AMERICAN PSYCHOLOGICAL ASSOCIATION

SCIENCE WATCH

Singled out

Social rejection and ostracism are emerging as powerful psychological forces that shape human behavior in positive and negative ways.

By Beth Azar

April 2009, Vol 40, No. 4
Print version: page 36
8 min read

Twelve years ago, Kip Williams, PhD, and his University of Toledo colleagues engaged in an experiment. Each day, for five days, Williams randomly hung a scarlet "O" over someone's office door, indicating that the others in the group would ignore the branded colleague for the day—no talking, no eye contact, no recognition.

They wanted to see if they might learn something about ostracism that they could later test in the lab.

They did. The experiment made them all miserable, including those doing the ostracizing.

"It was a phenomenon I'd studied and described at length," recalls Williams, "and yet I felt amazingly terrible for the whole day."

The experiment drove home for Williams how sensitive people are to being socially rejected. From an evolutionary perspective, it makes sense, says Williams, now at Purdue University and a noted ostracism expert. We evolved in social groups. And, like other social animals, from apes to bees, our survival depends upon being included and

accepted. Groups use ostracism to weed out unproductive or disruptive members so members are acutely sensitive to detecting ostracism so they can salvage their social standing if they need to.

But how we react to ostracism and social rejection varies. We might become servile and try to mend the rift. We might withdraw. Or we might become angry and aggressive, as is the case of students who felt rejected by their peers and became involved in school shootings.

Using techniques including qualitative interviews, laboratory behavioral experiments and brain imaging, Kipling and others are piecing together how the system for responding to rejection works and, perhaps, how people can cope with social exclusion.

The need to belong

Although Williams's work specifically examines ostracism—an extreme form of social rejection—other researchers take a broader view, examining all kinds of negative social interactions, including breakups, bullying and being the last one picked for the team. In a seminal 1995 article published in *Psychological Bulletin*, social psychologists Roy Baumeister, PhD, and Mark Leary, PhD, made the case that humans are motivated by a basic need to belong. When this need is thwarted, people pay a psychological price.

"Rejection blocks the need to belong, which I would argue is the most powerful motivation there is," says Baumeister, a Florida State University psychology professor. "And when rejection blocks it, it seems to throw a lot off. All the inner machinery loses its focus and purpose."

By "inner machinery" Baumeister means everything from empathy to intelligent thought. Indeed, the research on social rejection finds that people are thrown off balance after they've been left out.

It doesn't take much for us to feel that way. Humans are incredibly sensitive to rejection, quickly sensing even subtle or ambiguous rebuffs, finds Williams, who uses a simple ball toss paradigm to test people's acumen at detecting ostracism. In some studies, people toss a ball around and an unsuspecting participant is abruptly left out of the game. In

other studies, Williams uses a virtual ball-toss program called "Cyberball" in which participants see the ball being tossed and are either included or excluded. Within 20 seconds of not getting the ball, people invariably feel left out, feel bad and feel as if satisfaction of their psychological needs is being threatened.

Numb to the pain

It turns out that "hurt feelings" may be a more valid term than most of us think. Research by Williams suggests that ostracism triggers the same area of the brain that's active when we feel physical pain. He and his colleagues used FMRI to examine what happened in the brain when people played several versions of "Cyberball": Participants were either included in the game, excluded having been told their computer wasn't hooked into the network, or intentionally excluded.

Each time participants felt excluded—even when it was unintentional—the brain's dorsal anterior cingulate cortex lit up, according to findings published in Science (Vol. 302, No. 5643). This area is well-known for being part of the brain's pain detection system, says Williams. Participants also reported feeling emotional pain.

Williams's findings make sense from an evolutionary perspective, argue Leary and Geoff MacDonald, PhD, in a 2005 *Psychological Bulletin* (Vol. 131, No. 2) article. They propose that social pain piggybacks on nerve pathways in the brain originally laid out for physical pain. The two now share many of the same pathways, resulting in similar responses to the two seemingly disparate phenomena, they say. It makes sense, says Leary, a Duke University professor of psychology, because social rejection and pain serve the same purpose—alerting an organism to a potentially life-threatening risk.

