

## Introduction to Law & Behavioral Biology

Behavioral biology (and its subfield of neurojurisprudence) is the next frontier for legal thought.<sup>1</sup> In the next few years, behavioral biology will become as important for the analysis of law as economics has been for the last several decades. Professor John Monahan has declared, “the question I want to raise is whether evolutionary psychology [a branch of behavioral biology] . . . could play the same central role in legal scholarship for the next thirty years that economics has played for the past thirty.”<sup>2</sup> Similarly, Professors Gottschall and Wilson have observed, “choose any subject relevant to humanity—philosophy, anthropology, psychology, economics, political science, law, even religion—and you will find a rapidly expanding interest in approaching the subject from an evolutionary perspective.”<sup>3</sup> Finally, Professor Joseph Carroll has stated, “Darwinian psychology is on the verge of achieving a paradigm—that is, a consensus about the necessary minimum of conceptual elements that enter into an understanding of ‘human nature.’”<sup>4</sup>

To ignore the insights of behavioral biology in legal analysis is to create a legal system based on crucially incomplete information.<sup>5</sup> Professor Owen Jones has asserted that “the extraordinary growth of behavioral biology renders obsolete any law-relevant model of human behavior that fails to integrate life science perspectives with social science ones, and . . . this deficiency can be remedied, in part, through . . . evolutionary analysis in law.”<sup>6</sup> As Professor Jones has noted, the law will learn a great deal from the insights of behavioral biology in three ways: (1) “anything law achieves, it achieves by effecting changes in human behavior,” (2) “evolutionary processes (such as natural and sexual selection) exert influences on the behavioral predispositions of all living organisms,” and (3) “if better behavioral models can yield more effect legal tools, and if human behavior is influenced by evolutionary processes, then greater

knowledge of how evolutionary processes influence behavior may improve law's ability to regulate it."<sup>7</sup> He has added: "If legal thinkers are charged with regulating behaviors, and, if understanding the causes of behaviors aids in regulating them, then familiarity with behavioral biology should be important to legal thinkers."<sup>8</sup>

Yet, legal scholars, following social scientists, have generally disregarded human behavior in legal analysis, instead analyzing law as a social construct.<sup>9</sup> This "Standard Social Science Model" of the mind considers the mind "a blank slate, or general, all-purpose computer in which all content is produced by external (social and cultural) influences."<sup>10</sup> This blank slate view of the mind, however, has been thoroughly debunked.<sup>11</sup> As Professor E. O. Wilson has averred, "much of the history of philosophy up to the present day has consisted of failed models of the brain."<sup>12</sup> Similarly, Professor Catherine Salmon has observed, "[m]any mainstream humanists have had a tendency to assume that human nature is constructed, that everything is nurture and nothing is nature. Recent research in cross-cultural anthropology and psychology suggests that this is incorrect, that almost everything that is important about human behavior and psychology has developed through a combination of nature and environment."<sup>13</sup>

Although research in behavioral biology dates back to the 1950s,<sup>14</sup> scholars have only recently applied its insights to fields outside of science. For example, literary scholars have applied behavioral biology methods to the analysis of texts,<sup>15</sup> art scholars have applied it to art,<sup>16</sup> and a music scholar has used cognitive science to study music.<sup>17</sup> While research using behavioral biology is relatively new in the law, there have been several significant articles.<sup>18</sup>

Scott Fruehwald. Neurojursiprudence Website. Last updated December 13, 2009.

