

# Research in Social Psychology: Consequences of Short- and Long-Term Social Exclusion

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Among the many experiences and motivations critical to human survival, the innate drive to affiliate with others is one of the most fundamental (Baumeister & Leary, 1995; Buss, 1990). Human survival is facilitated by stable social bonds and hierarchies, and some have argued that group living was selected as an adaptation for human psychology exactly because it proved so valuable to helping humans manage problems they faced in their environments during their evolutionary history (Brewer, 2004). Living in groups offers better access to social support as well as to food, water, and shelter. It offers better access to protection from environmental dangers, predators, and other bands of humans, as well as increased access to other potential mates (Buss, 1990, 1991; Duncan et al., 2007). Belonging is, in many ways, as foundational to human survival as much more biological imperatives like food or water (Baumeister & Leary, 1995; Maslow, 1943).

Beyond facilitating basic survival and reproduction, it is also the case that humans derive multiple psychological and physiological benefits from maintaining stable social connections. The world is a chaotic place, and people are highly motivated to predict and understand causal relationships in the world (e.g., Bruner, 1957). In order to understand what is otherwise a very chaotic landscape, individuals look to the groups to which they belong for guidance; in fact, some have argued that one of the primary psychological purposes of group formation and identification is to reduce uncertainty about the social world (Hogg, 2004). By focusing on the norms and attitudes of the groups to which they belong, individuals can create a greater sense of certainty about how to behave toward and what to expect from people in the same or other social groups. They can determine how to

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act in situations where they may lack accurate insight (e.g., Sherif, 1937). Beyond uncertainty reduction, people derive positive self-esteem from their groups as well as a sense of identity (e.g., Tajfel, 1982).

In addition to these broad benefits that groups offer, people who have stable social access show reduced stress (both in terms of self-report and psychophysiological markers such as cortisol, e.g., Heinrichs, Baumgartner, Kirschbaum, & Ehlert, 2003) and are better at coping with stress generally (Cohen, Sherrod, & Clark, 1986). This is perhaps not surprising given the social buffering hypothesis (Cohen & Wills, 1985), which suggests that social support both benefits people directly and indirectly as well as acts as a buffer against stressful events. People with more social connections also engage in less antisocial behavior (Sampson & Laub, 1993). There is also some evidence to suggest that poor social connections can lead to increased incidence of psychopathology (Bhatti, Derezotes, Kim, & Specht, 1989; for the role of social exclusion in the development of psychopathology, see chapter “Research in Clinical Psychology: Social Exclusion and Psychological Disorders”). Social isolation can have a host of negative consequences including loneliness (Jones, 1981), decrements in immune functioning (Kiecolt-Glaser et al., 1984), and anxiety (e.g., Mathes, Adams, & Davies, 1985), among others.

Given the inherent value of stable social belonging, it should come as no surprise that individuals react strongly when their belonging needs are thwarted. This is sensible as such actions should provide a motivational incentive to remedy the situation that has blocked one’s belonging satisfaction. In the current chapter, I elaborate on these reactions to social exclusion. With respect to the responses to short-term experiences of exclusion (i.e., those experiences of exclusion which occur at a single moment in time and are not chronic, such as a breakup), I examine how some of these consequences seem adaptive to the goal of facilitating reaffiliation, while others seem inconsistent with the immediate goal of affiliation, while others appear somewhat neutral to those ends. I consider the classification of responses as prosocial, antisocial, and socially avoidant and what predicts which response will prevail.

I also discuss consequences in terms of existing research on loneliness and chronic social isolation, and I examine longitudinal work and studies employing ecological momentary assessment to examine the impact of social connectedness on health and well-being. I also consider the consequences of prolonged exclusion in the penal system as well as the relationship between chronic social exclusion and school violence.

Finally, I conclude with a review of proposed models, mechanisms, and moderators of social exclusion and how they might explain the often seemingly contradictory findings in the literature for acute responses to exclusion. Models and moderators such as the Social Monitoring System (Pickett & Gardner, 2005), availability for affiliation (DeWall & Richman, 2011), and the Multimotive Model (Richman & Leary, 2009) all offer avenues to help explain what appear as rather contradictory findings in the literature.

## Consequences of Short-Term Social Exclusion

Given the dangerous pressures levied upon an excluded individual, one might expect exclusion to lead to behaviors that are aimed exclusively at ameliorating the situation—helping excluded individuals either mend their broken social bonds or find new affiliation opportunities. This is indeed often the case. Responses to social exclusion are often clearly affiliative (e.g., K. D. Williams, 2007). K. D. Williams and Sommer (1997) found that excluded individuals do engage in more prosocial behavior. Specifically, excluded women were less likely to engage in social loafing and more likely to help in a task when participating in a group project. These authors asserted that the additional work participants contributed during a conjunctive task was motivated by an increased desire to reaffiliate and with the goal of highlighting their own value as a potential group member, thus enhancing the likelihood of successful affiliation. This is similar to the findings of Carter-Sowell, Chen, and Williams (2008) who found that, following social exclusion, individuals became more compliant to the requests of others, being more willing to acquiesce to requests made of them (in the context of obedience, also see Riva, Williams, Torstrick, & Montali, 2014).

