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# THE DEVIL'S ADVOCATE: USING NEUROSCIENTIFIC EVIDENCE IN INTERNATIONAL CRIMINAL TRIALS?

*Adam B. Shniderman\**

## INTRODUCTION

*Why does one death matter against so many? Because there is good and there is evil, and evil must be punished. Even in the face of Armageddon I shall not compromise in this. But there are so many deserving of retribution . . . and there is so little time.*

Walter Kovacs/Rorschach, WATCHMEN

Hank Greely writes, “[t]oday we are regularly making new discoveries about the functioning of the human brain, discoveries that have led many lawyers, philosophers, and neuroscientists to speculate about the consequences of our new understanding for the criminal justice system.”<sup>1</sup> Greely notes that scholars have focused almost exclusively on questions of responsibility, reaching conclusions “from apocalyptic to ‘business as usual.’”<sup>2</sup> Joshua Greene, a philosopher at Harvard University, leans towards the apocalyptic view. Greene asserts that our operative “legal principles exist because they more or less adequately capture an intuitive sense(s) of justice.”<sup>3</sup> For him, neuroscience will challenge and “reshape our intuitive sense of justice.”<sup>4</sup> While he concedes that the “business as usual” scholars, namely Stephen Morse, are correct that the law currently re-

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1. Henry T. Greely, *Neuroscience and Criminal Justice: Not Responsibility But Treatment*, 56 U. KAN. L. REV. 1103, 1103 (2008).

2. *Id.*

3. Joshua Greene & Jonathan Cohen, *For the Law, Neuroscience Changes Nothing and Everything*, 359 PHIL. TRANS. R. SOC. LOND. B 1775, 1775 (2004).

4. *Id.*

quires only minimal rationality, Greene contends that new neuroscientific discoveries will radically change society's intuitive sense of justice, our collective morality.<sup>5</sup> The issues facing the American criminal justice system are complicated. But what does the emergence of this science mean for the trials of the most horrific crimes?

Since the first modern war crimes trial at Nuremberg, there has been speculation that war criminals' deviant and aberrant behavior stemmed from psychopathology.<sup>6</sup> In response to Adolf Eichmann's seemingly ordinary demeanor during his trial in Jerusalem, Hannah Arendt famously characterized his behavior as "the banality of evil," although some disagree with her assessment.<sup>7</sup> Gustave Gilbert, an American Army psychologist assigned to interview and evaluate the defendants at Nuremberg, characterized the defendants as uniformly lacking empathy, potentially qualifying these defendants as psychopaths.<sup>8</sup> Miale and Selzer also found what they believe supported a claim of pervasive psychopathology among the Nuremberg defendants.<sup>9</sup> They concluded, "[t]he Nazis were not psychologically normal or healthy individuals."<sup>10</sup> Instead, these men consti-

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5. *Id.* at 1775–76, 1784; see also Stephen J. Morse, *Determinism and the Death of Folk Psychology: Two Challenges to Responsibility from Neuroscience*, 9 MINN. J. L. SCI. & TECH 1, 2 (2008); Greely, *supra* note 1, at 1103.

6. JAMES WALLER, *BECOMING EVIL: HOW ORDINARY PEOPLE COMMIT GENOCIDE AND MASS KILLING* 59–62 (2007). Gustave Gilbert, an army psychologist at Nuremberg, wrote several articles developing what he thought was the explanation for the behavior of high-ranking Nazi officials. In 1963, Gilbert published *The Mentality of SS Murderous Robots*, in which he maintained that the Nazis had cultivated a particular personality type that lacked any sense of empathy or conscience. Others, however, have disagreed. See *id.* at 63–70.

7. HANNAH ARENDT, *EICHMANN IN JERUSALEM* (2006). Most notably, Raul Hilberg disagreed with her assessment of Eichmann's evil as "banal" in his work *THE DESTRUCTION OF THE EUROPEAN JEWS*.

8. The term psychopath is frequently used to describe violent offenders and people whose motives the public does not understand. In this paper, the term psychopath is used strictly in a psychological, technical sense, referring to those individuals who score 30 or greater on the Hare Psychopathy Checklist Revised (PCL-R). Hare Psychopathy Checklist Revised (PCL-R), available at <http://www.minddisorders.com/Flu-Inv/Hare-Psychopathy-Checklist.html>; ROBERT HARE, *MANUAL FOR THE HARE PSYCHOPATHY CHECKLIST-REVISED* (1991).

9. WALLER, *supra* note 6, at 67.

10. ERIC ZILLMER, *THE QUEST FOR THE NAZI PERSONALITY: A PSYCHOLOGICAL INVESTIGATION OF NAZI WAR CRIMINALS* 94 (1995).

tuted, from a psychological standpoint, a “highly distinctive group.”<sup>11</sup> The possibility that a war criminal would offer insanity or diminished capacity as a defense is not new. Some were concerned that three defendants at Nuremberg, most notably Rudolph Hess, would attempt to plead insanity.<sup>12</sup> More recently, Esad Landzo offered an affirmative, psychological defense at the International Criminal Tribunal for Yugoslavia (“ICTY”) during the “Celebici Camp” trial.<sup>13</sup> With the increased use of neuroscience in courtrooms across the world, supporting claims that there are biological underpinnings to these psychological phenomena, comes the possibility that defendants tried at the International Criminal Court (“ICC”) will attempt to mitigate their culpability or excuse their conduct with support from brain scans and expert witnesses.

To the extent modern War Crimes trials seek to model themselves after domestic criminal proceedings (i.e., holding an individual responsible for his or her actions through adjudication of guilt followed by punitive sanctions), the use of evidence demonstrating neurologic pathologies associated with deviant behavior may hinder the court’s ability to find offenders culpable. In fact, several key aspects of the international criminal justice system face challenges from this emerging science. What do neuroscientific discoveries about deviance, particularly violence, mean for the didactic value of trials, for justice, and the form of response we choose to implement in the wake of

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11. *Id.* at 177–78.

12. Prior to trial, doctors from each delegation, the United States, the United Kingdom, the Soviet Union, and France, evaluated Hess’ mental condition. They concluded that Hess was not insane in the strict sense of the word— he was aware of what was going on around him. However, they did suggest that he could be impaired in his ability to assist in his own defense. Given the evaluations, Hess proceeded to trial without offering an insanity defense. See Report of Commission to Examine Defendant Hess (Nov. 17, 1945), available at <http://avalon.law.yale.edu/imt/v1-28.asp>.

13. Esad Landzo was purported to be a guard at the detention facility in Celebici, Bosnia between May and December 1992. He was indicted and detained at the ICTY in 1996. Landzo was charged with 24 counts of criminal conduct, including multiple counts of murder, torture, and rape. Landzo’s mental state was a significant issue at trial. Several psychiatrists evaluated the defendant and testified about his mental state. The court ultimately rejected his claim that he was not responsible for his actions due to psychological disorders. Landzo was convicted and sentenced to fifteen years in prison and was released in 2006. See *infra* notes 137–141 and accompanying text for further discussion.

atrocities? Certainly, the ICC and other international criminal tribunals could look to the domestic courts of various nations for guidance on how to address these questions. Ultimately, the substantial differences between ordinary domestic trials and extraordinary perpetrator trials suggests that the path taken in various domestic contexts to incorporating neuroscience and addressing the particular challenges and issues it poses, is likely to provide little guidance for international criminal tribunals.

This Article explores the difficult questions and choices the ICC and other international criminal tribunals will face from evolving scientific discoveries. First, this Article traces the development of international criminal law, and its adjudication through various international criminal courts. Second, it considers the specific scientific developments relevant to the issue of adjudicating culpability. Third, the Article discusses the implications for international criminal trials of having to address a neuroscience-based understanding of culpability, specifically discussing the implications for the due process rights of the accused, the rights and needs of the victims, the didactic value of trials, and the viability of the trial model in light of evolving issues at the intersection of law, politics, and neuroscience. This analysis will show that whether the international criminal legal regime accepts or rejects this science, the legitimacy and justness in a traditional trial model is zero-sum. That is, the rights of either the accused or victim will be undermined; we must decide whose. Yet, this realization does not prove fatal for trials before the ICC. Finally, this Article makes suggestions for future research and also considers alternative justifications for punishing offenders at international criminal trials so as to allow the continuation of a tradition of holding individuals, particularly heads of state, accountable for their conduct.

#### I. PRELUDE TO THE MODERN INTERNATIONAL CRIMINAL TRIAL

The concept that certain conduct is unacceptable or unlawful even in times of war can be traced as far back as the sixth century BCE.<sup>14</sup> Chinese military general and philosopher Sun Tzu wrote that punitive and excessive measures against an enemy

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14. SUN TZU, *ART OF WAR* (Stephen F. Kaufman ed., Stephen F. Kaufman trans., 1996).

were inexcusable.<sup>15</sup> He argued that these measures were unacceptable because they were ineffective and inefficient. Sun Tzu's writings shaped the law of war and international law going forward.<sup>16</sup> There are a few historical examples of holding individuals accountable for violating the laws of war long before anyone even contemplated the trials at Nuremberg.<sup>17</sup> However, these incidents did not take place in a nominal court of law and they were not true trials, so much as occasions for pronouncing unilateral, predetermined findings of guilt and summary execution.<sup>18</sup> Each of these "trials" occurred in a time in which Cicero's pronouncement that "law is silent amidst the clash of arms," reigned.<sup>19</sup>

The precedent for holding recognized heads of state individually responsible in a court of law traces back to the trial of King Charles I in 1649. This trial marked the first prosecution of a civilian or military head of state in a court of law for crimes committed during conflict.<sup>20</sup> At the time, holding a recognized head of state responsible for conduct during wartime was a

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15. Timothy L.H. McCormack, *Selective Reaction to Atrocity: War Crimes and the Development of International Criminal Law*, 60 ALB. L. REV. 681, 684 n.4 (1997).

16. *Id.* at 684.

17. See Jordan J. Paust, ILSA Panel Oct. 18, 2003, at Loyola University New Orleans-Panel on History of International Tribunals Prior to Nuremberg: Selective History of International Tribunals and Efforts Prior to Nuremberg, 10 ILSA J. INT'L & COMP. L. 207, 207–8 (2003). For a discussion of individuals tried before tribunals convened prior to Nuremberg, see M. CHERIF BASSIOUNI, *CRIMES AGAINST HUMANITY: HISTORICAL EVOLUTION AND CONTEMPORARY APPLICATION* 86–156 (2011).

18. For example, the English tried and executed William Wallace for treason and atrocities against civilians in 1305 CE. The ad hoc trial afforded Wallace no legal rights or privileges. They marched Wallace through the city to the place of his eventual execution, the indictment was read and sentence was pronounced and carried out without any opportunity for defense. MAGNÚS MAGNÚSSON, *SCOTLAND: THE STORY OF A NATION* 155 (2000).

19. While this is an oversimplification—in that, as noted, there had been an understanding that there were rules governing the conduct of war long before any of these trials—I wish to convey that at the time of these trials, it was not a routine practice to hold perpetrators responsible for conduct during wartime. Political pressures and pragmatism greatly overshadowed any expectation of individual accountability.

20. CHARLES ANTHONY SMITH, *THE RISE AND FALL OF WAR CRIMES TRIALS: FROM CHARLES I TO BUSH II* 29 (2012).

novel concept.<sup>21</sup> The trial arose following the conclusion of the English Civil War for the supposed purpose of redressing the wrongs committed by Charles I against both civilians and the prevailing military.<sup>22</sup> Charles I was charged with murdering civilians, torture, involuntary conscription, and high treason.<sup>23</sup> However, the substantive and procedural flaws of this "trial" demonstrate it was little more than a farce, constituted to serve the political agenda of the prevailing army, led by Oliver Cromwell.<sup>24</sup> Substantively, the tribunal was created and convened to try a single individual from the entire conflict and the substance of the indictment was stretched to assure that the charges would stand against Charles I.<sup>25</sup> The procedural aspects were little better. Charles I had no right to appeal, pardon, or reconsideration<sup>26</sup> and he faced his accusers without a number of additional procedural rights: the right to counsel, the ability to present a defense or challenge the prosecution's evidence, the right to cross-examine any witnesses, and the ability to appeal any judicial decision.<sup>27</sup> Charles I steadfastly protested his trial, asserting that because of the significant legal shortcomings the court lacked the legitimacy to try him.<sup>28</sup> However, to acknowledge any of the king's assertions would mean the court lacked the legal right to proceed. As such, the court summarily dismissed and disregarded his claims. Because Charles I refused to cooperate with the orchestrators of

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21. *Id.* at 103. Smith suggests that prior to Nuremberg, holding an individual responsible for his or her conduct during war was a novel concept.

