another prominent theoretical model is the stages of coping theory (Williams, 2009). Like the need to belong theory, SCT is founded on the notion that social exclusion thwarts a fundamental need for positive and lasting relationships. SCT argues that

thwarting the need to belong, whether through ostracism, social exclusion, or social rejection, also threatens needs for self-esteem, control, and meaningful existence. Since the publication of the need to belong theory, many studies have shown that responses to social exclusion are varied and complex. SCT offers some explanation regarding disparate responses to social exclusion.

Stages of coping theory emphasizes a three-stage process in the time-course of responding to social exclusion: reflexive, reflective, and resignation. The reflexive stage occurs immediately following social exclusion and produces a rapid response akin to pain. Blood pressure rises, brain activation patterns resemble responses to physical pain, and people report more threatened needs (see Williams, 2009; for a review). Reflexive responses to social exclusion are crude and do not depend on appraisals of the social exclusion experience. For example, experiencing social exclusion from a computer produces a similar response as experiencing exclusion from a person (Zadro, Williams, & Richardson, 2004), intentional exclusion activates similar brain regions as accidental exclusion (Eisenberger et al., 2003), and social exclusion from a despised outgroup member (i.e., the Ku Klux Klan) threatens people's needs as much as social exclusion from a cherished ingroup member (i.e., people who hold similar political attitudes) (Gonsalkorale & Williams, 2007).

The reflective stage occurs after people have had time to think about and appraise their recent rejection experience. In the reflective stage, people begin to recover from the pain they experienced in the reflexive stage by engaging in responses aimed at fortifying threatened needs. Williams (2009) argues that responses to social exclusion depend on what type of need—belonging, self-esteem, control, or meaningful existence—has been threatened. According to SCT, socially excluded people should behave prosocially when doing so can strengthen their needs for belonging and self-esteem. In contrast, socially excluded people should engage in aggressive or antisocial behavior when these responses can fulfill their needs for having a meaningful existence and control.

The resignation stage involves arriving at the conclusion that one's value to others is quite low and one's presence is a burden. This distressing mindset will occur for one of two reasons. First, attempts to reinforce one's threatened needs during the reflective stage are consistently unsuccessful. Second, social exclusion occurs so frequently that people begin to accept their threatened needs of alienation, depression, learned helplessness, or unworthiness. Because acceptance is not forthcoming among people in the resignation stage, they may lose their motivation to engage in prosocial behavior and may experience an increased motivation to engage in aggressive behavior.

Multi-motive model of social exclusion

A final theoretical model of social exclusion, the multi-motive model, was developed to explain the multifaceted responses that social exclusion produces (Smart Richman & Leary, 2009). The multi-motive model argues that social exclusion produces responses related to the desire to harm others, the desire to seek support and acceptance, or the desire to withdraw from others. Which motive drives a socially excluded person's response will depend on how the person construes the social exclusion experience. Smart Richman and Leary (2009) argue that people make one or more of six possible construals—the fairness of the social exclusion experience, expectations of relationship repair, pervasiveness or chronicity of the social exclusion experience, value of the damaged relationship, perceived costs of the social exclusion experience, and the possibility of relational alternatives.

If rejection is perceived as unfair, people will lash out and react with anger, as is common for people to do in response to unfairness or injustice (Lind & Tyler, 1988). The perception of relational repair as unlikely would also lead to antisocial, as well as avoidant, behavior. If people do not believe that there is any hope for a future with the person who rejected them, they will feel free to retaliate against or withdraw from the rejecter without any consequences to themselves. Similarly, if rejected people do not place a high value on their relationship with the rejecter, rejected people will likely engage in antisocial or avoidant behavior because they have little reason to hold back or to put effort into relational repair. In contrast, the perception of relational repair as likely and the placement of a high value on the relationship lead to prosocial behavior.

