THE PROBLEM WITH NEUROLAW

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ABSTRACT

This Article describes and critiques the increasingly popular program of reductive neuroLaw. Law has irrevocably entered the age of neuroscience. Various institutes and conferences are devoted to questions about the relation between neuroscience and legal procedures and doctrines. Most of the new "neuroLaw" scholarship focuses on evidentiary and related issues, and is important and beneficial. But some versions of reductive neuroLaw are frightening. Although they claim to liberate us from false conceptions of ourselves and to open new spaces for more scientific applications of the law, they end up stripping away all notions of "selves" and of "law." This Article argues that a revitalized sense of transcendence is required to avoid the violent metaphysics of reductive neuroLaw and to maintain the integrity of both "law" and "science."

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INTRODUCTION

> *Genetics may yet threaten privacy, kill autonomy, make society homogeneous and gut the concept of human nature. But neuroscience could do all of these things first.*[1]

Law has entered the age of neuroscience. Various institutes and conferences are devoted to questions about the relation between neuroscience and legal procedures and doctrines.[2] The MacArthur Foundation recently awarded a $4.85 million grant for a Center of Law and Neuroscience at Vanderbilt University.[3]

Most of the new "neuroLaw" scholarship is important and beneficial. NeuroLaw scholars are seeking to better understand, for example, how diagnostic tools such as functional magnetic resonance imaging (fMRI) might or might not be useful as evidence in the courtroom.[4] Such evidence might help determine the presence of brain injury in a negligence case, assess mental capacity in a competency hearing, or define "brain death" for purposes of interpreting a medical advance directive.[5] More controversially, fMRI evidence could bear on the *mens rea* requirement in criminal law when the defendant suffers from some mental defect, or on whether a witness is telling the truth.[6] Such uses of the best available empirical science to help clarify the application of legal rules represent the way in which the law's general principles become instantiated in particular situated contexts.

But some versions of reductive neuroLaw are frightening. Although they claim to liberate us from false conceptions of ourselves and to open new spaces for more scientific applications of the law, they end up stripping away all notions of "selves" and of "law." They propose not a concept of the "rule of law," but instead a dictatorship of the brain—or of some model of the brain—and "neural reeducation camps" for those whose brains do not quite fall in

1. *The Ethics of Brain Science: Open Your Mind*, THE ECONOMIST, May 25, 2002, at 93.

2. *See, e.g.*, THE MACARTHUR FOUNDATION RESEARCH NETWORK ON LAW AND NEUROSCIENCE, http://www.lawneuro.org/ (last visited Sept. 18, 2013); *Law and Neuroscience*, VANDERBILT UNIV., http://www.psy.vanderbilt.edu/courses/neurolaw/ (last visited Sept. 18, 2013) (listing American law schools that offer "Law and Neuroscience" classes); NEUROETHICS & LAW BLOG, http://kolber.typepad.com/ (last visited Sept. 18, 2013); *Society for Evolutionary Analysis of Law*, VANDERBILT UNIV., https://www4.vanderbilt.edu/seal/ (last visited Sept. 18, 2013).

3. Amy Wolf, *Landmark Law and Neuroscience Network Expands at Vanderbilt*, VANDERBILT UNIV. (Aug. 24, 2011, 10:47 AM), http://news.vanderbilt.edu/2011/08/grant-will-expand-law-neuroscience-network/.

4. *See, e.g.*, Neal Feigenson, *Brain Imaging and Courtroom Evidence: On the Admissibility and Persuasiveness of fMRI*, *in* LAW, MIND AND BRAIN 23 (Michael Freeman & Oliver R. Goodenough eds., 2009).

5. *Id.* at 25.

6. *Id.*

line.[7] In this respect, reductive neuroLaw represents the apotheosis of the modern drive to replace law with science. This drive must be resisted and reversed if law and science are each to retain their integrity.

Part I of this Article describes the increasingly popular program of reductive neuroLaw and surveys the basis for that program in paleoanthropology and sociobiology. Part II excavates the philosophical roots of attempts to reduce "law" to "science," of which neuroLaw is the most recent manifestation, and shows that those roots extend to medieval theologies of voluntarism, nominalism, and univocity. Part III demonstrates why reductive neuroLaw represents a form of neuro-fascism. Part IV surveys some alternative approaches to and critiques of neuroLaw. Part V argues that a revitalized sense of transcendence is required to avoid the violent metaphysics of reductive neuroLaw.

I. THE OUTLINES OF REDUCTIVE NEUROLAW

A. The Claims of Reductive NeuroLaw

Reductive neuroscience suggests that "the brain is a physical entity governed by the principles and rules of the physical world" and that "brain determines the mind."[8] Contemporary neuroscience thereby claims to elide the soul and the mind—what many neuroscientists call the "ghost in the machine."[9] As Martha Farah of the University of Pennsylvania's Center for Neuroscience and Society puts it:

> [A]s neuroscience begins to reveal the mechanisms of personality, character, and even sense of spirituality, [dualism] becomes strained. If these are all features of the machine, why have a ghost at all? By raising questions like this, it seems likely that neuroscience will pose a far more fundamental challenge to religion than evolutionary biology.[10]

Not just religion, but law as well, can be reduced to neuroscience. Legal theorists have not missed the implications of the new reductive sociobiology and neuroscience for "folk" concepts of the rule of law. Farah notes with some understatement that "[t]he idea that behavior is determined by physical causes

7. *See infra* Part II.

8. NEUROSCIENCE AND THE LAW: BRAIN, MIND, AND THE SCALES OF JUSTICE 8 (Brent Garland ed., 2004).

9. *Id.* at 66. This phrase was originally introduced by Gilbert Ryle in 1949. GILBERT RYLE, THE CONCEPT OF MIND 15–16 (1949).

10. Martha Farah, *Neuroethics*, VIRTUAL MENTOR (Aug. 2004), http://virtualmentor.ama-assn.org/2004/08/oped2-0408.html.

is hard to reconcile with the intuitive notions of free will and moral agency on which our legal systems are based."[11]

"Free will" is an illusion, many neuroLaw scholars argue. Among their most compelling bits of evidence for this claim are studies suggesting that the brain signals the body to engage in actions before we become consciously aware of the action we will take.[12] This "precognition" suggests that our actions are automatic responses to stimuli and that our conscious "decisions" are merely *ex post* determinations not to "veto" what the brain has already signaled its readiness to do. We have, at best, "free won't" rather than "free will."[13] Therefore, "[a]ccording to neuroscience, no one person is more or less responsible than any other for actions. We are all part of a deterministic system that some day, in theory, we will completely understand."[14] In this view, the notion of "responsibility" is only a "social construct," law is an instrumentalist tool useful for engineering the society we are constructing, and the society we are constructing ultimately is reducible to the evolutionary history embedded in our brains.

B. Please Prepare for Your Prefrontal Workout

One prominent advocate of this vision for neuroLaw is David Eagleman, Director of the Initiative for Neuroscience and the Law at the Baylor College of Medicine in Houston, Texas.[15] Eagleman states the issue for neuroLaw as follows: "The crux of the question is whether all of your actions are fundamentally on autopilot or whether there is some little bit that is 'free' to choose, independent of the rules of biology."[16]

Eagleman offers a seemingly mundane example: the everyday activity of driving home from work and opening the front door of one's home.[17] Most of us will realize, if we reflect on these actions once we are comfortably seated on the couch after a long day, perhaps with a cold beer in hand and a football

11. Martha Farah, *Responsibility and Brain Function*, CTR. FOR NEUROSCIENCE & SOC'Y AT UNIV. OF PA., http://neuroethics.upenn.edu/index.php/penn-neuroethics-briefing/responsibility-a-brain-function (last visited Sept. 6, 2013).

12. Michael S. Gazzaniga & Megan S. Steven, *Free Will in the Twenty-first Century*, *in* NEUROSCIENCE AND THE LAW: BRAIN, MIND, AND THE SCALES OF JUSTICE 51, 56 (Brent Garland ed., 2004). These experiments, originally conducted by Benjamin Libet in the 1970's, may not in fact support such sweeping conclusions. *See, e.g.*, Daniel C. Dennett, *The Self as a Responding—and Responsible—Artifact*, 1001 ANNALS N.Y. ACAD. SCI. 39, 39–50 (2003).

13. Gazzaniga & Steven, *supra* note 12, at 57.

14. *Id.* at 68.

15. *See Neuroscience and the Law*, THE INITIATIVE ON NEUROSCIENCE & L. AT BAYLOR COLLEGE OF MED., http://www.neulaw.org/ (last visited Sept. 18, 2013).

16. DAVID M. EAGLEMAN, INCOGNITO: THE SECRET LIVES OF THE BRAIN 166 (2011) (emphasis omitted).

17. *Id.* at 141–42.

game on the television, that we drove home on mental auto-pilot and that we opened the door to our homes without thinking about the location of the doorknob. If our route had been changed because of road construction, or if our significant other had installed a new door with a different type of opener, things would have been different: these new facts would have required greater attentiveness. For Eagleman, this means that the conscious aspect of returning home from work is only a "little bit" of the story: once we become habituated to the routine, it becomes automatic.[18] The same is true, he argues, for all of our actions, including what we mistakenly attribute to intentionality.[19]

Indeed, in a recent interview, Eagleman acknowledged that his view of neurobiology undermines libertarian notions of personal autonomy and free will.[20] Asked whether neuroscience completely erodes, or at least challenges, the notion of individual autonomy, he replied, "I'm afraid it does," "[Y]ou are your biology," and "[W]hat I'm pretty certain about now is that to whatever extent we have free will it is only a bit player in what actually happens in people's lives."[21]

Eagleman asserts that "[t]he unique patterns of neurobiology inside each of our heads cannot qualify as *choices*; these are the cards we're dealt."[22] He suggests that "it is difficult to find the gap into which to slip free will—the uncaused causer—because there seems to be no part of the machinery that does not follow in a causal relationship from the other parts."[23] He argues that concepts of "blame" should be replaced with "science" and that "[b]lameworthiness should be removed from the legal argot."[24] Blameworthiness is merely a "backward-looking concept that demands the impossible task of untangling the hopelessly complex web of genetics and environment that constructs the trajectory of a human life."[25]

Eagleman's near-mechanistic view of human nature is reflected in his bold and ultimately frightening vision of the legal system. Since people do not really possess moral agency, the question for the law is not whether the accused is to *blame* for his or her conduct, but rather whether there is

18. *Id.* at 166.

19. *Id.*

20. ReasonTV, *"You Are Your Brain": David Eagleman on Transforming Criminal Justice*, YOUTUBE (June 14, 2010), http://www.youtube.com/watch?v=wSQY7zHk5y8.

21. *Id.* Of course, he did not explain how his views about biological determinism are consistent with his description of first-person phenomenological qualia ("I'm afraid. . ." "I'm pretty certain. . ."). And just moments before offering that grim response, he suggested that biofeedback treatments for criminals would provide them with a "libertarian" way to "help themselves." *Id.*

22. David Eagleman, *The Brain on Trial*, THE ATLANTIC, July–Aug. 2011, at 112, 116.

23. *Id.* at 118.

24. *Id.* at 118, 120.

25. *Id.* at 120.

something "different" about the person's neurobiology that led the person to act in a certain way.[26] We should think about criminal conduct "in the same way we think about any other physical process, such as diabetes or lung disease."[27]

Eagleman admits that, at present, only in relatively rare cases can we assert with confidence that a person's anti-social conduct was caused by an identifiable brain condition, such as a tumor—but this, he claims, is merely a problem of technology.[28] In principle, he suggests, science will one day be able to measure biological states with a degree of comprehensiveness and granularity that will permit a full diagnosis of criminal conduct.[29] Culpability, he argues, should not "be determined by the limits of current technology."[30] In place of traditional legal concepts of fault and blame, Eagleman proposes a "forward-looking" system in which criminals would receive bio-feedback treatments designed to retrain their brains towards "pro-social behavior."[31]

How does Eagleman define what "pro-social" should mean in a world of neurobiological determinism? He speaks of "social contracts," "society's needs," and what we can "hope for" as "a society that respects individual rights and freedom of thought."[32] All of these concepts, of course, presuppose the very "folk" concepts of freedom, autonomy, and intentionality that Eagleman's neuroscience supposedly deconstructs. Yet for Eagleman, these concepts are merely artifacts of evolution.[33] "A meaningful theory of human biology," he argues:

> [C]annot be reduced to chemistry and physics, but instead must be understood in its own vocabulary of evolution, competition, reward, desire, reputation, avarice, friendship, trust, hunger, and so on—in the same way that traffic flow will be understood not in the vocabulary of screws and spark plugs, but instead in terms of speed limits, rush hours, road rage, and people wanting to get home to their families as soon as possible when their workday is over.[34]

Instead of assuming that people ordinarily possess a degree of agency that allows them to choose whether to abide by the law, Eagleman argues that "criminals should always be treated as incapable of having acted otherwise."[35]

The role of the legal system would then shift from assigning blame based on agency to changing the law-breaker's brain state in order to produce more

26. EAGLEMAN, *supra* note 16, at 174–77.
27. *Id.* at 170.
28. *Id.* at 175–76.
29. *Id.* at 176.
30. *Id.*
31. Eagleman, *supra* note 22, at 120, 122.
32. *Id.* at 121–23.
33. EAGLEMAN, *supra* note 16, at 218–19.
34. *Id.*
35. *Id.* at 177.

desirable behavior.[36] This would be accomplished by a "prefrontal workout" consisting of cognitive biofeedback.[37] A person's sentence—their prescribed prefrontal workout regimen—would depend on the degree to which the person's biology is "modifiable," based on some as-yet-undiscovered measure of neuroplasticity.[38] The concept of variable neuroplasticity is important, Eagleman observes, because contrary to the ideals of developed democracies, all people are *not* created equal: "While admirable in spirit, the notion of neural equality is simply not true."[39] People vary widely both in nature and in nurture.[40] With this truth in hand, we could "tailor sentencing and rehabilitation" to the individual's specific neurobiological makeup.[41]

C. Paleoanthropology, Sociobiology, and the Human Mind

Since neuroLaw purports to be rooted in human evolutionary history, it might be helpful to examine what, in evolutionary terms, it means to be "human." In fact, the term "human" is elastic in paleoanthropology.[42] Moreover, there is significant disagreement between some paleoanthropologists and some evolutionary sociobiologists about what, if anything, makes modern humans unique.

