ARTICLES

A BIOLOGICAL BASIS OF RIGHTS

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“There is no denying, at this point, that Darwin’s idea is a universal solvent, capable of cutting into the heart of everything in sight.” Daniel C. Dennett

I. INTRODUCTION

Rights are an essential part of a modern legal system. Yet, scholars have had great difficulty developing a convincing source for rights. Traditionally, scholars have based rights on natural rights—rights that come from God or nature. However, God is based on faith, and no scholar has been able to demonstrate conclusively that rights exist externally in nature. Modern moral rights theories, in contrast, are generally deontological, rejecting metaphysical or theological foundations. In other words, they retain classical natural law’s relationship between law and morality, but they reject a connection with the natural order.

Ronald Dworkin is probably the most important twentieth century legal philosopher to have developed a deontological, moral-based conception of rights, which rejects their source in nature. Dworkin has argued that “[i]ndividual rights are political trumps held by individuals. Individuals have rights when, for some reason, a collective goal is not a sufficient justification for denying them what they wish, as individuals, to have or to do, or not a sufficient justification for imposing some loss or injury upon them.”

Dworkin has stated: “Political rights are creatures of both history and morality; what an individual is entitled to have, in a civil society, depends on both the practice and the justice of its political institutions.”

Dworkin’s theories also appear in his approach to constitutional adjudication:

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2 Id.
4 RONALD DWORKIN, LAW’S EMPIRE (1986); RONALD DWORKIN, TAKING RIGHTS SERIOUSLY (1978) [hereinafter DWORKIN, RIGHTS].
5 DWORKIN, RIGHTS, supra note 4, at xi.
6 Id. at 87.
Our constitutional system rests on a particular moral theory, namely, that men have moral rights against the state. The difficult clauses of the Bill of Rights, like the due process and equal protection clauses, must be understood as appealing to moral concepts rather than laying down particular conceptions: therefore a court that undertakes the burden of applying these clauses fully as law must be an activist court, in the sense that it must be prepared to frame and answer questions of political morality.7

More recently, Alan Dershowitz has developed a system of rights based on experience with wrongs, which he calls “nurtural” rights.8 He asserts that “rights are those fundamental preferences that experiences and history—especially of great injustices—have taught are so essential that the citizenry should be persuaded to entrench them and not make them subject to easy change by shifting majorities.”9 He views the essential problem of a system of rights as the source of those rights; otherwise, they could not trump majoritarian (democratic) preferences.10 He rejects both God and nature as the source of rights.11 He also refuses to use the ideal as a basis of rights, declaring “[i]t is more realistic to try to build a theory of rights on agreed-upon wrongs of the past that we want to avoid repeating, than try to build a theory of rights on idealized conceptions of the perfect society about which we will never agree.”12 Instead, he “identifies the most grievous wrongs whose recurrence we seek to prevent, and then asks whether the absence of certain rights contributed to those wrongs.”13 Dershowitz acknowledges that, because his system has no external source, he can only advocate his theory.14 However, he declares, “[i]f there can be agreement that certain rights are essential to reduce injustice, such agreement constitutes a solid theory of rights.”15

Neither Dworkin’s nor Dershowitz’s approach is convincing because both approaches lack a source for their rights.16 One cannot accept rights based on faith: faith often becomes ideology. Rights should be unchangeable (or at least not easily changed), and rights cannot be unchangeable without a source. Dworkin is not clear concerning his source of rights, and, as noted above, Dershowitz admits that his theory has no external source, and his optimism concerning obtaining a consensus on rights is questionable.

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7 Id. at 147.
9 Id. at 81.
10 Id. at 5. See also id. at 15–91.
11 Id. at 8.
12 Id. at 7.
13 Id. at 82.
14 Id. at 9.
15 Id. at 82. Dershowitz also states, “The reality is that rights are legal constructs devised by the minds of human beings, based on human experience, and they must be constantly defended in the court of public opinion.” Id. at 8.
16 Professor Dershowitz has written the following concerning Dworkin’s approach: “Accepting his source of rights requires one to accept the brilliance of his logic (or some hidden metaphysical truth) rather than being persuaded that experience demonstrates the utility (broadly defined) of rights.” Id. at 117. He has also argued, “Unless there is a compelling source of rights that trumps majoritarian preferences, the default position in a democracy should be a vote of the majority.” Id. at 5.
This paper advocates rights based on a different kind of “natural law,”
righst which come not from God or externally from nature, but from human
behavior—how our minds evolved. Professor Bernd Graefrath has written:
“The most acceptable explanation of the biological part of the cosmological
process is now one that assumes a natural evolution, developing without
purpose.”\(^{17}\) He has added, “even complex aspects of human culture [can]
be explained by the mechanism of an evolution that consists in differential
copying success of genes relative to their alleles.”\(^{18}\)

Under this approach, there are two kinds of truth: anthropocentric truth
and non-anthropocentric truth.\(^ {19}\) Nonanthropocentric truths are the laws
of physical nature and mathematics; they are unassailable truths that “are true
regardless of what we happen to think about them.”\(^ {20}\) Anthropocentric
truths are “truths that are true only because of the kinds of minds that we
happen to have, and the cultural worlds in which our minds developed.”\(^ {21}\)
In other words, anthropocentric truths are not unassailable in the universe,
but they are truths shared by all mankind.

This Article proposes that rights can be based on anthropocentric
truths—that rights arose from human nature. In particular, anthropocentric
rights developed to deal with specific adaptive problems in the
Environment of Evolutionary Adaptedness (“EEA”). The fundamentals of
rights derived from how our brains evolved with the details of rights arising
from how a particular culture reacted to how differing geography, ecology,
and social conditions affected survival.

Part II of this Article will introduce basic concepts of behavioral
biology. It will first discuss neuro-cognitive universals, the universal
grammar of morality, and universals in the law. Next, it will examine why
cultural differences occur despite the existence of universal human
behavioral traits, and then it will consider the selfish gene, a central
characteristic of human behavior, and related topics—reciprocal altruism,
natural morality, pain, and fairness. Subsequently, it will show how society
and the social contract evolved as a means for survival. Finally, it will
argue that rights should generally be based on biology because it is easier
to enforce a positive human trait than to repress it.

Part III will then present a biological basis for rights. It will first
demonstrate the need for rights based on biological factors and introduce
the sources of rights in human nature. Next, it will discuss the biological
basis of four kinds of rights—property rights, rights to fairness, liberty

\(^{17}\) Bernd Graefrath, Darwinism: Neither Biologistic nor Metaphysical, in DARWINISM & PHILOSOPHY
\(^{18}\) Id. at 369.
\(^{19}\) See Jonathan Haidt, Invisible Fences of the Moral Domain, 28 BEHAV. & BRAIN SCI. 552, 552 (2005)
[hereinafter Haidt, Invisible Fences]. See also Jonathan Haidt & Fredrik Bjorklund, Social
Institutionalists Answer Six Questions About Moral Psychology, in 2 MORAL PSYCHOLOGY 181, 213–14
\(^{20}\) Haidt, Invisible Fences, supra note 19, at 552.
\(^{21}\) Id. at 552–53. See also Haidt & Bjorklund, supra note 19, at 214 (“We would expect intelligent
creatures from another planet to show little agreement with us on questions of humor, beauty, good
writing, or morality.”). These authors note that the only other ultrasocial mammals are naked mole rats,
but their ultrasociality, like that of bees and ants, is based on kin altruism since all are siblings. Haidt &
Bjorklund, supra note 19, at 192. Consequently, their social system is radically different from humans.
rights, and rights to equal treatment. Finally, it will examine some implications of a biological basis of rights.

The final part will illustrate how biological rights exist in different cultures. It will first examine how rights based on human behavior developed in the American constitutional system; then it will compare the concept of liberty in American and German law.

II. PRINCIPLES OF BEHAVIORAL BIOLOGY

A. INTRODUCTION

Behavioral biologists study human nature from an evolutionary perspective. They connect patterns of “genes through neural activity to brain circuitry and behavior.” They believe that the human brain evolved similarly to human physical characteristics, such as opposable thumbs and walking erect. In other words, the human brain evolved through natural selection “to make decisions that enhance reproductive success.” Likewise, “complex functional human psychological and behavioral traits are the results of adaption through natural selection.”

