# Ostracism: The Kiss of Social Death<sup>1</sup>

Kipling D. Williams\*
Purdue University

#### Abstract

To be ostracized is to be ignored and excluded. How does ostracism affect individuals? Considerable research has now shown that the initial (reflexive) reactions to even the most minimal forms of ostracism are painful and distressing. Fundamental needs of belonging, self-esteem, control, and meaningful existence are thwarted; sadness and anger increase. These effects emerge despite individual differences or situational factors that should lead logically to easy dismissal. With time to appraise the ostracism episode, individuals become differentially sensitized based on (i) the specific needs that are thwarted, (ii) their own individual differences, and (iii) their assessment of who ostracizes and why. These differences lead to need-restorative behaviors that range from being overly socially attentive and susceptible to influence to being aggressive and antisocial.

Jennifer (not her real name) was in Kindergarten and acted maybe a bit too impulsively. She ran up to a boy and kissed him. Embarrassed, the boy recoiled and then told his friends. Their response: to spray him with imaginary Jennifer germ repellant. They also told other girls. They joined the boys in perpetuating the Jennifer germ response, spraying anything she touched. If Jennifer drank out of a fountain, the children would spray the fountain before using it; if she got up from her seat in the cafeteria, the next child would spray the seat before sitting down. Within just a few days, none of the children would be caught talking with her or including her in their activities. Jennifer was no longer invited to parties, to overnights, to recess games. Jennifer was ostracized. Not for a day, a week, or even a month. Her classmates ostracized Jennifer until her parents decided to move her to another school ... in fifth grade.

To be ostracized is to be ignored and excluded. Most people experience ostracism in their lives, as sources and as targets. About three quarters of Americans report having received the silent treatment from their loved ones (Faulkner, Williams, Sherman, & Williams, 1997). A daily diary study found that a sample of Australians reported one episode a day (Williams, Wheeler, & Harvey, 2001). Fortunately, few of us have had to endure the extent and duration of Jennifer's experience. But, as we shall see, even a brief episode of ostracism by complete strangers is sufficient to cause pain and distress.

How much ignoring and exclusion is necessary before ostracism is detected and hurtful? What is its psychological impact? How do people respond? In this article, I will review the research that my colleagues, students, and I have conducted over the last 15 years that begins to answer these questions.

The key findings that I will present suggest that we have learned a great deal about ostracism beyond the fact that it is unpleasant for the recipient. Being a social outcast appears to be detected very quickly and crudely, without concern for factors that should diminish its impact. It is felt initially much like physical pain, and may be detected through much the same neural architecture, as is physical pain. The direction of behavioral responses is complicated; there is no simply ostracism-behavior link. Subsequent behavioral responses vary according to which need or needs the individual is attempting to fortify. These needs can lead the individual to strive toward inclusion and acceptance, or to exact revenge and control over others.

### The Reflexive Detection of Ostracism: Crude, But Adaptive

I began my investigations into ostracism by developing a paradigm based on an actual experience I had in the mid-1980s. My interest in ostracism preceded this event by several years, but I had neither a theory nor a paradigm to examine what clearly to me was a very fundamental social psychological phenomenon. After all, much of social psychology was predicated on a fear of rejection or exclusion. Why do we conform, comply, and obey? Why are we inhibited from doing the right thing because others are around? One answer to these questions is to avoid ostracism. We want to belong and to be recognized. We want to be worthy of attention, and positive attention if we can get it. What happens when we voice a dissenting opinion and are unwilling to submit to the majority? We are kicked out of the group (Schachter, 1959). Thus, social psychology already had respect for ostracism although we did not actually study it.

My dog and I were lying on a blanket in a park. A Frisbee rolled up and when I turned to see what it was, I saw two guys looking my way, expectantly. I threw the Frisbee back to them and was about to sit back down when they threw it back to me. I joined them. We didn't speak, but it was fun and I felt welcomed. We threw the disc around for about 2 minutes. Then, just as suddenly as I was included, I was shut out. They stopped throwing to me; they stopped looking at me. It was as though I was suddenly invisible and had never existed. This experience, with strangers, was surprisingly powerful and negative. I felt terrible and awkward and helpless. I slinked back to my dog showering her with praise and affection. When I regained my composure, I realized two things: being excluded from this game of toss upset me, even though it was with strangers, and I found a way to study ostracism in a laboratory.