This is consistent with Maner, DeWall, Baumeister, and Schaller's (2007) work which found that individuals who were excluded did not aggress against but rather showed affiliative behaviors towards targets they believed were possible interaction partners. Across six studies, researchers found evidence for a social reconnection hypothesis (e.g., Baumeister & Leary, 1995). Excluded participants were more interested in joining social clubs, more interested in working with others, perceived others more positively, and behaved more prosocially by assigning greater rewards to a potential interaction partner. Importantly, these effects were limited only to novel or neutral targets with respect to the initial exclusionary experience (e.g., excluded participants were not prosocial towards the perpetrator of the exclusion). Further, attempts at social reconnection only occurred when participants anticipated interacting with the novel target; if the new target was clearly not available for affiliation or the potential for affiliation was low, resources for such affiliative responses were withheld. Excluded individuals find themselves in a precarious position—when one's survival is on the line, one cannot waste resources on futile affiliation attempts.

Though controlled efforts can be allocated to enhance the likelihood of reaffiliation (i.e., working harder in group tasks or offering help to possible affiliation partners), automatic responses that might aid in reaffiliation have also been found. In two studies, Lakin, Chartrand, and Arkin (2008) found that excluded individuals showed greater nonconscious behavioral mimicry of a future interaction partner (specifically identified as not being associated with the original social exclusion experience) than those not excluded. Previous research has demonstrated that behavioral mimicry increases liking and rapport with the target being mimicked (Lakin & Chartrand, 2003) and thus may serve a reaffiliative function. In both studies, participants who mimicked their interaction partners more were rated as more likable by those partners than those who mimicked less. Importantly, when

probed about behavioral mimicry, participants were unaware of their behaviors, suggesting this is an automatic, reflexive, nonconscious response to social exclusion as outlined by other researchers (e.g., K. D. Williams, 2007).

Such nonconscious affiliative behaviors towards others are consistent with other work as well, which broadly demonstrates that socially excluded people are particularly attuned to socially relevant information. In a study conducted by Gardner, Pickett, and Brewer (2000), individuals read diary entries after experiencing an exclusion or acceptance manipulation. The diaries included intrapersonal, interpersonal, and intergroup behaviors. Memory for the information was examined at the end of the study. Compared to accepted individuals, excluded individuals recalled more social information (both interpersonal and intergroup). Further, excluded individuals recalled more social than intrapersonal information, suggesting that excluded individuals are especially attuned to socially relevant signals.

These findings are similar to work done by Pickett, Gardner, and Knowles (2004) which found that individuals dispositionally high in the need to belong were better at identifying facial expressions and vocal tones than those low in the need to belong, but that this increased accuracy was related only to social perception and did not extend to nonsocial stimuli. A more recent set of studies examined exclusion's effects on the discrimination of real and fake smiles (Bernstein, Young, Brown, Sacco, & Claypool, 2008). According to these researchers, a real smile is a sign of affiliation, cooperation, and altruism, whereas a fake one masks true intentions (Ekman, Davidson, & Friesen, 1990). Thus, it would be adaptive for excluded individuals to be able to make this discrimination, so as to identify the "best" candidates with whom reaffiliative efforts will be successful. In Bernstein et al.'s (2008) work, participants wrote about a time they were included, excluded, or a control condition (their day yesterday) and then saw 20 videos of individuals exhibiting a smile that was either genuine or fake. Participants decided, for each video, whether the person in the video was exhibiting a real or fake smile. The results indicated that excluded participants were better at discriminating between real and fake smiles, as compared to included or control participants. In a separate study (Bernstein, Sacco, Brown, Young, & Claypool, 2010), the researchers extended the work by showing that excluded participants are more selective in terms of whom they want to work with on a future task, showing a particular desire to work with people exhibiting real smiles and avoid those exhibiting fake smiles, as compared to the non-excluded participants. The researchers interpreted their findings as evidence that excluded individuals are careful information processors when it comes to social targets, because they need to be judicious in terms of how they allocate resources for potential affiliation. This work is akin to recent findings showing that social exclusion results in an increased ability to discriminate between truths and falsehoods as well, though this work found this was true only when the lie contained verbal information that was highly relevant to affiliation (Eck, 2016).

Others have extended this work, suggesting that social exclusion influences early stage attentional processes. DeWall, Maner, and Rouby (2009) found that social exclusion resulted in individuals becoming attuned to signals of inclusion or acceptance. In their first study, the researchers found that excluded individuals were

particularly fast to identify smiling faces in a crowd of non-smiling faces, and were far slower to attentionally disengage from smiling faces in a separate task (Study 4). Using eye-tracking, they also found that excluded individuals fixated attention more on smiling faces. Importantly, these attentional benefits only occurred for positive, social targets; when the targets showed disapproving facial expressions or were non-social images, socially excluded participants did not show any increase in attentional attentions. The researchers interpreted their findings as evidence that social exclusion prepares people to be particularly attuned to signals of potential affiliation as a means of potentially altering more downstream behaviors (e.g., approaching others).