Behavioral biologists study human behavior using methods that allow them to analyze behavior in ways that were unimaginable just a few years ago. Evolutionary psychologists examine how subjects react while playing various “games,” such as the prisoners’ dilemma or the ultimatum game. Psychologists also analyze how brain deformities alter human behavior, while other scientists study childhood development. Comparative anthropologists investigate behavior across cultures. Finally,

22 Behavioral biology encompasses many fields including evolutionary biology, evolutionary psychology, cognitive science, neuroscience, etc.
25 MICHAEL S. GAZZANIGA, HUMAN: THE SCIENCE BEHIND WHAT MAKES US UNIQUE 19 (2008). See also Pinker, supra note 24, at 302. “These psychologists have argued that human thinking and decision making are biological adaptations rather than engines of pure rationality.” Id.
27 E.g., Gazzaniga, supra note 25, at 133–34.
28 Id. at 119–20.
29 Id. at 165–68.
neuroscientists examine the brain using techniques such as fMRI scans and investigate the brain’s chemistry.\textsuperscript{31}

Natural selection is the main force behind evolution. As one scholar has stated: “Differential reproduction of genetically different forms, or evolutionary selection, is the only candidate for the principal guiding force of evolutionary change.”\textsuperscript{33} Under natural selection, genes compete with other alleles (variations of the gene), and “those alleles that are better at securing the reproductive success of their organisms are likely to spread in the gene pool to the detriment of the others.”\textsuperscript{34} As Professor Marc Hauser has noted: “Natural selection builds organisms with complex design features based on a nonrandom but directionless process. Poorly-designed variants are eliminated, better-designed ones favored.”\textsuperscript{35} In evolutionary theory, an ‘adaptation’ is a biological trait, physiological, psychological, or behavioral, shaped by natural selection to enhance the fitness of members of a species.\textsuperscript{36} As Professor John McGinnis has observed, “[s]ince resource acquisition ability was important to the genetic fitness of our ancestors, traits that contributed to this ability were selected over time in any given population.”\textsuperscript{37}

Another aspect of evolution is sexual selection. Sexual selection is the competition for mates and reproductive opportunities.\textsuperscript{38} Human males and females make different contributions to reproduction, with females making the most valuable contribution in that they provide the egg, internal fertilization, gestation, and lactation and they bear most of the responsibility for raising their offspring.\textsuperscript{39} Because females contribute the most important resources and they can have only a limited number of offspring due to gestation, males must compete for females.\textsuperscript{40} Males who are better at attracting mates reproduce and continue their genes, while males that cannot attract mates do not.\textsuperscript{41} Thus, nature selects against those males who are not good at attracting mates. Characteristics that attract females indicate traits that the mate will produce strong offspring, traits

\textsuperscript{31} E.g., GAZZANIGA, supra note 25, at 124–26, 168–71.
\textsuperscript{32} Id. at 175–76.
\textsuperscript{34} Bailey Kuklin, Peril Invites Rescue: An Evolutionary Perspective, 35 HOFSTRA L. REV. 171, 179 (2006) [hereinafter Kuklin, Peril].
\textsuperscript{35} HAUSER, supra note 24, at 312. See also Cosmides & Tooby, supra note 24, at 167. “If a change in an organism’s design allows it to outreproduce the alternative design in the population, then that design change will become more common—it will be selected for.” Id. In addition, “the fitness of a gene is determined, at least partially, by its ability to coordinate well with the other genes it finds itself with in its particular genome.” Bailey Kuklin, Evolution, Politics and Law, 38 VAL. U.L. REV. 1129, 1135 (2004) [hereinafter Kuklin, Politics].
\textsuperscript{36} Brian Boyd, Evolutionary Theories of Art, in THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE 147, 150 (Jonathan Gottschall & David Sloan Wilson eds., 2005). See also Cosmides & Tooby, supra note 24, at 164 (“[C]omplex adaptations are constructed in response to evolutionarily long-enduring problems...”).
\textsuperscript{38} Kuklin, Peril, supra note 34, at 194–95.
\textsuperscript{39} Id. at 195; PINKER, supra note 24, at 252.
\textsuperscript{40} Kuklin, Peril, supra note 34, at 196–97; PINKER, supra note 24, at 252 (“Males compete, females choose; males seek quantity, females quality.”).
\textsuperscript{41} Kuklin, Peril, supra note 34, at 205.
such as physical attractiveness, social status, good health, and intelligence, as well as traits demonstrating that the male will help the female raise the child and be a good-faith mate, such as kindness, faithfulness, and the ability to obtain resources. While certain mate preferences overlap among the sexes, there are also significant differences in preference because of the different investments in and benefits from mating. Males prefer mates who are attractive (an indicator of being young and healthy and having good genes), make commitments, and would be a good mother.

Behavioral biologists believe that the brain is modular, with each module having a specialized function (domain-specific reasoning procedures), and that these modules interact to produce a thought or an action and that they can "reinforce or cancel one another out, according to context." Professor Hauser has stated: "[t]he logic of natural selection suggests that the mind is equipped with specialized reasoning abilities, designed to solve specific adaptive problems." Similarly, Professor Michael Gazzaniga has declared: "[T]hink of a module as a hardwired (innate) mechanism that unconsciously directs you to think or act in a certain way, that directs your attention to such states as belief, desire, and pretense and then allows you to learn about these mental states." Professor Steven Pinker has described how these modules interact: "[A]n urge or habit coming out of one module can be translated into behavior in different ways—or suppressed altogether—by some other module." Professor Gazzaniga has argued that "[t]hese modules produce specific intuitive concepts that have allowed us to create the societies we live in." Neuroscientists have observed the modularity of the human mind with fMRI scans.

42 Id. at 197–201. See also ANTHONY WALSH, BIOSOCIOLOGY: AN EMERGING PARADIGM 209, 211 (1995) ("Unlike most other mammals, human fathers have strong parental bonds with their children.").

44 Kuklin, Peril supra note 34, at 197–98.

46 Id.

48 GAZZANIGA, supra note 25, at 52; Wilson, Foreword, THE NEUROSCIENCE OF FAIR PLAY, supra note 23, at x; Robinson et al., supra note 26, at 1659–60; PINKER, supra note 24, at 40, 219; Cosmides & Tooby, supra note 24, at 209. "It appears our brains have neuronal circuits that have developed over evolutionary time that do indeed do specific jobs." GAZZANIGA, supra note 25, at 127.

49 HAUSER, supra note 24, at 291. Professor Pinker thinks we have at the least: 1) an intuitive physics, 2) an intuitive version of biology or natural history, 3) an intuitive engineering, 4) an intuitive psychology, 5) a spatial sense, 6) a number sense, 7) a sense of probability, 8) an intuitive economics, 9) a mental database and logic, and 10) language. PINKER, supra note 24, at 220–21. Professor Paul Rubin has pointed out that specialized modules developed because a general purpose mind that could deal with everything in the EEA was too costly. PAUL H. RUBIN, DARWINIAN POLITICS: THE EVOLUTIONARY ORIGIN OF FREEDOM 27 (2002).

50 Id. at 9 ("Brain imaging studies have revealed that specific parts of the brain are active for specific types of information."); HAUSER, supra note 24, at 220–23; Casebeer & Churchland, supra note 24, at 178–79; Robinson et al., supra note 26, at 1659–64. See generally MARCO IACOBONI, MIRRORING PEOPLE: THE NEW SCIENCE OF HOW WE CONNECT WITH OTHERS (2008); GIACOMO RIZZOLATTI & CORRADO SINIGAGLIA, MIRRORS IN THE BRAIN—HOW OUR MINDS SHARE ACTIONS AND EMOTIONS (2008). fMRI scans measure brain activity by examining blood flow in the brain. For a more detailed explanation of the fMRI, see IACOBONI, supra, at 59–60.
B. NEURO-COGNITIVE UNIVERSALS, THE UNIVERSAL GRAMMAR OF MORALITY, AND UNIVERSALS IN THE LAW

Biological rights derive from neuro-cognitive universals that transcend cultures. These universals exist because “[s]ome designs [evolutionary adaptations] out reproduce others until they become universal in the population . . . .” Behavioral biologists have discovered hundreds of universals, Noam Chomsky has conjectured that there is a “universal grammar,” which underlies all human languages. Professor Raffaele Caterina has declared that “[p]eople from different cultures, and scientists, recognize substantially the same discontinuities in nature, demonstrating that classification of living organisms is not just a matter of cultural conventions.” Professor Donald Brown has uncovered hundreds of universals including classification, crying, daily routines, envy, etiquette, facial expressions, jokes, law, leaders, logical notions, play, and social structure. Even art is a universal.