1. Behavioral biology as used on this website means “[e]volutionary processes (such as natural selection and sexual selection)—together with environmental and physical inputs—built the brains that yield behaviors.” Owen D. Jones, *Evolutionary Analysis in the Law: Some Objections Considered*, 67 Brook. L. Rev. 207, 211 (2001) [hereinafter Jones, *Evolutionary Analysis*]. For introductions to behavioral biology, see STEVEN PINKER, *HOW THE MIND WORKS* (1997), DAVID M. BUSS, *EVOLUTIONARY PSYCHOLOGY: THE NEW SCIENCE OF THE MIND* (1997), and TIMOTHY H. GOLDSMITH, *THE BIOLOGICAL ROOTS OF HUMAN NATURE* (1991). Areas of study related to and overlapping with behavioral biology include cognitive science, evolutionary psychology, evolutionary biology, sociobiology, cognitive anthropology, neuroscience, etc. These terms are often used interchangeably with behavioral biology. For a detailed history of cognitive science see William Bechtel, Adele Abrahamsen, and George Graham, *The Life of Cognitive Science*, in *A COMPANION TO COGNITIVE SCIENCE* 1-104 (William Bechtel & George Graham eds., 1998); see also PAUL THAGARD, *MIND: INTRODUCTION TO COGNITIVE SCIENCE* (1996).
2. John Monahan, *Symposium: Violence in the Family: Could “Law and Evolution” Be the Next “Law and Economics?”* 8 VA. J. SOC. POL’Y & L. 123 (2000); see also Jones, *Evolutionary Analysis*, supra note 1, at 207 (“Evolutionary analysis in law represents, in large measure, an effort to inform legal thinking with behavioral biology, in much the same way that we try to inform legal thinking with economics or psychology.”); John O. McGinnis, *The Human Constitution and Law: A Prolegomenon*, 8 J. CONTEMP. L. ISSUES 211, 211 (1997).
3. Jonathan Gottshall and David Sloan Wilson, *Introduction: Literature—a Last Frontier in Human Evolutionary Studies*, in *THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF THE NARRATIVE* xvii (Jonathan Gottshall and David Sloan Wilson eds., 2005).
4. Joseph Carroll, *Human Nature and Literary Meaning: A Theoretical Model Illustrated with a Critique of Pride and Prejudice*, in *THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE* 77 (Jonathan Gottschall and David Sloan Wilson eds., 2005).
5. Professor Jones has declared: “Any model of behavior that ignores the biology of behavior—through the effect of evolutionary processes on brain function—is materially incomplete.” Jones, *Evolutionary Analysis*, supra note 1, at 214.
6. Owen D. Jones, *Time-Shifted Rationality and the Law of Law’s Leverage: Behavioral Economics Meets Behavioral Biology*, 95 N.W. U.L. REV. 1141, 1143 (2001).
7. Jones, *Evolutionary Analysis*, supra note 1, at 208-09.
8. *Id.* at 215.
9. See generally Scott Fruehwald, *The Emperor Has No Clothes: Postmodern Legal Thought and Cognitive Science*, 23 GA. ST. U. L. REV. 1 (2006).
10. Carroll, supra note 4, at 80; see also STEVEN PINKER, *THE BLANK SLATE: THE MODERN DENIAL OF HUMAN NATURE* 55 (2002); see also MARC D. HAUSER, *MORAL MINDS: HOW*

NATURE DESIGNED OUR UNIVERSAL SENSE OF RIGHT AND WRONG 2 (2006) (“During the past century, the Blank Slate has set the agenda for much of the social sciences and humanities.” *Id.* at 6.).

11. *E.g.*, Professor Rubin has declared: “The notion that humans are born as blank slates (*tabula rosa* to use Locke’s Latin phrase) is no longer intellectually respectable among serious people.” PAUL RUBIN, *DARWINIAN POLITICS: THE EVOLUTIONARY ORIGIN OF FREEDOM* ix (2002); *accord* Jim Chen, *Law as a Species of Language Acquisition*, 73 WASH. L.J.1263, 1272 (2001) (“[W]e stand on the brink of a century whose principal intellectual project may consist of overthrowing the Social Science Model. . .”); E. O. Wilson, *Foreword from the Scientific Side*, in *THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE* viii (Jonathan Gottschall and David Sloan Wilson eds., 2005) (“The blank-slate model could be tested empirically. It lost.”); Dylan Evans, *From Lacan to Darwin*, in *THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE* 52 (Jonathan Gottschall and David Sloan Wilson eds., 2005) (“The cognitive revolution swept through psychology in the 1960s, replacing the behaviorist paradigm that had held sway since the 1920s.”); *see generally* PINKER, *supra* note 10; *see also* Sharon Street, *A Darwinian Dilemma for Realist Theories of Value*, 127 PHIL. STUD. 109, 109 (2006) (“[R]ealist theories of value prove unable to accommodate the fact that Darwinian forces have deeply influenced the content of human values.”).

12. Wilson, *supra* note 11, at viii; *see also* Gail L. Heriot, *The Symposium on Law: Human Behavior and Evolution: An Introduction*, 8 J. CONTEMP. L. ISSUES 1, 1 (1997) (“Law must be accommodated to the fixed aspects of human nature; they cannot be refitted to accommodate law.”).

13. Catherine Salmon, *Crossing the Abyss: Erotica and the Intersection of Evolutionary Psychology and Literary Studies*, in *THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE* 244 (Jonathan Gottschall and David Sloan Wilson eds., 2005).

14. Evans, *supra* note 11, at 52.

15. *See generally* Gottshall and Wilson, *supra* note 3.

16. *E.g.*, DAVID LEWIS-WILLIAMS, *THE MIND IN THE CAVE: CONSCIOUSNESS AND THE ORIGINS OF ART* (2002); ELLEN DISSANAYAKE, *ART AND INTIMACY: HOW THE ARTS Began* (2000); Nancy A. AIKEN, *THE BIOLOGICAL ORIGINS OF ART* (1998).

17. DAVID J. LEVITIN, *THIS IS YOUR BRAIN ON MUSIC: THE SCIENCE OF A HUMAN OBSESSION* (2006).

18. *See* Selected Articles on Neurojurisprudence and Law & Behavioral Biology, which is part of this website under Other Pages on the Main Page.