Because people are particularly attuned to social signals (e.g., Bernstein et al., 2008, 2010; Pickett et al., 2004), and because allocating resources to good affiliation targets is so important to excluded individuals (e.g., Maner et al., 2007), recent research proposed that excluded individuals should be less likely to stereotype and more likely to individuate others (Claypool & Bernstein, 2014). Therefore, carefully thinking about and encoding information about other social targets should be particularly important for socially excluded individuals, because it is so important for them to find targets whom are good potential affiliation partners. Conversely, stereotyping a target might reduce the pool of individuals an excluded person is willing to affiliate with, which would reduce the probability of successful affiliation. Relying on stereotypes is a potentially risky avenue for person perception; an excluded person who stereotypes a female target as warm (e.g., Eagly & Mladinic, 1989) and thus a good candidate for affiliation may be rebuffed and experience further social exclusion if she or he did not notice individuating information suggesting the female target's disinterest in affiliation. Similarly, excluded individuals could miss an opportunity for affiliation by relying on stereotypes rather than individuating; assuming that an African American target possesses a high degree of the stereotypic trait of aggressiveness (e.g., Devine, 1989) or an Asian target is too cold to be a good affiliation partner (Lin, Kwan, Cheung, & Fiske, 2005) might cause excluded individuals to miss out on affiliation opportunities. Across several studies, Claypool and Bernstein (2014) found that socially excluded individuals stereotyped targets less and individuated them more. For example, in one study, when reading about individuals described as counter-stereotypic with respect to their jobs (e.g., a nonassertive, nondeceptive lawyer), excluded individuals attended to the individuating information and rated the targets as less on the stereotypic dimensions. Non-excluded participants rated the targets as relatively more stereotypic; rather than paying attention to the individuating information, they instead relied on the stereotype to evaluate their targets.

Broadly, the literature suggests that socially excluded individuals become particularly attuned to seeing the world and others in ways that may facilitate the goal of reconnection, and a litany of other additional work supports this claim. Social exclusion results in the perceptions that others are closer to the victim (Pitts, Wilson, & Hugenberg, 2014), and this is true for accepting others and even neutral targets, but not the perpetrators of social exclusion (Knowles, Green, & Weidel, 2013). Excluded individuals become more sensitive to distinctions between in-groups and out-groups (Sacco, Wirth, Hugenberg, Chen, & Williams, 2011), a response that

should aid in identifying likely affiliation partners, and this identification even extends to face memory (Bernstein, Sacco, Young, & Hugenberg, 2014). They become better at managing the emotions of others (Cheung & Gardner, 2015). Social exclusion and inclusion change the way we think about others with respect to dating and mating (e.g., Sacco, Brown, Young, Bernstein, & Hugenberg, 2011; Sacco, Young, Brown, Bernstein, & Hugenberg, 2011). Even our perceptions of our own group identities change following social exclusion; excluded individuals see themselves as more similar to their in-groups (Sacco, Bernstein, Young, & Hugenberg, 2014), and group identities become more activated and in-groups are perceived as more entitative (i.e., cohesive and unified) following social exclusion. To the extent that these two changes occur, self-esteem also increases, thus facilitating recovery from the threat of exclusion (Knowles & Gardner, 2008).

While much of this research portrays socially excluded individuals as responding in ways that should facilitate reaffiliation, some research suggests that this routinely is not the case. Often, for example, social exclusion precipitates aggressive behavior (Baumeister & Leary, 1995; Baumeister, Smart, & Boden, 1996; Leary, Twenge, & Quinlivan, 2006), a response unlikely to lead to successful reintegration into the group. In seminal work, researchers found that excluded people evaluated targets more negatively and blasted targets, who initiated the exclusion, with more aversive noise relative to included participants (Twenge, Baumeister, Tice, & Stucke, 2001). Other research has supported the claim that recently excluded individuals are significantly more likely to aggress against the perpetrator of their social exclusion (Buckley, Winkel, & Leary, 2004; Bushman & Baumeister, 1998) and even against “innocent” targets who were not involved in the original exclusion situation (Twenge et al., 2001). Other researchers have demonstrated that this aggressive response is even stronger against groups perceived as being high in entitativity, perhaps because a depersonalization of the targets makes every member of a highly entitative group seem equally guilty, in the eyes of the victim, as the specific member inflicting the social exclusion (Gaertner & Iuzzini, 2005).

Beyond causing seemingly antisocial behaviors, researchers have found other effects following social exclusion that, on their face, may seem contrary to the goal of affiliation. Baumeister, Twenge, and Nuss (2002) found that individuals suffering a social exclusionary episode experienced decrements in their cognitive abilities. Participants were exposed to a manipulation of social exclusion (one in which individuals were told their responses on a personality inventory were predictive of individuals whose future lives would be spent alone, i.e., the future life alone paradigm; see chapter “Methods for Investigating Social Exclusion”). Following this, they performed worse on GRE tasks (i.e., a standardized test used as an admission requirement for many graduate schools in the USA), answering fewer problems correctly and being slower to do so, as compared to those in the accepted and control conditions (who were given different feedback on the personality test). Interestingly, this deficit in cognitive abilities was only true for logic and reasoning-based problems, and not for those based on simple information encoding. Baumeister et al. argued that this reduction in intelligent thought occurred only for complex reasoning skills, which require effort and control, whereas more automatic processes should not be affected

by social exclusion. They assert this may be because intelligence, which may exist for the purpose of navigating complex social systems, is less important once an individual has been excluded from such a system. An alternative explanation, however, does exist and stems from the Social Monitoring System (Pickett & Gardner, 2005) which will be discussed later in this chapter.