Behavioral biologists believe that morality (our sense of right and wrong) is a universal that is hardwired into our brains (a “universal moral grammar”) and that has aided survival. Moral judgments are generally intuitive and unconscious; they often occur automatically and allow us to make rapid judgments. For example, humans developed an innate incest

51 As Professor Flew has remarked, “any universal natural rights will have to be grounded upon some characteristic or characteristics common to all mankind.” ANTHONY FLEW, EQUALITY IN LIBERTY AND JUSTICE 43 (1984).
52 Cosmides & Tooby, supra note 24, at 170.
53 PINNER, supra note 24, at 435–39 (summarizing DONALD E. BROWN, HUMAN UNIVERSALS (1991)). See also HAUSER, supra note 24, at 419.
54 E.g., NOAM CHOMSKY, KNOWLEDGE OF LANGUAGE: ITS NATURE, ORIGINS, AND USE (1986); NOAM CHOMSKY, REFLECTIONS ON LANGUAGE (1975). Professor Gazzaniga has observed: “Cognitive linguists . . . argue that mental traits are subject to the same forces of natural selection as biological traits.” GAZZANIGA, supra note 25, at 56. Similarly, Professor Ian McEwan has noted, “[w]e know now that no blank-disk, all-purpose machine could learn language at the speed and facility that a child does.” Ian McEwan, Literature, Science, and Human Nature, in THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE 5, 17 (Jonathan Gottschall & David Sloan Wilson ed., 2005). Recently, a group of scientists have shown that zebra finches have a universal grammar of song. Olga Fehér et al., De novo Establishment of Wild-Type Song Culture in the Zebra Finch, 459 NATURE 564 (2009).
55 Professor Raffaele Caterina, supra note 30, at 1504.
56 DONALD E. BROWN, HUMAN UNIVERSALS (1991) (summarized in PINNER, supra note 24, at 435–39). See also GAZZANIGA, supra note 25, at 103 (“Facial expressions are universal and [l] there are specific facial expressions for specific emotions.”).
57 GAZZANIGA, supra note 25, at 205.
59 GAZZANIGA, supra note 25, at 118; HAUSER, supra note 24, at xvii, 2, 67, 425 (“[W]e are endowed with a moral instinct, a faculty of the human mind that unconsciously guides our judgments concerning right and wrong, establishing a range of learnable moral systems, each with a set of shared and unique signatures.” Id. at 425); Casebeer & Churchland, supra note 24, at 185; Haidt, Emotional Dog, supra note 58, at 814 (“In the social intuitionist model it becomes plausible to say, ‘I don’t know, I can’t explain it, I just know it’s wrong.’”). Professor Haidt added: “Affective evaluation occurs so quickly, automatically, and pervasively that it is generally thought to be an integral part of perception.” Haidt, Emotional Dog, supra note 58, at 819. He continued that “[t]heir flashes of intuition are not dumb; as
taboo that causes a person to be sexually uninterested in a person that he or she lived with as a child, a trait which developed to discourage inbreeding with its genetic costs. However, there are also times when abstract moral reasoning is required, such as when conflicting moral judgments are involved. In addition, individuals often work out moral dilemmas with others; morality is partly a social process. In sum, much of our morality is based on moral intuition, but man is also capable of conscious moral judgment and sometimes morality develops through a social process.

Morality doesn’t derive from a single module in the brain; rather, it is produced by several modules in combination. FMRI scans have revealed that “when people confront certain kinds of moral dilemmas, they activate a vast network of brain regions, including areas involved in emotion, decision-making, conflict, social relations, and memory.” Professors Jonathan Haidt and Craig Joseph have proposed that there are five moral modules: (1) harm/care (“a sensitivity to or dislike of signs of pain and suffering in others’); (2) fairness/reciprocity; (3) authority/respect (“a set of concerns about navigating status hierarchies, e.g., anger towards those who fail to display proper signs of deference and respect”); (4) boundaries between in-groups and out-groups (coalitions); and (5) purity/sanctity (“relating to the emotion of disgust”).

In addition, fMRI scans show the effects of emotion on moral reasoning. People distinguish between types of moral dilemmas (such as direct versus indirect harm) based on the regions of the brain activated. For example, when direct physical harm is involved (e.g., pushing one

with the superb mental software that runs visual perception, they often hide a great deal of sophisticated processing occurring behind the scenes.” Haidt & Bjorklund, supra note 19, at 188.

65 Gazzaniga, supra note 25, at 116–17; Robinson et al., supra note 26, at 1645–46.
66 Casebeer & Churchland, supra note 24, at 185; Haidt, Emotional Dog, supra note 58, at 817. Professor Haidt has asserted that “[t]he social intuitionist model, therefore, is not an antirationalist model. It is a model about the complex and dynamic ways that intuition, reasoning, and social influences interact to produce moral judgment.” Haidt, Emotional Dog, supra note 58, at 829. See also Street, supra note 24, at 120, 123 (“The view I am suggesting by no means involves thinking of us as automatons who simply endorse whatever evaluative tendencies are implanted in us by evolutionary and other forces.” Id. at 123); Cass R. Sunstein, Moral Heuristics, 28 BEHAV. & BRAIN SCI. 531, 533 (2005) (“System I proposes quick answers to problems of judgment, and System II operates as a monitor, confirming or overriding those judgments.”). Professors Mullen and Skitka have suggested that people “tend to shift into a more thoughtful and analytical mode of reasoning when they experience something negative or unexpected.” Elizabeth Mullen and Linda J. Skitka, Exploring the Psychological Underpinnings of the Moral Mandate Effect: Motivated Reasoning, Group Differentiation, or Anger?, 90 J. PERSONALITY AND SOC. PSYCHOL. 629, 631 n.4 (2006).
67 Haidt & Bjorklund, supra note 19, at 192–93.
68 Chris D. Frith and Tania Singer, The Role of Social Cognition in Decision Making, 363 PHIL. TRANSACTIONS OF THE ROYAL SOC’Y B 3875, 3883 (2008). They add that “decisions dictated by reason are not always good, while decisions dictated by emotion are not always bad.” Id. at 3884.
69 Donald W. Pfaff, The Neuroscience of Fair Play: Why We Usually Follow the Golden Rule 4 (2007); Casebeer & Churchland, supra note 24, at 172, 188; Terrence Chorvat & Kevin McCabe, The Brain and the Law, 359 PHIL. TRANSACTIONS OF THE ROYAL SOC’Y LONDON B 1727, 1728 (2004); Haidt & Bjorklund, supra note 19, at 203; Robinson et al., supra note 26, at 1662.
71 Haidt & Bjorklund, supra note 19, at 203.
person off a footbridge to stop a trolley from killing five people—the “trolley problem”), most individuals have an emotional reaction that causes them to think intuitively and come to an immediate conclusion that this action is wrong. The brain region involved in this process is the ventromedial prefrontal cortex, which integrates affective responses (emotion) with higher cognition. However, when the same outcome involves indirect harm (e.g., throwing a switch to shift a trolley from killing five people to a track that kills one), individuals do not have the same response with a different part of the brain being involved, and they often exhibit a utilitarian reaction in which one person is sacrificed to save five. This suggests that intuitive moral responses involve emotion, and they activate different parts of the brain than utilitarian reasoning.

Humans can recognize the emotional states of others, and they “have the ability to form theories with some degree of accuracy about what those desires, intentions, beliefs and mental states are.” In other words, humans have “the ability to observe behavior and then infer the unobservable mental state that is causing it.” This is “a theory of mind, a more-or-less automatic understanding of what it means to be someone else.” Most significantly, “[h]uman nature provides a yardstick to identify suffering in any member of our species.”

“Individuals recognize actions made by others because the pattern of firing neurons [mirror neurons] made when observing an action is similar to the pattern produced to generate the action.” Professors William Casebeer and Patricia Churchland have described how mirror neurons work:

The behavior of the “mirror neurons” suggests that when seeing the other make the movement, the premotor cortex generates incipient motor commands to match the movement. It is possible that these signals can be detected as intentions, albeit off-line intentions, which are used to interpret what is seen (e.g., “he intends to share food”).

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68 Greene et al., supra note 67, at 2105–07; Haidt & Bjorklund, supra note 19, at 200.
69 Greene et al., supra note 67, at 2106–07; Haidt & Bjorklund, supra note 19, at 200.
70 Greene et al., supra note 67, at 2106–07; Haidt & Bjorklund, supra note 19, at 200.
71 Gazzaniga, supra note 25, at 48–49.
72 Id. at 49. See also Pinker, supra note 24, at 166 (“The faculties underlying empathy, foresight, and self-respect are information-processing systems that accept input and commandeer other parts of the brain and body.”).
73 Casebeer & Churchland, supra note 24, at 176–78; McEwan, supra note 54, at 5. See also Rebecca Saxe, Uniquely Human Social Cognition, 16 CURRENT OPINION IN NEUROBIOLOGY 235 n.2 (2006) (Neuroscientific evidence suggests that social cognition is connected with at least five brain regions. In other words, theory of mind is modular with different parts of the mind supplying different aspects of TOM.).
74 Pinker, supra note 24, at 172.
75 Gazzaniga, supra note 25, at 63. See also Hauser, supra note 24, at 224 (The mirror neuron system plays an essential role in moral judgments.). See generally Rizzolatti & Sinigaglia, supra note 50; Iacoboni, supra note 50, at 4. One researcher has “suggested that the discovery of mirror neurons promise[s] to do for neuroscience what the discovery of DNA did for biology.” Iacoboni, supra note 50, at 8.
76 Casebeer & Churchland, supra note 24, at 176. See also Iacoboni, supra note 50, at 119 (“[M]irror neuron areas help us understand the emotions of other people by some form of inner imitation”); Haidt, Emotional Dog, supra note 38, at 825.
In other words, an individual understands an action because he has a template in his brain for that action based on his own movements. Moreover, social cognition also depends on the ability to form triadic mental representations of mental states—You, Me, and This (an object), which allows sharing attention to an object and collaborating on a shared goal ("shared intentionality").