The presence of many relational alternatives encourages withdrawal behaviors because the worth of the relationship decreases when alternatives exist. On the other hand, a lack of relationship alternatives can lead to prosocial behavior because a lack of potential friends leads to settling with whoever is available to satisfy one's need to belong. Chronically experiencing rejection is the final construal that contributes to withdrawal behaviors. If there is little to no chance that chronically rejected people will experience acceptance from a person, there is no reason to pursue a dead-end relationship. Finally, if the perceived cost of the rejection is high (e.g., rejection by one person in a group indicating exclusion by the entire group), prosocial behavior is more likely because the rewards of gaining acceptance from a large group of people trump the rewards that are obtained from acceptance by one person. Ultimately, according to the multi-motive model, one's behavior following rejection depends on the way that the rejection experience is construed.

Behavioral Responses to Social Exclusion

The previous section provided considerable theoretical precedent for predicting that responses to social exclusion depend on the prospect of acceptance. All three theoretical models argue that social exclusion may be linked to a variety of negative outcomes, but they also assert that social exclusion instills in people a motivation for renewed affiliation. This section reviews evidence that the effect of social exclusion on three types of behaviors—aggression, prosocial behavior, and self-regulation—hinges on the potential for acceptance.

Aggression

Social exclusion and aggression are intimately linked. People who behave aggressively are frequently excluded from groups, relationships, and even society. Aggressive kids experience frequent social exclusion from their peers, and aggressive adults experience social exclusion from society through imprisonment (Gottfredson & Hirschi, 1990; Juvonen & Gross, 2005). In addition, experimental manipulations of social exclusion often increase aggressive behavior. Excluded people, compared to their non-excluded counterparts, blast strangers with more intense and prolonged noise, give damagingly negative job candidate evaluations, make strangers listen to annoying tape recordings, and dole out large amounts of hot sauce to people who express a strong dislike for spicy food (Buckley, Winkel, & Leary, 2004; DeWall, Twenge, Gitter, & Baumeister, 2009; DeWall, Twenge, Bushman, Im, and Williams, 2010; Twenge, Baumeister, Tice, & Stucke, 2001). Experiencing social exclusion increases aggression not only toward the people involved in the exclusion experience, but it also increases aggression against innocent bystanders (DeWall, MacDonald,

et al., 2010). The pain of rejection is so potent that it even increases aggression against several people simultaneously (Gaertner, Iuzzini, & O'Mara, 2008), which resembles incidents of mass violence among chronically excluded youth, such as the Columbine shooting (Leary, Kowalski, Smith, & Phillips, 2003).

These studies paint a picture of the excluded person as someone who behaves aggressively in many ways toward a variety of different people. Yet, those studies did not offer socially excluded people a means of experiencing acceptance. What happens to the aggressive behavior of socially excluded people when they experience at least a minimal amount of acceptance or social connection?

A growing amount of evidence suggests that experiencing even small amounts of acceptance or social connection are enough to curb aggression following social exclusion. In one investigation, the number people who accepted the participant—0 to 3 people in one experiment; 0 to 4 people in a second experiment—was manipulated (DeWall, MacDonald, et al., 2010). The main prediction was that the relationship between the number of acceptors and the amount of aggression would fit a power function in which the marginal effect of the N th other acceptor was less than that of the $(N - 1)$ th acceptor (Latané, 1981). Put simply, the impact of social rejection on aggression should be diminished if someone experiences acceptance from even one person, with each additional accepting person having a diminishing incremental effect on reducing aggression. Both experiments supported this hypothesis. Thus, giving socially excluded participants a small taste of acceptance was enough to reduce their aggression.

A second investigation offered similar results (Twenge, Zhang, et al., 2007). Under normal circumstances, socially excluded participants behaved quite aggressively. Providing socially excluded people with reminders of positive social activity, however, completely eliminated their aggression. For example, having a brief, friendly interaction with an experimenter, compared to a neutral interaction, caused socially excluded participants to behave less aggressively. These findings provide additional support for the hypothesis that giving socially excluded people a small serving of social acceptance can reduce their aggression.

