

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
MEETING AS A COMMITTEE OF THE WHOLE**

July 16, 2008

The Regents of the University of California met on the above date at University Center, Santa Barbara Campus.

Members present: Regents Blum, Cole, De La Peña, Hopkinson, Hotchkis, Island, Marcus, Pattiz, Reiss, Ruiz, Schilling, Scorza, Shewmake, Varner, and Yudof

In attendance: Regents-designate Bernal, Nunn Gorman, and Stovitz, Faculty Representatives Brown and Croughan, Secretary and Chief of Staff Griffiths, Associate Secretary Shaw, General Counsel Robinson, Chief Investment Officer Berggren, Provost Hume, Executive Vice President Darling, Vice President Foley, Chancellor Yang, and Recording Secretary Johns

The meeting convened at 4:45 p.m. with Chairman Blum presiding.

1. CAMPUS PRESENTATIONS: FACULTY RESEARCH PRESENTATION

Michael Gazzaniga, Professor of Psychology, Director of the SAGE Center for the Study of the Mind at UC Santa Barbara, and author of the book, "The Ethical Brain," made a presentation on developments in neuroscience and their implications for the judicial system. He informed the Regents that the SAGE Center is currently participating in the Law and Neuroscience Project. The Project, sponsored by the MacArthur Foundation, promotes research and education, involves many universities, and is overseen by a governing board chaired by Sandra Day O'Connor.

Professor Gazzaniga began by observing that human societies are today facing complex problems which are relatively new and which require thinking in new ways, yet they are using brains evolved long ago.

At the core of the Law and Neuroscience Project is the question of how modern neuroscience has developed or changed our ideas about determinism. Is there less reason for personal responsibility, retribution, or punishment? This question has been spurred by study of the unconscious determinants of free decisions in the human brain. Recent research suggests that, ten seconds before an individual makes a decision, the brain has already "decided," or that a decision could be known from observing the state of the brain prior to conscious awareness. Neuroscience is now seeking to locate where in the brain decisions are occurring.

This research obviously has important implications for our understanding of personal responsibility and free will. Professor Gazzaniga cautioned that some of these ideas have "oozed out" into the public before enough scientific understanding of the subject has

been gained, and that there is a danger of the abuse of neuroscience in the judicial process.

The research also raises questions about our conceptions of justice and retribution. Professor Gazzaniga discussed a study carried out at a New Mexico correctional facility and suggested that retribution may in fact be an innate response and reflect the urge to remove a bad individual from society. There may be good evolutionary reasons as well for wanting to punish people who cause harm. He concluded by noting that the Law and Neuroscience Project hopes to illuminate some of these very complex issues.

Regent Reiss asked how society should deal with rapists and murderers. Professor Gazzaniga responded that this issue will be debated for a long time after the Project is finished. He anticipated that views on this issue will change, not in the short term, but in the longer term. With advances in science, there may be more successful interventions. In that case, many people would advocate intervention rather than punishment. It is also possible that no society can exist without a feeling of retribution being activated. The Law and Neuroscience Project is planning research on these and related questions, such as the relationship of addiction and crime, or the reasons for recidivism among psychopaths.

Regent Marcus asked if the neuroscience studies would include the issue of deterrence. Professor Gazzaniga responded that this issue would be considered as science gains a better understanding of the psychopath's brain. Currently, nothing has been detected as wrong in the brains of extreme psychopaths, for example, serial killers. However, some preliminary work suggests that there may be structural abnormalities. Scientific knowledge on this topic is limited at this point and it should not be applied in the court room, but neuroscientific knowledge of this kind may be available for judicial thinking in the future.

Chairman Blum asked if there is evidence that meditation can modify behavior and incline individuals to become less violent and to respond differently to stressful situations, and if cultural factors influence this. Professor Gazzaniga responded that there has been much discussion on this topic. He noted that he is providing assistance to a project sponsored by a local foundation and run by the University of Oregon. This project is attempting to reproduce results of a study in China which showed that, after five days of meditation training, subjects showed reduced response to stress, positive responses in mood, and possible health benefits. The project will also examine the influence of cultural factors, and it may raise new issues for future studies.

President Yudof referred to Professor Gazzaniga's book and noted that he has taken on the most challenging legal problem of all, free will. In the book, the brain is described as a machine for making arguments, not for seeking the truth. President Yudof stated that it would be interesting to know more about the cognitive basis for advocacy. Another interesting point from the professor's book concerned the distinction between errors of commission and omission, a distinction made even by children. This distinction is deeply

rooted in the American and other legal systems. President Yudof suggested these topics as two possible avenues of exploration.

Professor Gazzaniga explained that, during the first year of the Project, 45 to 50 participants will suggest research topics. Activity will first focus on one demonstration project, with neuroscientists working on a particular question known to be legally relevant. Other research topics will be added as the Project proceeds. He observed that all cutting-edge research today is interdisciplinary. Communication among different fields is difficult, but necessary. Professor Gazzaniga suggested that there should be new criteria for scholars and their ability to work in an interdisciplinary way. The Law and Neuroscience Project is exciting because all the scholars involved have to adapt to each others' points of view.

The meeting adjourned at 5:10 p.m.

Attest:

Secretary and Chief of Staff

Pending Approval