Mirror neurons help us understand the emotions of others. For example, fMRI scans suggest that "the understanding of the facial expressions of disgust in someone else involves the activation of the same part of the brain that normally is activated during the experience of that same emotion." Understanding the emotions of others helps us navigate our lives; "[i]f our brains were not able to discriminate at emotional level events perceived, remembered, or imagined, it would be almost impossible for us to deal with even the most banal of the situations that we have to face daily." Furthermore, "[b]y being able to feel what others feel, we are also able to respond compassionately to their emotional states."

There are specific neural circuits in the brain that allow one to distinguish between oneself and others (self-awareness), both physically and psychologically. Professor Gazzaniga has stated that the "sense of self arises out of distributed networks in both hemispheres. It is likely that both hemispheres have processing specializations that contribute to a sense of self, and that sense of self is constructed by the left-hemisphere interpreter on the basis of the input from the distributed networks." Professor Marco Iacoboni has elaborated: "The mirror neurons embody both the interdependence of self and other—by firing for the actions of both—and the independence we simultaneously feel and require, by firing more powerfully for actions of the self." In addition, the brain may have "super mirror neurons," which are involved in creating a proper sense of the self.

Our self-awareness and theory of mind contribute to our moral judgments of responsibility. According to Professor Hauser, "[s]elf-knowledge is a prophylactic, a protective skin that can empower us to avoid
temptations or, more mundanely, avoid saying or doing the wrong thing at the wrong time.\textsuperscript{90} Similarly, empathy (“a matching up of the emotions in the displayer and observer”) derives from our self-awareness, mirror neurons, and theory of mind.\textsuperscript{91} “[I]ndividuals can think about what someone else feels, imagine what they would feel in the same situation, work out what would make them feel better, and from this deduce how to make the other person feel better.”\textsuperscript{92} More specifically, “the perception of someone’s suffering evokes an altruistic motivation directed toward the ultimate goal of reducing the suffering.”\textsuperscript{93} However, empathy is not just automatic; it can be affected by such factors as “the affective link to the other person, the perceived fairness of the other, the subject’s appraisal of whether the reason the other person is suffering is justified, the frequency of a person’s prior exposure to pain-inducing situations and the intensity of the inflicted pain.”\textsuperscript{94}

Finally, not all moral emotions are “nice.”\textsuperscript{95} Emotions involving shaming, ostracism, and revenge are part of human nature.\textsuperscript{96} Similarly, disgust protects against disease (lack of purity).\textsuperscript{97} Even fear is an important moral emotion because it can affect our moral choices.\textsuperscript{98}

Neuro-cognitive universals also exist in the law, which is not surprising considering the relationship between morality and law.\textsuperscript{99} For example, Professor Brown has discovered numerous universals that are relevant to law including a concept of fairness, distinguishing right and wrong, inheritance rules, murder proscribed, property, rape proscribed, reciprocal exchanges of labor, goods, or services, redress of wrongs, sanctions, sanctions for crimes against the collectivity, and some forms of violence proscribed.\textsuperscript{100} Professor George Fletcher has asserted that there is a “deep universal structure of criminal law.”\textsuperscript{101} Professors Owen Jones and Timothy Goldsmith have claimed that one can see the effects of the evolutionary process on the human brain in the architecture of legal systems.\textsuperscript{102} A related set of professors has proposed that humans probably share a sense of

\textsuperscript{90} HAUSER, supra note 24, at 183.
\textsuperscript{91} Id. at 194. See also IACOBONI, supra note 50, at 5, 109; RIZZOLATTI & SINIGAGLIA, supra note 50, at 185–93. A group of neuroscientists have theorized that empathy has both cognitive and affective components. Simone G. Shamay-Tsoory, Empathetic Processing: Its Cognitive and Affective Dimensions and Neuroanatomical Basis, in THE SOCIAL NEUROSCIENCE OF EMPATHY 216 (Jean Decety & William Ickes eds., 2009). See also Decety & Lamm, supra note 84, at 209 (“[E]mpathy operates by way of unconscious and automatic processes that, far from functioning independently, represent different aspects of a common mechanism.”).
\textsuperscript{92} HAUSER, supra note 24, at 352.
\textsuperscript{93} Haidt, Emotional Dog, supra note 58, at 824.
\textsuperscript{94} Firth & Singer, supra note 63, at 3877 (citations omitted).
\textsuperscript{95} GAZZANIGA, supra note 25, at 130.
\textsuperscript{96} Id. at 131.
\textsuperscript{97} Id. at 137.
\textsuperscript{98} PRAFF, supra note 64, at 22–23.
\textsuperscript{99} Professor Kar believes that “law and morality share a deep and pervasive structure—an analogue in the moral and legal domain of what Noam Chomsky has called the ‘deep structure’ or ‘universal language’ or grammar.” Robin Bradley Kar, The Deep Structure of Law and Morality, 84 TEX. L. REV. 877, 878 (2006).
\textsuperscript{100} PINKER, supra note 24, at 435–39.
\textsuperscript{101} GEORGE P. FLETCHER, BASIC CONCEPTS OF CRIMINAL LAW 5 (1998).
\textsuperscript{102} Owen D. Jones & Timothy H. Goldsmith, Law and Behavioral Biology, 105 Colum. L. Rev. 405, 466 (2005).
justice concerning deserved punishment, which arose from the social nature of humans through evolution. Furthermore, Professor Peter Strahlendorf has theorized that Darwinian algorithms ("the interaction between information in gene-determined structures and environmental information that occurs in the functioning of cognitive programs") underlie our sense of justice. He has explained: "It is the Darwinian algorithms that are [evolutionary] adaptations, . . . the algorithms are solutions to problems, the solving of which must have resulted in greater reproductive success of individuals in the past."

The mind also has cognitive limitations—"[t]here are things it cannot do, cannot learn, and cannot comprehend." Our cognitive abilities were developed for survival—"[i]f an organism repeatedly comes across the same situation, any individual that evolves a mechanism to understand or predict the results of the situation is going to have a survival advantage." Consequently, our cognitive limitations exist because mankind did not need all skills on the primate savannah. These limitations apply to moral reasoning: "[f]rom an evolutionary perspective, the survival of the animal depends on its maintaining its inner milieu within a very narrow range of values." In other words, strong moral relativism does not exist.

C. CULTURAL DIFFERENCES

Culture provides the details of human behavior. The development of culture aided survival in the EEA in light of differing geography, ecology, and social circumstances. Professor Hauser has written that "[c]ultural variation is only possible because of specialized psychological mechanisms that enable particular forms of learning." Similarly, Professor Pinker has observed that "familiar categories of behavior—marriage customs, food taboos, folk superstitions, and so on—certainly do vary across cultures and have to be learned, but the deeper mechanisms of mental computation that generate them may be universal and innate." For example, all cultures proscribe murder, but the exceptions to murder vary by culture. Finally,

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103 Robinson et. al., supra note 26, at 1639, 1646, 1664.
105 Id. at 148–49.
106 Id. at 149.
107 David Gazzaniga, supra note 25, at 127. See also Haidt & Bjorklund, supra note 19, at 183.
110 Pinker, supra note 24, at 60, 68; Kar, supra note 99, at 887; Robinson et al., supra note 26, at 1640. See generally Jared Diamond, GUNS, GERMS, AND STEEL (1997). "History followed different courses for different people because of differences among peoples' environments, not because of biological differences among people themselves." Id. at 25.
111 HAUSER, supra note 24, at 132. See also Pinker, supra note 24, at 35, 39, 60–63 ("[T]here can be no learning without innate circuitry to do the learning."); Edward O. Wilson, Foreword from the Scientific Side to THE LITERARY ANIMAL: EVOLUTION AND THE NATURE OF NARRATIVE viii (Jonathan Gottschall & David Sloan Wilson eds., 2005) [hereinafter Wilson, Foreword from the Scientific Side]; Kuklin, Politics, supra note 35, at 1172 ("[T]he ability to learn is an evolved trait.").
112 Pinker, supra note 24, at 39. See also Caterina, supra note 30, at 1513 ("[W]e can say that perception of the world, recognition of certain discontinuities in the world, precede, and do not follow, cultural elaboration.").
Judge Morris Hoffman has argued: “Perhaps all behaviors are represented in the brain by a set of probability distributions which are then continuously influenced by the interaction between ultimate causes (the initial probabilities evolution built into our brains) and proximate causes (the particular environmental challenges brains are called upon to solve).”