Can the pain of social exclusion be reduced even by connection with a simulated person? Yes. When people feel socially excluded, identifying with television characters is enough to reduce the negative consequences of exclusion (Derrick, Gabriel, & Hugenberg, 2009).

Turning to supernatural agents, such as through religion, can also reduce the relationship between social exclusion and aggression. The notion that religion buffers people from suffering and the pain of social exclusion can be traced back to Marx (1844/1959), James (1902), and Freud (1927/1964). The implication is that by turning to religion, the sting of social exclusion should be diminished. In one recent study, participants experienced either social exclusion or social acceptance, wrote an essay about religiousness and faith or about the environment, and then were given the opportunity to behave aggressively by making an innocent bystander hold his or her hand in painfully cold ice water (Aydin, Fischer, & Frey, 2010). As predicted, socially excluded participants who were not primed with religiousness behaved more aggressively than all other participants. Simply writing about religiousness and faith was enough to eliminate the relationship between social exclusion and aggression.

Prosocial behavior

Helping others involves a tradeoff between the positive and negative consequences of being helpful. Being helpful is linked to a variety of positive outcomes. People who

donate large amounts of their money earn reputations as being generous. Helping others is also associated with a better mood (Dunn, Aknin, & Norton, 2008). There are tremendous costs to helping others, however, which include expending one's time, material resources, and energy. Given the benefits and costs of helping, socially excluded people should behave prosocially when doing so can earn them acceptance, but they should behave selfishly when it can not.

This is precisely the case. When prosocial behavior is not linked to gaining social acceptance, socially excluded people behave quite selfishly. Among adolescents, loneliness is strongly associated with lower levels of prosocial behavior (Storch, Masia-Warner, & Brassard, 2003). Compared to non-excluded people, socially excluded people donate less money to charity, volunteer less of their time, pick up fewer pencils in response to an experimenter mishap, and behave less cooperatively in a mixed-motive game (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007; Twenge, Zhang, et al., 2007). Another investigation showed that socially excluded people, compared to non-excluded people, donated less money to charity when their exclusion experience resulted in them missing out on a potential monetary reward (Van Beest & Williams, 2006). Crucially, being helpful did not offer socially excluded people a means of satisfying their need to belong in any of these studies.

Would socially excluded people behave prosocially when doing could earn them social acceptance? To test this hypothesis, Maner, DeWall, Baumeister, and Schaller (2007) conducted a series of experiments in which prosocial behavior was (or was not) linked to the prospect of acceptance. In one illustrative experiment, participants expected to meet with another participant and, by random assignment, were told that the person refused to meet them (social exclusion condition) or that the person would not be able to meet them because of a forgotten appointment (irrelevant departure condition). Next, participants were told that they would complete the interaction with a new, same-sex person who was in the laboratory making up a missed study. The experimenter gave participants \$5 in quarters and a drawing ostensibly composed by the new partner. Next, the experimenter instructed participants to give the new partner as many quarters as they wanted, according to how creative they thought the drawing was. (The drawing was pre-tested as being average in terms of its creativity.) Participants were eligible to win any money they did not give to the new partner in a lottery. Thus, participants could make a good impression on the new partner by giving him or her more money—but giving more money would hijack their opportunity to win the money themselves.

Did socially excluded people try to buy new friends by giving them large amounts of money for an average drawing? They did. As predicted, socially excluded participants gave significantly more money to the potential new friend than non-excluded participants did. A follow-up experiment replicated this effect and showed that socially excluded participants lost their motivation to behave prosocially when they did not expect to meet the new person. These findings provide additional evidence that responses to social exclusion hinge in part on whether behaviors can satisfy a thwarted need to belong.

What individual difference variables might strengthen and diminish prosocial behavior following social exclusion? People who anxiously anticipate, readily perceive, and respond strongly to social exclusion, such as people high in the trait rejection sensitivity (Downey & Feldman, 1996), may be especially likely to behave prosocially in the wake of social exclusion when doing so can earn them acceptance. In contrast, people who are constantly fearful of being rejected and who avoid threatening situations, such as people high in social anxiety (Kashdan, McKnight, Richey, & Hofmann, 2009), might withdraw from

opportunities to gain favor with potential new friends after experiencing social exclusion because they are more pessimistic about the interaction resulting in acceptance.