Other deficits, beyond the cognitive domain, occur as well. Baumeister, DeWall, Ciarocco, and Twenge (2005) found that, following social exclusion, individuals were less able to exert self-regulatory abilities. Using several dependent measures, results consistently indicated that excluded individuals were less able to self-regulate on tasks such as those involving dichotic listening, those involving active avoidance of pleasure (i.e., not eating cookies), and those requiring individuals to engage in disgusting but healthy tasks (i.e., drinking a poor tasting health drink). Interestingly, when excluded participants were motivated to self-regulate (via a monetary incentive), they were able to regulate their behavior. The researchers suggested that excluded individuals do in fact maintain the ability to self-regulate, but that social exclusion strips them of the necessary motivation to do so. Should that motivation be reinstated, self-regulation can again be reconstituted (for a more detailed review of the ongoing debate concerning self-regulation, see Inzlicht & Schmeichel, 2012; Job, Bernecker, Miketta, & Friese, 2015; Job, Dweck, & Walton, 2010). These findings are somewhat similar to findings by Twenge, Catanese, and Baumeister (2002) who found that socially excluded individuals, relative to control participants, engaged in more self-defeating behaviors, taking more risks, selecting more unhealthy snacks, and were more likely to put off studying for an upcoming exam. This particular study, however, employed the future life alone paradigm which seems to elicit a sense of chronic exclusion (see chapter “Methods for Investigating Social Exclusion”).

While prior work suggested social exclusion results in more prosocial behavior (e.g., K. D. Williams & Sommer, 1997), excluded individuals, in some instances, appear to do the opposite (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). Across seven studies, researchers manipulated exclusion either using the future life alone paradigm (in which participants are told they will live a life alone, devoid of social relationships) or used the get-acquainted paradigm in which participants are led to believe no one selected them as a partner on a task (see chapter “Methods for Investigating Social Exclusion”). In each case, compared to participants who were included, excluded participants engaged in less prosocial behavior, donating less money to a student group, being less willing to help an experimenter with additional lab studies, helping less after someone dropped pencils, and cooperating less in a mixed-motive game. The researchers found that this effect was mediated by reduced empathy for targets (but not by other possible mediators, including basic needs or mood).

There are a host of other consequences of social exclusion that seem to change the way we perceive ourselves and others in ways that seem inconsistent with the goal of reaffiliation. Excluded individuals see themselves and the perpetrators of their exclusion as less human and believe that others perceive them as less human (Bastian & Haslam, 2010). They feel entitled and are more dishonest (Poon, Chen, & DeWall, 2013).

Excluded people find life more meaningless (Stillman et al., 2009). Twenge, Catanese, and Baumeister (2003) similarly found changes in excluded participants' perceptions of meaningfulness in their lives, but also found that excluded individuals had changes in time perception, were more lethargic, had difficulty delaying gratification for rewards, and showed less emotion than did non-excluded participants (a finding consistent with emotional numbing suggested by Twenge, Baumeister, et al.'s [2007] work showing reduced empathy for others). Further, they also found that excluded participants were less likely to select a seat facing a mirror, instead choosing to face a blank wall, than were other non-excluded participants. The researchers interpreted this as a sign that excluded participants avoid situations that make them self-aware (mirrors have been used as a manipulation to increase self-awareness; e.g., Diener & Wallbom, 1976), a consequence which the authors assert could have deleterious consequences for interpersonal reconnection.

While much of the recent work in experimental social psychology has focused on these various consequences of acute or short-term social exclusion, other research speaks to the multitude of outcomes related to more chronic or long-term social exclusion and isolation. In the following section, I review that work.

## **Consequences of Long-Term Social Exclusion and Isolation**

Psychologists and philosophers have, for some time, suggested that isolation and exclusion from others can have deleterious effects. Thoreau, after having been away from people for only a few weeks, “doubted if the near neighborhood of man was not essential to a serene and healthy life,” and later describes a “slight insanity” in his mood (Shanley, 1971). More recently, K. D. Williams (2007) suggested that some people may experience long-term ostracism—being ignored and excluded by others in their lives repeatedly—and while little research directly examining chronic exclusion exists, there is evidence that alludes to such consequences.

While not experimental, social psychologists have investigated how chronically excluded people think about their social exclusions. As discussed in other work (K. D. Williams, 2001; Zadro, 2004), researchers interviewed more than 20 individuals who described themselves as having experienced the silent treatment (i.e., not being spoken to or acknowledged by another) for prolonged periods of time. Such individuals' responses to prolonged, chronic ostracism were indicative of an inability to manage the experiences; individuals failed to cope with the loss of the social connections, being unable to better their affiliative relationships by mending the social bonds or by engaging in aggressive, retaliatory behaviors to reestablish control (e.g., Warburton, Williams, & Cairns, 2006). Physical and mental well-being were worsened with suicidal ideation and actual suicide attempts occurring among some of the persons interviewed. Other psychological well-being related issues arose following the ostracism, including eating disorders and increased sexual promiscuity. Some participants reported preferring to be physical abused than to be ignored, because physical abuse would have at least been recognition of their existence.



Further, a large body of work suggests that long-term social connectedness is related to positive health-relevant outcomes while social isolation is related to negative health-relevant consequences. Research among married couples found those who report higher satisfaction in their relationships have better physical health and psychological well-being relative to participants in less supportive social relationships, and this remained true even during and following stressful days (DeLongis, Folkman, & Lazarus, 1988). Other work too supports the importance of perceived availability of social support for both physical (Wallston, Alagna, DeVellis, & DeVellis, 1983) and mental health (Kessler & McLeod, 1985). Social support, through which emotional support is perceived, is directly related to stress reduction (Coyne & DeLongis, 1986).

