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People Programmed to Sniff Out Cheaters: Study

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By Alison McCook



NEW YORK (Reuters Health) - People appear to have an innate ability to determine when someone is cheating them out of a deal, US researchers suggest.

In one recent report, a group of investigators demonstrate that humans from widely different cultures--US college students and members of an Amazonian society--can identify when someone is renegeing on some type of social agreement, suggesting this ability may be an aspect of being human.

In another related article, the authors report the experience of a man who suffered damage to one portion of the brain in a bicycle accident and lost the ability to detect a cheater. However, he remained able to reason and express emotions, demonstrating that the ability may be linked to a particular region of the brain.

The research centers on the principle of social contracts, in which one person offers to do something for the other, who then offers something in return. The process, known as a social exchange, includes situations such as when people hold potlucks, or when a buyer pays \$5 for a sandwich.

Researchers have spotted this behavior in a variety of species besides humans, ranging from bats to baboons. Although it is often in the interest of animals to help blood relatives without the promise of a return reward, in other cases, indiscriminately performing favors for others can hurt chances of survival, said study author Dr. John Tooby of the University of California, Santa Barbara.

According to Tooby, individuals who enter into social exchanges without determining whether the participant will cheat them out of the return favor will become exploited over time, and are less likely to reproduce and pass on their tendencies.

Consequently, those who try not to let themselves become exploited during social exchanges are more likely to live long enough to reproduce and distribute their genes to the next generation. But in order to do that, "you have to notice when you're being exploited," Tooby said.

In two articles published in the early edition of the Proceedings of the National Academy of Sciences, Tooby and his colleagues offer evidence to support the theory that humans are born with the capacity to identify people who cheat during social exchanges.

In one study, Tooby and his team demonstrate that members of the Shiwiari, who live in a remote region of the Ecuadorian Amazon and do not read or regularly contact outsiders, are just as able to detect when people might cheat in social exchanges as Harvard undergraduates.

In the other article, the investigators describe the experience of a patient dubbed R.M., who suffered damage to a particular area of the brain during a bike accident. Thereafter, the man performed poorly during tests of the nature of social exchanges, but lacked neither emotions nor the ability to complete tests that targeted other types of reasoning.

In an interview with Reuters Health, Tooby explained that, taken together, these results demonstrate that the ability to notice when you are being cheated on social exchanges may be linked to a particular area of the brain, and that people can develop that ability regardless of their own cultural experiences.

"If (detecting cheaters in social exchanges) were all culturally specific, then you should find some cultures where people don't do it. We don't think that's the case," Tooby said.

He cautioned that the results from R.M. do not necessarily indicate that proficiency in assessing social exchanges resides wholly in the patient's damaged brain region. The man had damage to the limbic system, which is associated with emotion.

"But the fact that damage to that area knocks something out indicates that region plays a role," he noted.

SOURCE: Proceedings of the National Academy of Sciences Early Edition 2002;10.1073/pnas.122352699.

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