1. Paleoanthropological Narratives

Paleoanthropologists broadly agree that a "cultural explosion," a "big bang of human culture," occurred around 60,000 to 30,000 years ago.[43] As

36. *Id.* at 115.

37. Eagleman, *supra* note 22, at 122.

38. *Id.* at 123.

39. *Id.*

40. EAGLEMAN, *supra* note 16, at 187.

41. Eagleman, *supra* note 22, at 123.

42. Scientific convention is to refer to as "human" all hominid species dating back to the split in evolutionary lineage from chimpanzees about four million years ago. *See, e.g.*, G.J. SAWYER AND VIKTOR DEAK, THE LAST HUMAN: A GUIDE TO TWENTY-TWO SPECIES OF EXTINCT HUMANS (2007) (a fascinating and beautifully produced book, which offers photographs of forensic reconstructions based on fossil samples of twenty-two species of hominids dating back to over seven million years, as well as narratives of the possible lifeways of these creatures). The basic outlines of human evolution are not in serious doubt. For a good overview of the evidence for human evolution from a paleoanthropological perspective, see IAN TATTERSALL, THE FOSSIL TRAIL: HOW WE KNOW WHAT WE THINK WE KNOW ABOUT HUMAN EVOLUTION (1995). For a discussion of the genetic evidence for human evolution, see *Genetic Clues of Relatedness*, THE CAMBRIDGE ENCYCLOPEDIA OF HUMAN EVOLUTION 293 (Steve Jones, Robert Martin & David Pilbeam eds., Cambridge Univ. Press 1994). The essay accepts as true the fossil and genetic evidence for human evolution, but questions the metaphysical reductionism that underpins sociobiology and neuroLaw.

43. *See* STEVEN MITHEN, THE PREHISTORY OF THE MIND: THE COGNITIVE ORIGINS OF ART, RELIGION AND SCIENCE 151 (1996). As with all things in paleoanthropology, there are dissenters even from this widely held view.

archaeologist Steven Mithen notes, "[W]ith no apparent change in brain size, shape or anatomy in general—the cultural explosion occurred."[44] Similarly, paleoanthropologist Ian Tattersall, who curated the American Museum of History's Hall of Human Origins, argues that modern humans "are an altogether unprecedented presence on our planet."[45] Further, Tattersall says that the notion that "the long human story" represents "an extended and gradual struggle from primitiveness toward perfection" is simply false.[46] "The acquisition of the uniquely modern sensibility" reflected in the cultural explosion, Tattersall says, "was instead an abrupt and recent event."[47]

Tattersall believes that our hominid predecessors generally did not possess the capacity for symbolic thought and had no robust sense of "self."[48] For example, Tattersall describes *Homo heidelbergensis*, which lived between 600,000 and 200,000 years ago, as follows:

> These were hardy, resourceful folk, who occupied and exploited a huge range of habitats throughout the Old World through the deployment of an amazing technological and cultural ingenuity. They were adroit hunters who pursued large game using sophisticated techniques, built shelters, controlled fire, understood the environments they inhabited with unprecedented subtlety, and produced admirable stone tools that at least occasionally they mounted into composite implements. Altogether, they lived more complex lives than any hominids had ever done before them.[49]

And yet, Tattersall observes, "[T]hroughout the period of *Homo heidelbergensis's* tenure no hominid produced anything, anywhere, that we can be sure was a symbolic object."[50] He therefore concludes that:

> If I had to wager a guess, it would be that the intelligence of these hominids, formidable as it may have been, was purely intuitive and non-declarative. They neither thought symbolically as we do, nor did they have language. As a result, we can't usefully think of them as a version of ourselves, certainly cognitively speaking.[51]

Although most paleoanthropologists agree that the fact of a "cultural explosion" is well documented, they disagree on what caused it. Tattersall suggests there are two leading theories: the theory of "mind" and the theory of "language."[52] Tattersall himself falls into the "language" camp.[53]

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44. *Id.* at 15.
45. IAN TATTERSALL, MASTERS OF THE PLANET X (2012).
46. *Id.* at XI.
47. *Id.*
48. *Id.* at 67.
49. *Id.* at 142.
50. TATTERSALL, *supra* note 45, at 142.
51. *Id.* at 142–43.
52. *Id.* at 213–14.
53. *Id.* at 216.

Tattersall acknowledges that "[t]he changeover of *Homo sapiens* from a nonsymbolic, nonlinguistic species to a symbolic, linguistic one is the most mind-boggling cognitive transformation that has ever happened to any organism."[54] He finds the theory of language compelling because language seems to bridge the "symbolic" and "intuitive" aspects of observed human nature and because language is a "communal possession."[55] He takes these two aspects of human nature—symbolic and intuitive—to correspond to reason and emotion.[56]

Tattersall suggests that language first developed "in a small community of biologically prepared early *Homo sapiens* somewhere in Africa," perhaps first among children stretching their minds through play, though he acknowledges that "[t]he details of this transition will probably forever evade us."[57] Part of this "biological preparation," according to Tattersall, might have involved the brain's ability to make connections between higher areas—the cortex—"without passing through the older emotional centers below."[58] One of the first linguistic functions this might have facilitated, he suggests, was the ability to name objects.[59] Another possibility he finds plausible is a significant increase in the brain's capacity for working memory, which facilitates executive functions such as "decision-making, goal forming, planning, and so on."[60] In any event, he concludes, "[I]t seems likely that a random modification of the already exapted brain, plus some children at play, led to the literal emergence of a phenomenon that changed the world."[61]

Steven Mithen, in contrast, is a prominent proponent of the "mind" school. Mithen argues that the cultural explosion "resulted in such a fundamental change in lifestyles that there can be little doubt that it derived from a major change in the nature of the mind."[62] Mithen draws on evolutionary psychologists who think of the "mind" not as a unified command center, but rather as a set of specialized modules that gradually developed in response to different environmental pressures.[63] Instead of the common metaphor of a "computer" for the mind, Mithen employs the metaphor of a "Swiss army knife."[64] The key breakthrough for the cultural explosion, Mithen argues, must have been a new way of connecting the diverse modules of the early human

54. *Id.* at 220.
55. TATTERSALL, *supra* note 45, at 220–221.
56. *Id.* at 220.
57. *Id.*
58. *Id.* at 220, 222–23.
59. *Id.* at 222.
60. TATTERSALL, *supra* note 45, at 224.
61. *Id.* at 225.
62. MITHEN, *supra* note 43, at 15.
63. *Id.* at 13–14.
64. *Id.* at 14.

mind so that they could communicate and coordinate with each other in new ways.[65] Here he employs a different metaphor: the human mind became a "cathedral," with different "rooms" that can function seamlessly together.[66] Like a visitor to a cathedral who might walk from the nave to the chapel to the altar, cognition could then flow across domains and make unified connections.

An early Paleolithic person might have known "rock" in one domain that included making flake tools, "animal" in another domain that included scavenging carcasses for food, and "female" in yet another domain that included sex and reproduction—but these different cognitive modules might not have communicated with each other.[67] An Upper Paleolithic person, in contrast, might have been able to make connections between "rock," "animal," and "female" in ways that gave rise to the symbolic "Venus" figurines found in the archeological record starting about 35,000 years ago, or the exquisite Lion Man statuette from the Hohlenstein-Stadel Cave in Germany, dating to about 30,000 years ago.[68]

Both Mithen and Tattersall, however, seem to recoil from the implications of their observations for any concept of transcendence, even as they exult in the transcendent beauty of something like the Lion Man statuette. At the conclusion of *The Prehistory of the Mind*, Mithen declares that "[t]he human mind is a product of human evolution, not supernatural creation. I have laid bare the evidence. I have specified the 'whats', the 'whens' and the 'whys' for the evolution of the mind."[69] Mithen believes his explanations are complete and airtight. He seems to have no room for a concept of "why" beyond the biological, never mind a concept of causation that could encompass "evolution" as part of an act of "creation."

In a strange coda to his *Masters of the Planet*, Tattersall reflects on universals and the bell curve.[70] He observes that:

> Yes, you can indeed find regularities in human behaviors, every one of them doubtless limited by basic commonalities in the structure of our controlling organs. But all such regularities are in reality statistical abstractions, and people are absolutely uniform in none of them. As a result, if any statistical phenomenon could be said to govern the human condition, it would be the "normal distribution" or the "bell curve." . . .
>
> In any human characteristic you might care to specify, physical or behavioral, you will find a bell curve. . . . For every saint, there is a sinner; for every philanthropist, a thief; for every genius, an idiot.[71]

65. *Id.* at 151–53.
66. *Id.* at 151.
67. MITHEN, *supra* note 43, at 160.
68. *Id.* at 155, 162–63.
69. *Id.* at 215.
70. TATTERSALL, *supra* note 45, at 228–29.

These variations, he suggests, mean there are no universal human characteristics, but only variations along a curve.[72] Indeed, he claims, "[A]part from that basic ability we all share to re-create the world in the mind, perhaps the only other true 'human universal' we all show is cognitive dissonance."[73]

If Mithen and Tattersall's reservations about transcendence are correct, there can be no "law," or at least no possibility of the "rule of law." There may be cognitive connections that facilitate language and the production of cultural artifacts, but such signs must signify nothing beyond themselves. If there is nothing signified, there may be cultural and linguistic structures that encourage and enforce behaviors, but there cannot be "law."

Yet Tattersall strikes a hopeful note at the end of his coda. Although humans have polluted the planet—a fact about which Tattersall does not hesitate to offer a negative value judgment rather than a placid observation about the normal distribution—there is hope, because "our rational abilities and our extravagant neophilia nonetheless remain beyond remarkable."[74] "From the very first stirrings of the human symbolic spirit," Tattersall assures us, "the technological and creative histories of humankind have revolved around an energetic exploration of the innovative potential released by our new way of processing information about the world."[75] Thus, "while the auguries appear indeed to be for no significant biological change in our species, culturally, the future is infinite."[76]

How can Tattersall move from the confines of the normal distribution into an infinite future in the course of a few paragraphs? How does he move from rejecting all universals to "*our* rational abilities," "*our* extravagant neophilia," "*the* human symbolic spirit," the "technological and creative histories of human*kind*," and "*our* new way of processing information about the world"?[77] He does not say.[78] It seems that Mithen and Tattersall, as archaeologists and anthropologists, cannot accept the implications of their own evidence against reductive scientism. Purpose, meaning, and even beauty, joy, and hope keep bubbling up from the primordial ooze.

71. *Id.*

72. *Id.* at 229.

73. *Id.* This is quite a jarring coda given Tattersall's exuberant claim in the previous chapter that human language, born in the play of children, represents a "communal possession" of humanity. It seems that Tattersall must toss aside his prior 220 pages of argument and resign himself to the fact that human existence can have no common meaning or purpose.

74. *Id.* at 232.

75. TATTERSALL, *supra* note 45, at 232.

76. *Id.*

77. *Id.* (emphasis added).

78. *Id.* Perhaps this is an example of the human universal of cognitive dissonance.

2. Reductive Sociobiological Narratives

Reductive sociobiology demurs even from the cautiously optimistic stance of paleoanthropologists concerning modern human uniqueness. For example, David Sloan Wilson, distinguished Professor of Biological Sciences and Anthropology at Binghamton University, argues that Darwinian evolution fully explains everything, including every aspect of human nature.[79] Anyone who thinks otherwise, even "intellectuals" who are not religious, is a kind of fundamentalist, an "'academic creationist.'"[80]

Wilson is clear in his evangelistic program for his version of evolutionism. "First," he says, "we must abandon the notion that some special quality was breathed into us by a higher power."[81] He claims that this does not demand an outright rejection of religious faith because, he says, "*[M]any* people manage to combine a vibrant religious faith with a fully naturalistic conception of the world."[82] But whatever he means here by "religious faith," there is no room in that faith for anything but the physical world. Wilson's epistemology is uncompromising:

> What goes for knowledge of the physical world also goes for knowledge about ourselves. If something is wrong with your body, your mind, or society, it has a naturalistic explanation, just like [a] problem with your car. Believing that we have special god-given abilities is like praying to your car on the side of the road.[83]

Sloan Wilson is not content merely to reduce "religious faith" to nature. He must include "culture" as well. "A common claim," even among non-religious people, he notes, "is that 'biology' sets broad limits to our behavior, such as eating and procreation, but that 'culture' determines what we do within the broad limits, such as making art rather than babies."[84] This high concept of "culture," he correctly observes, suggests that notwithstanding our evolutionary past we are free to choose our future destiny.[85]

To this claim that "culture" exerts some kind of downward causality, Wilson cries, "Hubris, all hubris!"[86] Since whatever attributes make humans unique are merely "like an addition onto a vast multiroom mansion" over deep

79. DAVID SLOAN WILSON, EVOLUTION FOR EVERYONE: HOW DARWIN'S THEORY CAN CHANGE THE WAY WE THINK ABOUT OURSELVES 6 (2007).