22. *Id.* at 36.

23. *Id.*

24. "The appeal to the rule of law as a justification for their actions was a mechanism used by Cromwell and his faction simply to facilitate the implementation of the style of government that they desired." *Id.* at 35. Conducting a trial to convict Charles I prior to executing him, instead of summarily executing him without even the façade of legal process as had happened in the past to tyrants, would not convey the same message. The trial signified a shift in the style of governance, in which those who made the laws would be bound by them, rather than above the law as had been the case with the monarchy. As Smith writes, "[t]he premise of how this approach would help consolidate power was straightforward. Specifically, if even the monarch was subject to the dictates of the law, then the law would be supreme over everyone." *Id.*

25. *Id.* at 39.

26. *Id.*

27. *Id.*

28. *Id.* at 43.

the trial and embrace an apparently predetermined fate, the court treated the king's non-response as an admission of guilt and convicted him of the crimes charged in the indictment.<sup>29</sup>

While civilian and military leaders were held responsible in various formal trials following the trial of Charles I, the concept that heads of state and military leaders should be tried in criminal courts for crimes committed at their behest did not become widely accepted or routine until the twentieth century.<sup>30</sup> Prior to Nuremberg, the idea that individual perpetrators would and could be held accountable for their conduct was quite radical.<sup>31</sup> The combination between the increasing frequency of states punishing violations of the laws of war and the agreements reached at the Hague Peace Conferences in 1899 and 1907 for the first multilateral conventions regulating the conduct of war resulted in a growing recognition and acceptance of individual culpability for violations of the international laws of war.<sup>32</sup>

## II. THE MODERN TRIAL PARADIGM

The turn of the twentieth century marked the beginning of a concerted effort to design a framework for holding leaders individually responsible for acts occurring during war. From the outset of World War I, Allied states called for the trial of Central Power individuals engaged in perpetrating atrocities.<sup>33</sup> The Allied governments established a Commission on the Responsibility of the Authors of the War and on Enforcement of Penalties, charged with investigating who was responsible for breaches of the laws of war, and with drafting proposals for the establishment of a "High Tribunal" to try these offenders.<sup>34</sup> Despite the participants' strong sentiment for holding perpetrators accountable and the dedication and careful work that went

29. *Id.* at 44.

30. Lawrence Douglas, *The Didactic Trial: Filtering History and Memory into the Courtroom*, 14 *EURO. REV.* 513, 513 (2006).

31. *Id.*

32. TIMOTHY L.H. MCCORMACK & GERRY J. SIMPSON, *THE LAW OF WAR CRIMES: NATIONAL AND INTERNATIONAL APPROACHES* 43 (1997). These initial and subsequent agreements developed at The Hague created a unified, international set of "laws of war" for States to follow. Prior to these agreements, the laws of war varied from State to State.

33. McCormack, *supra* note 15, at 698.

34. MCCORMACK & SIMPSON, *supra* note 32, at 45–46.



into formulating the tribunal at the Peace Conference, it never conducted any trials.<sup>35</sup> This work, however paved the way for what has become the cornerstone of the international criminal trial, the International Military Tribunal (“IMT”) at Nuremberg.<sup>36</sup>

Following the conclusion of World War II, leaders across the world demanded the Nazi perpetrators face justice for their crimes.<sup>37</sup> The Allied nations could not afford to ignore these calls to hold responsible the perpetrators of some of the worst crimes humanity had ever seen.<sup>38</sup> Initially, the Soviets suggested that de-Nazification could proceed quickly by implementing large-scale execution.<sup>39</sup> Many Americans supported the calls for summary execution of the Nazi Generals.<sup>40</sup> In spite of strong early support, however, the Allies rejected the proposal.<sup>41</sup> Instead, Allied leaders decided to hold these individuals to account through a “fair process” that “furthered the ends of justice, retribution, and deterrence.”<sup>42</sup> The Allies adopted the London Charter of the IMT in August of 1945, which set forth the jurisdiction of the tribunal for several categories of crimes, a few of which many now consider the “core crimes” of international law.<sup>43</sup> While the establishing document delegated the

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35. McCormack, *supra* note 15, at 702; *see also*, MCCORMACK & SIMPSON, *supra* note 32, at 47.

36. McCormack, *supra* note 15, at 714.

37. The United Nations War Crimes Commission was established in October 1942 to draw up lists of criminals to be tried. The commission was composed of representatives from fifteen different nations, including the United States and Great Britain. EUGENE DAVIDSON, *THE TRIAL OF THE GERMANS: AN ACCOUNT OF THE TWENTY-TWO DEFENDANTS BEFORE THE INTERNATIONAL MILITARY TRIBUNAL AT NUREMBERG* 5 (1966).

38. McCormack, *supra* note 15, at 714–15.

39. SMITH, *supra* note 20, at 85.

40. DONALD M. MCKALE, *NAZIS AFTER HITLER: HOW PERPETRATORS OF THE HOLOCAUST CHEATED JUSTICE AND TRUTH* 6 (2012).

41. SMITH, *supra* note 20, at 85.

42. *Id.* at 86.

43. Theodor Meron, *Reflections on the Prosecution of War Crimes by International Tribunals*, 100 AM. J. INTL. LAW 551, 564 (2006); Charter of the International Military Tribunal [London Charter] sec. 1, art. 1, sec. 2, art. 6. The London Charter gave the IMT jurisdiction over Crimes Against Humanity, War Crimes, and Crimes Against Peace. Contrary to popular belief, it did not give the court jurisdiction over the Nazi genocide of the Jewish people. Genocide was not formally defined as a crime until the 1948 United Nations Convention on the Prevention and Punishment of the Crime of Genocide.

determination of specific procedures to the tribunal, the call for a “Fair Trial for Defendants” demonstrates that the authors contemplated just, fair, and unobjectionable process that would deter future leaders and provide retribution for those seriously aggrieved by the Nazi’s actions.<sup>44</sup> This is not to suggest that the Tribunal is without criticism or problems. Scholars routinely point out the jurisdictional problems and the use of *ex post facto* laws to criminalize the Nazi’s conduct.<sup>45</sup>

The decision to prosecute the Nazi leaders at Nuremberg marked the beginning of the war crimes tribunal as an institutionalized and expected response to atrocity.<sup>46</sup> Significant thought and care went into establishing the IMT to assure respect for the substantive and procedural rights of the accused. While the IMT became the standard against which subsequent war crimes tribunals are frequently measured, it is not the only criminal trial to influence modern international criminal trials.<sup>47</sup> In fact, the form of the modern trials is more similar to the Eichmann trial.<sup>48</sup> For example, the prosecution at the IMT relied heavily on the Nazi’s own documentation of their criminal conduct, using documentary video footage and extensive written materials.<sup>49</sup> The victim-witness (or survivor-witness) was of significantly less focus than these other forms of evidence.<sup>50</sup> However, at the Eichmann trial, the prosecution chose

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Since then, Crimes Against Humanity, War Crimes, and Genocide have come to be considered the core crimes of international law. JANN KLEFFNER, *COMPLEMENTARITY IN THE ROME STATUTE AND NATIONAL CRIMINAL JURISDICTIONS* 1 (2008).

44. London Charter sec. 4, art. 16.

45. Jonathan Friedman, *Law and Politics in the Subsequent Nuremberg Trials: 1946-1949*, in *ATROCITIES ON TRIAL: HISTORICAL PERSPECTIVES ON THE POLITICS OF PROSECUTING WAR CRIMES* 75, 81 (Patricia Heberer & Jürgen Matthäus eds., 2008).

46. SMITH, *supra* note 20, at 23.

47. *Id.* at 22, 80.

48. Lawrence Douglas, *The 50th Anniversary of the Eichmann Trial – A Look Back*, YOUTUBE (June 13, 2011), <https://www.youtube.com/watch?v=IYpvBG4ELSw>. According to Lawrence Douglas’s address at New York University’s colloquium on the fiftieth anniversary of the Eichmann trial, the contemporary paradigm of international criminal law, what he calls the “jurisprudence of atrocity,” bears greater similarity to the Eichmann trial than the Nuremberg trial.

49. Douglas, *supra* note 30, at 515.

50. *Id.* Justice Jackson of the IMT “tactically limited the use of ‘soft evidence’—eyewitness testimony—in favor of ‘hard evidence’ – trial by docu-

to proceed in a different manner, and the victim-witness played a significant role in the trial.<sup>51</sup> Subsequent trials have had varying degrees of success in incorporating victims into the process, with the ad hoc ICTY relying heavily on the victim-witness.<sup>52</sup> The ICC has also gone to great effort to assure the victim-witness a place in the trial.<sup>53</sup> While several paradigms exist to provide justice in the wake of atrocity, including truth commissions like those used in South Africa and various South American countries,<sup>54</sup> the trial paradigm is seen today as a fundamental requirement of doing justice in the wake of atrocity.<sup>55</sup>

### III. THE MEDICAL MODEL OF BEHAVIOR AND DEVIANCE

Nikolas Rose writes, “[w]e live inescapably in a biologized culture. Not merely the sickness of human beings, but also their personalities, passions and the forces that mobilize them—their identities themselves appear at least potentially to be explicable in biological terms, and increasingly in terms of their genetic makeup.”<sup>56</sup> Rose’s assessment is quite apt. The process of medicalization allows one to probe conduct once thought to be a normal part of life for possible physiological origins and place it in the realm of illness and disorder.<sup>57</sup> Once thusly categorized, one can fix or improve that conduct, as is frequently done with pharmaceutical intervention.<sup>58</sup> The psy-

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ment. This approach assumed a broad and imaginative range of forms, including an unprecedented use of documentary film in a juridical setting.” *Id.*

51. *Id.*

52. Patricia M. Wald, *The International Criminal Tribunal for the Former Yugoslavia Comes of Age: Some Observations on Day-to-Day Dilemmas of an International Court*, 5 WASH. U. J.L. & POL’Y. 87, 107 (2001).

53. Article 68 of the Rome Statute of the ICC is dedicated to the “protection of the victims and witnesses and their participation in the proceedings.” This section carefully outlines the opportunities for participation of the victim-witness in the proceedings. Rome Statute of the International Criminal Court [Rome Statute], July 17, 1998, art. 68, U.N. Doc. A/CONF.183/9 (1998).

54. *See infra* note 132 and accompanying text.

55. Douglas, *supra* note 30, at 513.

56. Nikolas Rose, *The Biology of Culpability: Pathological Identity and Crime Control in a Biological Culture*, 4 THEORETICAL CRIMINOLOGY 5, 6 (2000).

57. Peter Conrad and Valerie Leiter, *Medicalization, Markets and Consumers*, 45 J. HEALTH AND SOC. BEHAV. 158, 158–59 (2004).

58. *Id.*

chiatric community has been responsible for transforming a number of behaviors into medical conditions. One of the most prominent examples of the modern era is the medicalization of unhappiness. Incorporated in the *Diagnostic and Statistical Manual of Mental Disorders* (“DSM”) in 1980, major depressive disorder (depression), became an officially diagnosable condition, treatable with a class of prescription drugs known as Selective Serotonin Reuptake Inhibitors (“SSRIs”).<sup>59</sup> Americans and Europeans alike have embraced this phenomenon with great fervor, particularly with respect to depression. A recent report shows that doctors have prescribed antidepressants to one in ten Americans, with comparable figures in Europe.<sup>60</sup> Peter Conrad and Joseph W. Schneider suggest that the public has become increasingly dissatisfied with the mild and benign symptoms of daily life. However, the fervor for “medicalizing” extends beyond every day illnesses and disorders, partly because moving behavior into the realm of the medical can depoliticize and remove moral judgment.<sup>61</sup>

Biological and “pathological” explanations for criminal conduct appear as far back as the Fourth Century. In his *Prior Analytics*, Aristotle writes,

It is possible to infer character from features, if it is granted that the body and the soul are changed together by the natural affections: I say ‘natural,’ for though perhaps by learning music a man has made some change in his soul, this is not one of those affections natural to us; rather I refer to passions and desires when I speak of natural emotions. If then this were granted and also that for each change there is a corresponding sign, and we could state the affection and sign prop-

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59. Petra Zimmermann et al., *Heterogeneity of DSM-IV Major Depressive Disorder as a Consequence of Subthreshold Bipolarity*, 66 ARCH. GEN. PSYCH. 1341, 1341 (2009).