Since 1995, I have conducted research on well over 5000 participants using variations on this game of toss. In several studies, we used a face-toface ball-tossing game that seemed to emerge on its own as participants were waiting for the experiment to begin. In fact, two of the ostensible participants were experimental confederates, following a script to either include or ostracize the actual participant. We found large effects on negative affect, sadness, and anger, in particular, from being ostracized in a 5-minute game of toss. Additionally, self-reports of belonging, self-esteem, control, and meaningful existence were significantly lower for those who were ostracized compared to those who were included. It was not that inclusion elevated these feelings (when compared to a no-balltossing control group), but rather that ostracism thwarted these fundamental needs. In another paradigm, Cyberball, we conduct an online Internet balltossing game as a ruse to exercise participants' mental visualization skills (Williams & Jarvis, 2006). Our effects are just as strong, despite the fact that our participants neither know nor see nor expect to meet the other participants (who are actually computer programmed to either include or ostracize). Why are these minimal episodes of ostracism so powerful?

We need to feel a sense of belonging or else we suffer psychologically and physically (Baumeister & Leary, 1995). We need to maintain a reasonable sense of self-esteem in order to feel positive and self-confident and effective (Steele, 1988; Tesser, 1988; Wortman & Brehm, 1975). We need to feel a sense of control over our environment, even if it is an illusion, to persevere and be ready for challenges (Bandura, 1997; Seligman, 1975). We need to be recognized as existing sentient humans to fight against existential angst and purposelessness (Solomon, Greenberg, & Pyszczynski, 1991). These needs most likely have strong evolutionary roots for maintaining the success of the individual and the group (Spoor & Williams, 2007).

Our research suggests that a signal that things do not bode well for the individual with regard to these needs is a system that detects ostracism at its earliest moment, in its crudest form (Williams & Zadro, 2001). The signal, we believe, is pain. Much like touching a flame is no less painful when we know it comes from a friendly rather than unfriendly source, our research suggests that the initial reflexive response to ostracism by friend or foe, computer or human, carried out intentionally or not, is pain. Using Cyberball, we have manipulated whether the other players are ingroup members or out-group members. In some cases, they are two other players who do (or do not) smoke, did or did not go to private schools, have the same or different political beliefs, use Macs or PCs. When ostracized, these in-group/out-group manipulations have no impact on the participants' reports of elevated sadness and anger, and lower levels of belonging, self-esteem, control, or meaningful existence (e.g., Williams, 2007; Williams, Cheung, & Choi, 2000; Williams et al., 2002). Even when the ostracizing outgroup is despised (e.g., the KKK), participants feel just as bad as they do when the ostracizers are in-group members (Gonsalkorale & Williams, forthcoming).

In another study, participants were led to believe the other players were other students, or were actually computer generated. This, too, mattered little: ostracism by anyone (or any thing) hurt, except that participants were somehow angrier when ostracized by computer players ('People let you down, computers aren't supposed to') (Zadro, Williams, & Richardson, 2004).

We have gone so far as to stack the deck against inclusion, charging participants money for each ball that is thrown to them. They still feel just as badly as when ostracized in a game in which the ball tosses have no monetary value (van Beest & Williams, 2006).

Whether or not the individual is high or low in social anxiety, introversion/extraversion, secure attachment, self-esteem, loneliness, individualism, or agreeableness seem to have negligible, if any, impact on this initial level of pain. Using Cyberball, we have measured these individual differences and so far found no moderation on the reflexive self-reports of distress, negative affect, or need threat.

An functional magnetic resonance imaging study, in which participants played Cyberball while lying down in a magnetic resonance image scanner, was particularly illuminating (Eisenberger, Lieberman, & Williams, 2003). First, we found that the same region that is activated when physical pain is experienced is activated during Cyberball ostracism (the dorsal anterior cingulate cortex). Second, the level of activation was highly correlated with retrospective self-reports of distress. Third, activation occurred even at the beginning of the experiment, when they were not expecting inclusion: participants were told that their computers were not yet hooked up to the computers of the other two players.