Recent evidence showed that socially excluded participants ingratiate themselves by contributing more money to a group task than non-excluded participants, an effect that was especially pronounced among participants high in rejection sensitivity (Romero-Canyas et al., 2010). In contrast, several experiments have shown that socially anxious people who have experienced social exclusion behave less prosocially toward potential new friends compared to people low in social anxiety, presumably out of their desire to avoid possible future social exclusion (Mallott, Maner, DeWall, & Schmidt, 2009; Maner et al., 2007).

Self-regulation

Humans have a highly sophisticated ability to control their impulses. This capacity, better known as self-regulation, involves substituting one response in favor of another so as to adhere to personal or societal standards for appropriate responding (Baumeister, Heather-ton, & Tice, 1994; DeWall, Finkel, & Denson, 2011). Like prosocial behavior, self-regulation is linked to a variety of positive outcomes, including better relationships, academic success, and lower levels of aggression (DeWall, Baumeister, Stillman, & Gailliot, 2007; DeWall, Deckman, Gailliot, & Bushman, 2011; Finkel & Campbell, 2001; Finkel, DeWall, Slotter, Oaten, & Foshee, 2009; Mischel, Shoda, & Peake, 1988; Tangney, Baumeister, & Boone, 2004). It is also extremely costly, sapping metabolic energy and creating high levels of mental exhaustion (Baumeister, Bratslavsky, Muraven, & Tice, 1998; DeWall, Baumeister, Gailliot, & Maner, 2008; Gailliot et al., 2007). Because self-regulation is such a desirable attribute, socially excluded people should be motivated to self-regulate effectively when doing so is linked to possible acceptance. When such acceptance is not forthcoming, socially excluded people should lose their willingness to regulate their impulses, unless they are given some other self-serving incentive.

A pair of early investigations provided initial tests of the hypothesis that, in the absence of a link to acceptance, social exclusion would reduce the willingness to self-regulate (Baumeister, DeWall, Ciaracco, & Twenge, 2005; Oaten, Williams, Jones, & Zadro, 2008). Social exclusion produced an assortment of self-regulation impairments. Excluded participants, compared to non-excluded participants, ate more fatty foods, drank less of a healthy but bad-tasting beverage, persisted less in the face of failure, and performed worse on a measure of attentional control. Similar effects emerge in the loneliness literature, with lonelier people having poorer self-regulation (Cacioppo et al., 2000). Additional evidence suggests that socially excluded people are unwilling, not unable, to control their impulses. When self-regulation performance is linked to financial gain, socially excluded participants regain their motivation and self-regulate effectively (Baumeister et al., 2005). Hence, a self-serving incentive can reduce the self-regulation deficits that follow social exclusion.

Having established that self-regulation impairments among socially excluded people were motivational, the logical next step was to test the hypothesis that framing self-regulatory performance as a means of gaining social acceptance would motivate socially excluded people to self-regulate effectively. In contrast, such a framing might de-motivate socially accepted people, presumably because they have had their need to belong satiated and therefore would be unwilling to expend effort to gain something they already have—a satisfied need to belong. A series of studies by DeWall, Baumeister, and Vohs (2008) tested both of these hypotheses.

Not surprisingly, social exclusion impaired self-regulation when performance was not seen as an opportunity to gain acceptance. In contrast, socially excluded participants self-regulated effectively when doing so might earn them acceptance. In one illustrative study, participants experienced social exclusion or a similar non-exclusion experience and then completed the Stroop color-naming task, which is a widely used measure of self-regulation (Stroop, 1935). By random assignment, half of the participants were told that Stroop performance was associated with something that was positive but was unrelated to their future belongingness, namely having good visual acuity (non-diagnostic control condition). The experimenter informed the other half of the participants that Stroop performance was associated with having traits that are good for relationships, such as being able to ‘read between the lines’ (social skills diagnosis condition). Framing the self-regulation task as a test of social skills should motivate socially excluded individuals to do better as reassurance they could find other sources of acceptance. This is precisely what we found.