60. Courtney Hutchison, *One in 10 Americans Use Antidepressants, Most Don't See a Therapist*, ABC NEWS, OCT. 19, 2011, <http://abcnews.go.com/Health/Wellness/10-americans-antidepressants-therapist/story?id=14763251#.T5SLxFH54WE> (last visited Jan 2, 2013); see also, University of Warwick, *Ten Percent of Middle-Aged Europeans Are on Antidepressants, Study Suggests*, SCI. DAILY (June 20, 2011), <http://www.sciencedaily.com/releases/2011/06/110620094435.htm>.

61. PETER CONRAD & JOSEPH W. SCHNEIDER, *DEVIANCE AND MEDICALIZATION: FROM BADNESS TO SICKNESS* 250 (1980).

er to each kind of animal, we shall be able to infer character from features.<sup>62</sup>

Generally, Aristotle contended that individuals who had facial features resembling animals often had temperaments like those animals.<sup>63</sup> As the emerging field of science shed light on new physical phenomena, biological theories of criminality evolved.

The early “scientific” theories of deviance took a deterministic view of criminality, frequently asserting the deviant was born with the character trait.<sup>64</sup> In the nineteenth century, phrenology, the measurement and study of an individual’s skull to assess personality, added systematicity to the notion of the innate criminal.<sup>65</sup> Much like physiognomy, the study of an individual’s personality from his or her appearance, phrenology relied on the assumption that outer appearances reflected inner states.<sup>66</sup> Spurzheim, a noted phrenologist, wrote that “there must be an organ of the brain that determines the propensity to kill, and . . . function[s] independently of other propensities.”<sup>67</sup> He noted protuberances in the skulls of several killers, which he attributed to an overdevelopment of particular regions of the brain.<sup>68</sup> Along with his colleague Gall, Spurzheim identified thirty-five characteristics of the head that corresponded with particular personality types.<sup>69</sup> Like most biological explanations, phrenologists based their explanations on a deterministic approach to human behavior. Criminality was not the result of free will gone awry, but rather “abnormal brain organization.”<sup>70</sup> Other nineteenth century theorists not engaged in phrenology also took a deterministic view of deviance. Dr. George Savage wrote that “moral insanity” is innate,

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62. ARISTOTLE, *PRIOR ANALYTICS* 100 (A.J. Jenkinson and G.R.G. Mure trans., 2006).

63. CONRAD & SCHNEIDER, *supra* note 61, at 217.

64. *Id.* at 262.

65. NICOLE HAHN RAFTER, *THE CRIMINAL BRAIN: UNDERSTANDING BIOLOGICAL THEORIES OF CRIME* 40 (2008).

66. *Id.* at 44.

67. *Id.* at 49.

68. *Id.* at 49–50.

69. CONRAD & SCHNEIDER, *supra* note 61, at 217.

70. RAFTER, *supra* note 65, at 50.

inherited from “unsound parents” or a result of conception while the “parents were feverish or syphilitic.”<sup>71</sup>

Cesare Lombroso, the father of modern criminology, wrote that the criminal is vain, bloodthirsty, remorseless, and undeterrable.<sup>72</sup> In his work *Criminal Man*, Lombroso asserts a theory of atavism, the tendency to revert to earlier forms, suggesting that criminals are biological “throwbacks,” who have reverted to an earlier, primitive, subhuman being, with multiple physical anomalies that separated them from the average person.<sup>73</sup> He writes, “[t]he most horrendous and inhuman crimes have a biological, atavistic origin in those animalistic instincts that . . . resurface instantly under given circumstances.”<sup>74</sup>

The concept of heredity played a key role in early twentieth century biological theories. For example, Johannes Lange published *Crime as Destiny* in 1929, which detailed the findings of his study of twins assessing the inheritance of crime.<sup>75</sup> Lange studied thirty pairs of twins, at least one of whom was in prison. The study contained thirteen pairs of identical twins and seventeen pairs of fraternal twins.<sup>76</sup> Lange hypothesized that if identical twins were found in prison together more often than fraternal twins were, this finding would indicate the heritability of criminality.<sup>77</sup> Lange’s study confirmed his heredity hypothesis. Of the thirteen identical twin sets, Lange found ten cases in which both were in prison together, whereas only two sets of the seventeen sets of fraternal twins were in prison together.<sup>78</sup> Thus, Lange concluded, “as far as crime is concerned, monozygotic [identical] twins on the whole react in a definitely similar manner, dizygotic [fraternal] twins behave quite different . . . innate tendencies play a preponderant part [in the causes of crime].”<sup>79</sup> In the wake of the Nazi eugenics of the

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71. *Id.* at 34.

72. CESARE LOMBROSO, *CRIMINAL MAN* 40, 91 (Mary Gibson & Nicole Hahn Rafter trans., 2006).

73. *Id.* at 1, 91.

74. RAFTER, *supra* note 65, at 74.

75. JOHANNES LANGE, *CRIME AS DESTINY: A STUDY OF CRIMINAL TWINS* (1929).

76. CONRAD & SCHNEIDER, *supra* note 61, at 219.

77. *Id.*

78. *Id.*

79. *Id.*

1930s and 1940s, biological theories fell out of favor with criminologists.<sup>80</sup>

However, the latter part of the twentieth century saw a resurgence in biological theories of crime, beginning with *Crime and Personality*, in which Hans Eysenck “revived the medical model by explaining criminality in genetic and neurophysiological terms.”<sup>81</sup> In 1985, Wilson and Herrnstein published *Crime and Human Nature*, another major work in the revival of biological theories of crime. Wilson and Herrnstein argue that individuals differ at birth in the degree to which they are at risk for criminality.<sup>82</sup> Working through the various biological theories offered throughout history, Wilson and Herrnstein conclude, “[t]he evidence leaves no doubt that constitutional traits correlate with criminal behavior.”<sup>83</sup> Although critics believe Wilson and Herrnstein engaged in “bad social science” and that their evidence leaves significant doubt, *Human Nature* began the resurgence of interest in biological theories of crime.<sup>84</sup>

As scholars from various disciplines sought to understand the general heritability of deviant behavior, they also searched for the specific genetic sources of these behaviors.<sup>85</sup> However, unlike previous biological theorists, many of today’s behavioral scientists are not determinists. Studies on a variety of genes, particularly genes related to the formation and processing of neurotransmitters (chemicals in the brain that transmit signals from a neuron to a cell across a synapse), have yielded results that suggest a genetic component to deviant, particularly aggressive, behavior.<sup>86</sup> For example, a particular recessive genotype of the tryptophan hydroxylase-1 (“TPH1”) gene, involved in the synthesis of the neurotransmitter serotonin, has been

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80. RAFTER, *supra* note 65, at 199.

81. *Id.* at 200.

82. *Id.* at 207.

83. *Id.* at 173.

84. RICHARD A. BALL, ET AL., CRIMINOLOGICAL THEORY: CONTEXT AND CONSEQUENCES 307–11 (2011).

85. See, e.g., Kent Nilsson et al., *Role of Monoamine Oxidase A Genotype and Psychosocial Factors in Male Adolescent Criminal Activity*, 59 *BIO. PSYCH.* 121, 121 (2006); Nelly Alia-Klein et al., *Brain Monoamine Oxidase A Activity Predicts Trait Aggression*, 28 *J. NEUROSCIENCE* 5099, 5099 (2008); Joshua W. Buckholtz & Andreas Meyer-Lindenberg, *MAOA and the Neurogenetic Architecture of Human Aggression*, 31 *TRENDS IN NEUROSCIENCES* 120, 120 (2008).

86. *Id.*

found to be a genetic risk factor for criminal behavior, particularly homicidal behavior in patients with schizophrenia.<sup>87</sup> The MAO-A gene, also known as the “warrior gene,” which codes an enzyme responsible for degrading the neurotransmitters norepinephrine, adrenaline, serotonin, and dopamine, has also been a significant target of research.<sup>88</sup> Studies have revealed that a particular low activity form of the gene, in conjunction with environmental factors, could lead to aggressive impulsiveness.<sup>89</sup> While genetic research continues, particularly in an effort to understand gene-by-environment interactions,<sup>90</sup> advances in structural and functional imaging technology have led researchers to focus on the brain as the source of understanding criminal behavior.

“Neurocriminologists” are conducting research to understand deviant behavior in what many in the field claim is the final frontier—the origin of all behavior—the brain.<sup>91</sup> Like those studying gene-by-environment interactions, neurocriminologists recognize an interaction between an individual’s biology and his or her environment. Particularly popular, at present, is research on the neurological correlates of antisocial personality (psychopathy) and violent behavior, paying significant atten-

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87. Kyung Bong Koh et al., *The Relation of Serotonin-Related Gene and COMT Gene Polymorphisms with Criminal Behavior in Schizophrenic Disorder*, 73 *J CLINICAL PSYCHIATRY* 159 (2012).

88. See, e.g., Nilsson et al., *supra* note 85, at 121; Alia-Klein et al., *supra* note 85, at 5099; Buckholtz & Meyer-Lindenberg, *supra* note 85, at 120; Roope Tikkanen et al., *Effects of MAO-A Genotype, Alcohol Consumption, and Aging on Violent Behavior*, 33 *ALCOHOL CLIN. EX. RES.* 428 (2009).

89. Klaus A. Miczek & Eric W. Fish, *Monoamines, GABA, Glutamate, and Aggression*, in *BIOLOGY OF AGGRESSION* 114, 126 (Randy J. Nelson ed., 2005).

90. Gene-by-environment interaction is the name for the interaction between an individual’s genetic makeup and his surrounding environment. This theory suggests that while a gene may be present, environmental conditions affect the phenotypic presentation of that gene. *Gene-Environment Interaction*, THE NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES, <http://www.niehs.nih.gov/health/topics/science/gene-env/index.cfm> (last visited Jan. 16, 2013).

91. Admittedly, the claims that scientists are investigating the origins of behavior and are examining “the final frontier” are reminiscent of claims that have been made by scientists in the past. As scientists have pushed the limits of existing technology throughout history, they have claimed to be looking at the “source” of behavior.



tion, as Greely notes, to re-conceptualizing the criminal law's understanding of the culpable criminal.<sup>92</sup>

Imaging studies have paid attention to a variety of regions of the brain. Scholars have explored the role of the prefrontal cortex—the region of the brain just behind the forehead that is implicated in decision-making and regulating behavior—in antisocial and violent behavior since the early nineteenth century. The case of Phineas Gage provided perhaps the first look into the involvement of the prefrontal cortex in antisocial behavior. Gage, a railroad worker, was injured when an iron spike went through his head, resulting in extensive damage to his prefrontal cortex. Following the incident, Gage, the normally courteous and hard-working individual, became antisocial.<sup>93</sup> Since the Gage case, empirical studies have shown that patients with antisocial personality disorder (“APD”) have an 11% reduction in prefrontal cortex gray matter, with similar findings in studies of aggressive individuals and pathological liars.<sup>94</sup> Functional imaging studies have also revealed decreased activation in this region of the brain in impulsive violent individuals, suggesting impulsive violence stems from diminished use of the prefrontal cortex's inhibition systems.<sup>95</sup> In addition to the prefrontal cortex, a variety of areas of the limbic system show structural and functional differences in individuals with antisocial behavior.<sup>96</sup>

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92. Greely, *supra* note 1, at 1103–04.

93. Michael Freeman, *Law and the Brain*, in *LAW AND NEUROSCIENCE*, 13 *CURRENT LEGAL ISSUES* 5, 4–5 (2011).

94. Adrian Raine et al., *Reduced Prefrontal Gray Matter Volume and Reduced Autonomic Activity in Antisocial Personality Disorder*, 57 *ARCH. GEN. PSYCHIATRY* 119, 119, 123 (2000).