These studies, and more under way, are providing evidence for two important conclusions: (i) the social pain of ostracism is linked closely to physical pain (see Eisenberger & Lieberman, 2004; MacDonald & Leary, 2005; Panksepp, 2003) and (ii) the initial painful response to ostracism is crude and illogical. It simply says, 'Ouch, I better stop what I am doing and pay attention to this, because it could be important.' Making an error such that ostracism is detected but is not really happening is not very costly, but making an error by not detecting ostracism when it is happening, could be very damaging. In most social animals, ostracism means death (Gruter & Masters, 1986). Early detection directs the individual to attend to the situation and to assess its meaning and significance. This, then, allows the individual ample time to fortify threatened needs, either by attempting to engage in actions that will improve the individual's inclusionary status, or by provoking attention, regaining control, and lashing out.

# The Reflective Stage: Paths to Recovery of Thwarted Needs

With time to reflect and assess the ostracism episode, the traits and predispositions of the ostracized individual, and the subsequent attributions, and appraisals ought to make a difference with respect to how long the episode remains distressing, and what type of thoughts or actions might effectively fortify the thwarted needs. It is here that logic, or at least psychologic, begins to direct the individual's response.

In one study, participants were chosen who were either high or normal in social anxiety. Immediately after playing Cyberball, the researchers assessed the participants' levels of negative affect and need satisfaction. Ostracism resulted in higher sadness and anger, and lower need satisfaction. No differences emerged as a result of social anxiety. After 45 minutes of engaging in a number of filler tasks, participants' affect and need satisfaction were again assessed. This time, social anxiety played a prominent role: those with normal levels had returned to high need satisfaction levels, as high as those who had been included, and positive affect. Those who were highly social anxious, however, were only halfway toward the road to recovery (Zadro, Boland, & Richardson, 2006). Similar results were found when examining participants' ability to self-regulate. Both normal and highly socially anxious individuals ate more junk food (Study 1) and drank less unappealing but healthy liquid (Study 2) immediately following ostracism. After 45 minutes, those with normal levels of social anxiety were able to self-regulate, but highly socially anxious participants continued to show impairment of self-regulation (Oaten, Williams, Jones, & Zadro, forthcoming).

Likewise, situational factors appear to play an important role once some cognitive deliberation has taken place. A large number of studies now show at least two divergent response paths following ostracism (or rejection or social exclusion, terms that I am treating interchangeably): actions that appear to be aimed at recovering thwarted needs of belonging and self-esteem, and actions that appear to recover thwarted needs of belonging and meaningful existence (including recognition by others).

### The Path Toward Increasing Social Inclusion

Belonging and self-esteem, at least the type of self-esteem that is bolstered by social acceptance, are probably best fortified by directing the individual's attention more toward social information, and toward behaviors that impel others to respond favorably. Many studies demonstrate this pattern of results.

Ostracized individuals have been shown to attend to and remember social information more than included individuals (Gardner, Pickett, & Brewer, 2000). They are also more tuned into social/emotional inconsistencies (Pickett, Gardner, & Knowles, 2004). Ostracized individuals are more likely to nonconsciously mimic a new person in a subsequent encounter, especially if that new person is an in-group member (Lakin & Chartrand, 2005). Patterns of social susceptibility are also evident: ostracized individuals are also more likely to conform (Williams et al., 2000), comply

(Carter & Williams, 2005), work harder for the group (women only, Williams & Sommer, 1997), cooperate (Ouwerkerk, Kerr, Galucci, & van Lange, 2005), attempt interpersonal reconnections (Maner, DeWall, & Baumeister, 2007), and express liking for new, even unusual groups (Wheaton, 2001).

Taken as a whole, there is substantial evidence that after being ostracized individuals will attempt to pay more attention to others, and to ingratiate themselves into others' favor. These behaviors would serve to improve one's level of belonging and self-esteem.

### The Path Toward Reclaiming Control and Recognition

A substantial number of studies, however, have demonstrated behavioral reactions to ostracism that appear to be aimed at anything but improving social inclusion. Instead, they find that ostracized individuals are less helpful (Twenge et al., 2007), and more aggressive toward those who ostracized, similar others, or even naïve others (Gaertner & Iuzzini, 2005; Twenge, Baumeister, Tice, & Stucke, 2001; Warburton, Williams, & Cairns, 2006). An analysis of news reports of US school shooters also found a prominent theme that the shooters had been ostracized and rejected in 13 of the 15 instances (Leary, Kowalski, & Smith, 2003). The recent Virginia Tech shootings also see themes of ostracism, although much of it apparently self-imposed. The results of these studies notwithstanding, we should remind ourselves that most people are ostracized daily without aggression, the disciplinary action of time-out – a temporary imposition of ostracism – is used widely to correct disruptive behaviors, and ostracism's widespread use in general, speak to its general corrective consequences.

