

# Are Humans Hardwired for Fairness?

April 15, 2008

Is fairness simply a ruse, something we adopt only when we secretly see an advantage in it for ourselves? Many psychologists have in recent years moved away from this purely utilitarian view, dismissing it as too simplistic. Recent advances in both cognitive science and neuroscience now allow psychologists to approach this question in some different ways, and they are getting some intriguing results.

UCLA psychologist Golnaz Tabibnia, and colleagues Ajay Satpute and Matthew Lieberman, used a psychological test called the “ultimatum game” to explore fairness and self-interest in the laboratory. In this particular version of the test, Person A has a pot of money, say \$23, which they can divide in any way they want with Person B. All Person B can do is look at the offer and accept or reject it; there is no negotiation. If Person B rejects the offer, neither of them gets any money.

Whatever Person A offers to Person B is an unearned windfall, even if it’s a miserly \$5 out of \$23, so a strict utilitarian would take the money and run. But that’s not exactly what happens in the laboratory. The UCLA scientists ran the experiment so sometimes \$5 was stingy and other times fair, say \$5 out of a total stake of \$10. The idea was to make sure the subjects were responding to the fairness of the offer, not to the amount of the windfall. When they did this, and asked the subjects to rate themselves on scales of happiness and contempt, they had some interesting findings: Even when they stood to gain exactly the same dollar amount of free money, the subjects were much happier with the fair offers and much more disdainful of deals that were lopsided and self-centered.

The psychologists wanted to know if there is something inherently rewarding about being treated decently. So, they scanned several parts of the participants’ brains while they were in the act of weighing both fair and miserly offers. Consistent with previous results, the researchers found that a region previously associated with negative emotions such as moral disgust (the anterior insula) was activated during unfair treatment. However, interestingly, they also found that regions associated with reward (including the ventral striatum) were activated during fair treatment even though there was no additional money to be gained.

As reported in the April issue of the journal *Psychological Science*, a journal of the Association for Psychological Science, the brain finds self-serving behavior emotionally unpleasant, but a different bundle of neurons also finds genuine fairness uplifting. What’s more, these emotional firings occur in brain structures that are fast and automatic, so it appears that the emotional brain is overruling the more deliberate, rational mind. Faced with a conflict, the brain’s default position is to demand a fair deal.

Furthermore, when the scientists scanned the brains of those who were “swallowing their pride” for the sake of cash, the brain showed a distinctive pattern of neuronal activity. It appears that the unconscious mind can temporarily damp down the brain’s contempt response, in effect allowing the rational, utilitarian brain to rule, at least momentarily.