Although there is a narrow range of possible moral systems, the details of morality do vary among cultures. Professor Hauser has observed that “[a] mature individual’s moral grammar enables him to unconsciously generate and comprehend a limitless range of permissible and obligatory actions within the native culture, to recognize violations when they arise, and to generate intuitions about punishable violations.”

Or, as Professor Graefrath has asserted: “We have to distinguish between the ethos of a community, which tells us what people in this community regard as obligatory, and morality proper, which tells us what is obligatory without reference to what a community’s customs happen to be.”

Man learns the details of a culture through imitation by exposure to that culture’s social norms. The ability to imitate others is innate and often unconscious. As Professor Hauser has observed, “[t]he role of experience is to instruct the innate system, pruning the range of possible moral systems down to one distinctive moral signature.” More specifically, mirror neurons create a connection between the observation and imitation of an action. Under this process, “the action as observed and as executed must share the same neural code and that this is the sine qua non condition for imitation.” Furthermore, the aforementioned triadic mental representations are important for learning culture.

According to one theory, cultural differences occur in the realization of morality because different cultures stress different aspects of Haidt’s and Joseph’s five modules. There are three areas of moral concern under:

113 Hoffman, supra note 109, at 1672.
114 Hauser, supra note 24, at 74, 420–21 (“The universal moral grammar is a theory about the principles that enable children to build a large but finite range of distinctive moral systems.”); Pinker, supra note 24, at 37 (“Universal mental mechanisms can underlie superficial variation across cultures.”); Jones & Goldsmith, supra note 102, at 424 (“[E]ach species come evolutionarily equipped . . . with proclivities to learn some behaviors far more easily than others.”).
115 Variations among cultures do not create cultural relativism. First, as noted, all cultures share many universals. Second, also as noted, the cultural variations are created by innate structures in the mind that permit cultural learning. Finally, as Professor Arnhart has pointed out, “for any given set of circumstances, there are naturally better and worse ways to satisfy the natural desires of human beings.” Larry Arnhart, Darwinian Natural Right: The Biological Ethics of Human Nature 39 (1998).
116 Hauser, supra note 24, at 44.
117 Graefrath, supra note 17, at 370.
118 Hauser, supra note 24, at 422; Pinker, supra note 24, at 63. See also Iacoboni, supra note 50, at 70.
119 Gazzaniga, supra note 25, at 160; Iacoboni, supra note 50, at 73. Imitation is “the capacity of an individual to replicate an observed act.” Rizzolatti & Sinigaglia, supra note 50, at 140.
120 Hauser, supra note 24, at 422. See also id. at 165.
121 Gazzaniga, supra note 25, at 177. See also Rizzolatti & Sinigaglia, supra note 50, at 139–71.
122 Rizzolatti & Sinigaglia, supra note 50, at 140.
123 See Tomasello, supra note 79, at 675. “The main point is that [one]-year-old infants use their newly emerging skills of intention understanding not only to predict what others will do, but also to learn from them how to do things conventionally in their culture.” Id. at 680.
124 Gazzaniga, supra note 25, at 130; Haidt & Bjorklund, supra note 19, at 209.
these modules: (1) the ethic of autonomy (suffering and reciprocity), which is concerned with an individual’s rights, freedoms, and welfare; (2) the ethic of community (hierarchy and coalitional boundaries), which is concerned with protecting families, communities, and nations; and (3) the ethic of divinity (the concern for purity), which involves the spiritual self and physical and mental purity. An environmental trigger activates the input into these modules; they then elicit moral emotions, and moral intuition (output) ensues.  

D. THE SELFISH GENE AND RELATED TOPICS

An important concept in behavioral biology is the notion of the selfish gene. Behavioral biologists believe that genes are selfish; they are only interested in their survival. Judge Hoffman has written: “[i]ndividuals, not groups, are the functional units through which genes act, and social norms become adaptive only because they confer a net benefit to individuals.” The first goal of the selfish gene is the organism’s survival, and the second is reproduction.

Various mechanisms, such as reciprocal altruism, natural morality, pain, and a notion of fairness, evolved to counteract the selfish gene and make man a social animal, thus aiding survival. People cooperate when they trust others to cooperate (reciprocal altruism). Therefore, cooperation is a byproduct of the selfish gene—cooperation aids survival. In other words, being selfless comes from being selfish.

Natural morality, through the emotions of anger, indignation, and gratitude, also helps control the selfish gene. Because humans can sense the feelings of others, they anticipate that others will become angry and retaliate when they are cheated. Moreover:

It can be to a selfish person’s advantage to have moral sentiments that are visibly expressed by moral emotions, which predispose him not to cheat. Moral emotions, which are difficult to counterfeit, advertise that you have

125 GAZZANIGA, supra note 25, at 130. See also PINKER, supra note 24, at 271; R.A. Shweder et. al., The “Big Three” of Morality (Autonomy, Community, and Divinity), and the “Big Three” Explanations of Suffering, in MORALITY AND HEALTH 119, 119–69 (A. Brandt & P. Rozin eds., 1997).
126 GAZZANIGA, supra note 25, at 132–141.
128 Hoffman, supra note 109, at 1674. See also DAVID P. BARASH, THE SURVIVAL GAME: HOW GAME THEORY EXPLAINS THE BIOLOGY OF COOPERATION AND COMPETITION 216 (2003) (“It is now widely acknowledged that evolution does not operate for the good of species, but rather, via the disparities in success of different individuals and—better yet—of competing genes.”); HAUSER, supra note 24, at 311 (“From the gene’s eye view, the way to think about the evolution of moral behavior is to think selfishly.”).
129 Alexander, supra note 33, at 309.
130 Barash, supra note 128, at 157; HAUSER, supra note 24, at 82. Trust is “the willingness to behave in such a way that only makes sense if you believe that others will reciprocate any benefits to you extended to them.” Chorvat & McCabe, supra note 64, at 1729.
131 HAUSER, supra note 24, at 380; McCannis, supra note 37, at 217 (“In primitive societies, where centralized enforcement of obligations were quite imperfect, psychological mechanisms that resulted in cooperation would have been naturally selected.”); Robinson et al., supra note 26, at 1647.
132 See ARNHART, supra note 115, at 161.
133 GAZZANIGA, supra note 25, at 132.
a conscience and would suffer uncomfortable feelings of guilt if a promise were broken.\textsuperscript{134}

Pain is also an important social emotion. When an individual experiences social rejection, that individual suffers pain.\textsuperscript{135} Avoiding this pain helps keep the group together and thus aids in its survival.\textsuperscript{136} Similarly, shame and guilt help prevent humans from violating social norms.\textsuperscript{137} Finally, man is born with an innate sense of fairness, with the details of fairness being set by the local culture.\textsuperscript{138} In fact:

The psychology of fairness in our own species is rich, including some ability to keep tabs, to place subjective values on different entities and actions, to judge when an inequity has transpired, to distinguish accidental from intentional giving and reneging, and to determine when an act is worthy of retribution."\textsuperscript{139}

E. BEHAVIORAL BIOLOGY, SOCIETY, AND THE SOCIAL CONTRACT

Mankind flourished because it came together into social groups, which produced a survival advantage (reciprocal altruism on a large scale). Professor David Barash has asserted: "[t]he basic concept of ‘society’ assumes give and take, often called a ‘social contract,’ whereby individuals make what is essentially a deal with society at large. Each will forego certain selfish, personal opportunities in exchange for profiting from the cooperation of others."\textsuperscript{140} Professor Gazzaniga has proposed that "all those social relationships we worry about intensely are merely by-products of behavior originally selected to avoid our being eaten by predators."\textsuperscript{141} Groups that cooperate internally prevail over selfish groups for survival.\textsuperscript{142} As Professor Gazzaniga has declared: "[w]ithout all those others, without our alliances, we die."\textsuperscript{143} For example, cooperation in hunting was important for human evolution because it created a supply of meat for protein and energy that allowed us to grow big brains.\textsuperscript{144} Furthermore,