Among participants in the non-diagnostic control condition, social exclusion impaired self-regulation. In contrast, among participants in the social skills diagnosis condition, excluded participants performed as well as participants in the non-exclusion condition. This effect, which was replicated in several other studies, showed that socially excluded participants are normally disinclined to control their impulses, but that they regain their motivation to do so when performance is linked to the prospect of acceptance.

Whereas socially excluded participants performed better when doing so was framed as a way to gain social acceptance, such a frame caused socially accepted participants’ performance to plummet. In several studies, DeWall, Baumeister, and Vohs (2008) showed that, under normal circumstances, accepted participants self-regulate quite well. When accepted participants believe that their performance is linked to gaining future acceptance, they lose their motivation and perform poorer than all other participants. Because they are satiated with belongingness, accepted participants feel they do not need to put much effort into the task. This is once again an effect of motivation rather than ability. Just as socially excluded participants will self-regulate effectively for money when they normally perform poorly, socially accepted participants who are offered money for their performance are willing to control their impulses even when their performance is linked to gaining the acceptance they already have.

How the Excluded Mind Warps

Cognitive responses represent another domain in which responses to social exclusion are contingent on the possibility of gaining acceptance. Socially excluded people may have a lower threshold for reacting to potential sources of threat that may increase the pain they are experiencing and preclude their ability to recover. But the desire for social connection may also drive socially excluded people to be attuned to potential sources of positivity and social connection that may satisfy their need to belong. Hence, social exclusion may warp the mind to perceive hostility in ambiguously aggressive situations, but it may also cause people to be attuned to signs of positivity and social connection.

Having a hostile cognitive bias is a hallmark feature of aggressive people. The General Aggression Model (Anderson & Bushman, 2002; DeWall, Anderson, and Bushman 2011) asserts that situational factors on aggression operate by activating cognitive responses that alert people to perceive aggression and hostility in even neutral or ambiguous situations. Meta-analytic evidence suggests a robust relationship between hostile cognition and aggression (Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002). Given

the close association between social exclusion and aggression, it is possible that socially excluded people may see ambiguous situations through 'blood-colored glasses'.

This hypothesis has received consistent support. Lonely people tend to perceive others and their world as hostile (Jones, Freemon, & Goswick, 1981). In addition, loneliness is associated with perceiving hostile and negative intentions in the actions of roommates, professors, and family members, among others (Hanley-Dunn, Maxwell, & Santos, 1985; Wittenberg & Reis, 1986). Rejection sensitivity is associated with having a lower threshold for detecting threatening facial expressions (Olsson, Carmona, Downey, Bolger, & Ochsner, forthcoming). Socially excluded people are also quick to detect fake (also known as non-Duchenne) smiles, presumably out of a desire to avoid people who may not have genuine concern regarding the socially excluded person's welfare (Bernstein, Young, Brown, Sacco, & Claypool, 2008). Finally, social exclusion causes people to perceive aggression in ambiguously hostile situations, which has direct implications for their aggressive behavior (DeWall, Maner, and Rouby, 2009).

Having a hostile cognitive bias may be helpful in alerting socially excluded people to potential sources of threat, but remaining steeped in negativity might make it difficult for excluded people to satisfy their need to belong. A growing body of evidence suggests that socially excluded people also show attunements to positive emotional information and potential sources of social acceptance. Feelings of social exclusion are associated with being highly attuned to others' eye gaze (Wilkowski, Robinson, & Friesen, 2009), which is closely linked to perceptions of social exclusion (Wirth, Sacco, Hugenberg, & Williams, 2010). Excluded people, compared to non-excluded people, spontaneously remember more positive childhood memories, give greater weight to positive emotions in their judgments of similarity, and show higher accessibility of and biased attention to positive emotional information (DeWall, Twenge, Koole, Baumeister, Marquez, and Reid, 2011). They form attitudes and make judgments that go along with the views of potential affiliates (DeWall, 2010; Williams, Cheung, & Choi, 2000). They have better memories for social events (Gardner, Pickett, & Brewer, 2000). They are quick to find smiling faces in a virtual 'crowd' and fixate their attention on potential sources of affiliation (DeWall, Maner, & Rouby, 2009; Gardner, Pickett, Jefferis, & Knowles, 2005; Pickett, Gardner, & Knowles, 2004). And they are especially sensitive to genuine (also known as Duchenne) smiles, presumably because they represent an authentic source of social acceptance (Bernstein et al., 2008; Bernstein et al., 2010).