With respect to mortality rates, research clearly reveals that rates are significantly higher among single, divorced, and widowed individuals relative to married couples (Lynch, 1979). Further, women in unhappy marriages or who were divorced or separated are found to have poor immune functioning (Kiecolt-Glaser et al., 1987). Similarly, research has found that perceived social isolation is related to poorer immunocompetence (Kiecolt-Glaser et al., 1984). Among patients with heart failure, social isolation significantly predicted mortality rates (Friedmann et al., 2006). Additionally, volunteers isolated in chambers at an aerospace institute showed increases in salivary cortisol and abnormal patterns of circadian rhythm variation (Hennig & Netter, 1995).

Extended isolation causes deficits for mental health as well. Socially isolated elderly individuals show higher levels of physiological arousal than do socially engaged individuals (Larson, Zuzanek, & Mannell, 1985; for a review of research on social exclusion in aging adults, see chapter “Research in Social Gerontology: Social Exclusion of Aging Adults”). Among retirees, lower sense of belonging was associated with engaging in fewer physical activities with others (as opposed to physical activities engaged in alone) which in turn predicted more depression and more suicidal ideation (Bailey & McLaren, 2005). Further, fewer social connections and poorer adequacy of those relationships has been associated with increased depressive symptoms (for review, see Barnett & Gotlib, 1988). The relationship between poor social connections and physical and mental health is clear (e.g., Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

While certainly not the same as social exclusion, a significant amount of research on loneliness also suggests detrimental consequences of long-term social isolation. Loneliness, or perceived social isolation (Cacioppo & Hawkley, 2009), has to do primarily with the perceived quality rather than quantity of social connections; lonely people do not necessarily report having too few social relationships, but report greater dissatisfaction with those social opportunities. In essence, they report having fewer satisfying social relationships than they would prefer. Lonely individuals have an increased risk of depression (e.g., C. A. Anderson & Arnoult, 1985; Russell, Cutrona, Rose, & Yurko, 1984; Shaver & Brennan, 1991) as well as suicidal ideation (Kirkpatrick-Smith, Rich, Bonner, & Jans, 1991). They are rated as having poorer social skills (C. M. Anderson & Martin, 1995), are less popular (Nurmi, Toivonen, Salmela-Aro, & Eronen, 1996), and tend to be socially anxious

(Segrin & Kinney, 1995). This results in lonely individuals' interpersonal trust being eroded over time as compared to non-lonely individuals (Rotenberg, 1994).

Prolonged social isolation is so aversive that legal systems often use it as a means of punishment for prisoners. Solitary confinement refers to the act of separating a person from the general population, often as punishment for some infraction (Haney & Lynch, 1997), and has been used extensively in both the USA and Europe in the late 1800 and early 1900s (Rothman, 1971). Researchers have suggested such practices elicit trauma and harm to both physical and mental well-being (Finke, 2001), exacerbating mental illness among individuals with preexisting conditions, but also causing negative psychological effects in otherwise healthy individuals, even when the isolation was for as little as 10 days (Haney, 2003). These psychological consequences included hallucinations, anger, depression, suicidal ideation, and emotional breakdowns (Kupers, 2008). It is unequivocally clear that such experiences of prolonged isolation from others have significant and deleterious impacts on individuals' mental health. Nonetheless, as recently as 10 years ago, roughly 80,000 prisoners in state and federal prisons in the USA were held in solitary confinement (e.g., Gordon, 2014).

To further understand the power of prolonged or chronic social exclusion, we can examine literatures related to discrimination and stigma for additional insights. Prejudice, discrimination, and stigma offer their own impact on chronic exclusion, insofar as members of groups that are the target of such experiences often feel isolated from the society and cultures in which they live. Many minority groups experience racial microaggressions (e.g., rudeness or insensitivity that may demean a person's race; for review, see Sue, 2010; Sue, Bucceri, Lin, Nadal, & Torino, 2007) that cause considerable stress for the targets of the behaviors (see chapter "Social Exclusion in Everyday Life", reporting that microaggressions elicit feelings of social exclusion). These microaggressions may cause minority individuals to feel powerless and invisible (Sue et al., 2007), responses that are similar to the loss of control and meaning associated with the threatened needs K. D. Williams (2007) and others refer to following social exclusion. Such prolonged experiences of discrimination result in severe health disparities as well, with targets of discrimination having higher rates of substance abuse (e.g., drugs; Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004; smoking; Harris et al., 2006; Landrine & Klonoff, 1996), and generally worsened health across a broad spectrum of measures (for review, see D. R. Williams & Mohammed, 2009). The implications for chronic feelings of exclusion are clear.

Some of the most devastating consequences of chronic social exclusion are gleaned from the literature concerning school violence. Acts of school violence, often occurring after experiences of bullying and social exclusion, have become all too common in the past few decades. In the USA, since the mid-1990s, school shootings have resulted in more than 200 deaths and many injuries among youth (M. Anderson et al., 2001). We are now a decade into the next millennia and the numbers with respect to school violence are still alarmingly high. Many Americans remember vividly where they were when they first heard of the shooting at Columbine High School, just as previous generations recall the shooting at University of Texas, Austin in the 1960s. These incidents have become such a part of our cultural vernacular that even students now attending their first year of college

are familiar with the events of the Columbine shootings even though they were only 6 years old when it occurred. While such violence is multifaceted, much work has been done to examine the role that chronic social exclusion has on these instances.