80. *Id.* at 2–3 (quoting Barbara Ehrenreich and Janet McIntosh, *The New Creationism: Biology Under Attack*, THE NATION, June 9, 1997, at 11). We may note in passing the irony of dismissing as "fundamentalist" everyone who disagrees with Sloan's Darwinian fundamentalism.

81. *Id.* at 68.

82. *Id.*

83. *Id.*

84. WILSON, *supra* note 79, at 69.

85. *Id.*

86. *Id.*

evolutionary time, "[i]t is sheer hubris to think that we can ignore all but the newest room."[87] Indeed, Wilson claims that humans have regarded themselves as "uniquely intelligent, moral, flexible, and capable of aesthetic appreciation," and that most of these are "self-congratulatory and suspect as factual claims."[88] He thinks it empirically established that "other species far surpass our intelligence for specific tasks and that traits associated with goodness can evolve in any species, given the right environmental conditions."[89]

Nevertheless, Wilson admits that humans possess a unique capacity to construct their own social environments, and indeed "evolutionary social constructivism" is the core of his moral and political philosophy.[90] The essential problem for morality, religion, and politics, in Wilson's scheme, is that "[s]ome individuals are driven to benefit themselves at the expense of others or their society as a whole."[91] To illustrate this problem, he surveys various game-theoretic models of altruism.[92]

In a chapter titled "Love Thy Neighbor Microbe," for example, he describes a bacterial species, *Pseudomonas flourescens*, which creates a polymer mat that sticks the bacteria together in a colony.[93] The mat is biologically expensive to create and eventually some mutant bacteria instead devote energy to reproduction.[94] When the mutants begin to thrive, the mat collapses, and the colony disintegrates.[95] "Thus," Wilson observes, "is the glue of civilization dissolved by sloth!"[96] And such "examples of good and evil among microbes can be repeated without end because they are based on inescapable facts of social life."[97] All of this maps directly onto human behavior and human folk concepts of "good" and "evil."[98] But, Wilson concludes, "If the traits that we associate with goodness can evolve, then we can make them more common by providing the right environmental conditions. Far from denying the potential for change, evolutionary theory can provide a detailed recipe for change."[99]

87. *Id.* at 70.
88. *Id.* at 71.
89. WILSON, *supra* note 79, at 71.
90. *Id.*
91. *Id.* at 13.
92. *Id.*
93. *Id.* at 128–29.
94. WILSON, *supra* note 79, at 128–29.
95. *Id.* at 129.
96. *Id.*
97. *Id.*
98. *Id.*
99. WILSON, *supra* note 79, at 32. Of course, what Sloan Wilson describes here has nothing to do with classical notions of "good" and "evil," which relate to intentional states, virtues, and transcendentals. *See, e.g.*, Rachana Kamtekar, *Ancient Virtue Ethics: An Overview With an Emphasis on Practical Wisdom*, *in* THE CAMBRIDGE COMPANION TO VIRTUE ETHICS 29, 42–46

Similarly, Michael Graziano, Professor at Princeton University's Neuroscience Institute, denies any sense of the transcendent:

> When we say we are conscious, aware, self-aware, in conscious control of our actions, have a stream-of-consciousness understanding of ourselves, what we really mean, apparently, is this: there is a system in the brain whose job is to construct models of intentionality of other people or of ourselves; and right or wrong, confabulated or not, the self-model, continuously updated, continuously refined, supplies the contents of our conscious mind.[100]

Since the author of this phenomenon is merely a system in the brain, Graziano says, "In this sense consciousness—a soul on a trajectory through waking life—is a perceptual illusion. It is a perceptual model that is at best a simplification and sometimes plain wrong."[101] All intentionality is reducible, for Graziano, to individual neurons.[102] And what seems like the product of self-reflexivity, awareness, and language—the sorts of cultural things Mithen and Tattersall argue radically distinguish modern humans from all other

(Daniel C. Russell ed., 2013) (explaining that only virtue is good by nature and that virtue, as a whole, is expertise in living); Jean Porter, *Virtue Ethics in the Medieval Period*, *in* THE CAMBRIDGE COMPANION TO VIRTUE ETHICS 70, 83–87 (Daniel C. Russell ed., 2013) (explaining that the classical view of diverse virtues are all expressions of some one virtue or ideal of goodness, rationality, or charity). But Sloan Wilson has already made his *a priori* commitment to absolute naturalism, so he has dismissed several thousand years of historical reflection on "good" and "evil" *tout court.* Here we must remark on Sloan Wilson's cry of "Hubris, all hubris!" (Yet what is "hubris" in a naturalistic game-theoretic world without transcendent virtues?).

100. MICHAEL S.A. GRAZIANO, GOD SOUL MIND BRAIN: A NEUROSCIENTIST'S REFLECTIONS ON THE SPIRIT WORLD 65 (2010).

101. *Id.*

102. *Id.* at 99–100. Memeology, of course, is one of the more absurdly imaginative inventions of materialistic reductionism. For a good critique of memeology, see ALISTER MCGRATH, DAWKINS' GOD: GENES, MEMES, AND THE MEANING OF LIFE 7–8 (2005) (explaining that the theory of memes offers a new theoretical framework for exploring the general question of the origins, development, and reception of ideas). No one has ever observed a meme, nor by definition can memes ever discretely be observed because they are cultural phenomena and not encoded in biology like genes. Moreover, if memes can explain "belief after belief" in religion, they can do the same in science. This would mean there can be no "science" of archeology or paleontology that might offer insights into the development of human consciousness, awareness, language, or culture because the idea of something like "archeology" or "paleontology" is just a meme, as are any ideas of human consciousness, awareness, language, and culture. Memeology itself must be merely a meme, as must the supposed explanatory power of Darwinian evolution. Indeed, the very concept of "explanatory power" must be a meme, a "perceptual illusion" as Graziano would say. But then there are no "illusions" because the notion of an "illusion," which presupposes a "reality," is a meme also. Memes therefore cannot "explain" anything, for there are no "explanations." The universal acid consumes itself. *See* CONOR CUNNINGHAM, DARWIN'S PIOUS IDEA 4–5 (2010) (discussing the transformative and all-consuming nature of Darwin's universal acid).

creatures—are merely "memes" that cause certain neurons to fire.[103] Thus, there is no intentionality and no "law."

II. A PHILOSOPHICAL GENEALOGY OF REDUCTIVE NEUROLAW

A. Law, Means, and Ends

The drive to make the law "scientific" is not in the first instance the result of any empirical observations of evolutionary biology or neuroscience. Rather, it is rooted in the broader intellectual movement towards legal positivism and instrumentalism. In his insightful book *Law as a Means to an End*, Brian Tamanaha describes the shift in Anglo-American law towards legal instrumentalism starting in the nineteenth century.[104] Tamanaha traces how "law" in the West became unmoored from any transcendent source and began to occupy the place of a "science." He explains that:

> Science is oriented toward uncovering causal relations, effects and functions, formulated in terms of principles or laws. Non-instrumental views portrayed law *as* an immanent ordering (of the universe or of the community). Under a scientific view, law would come instead to be seen as the *source* of social order—to produce social order is the function or purpose or end of law. In turn, this new perspective, over time, would open up questions about the efficiency and utility of law in carrying out its functions. The subtle but fundamental difference can be put thus: law *is* order, versus law *maintains* order."[105]

Tamanaha notes that in the Anglo-American legal tradition, historically, "law was not seen as an empty vessel that could be filled in with whatever content might be desired by law makers to serve whatever end was desired."[106] There were various theories of legal legitimacy, including "natural law, principle and reason, or customs from time immemorial," all of which finally located law in some transcendent source.[107] But, according to Tamanaha, a variety of intellectual currents, including Spencerian Social Darwinism, laisez faire economics, and Benthamite utilitarianism, contributed to the rise of "legal positivism" throughout the nineteenth century.[108] Legal positivism is a form of "command" theory of law, in which the law is simply whatever the authority with the power to enforce it says it is.[109] Legal positivism is readily twinned with legal instrumentalism, which understands the law as a tool for achieving

103. GRAZIANO, *supra* note 100, at 150–58.
104. BRIAN Z. TAMANAHA, LAW AS A MEANS TO AN END 5 (2006).
105. *Id.* at 21.
106. *Id.* at 35.
107. *Id.*
108. *Id.* at 38–43.
109. TAMANAHA, *supra* note 104, at 43.

ends that are essentially infinitely malleable.[110] Thus the law becomes severed from any transcendent source beyond the chosen instrumental ends instantiated in the will of whoever has the power to enforce the law.

B. Law, Power, and Will

Tamanaha's genealogy of legal positivism is helpful, but in fact the roots of the drive towards "scientific" law run deeper than the scientific revolution and the Enlightenment. They reach deep into *theological* movements of the late medieval scholastic period, particularly nominalism, voluntarism, and the move towards a univocal understanding of God's being.[111]

As historian Brad Gregory notes, "[T]he alleged incompatibility between science and religion derives not from science but in the first instance from a seemingly arcane metaphysical presupposition of some medieval scholastic thinkers."[112] This metaphysical presupposition was that God shares being with creation (a "univocity of being" between God and creation); that God's will is radically non-contingent, including on God's essential nature or being; and that God's providence, including his governance of creation, because of its radical non-contingency, was arbitrary.[113]

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110. *Id.*

111. *See, e.g.*, AMOS FUNKENSTEIN, THEOLOGY AND THE SCIENTIFIC IMAGINATION 57 (1986) (explaining that the Nominalists and Scholasticists of the fourteenth century objected to any equivocation); MICHAEL ALLEN GILLESPIE, THE THEOLOGICAL ORIGINS OF MODERNITY 35 (2008) (noting that modern science developed out of nominalism); BRAD S. GREGORY, THE UNINTENDED REFORMATION: HOW A RELIGIOUS REVOLUTION SECULARIZED SOCIETY 32–73 (2012) (discussing how seventeenth-century contributions by developments in scholastic philosophy led to the appropriation and transformation of metaphysical univocity by nominalist thinkers).

112. GREGORY, *supra* note 111, at 33.

113. *Id.* at 33–37; GILLESPIE, *supra* note 111, at 23; Catherine Pickstock, *Duns Scotus: His Historical and Contemporary Significance*, 21 MODERN THEOLOGY 543, 557–58 (2005). It should be noted that this rather simple account of these medieval theologians, and particularly of the thought and influence of Duns Scotus, has been hotly contested. *See, e.g.*, John Hare, *Scotus on Morality and Nature*, 9 MEDIEVAL PHIL. & THEOLOGY 15, 35–38 (2000) (delineating three objections that eudaimonists have with Duns Scotus's positions); *Editors' Introduction: John Duns Scotus and Modern Theology*, 21 MODERN THEOLOGY 539, 539–40 (2005) (introducing Duns Scotus's view of the univocal concept of being and the scholarly debate that follow); Olivier Boulnois, *Reading Duns Scotus: From History to Philosophy*, 21 MODERN THEOLOGY 603, 604–05 (2005) (explaining the ways in which the author disagrees with Duns Scotus's philosophy). As Hare and others argue, it may be that Scotus used the *language* of univocity in recognition of the limits of human language, while continuing to hold that God was ontologically entirely transcendent of creation. *See id.* (noting God's transcendence within human intelligence). *See also* Thomas Williams, *The Doctrine of Univocity is True and Salutary*, 21 MODERN THEOLOGY 575, 577, 582–83 (2005) (disagreeing with the charge that Duns Scotus's doctrine of univocity destroys the transcendent uniqueness of God); Nelson H. Minnich et al., *Forum Essay*, *in* 98 CATHOLIC HISTORICAL REVIEW 503, 508 (2012) (comments of Joshua Benson reviewing

If God's will was arbitrary, then it could be known only by revelation and not by reason, and likewise nature could only be known by empirical investigation of natural phenomena and not by abstract reasoning about the relations between transcendent universals and immanent particulars.[114] Nominalist theologian William of Ockham (c. 1287–1347) is known today for "Ockham's Razor," which is interpreted in contemporary discourse as a general principle of parsimony in theorizing about natural phenomena.[115] Ockham's Razor, however, originally was directed at excessive speculation about transcendent universals.[116]

If God's being was univocal with the being of creation, the "need" for God as a causal agent diminished.[117] Because of the increasing loss of a sense of God's absolute transcendence over creation, prompted at least in part by Scholastic nominalism and voluntarism, the physicist Pierre-Simon Laplace (1749–1827) could eventually (reportedly) exclaim that he had no need of God as a "hypothesis" in assessing natural causation.[118] Further, Laplace argued that nominalist scientific empiricism should be applied to law and politics: "Let us apply to the political and moral sciences the method founded upon

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BRAD S. GREGORY, THE UNINTENDED REFORMATION (2012)) (critiquing and briefly summarizing Duns Scotus's doctrine of univocity). Nevertheless, this sort of language had consequences as it filtered through the Reformation and the Enlightenment. *See id.* at 513 (response of Brad S. Gregory). As Gregory argues:

> Even if we follow those interpreters [of Scotus] who, as Benson indicates, regard Scotus's conception of being as a semantic theory of religious language rather than an ontology, it would at most qualify the character of Scotus's contribution . . . . A more adequate account would then inquire about the process whereby Scotus's semantic theory was taken as a metaphysics such that God and creation *were* conceived ontological as (infinite and finite) differentiations within the more encompassing *reality* of being . . . . For, whatever the particularities of the history, it seems clear not only that this happened, but also that, in combination with Occam's razor applied to an either/or distinction between natural and supernatural causality, it explains why so many scholars and scientists today mistakenly assume that central claims of revealed religion are rendered implausible in proportion as scientific explanation of natural regularities proceeds apace.