Nevertheless, what function is served by such antisocial behaviors? At the macro level, perhaps this infrequent but noticeable response provides a necessary balance so that ostracism is not overused, or practiced indiscriminately. But what does the individual accrue from lashing out after being ostracized? Our work suggests that antisocial actions serve two functions.

First, aggression is a form of reclaiming control over one's (social) environment (Tedeschi, 2001). Thus, if ostracism thwarts control, then aggressive responding is one way to restore or fortify the sense of control. In one study, after being ostracized or included in a face-to-face balltossing game, participants then had to listen to 10 blasts of aversive noise. Half the participants were allowed to control the onset of aversive noise whereas the other half had no control over their onset. Using the delivery of hot sauce to a naïve participant who was known not to like hot sauce (and who had to eat the entire amount allocated) as the measure of aggression, we found that only those participants who were ostracized and who were deprived control over the onset of noise blasts showed significant

(five times as much) aggression. Those who were ostracized but were able to regain control (albeit no social control over noise) were no more aggressive than participants who had been included.

But what of the other studies that simply showed a direct ostracismaggression effect? Here, it is necessary to examine the methods used to manipulate ostracism (or social exclusion and rejection) in these studies. Two paradigms have been used to demonstrate the direct link. One is the life alone paradigm, in which participants are given a prognosis by a psychologist that they will live a life alone, without friends or meaningful relationships. In this case, it is not difficult to understand that this type of social exclusion is very different from the short-term form of ostracism studied in Cyberball or ball tossing. Assuming participants believe the feedback, they are left with the conclusion that their fate is inevitable and unavoidable. Control over changing their prognosis has been stripped away. Thus, it is not surprising that individuals who are led to expect a life alone might react with aggression as a means to reclaim the control that has just been thwarted.

The other paradigm used in this research invites a group of actual participants to engage in a 15-minute get-acquainted conversation, where they talk about their favorite movies, food, and hobbies. After the discussion participants are separated and asked to indicate who from the group they would like to work with on a subsequent task. False feedback is then given to participants such that they are told that everyone or no one wanted to work with them (either way, they must do the subsequent task alone). Why would this procedure be such a threat to control? We believe that a different type of control is being thwarted: the ability to feel control over predicting other peoples' reactions. Assuming that the conversations are pleasant enough (and why wouldn't they be?), then most participants should be expecting that they are making favorable impressions. Leary et al. (1995) uses the term 'sociometer' to refer to our mental gauge as to how we are coming across to others; it is a measure of our inclusionary status. Thus, in the rejection condition, participants' sociometers – their ability to predict how others judge them – are broken. They have no predictive control. In a study just completed, we have preliminary evidence that if participants expect rejection (because the others are signaling displeasure and indifference) and then are rejected, aggression is greatly reduced (Wesselmann, Williams, & Pickett, 2007).

Another reason that ostracism may lead to aggression is because ostracized individuals feel invisible, unable to provoke a response in others, be it favorable or unfavorable. Perhaps when this feeling is particularly salient, individuals will be less concerned with being liked, and more concerned with being noticed. As the BTK (bind, torture, and kill) killer in Oklahoma wrote, 'how many people do I have to kill before someone notices me?' More research is needed to determine whether this explanation can be supported.

### Summary of Reflective Reactions

Both patterns of reactions can be understood as attempts to fortify thwarted needs. In general, it would appear that the dominant tendency would be to correct behaviors so as to be re-included by the ostracizing group or a new group (see Baumeister & Leary, 1995 for a cogent argument for this process). But, when control has been stripped away, or when individuals feel they have no voice and attract no attention, they may resort to aggression as a means to fortify control and recognition, without concern for future consequences.