\begin{itemize}
\item \textsuperscript{134} Id. at 131.
\item \textsuperscript{135} Chorvat & McCabe, supra note 64, at 1732.
\item \textsuperscript{136} Id.
\item \textsuperscript{137} GAZZANIGA, supra note 25, at 135.
\item \textsuperscript{138} HAUER, supra note 24, at 79, 84; Sarah F. Brosnan & Frans B. M. de Waal, Monkeys Reject Unequal Pay, 425 NATURE 297, 297 (2003).
\item \textsuperscript{139} HAUER, supra note 24, at 392.
\item \textsuperscript{140} BARASH, supra note 128, at 129. See also Kar, supra note 99, at 898 (“Social contract problems arise whenever we could all do better by agreeing to be bound by some standard of action if that were the price of having all (or a significant majority of) others be similarly bound.”). As Professor Pinker has pointed out: “[p]eaceful coexistence, then, does not have to come from pounding selfish desires out of people. It can come from pitting some desires—the desire for safety, the benefits of cooperation, the ability to formulate and recognize universal codes of behavior—against the desire for immediate gain.” PINKER, supra note 24, at 169.
\item \textsuperscript{141} GAZZANIGA, supra note 25, at 82. Professor Pinker has asserted that "[t]he modern theory of evolution falls smack into the social contract tradition.” PINKER, supra note 24, at 285.
\item \textsuperscript{142} GAZZANIGA, supra note 25, at 82. See also BARASH, supra note 128, at 133 (“In a world of social dilemmas, the pursuit of rational self-interest results in a bad payoff for everyone.”); Robert Boyd et. al., The Evolution of Altruistic Punishment, 100 PROC. NAT’L ACA. SCI. U.S. 3531, 3531 (2003) (“It is plausible that more cooperative groups are less subject to extinction because they are more effective in warfare, more effective in coinsuring, more adept at managing common resources, or for similar reasons.”); Wilson, Foreword, THE NEUROSCIENCE OF FAIR PLAY, supra note 23, at xi.
\item \textsuperscript{143} GAZZANIGA, supra note 25, at 83.
\item \textsuperscript{144} Id. at 88–89.
\end{itemize}
Professor Hauser has observed: “[w]hat has allowed us to live in large groups of unrelated individuals that often come and go is an evolved faculty of the mind that generates universal and unconscious judgments concerning justice and harm.”

Man can live in large groups because humans are innately able “to monitor social behavior in large groups so that we may access the value of cooperation, the risk of noncooperation, and so on.” Under the social contract, most “people don’t mind paying ‘their fair share,’ once they are convinced that (1) it is in fact fair; and (2) others are doing the same.” On the other hand, people stop cooperating when others are cheating. Cheating violates and undermines the social contract.

Societies must, therefore, be able to control cheaters (free riders) and prevent excessive status-seeking. Punishment is the glue that holds societies together; without punishment, society would fall apart.

Animals expend energy (use resources) to reduce or avoid punishment. When individuals are punished, “the individuals in the group benefit because they are less likely to be subject to violence, theft, or cheating,” thus increasing their chances of surviving and reproducing. For example, gossip, which affects reputation, may have evolved as an early way to restrain cheaters. Similarly, as Professor Haidt has averred: “the combination of language and a full theory of mind made it possible for large groups of non-kin to reap the benefits of cooperation by monitoring each other’s behavior (with gossip), shunning or punishing cheaters, and rewarding team players.”

145 HAUSER, supra note 24, at 60. See also Kar, supra note 99, at 891.
146 GAZZANIGA, supra note 25, at 80; HAUSER, supra note 24, at 274 (“[It is likely that evolution equipped us with a specialized ability to work through the cost-benefit analysis of a social contract.]”); PINKER, supra note 24, at 285 (declaring that “the logic of social contracts may have propelled the evolution of the mental faculties that keep us in these groups.”).
147 BARASH, supra note 128, at 137.
148 Id. at 152; Ben Seymour et. al., The Neurobiology of Punishment, 8 NATURE REVIEWS NEUROSCI 300 (2007) (“In humans, however, punishment also appears to adopt an important role in promoting and preserving cooperation.”). See generally Janice Nadler, Flouting the Law, 83 TEX. L. REV. 1399 (2005) (“When a person evaluates particular legal rules, decisions, or practices as unjust, the diminished respect for the legal system that follows can destabilize otherwise law-abiding behavior.”); PINKER, supra note 24, at 261 (noted that individuals differ genetically in their selfish tendencies).
149 GAZZANIGA, supra note 25, at 129 (“If cheaters take over, reciprocity crumbles.”); HAUSER, supra note 24, at 77, 99, 390, 403–08 (“If the payoffs to defection are higher than the payoffs to cooperation, individuals defect.” Id. at 77.); BARASH, supra note 128, at 136 (“The best—perhaps the only—solution is for external constraints to force individuals to cooperate, because otherwise they won’t.”); Boyd et. al., supra note 142, at 3533 (“Adding punishment sustains substantial amounts of cooperation in much larger groups.”). See generally Oezgür Gurerk et. al., The Competitive Advantage of Sanctioning Institutions, 312 SCIENCE 108 (“Profound empirical evidence shows that the possibility of sanctioning norm violators stabilizes human cooperation at a high level, whereas cooperation typically collapses in the absence of sanctioning possibilities.”); Haidt, Emotional Dog, supra note 58, at 826 (only man has “widespread third-party norm enforcement”). Similarly, Justice Holmes stated: “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 it, in the vaguer sanctions of conscience.” Oliver Wendell Holmes, Jr., The Path of the Law, 10 HARV. L. REV. 457, 459 (1897).
150 Seymour, supra note 148, at 300.
151 Robinson et. al., supra note 26, at 1650.
152 GAZZANIGA, supra note 25, at 94–97. See also BARASH, supra note 128, at 153 (“Also, don’t overlook the role of social punishment, administered by other ‘players’ who stand to lose if someone in their group is stingy or a shirker.”); HAUSER, supra note 24, at 81.
153 Haidt, Emotional Dog, supra note 58, at 826.
Behavioral biologists believe that the human brain has a special module to detect social cheaters.\textsuperscript{154} For example, facial expressions and voice tone can often reveal a cheater because of the effect of the underlying emotions.\textsuperscript{155} Similarly, humans’ shared emotions, which are triggered when cheating occurs, motivates societies to punish cheaters.\textsuperscript{156} People even punish cheaters when it is costly to themselves (altruistic punishment) because punishing cheaters promotes cooperation and is a fitness indicator for sexual selection.\textsuperscript{157} Further, it might be immoral \textit{not} to punish cheaters, and the cost of punishment is reduced when undertaken by a group.\textsuperscript{158} Moreover, because culture is learned through observation and is passed from generation to generation, punishment becomes a behavioral-cultural norm, thus allowing “the outcome of punishment to be learned without personal transgression.”\textsuperscript{159} In addition, punishment and other law help to create trust within the group.\textsuperscript{160} In sum, law and punishment help maintain reciprocal altruism within a group when the opportunity for personal interaction is impossible because of the group’s size.\textsuperscript{161}

F. \textsc{Human Nature, “Ought,” and Rights}

Behavioral biologists do not believe that what is natural is necessarily good or that nature creates “musts.”\textsuperscript{162} What was adaptive on the savanna may no longer be proper today.\textsuperscript{163} Obviously, violence was part of our evolutionary past, but this is not a human behavioral trait that we want to encourage in our modern world. In addition, “[t]he proper evolutionary use of a domain may be quite different from its current use.”\textsuperscript{164} Consequently, as Professor Edward Wilson has noted, our innate characteristics “have to be played like a musical instrument, with some parts stressed to produce results of great beauty and pleasure (by terms of the human limbic system) and other parts sublimated and averted.”\textsuperscript{165} Therefore, “[t]he step from \textit{is} to \textit{ought} requires a special justification.”\textsuperscript{166} For instance, “if there is a kind of ‘natural’ tendency for male domination, but we find it morally obligatory