Id. at 513. For a balanced discussion of the role of Scotus in relation to Aristotelian/Thomistic virtue ethics, see Porter, *supra* note 99, at 89 (explaining that Duns Scotus, unlike Aquinas, did not believe that the soul is really distinct from its faculties. Further, unlike Aristotle, Duns Scotus did not value the concept of virtue ethics as highly).

114. Gillespie, *supra* note 111, at 23.

115. *Id.*

116. *Id.*

117. *Id.*

118. CARL B. BOYER, A HISTORY OF MATHEMATICS 494 (2d ed. 1991). In fact, this account of Laplace's comments might be apocryphal, but nevertheless it was widely repeated and became part of the intellectual milieu in which "science" and "faith" came to be viewed as separate, and competing, domains. *See, e.g.*, FUNDAMENTALISMS AND SOCIETY 30 (Martin E. Marty & R. Scott Appleby eds., 1997).

observation and upon calculus, the method which has served us so well in the natural sciences."[119]

Political philosopher Jean Bethke Elshtain suggests that the rule of law was ultimately weakened by these trends. In her Gifford lectures, Elshtain noted how the nominalistic sense of will, power, justice, and law has informed Western concepts of political sovereignty since the late Middle Ages:

> *If* there is a vital move in theology, law, and ethics with nominalism, it is this: An emphasis on the primacy of will over intellect is lodged as the gravamen of understandings of power and authority—a seismic shift from realist emphases. Within medieval realism, even as Jesus, the Mediator, help us to "rise to him," as Augustine puts it, so an enduring fabric and structure of unchanging law forges a connection between God and human beings. Human reason has access to it and can come to know and to embrace law freely. The grounding of ethics lies in law. There is an element of predictability here: You can "take it to the bank," as we nowadays say.[120]

Elshtain connects this nominalist tendency with legal positivism:

> By contrast, the rise of a command-obedience account of law, what in modernity came to be called legal positivism, turned, at least in its early formulations, on the theory of a willful supreme being who might as well have created things differently than he did—and might yet do so by undoing what has been done. . . .
>
> Remaining on the trail of the will in theology and politics—the voluntarist tendency—earthly sovereignty is to social, political, and religious life as God's sovereignty is to the emergence of law and dominion in the first instance.[121]

Here is the trace of Jacques Derrida's argument about the founding event of justice and law as always an act of violence.[122] If the founding event of God's justice, the giving of the law in the Garden, is just an arbitrary act of will—a rule that God could change at any moment—then the same can be said of the human exercise of authority as derived from God. Elshtain notes:

> In strong articulations of the voluntarist theory, God holds the potential power in reserve—power as *absoluta*—and possesses the latent power to alter prior revelations of divine law and natural law as reason-based in favor of an alternative command structure. . . .

119. PIERRE SIMON & MARQUIS DE LAPLACE, A PHILOSOPHICAL ESSAY ON PROBABILITIES 107–08 (Frederick W. Truscott & Frederick L. Emory trans., 1902).

120. JEAN BETHKE ELSHTAIN, SOVEREIGNTY: GOD, STATE, AND SELF 50 (2008).

121. *Id.*

122. Jacques Derrida, *Force of Law: The "Mystical Foundation of Authority,"* 11 CARDOZO L. REV. 920, 925–27 (1990).

> The "sovereign" or ruler, whether pontiff, emperor, or king, might be understood to be above the law and not beholden to it lest he choose to be so . . . .[123]

As God was elided from the equations of law and justice, first the absolute human sovereign, and then autonomous self, and then the irrational self, and finally the mercilessly deterministic brain began to take His place.

C. Law and the Bad Man

The voluntarist notion that law is reducible to power and will is reflected in Justice Oliver Wendell Holmes, Jr.'s influential essay *The Path of the Law*, delivered at the opening of a new Boston University Law School hall and published in the Harvard Law Review in 1897.[124] Holmes's essay is so important that it occupies the opening slot in David Kennedy and William Fisher's compilation of *The Canon of American Legal Thought*.[125]

Holmes opens his essay with the claim that "[w]hen we study law we are not studying a mystery but a well known profession."[126] From the study of precedent—the "oracles of the law"—Holmes argued, the law student can discern the nature of legal duties.[127] A legal duty is not a moral idea, but rather "is nothing but a prediction that if a man does or omits certain things he will be

123. ELSHTAIN, *supra* note 120, at 50–51. *But see* HEIKO AUGUSTINUS OBERMAN, THE HARVEST OF MEDIEVAL THEOLOGY 96–98 (The Labyrinth Press 3d ed. 1983). Oberman notes that, in the voluntarist thought of Ockham's disciple, Gabriel Biel, "God does not will something because it is good or right. If this were the case, God's will would be subject to created principles of morality, whereas Biel is convinced that nothing can be called good unless it be accepted as such by the 'uncreated principle,' God." *Id.* at 96. Moreover, for Biel, "God can do something which he himself has declared unjust; however, if he does it, it then becomes right; therefore the will of God is the first rule of all justice." *Id.* Nevertheless, Oberman notes that Biel did not radically separate God's will from God's being, but rather that Biel attempted to preserve divine simplicity by rejecting distinctions between God's will and being. *Id.* at 99. In so doing, Oberman argues, Biel preserved a notion of natural law as a stable, universal principle, albeit in a form somewhat different from Thomas Aquinas, particularly in the possibility that God might temporarily suspend some of His commandments. *Id.* at 110. Nevertheless, for Biel, "Insofar as the wisdom of God which is involved in the establishment of the natural law is beyond human intellectual capacities, it would have been possible for God to have decided in favor of a natural law different from the present one." *Id.* at 100. The present natural law exists *de facto* because God has in His inscrutable wisdom made it so. *Id.* This seems to introduce an uncomfortable possible division between God's being and His will. Brad Gregory suggests that Oberman's assessment of nominalism is excessively sanguine because of Oberman's personal disdain for Thomism. GREGORY, *supra* note 111, at 401 n.30.

124. Oliver Wendell Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 457 (1897).

125. THE CANON OF AMERICAN LEGAL THOUGHT (David Kennedy & William W. Fisher III eds., 2006).

126. Holmes, *supra* note 124.

127. *Id.* at 457–58.

made to suffer in this or that way by judgment of the court."[128] The law exists to deter the "bad man," for "[a] man who cares nothing for an ethical rule which is believed and practised by his neighbors is likely nevertheless to care a good deal to avoid being made to pay money, and will want to keep out of jail if he can."[129] Therefore, Holmes told the newly matriculated Boston University law students:

> If you want to know the law and nothing else, you must look at it as a bad man, who cares only for the material consequences which such knowledge enables him to predict, not as a good one, who finds his reasons for conduct, whether inside the law or outside of it, in the vaguer sanctions of conscience.[130]

The law *in esse*, for Holmes, had nothing to do with morality. Indeed, only "confusion of thought" could result from any equation of law and morality.[131] Instead, Holmes wondered aloud "whether it would not be a gain if every word of moral significance could be banished from the law altogether, and other words adopted which should convey legal ideas uncolored by anything outside the law."[132] If this were possible, Holmes mused, judges might better understand their role as social engineers.[133] Indeed, Holmes looked "forward to a time when the part played by history in the explanation of [legal] dogma shall be very small, and instead of ingenious research we shall spend our energy on a study of the ends sought to be attained and the reasons for desiring them."[134]

A key "step towards that ideal" for Holmes was "that every lawyer ought to seek an understanding of economics."[135] Holmes concluded his germinal essay with a nod to the form of practical reason that underwrote his philosophy: "Read the works of the great German jurists," Holmes advised, "and see how much more the world is governed to-day by Kant than by Bonaparte."[136] There were no choices for Holmes other than the seemingly opposite poles of rational freedom and dictatorial tyranny.

There is a profound irony here that seems to escape neuroLaw scholars such as David Eagleman. Justice Holmes wrote the infamous U.S. Supreme Court opinion in *Buck v. Bell,* a 1927 case that upheld the forced sterilization of mentally retarded persons.[137] In that case, Holmes wrote that:

128. *Id.* at 458.

129. *Id.* at 459.

130. *Id.* at 459.

131. Holmes, *supra* note 124, at 460.

132. *Id.* at 464.

133. *See id.* at 467–68 (stating, "I think that the judges themselves have failed adequately to recognize their duty of weighing considerations of social advantage.").

134. *Id.* at 474.

135. *Id.*

136. Holmes, *supra* note 124, at 478.

137. Buck v. Bell, 274 U.S. 200, 204 (1927).

> We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes.[138]

The climactic line of Holmes's opinion in *Buck v. Bell* is widely regarded as one of the most embarrassing in the history of U.S. Supreme Court jurisprudence: "Three generations of imbeciles are enough."[139]

D. From the Bad Man to Homo Economicus *to* Homo Irrationaliblis

In the contemporary history of American legal thought, this conjoining of legal positivism and legal instrumentalism has tended to break into two sometimes contradictory streams: the law and economics movement and critical legal studies (CLS).[140] Law and economics seeks to explain legal rules in terms of microeconomic principles.[141] CLS seeks to explain legal rules by deconstructing the power relations behind the rules.[142] CLS can be critical, indeed hostile, to law and economics, but in some ways they are natural bedfellows. It is law and economics, after all, that supplies the notion of "capture," which shows how most regulatory requirements result from the influence of power industries that influence ("capture") the regulators.[143]

But law and economics, following Holmes's Kantian bent, purports to offer a "scientific" analysis of legal rules that can supply an objective basis for policymaking.[144] Perhaps for this reason, over the past twenty-five years or so, law and economics has been a reigning paradigm for legal scholarship, while CLS has declined except among pockets of diehard adherents (often among dispossessed groups such as racial minorities, women, and the LGBT community).[145] To be sure, there are other very important paradigms in the legal academy that eschew the positivism behind both law and economics and

138. *Id.* at 207.

139. *Id.*

140. THE CANON OF AMERICAN LEGAL THOUGHT, *supra* note 125, at 7; Peter Fitzpatrick & Alan Hunt, *Critical Legal Studies: Introduction*, 14 J. LAW & SOC'Y. 1, 1–2 (1987).

141. THE CANON OF AMERICAN LEGAL THOUGHT, *supra* note 125, at 7.

142. Fitzpatrick & Hunt, *supra* note 140, at 1.

143. William W. Bratton & Joseph A. McCahery, *Regulatory Competition, Regulatory Capture, and Corporate Self-Regulation*, 73 N.C. L. REV. 1861, 1863, 1875–76 (1995).

144. JAMES R. HACKNEY, JR., UNDER COVER OF SCIENCE: AMERICAN LEGAL-ECONOMIC THEORY AND THE QUEST FOR OBJECTIVITY xiii (2006).

145. *Id.* at 155.

CLS, notably deontological approaches informed in one way or another by John Rawls.[146] Nevertheless, law and economics continues to represent a default "scientific" posture for many legal scholars.[147]

In recent years, however, the law and economics movement has witnessed a significant shift occasioned by the rise of behavioral economics.[148] Classical microeconomics assumes rational utility-maximizing actors who act on perfect information, a model which even neoclassical economists admit almost never obtains in the real world.[149] Behavioral economics, in contrast, assumes that people do things for reasons that are often irrational or sub-rational.[150] This assumption is informed by empirical behavioral psychology studies.[151] And

146. It is beyond the scope of this Article to offer a critique of Rawlsian legal theory. In short, Rawlsians cannot articulate a reason why anyone *ought* to honor the original position and the veil of ignorance, if cutting the veil and betraying the original position would make an individual actor better off. A defender of Rawls might argue that the original position ought to be honored because it protects the rights of all citizens and thereby promotes the aggregate well-being of everyone. This sounds, however, like a utilitarian argument and not a deontological one. Utilitarian arguments fail for the same reason: why *ought* any individual actor care about aggregate social welfare? Who says maximizing aggregate social welfare is "good" if reaching that goal decreases individual welfare for some? The question of what comprises "the good" is begged.