Thus, social exclusion warps the mind to protect the excluded person from additional threats, resulting in a lower threshold for perceiving hostility in ambiguous situations. But the desire for renewed affiliation also causes socially excluded people to be attuned to and remember people and events that might aid them in satisfying the need to belong.

Biological Responses to Social Exclusion are Tuned to the Desire to Reconnect

The mind and body are intimately connected, and recent evidence suggests that social exclusion influences biological responses according to whether people wish to approach or avoid potential sources of renewed affiliation. In one investigation, participants were exposed to a social exclusion manipulation and then spit into a cup so that the researchers could measure their hormonal responses (Maner, Miller, Schmidt, & Eckel, 2010). Socially excluded participants who were high in rejection sensitivity, who show a heightened desire for affiliation after social exclusion (Romero-Canyas et al., 2010), demonstrated a sharp increase in progesterone, a hormone associated with a desire for affiliation. The opposite pattern was found among socially anxious people, who showed a reduced

desire for affiliation in the wake of social exclusion (e.g., Mallott et al., 2009; Maner et al., 2007). These findings dovetail nicely with the behavioral and cognitive results reviewed above—and underscore the importance of the prospect of acceptance in understanding responses to social exclusion.

When the Desire for Reconnection Backfires: Smoking and Cocaine

Thus far, this article has shown that responses to social exclusion depend largely on the desire and opportunity for social connection. Aggressive responses tend to occur when the possibility of satisfying the need to belong is absent, whereas prosocial responses tend to occur when there is some possibility of gaining immediate or future acceptance. Can the desire for reconnection be linked to harmful behavior, such as smoking? To date, very little research has investigated the potentially negative consequences of the desire to reconnect. We would predict that feelings of social exclusion would be associated with an increase in smoking behavior. Crucially, the relationship between social exclusion and smoking should be strongest among people living in environments in which smoking is socially acceptable, presumably because smoking would then represent an especially useful means of gaining acceptance.

A recent investigation tested this hypothesis using large, nationally representative samples of adults and adolescents (DeWall & Pond, 2011). Across all three studies, loneliness showed a small but reliable association with higher smoking rates. As predicted, the relationship between loneliness and smoking was highest among people living in a U.S. region with the highest smoking rates, namely the Midwestern region. These findings offer initial evidence that the desire for social reconnection is a crude motivation that can lead socially excluded people to engage in desirable (e.g., self-regulation, charitable contributions) as well as undesirable (e.g., smoking) behaviors.

A second investigation provided additional support that the desire for reconnection can guide socially excluded people down a hazardous path (Mead, Baumeister, Stillman, Rawn, & Vohs, 2011). First, participants were exposed to a social exclusion manipulation. Next, they were asked to express their willingness to try cocaine. Crucially, participants were randomly assigned to consider doing cocaine with others (public condition) or alone (private condition). Consistent with the reconnection hypothesis, socially excluded participants in the public condition, compared to non-excluded participants, expressed the highest willingness to try cocaine. Thus, the desire to reconnect may also drive socially excluded people to use cocaine to gain friends.

Conclusion

Deep down in the heart of every man, woman, and child is the desire for positive and lasting relationships. Socially connected people typically flourish both mentally and physically. The current article discussed what happens when social relationships go awry, namely through social exclusion. It sought to resolve discrepancies in the literature by proposing that responses to social exclusion depend primarily on the prospect of social acceptance.