One unexplored consequence combines an insidious combination of these two paths. First, ostracized individuals may be especially susceptible to favorable interest and treatment by groups who prey on such individuals, such as cults or extremist groups. These groups also offer a strong sense of belonging, purpose, and social identity. Then, as a consequence of being a member of a marginalized group, they may try to provoke attention and respect through violence. Such speculation requires further research: research into ostracism induced gullibility, attraction to extreme groups, and the effects of groups ostracizing groups. We are currently examining some of these issues, finding evidence that, following Cyberball, groups are more aggressive to other groups than individuals are to individuals (Carter-Sowell, Williams, van Beest, & van Dyjk, 2007).

## Depletion and Acceptance: The Consequences of Long-Term Ostracism

So far, we have examined the consequences of short-term ostracism, often involving episodes of less than 5 minutes. In these circumstances, individuals are likely to have the cognitive and emotional resources to cope with the ostracism by attempting to fortify threatened needs. But what of Jennifer and others like her who must endure months and years of ostracism? What then?

Here, we must rely on anecdotes, letters, and interviews with individuals have suffered long-term ostracism. Over the years we have received hundreds of letters and have conducted and analyzed over 50 in-depth interviews with individuals who have been ostracized or received the silent treatment (a dyadic form of ostracism) from peers, work mates, congregations, relationship partners, and family members for up to 40 years (Williams & Zadro, 2005; Zadro, 2004).

My model of ostracism (Williams, 1997, 2001, 2007) characterizes this third stage as one of depleted coping resources resulting in acceptance of ostracism's message: alienation, depression, helplessness, and worthlessness.

Our interviews suggest that these individuals no longer seek others for support or companionship; they are no longer socially compliant or aggressive. Instead, they self-ostracize, perhaps avoiding further rejection by preempting the possibility of acceptance. Furthermore, they report a substantial rate of depression, suicidal ideation, suicide attempts, eating disorders, and short-term promiscuity. They feel little ability to change their situation, and have resigned themselves to feeling unworthy of attention at all. Clearly, the repeated themes emerging from these letters and interviews must be treated with caution: there is no way to determine cause and effect. It is just as plausible that ostracism leads to depression as depression leads to ostracism. It is likely that both co-occur, resulting in a vicious cycle.

### Summary

Almost two decades of empirical social psychological research on ostracism, exclusion, and rejection have been very fruitful and enlightening. Beyond the obvious point that these are aversive interpersonal behaviors that cause distress, we now know that (i) individuals appear to have a knee-jerk reflexive reaction to being excluded and ignored that seems to bypass information that should logically diminish its importance or relevance, (ii) there is a close link between physical pain and social pain, and (iii) subsequent responses to ostracism may vary depending on which need or needs the individual is trying to fortify. Thus, some ostracized individuals seek approval whereas others seek revenge.

I began this article with an anecdote about Jennifer, who was ostracized by her classmates from the age of 5 until she moved away when she was 11. Her innocent kiss turned out to be a kiss of (social) death. I am told that she became reclusive and sullen. It is no wonder. Given the research that we have accumulated so far, it is amazing that she was able to garner to the strength and will to attend school for those five long years. In fact, a few studies suggest that ostracized individuals report more intense threats to all four needs than individuals who are verbally bullied (see Zadro, Williams, & Richardson, 2005) or who are on the receiving end of punitive inclusion (Van Beest & Williams, 2006). We often say to our children, 'If you can't say something nice, don't say anything at all.' I would imagine, however, that Jennifer would have welcomed any words at all over being a nonexistent entity for so much of her youth.

# **Short Biography**

Kipling Williams is Professor of Psychological Sciences at Purdue University. He earned his B.S. at the University of Washington (1975), and his Ph.D. at The Ohio State University (1981). He has authored or edited eight books and has published over eighty articles and chapters on topics in group performance, social influence, psychology and law, aggression, and Internet research. His current research interest is on ostracism—being

ignored and excluded. He is past-president of the Society for Australasian Social Psychologists and the Midwestern Psychological Association. He is or has served as an associate editor for Personality and Social Psychology Bulletin, Group Dynamics: Theory, Research, and Practice, and Journal of Experimental Social Psychology. For six years, he co-convened the Sydney Symposium on Social Psychology. Both the Australian Research Council and the National Science Foundation have funded his research. His books include The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying (2005), Ostracism: The Power of Silence (2001), Psychology & Law: An Empirical Perspective (2005), Social Motivation: Conscious and Unconscious Processes (2004), Social Judgments: Implicit and Explicit Processes (2003), The Social Self: Cognitive, Interpersonal and Intergroup Perspectives (2002), Social Influence: Direct and Indirect Processes (2001), and The Social Mind: Cognitive and Motivational Aspects of Interpersonal Behavior (2001).

