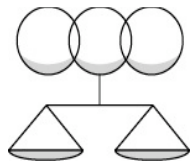


GRUTER INSTITUTE FOR  
LAW AND BEHAVIORAL RESEARCH  
&  
THE FEDERAL JUDICIAL CENTER



**Seminar on  
Neuroscience & Criminal Behavior**

**Philadelphia, Pennsylvania**

**July 12-13, 2010**

**Funding for this program provided by**

**MACARTHUR**  
The John D. and Catherine T. MacArthur Foundation  
**Law and Neuroscience Project**

## Faculty and Organizers

**Geoffrey Karl Aguirre, M.D. Ph.D.** - Assistant Professor of Neurology, Hospital of the University of Pennsylvania

**Rita Z. Goldstein, Ph.D.**- Scientist, Brookhaven National Laboratory Medical Research Department & Affiliate, Depts. of Psychology and Biomedical Engineering, SUNY at Stony Brook

**Oliver R. Goodenough, J.D.** - Professor of Law, Vermont Law School; Faculty Fellow, Berkman Center for Internet & Society, Harvard Law School

**Chris Hansen, Ed.D.** – Chief U.S. Probation Officer, District of Nevada

**Kent Kiehl, Ph.D.** –Associate Professor, Department of Psychology, University of New Mexico; The Mind Research Network

**J. Steven Lamberti, M.D.** – Professor of Psychiatry, University of Rochester School of Medicine

**Stephen J. Morse, J.D., Ph.D.** - Ferdinand Wakeman Hubbell Professor of Law, University of Pennsylvania Law School; Professor of Psychology and Law in Psychiatry, University of Pennsylvania School of Medicine

**Adina Roskies, Ph.D.** – Associate Professor of Philosophy, Dartmouth College

**Elaine Terenzi, M.S., M.B.A.** – Chief U.S. Probation Officer, Middle District of Florida

**Monika Gruter Cheney, J.D.** - Executive Director, Gruter Institute for Law & Behavioral Research

**Susie Merchant, M.A.** – Education Specialist, Federal Judicial Center

**Mark A. Sherman, J.D., LL.M.** - Senior Education Attorney, Federal Judicial Center

**Neuroscience & Criminal Behavior  
for  
Chief U.S. Probation and Pretrial Services Officers  
and Substance Abuse/Mental Health Specialists**

**Monday, July 12, 2010**

**1:00-1:15pm**      **Welcome & Introductory Remarks**

Mark Sherman  
Senior Education Attorney  
Federal Judicial Center

Monika Gruter Cheney  
Executive Director  
Gruter Institute for Law and Behavioral Research

**1:15-1:35pm**      **Overview: Neuroscience & Criminal Behavior: What We Know and Don't Know**

Stephen Morse  
Ferdinand Wakeman Hubbell Professor of Law  
Professor of Psychology and Law in Psychiatry  
University of Pennsylvania Law School

Topics: The importance of focusing on the practical relevance of neuroscience information; Understanding how to assess the confidence that one may place in neuroscience research; How much genuine causal information we have at present; The problem of brain overclaim and the "No Lie MRI" problem; the cases of Phineas Gage, "John Doe," and "William Baday"; Questions to consider over the course of the seminar: Can neuroscience help identify likely candidates for substance abuse and mental health treatment, etc.? Does it say anything about the use of sanctions and rewards in the criminal justice context generally? How can neuroscience help in investigation and supervision of defendants and offenders?

**1:35-2:35**      **Introduction to the Neuroanatomy of the Brain and Its Relationship to Behavior**

Topics: Neuroanatomy, brain chemistry, plasticity, and development; reward centers; techniques of brain measurement; overview of impact of

addiction, trauma, and underdevelopment on brain function; challenges presented by Phineas Gage, “John Doe,” and “William Baday”

Presenters:

Adina Roskies  
Associate Professor of Philosophy  
Dartmouth College

Oliver Goodenough  
Professor of Law  
Vermont Law School

Facilitator:

Chris Hansen  
Chief U.S. Probation Officer  
District of Nevada

**2:35 – 3:30pm**

**Pluses and Minuses of Brain Scanning and What is Good Science versus Bad?**

Neuroimaging has revolutionized the field of cognitive neuroscience over the last 20 years. More recently, it has been applied outside of the basic science laboratory to questions in business, politics, and law. In this session we will explore the basis of neuroimaging and the limits of the technology to explain or predict behavior. In many cases the claims made on behalf of the method have exceeded what it can reasonably deliver. By the end of the session you will have the intellectual tools needed to critically evaluate neuroimaging claims on your own.

Presenters:

Geoffrey Aguirre  
Assistant Professor of Neurology  
Hospital of the University of Pennsylvania

Stephen Morse

Facilitator:

Chris Hansen

**3:30- 3:45pm**

**Break**

**3:45 -5:15pm**

**Neuroimaging, Neuropsychology of Drug Addiction, and Implications for Assessment and Treatment**

Topics: Differentiating addiction, abuse, and dependence; neuroscience of addiction; addiction as brain injury; normalizing cognitive functioning to enable treatment; role of attentional bias; use of non-drug rewards and contingency management; how to evaluate treatment quality; John Doe's drug problem, assessment/screening, and treatment needs.

Presenter:

Rita Goldstein

Scientist, Brookhaven National Laboratory Medical Research Department  
& Affiliate Departments of Psychology and Biomedical Engineering  
State University of New York at Stony Brook

Facilitator:

Elaine Terenzi

Chief U.S. Probation Officer  
Middle District of Florida

**5:00pm**

**Adjournment**

## **Tuesday, July 13, 2010**

**7:00-8:00am**

### **Continental Breakfast**

**8:00-9:15am**

### **Anti-Social Personality Disorder & Psychopathy: Risk Assessment, Treatment, and Neuroscience**

Topics: Anti-social personality disorder among offenders; psychopathy as subset of ASPD; effects of prison environment on inmates; neuroscientific information to include in presentence report; risk/needs assessment upon reentry and individualized treatment. William Badaý's ASPD problem, assessment, and treatment needs.

Presenter:

Kent Kiehl  
Associate Professor of Psychology  
University of New Mexico  
The Mind Research Network  
Albuquerque, NM

Facilitator:

Elaine Terenzi

**9:15-10:30am**

### **Mental Illness and the Limits of Current Neuroscientific Knowledge**

Topics: Topics: Neurobiology of serious mental illnesses, such as schizophrenia and bipolar disorder, and how diagnosis is based on clinical observation rather than laboratory testing or neuroimaging studies. Limits of neuroscientific knowledge on these topics; unreliability of neuroimaging or any other kind of biological test for diagnostic purposes at the present and for the foreseeable future.

Presenters:

J. Steven Lamberti  
Professor of Psychiatry  
University of Rochester School of Medicine

Geoffrey Aguirre

Facilitator:

Susie Merchant  
Education Specialist  
Federal Judicial Center

**10:30-10:45am**      **Break**

**10:45-12:00 noon**      **Dialogue: Using Neuroscience in Investigation and Supervision**

Topics: Reviewing and applying what we've learned to "John Doe" and "William Baday" cases and to the daily work of officers who investigate and supervise these types of defendants/offenders; address remaining questions.

Panelists:

Stephen Morse  
Oliver Goodenough  
Elaine Terenzi  
Chris Hansen

Facilitators:

Mark Sherman  
Susie Merchant

**12:00 noon**      **Adjournment**