95. Dean Mobbs et al., *Law, Responsibility, and the Brain*, 5 *PLOS BIOLOGY* 693, 693–94 (2007).

96. See, e.g., Kent A. Kiehl, *A Cognitive Neuroscience Perspective on Psychopathy: Evidence for Paralimbic Dysfunction*, 142 *PSYCHIATRY RES.* 107 (2006); Kent A. Kiehl et al., *Limbic Abnormalities in Affective Processing by Criminal Psychopaths as Revealed by Functional Magnetic Resonance Imaging*, 50 *BIO. PSYCH.* 677 (2001); Jari Tiihonen et al., *Amygdaloid Volume Loss in Psychopathy*, *SOCIETY FOR NEUROSCIENCE ABSTRACTS* 2017 (2000); Elsa Ermer et al., *Aberrant Paralimbic Gray Matter in Criminal Psychopathy*, 121 *J. ABNORMAL PSYCH.* 649 (2012). The limbic system is a set of structures, including the hippocampus, the hypothalamus, the amygdala and several surrounding areas that regulate a variety of functions, primarily emotion (particularly relevant for antisocial behavior is the role in fear conditioning).

The amygdala has become perhaps the most prominent area of the limbic system investigated in research on individuals with theory of mind deficit (Autism Spectrum Disorders), aggression, and the inability to interpret sadness and fear in faces. The focus on this region is due in part because of its role in emotional processing.<sup>97</sup> As Simon Baron-Cohen notes, each of these disorders can be characterized by a lack of empathy.<sup>98</sup> Particular focus has been paid to this region of the brain in psychopathic criminals in an effort to understand their poor fear conditioning and lack of empathy. According to functional magnetic resonance imaging (“fMRI”) studies, psychopathic offenders have decreased activation in the amygdala in response to shocking and fearful stimuli.<sup>99</sup>

Adrian Raine, a neuroscientist at the University of Pennsylvania, has discovered the first neurodevelopmental marker for antisocial personality and psychopathy.<sup>100</sup> In a study of eighty-seven individuals, Raine and his colleagues examined the presence of Cavum Septum Pellucidum (“CSP”), a septum pellucidum with separation between its two component parts, to test a neurodevelopmental hypothesis of antisocial personality disorder and psychopathy.<sup>101</sup> Their study found evidence that those with CSP had significantly “higher levels of antisocial personality, psychopathy, criminal charges and convictions” compared with control subjects, supporting the conclusion that there is a neurodevelopmental basis to a broad spectrum of antisocial behaviors.<sup>102</sup>

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97. *Id.*

98. SIMON BARON-COHEN, *THE SCIENCE OF EVIL* (2011).

99. Niels Birbaumer et al., *Deficient Fear Condition in Psychopathy: A Functional Magnetic Resonance Imaging Study*, 62 *ARCH. GEN. PSYCHIATRY* 799, 803 (2005).

100. Adrian Raine et al., *Neurodevelopmental Marker for Limbic Maldevelopment in Antisocial Personality Disorder and Psychopathy*, 197 *BR. J. PSYCHIATRY* 186, 186 (2010).

101. *Id.* According to Raine, “Cavum Septum Pellucidum is a marker for fetal neural maldevelopment.” During fetal development, a space forms between the two laminae-forming the CSP. The closure of the CSP begins at approximately the twentieth week of gestation and ends between three and six months after birth. In this study, Raine is comparing individuals whose CSP failed to fuse with those whose CSP developed normally. *Id.*

102. *Id.* at 190.

## IV. NEUROSCIENCE IN COURTROOMS TODAY

Neuroscientific evidence addressing a variety of legal issues has begun to appear in courtrooms across the globe. In most instances, the evidence has been offered to address individual or group culpability.<sup>103</sup> In the United States, the most prominent uses of neuroscientific evidence have been to establish diminished culpability. In three decisions since 2005, the Supreme Court addressed the use of neuroscientific evidence within the framework of punishment of adolescent criminals: *Roper v. Simmons*,<sup>104</sup> *Graham v. Florida*,<sup>105</sup> and *Miller v. Alabama*.<sup>106</sup> In *Roper*, several amicus briefs cited neuroscientific studies to argue that imposing the death penalty on adolescents under age eighteen is cruel and unusual punishment.<sup>107</sup> The science was used to demonstrate that adolescents' brains are not fully developed, particularly their frontal lobes, supporting the assertion that adolescents' self-control is diminished.<sup>108</sup> The Court eventually found the death penalty unconstitutional for minors, based on "objective indicia" that there was a national consensus opposing the imposition of the death penalty on individuals under eighteen.<sup>109</sup> However, the *Roper* court did not clearly define the extent of its reliance on the neuroscientific evidence. Five years later, the Court considered the constitutionality of sentencing minors to life in prison without the possibility of parole for non-capital crimes in *Gra-*

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103. For example, neuroscience has been used to support the proposition that juveniles, as a class of offenders, are less culpable than adult offenders, and therefore should not be executed or imprisoned for life without the possibility of parole. In other instances, expert witnesses, Adrian Raine and Kent Kiehl, have testified in the sentencing phase of trials that a particular individual suffered from neurologic abnormalities that should mitigate the punishment meted out by the court. See the cases of Donta Page and Brian Dugan, respectively.

104. *Roper v. Simmons*, 543 U.S. 551, 555–56, 559 (2005).

105. *Graham v. Florida*, 130 S.Ct. 2011, 2054–55 (2010).

106. *Miller v. Alabama*, 132 S.Ct. 2455, 2460 (2012).

107. See, e.g., Brief for the American Psychological Association, and the Missouri Psychological Association as Amici Curiae Supporting Respondent at 4, *Roper v. Simmons*, 542 U.S. 551 (2005), (No. 03-633); Brief for the American Medical Association et al. as Amici Curiae Supporting Respondent at 3, *Roper v. Simmons*, 543 U.S. 551 (2005) (No. 03-633).

108. Brief for the American Medical Association at 20, *Roper v. Simmons*, 543 U.S. 551 (2005) (No. 03-633).

109. *Roper v. Simmons*, 543 U.S. 551, 567, 572–73 (2005).

*ham*. As in *Roper*, medical and psychological groups submitted amicus briefs addressing issues related to the development of the adolescent brain.<sup>110</sup> Justice Kennedy, writing for the majority in *Graham*, clearly indicated the influence neuroscience had on the decision, as had not been the case in *Roper*.<sup>111</sup> He wrote,

No recent data provide reason to reconsider the Court's observations in *Roper* about the nature of juveniles. As petitioner's *amici* point out, developments in psychology and brain science continue to show fundamental differences between juvenile and adult minds. For example, parts of the brain involved in behavior control continue to mature through late adolescence.<sup>112</sup>

Most recently, in *Miller*, the Supreme Court ruled that mandatory life without parole for juveniles convicted of homicide crimes violates the Eighth Amendment.<sup>113</sup> In this case, the Court recognizes that the science presented to the Court justifying its decisions in *Roper* and *Graham* has become even stronger, requiring individually tailored sentencing that takes into account the particular characteristics of the youth offender.<sup>114</sup> During this same period of time, neuroscientific evidence and expert testimony based on fMRI scans have been offered during both the trial and the sentencing phases in two cases to mitigate culpability for specific adult offenders in murder cases in the United States.

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110. See Brief for the American Medical Association et al. as Amici Curiae Supporting Neither Party, *Graham v. Florida*, 130 S.Ct. 2011 (2010) (Nos. 08-7412, 08-7621); Brief for the American Psychological Association et al. as Amici Curiae Supporting Petitioner, *Graham v. Florida*, 130 S.Ct. 2011 (2010) (Nos. 08-7412, 08-7621).

111. *Graham v. Florida*, 130 S.Ct. 2011, 2054–55 (2010). While amicus briefs were filed in *Roper*, the opinion of the Court never explicitly cited neuroscientific evidence. Lizzie Buchen, *Science in Court: Arrested Development*, 484 *NATURE* 304, 306 (Apr. 18, 2012).

112. *Graham*, 130 S.Ct. at 2026.

113. This decision, unlike *Roper* and *Graham* “does not categorically bar a penalty for a class of offenders or type of crime . . . . Instead, it mandates only that a sentencer follow a certain process—considering an offender’s youth and attendant characteristics—before imposing a particular penalty.” *Miller v. Alabama*, 132 S.Ct. 2455, 2471 (2012). Thus, sentencers may continue to impose life without parole sentences for juveniles convicted of homicide crimes; however, the sentence must have the *option* not to impose such a sentence.

114. *Id.* at 2464 n.5.

In an Illinois criminal proceeding, Kent Kiehl, a professor of psychology at the University of New Mexico, scanned the brain of convicted murderer Brian Dugan.<sup>115</sup> Dugan, who was already serving two life sentences, faced the death penalty for another murder. Kiehl scanned Dugan's brain using a series of cognitive control, attention, and moral-decision making tests, and conducted a psychological interview on Dugan.<sup>116</sup> Dr. Kiehl determined Dugan scored a 38 on the Hare Psychopathy Checklist Revised ("PCL-R"), a diagnostic test developed by Robert Hare of the University of British Columbia.<sup>117</sup> The PCL-R is a clinical assessment for psychopathy, and Dugan's score of 38 qualified him as a "psychopath."<sup>118</sup> According to the functional MRI scans, several areas of Dugan's brain showed deficiencies common for psychopaths.<sup>119</sup> Kiehl testified about his findings at Dugan's trial.<sup>120</sup> Ultimately, the jury sentenced Dugan to death.<sup>121</sup> With Governor George Ryan's bill ending the use of the death penalty in Illinois, Dugan's sentence has been commuted to life without parole.

In Colorado, Adrian Raine testified similarly at Donta Page's murder trial, citing deficiencies in particular regions of Page's brain in support of a lesser sentence.<sup>122</sup> Ultimately, a three-judge panel, sentencing Page to life without parole, determined that the nature of Page's crime did not rise to the level of warranting the death penalty, particularly in light of his upbringing.<sup>123</sup>

Abroad, an Italian court admitted neuroscientific evidence to demonstrate the defendant's inability to distinguish between

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115. Matthew Taylor, *Psychopaths: Born Evil or With A Diseased Brain?*, BBC NEWS (Nov. 14, 2011), <http://www.bbc.co.uk/news/health-15386740>.

116. Virginia Hughes, *Science in Court: Head Case*, 464 NATURE 340, 340 (2010).

117. *Id.* at 341.

118. *Id.* According to Kiehl's assessment, Dugan scored a 38 out of a possible 40, putting him at the extreme end of the psychopathy continuum.

119. *Id.*

120. *Id.*

121. *Id.* at 342.

122. Howard Pankratz, *Witness: Page Brain-Damaged*, DENVER POST, Nov. 10, 2000.

123. Howard Pankratz, *Tuthill Killer Spared Death Penalty*, DENVER POST (Mar. 3, 2001), <http://extras.denverpost.com/news/news0303b.htm>.

right and wrong.<sup>124</sup> In that case, Stefania Albertani murdered her sister, burned the corpse, and attempted to kill her parents.<sup>125</sup> Albertani pled guilty to the charges in 2009. Using EEG and Voxel Based Morphometry (“VBM”), scientists found a lack of integrity and function in the anterior cingulate cortex, which controls aggressiveness and compulsivity.<sup>126</sup> This finding coupled with the presence of the MAOA-uVNTR was said to explain, at least in part, Albertani’s propensity to act aggressively and compulsively.<sup>127</sup> The judge espoused the virtues of neuroscience to complement traditional psychiatric behavioral assessments to define precise pathologies and evaluate individual abilities to distinguish between right and wrong.<sup>128</sup> As a result of the neuroscientific evidence, Albertani’s sentence was reduced to twenty years.<sup>129</sup> In addition to culpability, neuroscientific evidence has been offered for assessing truthfulness of a witness.<sup>130</sup> With the permeation of neuroscientific evidence in courtrooms across the globe, the ICC is likely to face decisions regarding the admissibility and value of neuroscientific evi-

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124. Fabio Turone, *Medical Tests Help Reduce Sentence of Woman Accused of Murder*, 343 *BMJ* (2011).

125. Hank Greely, *Another ‘Brain Mitigation’ Criminal Sentence from Italy*, *LAW AND BIOSCIENCES BLOG* (Sept. 3, 2011), <http://blogs.law.stanford.edu/lawandbiosciences/2011/09/03/another-brain-mitigation-criminal-sentence-from-italy/>.

126. Barbara Bottalico, *The Albertani Case in Italy*, *NEUROETHICS AND LAW BLOG* (Sept. 5, 2011, 10:53 AM), [http://kolber.typepad.com/ethics\\_law\\_blog/2011/09/the-albertani-case-in-italy-bottalico.html](http://kolber.typepad.com/ethics_law_blog/2011/09/the-albertani-case-in-italy-bottalico.html).