Leary, Kowalski, Smith, and Phillips (2003) performed case studies on 15 school shootings, with any lethality, from 1995 to 2001. Their findings were clear; in 13 of the 15 case studies, chronic and/or acute social exclusion occurred immediately before the violent episodes. While other factors were also identified as being present (e.g., a fascination with guns and explosives, mental health related problems, and an interest in death), it appears that the experience of social exclusion is particularly dominant in leading individuals to engage in violent acts and may interact with these other traits to create a scenario where violence occurs.

M. Anderson et al. (2001) found that between the years of 1994 and 1999, there were over 220 events in which violence occurred at a school or school-related setting and in which at least one person was killed. Over 250 deaths were identified as having occurred among those events. Consistent with prior findings, the perpetrators of school homicides were likely to have experienced chronic exclusion and bullying by their peers and were more likely to be considered loners, often experiencing long-term social isolation relative to other students in their peer group (M. Anderson et al., 2001). This echoes some of the findings from Leary et al.'s (2003) work as well as the findings from the U.S. Secret Service National Threat Assessment Center on the prevention of school violence (Vossekuil, Reddy, Fein, Borum, & Modzeleski, 2000). Though they make it clear that many students who are the victims of chronic exclusion do not themselves engage in violence, they also assert that chronic exclusion by peers is nonetheless a risk factor in many cases of school violence.

Having now covered the consequences of social exclusion, following both acute experiences as well as chronic ones, I turn to proposed underlying mechanisms for such effects as well as moderating variables that have been proposed to explain the often apparently contradictory findings that stem from acute experiences of social exclusion.

## **Models, Mechanisms, and Moderators**

As outlined earlier in the chapter, the consequences that follow acute experiences of social exclusion are robust but often seem to be contradictory to each other. As a result, a host of moderating variables having been suggested to explain when and why people behave in different ways. Further, a number of theoretical models have been put forward to explain the underlying mechanism by which these behaviors occur.

One of these models focuses on the research showing that excluded individuals become highly attuned to social information, presumably to aid in reaffiliation processes (e.g., Bernstein et al., 2008, 2010; Gardner et al., 2000; Pickett et al., 2004). Pickett and Gardner (2005) describe their Social Monitoring System account of responses to social exclusion, suggesting a model that acts as a sort of self-regulatory process. In their model, the Social Monitoring System constantly scans the environment

for signs of potentially impending or occurring social exclusion. Once an occurrence is recognized, the system directs resources and prompts behavior in ways that can either prevent the exclusion from happening or help manage reaffiliation, either with the same or different targets, following the exclusion. This model helps explain findings described previously that show socially excluded individuals becoming attuned to social information (e.g., smiles, social information, signs of positivity, nonverbal behaviors for behavioral mimicry), as well as explains the research on why excluded persons become worse at other tasks (e.g., complex cognitive tasks). If resources are being directed to attending to social cues, it is reasonable that they be taken from tasks less relevant to mending social bonds (e.g., performing math problems; Baumeister et al., 2002). Just as hunger leads people to attend quickly to food (Atkinson & McClelland, 1948), the Social Monitoring System helps attune people to social cues of others (e.g., a person checking their watch or tapping their foot as an indication of boredom and desire to extricate themselves from an interaction). By attending to such information, changes in behaviors can occur to better respond to impending exclusion (to potentially prevent it) or to actual exclusion, enabling the person to either mend the broken bond or move on to find other affiliation opportunities.

While the Social Monitoring System is one model explaining how individuals respond following social exclusion, it does not attempt to explain when and why individuals respond with more prosocial rather than antisocial responses. Richman and Leary's (2009) Multimotive Model, however, purports to do just that. Richman and Leary argue that responses to exclusion generally fall into one of three categories: prosocial, antisocial, and socially avoidant. While they suggest that, in virtually all cases, the immediate response to social exclusion is one of negative affect and lowered self-esteem, how people respond after is a function of their construal of the situation that produces a motivated response. Construals about the situation include the extent to which there is an expectation of the social bond being repaired, the value of the relationship, whether alternatives are available, the perceived unfairness of the exclusion as well as the chronicity and the cost of the exclusion. The extent to which these are perceived as being high or low affects the type of motivated response (i.e., prosocial, antisocial, socially avoidant) that follows. For example, if the exclusion comes from a high value relationship, the model predicts a prosocial response as compared to if the exclusion comes from a relatively low value relationship. If the exclusion experience seems unfair or unjust, antisocial responses are likely to follow (see also Tuscherer et al., 2015). Finally, if the exclusion appears chronic, individuals are likely to withdraw and avoid social relations. Among these motivated responses, if the behaviors successfully restore a sense of acceptance, individuals experience positive physical and mental health outcomes. If acceptance is not restored following the response, negative mental and physical health consequences follow. This is a particularly strong theoretical model insofar as its explanatory power is vast; while there are apparent contradictions in the literature concerning when people engage in prosocial, antisocial, or socially avoidant responses, this model can account for many of those differential behaviors.

