How do courts look at neuroscientific evidence?

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Several years ago, Ars looked at the role of neuroscience in crime. Since then, the scientific community has continued to learn about how brain abnormalities or dysfunctions can affect reasoning and behavioral traits, and certain gene variants like monoamine oxidase have been linked to violent behavior.

But correlation isn't the same as causation, and many of those correlations fall well short of 100 percent linkage. So, while biologically reductionist arguments like "my brain made me do it" can be appealing, scientists know that in the real world things are a lot more complex.

Nevertheless, neuroscience is increasingly being used as evidence in the criminal justice system. Nita Farahany, a professor of law and philosophy at Duke University, has now conducted a systematic study of how neuroscience ends up being used in the courthouse.

Starting with over 10,000 federal and state criminal cases that produced judicial opinions published between 2005 and 2012, she found 1,585 cases where neurobiological evidence was introduced. Her findings show that there is an increasing trend by criminal defendants to use neuroscience or behavioral genetics in their trials—and that those uses are often well outside the accepted academic or scientific implications of that work.

One might expect that neurobiological evidence would mean submitting brain scans to the court. However, it turns out this only happened in about 15 percent of cases. More than 40 percent "have no discussion of neurological testing the opinion, even though the defendant staked their defense in part on a claim that 'his brain made him do it.'"

Read full, original post: My brain made me do it: Neuroscience and behavioral genetics in court