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Your Brain is Wired to be Social

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Illustration by: Josh Cochran

Is "heartbreak" more than just a metaphor? Absolutely, says UCLA Professor of Psychology Matthew Lieberman, whose research shows that as far as our brains are concerned, social rejection is just like physical pain. In his new book, *Social: Why Our Brains Are Wired to Connect*, Lieberman explains that the human brain is hardwired to seek interaction with other people, and that those connections are at least as important to human survival as food, water and shelter.

Lieberman uses functional magnetic resonance imaging (fMRI) to analyze people's brain activity as they react to social scenarios. In one experiment, subjects lay down inside an fMRI machine while wearing electronic goggles that enabled them to play a virtual game of catch with two other people (actually just avatars programmed into the game). At first, the players shared the ball equally, but after a few minutes, the virtual players tossed the ball only between themselves, excluding the real person. Research subjects felt slighted, but their brain scans revealed something else.

"When you're rejected, the parts of the brain that register physical pain are more active than when you're being included," Lieberman explains. "So 'hurt feelings' or 'heartbreak' aren't really metaphors."

Lieberman's research also reveals that the human brain has an innate ability to consider what's important to other people — a system called mentalizing. "That system is almost completely distinct from our system of thinking and reasoning about everything else in the world," he says. The mentalizing system tends to activate almost immediately when the analytical system idles.

This insight could improve how we learn, Lieberman says. Most teaching is aimed at the analytical system, but studies now suggest that the brain's social system can be highly effective for learning.

"Math and science aren't intrinsically social, but we could turn teaching them into a social process, with 10th-graders teaching eighth-graders and eighth-graders teaching sixth-graders," Lieberman says. "The students who would improve most are the people doing the teaching."