147. TAMANAHA, *supra* note 104, at 120. Kennedy and Fisher divide American legal thought into eight schools: "Legal Realism, Legal Process, Law and Economics, Law and Society, Critical Legal Studies, Modern Liberalism, Feminist Legal Thought, and Critical Race Theory." THE CANON OF AMERICAN LEGAL THOUGHT, *supra* note 125, at 7. Law and Economics and Law and Society, however, are in fact both branches of Legal Realism, with Law and Society representing sociology and other social sciences apart from economics. TAMANAHA, *supra* note 104, at 123. Likewise, Feminist Legal Thought and Critical Race Theory are branches of Critical Legal Studies. *Id.* at 122. Legal Process and Modern Liberalism represent the pragmatist and Rawlsian influences.

148. *See, e.g.*, Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1473 (1998); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption From Law and Economics*, 88 CALIF. L. REV. 1051, 1053 (2000); Russell Korobkin, *What Comes After Victory for Behavioral Law and Economics?*, 2011 U. ILL. L. REV. 1653 (2011) (stating that "[t]he battle to separate the economic analysis of legal rules and institutions from the straightjacket of strict rational choice assumptions has been won by the proponents of 'behavioral law and economics.'").

149. Jolls et al., *supra* note 148, at 1476; Korobkin & Ulen, *supra* note 148, at 1055.

150. *See* Jolls et al., *supra* note 148, at 1471 (stating that "[e]conomic analysis of law usually proceeds under the assumptions of neoclassical economics. But empirical evidence gives much reason to doubt these assumptions; people exhibit bounded rationality, bounded self-interest, and bounded willpower.").

151. *See id.* at 1489 (discussing how empirically verified patterns of behavior can be used to generate new predictions); *see also* Joshua D. Wright & Douglas H. Ginsburg, *Behavioral Law and Economics: Its Origins, Fatal Flaws, and Implications for Liberty*, 106 NW. U. L. REV. 1033, 1034 (2012) (noting that "[e]merging close on the heels of behavioral economics over the past thirty years has been the 'behavioral *law and* economics' movement, which explores the legal and policy implications of cognitive biases.").

behavioral economics has spawned a robust new sub-discipline of behavioral law and economics.[152]

Behavioral law and economics scholarship can offer useful and interesting insights concerning the limitations of rational choice theory for legal analysis.[153] Critics have argued, however, that the experiments upon which behavioral economics is based are not transposable to real-world market situations.[154] Here reductive neuroLaw enters the stage. The supposedly harder science of neurobiology—"harder" precisely because it is a *natural* science rather than a *social* science—might confirm the behavioral economists' insight that human beings are finally not rational beings. Could neuroLaw finally fulfill Holmes's Kantian dream?

III. DECONSTRUCTING REDUCTIVE NEUROLAW

A. The Naked Power of Law Without Reasons

If neuroLaw is truly to fulfill its promise, why *doesn't* an ardent believer such as David Eagleman go all-in for lobotomies, chemical castrations, and other more direct biological interventions? "The ethical problem," Eagleman suggests, "pivots on how much a state should be able to change its citizens."[155] This is a "landmark problem" in neuroscience: "[A]s we come to understand the brain, how can we keep governments from meddling with it?"[156] One of Eagleman's concerns is that legal advances of recent years, such as civil rights legislation, should not be compromised: "Our social policies work to cement into place the most enlightened ideas of humanity to surmount the basest facets of human nature."[157]

Eagleman never explains what terms like "should" or "meddling" or "enlightened" or "surmount" or "basest facets" might mean in his neuro-world. Nor does he venture any suggestion about why some behaviors should qualify for a prefrontal workout while others ought to be left unchecked or encouraged. In a world without transcendence, why *should* one organism's immanent frame be preferred over another's? Eagleman recites notorious examples of pedophiles and mass murderers whose conduct clearly was influenced by significant brain traumas or invasive tumors.[158] What makes

152. *See* Jolls, et al., *supra* note 148, at 1489 (stating that behavioral economic analysis is a promising new avenue for approaching legal questions).

153. *See* Wright & Ginsburg, *supra* note 151, at 1034 (discussing behavioral economics as a significant development that combines economics and psychology to analyze departures from rational choice behavior).

154. *Id.* at 1044–52.

155. EAGLEMAN, *supra* note 16, at 181–82.

156. *Id.* at 182.

157. *Id.* at 186.

158. *Id.* at 154–82.

their brain states or their conduct *abnormal* and therefore subject to correction? Why ought "governments" not possess the power to meddle with citizens' brain states? In an evolving sociobiological matrix, there are no "neural rights" (a term Eagleman inexplicably introduces and then drops);[159] there are only game-theoretic solutions for passing along genes.

To move from extreme examples such as pedophiles and mass murderers, consider a society in which people who hold undesirable ideas and engage in other anti-social practices—say, rallies and demonstrations for political or religious causes opposed by the majority of the populace—are sent to reeducation camps for prefrontal workouts. To refine the example, let us admit that people are not in fact created equal, and that the task of determining which rallies and demonstrations are anti-social is taken on by an elite class specially bred for this task. Visions of Aryan supremacy, Communist China during the Cultural Revolution, contemporary North Korea, and Orwell's "1984" are not far off. These are not new ideas, dressed up though they may be in the trendy lingo of neuroscience.

Eagleman, to be fair, is not advocating a neuroscientific totalitarian state, but there appears to be no reason why not. There simply is no basis in neuroscience for his expressed preference of liberal democratic values or for any other notion of human dignity inscribed in the law. Having given up on a meaningful notion of persons and agency, he destroys the basis for understanding "human equality" as something that transcends differences in mental capacity.

Indeed, Eagleman at times seems uncomfortable with his own logic. In an effort to critique any concept of an immaterial soul—which he refers to as "the extrabiological soul"—he rehearses various examples of how brain states, chemical alterations (such as cocaine) and brain injuries can affect behavior, and concludes that "invisibly small molecules we call narcotics, neurotransmitters, hormones, viruses, and genes can place their little hands on the steering wheel of our behavior."[160] Quoting neuroethicist Martha Farah, he asks:

> [I]f an antidepressant pill 'can help us take everyday problems in stride, and if a stimulant can help us meet our deadlines and keep our commitments at work, then must not unflappable temperaments and conscientious characters also be features of people's bodies? And if so, is there anything about people that is *not* a feature of their bodies?'[161]

159. *Id.* at 181.

160. EAGLEMAN, *supra* note 16, at 208–09.

161. *Id.* at 209 (quoting Martha J. Farah, *Neuroethics: The Practical and the Philosophical*, 9 TRENDS IN COGNITIVE SCIENCES, 34, 38 (2005)).

"If there's something like a soul," Eagleman says, "it is at minimum tangled irreversibly with the microscopic details."[162] "From this point of view," he notes, "you can see why biological reductionism has a strong foothold in modern brain science."[163]

But then, remarkably, Eagleman undermines his entire thesis with a critique of reductionism based on emergence.[164] Reductionism, he says, "isn't the whole story."[165] He critiques the sort of genetic reductionism that drove the Human Genome Project and concludes that "successive levels of reduction are doomed to tell us very little about the questions important to humans."[166] He nods towards systems biology by noting that "the contributions from the genome can really be understood only in the context of interaction with the environment" and argues that "knowledge of the genes alone is not sufficient to tell you much about behavior."[167] He offers the example of reducing an airplane to a hunk of metal, and concludes that "[t]he concept of emergent properties means that something new can be introduced that is not inherent in any of the parts."[168]

So much for the way Eagleman initially framed the "crux of the question" concerning law and responsibility: he apparently agrees that there can be a meaningful concept of will and responsibility that need not propose a mind "independent of the biology."[169] Indeed, he agrees that will and responsibility need not even emerge from the brain alone: "Without a doubt," he says, "minds and biology are connected—but not in a manner that we'll have any hope of understanding with a purely reductionist approach."[170] And later he concludes "[w]hen we talk about 'the brain' and behavior, this is a shorthand label for something that includes contributions from a much broader sociobiological system. The brain is not so much the seat of the mind as the hub of the mind."[171]After this statement, it is hard to comprehend what all the fuss is about. It seems, then, that Eagleman wants it both ways: he wants neuroscience to replace notions of agency and culpability, but at the same time

162. EAGLEMAN, *supra* note 16, at 209.

163. *Id.*

164. *Id.* at 217.

165. *Id.* at 209.

166. *Id.* at 210.

167. EAGLEMAN, *supra* note 16, at 211–12.

168. *Id.* at 217.

169. *See id.* at 162, 166 ("The crux of the question is whether *all* of your actions are fundamentally on autopilot or whether there is some little bit that is 'free' to choose, independent of the rules of biology.").

170. *Id.* at 216.

171. *Id.* at 219.

he wants to speak holistically of things like "desire," "friendship," "trust," "people," and "families."[172]

In fact, Eagleman's approach is question-begging on multiple fronts. First, Eagleman assumes that any part of the brain that is "free" to choose must comprise a "little bit."[173] But what is meant by "little"? Throughout his book, Eagleman gives examples that suggest the brain is comprised of multiple independent control systems that operate below conscious awareness.[174] He argues that what we call "consciousness" is a sort of executive control module that becomes active when circumstances require mediation between the subconscious control systems—a situation that, in quantitative terms, represents a small portion of our overall brain function.[175] It appears, then, that Eagleman's term "little bit" is quantitative: only a small portion of our waking brain activity may be dedicated to conscious decision-making.[176] This may be true, but Eagleman simply begs the question whether the *qualitative* aspects of the activity he assigns to conscious decision-making are a "big bit" of what we mean by "consciousness" and "responsibility."

The realization that human beings conduct many of their daily activities in an automatic or subconscious mode is not a new insight of neuroscience. Eagleman averts to this when he acknowledges that "[t]he existence of free will in human behavior is the subject of an ancient and heated debate."[177] Indeed! Yet he never even attempts to explore the contours of that debate. A key problem in that debate is the phenomenological observation, known from ancient times, that human beings often act automatically, under apparent mental compulsion, or otherwise outside the zone of conscious control.[178] What contemporary neuroscience brings to the table is a deeper understanding of the physical element of at least some of these phenomena.

In fact, such a focus on habits and practices is precisely what virtue theory, which informs many kinds of moral theology, is all about.[179] Moral theologians and philosophers, however, will want to inquire about the development of the *habit* itself.[180] Is not the "largest bit" of the story, from a qualitative

172. *See* EAGLEMAN, *supra* note 16, at 218–19 (explaining that the theory of biology cannot be reduced to chemistry and physics but must be understood in its own vocabulary, which includes, among other things, desire, friendship, trust, people, and families).

173. *See id.* at 166.

174. *See id.* at 171 (using examples of individuals who suffer from various mental/brain disorders and defects).

175. *Id.* at 193–94.

176. *Id.* at 200.

177. EAGLEMAN, *supra* note 16, at 162.

178. *Id.* at 170.

179. *See, e.g.*, Porter, *supra* note 99, at 77.

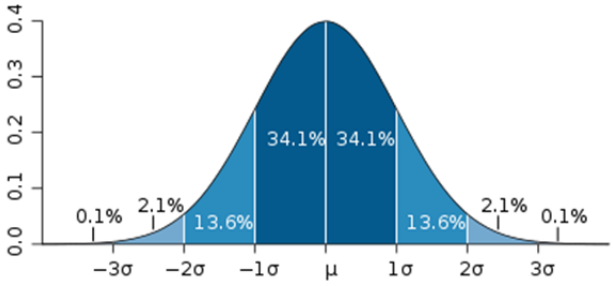
180. *See, e.g.*, WILLIAM C. MATTISON III, INTRODUCING MORAL THEOLOGY: TRUE HAPPINESS AND THE VIRTUES 59–60 (2008).

perspective, the initial development of habits and practices, through some exercise of the conscious will, that lead to habituated action? Far from undermining traditional accounts of moral action, then, neuroscience simply fleshes out the physical picture of what theology and philosophy already knew: behaviors become ingrained in the "soul" and changing them requires prolonged and sometimes difficult habituation into new behaviors.

B. Evolving Norms and Fitness Landscapes

Eagleman's proposal also suffers from a lack of normative grounding. In an evolving universe, taken solely on its own terms, there is no normative force to the term "normal." There are populations, which always exhibit some degree of genetic diversity, and there is change over time. There is no sense in which organisms should conform to any "norm" external to survival in the context of the selective pressures on the organism. Perhaps a rough analogy to a "norm" would be a species's fitness landscape—that is, the parameters of the environment the species inhabits.[181] The notion is that natural selection will direct a population toward the mean fitness level as determined by the organism's environment.[182]

Let us return to Ian Tattersall's reference to the normal distribution. We could imagine a statistical normal distribution in which the mean fitness level represents what Eagleman means by "normal" behavior. This is a great leap of imagination given the complexity of human behavioral interactions (can "*a* behavior" even be isolated from other behaviors?), but nevertheless we shall simplify for the sake of discussion. In a normal distribution, more than twenty-five percent of the set falls between one and two standard deviations from the mean, as illustrated below:[183]



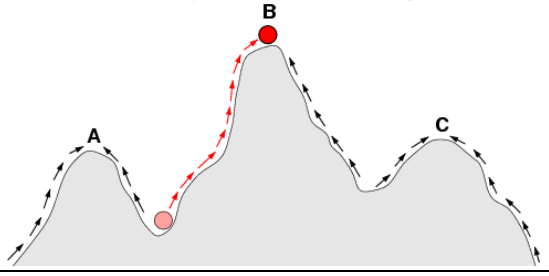
181. *See* MARK RIDLEY, EVOLUTION 216 (3d ed. 2004) ("When the environment changed, and competing species evolved new forms, the shape of the adaptive topography for a population would change too.").