It may also support a counterintuitive theory proposed by Baumeister and his colleagues: that social rejection leads initially to emotional numbness. They have conducted studies in which they tell participants that based on a psychological evaluation they will end up alone later in life. They've found that the participants' behaviors are affected by the news, but their moods aren't. Baumeister compares this emotional numbing with the analgesic effect that can happen after an injury. We don't feel pain until we've gotten to safety. This same pathway, he argues, may cause emotional numbness after rejection to allow the brain to begin to cope with the pain

before it sets in. In fact, in a series of studies, Baumeister and colleagues find that after rejection, not only are people emotionally numb, but their threshold for physical pain increases.

Williams agrees that emotional numbness can happen. In qualitative interviews he conducted with victims of long-term ostracism, many people described their trouble engaging emotionally. However, he says, it's not clear yet when or under what conditions people feel numbness versus pain.

Rejection's link to aggression

Regardless, it's clear from the research that ostracism and rejection have very real consequences. Williams's student Lisa Zadro, PhD, now at the University of Sydney in Australia, interviewed 50 people who were either ostracized or perpetrators of ostracism. Those who'd been ostracized reported depression, eating disorders, promiscuity disorders and even attempted suicide. Almost all said that they would have preferred physical abuse to ostracism.

"The interviews were heartbreaking," says Williams. "One woman, whose husband both physically abused her and ostracized her, said that the bruises would heal quickly, but the silent treatment was more damaging."

In fact, long-term rejection can have disastrous consequences in the form of anger and aggression. Leary examined cases of school shootings and found that as many as 80 percent of shooters suffered from prolonged peer rejection. These are, of course, only correlations, but many lab studies support the idea that rejection can lead to aggression.

For example, research by Baumeister and his colleagues published in the January *Journal of Personality and Social Psychology* (Vol. 96, No. 1) found that college students were more likely to be aggressive after they were told that a personality test indicated they'd eventually spend their lives alone. In one study, after receiving the bogus information about their future, students played a computerized game against an unseen opponent. As a penalty for losing a round of the game, the winner blasted the loser with white noise. Students who were told they'd live lonely lives blasted their opponents

longer and with more intensity than students who got positive or neutral feedback about their futures.

"There seems to be a failure of self-regulation in people who feel rejected," says Baumeister. "And this allows a shift toward anti-social and aggressive behavior."

But aggression is only one reaction people can have, says Williams. He and others find that people may also become more socially attentive in an attempt to win approval. Aggression, he argues, is more likely to occur when people have lost a sense of control. They use aggression to reassert themselves—a motivation that becomes more salient than any desire to be liked.

While the evidence that ostracism has negative real-life consequences is strong, it's still an accepted form of punishment in human society, says Williams. The problem is once it begins, ostracism can be difficult to stop. In her interviews, Zadro heard many ostracizers say that once they started ignoring someone, they had trouble re-engaging with them.

Even when there's a time-limit on the rejection—as with "time-outs" for child discipline—there may be unintended consequences, says Williams. He's not condemning it yet, but he'd like to conduct research to see if there are better ways to use such discipline. For example, if caregivers give children some sense of control over the punishment—by letting them end their seclusion on their own—it might encourage more pro-social behavior and less aggression.

In the end, it may be that personality differences play a role in how people react to rejection. Williams even found differences in his simple "Scarlet O" study. One ostracized participant wrote, "I don't care if I anger them, I just want someone to notice me." Others, in contrast, became servile, trying to ingratiate themselves.

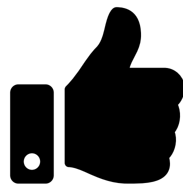
"These varying responses may be because of individual differences," says Williams. "Some people may have a high need for control, others a high need to belong."

So far, the researchers can't predict who will respond to ostracism with anger or even violence. But it does support the idea that ostracism is a powerful social tool that we use

much in the same way our distant ancestors did: to cull out those perceived to be misfits and shape others' behavior to suit society's needs.

Beth Azar is a writer in Portland, Ore.

The content I just read:



IS RELEVANT

MAY NEED AN UPDATE

Find this article at:
https://www.apa.org/monitor/2009/04/social