"Then Came the Lawyers, Then Came the Rules": The Need for Improved Understanding and Regulation of Neuroimaging Evidence in the Law

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Abstract:

Emerging technologies often enter the criminal justice system before they can be properly understood and regulated within the trial process by judges who serve as the gatekeepers for novel scientific evidence. This holds particularly true for neuroscience and neuroimaging technology, two areas of fast-growing innovation which promise new insights about the biological bases of behavior – behavior that is often directly at issue in a criminal trial. This paper examines some of the ethical and social issues raised by the use of brain imaging as evidence in criminal trials, including the availability of neuroimaging for all defendants based on cost and competence of counsel. Additionally, this paper will discuss the need for improved governance and regulation of neuroimaging in the law, and the need for education of judges, of defense lawyers, and of prosecutors about various neuroimaging technologies sought to be introduced as evidence in criminal trials.

If used properly, this evidence may help to provide an objective set of factors that can explain an individual's particular offending patterns, assess his current mental state, or mitigate the punishment he would have received based on his actions. However, it can become problematic if the law relies too heavily on untested theories, "junk" science and unregulated imaging methods and technologies. Scientific discovery moves faster than the law, making it especially critical to avoid the risk of allowing unregulated, untested technology to influence how a defendant is treated.

In my paper, I first examine criminal sentencing procedures, and discuss how the use of emerging neuroimaging technology can work to mitigate (or aggravate) harsh sentences,

including death penalty cases. I also discuss the ethical issues of access to technology, and how the legal system can ensure that defendants have an equal chance to present a mitigation case with neuroimaging, notwithstanding its high cost. Then, I review recent work on neuroimaging technology and its ability to identify the biological basis of a defendant's criminal behavior, as well as the policy implications that arise from the ongoing search to locate a biological explanation for crime. Finally, I discuss the ways in which this technology must be regulated by the legal system. In particular, I look at the need for better education of judges and of attorneys who seek to use neuroimaging technology as evidence in court, and I provide recommendations for ensuring that emerging neuroscience is introduced and used appropriately throughout the legal system.

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