127. *Id.*

128. Turone, *supra* note 99, at 343.

129. *Id.*

130. Neuroscientific lie detection has been excluded in the only two efforts to admit it in U.S. courts at the time of this writing, in *United States v. Semrau*, 693 F.3d 510, 516 (6th Cir. 2012) and *Wilson v. Corestaff Services L.P.*, 900 N.Y.S.2d 639, 641–42 (2010). However, courts in other parts of the world have been less resistant to its use. Brain-based lie detection has found great success in India, particularly in the state of Maharashtra. The technology was used to support dozens of convictions, including one murder case. In that case, the prosecution used Brain Electrical Oscillations Signature (“BEOS”) test to demonstrate that the defendant had experiential knowledge of poisoning her former fiancé. For a discussion of India’s use of neuroscientific evidence, see Anand Giridharads, *India’s Use of Brain Scans in Courts Dismays Critics*, *N.Y. TIMES*, Sept. 15, 2008, at A10, and Teneille Brown & Emily R. Murphy, *Through A Scanner Darkly: The Use of fMRI as Evidence of Mens Rea*, 22 *J.L. & HEALTH* 319, 336–37 (2008).

dence in the future. How this information affects the administration of justice is a crucial issue.

#### V. DOING JUSTICE IN THE FACE OF "THE SCIENCE OF EVIL"

*What my love and anger propels me to do is not what our government should do. Our government should help heal my pain, but also find ways to punish that do more than exact the most primitive kind of bloodlust and vengeance. The government should help heal our pain, but not offer the promise of a simple response to complex problems: the problems of violence that plague our society.*

Austin Sarat

The "core crimes" of international law "violate the most central norms of humanity."<sup>131</sup> The global community has come to expect individuals be held to account for their crimes, to provide justice to the victims and to society. There have been several approaches to seeking justice in the wake of atrocity. In a number of countries, South Africa being the most well-known, the post-conflict government has conducted truth commissions. Some of these commissions are vested with the power to grant amnesty for crimes committed on behalf of the state in exchange for a full accounting of those crimes.<sup>132</sup> However, in the seven decades since Nuremberg, the perpetrator trial has become the dominant response to atrocity, and many consider it a fundamental requirement and method of doing justice.<sup>133</sup>

Eric Blumenson writes, "[t]o allow Pol Pot, Pinochet, and others guilty of such crimes to go unpunished is a form of legal amnesia that appears to excuse the most egregious deeds, be-

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131. STEVEN R. RATNER & JASON S. ABRAMS, ACCOUNTABILITY FOR HUMAN RIGHTS ATROCITIES IN INTERNATIONAL LAW: BEYOND THE NUREMBERG LEGACY 336 (2d ed. 2001).

132. AMNESTY INTERNATIONAL, COMMISSIONING JUSTICE: TRUTH COMMISSIONS AND CRIMINAL JUSTICE 12–13 (2010). According to Amnesty International's report, there have been forty truth commissions established around the world between 1974 and 2010. However, only three of these commissions (South Africa, Grenada, and Indonesia) were constituted with the power to grant or recommend amnesty for crimes committed under international law. Five additional commissions were given the power to grant or recommend amnesty for crimes other than crimes under international law.

133. Lawrence Douglas, *Shattering Nuremberg: Toward a Jurisprudence of Atrocity*, HARVARD INT'L REV. (Nov. 21, 2007, 7:40PM), <http://hir.harvard.edu/shattering-nuremberg>.

tray the victims who endured them, and encourage similar crimes against others.”<sup>134</sup> The applicability of the traditional trial model is complicated by the nature of the crimes and will only be further complicated by the introduction of neuroscientific evidence. This section will discuss the theories of justice underlying the perpetrator trial, some of the known problems with these theories, and present a discussion of the new challenges neuroscientific evidence will bring.

At the most basic level, necessary for the fair administration of any criminal trial, are substantive and procedural rights. Early perpetrator trials were merely show trials, predetermined to find the accused guilty. Charles I of England, in the first war crimes trial in a nominal court of law, was denied the right to counsel, to present a defense, to cross-examine the witnesses against him, or to appeal the court’s decision.<sup>135</sup> The twentieth century war crimes trials represent a marked departure from this first venture. The framers of the London Charter worked hard to assure the rights of the accused at the IMT. While the charter left many of the specific technical rules of procedure up to the trial judges, the framers included a section titled “Fair Trial for Defendants,” which contemplated a just, fair, and unobjectionable process.<sup>136</sup> The tradition has carried through the current war crimes trials. The convening statutes are carefully crafted, providing significant, detailed guidance on the substantive jurisdiction of the crimes prosecuted and the procedural rules governing the trials, including the rights of the accused. For example, Article 21 of the convening statute of the ICTY provides for detailed rights of the accused, while Article 25 provides for appellate process. Furthermore, unlike the IMT, the Rules of Procedure and Evidence of the ICTY provide detailed technical guidelines for the administration of the proceedings and admissibility of evidence. This is not to say all technical aspects of proceedings before the ICTY are unambiguous.

Particularly relevant to this discussion is the ambiguity in the precise definition of diminished or lack of mental capacity before international criminal tribunals. This defense has only

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134. Eric Blumenson, *The Challenge of a Global Standard of Justice: Peace, Pluralism and Punishment at the International Criminal Court*, 44 *COLUM. J. TRANSNAT’L L.* 801, 819 (2006).

135. SMITH, *supra* note 20, at 39.

136. London Charter, *supra* note 43, sec. 4, art. 16.



been presented once before an international court, at the ICTY. In the “Celebici Camp” trial, defendant Esad Landzo raised a “special defense” of diminished or lack of mental responsibility.<sup>137</sup> At the time, and still today, the definition of the legal standard for such a defense is ambiguous. During his trial, Landzo filed for a clarification of the precise legal parameters.<sup>138</sup> The court determined that the defendant bore the burden of proving this defense, but reserved the definition for final judgment.<sup>139</sup> Ultimately, the final judgment provided little clarity on the matter, leaving open the issue of what constitutes a “lack of capacity.”<sup>140</sup> This decision leads to the issue of neuroscientific defenses at the ICC. Article 31(1)(a) of the Rome Statute excludes individuals from the class of the criminally responsible if that person “suffers from a mental disease or defect that destroys that person’s capacity to . . . control his or her conduct to conform to the requirements of the law.”<sup>141</sup>

The “legally non-responsible/excludable” category is a socially constructed one, heavily influenced by the moral and value judgments of society that may vary from society to society. Law, and particularly legal categories such as this one, is carefully constructed based on our understanding of fairness and human behavior.<sup>142</sup> For Greene and Cohen, neuroscience will

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137. Landy F. Sparr, *Mental Incapacity Defenses at the War Crimes Tribunal: Questions and Controversy*, 33 J. AM. ACAD. PSYCHIATRY L. 59, 63 (2005).

138. *Id.* at 64.

139. Prosecutor v. Delalic, Mucic Delic and Landzo, Case No. IT-96-21-T, Judgment, ¶ 78 (Int'l Crim. Trib. for the Former Yugoslavia Nov. 16, 1998).

140. Sparr, *supra* note 137, at 64.

141. Rome Statute art. 31, sec. 1(a). The language of “destruction,” which provides for a complete excuse from criminal responsibility, rather than diminished culpability and a mitigated prison sentence, has been said to provide a more precise definition of the requirements for a successful affirmative defense than have other formulations of “insanity defenses,” such as the definition employed at the ICTY. That definition, as seen in the Landzo case, left unclear whether diseases and disorders of the mind that affect control over behavior constitute only partial defenses or complete excuse from culpability. However, the inexactitude of psychological science and neuroscience makes it difficult to ever ascertain whether an individual suffers from only a partial inability to conform his or her actions to the law or a complete destruction of that ability. As such, the framing of the affirmative psychological defense at the ICC, and the clear implication of complete exclusion from responsibility, may be open to more subjective interpretation than earlier definitions.

142. Greene & Cohen, *supra* note 3, at 1775.

challenge the status quo of libertarianism<sup>143</sup> that currently underlies the law, shedding greater light on an individual's ability to control his or her conduct to conform to the requirements of the law.<sup>144</sup> As Joshua Greene writes, the "legitimacy of the law . . . depends on its adequately reflecting the moral intuitions and commitments of society."<sup>145</sup> Some neurocriminologists seek to shed greater light on individuals' responsibility for actions, with the hope that their findings can better inform society's intuitions about human behavior. International criminal tribunals, particularly the ICC, will likely be forced to determine whether to accept the logic of neuroscience to excuse or partially excuse defendants with neurologic impairments. As courts in the United Kingdom, the Netherlands, and Germany begin and continue to recognize a wider range of mental disorders as mitigating and legally excusing, can the ICC afford to refuse to acknowledge these conditions and the supporting evidence?<sup>146</sup>

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143. *Id.* at 1776. Here, the term libertarianism is not used in the political philosophical sense. Instead, the term libertarianism in the metaphysical philosophical sense describes an incompatibilist view that human beings are agents with free will. Therefore, determinism is false. Greene and Cohen assert that although the current legal doctrine is officially compatibilist, meaning determinism can be true and people can be agents with free will, the law is ultimately grounded in institutions that are philosophically libertarian. *Id.*

144. *Id.* at 1775.

145. *Id.* at 1778.

146. According to de Ruiter and Trestman, "[t]here is a growing uneasiness about crime and public safety" in the Netherlands that has been accompanied by recognition that alternative strategies are needed to address crime. The Dutch Parliament and the Ministries of Health and Justice have called for reports on the state of the art treatment for mentally disturbed offenders and on the prevention and treatment of antisocial personality disorder. In part this stems from the Dutch recognition of greater variation in the degree of responsibility for criminal conduct. In contrast to the United States, in which an offender is only sent to a forensic hospital if they suffer from a major psychological disorder, such as schizophrenia, a large proportion of patients in Dutch forensic psychiatric hospitals have a personality disorder without an accompanying major mental disorder. Clearly, the Dutch system is open to the notion that a wide variety of disorders can diminish responsibility for conduct. See Corine de Ruiter & Robert L. Trestman, *Prevalence and Treatment of Personality Disorders in Dutch Forensic Mental Health Services*, 35 J. AM. ACAD. PSYCHIATRY L. 92, 92, 94 (2007). For a discussion of the United Kingdom, Germany, and other countries see Landy F. Sparr, *Personality Disorders and Criminal Responsibility: An International Perspective*, 37 J. AM. ACAD. PSYCHIATRY L. 168, 172–75 (2009).

In all legal systems, society is forced to draw lines that hold some individuals responsible, but not others. Even among those that can be held criminally responsible, there are further categorical divisions. For example, the United States Supreme Court has distinguished several classes of people for whom the available punishments are limited, i.e., prohibiting execution of minors and the mentally retarded, based on assumptions about the agency and capacity of the actor.<sup>147</sup> Implicitly, these lines are drawn based on concepts of morality and justice, sometimes rooted in scientific knowledge about human behavior.<sup>148</sup> Certainly, the bright line distinctions that society and the law create do not perfectly fit the real world. Is a person with an IQ of 71 so radically different than a person with an IQ of 69, such that the former is eligible to be executed while the latter is not? Is the brain of a nineteen-year-old so significantly different from a seventeen-year-old that the former should be eligible for execution, while the latter should not?

The distinctions that law makes are also not universal. The minimum age at which an individual can be held criminally responsible varies by country and in some instances within a country. For example, in the United States, the youngest minimum age at which any state holds a child legally responsible is six, while the highest minimum age in any state is twelve. In the United Kingdom, whose legal system provides much of the foundation of the U.S. legal system, the minimum age is ten. Do the United Kingdom and other nations (or other states, in the case of the United States) that hold a child under twelve responsible commit a moral wrong by doing so?

It is unrealistic to expect science to provide us with simple answers to these complex questions. Even when science can shed light on issues, how far will the law go in response to science? History would suggest that even with scientific evidence, the law is only willing to go so far to recognize new information. For example, neuroscience has provided U.S. courts with some information on juvenile brains and their responsibility for actions. However, the courts have not said that a juve-

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147. See *supra* notes 103–114 and accompanying text.

148. See *Roper v. Simmons*, 543 U.S. 551, 572–73 (2005) and *Graham v. Florida*, 130 S.Ct. 2011, 2026–27 (2010), in which the Supreme Court, relying on psychological and neuroscientific evidence, determined that juveniles lacked the requisite agency to be responsible for particular crimes to the extent that would justify execution or life without parole.

nile should be completely excused for his or her actions based on brain development. Instead, the courts have simply limited the permanence of the penal response to juvenile deviance.<sup>149</sup> Similarly, neuroscience may provide us with information from which to draw distinctions between who is and is not culpable, but the law may choose not to fully exculpate these individuals, but rather tailor the punishment as has been done with juveniles.