\begin{itemize}
  \item \textsuperscript{154} \textsc{Barash}, supra note 128, at 267; \textsc{Gazzaniga}, supra note 25, at 99; \textsc{Hauser}, supra note 24, at 272, 276; Cosmides & Tooby, supra note 24, at 205–06. “[T]hat cheater detection device develops at an early age, operates regardless of experience and familiarity, and detects cheating but not unintentional violations.” \textsc{Gazzaniga}, supra note 25, at 100.
  \item \textsuperscript{155} \textsc{Gazzaniga}, supra note 25, at 103. \textit{See also} \textsc{Barash}, supra note 128, at 105, 180.
  \item \textsuperscript{156} \textsc{Kar}, supra note 99, at 914.
  \item \textsuperscript{157} \textsc{Gazzaniga}, supra note 25, at 82; \textsc{Seymour}, supra note 148, at 306.
  \item \textsuperscript{158} \textsc{Robinson et. al.}, supra note 26, at 1650–51.
  \item \textsuperscript{159} \textsc{Seymour}, supra note 148, at 304.
  \item \textsuperscript{160} \textsc{Chorvat & McCabe}, supra note 64, at 1734.
  \item \textsuperscript{161} \textsc{Id.}
  \item \textsuperscript{162} \textsc{Hauser}, supra note 24, at 3; \textsc{Graefrath}, supra note 17, at 370. Darwin did not view evolution as leading to a positive end. Graefrath, supra note 17, at 374. “The existence of inborn talents . . . does not call for Social Darwinism.” \textsc{Pinker}, supra note 24, at 150.
  \item \textsuperscript{163} \textsc{Hauser}, supra note 24, at 417.
  \item \textsuperscript{164} \textsc{Gazzaniga}, supra note 25, at 254. \textit{See also} \textsc{Pinker}, supra note 24, at 219.
  \item \textsuperscript{165} \textsc{Edward O. Wilson}, \textit{Comparative Social Theory, in 1 \textsc{The Tanner Lectures on Human Values} 68–69} (Sterling M. McMurrin, ed. 1980). \textit{See also} \textsc{Timothy H. Goldsmith, The Biological Roots of Human Nature} \textsc{67} (1991); Douglas A. Terry, \textit{Don’t Forget About Reciprocal Altruism: Critical Review of the Evolutionary Jurisprudence Movement, 34 \textsc{Conn. L. Rev.} 477, 502–03} (2002) (“[T]he function of law is to both condone and prohibit the manifestations of certain biological tendencies given to humans by natural selection.”).
  \item \textsuperscript{166} \textsc{Graefrath}, supra note 17, at 370. \textit{See also} \textsc{Pinker}, supra note 24, at 164.
\end{itemize}
that females have the same moral status as males, biological knowledge can help us determine what the most promising course of action will be to counter the ‘natural’ tendency that we cannot justify. On the other hand, “[n]ature may . . . limit what is morally possible, and suggest ways in which humans . . . are motivated into action.”

One reason to base a theory of rights on biology is that it is easier to adopt a positive natural trait than to repress it since it is part of the human behavioral system. As Professor Ian McEwan has noted, “[i]f there are human universals that transcend culture, then it follows that they do not change, or they do not change easily.” Similarly, as philosopher Michael Oakeshott declared, “[t]o try to do something which is inherently impossible is always a corrupting enterprise.” More specifically, “[s]hared institutions of justice are not easily altered, regardless of their source.” Therefore, it would be easier and more efficient to enforce positive human traits, than to repress them. This is especially true with rights because, as noted above, a moral system is built into our brains.

Equally important, normative statements about rights should be predicated on facts; “ought” needs to be grounded in “is.” As Professors Haidt and Fredrik Bjorklund have declared: “If moral facts are anthropocentric facts, then it follows that normative ethics cannot be done in a vacuum, applicable to any rational creature anywhere in the universe.” Furthermore, “[w]hen not properly grounded, entire schools of metaethics can be invalidated by empirical studies…” Theories about rights should not contradict scientific facts, but rather be grounded in science. The theory of rights proposed in this paper is grounded in science.

III. BIOLOGICAL BASIS OF RIGHTS

A. INTRODUCTION

It is the thesis of this paper that a universal system of basic rights is hardwired into our brains (a universal grammar of rights), just like morality is hardwired into our brains. In fact, rights relate to our innate ability to tell

167 HAUER, supra note 24, at 3; Graefrath, supra note 17, at 370. See also PINKER, supra note 24, at 299 (“Because social conventions are not adopted to human nature alone, a respect for human nature does not require preserving all of them.”).
168 HAUER, supra note 24, at 4.
169 Neel P. Parikh, Note: When Nice Guys Finish First: The Evolution of Cooperation, the Study of Law and the Ordering of Legal Regimes, 37 U. MICH. J. L. REFORM 909, 942–43 (2004) (“Legal rules that ignore human realities will prove inefficient.” Further adding that evolutionary analysis “directs that where appropriate, a default rule should conform to instinctive behavior and reduce private and social costs.”). See also Jones & Goldsmith, supra note 102 at 413 (“We can consider the law effective when it gets its job done, and efficient when it does so with minimum waste.”).
170 McEwan, supra note 54, at 12. See also E. O. Wilson, Foreword from the Scientific Side, supra note 111, at ix (“Our cultures and values seem highly variable to us but in fact are very specialized and very epigaeic and diurnal mammalian.”).
171 Quoted in PINKER, supra note 24, at 290.
172 Robinson et al., supra note 26, at 1687–88. Adding that “[i]t is unlikely that the shared intuition that serious wrongdoing should be punished can be changed through social engineering, at least not through methods short of the kind of coercive indoctrination that liberal democracies find unacceptable.”
173 Haidt & Bjorklund, supra note 19, at 214.
174 Id. at 215.
right from wrong. Like morality, our hardwired rights are general principles with the details of these rights being specified by particular cultures. In other words, we have an innate toolkit for building a system of rights. Among these rights are (1) property rights; (2) a right to basic fairness; (3) liberty rights; and (4) a right to be treated equally. These innate rights are not a minimum, but rather a foundation.

Behavioral biology demonstrates the need for rights. First, behavioral biologists have established that humans are sentient, autonomous beings who have a moral sense. As Professor Haidt has stated, “Thomas Jefferson’s declaration that certain truths are ‘self-evident’ is an example of ethical intuitionism.” Despite the traditional (and now totally discredited) social science theory of man as culturally constructed, the human mind is not a blank slate that allows for easy social engineering—human nature cannot be rewritten. Rather, all humans are defined by the inner workings of their minds, and they share a similar genetic makeup. In addition, as Kant believed, human beings are morally special because they have the capacity for rational choice and the freedom of rational beings should be respected.

For example, psychology experiments, such as the trolley problem discussed above, have shown that “it is permissible to cause harm as a by-product of achieving a greater good, but it is impermissible to use harm as a means to a greater good.” Finally, autonomy helps the individual survive.

Second, rights help hold the social contract together. Social contracts involve “commitment” problems which are “any dynamic, strategic problem in which an individual can obtain more desirable or self-interested results by giving up certain options or by guaranteeing others—in short, by making commitments.” A person will not voluntarily give up her selfish interest (commit or remain committed) when that person is subject to the tyranny of a majority of which that person is not a part of. Similarly, part of our evolved nature is the freedom to leave our group and join another one to avoid coercion by dominants. In other words, “[e]xit freedom had the

175 HAUSER, supra note 24, at 47.
176 Accord HAUSER, supra note 24, at xvii.
177 I am not claiming that this is a definite list of basic rights. However, our current state of knowledge concerning behavioral biology suggests that these are the most important rights.
178 PINKER, supra note 24, at 425.
179 Haidt, Emotional Dog, supra note 58, at 814.
180 RUBIN, supra note 46, at ix (“The notion that humans are born as blank slates (tabula rasa) to use Locke’s Latin phrase) is no longer intellectually respectable among serious people.”). Accord Jim Chen, Law as a Species of Language Acquisition, 73 WASH. L.J. 1263, 1272 (“[W]e stand on the brink of a century whose principal intellectual project may consist of overthrowing the Standard Social Science Model...”). See generally PINKER, supra note 24. Rubin has noted that false views of human nature have led to great suffering, such as the reign of communism. RUBIN, supra note 46, at 2.
181 MURPHY & COLEMAN, supra note 3, at 77–79.
182 HAUSER, supra note 24, at 33, 120.
184 Kar, supra note 99, at 898. See also Hoffman, supra note 109, at 1670 (“living in groups requires rather sophisticated mechanisms to regulate relationships between members.”).
185 RUBIN, supra note 46, at 97–98 (2002). See also Hoffman, supra note 109, at 1673 (“[T]he small groups in which we evolved contained an important element of freedom—the freedom to enter into mutually beneficial social institutions, the freedom to decline to do so, and, as Rubin points out, the
effect of imposing constraints on dominant individuals in the group: if a few powerful individuals got too powerful, they risked loss of members, and thus some of the net advantage of living in groups. Likewise, even the majority in any group had to keep a keen eye on majoritarian excess."

Rights help solve the commitment and exit problems by protecting individuals from the tyranny of a majority and creating trust. While an individual will not always win what he or she wants in the political process, rights will protect that individual from overreaching by the majority. In other words, rights grant a minimum for each person under the social contract, which encourages that person to give up his or her selfish interest, to remain a member of that community, and to further both the individual’s and community’s ability to survive. As Judge Hoffman has declared:

The deepest social connections that bind us bind us only because, in the end, we are free to disregard them. They have become powerful precisely because they must have had enough long-term utility to overcome their short-term costs, and to keep us from exercising our freedom to exit the group. Of course, in order for rights to help hold the social contract together, society must punish those who violate others' rights.

A third reason for the existence of rights is to prevent violence and increase the chances for survival. Professor Barash has declared: “What isn’t arbitrary is the underlying idea: the success of strategies that settles conflicts with a minimum of violence.” In other words, when rules settle disputes, no one is harmed and genes are passed on.