#### **Endnotes**

- <sup>1</sup> This material is based on work supported by the National Science Foundation under Grant No. 0519209, and by an Australian Research Council Discovery Grant.
- \* Correspondence address: Department of Psychological Sciences, Purdue University, 703 Third Street, West Lafayette, IN 47907, USA. Email: kip@psych.purdue.edu.

#### References

Bandura, A. (1997). Self-efficacy: The Exercise of Control. New York: Freeman.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117, 497-529.

Carter, A. R., & Williams, K. D. (2005, May). Effects of Ostracism on Social Susceptibility. Presented at the annual meeting of the Midwestern Psychological Association. Chicago, IL.

Carter-Sowell, A. R., Williams, K. D., van Beest, I., & van Dijk, E. (2007, May). Groups Ostracizing Groups: The Effects of Having a Co-target. Presented at the annual meeting of the Midwestern Psychological Association. Chicago, IL.

Eisenberger, N. I., & Lieberman, M. D. (2004). Why rejection hurts: A common neural alarm system for physical and social pain. Trends in Cognitive Science, 8, 294-300.

Eisenberger, N. I., Lieberman, M. D., Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. Science, 302, 290-292.

Faulkner, S., Williams, K., Sherman, B., & Williams, E. (1997). The 'Silent Treatment': Its Incidence and Impact. Presented at the 69th Annual Midwestern Psychological Association, Chicago, IL.

Gaertner, L., & Iuzzini, J. (2005). Rejection and entitativity: A synergistic model of mass violence. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying (pp. 307-320). New York: Psychology Press.

Gardner, W., Pickett, C. L., & Brewer, M. B. (2000). Social exclusion and selective memory: How the need to belong influences memory for social events. Personality and Social Psychology Bulletin, 26, 486-496.

Gonsalkorale, K., & Williams, K. D. (forthcoming). The KKK won't let me play: Ostracism even by a despised outgroup hurts. European Journal of Social Psychology.

Gruter, M., & Masters, R. D. (1986). Ostracism as a social and biological phenomenon: An introduction. Ethology and Sociobiology, 7, 149-158.

Lakin, J. L., & Chartrand, T. L. (2005). Exclusion and nonconscious behavioral mimicry. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying (pp. 279-295). New York: Psychology Press.