Thus, a refusal to include particular conditions in the category of legally exculpatory, even when inclusion is supported by neuroscientific evidence, is not necessarily an indictment of the system. Exclusion does not prove that the trials are unfair or are simply show trials. However, if the relevant disciplinary groups begin to treat the science as valid, a total denial of the defendant's right to present a neuroscientific defense is likely to bring at least some scrutiny to the motivations for rejecting science. Some will likely see the decision as the result of a value-laden judgment that these individuals are inexcusable, regardless of their ability to conform their actions to the law. Society is likely willing to accept this rejection.

If the rights of the accused and the victim are balanced, very few are likely to complain that the scale has tipped in favor of the victim. However, if the courts deny defendants the right to present an exculpating defense, and perhaps the only viable defense available in some instances, because of a value judgment, the courts would be undermining what the framers of international criminal tribunals have worked hard to do: establish legitimate trials for those accused of even the most heinous crimes.<sup>150</sup> The rejection would also go against the establishment of the insanity defense that is available in so many domestic legal systems.<sup>151</sup> For many of these defendants, as with many of the defendants who employ an insanity defense in domestic criminal trials, the affirmative defense based on neuroscience would be the *only* defense. A complete rejection, excluding neuroscience, may reveal that the purpose of these trials is

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149. See *supra* notes 103–114 and accompanying text.

150. See *supra* Part II and Part IV for a discussion of the development of principles of fairness and legitimacy in International Criminal Trials beginning with Nuremberg.

151. See, e.g., RITA JAMES SIMON & HEATHER AHN-REDDING, *THE INSANITY DEFENSE, THE WORLD OVER* (2006) for a discussion of the insanity defense in countries around the world.

to find the defendant guilty of the act as a symbol of recognizing the wrong and standing with the victims, regardless of biological responsibility for the conduct. This choice does not necessarily spell the end of the international criminal trial, or make these trials pure show trials. Perhaps, a rejection simply reinforces the notion that trying to fit ordinary legal procedures to extraordinary crimes is imperfect. It may suggest that what is just, even what procedures are just, is so contextual that the language of ordinary law is simply inapplicable to the international criminal trial.

On a deeper level, neuroscience presents significant challenges for the current theories of justice and punishment that underlie bringing perpetrators before a criminal tribunal. Ordinary domestic criminal law subjects the guilty offender to penal sanctions justified by rehabilitation, retribution, and deterrence, both specific and general.<sup>152</sup> While the rationality of ordinary law has been borrowed in support of the extraordinary perpetrator trial, reformation and rehabilitation play almost no part in the extant literature on supranational punishment.<sup>153</sup> Instead, international law theorists focus on deterrence and retribution.<sup>154</sup> Deterrence is premised on the notion that the individual is a rational actor who will engage in a cost-benefit analysis, weighing the potential for success in his criminal act against the possibility of criminal prosecution and punitive sanction.<sup>155</sup> As Jeremy Bentham wrote, “[p]unishment must be the object of dread more than the offense is an object of desire.”<sup>156</sup> However, the deterrent effect of international criminal prosecutions is perhaps more dubious than the deterrent effect of even the harshest domestic criminal sanctions.

The IMT prosecuted the Nazis for their atrocities nearly seventy years ago and concluded with several defendants receiving

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152. For more discussion of the theoretical justifications of criminal sanctions, see, e.g., *Graham v. Florida*, 130 S.Ct. 2011, 2021–23 (2010); HERBERT L. PACKER, *THE LIMITS OF THE CRIMINAL SANCTION* 35–52 (1968); Douglas, *supra* note 133; Farooq Hassan, *The Theoretical Basis of Punishment in International Criminal Law*, 15 CASE W. RES. J. INT'L L. 39 (1983).

153. Douglas, *supra* note 133.

154. DRUMBL, *supra* note 153, at 11.

155. Kevin M. Carlsmith et al., *Why Do We Punish? Deterrence and Just Deserts as Motives for Punishment*, 83 J. PERSONALITY AND SOC. PSYCHOL. 284, 285 (2002).

156. Hassan, *supra* note 152, at 49.

the ultimate sanction—death.<sup>157</sup> Yet, in the intervening seven decades, there have been heinous crimes committed by state actors around the world. Criminal prosecutions have followed the cessation of hostilities in many of these instances, yet there continue to be state-sanctioned atrocities. Perhaps the deterrent effect is diminished by the relatively light sentences meted out before some criminal tribunals.<sup>158</sup> The mean sentence as of May 2006 at the ICTY was 14.3 years and the mean sentences of the Special Panels for East Timor was 9.9 years.<sup>159</sup> Further diminishing the effect of these light sentences, each of these tribunals has granted several individuals early release.<sup>160</sup>

Neuroscience further challenges the deterrent effect of international criminal prosecutions. If human behavior is in some way predetermined by brain biochemistry or structure, preventing the deviant behavior from occurring through the punishment of others is unlikely to be successful. Admittedly, there are very few, if any, neuroscientists and neurocriminologists who adopt a purely deterministic approach to human behavior. However, even under theories of moderate determinism, the deterrent effect of punishment is likely to be significantly diminished.

A fundamental requirement for deterrence to be successful is the assumption that the perpetrators are rational actors. However, when dealing with war criminals at the highest level of power, that assumption may become specious. Psychological assessments suggest that some of the infamously “evil” heads

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157. Twelve of the Nuremberg defendants were sentenced to death, including Joachim von Ribbentrop, Hans Frank, Alfred Rosenberg, Julius Streicher, Martin Bormann, Wilhelm Frick, Herman Göring, Alfred Jodl, Ernst Kaltenbrunner, Wilhelm Keitel, Fritz Sauckel, and Arthur Seyss-Inquart. Göring avoided hanging by committing suicide the night before his execution.

158. Certainly, the view that these sentences are lenient or inordinately light is context dependent. From an American perspective, these sentences may be seen as extremely light. Maximum sentences are far shorter in many European countries. Perhaps, from a different cultural perspective these sentences are not unusual. For example, in the Netherlands, there is no capital punishment and non-life sentences are limited to thirty years for murder and to fifteen years for manslaughter. For further discussion of homicide sentencing in the Netherlands, see Brian D. Johnson et al., *Sentencing Homicide Offenders in the Netherlands: Offender, Victim, and Situational Influences in Criminal Punishment*, 48 *CRIMINOLOGY* 981 (2010).

159. DRUMBL, *supra* note 153, at 11, 56.

160. *Id.* at 57–58.

of state possessed significant psychological disorders.<sup>161</sup> In 2007, psychologists Frederick Coolidge and Daniel Segal asked five experts to evaluate Hitler according to the DSM-IV (the fourth edition of the DSM). The experts claimed that Hitler scored highly on the personality disorder scales for paranoia, antisocial behavior, narcissism, and sadism.<sup>162</sup> The experts also believed that Hitler likely had schizophrenic tendencies.<sup>163</sup> Coolidge and Segal pursued their interest in exploring the psychological disorders of dictators, evaluating Saddam Hussein based on informant reports from eleven Iraqis who knew Hussein either personally or through family connections for an average of twenty-four years.<sup>164</sup> They claimed that Hussein, like Hitler, exhibited clear symptoms of paranoia, antisocial behavior, narcissism, and sadism.<sup>165</sup> Two years later, Coolidge and Segal endeavored to diagnose Kim Jong-il.<sup>166</sup> According to their analysis, Coolidge and Segal claimed that Kim Jong-il exhibited the same “big six” constellation of personality disorders.<sup>167</sup> Coolidge and Segal believe that these six personality disorders may commonly reflect the personality of dictators generally.<sup>168</sup>

Whatever deterrent role prosecution and punishment plays, “retribution is the dominant stated objective” of the perpetrator trial.<sup>169</sup> In administering and justifying the level and means of any punishment in response to criminal wrongdoing, society is forced to walk the fine line between retribution and revenge. The existence of a meaningful distinction between the two concepts in criminal law is heavily debated; however, retribution, unlike revenge, is grounded in the idea of “just deserts,” giving

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161. See Frederick L. Coolidge & Daniel L. Segal, *Was Saddam Hussein Like Adolf Hitler: A Personality Disorder Investigation*, 19 *MILITARY PSYCHOL.* 289, 290 (2007).

162. *Id.* at 290.

163. *Id.*

164. *Id.* at 291.

165. *Id.* at 293–94.

166. Frederick L. Coolidge & Daniel L. Segal, *Is Kim Jong-il Like Saddam Hussein and Adolf Hitler? A Personality Disorder Evaluation*, 1 *BEHAV. SCI. TERRORISM & POL. AGGRESSION* 195, 195 (2009).

167. *Id.* at 199.

168. Jason G. Goldman, *The Psychology of Dictatorship: Kim Jong-il*, *SCIENTIFIC AMERICAN* (Dec. 19, 2011), <http://blogs.scientificamerican.com/thoughtful-animal/2011/12/19/the-psychology-of-dictatorship-kim-jong-il/>.

169. DRUMBL, *supra* note 153, at 150.

people what they deserve for past actions.<sup>170</sup> The difficulty for retribution in the prosecution of war crimes, however, is that the acts of those brought to trial are so heinous that no available punishment can give these offenders what they deserve.<sup>171</sup> As Hannah Arendt wrote, “[f]or these crimes, no punishment is severe enough. It may well be essential to hang Göring, but it is totally inadequate. That is, this guilt, in contrast to all criminal guilt, oversteps and shatters any and all legal systems.”<sup>172</sup>

The limited severity of the sanctions available to the ICC and other international criminal tribunals further strains the ability to achieve retribution for war crimes. In contrast to the United States and the eighteen other nations currently employing capital punishment, the maximum sanction available to the ICC is life in prison.<sup>173</sup> In addition to the inability to administer a punishment fitting the crime, retributivism suffers from being offender-centric.<sup>174</sup> In administering punishment based on retributivist theory, justice to the victim is a “mere by-product of . . . the punishment that is required to treat the offender as she deserves.”<sup>175</sup> In fact, several studies have convincingly shown that survivors of atrocity have a strong preference for justice through truth telling.<sup>176</sup> This seemingly undermines at least one of the justifications for the international criminal trial, which is to bring about justice for the victims and their families.<sup>177</sup>

Setting aside, for the moment, these widely contested issues of the success of retributivism in war crimes trials, neurosci-

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170. Leo Zaibert, *Punishment and Revenge*, 25 *LAW AND PHILOSOPHY* 81 (2006).

171. Douglas, *supra* note 133.

172. GARY JONATHAN BASS, *STAY THE HAND OF VENGEANCE: THE POLITICS OF WAR CRIMES TRIBUNALS* 13 (2000).

173. DRUMBL, *supra* note 153, at 52.

174. Retributivism concerns itself only with what the *defendant* deserves, rather than focusing on what the *victim* desires. VICTOR TADROS, *THE ENDS OF HARM: THE MORAL FOUNDATIONS OF CRIMINAL LAW* 71 (2011).

175. Blumenson, *supra* note 134, at 836. Taking this conclusion one step further, the trial process itself often treats victims simply as a means to convict the defendant.

176. David Mendeloff, *Trauma and Vengeance: Assessing the Psychological and Emotional Effects of Post-Conflict Justice*, 31 *HUM. RTS. Q.* 592, 594–95 (2009).