K. D. Williams' (2007) temporal need-threat model suggested that there are three stages of responses to social exclusion—a reflexive stage occurring during and

immediately following exclusion, a reflective stage during which people consider the response to exclusion, and a chronic or resignation stage which occurs following long-term exclusion. K. D. Williams (2007) asserts that the reflexive stage (Stage 1) is incredibly difficult to moderate and acts as an initial, automatic reaction to exclusion (e.g., neurological responses, immediate social pain, need threat). The reflective stage (Stage 2) is where he asserts moderation occurs and where variability in prosocial and antisocial behaviors begins to emerge. It is here where K. D. Williams (2009) argues that how people respond to social exclusion has to do with which cluster of needs are threatened following the exclusionary experience. As stated previously, basic psychological needs include belonging and self-esteem as well as having a sense of control and meaningful existence. According to K. D. Williams, these needs form an inclusionary cluster (belonging, self-esteem) and a power-provocation cluster (control, meaningful existence); when threats to the inclusionary cluster is most salient, prosocial responses occur while antisocial responses follow from threats that make salient the power-provocation cluster. In the final stage (i.e., the resignation stage), excluded individuals focus on avoiding additional exclusion, exhibiting learned helplessness with respect to social interactions. Though this model has not been tested directly, support can be found from the existing literature. For example, reestablishing a sense of control (and thus fixing the power-provocation cluster) following social exclusion eliminates the exclusion-aggression relationship (e.g., Warburton et al., 2006) and satiating the inclusion cluster (by asking individuals to think about a close other) reduce aggressive responding (e.g., Twenge, Zhang, et al., 2007). This need fortification model needs additional testing, however (see Wessellmann, Ren, & Williams, 2015).

DeWall and Richman (2011) argue that the primary determinant of how individuals respond to social exclusion is whether there remains a possibility of reaffiliation. From their perspective, the key predictor of whether people engage in prosocial or antisocial responding is whether a chance of affiliation is present. Socially excluded individuals desire to regain acceptance and will act in ways that can facilitate that goal if they perceive acceptance is possible. If the possibility of affiliation is not likely, however, social exclusion may elicit more inward antisocial or socially avoidant responses. They assert that papers demonstrating aggression following social exclusion (e.g., Buckley et al., 2004) did not offer excluded individuals a reasonable chance of affiliation. When affiliation needs are satiated (e.g., DeWall, Twenge, Bushman, Im, & Williams, 2010; Twenge, Zhang, et al., 2007), aggression does not follow exclusionary experiences. Similar findings occur for helping behavior. While there is work showing that exclusion results in less prosocial behaviors (e.g., cooperating less in a mixed-motive game and volunteering less of their time, Twenge, Baumeister, et al., 2007), these studies did not afford excluded participants the opportunity for affiliation and used particular types of exclusion manipulations (e.g., future life alone). When participants believed they had an opportunity to meet with and engage with a potential interaction partner (e.g., Maner et al., 2007), exclusion resulted in prosocial behaviors.

Additional contradictions exist in the literature that point to underlying moderators. Socially excluded individuals, as already stated, show increased ability in

detecting real and fake smiles (e.g., Bernstein et al., 2008, 2010), identifying others' signals of emotion (e.g., Pickett et al., 2004), and memorizing social information (Gardner et al., 2000). These findings seem to stand in stark contrast to Baumeister et al.'s (2002) findings that social exclusion results in reduced cognitive abilities. Baumeister et al. assert that social exclusion impairs cognitive performance by causing deficits in controlled processing because resources are being diverted from such cognitive processing to suppressing emotional distress. Yet, according to the aforementioned research, even when participants report exclusion to be emotionally painful, it seems to elicit *intelligent* thinking. One potential explanation lies in the type of information to which excluded people are attending. In the paper showing that social exclusion reduces intelligent thinking (Baumeister et al., 2002), the cognitive tasks all involved nonsocially relevant information. In the other tasks in which cognitive performance seems to increase, the tasks are socially relevant. In fact, some studies have examined this more directly; in Gardner et al.'s (2000) work, they found socially excluded individuals had heightened memory for socially relevant, but not for socially irrelevant information. Claypool and Bernstein (2014) found that socially excluded individuals stereotyped less and individuated more, but this only occurred for social targets; when the targets were nonsocial (e.g., a tree), excluded individuals relied on readily available category information to make judgments of the target. Thus, it is possible that social exclusion results in a more nuanced deployment of resources for social, but not for nonsocial information processing, and this could explain the apparently contradictory findings.

Another major debate in the literature, that indicates the presence of a moderating factor, concerns the emotional impact elicited by social exclusion. The question as to whether social exclusion is indeed a painful experience has been debated furiously in the literature, with two meta-analyses coming out at roughly the same time drawing drastically different conclusions. Gerber and Wheeler (2009) concluded that social exclusion does indeed reduce self-esteem and cause emotional pain in its victims. Much work has shown that social exclusion does indeed reduce mood (e.g., Hess & Pickett, 2010; Leary, Koch, & Hechenbleikner, 2001) and other theories predict negative emotional responses to social exclusion (e.g., Richman & Leary, 2009). Exclusion seems to be a painful experience, whether the perpetrator is a computer (e.g., Zadro, Williams, & Richardson, 2004) or a despised out-group (Gonsalkorale & Williams, 2007), and whether being excluded means keeping money (e.g., van Beest & Williams, 2006) or even when it happens to someone with whom a person is psychologically close (e.g., Young, Bernstein, & Claypool, 2009). Other work suggests anger is a common response to social exclusion (see Leary et al., 2006, for review). In one demonstration, participants excluded via Cyberball (see chapter "Methods for Investigating Social Exclusion") experienced increased anger and sadness but only anger was related to later aggressive behaviors participants enacted against others (Chow, Tiedens, & Govan, 2008).