- Leary, M. R., Kowalski, R. M., & Smith, L. (2003). Case studies of the school shootings. *Aggressive Behavior*, **29**, 202–214.
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, **2**, 518–530.
- MacDonald, G., & Leary, M. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological Bulletin*, **131**, 202–233.
- Maner, J. K., DeWall, C., & Baumeister, R. F. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the 'porcupine problem.' *Journal of Personality and Social Psychology*, **92**, 42–55.
- Oaten, M., Williams, K. D., Jones, A., & Zadro, L. (2007). The Persistence of Regulatory Impairment in Ostracized Social Anxious People. Presented at the Society for Personality and Social Psychology, Memphis, TN.
- Ouwerkerk, J. W., Kerr, N. L., Gallucci, M., van Lange, P. A. M. (2005). Avoiding the social death penalty: Ostracism and cooperation in social dilemmas. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), *The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying* (pp. 321–332). New York: Psychology Press.
- Panksepp, J. (2003). Feeling the pain of social loss. Science, 302, 237-239.
- Pickett, C. L., Gardner, W. L., & Knowles, M. (2004). Getting a cue: The need to belong and enhanced sensitivity to social cues. *Personality and Social Psychology Bulletin*, **30**, 1095–1107.
- Schachter, S. (1951). Deviation, rejection, and communication. *Journal of Abnormal and Social Psychology*, **46**, 190–207.
- Seligman, M. E. P. (1975). Helplessness: On Depression, Development, and Death. San Francisco, CA: Freeman & Co.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of self-esteem and its role in social behavior. In M. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp. 93–159). New York: Academic Press.
- Spoor, J., & Williams, K. D. (2007). The evolution of an ostracism detection system. In J. P. Forgas, M. Haselton, & W. von Hippel (Eds.), The Evolution of the Social Mind: Evolutionary Psychology and Social Cognition. New York: Psychology Press.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology. New York: Academic Press.
- Tedeschi, J. T. (2001). Social power, influence, and aggression. In J. P. Forgas, & K. D. Williams (Eds.), *Social Influence: Direct and Indirect Processes* (pp. 109–128). New York: Psychology Press.
- Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (vol. 21, pp. 181–227). San Diego, CA: Academic Press.
- Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology*, **92**, 56–66.
- Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them, beat them: Effects of social exclusion on aggressive behaviors. *Journal of Personality and Social Psychology*, **81**, 1058–1069.
- Van Beest, I., & Williams, K. D. (2006). When inclusion costs and ostracism pays, ostracism still hurts. *Journal of Personality and Social Psychology*, **91**, 918–928.
- Warburton, W. A., Williams, K. D., & Cairns, D. R. (2006). When ostracism leads to aggression: The moderating effects of control deprivation. *Journal of Experimental Social Psychology*, **42**, 213–220.
- Wesselmann, E., Williams, K. D., & Pickett, C. L. (2007, May). Blindsided by Rejection: Thwarting Predictive Control can Increase Aggression. Presented at the Midwestern Psychological Association, Chicago, IL.
- Wheaton, A. (2001). Ostracism and Susceptibility to the Overtures of Socially Deviant Groups and Individuals. Unpublished honors thesis, Macquarie University, Sydney, NSW.
- Williams, K. D. (1997). Social ostracism. In R. M. Kowalski (Ed.), Aversive Interpersonal Behaviors (pp. 133–170). New York: Plenum.
- Williams, K. D. (2001). Ostracism: The Power of Silence. New York: Guilford Press.
- Williams, K. D. (2007). Ostracism. Annual Review of Psychology, 58, 425-452.
- Williams, K. D., & Jarvis, B. (2006). Cyberball: A program for use in research on ostracism and interpersonal acceptance. Behavior Research Methods, Instruments, and Computers, 38, 174–180.

- Williams, K. D., & Sommer, K. L. (1997). Social ostracism by one's coworkers: Does rejection lead to loafing or compensation? Personality and Social Psychology Bulletin, 23, 693-706.
- Williams, K. D., & Zadro, L. (2001). Ostracism: On being ignored, excluded, and rejected. In M. R. Leary (Ed.), Interpersonal rejection (pp. 21-53). New York: Oxford University Press.
- Williams, K. D., & Zadro, L. (2005). Ostracism: The indiscriminate early detection system. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying (pp. 19-34). New York: Psychology Press.
- Williams, K. D., Cheung, C., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. Journal of Personality and Social Psychology, 79, 748-762.
- Williams, K. D., Govan, C. L., Croker, V., Tynan, D., Cruickshank, M., Lam, A. (2002). Investigations into differences between social and cyberostracism. Group Dynamics: Theory, Research, and Practice, 6, 65-77.
- Williams, K. D., Wheeler, L., & Harvey, J. (2001). Inside the social mind of the ostracizer. In J. Forgas, K. Williams, & L. Wheeler (Eds.), The Social Mind: Cognitive and Motivational Aspects of Interpersonal Behavior (pp. 294-320). New York: Cambridge University Press.
- Wortman, C. B., & Brehm, J. W. (1975). Responses to uncontrollable outcomes: An integration of reactance theory and the learned helplessness model. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology (Vol. 8, pp. 277-336). San Diego, CA: Academic Press.
- Zadro, L. (2004). Ostracism: Empirical Studies Inspired by Real-World Experiences of Silence and Exclusion. Unpublished doctoral dissertation. University of New South Wales, Sydney, NSW.
- Zadro, L., Boland, C., & Richardson, R. (2006). How long does it last? The persistence of the effects of ostracism in the socially anxious. Journal of Experimental Social Psychology, 42, 692-697.
- Zadro, L., Williams, K. D., & Richardson, R. (2004). How low can you go? Ostracism by a computer lowers belonging, control, self-esteem, and meaningful existence. Journal of Experimental Social Psychology, 40, 560-567.
- Zadro, L., Williams, K. D., & Richardson, R. (2005). Riding the 'O' train: Comparing the effects of ostracism and verbal dispute on targets and sources. Group Processes and Interpersonal Relations, 8, 125-143.