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Tekst 9

Brain Scans Reveal The Secret of Revenge

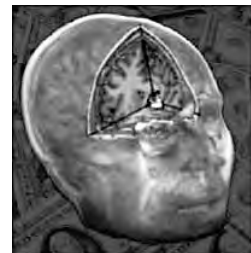
In Dante's *Inferno*, the inner circle of hell was reserved for betrayers like Judas and Brutus. But new research indicates that punishing those who break social norms is not merely the province of poets.

Dominique J.-F. de Quervain of the University of Zurich and his colleagues set up an experiment to study how a group of male participants responded to acts of selfishness. As described in today's edition of *Science*, the researchers devised a game in which one player (A) offered money to an anonymous player (B), knowing that B would actually receive four times the specified amount. Player B then had to choose whether or not to share his windfall equally with player A. If player B was stingy, player A could penalize him.

The scientists tested different scenarios. In some instances A set a fine that B had to pay, but other times A knew his punishment would be merely symbolic and that B would lose no money. While player A was contemplating his revenge, a positron emission tomography (PET) scan determined what parts of his brain were active. The scans showed increased activity in the striatum, a region associated with the processing of rewards, but only when A knew he could hurt B financially. The implication was that real punishment feels good. To explore the significance of this emotion, the researchers sometimes charged A for his revenge. They found that the level of striatum activity positively correlated with how much money a participant was willing to pay for the opportunity to retaliate. The anticipation of pleasure apparently affected a player's eagerness to punish.

This sort of causal relationship may explain why people are willing to discipline a stranger even when there is no immediate gain in it for them. Brian Knutson of Stanford University who penned an accompanying commentary remarks that "passionate" forces may need to be included in economic models because, as this research shows, "people show systematic deviations from rationality." --*Michael Schirber*

Scientific American



Lees bij de volgende opgave eerst de vraag voordat je de bijbehorende tekst raadpleegt.

Tekst 9 Brain scans reveal the secret of revenge

- Brain Scans Reveal The Secret of Revenge (kop tekst 9)
- 1p **42** Citeer de eerste twee woorden van een zin uit de tekst waaruit blijkt wat het "geheim" is dat door hersenscans is onthuld.