



Brain scans may predict return to crime

Researchers say they have found ways to use brain scans to predict which prisoners are at higher risk of returning to crime.

A team of neuroscientists from the nonprofit Mind Research Network and the University of New Mexico asked 96 New Mexico prisoners to perform a task while undergoing an MRI scan. The scans targeted the anterior cingulate cortex, an area of the brain associated with impulse control. The researchers found that inmates with low activity in the anterior cingulate cortex were nearly twice as likely to commit another felony within four years of release as those with higher anterior cingulate activity.

The brain scans were better at predicting recidivism than traditional risk assessment methods, which take into account factors such as the criminal's age of first offense and whether an inmate will have a job or home to return to upon release, according to Kent Kiehl, the study's team leader.

The study was conducted using an MRI scanner in Kiehl's mobile lab that has been used to research the brains of nearly 3,000 criminals in New Mexico and Wisconsin since 2007.

Though Kiehl called the work "a first step," in the future he hopes similar research can be used to develop treatments for prisoners to reduce recidivism. Kiehl believes some of the traits common to high-risk offenders, such as impulsivity and lack of empathy, can be treated.

"It's like an ability," Kiehl said. "The systems of the brain we found are plastic, you can actually alter the way those brain systems function."

Stephen J. Morse, a professor of law and psychiatry at the University of Pennsylvania, said that while the study was well done, it had some flaws. First, it used arrest as a measure of recidivism, which Morse said is "not necessarily the best way to measure actual recidivism." Secondly, it did not compare the scans' ability to predict recidivism to some of the best behavioral measures. If those measures had been used, it's possible the scans would not have been a much better predictor than traditional methods.

"Having said all that, I think it's a good study," Morse said. "It shows that, at least in principal, there's reason to believe that neuromarkers may add to predictive ability."

Magdalene Perez
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