182. *See id.* (explaining that natural selection causes organisms to adapt to their local environment, which prevents some populations from evolving the best adaptations).

183. *Standard Deviation Diagram*, WIKIPEDIA, http://en.wikipedia.org/wiki/File:Standard_deviation_diagram.svg (last visited Sept. 26, 2013).

Would Eagleman propose that twenty-five percent of the population be assigned to reeducation camps for prefrontal workouts? In the United States, this would encompass about seventy-nine million people.[184] According to the U.S. Census Bureau, over 1.6 million people were incarcerated in State and Federal prisons in the United States as of 2009.[185] Extending Eagleman's cognitive workout program to people beyond one standard deviation of the mean therefore would represent a massive expansion of the criminal justice system, without precedent in world history. Or, perhaps, Eagleman would require cognitive workouts for only the roughly two percent who fall on the tails outside two standard deviations of the mean? This would cover about 6.8 million people in the United States—about six times the number now incarcerated.[186] Who would decide where to draw this line? Do the sixty-eight percent within one standard deviation of the mean get to decide, or the ninety-five percent within two standard deviations?

A significant problem here—which is also a problem with Tattersall's reference to the normal distribution—is that, in strictly evolutionary terms, particularly in terms of the concept of fitness landscapes, it is doubtful whether there *is* any such thing as a homogenous normal distribution.[187] Biologists who favor the idea of fitness landscapes distinguish between "global" and "local" landscapes, and argue that segments of a broader population can move toward a fitness mean dictated by local niche conditions, which might represent a different mean than that of the aggregate population.[188] The resulting picture is more like a set of hills and valleys rather than a single normal distribution:[189]



184. *See U.S. and World Population Clock*, UNITED STATES CENSUS BUREAU, http://www.census.gov/popclock/ (last visited Sept. 26, 2013).

185. *Table 347, Prisoners Under Jurisdiction of Federal or State Correctional Authorities—Summary by State: 1990 to 2009*, UNITED STATES CENSUS BUREAU, http://www.census.gov/compendia/statab/2012/tables/12s0347.pdf (last visited Sept. 26, 2013).

186. *See id.* (There were over one and a half million prisoners under the jurisdiction of Federal or State Correctional Authorities in 2009).

187. *See* RIDLEY, *supra* note 181, at 217–18 (discussing the debate within evolutionary biology about the idea of local fitness landscapes).

188. *See id.* at 217 (explaining natural selection's strong tendency to cause organisms to adapt to their local environment).

189. *See Fitness Landscape Cartoon*, WIKIPEDIA, http://en.wikipedia.org/wiki/File:Fitness-landscape-cartoon.png (last visited Sept. 26, 2013) (Points A and C in this diagram are local optimal fitness peaks).

So what might the fitness landscape look like for human social behaviors? Would there be local populations in which optimal behaviors include things like forced marriage of young girls, slavery, and spousal abuse? It seems there would be, or else such behaviors would not recur so often throughout human history. Within such populations, presumably there would be no need for cognitive workouts to correct such behavior. If anything, people who fall a standard deviation or two outside this local mean (such as, perhaps, some brave young woman who desired independence and an education) would be candidates for reeducation. Curiously, this might indeed describe the socialization process for young girls in some contemporary societies that blend tribalism with radical Islamism (the Taliban).

Biologist and new atheist popularizer Sam Harris tackled precisely the problem of the treatment of women in radical Islamist societies in an audacious TED talk, entitled "Science Can Answer Moral Questions."[190] Early in his talk, consistent with Eagleman, Harris claims that "a suicide bomber's 'personality . . . is the product of his brain."[191] Yet, later, he flashes a picture of a woman wearing a burqa and claims that everyone in his audience knows it is unhealthy and bad for this woman to be forced to wear a burqa "involuntarily.'"[192] But is the woman's choice to wear the burqa, or her compliance with the social norm that impels her to wear the burqa, not a product of *her* brain? And does the tradition of burqa-wearing not reflect something about social strategies in the fitness landscape of Islamic societies, with deep historical roots in the cultural dress practices of the ancient near east? Why should Harris's historically recent Western liberal democratic values trump the survival strategies of the near eastern societies in which the burqa is valued?

Still later in his talk, Harris critiques the culture of girlie magazines in the West.[193] He asks, "Is this the optimal environment in which to raise our children?"[194] Well, who is to say? If the women who pose get paid, and the

190. Sam Harris, *Science Can Answer Moral Questions*, TED.COM, http://www.ted.com/talks/lang/en/sam_harris_science_can_show_what_s_right.html (last visited Sept 26, 2013). TED stands for "Technology, Entertainment, Design." *About TED*, TED.COM, http://www.ted.com/pages/about (last visited Sept. 26, 2013). Videos of "TED Talks" are freely available on the internet and have become a cultural phenomenon. *See 1500+ Talks to Stir your Curiosity*, TED.COM, http://www.ted.com/talks (last visited Sept. 26, 2013). Harris's talk is based on his New York Times bestseller, THE MORAL LANDSCAPE: HOW SCIENCE CAN DETERMINE HUMAN VALUES (2010).

191. Harris, *supra* note 190, at 4:25–4:36.

192. *Id.* at 10:15–11:25.

193. *Id.* at 12:10–12:40.

194. *Id.* at 12:35–12:39. Most fascinating was the crowd's reaction at this point in Harris' talk—a hearty cheer against the commodification of women's bodies! The enlightened bourgeoisie who attend TED talks are of course all for raising girls who grow up to understand that their bodies are not the property of the sort of men who buy girlie magazines—except, perhaps, when a feminist tells them that pornography empowers women. *See* NADINE STROSSEN,

men who peek get off, and the publishers and writers and newsstand owners make money, are we not observing an optimal fitness maximization strategy? The production and use of sexualized female imagery is among the most ancient of human arts, which suggests from an ecological anthropology perspective that such behavior serves some adaptive purpose.[195]

IV. A KINDER, GENTLER NEUROLAW?

A. Hominization and the Law

The history of human evolution in the supposed state of pure nature, unfortunately for the project of reductive neuroLaw, is deeply ambiguous. Purely immanent "law" turns out either to affirm every behavior or to draw entirely arbitrary lines among behaviors. Perhaps for this reason, it seems that a transcendent concept of "law" is a human universal. Every human culture in recorded history has some concept of transcendent principles that were translated into some concept of justice and positive law.[196] It seems that we are *homo juridicus*—we cannot help but express particular legal norms for our communal relations based on some higher governing principles. And the capacity to formulate "law" seems uniquely human. David Sloan Wilson's microbes have no law, nor do chimps or dolphins formulate codes of positive law or conceive (as far as we know) of a higher law, nor do we have any record of law codes among any of the hominid species that preceded us.

The reference to "recorded history" in relation to law is important because positive law, by definition, implies a record.[197] The oldest law code discovered by archaeologists is that of Ur-Nammu, ruler of the city of Ur during its third

DEFENDING PORNOGRAPHY: FREE SPEECH, SEX, AND THE FIGHT FOR WOMEN'S RIGHTS 146, 149, 151 (2000) (explaining that pornography and sexual imagery has empowered women rather than degrade them). *But see, e.g.*, CATHARINE MACKINNON, ONLY WORDS 15–16, 20–22 (1993) (explaining that many feminists believe pornography exploits women).

195. *See, e.g.*, O. Soffer, J.M. Adovasio & D.C. Hyland, *The "Venus" Figurines: Textiles, Basketry, Gender, and Status in the Upper Paleolithic,* 41 CURRENT ANTHROPOLOGY 511, 511, 514 (2000). In fact, the applicability of fitness landscapes and other ecological concepts to human cultural change is a contested question in the discipline of anthropology. *See* William S. Abruzzi, *Ecological Theory and the Evolution of Complex Human Communities*, *in* 5 ADVANCES IN HUMAN ECOLOGY 111, 115 (Lee Freese ed., 1996) (noting that "[c]onsiderable controversy surrounds the application of ecological concepts in anthropological human ecology."); Maria Panakhyo & Stacy McGrath, *Anthropological Theories: A Guide Prepared by Students for Students*, UNIV. OF ALA., http://anthropology.ua.edu/cultures/cultures.php?culture=Ecological%20Anthropology (last visited Sept. 26, 2013) (not surprisingly, an early pioneer of what has become the school of ecological anthropology was Thomas Malthus).

196. *See, e.g.*, DAVID JOHNSTON, A BRIEF HISTORY OF JUSTICE 21, 37 (2011); C.S. LEWIS, THE ABOLITION OF MAN 48 (2010).

197. *See* JAMES BERNARD MURPHY, THE PHILOSOPHY OF POSITIVE LAW: FOUNDATIONS OF JURISPRUDENCE 1–3 (2005) (discussing sources of positive law).

dynasty, which began in about 2050 B.C.[198] The tablet containing Ur-Nammu's laws dates to about three hundred years before Hammurabi created the code that was inscribed on a famous stele now on display in the Louvre.[199]

One side of the tablet containing Ur-Nammu's law code locates the origin of the laws in a creation myth.[200] The chief gods An and Enlil appointed the moon-god Nanna to rule over Ur, and Nanna in turn selected Ur-Nammu as their human representative.[201] Ur-Nammu removed the "chiselers" and "grabbers," people who stole the citizen's oxen, sheep, and donkeys, from the city.[202] He established a system of weights and measures and ensured equity for the poor and dispossessed.[203] By his rule he ensured that "the orphan did not fall a prey to the wealthy," "the widow did not fall a prey to the powerful," and "the man of one shekel did not fall a prey to the man of one mina (sixty shekels)."[204]

The other side of the tablet lists Ur-Nammu's laws. The tablet is badly damaged and only five of the laws are readily discernible.[205] These show that the *lex talonis* already had been mitigated through a system of monetary payments. Thus, if a man cut off another man's foot with some sort of instrument (the text is unclear about what kind of instrument), he was liable for damages of ten silver shekels; a severed nose required damages of two thirds of a silver mina (forty silver shekels).[206]

Ur-Nammu certainly was not the first law-giver. Indeed, there are references dating about three-hundred years before the Ur-Nammu law tablet to the legal reforms of Urukagina, ruler of the city of Lagash.[207] According to an inscription memorializing Urukagina, he "freed the inhabitants of Lagash from usury, burdensome controls, hunger, theft, murder, and seizure (of their property and persons). He established freedom (of a type). The widow and orphan were no longer at the mercy of the powerful: it was for them that Urukagina made his covenant with Ningirsu."[208] All of these references show that concepts of justice, the rule of law, and written law codes date at least to

198. SAMUEL NOAH KRAMER, HISTORY BEGINS AT SUMER 52 (3d rev. ed. 1981).

199. *Id.* at 51; *see also Law Code of Hammurabi, King of Babylon*, LOUVRE, http://www.louvre.fr/en/oeuvre-notices/law-code-hammurabi-king-babylon (last visited Sept. 26, 2013) (photograph and discussion of the Hammurabi stele).

200. KRAMER, *supra* note 198, at 53–54.

201. *Id.* at 54.

202. *Id.*

203. *Id.*

204. *Id.*

205. KRAMER, *supra* note 198, at 54.

206. *Id.* at 55.

207. *Id.* at 45–46, 49–50.

208. *The Reforms of Urukagina*, INT'L WORLD HIST. PROJECT, http://history-world.org/reforms_of_urukagina.htm (last visited Sept. 26, 2013).

the foundations of the earliest Mesopotamian cities. Perhaps the inscribing of positive law is as old as writing itself.[209]

We know nothing of "law" prior to recorded history. But if Mithen's theory is correct, the cognitive connections that facilitated art, science, and religion also would have facilitated concepts of "law"—and the lack of such connections would have meant that for early hominids/humans, there was no "law." And if Tattersall is correct, the acquisition of language would also have facilitated the concept of law, particularly positive law with its concrete expression in language.

The earliest small bands of hunter-gatherer hominids/humans, of course, would have operated according to sets of social "rules."[210] Social rules are not a uniquely human trait. Indeed, social ordering is a pervasive feature of the animal kingdom. Even insects, such as honeybees, can show intricate social ordering.[211] "Dumb" farm animals, such as the chickens I have begun raising in my backyard, are socially strict creatures—hence the term "pecking order."[212] Other higher mammals, such as whales, dolphins, and elephants, display detailed social ordering with local cultural variations.[213] Modern chimpanzee bands possess elaborate cultural norms that regulate access to food, access to sex, access to affection, and even what we might anthropomorphically call "war" with other tribes.[214] Observations of chimpanzee and bonobo social ordering provide the raw material for many game-theoretic studies of human evolutionary psychology.[215]

But it seems clear that even the most socially "advanced" of the higher mammals do not possess concepts of social order closely akin to what we call "law." A dominant animal in the pack might perform a sort of "judicial"

209. *See* JOHN HAYWOOD ET AL., HISTORICAL ATLAS OF THE ANCIENT WORLD § 1.07 (1998) (The earliest written documents are Sumerian clay tablets that date to about 3400 B.C.).