While much evidence suggests a clear relationship between social exclusion and emotional reactions, Blackhart, Knowles, Nelson, and Baumeister (2009) arrived at virtually contradictory conclusions in their meta-analysis, arguing that exclusion results in a state of emotional numbing. There is evidence to support such a claim as

well. Twenge et al. (2003) conducted multiple studies that not only failed to produce a negative emotional reaction or social pain in excluded participants, but actually resulted in an emotionally numb state; participants neither felt increased negative moods nor decreased positive ones. Other work suggests social exclusion numbs our emotional system. DeWall and Baumeister (2006) found that exclusion reduced participants' empathy for others, reasoning that our minds become numb to protect ourselves from the exclusionary experience.

While these outcomes seem difficult to reconcile, some work suggests that there may be fundamental differences in the paradigms used to manipulate social exclusion and that the paradigm used may itself be a moderating factor. Bernstein and Claypool (2012a) found that social exclusion induced via Cyberball resulted in social pain (reduced mood, threatened basic needs) while social exclusion manipulated via the future life alone paradigm resulted in no differences from inclusion. These findings were consistent with existing literatures which often find worsened mood and threatened basic need states following exclusion in Cyberball (e.g., K. D. Williams, Cheung, & Choi, 2000; Zadro et al., 2004), while no effect on mood or self-esteem is found when exclusion occurs via the future life alone paradigm (e.g., Baumeister et al., 2005; DeWall & Baumeister, 2006; Twenge et al., 2003; cf. Bernstein et al., 2013). While additional work is needed to examine these and other, newer exclusion paradigms (e.g., Atimia; Wirth, Bernstein, & LeRoy, 2015; Wirth, Turchan, Zimmerman, & Bernstein, 2014; see chapter "Methods for Investigating Social Exclusion"), this and other work (e.g., Molden, Lucas, Gardner, Dean, & Knowles, 2009) suggest a fruitful avenue for research.

Other models have been suggested for attempting to explain the variety of consequences that follow social exclusion. Both pain overlap theory (Eisenberger & Lieberman, 2005) and social pain theory (MacDonald & Leary, 2005) suggest that social pain is detected by the same neurological systems used to detect physical pain. These theories broadly suggest that both physical injuries and social distance from others posed serious threats to the survival of early humans. One single system that was able to detect both physical and social injuries, and then direct resources to respond to such injuries, would have proven to be an evolutionary advantage as opposed to having two separate systems. Recent evidence supports this claim; Eisenberger, Lieberman, and Williams (2003) found that excluded participants experienced increased activation of the dorsal anterior cingulate cortex (dACC) as well as the right ventral prefrontal cortex (rVPFC), and this was positively correlated with self-reported distress. Both neural regions are related to the experience and/or regulation of pain. The researchers interpreted their findings as evidence that the same neural substrates responsible for responding to physical pain are also implicated in the experience of social pain (for a discussion of contradictory evidence, see chapter "Research in Social Neuroscience: How Perceived Social Isolation, Ostracism, and Romantic Rejection Affect Our Brain").

In line with this work, Bernstein and Claypool (2012b) hypothesized that the severity of a social injury could moderate the consequences of social exclusion. The severity of a physical injury is related to the experienced pain, but the relationship is not linear. Relatively minor physical injuries (e.g., stubbing a toe) result in relatively

little experienced pain. Relatively more severe injuries (e.g., a broken finger) hurt considerably more. However, if the severity of a physical injury is so severe, the body does not experience a commensurate amount of physical pain but instead, an analgesic response occurs (in a protective fashion, much like DeWall & Baumeister, 2006, asserted; see for review, Kandel, Schwartz, & Jessell, 2000). Bernstein and Claypool (2012b) reasoned that severe social exclusions might result in numbing of physical pain while less severe exclusions would result in hypersensitivity, and indeed, in two studies, they found exactly that. When participants were excluded via Cyberball (a relatively low severity social injury), they experienced a hypersensitivity to physical pain, but individuals told they would live a life devoid of social connections (a highly severe social injury) experienced a numbing of physical pain (thus replicating DeWall and Baumeister's [2006] work showing exclusion numbs people to physical pain). When they directly manipulated exclusion's severity, they again found that high severity exclusions resulted in physical pain numbing while less severe exclusions resulted in hypersensitivity.

## Conclusion

The consequences of short- and long-term social exclusion are numerous. Experimental social psychology has, and continues to thoroughly examine consequences to acute social exclusion, while consequences as a result of chronic exclusion are understood better through cross-sectional, longitudinal, and qualitative work. Broadly, researchers have classified responses to social exclusion as being prosocial, antisocial, or socially avoidant, and this classification generally fits well with the existing literature. A review of this work suggests that the question of how exclusion affects a person depends on a number of factors, some of which we understand and some of which remain open to question.

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