177. Douglas, *supra* note 30, at 514, 520. *See also*, WILLIAM SCHABAS & NADIA BERNAZ, *ROUTLEDGE HANDBOOK OF INTERNATIONAL CRIMINAL LAW* 408 (2011).



ence further complicates the ability to justify punishment through retribution. As Stephen Morse points out, the law currently requires only minimal rationality, for example, the ability to tell right from wrong, to be legally responsible and deserving of punishment.<sup>178</sup> For Morse, neuroscientific discoveries thus far do not pose problems for the law's ability to hold individuals responsible.<sup>179</sup> Nor does Morse think it is likely we will discover anything soon that would materially challenge the law.<sup>180</sup> However, as Joshua Greene writes, "our operative legal principles exist because they more or less adequately capture an intuitive sense of justice."<sup>181</sup> While Greene concedes that Morse is correct as the law stands, Greene and others believe that neuroscience will challenge and reshape our sense of justice, posing problems for retributivist justifications for punishment in the future.<sup>182</sup> In part, Greene contends that punishment based in retributivism relies on a demanding concept of free will, rather than a minimal rationality.<sup>183</sup> If behavior is determined based on brain biochemistry or structure, then arguably we lack the requisite free will to meet the current standards of responsibility necessary for retributivism.<sup>184</sup> Peter Conrad reaches the same conclusion, though he reaches that conclusion through a different path. He writes that if deviance is characterized as "badness," deviants are considered responsible for their behavior.<sup>185</sup> Once deviance is placed in the realm of "sickness," the deviant is no longer responsible for his or her actions and instead is deserving of treatment, rather than punishment.<sup>186</sup> These notions create a number of problems. If the court rejects neuroscience, the defendant's procedural rights may be abrogated.<sup>187</sup> But, has the court also stepped from retribution into the realm of revenge? How can the court justify

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178. Morse, *supra* note 5, at 6–7; Stephen J. Morse, *New Neuroscience, Old Problems: Legal Implications of Brain Science*, 6 CEREBRUM 81 (2004), available at <http://dana.org/news/cerebrum/detail.aspx?id=1204>.

179. Morse, *supra* note 5, at 2.

180. *Id.* at 3.

181. Greene & Cohen, *supra* note 3, at 1775.

182. *Id.* at 1776.

183. *Id.* at 1775.

184. *Id.*

185. CONRAD & SCHNEIDER, *supra* note 61, at 34.

186. *Id.*

187. One could argue that failure to allow the defense to mount a legitimate defense constitutes an abrogation of procedural due process and fairness.

punishing offenders in the face of neuroscientific evidence demonstrating diminished free will?

The court may be able to legitimately move beyond the unwillingness to completely excuse war criminals, but any legitimacy maintained in the guilt phase of the trial may, for the staunchest of retributivists, be erased by a vengeful punishment.<sup>188</sup> If the ICC ignores scientific information demonstrating a diminished ability to control one's actions and continues to punish as it and other international tribunals have, it departs from engaging in retributivism. Whether continuing these punishments in opposition to science enters the realm of revenge is, at least in part, dependent on the extent to which neuroscience actually reshapes our moral intuitions and the extent to which there is another reasonable, sustainable justification for continuing the status quo punishment, such as expressivism or lustration.<sup>189</sup>

Desert and moral judgment do not exist in a vacuum. As with the substantive construction of the legally excludable, the notion of just deserts is socially constructed. When people draw moral distinctions between those deserving of blame and punishment and those who are excused, they do so not in abstraction but in context. State-sponsored atrocity is extraordinary. Finding a punishment that matches the horror done by genocidal war criminals is impossible. Perhaps, because of the extraordinary crimes under the jurisdiction of the ICC, society will continue to believe these individuals are deserving of punishment, regardless of biological culpability. Even if one were to concede that this no longer fits in the realm of retributivism because of a divide in the law and collective morality, there seem to be perfectly acceptable justifications for continuing to punish these offenders as the courts have, without entering the realm of revenge.

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188. Lawrence Douglas, *The Saddam Hussein Hanging: A Spectacle of Vengeance*, JURIST (Jan. 4, 2007), <http://jurist.org/forumy/2007/01/saddam-husseini-hanging-spectacle-of.php>.

189. Expressivism holds that enforcing punishments on individuals for their wrongdoing is a way of expressing disapproval for the behavior being punished. See Bill Wringe, *Why Punish War Crimes? Victor's Justice and Expressive Justifications of Punishment*, 25 L. AND PHIL. 159, 177–78 (2006). Lustration is the act of purging or cleansing, similar to expulsion. Under this justification, punishment is justified in its cleansing society of the wrongdoer. Douglas, *supra* note 188.

Greene may be correct that neuroscience will reshape our collective moral intuitions, necessitating changes in law, but his hypothesis may also be incomplete. Based on the decades of scholarship on war crimes trials, it is clear that the overriding sentiment is that these individuals deserve to suffer the worst possible fates for their crimes, no matter what. It seems unlikely to change society's desire to continue to force these individuals to suffer the consequences of their actions, regardless of whether they could "conform their actions" to the law. As Professor Lawrence Douglas writes, it may be possible to oppose the death penalty or other harsh punishment while endorsing its use for perpetrators of genocide, suggesting the moral difference between punishing ordinary criminals and extraordinary criminals.<sup>190</sup> Douglas contends that Arendt's justification for Eichmann's execution is the best orchestration of this point. In addressing the appropriateness of the death penalty for Eichmann, Arendt provides a reasoned justification for punishment: lustration.<sup>191</sup> She wrote in reference to Eichmann, "just as you supported and carried out a policy of not wanting to share the earth with the Jewish people and the people of a number of other nationals we find that no one, that is, no member of the human race, can be expected to want to share the earth with you."<sup>192</sup> Revenge, Nozick contends, is personal.<sup>193</sup> In contrast, the agent of retribution need have no special tie to the wrong done.<sup>194</sup> Thus, Arendt's reasoned judgment skirts the realm of revenge, justifying Eichmann's execution not in the name of the Jewish people or any other specific group, but in the name of humanity as a whole.<sup>195</sup> Expressivism is a viable alternative to retributivism, particularly as it ties in with the inherently didactic nature of criminal trials.<sup>196</sup> However, justifying harsh punishment based on expressivism may be more difficult than justification based on lustration.

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190. Douglas, *supra* note 133.

191. *Id.*

192. ARENDT, *supra* note 7, at 279.

193. ROBERT NOZICK, PHILOSOPHICAL EXPLANATIONS 367 (1981).

194. *Id.*

195. Douglas, *supra* note 133.

196. Mark Drumbl, *The Expressive Value of Prosecuting and Punishing Terrorists: Hamdan, The Geneva Convention and International Criminal Law*, 75 GEO. WASH. L. REV. 1165 (2011).

Expressivism, an infrequently cited third alternative to retributivist and deterrent notions of punishment, relies on the principle that the trials and the act of punishing serve as a symbolic, declarative act associated with the pedagogical purpose of trials.<sup>197</sup> The act of punishing communicates messages about power, authority, legitimacy, and normality.<sup>198</sup> Most importantly, punishment demonstrates society's disapproval for the particular behavior and reinvigorates society's faith in the law.<sup>199</sup> However, proponents of expressivism face significant challenges. First, if this is the appropriate justification for punishing war crimes, how can we reject neuroscientific evidence? Otherwise stated, how can we justify inflicting harsh levels of punishment, particularly in the face of neuroscientific evidence claiming to demonstrate diminished culpability, if the mere act of punishment is sufficient to communicate society's disapproval for conduct? Wringer responds to these potential objections in two ways. First, he states that the denunciation of the crime must be one that is "clearly sincere."<sup>200</sup> If the criminal is allowed to escape with mere public denunciation or some other light punishment, the sincerity of the expression of disapproval might be questioned, especially if that denunciation was coupled with a displacement of blame.<sup>201</sup> Second, he notes that considerations of proportionality are central to the fairness of any system.<sup>202</sup> War crimes are frequently considered the most serious crimes.<sup>203</sup> Thus, a system of punishment that allowed war criminals to be tried but not punished would involve violations of proportionality, particularly given that it is unlikely that society would allow all disordered offenders an exemption from responsibility for their crimes.<sup>204</sup>

The ICC will face difficult choices in an effort to "do justice" in the face of growing knowledge about the human brain. Regardless of the court's decision to accept or reject evidence that

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197. Douglas, *supra* note 30, at 514; *see also*, DRUMBL, *supra* note 153, at 17.

198. *See* DRUMBL, *supra* note 153, at 12.

199. *Id.*

200. Wringer, *supra* note 189, at 180.

201. *Id.*

202. *Id.* at 185.

203. WILLIAM SCHABAS, *WAR CRIMES AND HUMAN RIGHTS: ESSAYS ON THE DEATH PENALTY, JUSTICE AND ACCOUNTABILITY* 659 (2008).

204. *Id.*

behavior is in some part determined by brain structure and function, not all parties will be satisfied. Perhaps we have reached a point in time when the traditional criminal trial model is difficult to justify and maintain. As Justice Stone, in reference to Nuremberg, wrote,

[i]t would not disturb me greatly . . . if that power were openly and frankly used to punish the German leaders for being a bad lot, but it disturbs me some to have it dressed up in the habiliments of the common law and the Constitutional safeguards to those charged with crime.<sup>205</sup>

## VII. MAKING HISTORY IN THE COURTROOM

Anthony D'Amato has suggested that war crimes trials can be "one of the most fundamental lessons in civics that can be taught."<sup>206</sup> Gideon Hausner, in his memoir, wrote that he "wanted the trial to capture the imagination of Israelis, among others, and give them a personal sense of what had happened."<sup>207</sup> Hausner is not alone in his quest for achieving a pedagogical purpose to conducting a war crimes trial. In fact, the great perpetrator trials of the last 100 years all aimed to do something more than render legal justice. Each of them explicitly embraced a didactic purpose.<sup>208</sup> In perhaps their most important role, as history teller, these trials aim to provide justice, for not only the victims and the perpetrators, as expected in ordinary criminal trials, but also for history.<sup>209</sup> Perpetrator trials provide an opportunity to narrate events publicly to disseminate information about acts often cloaked in government secrecy.<sup>210</sup> In openly addressing the atrocity, these trials have the power to "resuscitate[] history and [make] it into a current event," creating a record that will withstand the test of time.<sup>211</sup>

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205. BASS, *supra* note 172, at 25.

206. Gerry J. Simpson, *Didactic and Dissident Histories in War Crimes Trials*, 60 ALB. L. REV. 801, 824–25 (1997).

207. DEBORAH E. LIPSTADT, *THE EICHMANN TRIAL* 55 (2011).

208. Douglas, *supra* note 30, at 514. The court in the Eichmann trial wrote of "the great educational value implicit in the very holding of this trial." Robert Kempner, a junior prosecutor at Nuremberg, called the trials "the greatest history seminar ever held in the history of the world." Attorney-General of the Government of Israel v. Eichmann, 36 ILR 5 (Israel District Court 1961).

209. Douglas, *supra* note 30, at 514.

210. DRUMBL, *supra* note 153, at 17.

211. Simpson, *supra* note 206, at 824.

These trials have attempted to accomplish their didactic goal in a variety of ways. The Nuremberg trials used extensive video recordings and documents, created by the Nazis, to tell the story of the atrocities of the Holocaust.<sup>212</sup> The Eichmann trial relied heavily on the victim-witness.<sup>213</sup> Survivors told their stories in narrative form to form the evidence against Eichmann. Other trials have involved a mix of victim survivors and documentary evidence.<sup>214</sup> The histories these trials tell, however, are not all encompassing. The historical narrative of these trials is filtered through a legal lens confined by the rules of evidence and procedure.<sup>215</sup> Gerry Simpson notes, “problems occur when art, history and law begin to encroach on each other’s territory.”<sup>216</sup> These problems are only heightened when science enters the mix.

Since 1946, advances in technology have vastly transformed the speed at which information is disseminated. The rapid diffusion of pictures, video, and written accounts has made global events less opaque. Individuals from Seattle to London to Tokyo were able to follow the progress of the battle between the Libyan Rebels and Qaddafi’s forces live from the comfort of their living rooms. Major network news reporters Anderson Cooper and Christiane Amanpour have broadcast in real-time from some of the most war-torn regions, including Iraq, Somalia and Rwanda. No longer will people in the first-world be completely in the dark about atrocities happening in far away parts of the globe. Yet, the didactic purpose of these trials is not diminished by the ease of information access.

In an age in which a person could experience sensory overload from the images and sounds bombarding them from the nightly news, the didactic purpose is as important now as it was seventy-five years ago. In addition to the challenges with rendering justice, for both the accused and the victim, neuroscience presents a significant challenge to the court’s ability to render justice for history. The admission of neuroscientific evidence would significantly detract from the ability to tell a last-

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212. Douglas, *supra* note 30, at 515.

213. *Id.*

214. See Timothy K. Kuhner, *The Status of Victims in Enforcement of International Criminal Law*, 6 OR. REV. INT’L L. 95 (2004) for a discussion of the growing and evolving role of the victim in international criminal trials.

