BOOK REVIEW Gazzaniga, M. S. (2005). *The ethical brain*. New York: Dana Press.

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When I first received this book as an assignment to review, I was intrigued by the title. Upon reading the Acknowledgments and the Preface, I was disturbed by the seemingly political bias. In several locations within The Ethical Brain, emphasis is placed on the fact that Michael S. Gazzaniga was appointed to President Bush's Bioethics Council. My interest in reading this book rapidly waned. I suspect many readers will have a similar reaction. However, such a reaction would be an error. The book is not politically biased. In fact, the substance of the book appears contrary to the philosophical foundation of our current administrative policies addressing stem cell research, cloning, and gene mapping. Thus, The Ethical Brain is not political propaganda and is very much worth reading.

Who should read it? Gazzaniga does not indicate his intended audience; however, it is clear this book would be appropriate for anyone with a college education and an interest in the subject matter. Psychiatrists and most psychologists will find the reading and information too elementary. However, lawyers - particularly defense lawyers - will find the book to be a valuable resource as a foundation to ask the right questions during criminal trials and plea bargaining negotiations. Prosecutors will find the book a useful guide to learn strategies and legal theory likely to be used by sharp defense attorneys. Most importantly, judges need to read this book in order to identify legal theory with sound scientific support. The author does a particularly good job of evaluating scientific research, thereby separating the good from the bad.

The author presents several key concepts that will enable defense attorneys to plan effective legal strategies. Scattered throughout the book is the concept of free will. Although the author declares that he is a Catholic, he does not allow his religion to interfere with his interpretation of scientific studies. Based on the biochemistry of the brain, Gazzaniga leans toward accepting a deterministic perspective. His perspective is fresh and very unlike the material presented to me while being educated by Dominican nuns and priests. He presents a concept of "free don't" rather than "free will." When criminal acts become an option, people are most apt to make their final decision on the basis of what not to do rather than what to do. In outlining the decision-making process, Gazzaniga clarifies that the cognitive management of options is not simple; however, it remains understandable if the observer is patient.

Perhaps the most important dimension of Gazzaniga's presentation is his unfolding of the future of brain research and intervention (i.e., prescription drugs) on the legal community. Two examples are particularly salient. First, Gazzaniga addresses the future of brain imaging as the ultimate lie detector. He writes: "Neuroscientists are beginning to be able to identify biases in emotional responses to images, and lawyers are eager to use such evidence in court" (page 107). Second, he offers an illustration of commercial usage with legal implications when he writes (page 115):

Dave Schraer, an engineer, is working on a new and

improved ATM machine that will be able to detect your mood. The hope is that ATMs will be able to use advertising (tailored to your mood of the day) in order to replace the ATM fees now paid by the consumer. If you are feeling sad as you approach the ATM, you may see an ad for the antidepressant Zoloft, but if you appear angry or annoyed when viewing the ad, the ATM will know you don't want to see it again.

Throughout the entire book, Gazzaniga paints a picture of the not so distant future of jurisprudence in which deception through lying can be eliminated. In many ways, Gazzaniga's presentation reads like science fiction similar to Orwell's *1984*. However, in Gazzaniga's presentation he is able to explain how the science works and debate the ethics of the scientist's ability to get into the head of the defendant – without his/her cooperation or consent.

Based on exponential growth in the quality and quantity of neuroscience research, the nature of criminal prosecution will radically change. In fact, Gazzaniga suggests that the process of collecting evidence will change to such a degree, the system will be unrecognizable using today's standards. Is there any way of stopping or slowing down the change? The author emphatically states no. Judges will *not* be in a position to reject neuroscience as a method of acquiring evidence. They will find some of their decisions will have an impact on past cases that will be retried or reviewed by higher courts. I envision court dockets will become quite messy.

I strongly recommend that practicing attorneys and judges read this book. Defense attorneys need to read it to create a strategy and a theory, while prosecutors must read it to develop a response. Gazzaniga suggests initially prosecutors will face many difficulties in winning their cases when neuroscience is presented. Judges must understand the foundations of neuroscience research to make decisions regarding what evidence should be allowed. Some legal precedence has been made prior to this book's publication. Thus, law school libraries should adopt this book. Most psychiatrists and psychologists will be familiar with the material presented and will find the material too elementary. However, social workers who have little background in neuroscience, and who may be called upon to testify in court, need the information within this book to employ as a frame of reference in testifying. Thus, university libraries that include holdings for social work, psychology, and human services should purchase this book.