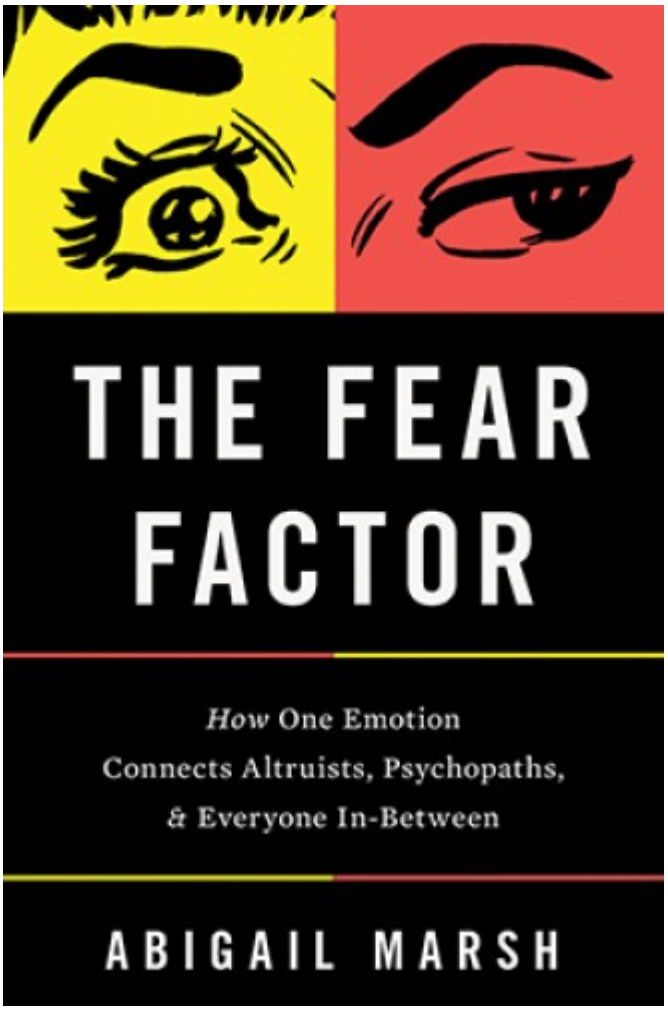
An altruist and a psychopath walk into a research study

Neuroscientist Abigail Marsh documents fascinating discoveries about how our brains process fear.

by LaVonne Neff in the March 28, 2018 issue

In Review



The Fear Factor

How One Emotion Connects Altruists, Psychopaths, and Everyone In-Between

By Abigail Marsh
Basic Books

Abigail Marsh is haunted by a story she once heard at a conference. A researcher had showed a prisoner a series of pictures, asking him to identify the emotion each face depicted. Whenever the prisoner looked at a frightened face, he was uncertain. Finally, he mused, “I don’t know what that expression is called. But I know that’s what people look like right before I stab them.”

The researcher, Essi Viding of University College London, studies psychopaths—callous, manipulative, and often violent people with no capacity for compassion. Marsh, who directs the Laboratory on Social and Affective Neuroscience at Georgetown University, studies both psychopaths and their exact opposites: extraordinary altruists who voluntarily help strangers even at the risk of their own health, wealth, or life. Oddly, Marsh finds much of the research on psychopaths “downright uplifting.”

Marsh, who is not only an award-winning academic but also a skilled storyteller, got interested in altruists when she was a college sophomore. Driving home one night, she braked and swerved in an attempt to miss a dog running across an eight-lane freeway. She hit the dog, her car spun into the fast lane of oncoming traffic, and the car’s engine died. As she weighed her options and prepared to die, a stranger tapped on her window. Risking his own life, he got her car started and moved it across the freeway to an off-ramp. Marsh wanted to know why.

A few years later, while she was in graduate school, Marsh experienced a different side of human nature. At a Las Vegas New Year’s Eve celebration with a group of her childhood friends, a drunk stranger pinched her bottom, punched her in the face, and broke her nose. Other drunk strangers captured him and beat him up. Marsh began to wonder: Are heroes like her freeway rescuer the exception? Do all humans have a cruel streak? A postdoctoral fellowship at the National Institutes of Health provided her with resources to investigate.

Marsh rounded up a dozen young adolescents at risk of becoming psychopaths. These were exceptionally troubled children. They were violent (sometimes armed), angry, and destructive. They stole, lied, and committed sexual offenses. Though

superficially agreeable, they showed a complete lack of remorse. Understandably, their parents were at their wits' end, especially since they were usually blamed for their child's antisocial behavior. And yet, Marsh writes, these were "caring parents with resources who really were trying, but none of it helped."

Using functional magnetic resonance imaging, Marsh found that these children's brains differed from the brains of normal children in one significant area. When the at-risk children looked at pictures of terrified people, their right amygdalae—small regions of the brain responsible for emotional functions—showed no activity. Like the psychopathic stabber, they did not recognize fear in others, nor did they feel fear themselves. They lacked the normal internal controls that might have inhibited their bullying.

This seemed to put them at the other end of the bell curve from the altruists Marsh had previously studied—people who easily recognized others' fear. In 2010, Marsh got a grant that allowed her to dig deeper into altruism. She wanted to study not kindly people who write yearly checks to NPR but extreme altruists—anonymous kidney donors, for example, who willingly endure surgery in order to give an organ to someone they don't even know.

As it turned out, kidney donors were eager to participate: after all, they enjoyed helping people. Brain scans confirmed their exceptional ability to recognize fear in others. The scans also showed that the kidney donors' right amygdalae were 8 percent larger than average. It is likely, Marsh suggests, that altruists feel even more fear than most people. "Their bravery lies in their ability to recognize and empathize with acute distress," she writes, "while simultaneously overcoming or overriding their own fear in the face of danger."

Marsh's research confirmed and extended what neuroscientists know about altruists, which is why she received the 2017 Sachiko Kuno Award for Applied Science. It also confirmed and extended her optimism about human nature.

The good news about psychopaths, she writes, is that "they are *different from other people*" (italics hers). Though some people are indeed fundamentally selfish, at least 70 percent of us are not. Most of us "seem to be genuinely capable of caring about the needs of [others]," and some of us—the extraordinary altruists—even put others' needs ahead of our own. The World Giving Index, she notes, has ranked the United States as the second-most generous country in the world over the last five years.

(Take that statistic with a grain of salt, however: genocidal Myanmar is number one, and in 2017, America's rank dropped to fifth place.)

For all her interest in human nature, Marsh mentions religion only rarely. She attributes Myanmar's generosity to the widespread adherence to Theravada Buddhist teachings as well as a high literacy rate. She notes that the first non-directed kidney donation was made by a Zen Buddhist, and she recommends the Buddhist practices of compassion and loving-kindness meditation as ways to enhance altruism.

Possible connections between her work and Christian belief and practice, however, are many. Are humans basically good, or does original sin touch all of us? Should people be blamed—or praised—for behavior that is largely related to physiological differences? Is conversion even possible? How far beyond our intimate circles should our love extend? Does perfect love really cast out fear? *The Fear Factor* could keep a church book group arguing for hours.

A version of this article appears in the print edition under the title "The altruist and the psychopath"