215. Douglas, *supra* note 30, at 515–16.

216. Simpson, *supra* note 206, at 825.

ing story about the events of the atrocity and the strength of the survivors and convey messages about responsibility and morality, instead focusing the trial on science. Peter Conrad writes that the dark side of medicalizing deviant behavior includes the dominance of experts, the dislocation of responsibility, and the exclusion of evil.<sup>217</sup> These issues are particularly troubling for the perpetrator trial, given the importance of the didactic purpose. One of the fundamental questions that the court will need to answer in determining whether to allow neuroscientific defenses becomes, "What story do we want these trials to tell?"

Lawrence Douglas points out that these trials cannot control the way in which they become cultural artifacts.<sup>218</sup> While this is certainly true, the court does have control over the choices that cumulatively could affect a trial's place in history. Allowing complex neuroscientific evidence may capture the narrative of the trial, shifting the focus from a story of responsibility and morality to a story about science. To mount a defense based on highly technical, scientific evidence, the defense needs to present testimony or documents from at least one expert who has evaluated the defendant. The prosecution is sure to want its own expert to evaluate the defendant, who will likely come to a different conclusion regarding the defendant's mental and neurological status. As happens in many domestic trials relying on highly technical or scientific evidence, the trial becomes a "battle of experts."<sup>219</sup> Allowing this to happen is sure to shape the trials' place in history.

War crimes trials have already experienced problems related to the assertion of a psychological affirmative defense. In 1998, Esad Landzo raised a special defense in the Celebici Camp trial.<sup>220</sup> Five psychiatrists evaluated Landzo. The four psychiatrists called by the defense, including two initially appointed by the court, concluded that Landzo suffered from psychiatric con-

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217. CONRAD & SCHNEIDER, *supra* note 61, at 259.

218. Douglas, *supra* note 30, at 521.

219. The Casey Anthony trial, which relied significantly on highly technical and scientific evidence, is a prime example of a trial that turned into a battle of experts. See, e.g., Mike Schneider, *Casey Anthony Trial; 'Battle of Experts,'* ASSOCIATED PRESS (May 23, 2011), <http://www.wptv.com/dpp/news/state/casey-anthony-trial%3A-'battle-of-experts'>.

220. Sparr, *supra* note 137, at 59.

ditions that impaired his ability to control his behavior.<sup>221</sup> However, the experts came to different conclusions about what psychiatric condition Landzo suffered from.<sup>222</sup> Dr. Landy Sparr testified for the prosecution and concluded that the personality abnormalities Landzo possessed were simply personality traits that had no pathological origin.<sup>223</sup> Because of the lack of consensus, the defense tried several strategies based on Landzo's supposed diminished mental capacity.<sup>224</sup> Early evaluations of the defendant suggested he suffered from Post-Traumatic Stress Disorder ("PTSD").<sup>225</sup> Defense counsel initially proceeded with their defense based on this theory. When it became clear the PTSD defense would prove unsuccessful, the defense shifted its strategy.<sup>226</sup> Several subsequent psychiatric evaluations of Landzo revealed a constellation of symptoms, including narcissism, antisocial behavior, "schizoid, compliant, borderline, inadequate, immature, impulsive, unstable, and deprived" personality traits.<sup>227</sup> The defense blamed his criminal conduct on this more generalized theory of "personality disorder." Landzo was eventually convicted and sentenced to fifteen years in prison. In its judgment, the court acknowledged the psychiatrists' opinions and noted that it took into account Landzo's age and mental condition in deciding his sentence.<sup>228</sup> In presenting such a complex defense, the defense arguably distracted from the important narrative these trials can offer. Instead of a morality play, the Landzo trial is written about and remembered for its battle of psychiatric experts and "spaghetti thrown on the wall" style defense. Additionally, as Conrad notes, by defining a behavior in medical terms, the problem is removed from the public realm where discussion can occur among lay individuals and put on a plane where only medical individuals can

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221. *Id.* at 64.

222. *Id.*

223. Prosecutor v. Delalic, Mucic Delic and Landzo, Case No. IT-96-21-T, Judgment, ¶ 1180 (Int'l Crim. Trib. for the Former Yugoslavia Nov. 16, 1998).

224. Sparr, *supra* note 137, at 64.

225. *Id.* at 63.

226. Dr. Van Leeuwen testified that Landzo did not suffer from a post-traumatic stress disorder at the time the crimes were committed, undermining the defense PTSD theory. Delalic, Mucic Delic and Landzo, at ¶ 1184.

227. Sparr, *supra* note 137, at 64.

228. Delalic, Mucic Delic and Landzo, at ¶ 1283.



discuss it.<sup>229</sup> How can lay individuals discuss the fairness of the outcome of the Landzo trial, or its legacy, without a medical professional's understanding of his mental condition?

While affixing responsibility is always a complex process, medicalization heightens the confusion and ambiguity.<sup>230</sup> To begin with, determining and defining an individual's responsibility is more difficult in war crimes trials. Unlike an "ordinary" crime, mass atrocity cannot occur without the cooperation of numerous individuals. Preliminarily determining the nature of an individual's role in the atrocity in an effort to assess the appropriate criminal charges is certainly a difficulty that stems from the collective nature of atrocity. However, structuring a trial that situates the individual in the overall narrative of atrocity is an important task for the perpetrator trial. The difficulty for modern war crimes trials, unlike Nuremberg, is that we rarely see twenty-four defendants in the dock at once. Yet, these trials, even with only one defendant, strive to provide a narrative that is bigger than the individual perpetrator on trial. Pathologizing deviant behavior distracts from the ability to create a larger narrative. Medicalizing deviance makes the criminal conduct the product of individual disorder or illness. Doing so ignores the important role of society and collective action in atrocity and focuses the narrative on the single individual without contextualizing his or her role in the atrocity. As one commentator writes,

Hitler orchestrated the greatest mass genocide in modern history, yet some have reduced his motivation for the destruction of the Jews (and others) to a personal pathological condition. To them and to many of us, Hitler was sick. But this portrays the horror of the Holocaust as a product of individual pathology.<sup>231</sup>

Efforts to understand the motivations of these war criminals as the product of sickness "prevents us from seeing and confronting man's inhumanity to man."<sup>232</sup> The perpetrator trial teaches a lesson in responsibility and accountability, and reaffirms the rule of law. It has served as a warning that heads of state are not exempt from the rule of law. The trial process also creates a

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229. CONRAD & SCHNEIDER, *supra* note 61, at 249.

230. *Id.* at 248.

231. *Id.* at 251.

232. *Id.*

clear narrative that distinguishes victim from perpetrator. Pathologizing deviance threatens to cloud this narrative by creating a multiplication of victims.

Pathologizing deviance blurs the clearly defined “victim” and “perpetrator” and in doing so undermines the narrative of responsibility and morality, in some ways devaluing the victims’ experiences. Instead, understanding deviance as a product of biology or psychopathology creates multiple classes of victims. While we maintain a traditional class of victims that have been wronged in the course of atrocity, we create a new class: perpetrators that are victims of circumstance or biology. In multiplying classes of victims, the trial would become handicapped in its narrative power. The trial would be unable to tell a story of responsibility, as blame simply shifts until no one can be held accountable.

Finally, pathologizing criminal conduct leads to an exclusion of evil from discussions of atrocity. “Medicalization . . . shrouds conditions, events, and people and prevents them from being confronted as evil.”<sup>233</sup> According to Conrad and Schneider, there is little to be gained from thinking about people like Qaddafi as sick.<sup>234</sup> A medical framework impedes our ability to comprehend “the human element in the decisions we make, the social structures we create, and the actions we take.”<sup>235</sup> As we have seen from criticism of Arendt’s concept of “the banality of evil,” the characterization of Eichmann as seemingly normal was and is to this day discomfiting to outsiders for more reasons than just the arguable inaccuracy of the claim.<sup>236</sup> Biologizing behavior produces much the same result as characterizing Eichmann as banal. Doing so eradicates the concept of evil, and eliminates the inherent sense of otherness of perpetrators of atrocity. While the “us” and “them” attitude is invariably one of the things that led to the Holocaust and other acts of atrocity, it is also what allows us to deal with the historical legacy of

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233. *Id.*

234. *Id.* at 251–52.

235. *Id.* at 252.

236. As discussed in note 7, *supra*, famed Holocaust historian Raul Hilberg has criticized Arendt for her characterization of Eichmann’s evil as “banal” and for explanation of the mechanisms of the Nazi’s evil acts. See, e.g., BEREL LANG, HOLOCAUST REPRESENTATION: ART WITHIN THE LIMITS OF HISTORY AND ETHICS 100–04 (2000) for a discussion of Hilberg’s assertions discussed in his work RAUL HILBERG, THE DESTRUCTION OF THE EUROPEAN JEWS (1981).

these acts. If we view those that perpetrate acts of violence as significantly different from ourselves, then we can believe that we would never engage in the same conduct. However, if deviant behavior is the result of biology or pathology, it may be the result of nothing more than a genetic roll of the dice. If so, there is a possibility that any one of us could have been afflicted by the same "illness" and put in the same position as these individuals we would otherwise like to characterize as "monsters."

#### CONCLUSION

The twenty-first century has seen a resurgence in research on the biological theories of deviant behavior. Researchers are working to understand both the genetic and neurological factors contributing to criminal conduct. As the science continues to develop, the legal community has shown a growing interest in incorporating scientific evidence of biological correlates of criminality into criminal proceedings. The Supreme Court of the United States has referenced studies on the neurological development of adolescents in support of barring life without parole for non-homicide crimes. Several state trial courts have heard expert evidence describing individual defendant's neurologic deficits in the sentencing phase of capital cases. With these theories about deviant behavior comes a possible change in our conception of individual criminal culpability.

Neuroscientific evidence poses significant challenges for trials before the ICC. First, the court must manage a delicate balance between a defendant's due process rights against the rights of the victim's to see justice. Neuroscientific evidence, demonstrating diminished free will and culpability, complicates this balancing act. To reject the science and deny the defendant the right to present an exculpatory defense, the court would undermine what the framers of perpetrator trials have worked so hard to do since Nuremberg, essentially, to provide a fair forum for holding perpetrators accountable for their actions. Yet, if the court accepts the evidence and excuses the defendant based on his or her neurologic deficiencies, the court undermines the purpose of holding individual heads of state and high-level state officials accountable for their conduct. In the language we currently use to discuss these trials, since they are similar to their ordinary domestic counterparts, it is difficult to see how an outright denial of the right to present a neu-

rosience-based defense does not make these trials show trials. However, even if Joshua Greene is right that the legitimacy of law will be undermined as societal morals change based on evolving understandings of free will and culpability, his hypothesis may be incomplete. Contrary to the literature on these trials, war crimes trials may be so radically different from ordinary criminal trials that society may not change its perspective on the morality of holding war criminals accountable.

Second, neuroscience presents challenges for our current theories of justice and punishment that underlie bringing perpetrators before a criminal tribunal. Criminal law subjects guilty offenders to penal sanctions in order to achieve rehabilitation, retribution, and deterrence. Rehabilitation plays no role in the literature on war crimes trials. However, both retribution and deterrence hold significant places in the discussion of punishing these offenders. If an individual lacks the ability to conform his or her behavior to the law because of specific pathology, the individual is unlikely to be able to engage in the calculus required for deterrence to be successful. The individual probably will not weigh the likelihood of prosecution and punishment against the perceived benefit from engaging in the conduct. Additionally, if the conduct were the product of sickness or pathology, common sense would suggest the individual is not deserving of punishment, at least in ordinary circumstances. However, to let these individuals go without punishment seems reprehensible on its face. As commentators have noted, to let individuals like Pol Pot and Pinochet roam free is to be complicit in their behavior. However, this does not mean we cannot continue to punish. Perhaps we simply need to reframe the discussions of punishment, justifying incarceration of war criminals on the symbolic value and the expressive function of punishment.

Finally, the didactic purpose of these trials, which is key to their success, is threatened by allowing complex neuroscientific evidence. These trials must do justice not only to the perpetrators and the victims, but also to history. These trials serve to create a body of evidence that serves as a record for future generations. They tell a story of how the victims were wronged and how society is willing to hold high-ranking individuals accountable for their conduct. Allowing neuroscience-based defenses would distract from a narrative of responsibility and a reaffirmation of the rule of law. Instead it will create a battle of

experts, the displacement of responsibility, and the exclusion of evil.

Perhaps it is time to reassess the way we frame the purpose and justification of the great perpetrator trials. These trials can continue to serve society; however, it seems untenable to continue with the status quo in the face of evolving science. It is clear that regardless of how the court handles the situation, the admissibility of the evidence and the excusability of individuals with psychopathologies, the court faces significant challenges in the future.