

The brain on trial

December 12 2011

How should insights about the brain affect the course of a criminal trial, from the arguments in a courtroom to the issuing of a sentence?

This was the topic of the Fred Kavli Public Symposium, held recently at the Society for Neuroscience's "Neuroscience 2011." Titled "The Brain on Trial: Neuroscience and the Law," the symposium looked at how advances in neuroscience are both challenging and assisting the judicial system. To explore this further, The Kavli Foundation brought together three experts to discuss the subject. Joining the dialogue:

- Alan Leshner, symposium chair; chief executive officer of the American Association for the Advancement of Science and former head of the National Institute of Drug Abuse;
- Martha Farah, director of the Center for Neuroscience and Society, University of Pennsylvania;
- Jay Giedd, MD, an expert in [adolescent brain](#) development at the National Institute of Mental Health and chief of NIMH's Unit on Brain Imaging in the Child Psychiatry Branch.

Together they examined the role neuroscience should have in determining legal policies and judgments, discussed innovative brain-based treatments for certain pathological behavior, and raised concerns about the use and misuse of scientific evidence. "The mere fact that [brain processes](#) give rise to the behavior isn't enough to excuse it," said Farah. "But the law does recognize some psychological conditions that diminish responsibility, and if [neuroscience](#) knows something about the

[neural processes](#) underlying these conditions, it can aid in their diagnoses."

Among the critical issues: how new insights about brain maturity should be used when assessing teenage crimes. "There currently is debate about whether adolescent brain maturity should be considered in sentencing for a crime or help determine what would be the proper deterrent for future adverse behavior," explained Giedd. "...What's difficult is applying this to individuals, as there are so many exceptions to the rule - there are many mature teens, and likewise immature people in their twenties and thirties. So the real challenge is going from group averages to individual prediction or characterization."

Another issue is how a deeper understanding of addiction should affect sentencing. Said Leshner, "By combining the health approach to the criminal justice approach, I think you have a better chance of having effective and acceptable public policy. If you don't deal with the illness or the [brain](#) part of drug addiction, you have much less chance of actually reducing the behavior you don't like, whether it's drug using or committing crimes."

More information: For the complete discussion with Alan Leshner, Martha Farah and Jay Giedd, visit: [www.kavlifoundation.org/scienc ...oscience-brain-trial](http://www.kavlifoundation.org/science...oscience-brain-trial)

Provided by The Kavli Foundation

Citation: The brain on trial (2011, December 12) retrieved 3 May 2024 from <https://medicalxpress.com/news/2011-12-brain-trial.html>

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