210. For a discussion of the game theoretic analysis of social traits in evolutionary biology, see Zachary Ernst, *Game Theory in Evolutionary Biology*, *in* THE CAMBRIDGE COMPANION TO THE PHILOSOPHY OF BIOLOGY 304 (David L. Hull & Michael Ruse eds., 2007).

211. *See Web Focus: Honeybee Genome*, NATURE, http://www.nature.com/nature/focus/honeybee/ (last visited Sept. 26, 2013) (noting that "[h]oneybees have fascinating social structure and advanced societies despite having brains that are five orders of magnitude smaller than humans.").

212. *See* PAM PERCY, THE FIELD GUIDE TO CHICKENS 39 (2006); JEROME D. BELANGER, THE COMPLETE IDIOT'S GUIDE TO RAISING CHICKENS 74 (2010) (discussing the social organization practices of chickens). For a picture of two of my chickens, see FLICKR, http://www.flickr.com/photos/dopderbeck/8635657888/ (last visited Sept. 26, 2013).

213. *See* EDWARD O. WILSON, SOCIOBIOLOGY: THE NEW SYNTHESIS 457–66 (2000) (discussing the detailed social ordering of various species).

214. *See* FRANS DE WAAL, CHIMPANZEE POLITICS: POWER AND SEX AMONG APES 169 (2007); CHRISTOPHE BOESCH, THE REAL CHIMPANZEE: SEX STRATEGIES IN THE FOREST 102 (2009).

215. *See generally* DE WAAL, *supra* note 214; BOESCH, *supra* note 214.

function by forcibly ending disputes, but there is nothing like a well-defined set of juridical procedures or principles. Most significantly, even these highest of social mammals appear to have no concept of binding abstract principles that would support a "rule of law." The "law" for them finally is, literally, the "law of the jungle"—chemistry, instinct, material and reproductive advantage, and force.

If we humans know a concept of "law" that refers the "legitimate" rule of law to abstract principles—indeed if we know even a concept of "legitimacy"—this requires a sort of cognitive capacity that only we humans, of all the creatures on Earth, seem to possess. Could it be that the same cognitive breakthroughs that facilitated the creative explosion in language, art, technology, and religion also were necessary to the development of "law"? Indeed, could it be that an essential part of what marks us "human" is just this sense of transcendent "law"?

B. Chastened NeuroLaw and Legal Constructivism

Contrary to Eagleman and Harris, some neuroLaw scholars recognize the need for caution when reframing concepts of positive law, particularly in light of the extravagant possibilities seemingly opened up by neuroscience. Stephen J. Morse, a law professor and Associate Director of the Center of Neuroscience and Society at the University of Pennsylvania, asks "why so many enthusiasts seem to have extravagant expectations about the contributions of neuroscience to law, especially criminal law."[216] Morse suggests that:

> Many people intensely dislike the concept and practice of retributive justice, thinking that they are prescientific and harsh. Their hope is that the new neuroscience will convince the law at last that determinism is true, no offender is genuinely responsible, and the only logical conclusion is that the law should adopt a consequentially based prediction/ prevention system of social control guided by the knowledge of the neuroscientist-kings who will finally have supplanted the platonic philosopher-kings.[217]

More careful neuroLaw scholars recognize some of the problems with reductionism. As Morse notes:

> [T]he arguments and evidence that [reductive neuroLaw scholars] use to convince others presuppose the folk-psychological view of the person. Brains do not convince each other, people do. Folk psychology presupposes only that human action will at least be rationalizable by mental state explanations or will be response to reasons—including incentives—under the right conditions.[218]

216. Stephen J. Morse, *The Status of NeuroLaw: A Plea for Current Modesty and Future Cautious Optimism*, 39 J. PSYCHIATRY & L. 595, 598 (2012).

217. *Id.*

218. *Id.* at 599.

Morse notes that "[t]he legal view of the person does not hold that people must always reason or consistently behave rationally according to some preordained, normative notion of rationality."[219] Instead, he argues, the law requires only that people be *capable* of "minimal rationality according to predominantly conventional, socially constructed standards."[220] Such a notion of minimal rationality is important because law governs people, not machines:

> Machines may cause harm, but they cannot do wrong, and they cannot violate expectations about how people ought to live together. Machines do not deserve praise, blame, reward, punishment, concern, or respect because they exist or because of the results they cause. Only people, intentional agents with the potential to act, can do wrong and violate expectations of what they owe each other.[221]

"If human beings were not rational creatures who could understand the good reasons for action and were not capable of conforming to legal requirements through intentional action or forbearance," Morse reminds us, "the law could not adequately guide action and would not be just."[222]

Nevertheless, Morse argues that even if neuroscience destroys any concept of human free will, this would not matter one bit for legal doctrine.[223] Morse argues that "[c]riminal law doctrines are fully consistent with the truth of determinism or universal causation that allegedly undermines the foundations of responsibility. Even if determinism is true, some people act and some people do not."[224]

In one sense, Morse is correct. A society could continue to employ legal doctrines that govern *behaviors* even if those behaviors are unfree. And even where legal doctrines govern *mental states*—such as the *mens rea* requirement in criminal law—the law could define those states with reference to the absence of certain kinds of constraints on action, such as unusual behavioral states defined as "insanity." But what Morse does not admit is that this would represent a *radically* different concept of "law" than what has historically obtained in Western culture. In particular, this conception would sever the notion of "law" from the notion of "justice." Why *ought* a society enact laws that discourage some behaviors and encourage others? That is a question of justice. Without some concept of human freedom, there is no concept of justice, at least not in any sense familiar to our sense of "law."

Later in the same article, Morse seems to recognize this conundrum. He notes that "[d]espite our lack of understanding of the mind-brain-action

219. *Id.* at 600.
220. *Id.*
221. Morse, *supra* note 216, at 600.
222. *Id.* at 601.
223. *Id.* at 605.
224. *Id.*

relation, some scientists and philosophers question whether mental states have any causal effect, thus treating mental states as psychic appendixes that evolution has created but that have no genuine function."[225] This claim, he admits, is made by "serious, thoughtful people," and if true, "would create a complete and revolutionary paradigm shift in the law of criminal responsibility and competence (and more widely)."[226] Nevertheless, Morse suggests, "given our current state of knowledge, there is little scientific or conceptual reason to accept" this broader critique.[227] It seems that Morse thinks some concept of supervenience might preserve at least some concept of intentionality that would underwrite some idea of rationality and justice in the law. And yet, Morse assures us, "Most informed people are not dualists concerning the relation between the mind and the brain. That is, they no longer think our minds—or souls—are independent of our brains and bodies more generally and can somehow exert a causal influence over our bodies."[228] It seems that Morse wants his materialist cake with Aristotelian icing.

C. NeuroLaw and a Modernized Aristotelianism

A few bold philosophers and legal scholars have more directly taken neuroLaw to task for its reductionism of "mind" to "brain."[229] Michael Pardo and Dennis Patterson, in their article *Philosophical Foundations of Law and Neuroscience*, observe that:

> If anything unites the various problems and projects of neurolegalists, it is the belief that the mind and the brain are one. This belief has spread far beyond neurolegalists, for it is a pervasive feature of much of the current literature and research in neuroscience as well as more popular writings.[230]

Yet, Pardo and Patterson ask, "[D]oes it make sense to attribute to the brain psychological attributes normally attributed to persons? Can we intelligibly say that the brain thinks, perceives, feels pain, and decides? If we cannot, what are the implications for neuroscience and law?"[231]

Pardo and Patterson believe that the reduction of "mind" to "brain" is a category mistake.[232] Nevertheless, they reject what they describe as the

225. *Id.* at 610.

226. Morse, *supra* note 216, at 610.

227. *Id.*

228. *Id.* at 609.

229. *See* THOMAS NAGEL, MIND AND COSMOS 4–5 (2012); CHARLES LANDESMAN, LEIBNIZ'S MILL 1 (2011); KEITH WARD, MORE THAN MATTER? 10 (2011); Michael S. Pardo & Dennis Patterson, *Philosophical Foundations of Law and Neuroscience*, 2010 U. ILL. L. REV. 1211, 1225 (2010).

230. Pardo & Patterson, *supra* note 229, at 1225.

231. *Id.*

232. *See id.*

"Cartesian dualism" that posits the "mind" as a separate "substance" or "entity."[233] Instead, they opt for a phenomenological distinction between "behavior, reactions, and responses of the living human being in the stream of life" and the "[b]rain functions and activities" that relate to these behaviors, reactions, and responses.[234] "This is the key," they claim, "to the mereological fallacy and the undoing of the reductive impulses of neurolegalists." They continue:

> Behavior is something only a human being (or other animal) can engage in. Brain functions and activities are not behaviors (and persons are not their brains). Yes, it is necessary that one have a brain in order to engage in behavior. But the reduction of a psychological attribute to a cortical attribute is a fallacious move from whole to part.[235]

A key aspect of Pardo and Patterson's critique is the interpretation of the relation between empirical observations of brain states and specific behaviors. For example, Pardo and Patterson criticize a "neuroeconomics" study of activity in different brain regions triggered by monetary offers in an ultimatum game.[236] The authors of the study concluded that different brain regions fire when the offer is perceived to be "unfair," and suggested that legal rules (presumably regarding information disclosures) could be tweaked to mitigate bad economic choices.[237] Pardo and Patterson conclude that:

> The evidence does not support their interpretations. First, it makes no sense to say that the brain "decides," "reasons," or "adjudicates" anything. Second, all that the neuroscientific evidence shows with regard to the ultimatum game is what subjects' brains were doing while they (the subjects) were deciding whether to accept or reject the offer. Consider the following analogy. Suppose one's face turned red whenever he was angry. Now, suppose when faced with an unfair offer in the ultimatum game, his face turned red right before he rejected the offer. Surely we would not say that the person's face rejected the offer—why, then, conclude that his insula cortex did so because it too turned colors on an fMRI machine?[238]

But if Pardo and Patterson reject what they consider the Cartesian-dualist and reductionist accounts of the mind-brain relation, what do they offer instead? They propose that "[t]he mind is not an entity or substance at all (whether non-physical or physical). To have a mind is to possess a certain

233. *See id.* at 1215.
234. *Id.* at 1226.
235. Pardo & Patterson, *supra* note 229, at 1226.
236. *Id.* at 1237–38.
237. *Id.* at 1238.
238. *Id.* (citations omitted).

array of rational powers exhibited in thought, feeling, and action."[239] This concept, they suggest, is rooted in Aristotle. As they interpret Aristotle:

> [T]he mind is not a part of the person that causally interacts with the person's body. It is just the mental powers, abilities, and capacities possessed by humans. Likewise, the ability to see is not a part of the eye that interacts with other parts of the physical eye. Under this conception, the question of the mind's location in the body makes no sense just as the location of eyesight within the eye makes no sense.[240]

They argue that this Aristotelian concept is "materialist/physicalist" in the sense that to lose the brain is also to lose the mind, but that it is nonreductive because "the mind is not identical with the brain."[241] And this means that, although neuroscience can contribute to law, it cannot overtake law.[242]

Pardo and Patterson have done a great service in debunking some of the grander claims of neuroLaw and in introducing Aristotle back into the mix. But Pardo and Patterson are careful to steer away from Aristotelian notions of causation. They invoke Aristotle as a sort of paradigmatic example of holism in the mind-body relation, but without offering the context for Aristotle's hylomorphism, which finally only makes sense within a thicker metaphysical matrix than that to which Pardo and Patterson are prepared to commit. The next section explores such a thicker matrix.

D. Revitalizing a Sense of Aristotelian Causation in the Law

In his treatise "On the Soul," Aristotle indeed stated that the "soul" and the "body" are inseparable. For example, comparing the soul to the potential power of a cutting tool and relating it to the power of sight, Aristotle said, "[T]he soul is actuality in the sense corresponding to the power of sight and the power in the tool; the body corresponds to what exists in potentiality; as the pupil plus the power of sight constitutes the eye, so the soul plus the body constitutes the animal."[243]Yet Aristotle never simply *equated* the soul with bodily functions. For example, he noted that "all those who define the soul by its power of knowing make it either an element or constructed out of the elements," and he is keen to refute this sort of reductionism.[244] Instead, for Aristotle, the soul is the form or source of the body:

> The soul is the *cause* or *source* of the living body. The terms cause and source have many senses. But the soul is the cause of its body alike in all three

239. *Id.* at 1249.
240. Pardo & Patterson, *supra* note 229, at 1249 (citations omitted).
241. *Id.* at 1250.
242. *Id.*
243. ARISTOTLE, ON THE SOUL 37 (J.A. Smith ed., 2006).
244. *Id.* at 12.

> senses which we explicitly recognize. It is (a) the source or origin of movement, it is (b) the end, it is (c) the essence of the whole living body.[245]

This reference to causation, source, and movement refers to Aristotle's concept of causation.