This review discussed prominent theoretical models that emphasize the importance of the prospect of acceptance in understanding responses to social exclusion. It summarized a growing body of literature showing that, in the absence of a palpable promise of acceptance, socially excluded people behave aggressively, express unwillingness to control their impulses (unless doing so can earn them a quick fistful of cash), and adopt a position of

selfishness instead of one of helpfulness. When they experience a taste of acceptance (or anticipate that they might), socially excluded people no longer behave aggressively, they self-regulate effectively, and they sacrifice self-interest by giving others money that they could have themselves. Similar effects emerge with measures of cognition and judgment, with socially excluded people being sensitive to potential threats but also attuned to potential sources of positivity and social connection. Social exclusion produces biological responses that mirror behavioral responses, as indicated by heightened progesterone release among people keenly interested in renewed affiliation (i.e., rejection sensitive people) and a precipitous drop among people motivated to withdraw from potential affiliates (i.e., socially anxious people). Although the desire for social connection can foster desirable responding, it may also be associated with harmful behaviors, such as smoking.

To be sure, the crux of this article's argument—that responses to social exclusion hinge on the prospect of acceptance—assumes that people have a fundamental need for positive and lasting relationships. Although this may be true of most people, there may be groups of people for whom the need to belong is relatively absent. Social anhedonics, for example, express social disinterest, are withdrawn, and experience low levels of positive emotions from having social interactions (Brown, Silvia, Myin-Germeys, & Kwapil, 2007). In addition, people with autism spectrum disorder show deficits in their social interactions, express a diminished desire for affiliation, and have biological and genetic profiles associated with a lower desire for social bonding (American Psychiatric Association, 2000). Therefore, the motivational dynamics associated with the need to belong may be absent among people with social anhedonia and autism spectrum disorder. As a result, social anhedonics and autistic people may have different behavioral, cognitive, and biological responses to social exclusion compared to people without these disorders. Future work will benefit from understanding responses to social exclusion among people whose need to belong is weak or defunct.

Another potential avenue for future research will involve cross-cultural studies of social exclusion and the desire to reconnect. If, as we argue, the desire to reconnect represents a basic and fundamental response to social exclusion, then the reviewed findings should also be found in non-Western cultures. What may differ, however, is the means by which people from different cultures seek to reconnect. Whereas socially excluded American participants express interest in meeting completely new people (Maner et al., 2007), members of East Asian cultures may seek out members of their group with whom they have established relationships (Markus & Kitayama, 1991). This possibility awaits future inquiry.

Social connections are both sweet and bitter. Acceptance and belonging bring tremendous benefits and rewards, whereas social exclusion can be painful and exhausting. By understanding how and why people respond to social exclusion, researchers and practitioners will be better equipped to stave off the deleterious consequences of social exclusion.

Short Biographies

C. Nathan DeWall is an Associate Professor of Psychology at the University of Kentucky. He received a BA in psychology from St. Olaf College, an MA in Social Sciences from the University of Chicago, and MS and PhD degrees in experimental social psychology from Florida State University. Nathan has three lines of research: social rejection/loneliness, self-regulation, and aggression. He is a recipient of a Young Investigator Award from the International Society for Research on Aggression, the Sage Young Scholar Award from the Foundation for Personality and Social Psychology, and was recently

named a 'Rising Star' by the Association for Psychological Science. His research is currently funded by NIH, NSF, and the John Templeton Foundation. In his spare time, Nathan reads history and business/economics books, drinks coffee, travels with his wife, and plays blues guitar.

Stephanie B. Richman is a Graduate Student at the University of Kentucky. She received a BA in Psychology from Northwestern University, and is currently working on her MA in experimental psychology under the supervision of C. Nathan DeWall. Her research interests include social rejection, self-concept, and interpersonal relationships.

Endnotes

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¹ In the current article, we use the terms social rejection, social exclusion, and ostracism interchangeably.

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