This book provides an introduction to the new field of *Law and Neuroscience*. The materials—which span subjects such as lie-detection, judging, brain injury, emotions, memory, and the adolescent brain—are accessible, informative, and provocative. No prior knowledge of neuroscience is assumed or necessary.

Why neuroscience? Law regulates behavior. Behavior comes from brains. And through powerful new tools of cognitive neuroscience we are learning more than ever, faster than ever, about the complex relationships between brains, environments, behavior, and mental states. As we develop a deeper understanding of why and how we behave as we do, some rendezvous of law and neuroscience was inevitable. Cognitive neuroscience challenges law to examine many of its long-held assumptions, and encourages each of us to reflect upon our own decision making and biases. The inquiry is not simply theoretical.

Attorneys are already attempting to use and defuse neuroscientific evidence in larger and larger swaths of criminal and civil law. For example, criminal defense attorneys sometimes proffer brain images to support an argument that a client is incompetent to stand trial. And some defendants argue “my brain made me do it,” to avoid convictions or to mitigate sentences. Both federal and state courts have been forced to rule on the admissibility of so-called brain-based lie detection. And the Supreme Court has considered neuroscience research in its rulings on the constitutionality of practices for sentencing juveniles. Some defendants have even successfully argued that their counsel was ineffective for failing to procure brain images as a part of their defense. On the civil side, brain images have been proffered not only in tort cases, as one would expect, but also in constitutional, disability benefit, and contract cases, among others.

Judges are therefore increasingly confronted with whether to admit neuroscientific evidence. Jurors are increasingly tasked with trying to understand and evaluate it. And both legislatures and agencies are deciding what, if anything, to do in response to our expanding neuroscience knowledge base.

The growth of neurolaw poses a practical challenge for coursebook construction, because it is not possible to include everything that deserves attention. In this first edition of *Law and Neuroscience* we have not attempted to cover everything, but rather have focused on a core set of fundamental questions and topics that presently animate the field. (A repository of supplemental chapters and materials, to which we add from time to time, appears on the accompanying website.)

There is no denying that neuroscience presents powerful new tools, such as functional brain imaging. But it is also clear that, as with any tools, neuroscientific tools—and the evidence or policy shaped by and around them—can be used for good or for ill, skillfully or sloppily, and in ways that are legally and socially useful, on one hand, or irrelevant and potentially harmful, on the other. For these reasons, our book not only
introduces some of the basics of how the brain works, but also highlights the delicate balance between the promise of neuroscience and the perils. Readers will be challenged to evaluate claims, evidence, and implications — both in science and in law — with care and rigor.

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