Aristotle recognized four kinds or aspects of causation: material, formal, efficient, and final.[246] The material cause is that out of which something comes, such as the bronze of a statue.[247] The formal cause is the form or account of what it is to be something, such as the shape of a statue.[248] The efficient cause is the primary source of change or rest, such as the sculptor who chips away at the marble.[249] The final cause is the end for which something is done, such as the production of a sculpture.[250]

Modern science recognizes only efficient causes.[251] While this may be an important methodological limitation, it is unwarranted, without further explanation, as an overarching metaphysic. Moreover, an Aristotelian or neo-Aristotelian notion of "mind" (or "soul") requires all these various senses of causation, and in particular *final* causation.[252] If some sort of Aristotelian anthropology is a response to reductive neuroLaw, then we must speak of where "law" comes from, what it means for "law" to be "law," and of the ends or purposes of "law." That is, we must speak of "law" as having some transcendent *telos*, some *source* that also implies its *ends*.

Reductive neuroLaw by definition offers no such transcendent sources or ends. In neuroLaw's state of pure nature there is no procedure for deriving how humans "ought" to live from the "is" of neurobiology. At any moment in the flow of evolutionary time, it might be possible to describe a fitness landscape of human behaviors, with highly localized accounts of an ordinary distribution of behavior ranges. Yet there is no principled way to construct a legal system that would seek to "correct" any particular behavior along any of these behavioral fitness curves. The act of attempting to effect such "corrections" itself would simply represent another adaptive behavior. And the legal machinery necessary to implement such corrective action necessarily would imply mere force and violence.

245. *Id.* at 39 (emphasis added).

246. *See, e.g.*, Andrea Falcon, *Aristotle on Causality*, STAN. ENCYCLOPEDIA OF PHIL. (Oct. 15, 2012), http://plato.stanford.edu/entries/aristotle-causality/.

247. *Id.*

248. *Id.*

249. *Id.*

250. *Id.*

251. For a discussion of causation in modern science, see Nancey Murphy, *Divine Action, Emergence and Scientific Explanation*, *in* THE CAMBRIDGE COMPANION TO SCIENCE AND RELIGION 244, 244–47 (Peter Harrison ed., 2010).

252. *See* Christopher Shields, *Aristotle's Psychology*, STAN. ENCYCLOPEDIA OF PHIL. (Aug. 23, 2010), http://plato.stanford.edu/entries/aristotle-psychology/.

Reductive neuroLaw therefore offers nothing other than the purposeless meander of natural selection. It is pure force—the "force of the law" without law. Thus, the legal system of reductive neuroLaw would perfectly enact the state of exception from the law.[253] With no rule of law, the will of the most powerful persons or groups would marginalize, exclude, control, and eventually replace and extinguish the less powerful, until the race of humanity is comprised only of the master race—except that not even the promised master race would make its *parousia*, since the fitness landscape changes and the cycle of competition is a world without end.[254] Indeed, the pure nature imagined by reductive neuroLaw destroys even "nature" itself. There is no whole "nature" that selects for its parts, and there are no parts oriented towards a whole. Finally, only these three remain—time, energy, and change—and the greatest of these is change.[255]

V. CONCLUSION: NEUROLAW AS A STATE OF EXCEPTION

In his book *Homo Sacer*, Italian political philosopher Giorgio Agamben observes that in the state of exception the law is "suspended."[256] When faced with a perceived threat or emergency, the sovereign declares a "state of exception" under which the ordinary rules of procedure, evidence, and judgment no longer apply.[257] In the state of exception there is no law but the will of the sovereign, and thus there is no "law" at all.[258]

Agamben highlights the problem of the relation between constituting and constituted power. Constituted power is that which is exercised with an existing state/juridical framework.[259] Constituting power is that which legitimates the state/juridical framework in the first instance.[260] Agamben suggests that the problem of constitutive power "is increasingly dismissed as a prejudice or a merely factual matter," creating a circularity by which the problem of legitimate power simply is referred to a constitutional document, which hangs in mid-air.[261] The fundamental problem, he argues, is metaphysical: what is the relation between potentiality (the possibility of

253. *See* GIORGIO AGAMBEN, HOMO SACER 15 (1998) (discussing the state of exception from the law).

254. *Cf. Ephesians* 3:20–21 (King James) ("Now unto him that is able to do exceeding abundantly above all that we ask or think, according to the power that worketh in us, Unto him be glory in the church by Christ Jesus throughout all ages, world without end. Amen.").

255. *Cf.* 1 *Corinthians* 13:13 (New International) ("And now these three remain: faith, hope and love. But the greatest of these is love.").

256. AGAMBEN, *supra* note 253, at 17.

257. *Id.* at 15.

258. *Id.*

259. *Id.* at 39.

260. *Id.* at 39–40.

261. AGAMBEN, *supra* note 253, at 40.

constituting law) and actuality (law as constituted).[262] "Until a new and coherent ontology of potentiality . . . has replaced the ontology founded on the primacy of actuality and its relation to potentiality," he argues, "a political theory freed from the aporias of sovereignty remains unthinkable."[263]

Agamben demonstrates that this problem of constituting and constituted law is a manifestation of the Aristotelian relationship between potentiality and act, *dynamis* and *energia*.[264] How, if at all, is potentiality different from act? Potentiality in the Aristotelian sense, Agamben explains, is the ability not to do or be: "Every potentiality is impotentiality of the same and with respect to the same" or "'What is potential can both be and not be.'"[265] This means that when potentiality passes into act, that which is potential "sets aside its own potential not to be (its *adynamia*)."[266] Therefore it is through potentiality that "[b]eing founds itself *sovereignly*," for the passage to actuality implies the sovereign freedom not to be or act.[267] And this means that constituting power is never exhausted by constituted power. Sovereign power can remain in reserve, as ungiven potentiality.[268] As Conor Cunningham notes, Agamben plays on the voluntarist notion of *de potential absoluta*.[269]

Here Agamben explores the figure of *homo sacer*, the person in Roman law placed under the sacred ban.[270] The *homo sacer* was not subject to execution by the State, but neither was it a crime of homicide for anyone to kill him.[271] This placed the *homo sacer* paradoxically both under and outside the law. The same dynamic, Agamben notes, was obtained in the Germanic *wargus*, the "werewolf," who is banned from the city and its law.[272] Agamben defines this as the origin of politics: "Not simple natural life, but life exposed to death (bare life or sacred life) is the originary political element."[273]

Agamben thereby deconstructs the Hobbesian response to the state of nature: the city and its laws do not limit the violence of the state of nature, but rather the state of nature exists within the city, in the human condition of bare

262. *Id.* at 44.

263. *Id.*

264. *Id.*

265. *Id.* at 45.

266. AGAMBEN, *supra* note 253, at 46. This is how Agamben construes Aristotle's statement that "[a] thing is said to be potential if, when the act of which it is said to be potential is realized, there will be nothing im-potential (that is, there will be nothing able not to be)." *Id.* at 45.

267. *Id.* at 46.

268. *Id.*

269. Conor Cunningham, *Nihilism and Theology: Who Stands at the Door?*, *in* THE OXFORD HANDBOOK OF THEOLOGY AND MODERN EUROPEAN THOUGHT 325, 340 (Nicholas Adams et al. eds., 2013).

270. AGAMBEN, *supra* note 253, at 71, 73.

271. *Id.* at 71.

272. *Id.* at 104.

273. *Id.* at 88 (emphasis omitted).

life, through which the citizen may become *homo sacer*/wolf-man in the state of exception.[274] The potential of the state of exception, moreover, bears within the potential for the dissolution of the city itself: "The transformation into a werewolf corresponds perfectly to the state of exception, during which (necessarily limited) time the city is dissolved and men enter into a zone in which they are no longer distinct from beasts."[275] Thus, "[t]he state of nature is, in truth, a state of exception, in which the city appears for an instant (which is at the same time a chronological interval and a nontemporal moment) *tanquam disoluta*."[276]

The paradigm of this dynamic, Agamben argues, is the concentration camp. In the camp, the governing "law" is pure biopolitics, the assertion of power over the body, as evidenced vividly in the gruesome Nazi medical experiments on inmates.[277] "The camp," Agamben says, "was also the most absolute biopolitical space ever to have been realized, in which power confronts nothing but pure life, without any mediation."[278] "Law" and "fact" become indistinguishable in the camp: the fact of bare life is law.[279] And as Western politics have come to define humanity in terms of bare life, to perpetuate the state of exception, and thereby to declare all persons not persons but rather *homo sacer* and *wargus*, the camp has superceded the city as our basic political paradigm.[280]

Agamben does not resolve this aporia, but he concludes with an appeal to reconstitute Western metaphysics.[281] As Christian theologian Graham Ward has noted, Agamben makes use of Pauline thinking about the person, about faith and love, "but there is no analysis of the third in the Pauline trilogue of virtues—hope."[282] Ward adopts Agamben's critique of the state of exception but only as a starting point to illuminate the contemporary situation and to bring it into the light of Christian eschatological hope.[283]

Earlier in his essay on *Homo Sacer*, Agamben refers to an article by Emmanuel Levinas, *Reflections on the Philosophy of Hitlerism*.[284] In that essay, Levinas locates the philosophy of National Socialism in "the essential

274. *Id.* at 105–06.

275. AGAMBEN, *supra* note 253, at 107.

276. *Id.* at 109.

277. *Id.* at 155, 159.

278. *Id.* at 171.

279. *Id.* at 170.

280. AGAMBEN, *supra* note 253, at 181.

281. *Id.* at 188.

282. GRAHAM WARD, THE POLITICS OF DISCIPLESHIP 179 (2009).

283. *Id.* at 180.

284. AGAMBEN, *supra* note 253, at 151; *see also* Emmanuel Levinas, *Reflections on the Philosophy of Hitlerism*, 17 CRITICAL INQUIRY 62 (Seán Hand trans., 1990).

possibility of *elemental Evil* into which we can be led by logic and against which Western philosophy had not sufficiently insured itself."[285]

Within the Jewish and Christian traditions, Levinas argued, human beings are free to transcend the vicissitudes of history, including of their own personal histories.[286] "This freedom," he said, "which is infinite with regard to any attachment and through which no attachment is ultimately definitive, lies at the base of the Christian notion of the soul."[287] Although the body remains stuck in the slipstream of history, through renewal of the soul a person "can regain the nudity he had during the first days of creation."[288] Because each soul always retains this potential to renew itself, there remains an "equal dignity of each and every soul, which is independent of the material or social conditions of people."[289] Indeed, freedom from history is the ultimate freedom:

> The salvation that Christianity wishes to bring us lies in the way it promises to reopen the finality brought about by the flow of moments of a past that is forever challenged, forever called into question, to go beyond the absolute contradiction of a past that is subordinate to the present.[290]

The modern alternatives to this paradigm, for Levinas, were liberalism, Marxism, and National Socialism.[291] Each of these programs displaced the notion of the soul.

For Levinas, liberalism retained the notion of choice but replaced the soul with a Kantian realm of pure, dispassionate reason.[292] This produced dislocation and skepticism, which attempt to keep concrete human history at a distance.[293] The seeds of National Socialism are present in this paradigm, because "[t]hought becomes a game."[294] People shy away from personal commitment to spiritual values.[295]

Materialist Marxism "confused the self [*le moi*] with the body . . . at the price of a pure and simple negation of the spirit."[296] Thus, the Marxists "placed the body in nature, and accorded it no exceptional standing in the Universe."[297] For such materialists, "the whole of the spirit's essence lies in the fact that it is

285. Levinas, *supra* note 284, at 63.
286. *Id.* at 64–66.
287. *Id.* at 65.
288. *Id.*
289. *Id.* at 66.
290. Levinas, *supra* note 284, at 65.
291. *Id.* at 63, 66–67.
292. *Id.* at 66.
293. *Id.* at 66, 69.
294. *Id.* at 69.
295. Levinas, *supra* note 284, at 69–70.
296. *Id.* at 68.
297. *Id.*

chained to the body."[298] Here again are seeds of National Socialism's exercise of power over the body.

National Socialism, in turn, replaced the soul with ideas. These were not ideas freely appropriated by reason, thereby creating a community of peers.[299] Rather, these were a framework of ideas—the *Blut und Boden* of the Aryan ideal of history—propagated by force.[300] The violence attached to ideas propagated by force does not dissipate when the ideas find acquiescence in subjects. Instead, the force remains, universalizing one final ideal: "war and conquest."[301]

Reductive neuroLaw now seeks to complete this trajectory: Kantian "pure" reason, stripped of moral sentiment, combined with Marxism's reduction of "person" to "body" and National Socialism's replacement of "law" with violence, to yield a final solution for control over "life" through "neural reeducation." The great philosophical and theological traditions, both East and West, offer rich metaphysical resources for resisting this trend towards biopolitical nihilism. It is a trend to be resisted at the cost of "life" itself.

298. *Id.*

299. *See id.* at 69–70. In an authentic community of ideas, Levinas says:

> The idea propagated detaches itself essentially from its point of departure. In spite of the unique accent communicated to it by its creator, it becomes a common heritage. It is fundamentally anonymous. The person who accepts it becomes its master, as does the person who proposes it. The propagation of an idea thus creates a community of 'masters'; it is a process of equalization. To convert or persuade is to create peers.

Id. at 70.

300. Levinas, *supra* note 284, at 70.

301. *Id.* at 71.