Another justification for rights is to compensate for flaws in human nature. As Professor Pinker has written, “[i]n the Tragic Vision, humans are inherently limited in knowledge, wisdom, and virtue, and all social arrangements must acknowledge those limits.” Society must protect individuals from nepotism, selfishness, competition for social status, and power seeking. Hierarchy is part of human nature, and while it is necessary for a functioning society, rights must be protected within the hierarchy. Individuals must be safeguarded from those who govern; otherwise, the social contract will break down. Similarly, humans need to be protected from group coercion. Finally, societies with a system of rights work better
and further the survival chances of their inhabitants. For example, “no functioning democracy with political rights has ever suffered a famine.”

While the above demonstrates justifications for rights, the question remains what their source is within human biology. As will be shown in detail below, rights come from the following sources: (1) the autonomy of human beings (liberty rights; a right to equal treatment); (2) reciprocal altruism, which is part of the social contract (rights are what an individual gets from entering into the social contract–property rights, fairness, etc.); (3) rights that arose as a solution to an evolutionary problem (certain property rights arose as a method to avoid harm and violence); and (4) our innate morality (most rights). Some rights have a combination of sources as their basis. In addition, our inner sense of morality helps define these rights, and these rights aided survival.

**B. PROPERTY RIGHTS**

Several scholars believe that property rights are hardwired into human brains, that there are “identifiable patterns in the resolutions of disputes over resources.” Professor Jeffrey Stake thinks that property rights evolved to avoid harm to individuals: “[r]ivals can reduce the costs of competition by adopting strategies for determining the outcome of fights without physical damage.” Thus, a body is more likely to survive if the brain is equipped with rules of property incorporating evolutionary stable strategies (“ESS”) for reducing the costs of allocating resources among competitors. Other scholars give additional reasons for the development of property rights including that they involved territorial possession, that they developed as a method to control cheating, that they evolved as an incentive to get people to work, and that survival is based on the use of things. This author believes that the last two reasons are particularly important; an individual should generally be able to keep the fruits of his labor because they are necessary for his survival. Finally, all these reasons contribute to the cohesiveness of the social contract by motivating cooperation and cutting down on free riders.

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193 DERSHOWITZ, supra note 8, at 163.
194 Stake, supra note 187, at 1763. See also Herbert Gintis, The Evolution of Private Property, 64 J. ECON. BEHAV. & ORG. 1, 15 (2007); McGinnis, supra note 37, at 222 (“[P]roperty is a phenomenon that exists apart from any organized government.”); Thomas W. Merrill & Henry E. Smith, Law and Morality: Property Law: The Morality of Property, 48 WM. & MARY L. REV. 1849, 1894 (2007) (“These points establish, we believe, that property rights must be moral rights if they are to exist at all, and that the moral right to property is not qualitatively different from those moral rights we describe as human or civil rights.”). Professor Pipes has noted that there has never been a society so primitive as to not have some form of ownership. RICHARD PIPES, PROPERTY & FREEDOM 76 (1999). He has added that the idealized notion of primitive communism has no basis in fact. Id. at 117.
195 Stake, supra note 187, at 1763. See also Gintis, supra note 194, at 3.
196 Stake, supra note 187, at 1763. See also Merrill & Smith, supra note 194, at 1858 (“This ‘possession’ or ‘bourgeois’ convention is an evolutionarily stable strategy.”).
197 Gintis, supra note 194, at 2 (“[P]rostitutional ‘natural’ private property has been observed in many species, in the form of the recognition of territorial possession.”).
198 HAUSER, supra note 24, at 80.
199 PINKER, supra note 24, at 290.
200 Hoffman, supra note 109, at 1675, n.3.
Professor Stake proposes that “humans might be programmed with three rules for initially allocating rights in a thing: to the first person to touch the thing, or to the older contestant, or to the dominant member of the group.” 201 Particular cultures would then determine the details of these rules. 202 For example, a “first-in-time convention” (possession) might have developed because humans fight harder for something they already possess, which means that deferring to the person who was first in time can avoid harmful violence for both parties. 203 Part of this convention would be rules for determining who is first in time, for example, a person who first controls a wild animal has title to it. 204 Thus, “[t]he result is that most of us descended from beings who could correctly determine who was first in time according to the convention.” 205

Our mirror neurons and the related ability to form triadic mental representations of mental states were involved in the development of property rules. Professor Stake has written:

[W]e may be programmed to recognize when we have a certain proximate relationship to a physical object and, by mirroring, to recognize when others have a similar relationship to an object. Our brains may then determine ‘ownership’ by combining that relational data with information about previous relationships, such as information about who was first in time and what voluntary transfers have occurred. 206

For example, through the above process one may recognize an individual possesses an object if they are grasping that object. 207

If property rules exist to help hold the social contract together, then society must protect individuals’ property. Animal studies have suggested that group protection of individual property may have ancient roots. Professors Thomas Merrill and Henry Smith have noted that property rights work because a significant majority of people recognize property as moral rights. 208 These authors think that law, without morality, cannot create a system of property rights and that, if property rights are based on morality, they can be secured with minimal legal enforcement. 209 This accords with the present author’s theory that much of our modern law is based on practices that developed on the savannah as survival advantages, and that modern law helps reinforce these evolutionary behaviors and makes them work in large groups. 210

201 Stake, supra note 187, at 1764.
202 Id.
203 Id.
204 Id. at 1765.
205 Id.
206 Id. See also Merrill & Smith, supra note 194, at 1858 (“Rules making nearness and physical control the criteria for possession have a psychological basis, and the convention of respecting possession stems from people’s mutual expectations that they will respect the right to control these things.”).
207 Stake, supra note 187, at 1765.
208 Id. at 1767.
209 Merrill & Smith, supra note 194, at 1850.
210 Id. See also Gintis, supra note 194, at 2.
211 For example, this author believes modern contract law derived from reciprocal altruism (“tit for tat”), which developed during the EEA. A person would give up his selfish aims in order to cooperate with another person so that both parties would benefit, thus increasing both their chances for survival.
In addition, property rights are not based on a utilitarian, cost-benefit analysis.\textsuperscript{212} For example, the property right to prevent trespass to land is absolute; it does not depend on a cost-benefit analysis that the trespass would or would not be beneficial to society.\textsuperscript{213} Accordingly, economic development takings where the government takes property from an innocent party and awards it to another party who can make better use of it are not justified. While the new use might create a bigger pie and produce favorable externalities, such as better business in the neighborhood, such takings go against our basic instincts concerning the sanctity of property.\textsuperscript{214} Eminent domain under such circumstances constitutes immoral coercion of innocent parties.\textsuperscript{215} While the Supreme Court disagreed in \textit{Kelo},\textsuperscript{216} the strong criticism against the holding of this case\textsuperscript{217} supports the proposition that property is an instinctive, moral right. As Professors Merrill and Smith have declared: “Coercing innocent persons to give up their homes and farms in order to bestow favors on the select few, however, crosses the line of what most persons are prepared to countenance, consistent with popular perceptions of morality.”\textsuperscript{218}

Behavioral biology also supports intestate succession (and similarly inheritance by will). Intestate succession is a way of transferring property (resources for survival) to those who share a person’s genes, thus furthering the survival of the individual’s genes.\textsuperscript{219} Since closer relatives, such as children and parents, share more of the donor’s genes, intestate succession laws favor closer relatives rather than distant ones.\textsuperscript{220} These laws also favor spouses, who are unrelated genetically to the donor, because favoring spouses increases a spouse’s investment in his or her children.\textsuperscript{221} Furthermore, “[e]volutionary pressure could have shaped brains to send property where it will be most efficiently deployed”—where it has a greater chance of furthering the donor’s genes.\textsuperscript{222} For example, primogeniture may have arisen because “[u]nder primogeniture, a decedent’s land passed to a

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\textsuperscript{212} Merrill & Smith, \textit{supra} note 194, at 1851. They add that “we will argue that the forms of utilitarianism that undergird modern law and economics which assume a degree of plasticity of property and have underplayed the information and coordination problems present in core property situations are inconsistent with the nature of the rights in question.” \textit{Id.} at 1856–57.
\textsuperscript{213} \textit{Id.} at 1871–74.
\textsuperscript{214} And, a stretched reading of the Constitution. The Takings Clause says public \textit{use}, not public purpose. \textsc{U.S. Const. amend. V.}
\textsuperscript{215} Merrill & Smith, \textit{supra} note 194, at 1882–84.
\textsuperscript{216} \textit{See} \textit{Kelo} v. City of New London, 545 \textsc{U.S.} 469 (2005).
\textsuperscript{217} \textit{See generally} Janice Nadler & Shari Seidman Diamond, \textit{Eminent Domain and the Psychology of Property Rights: Use, Subjective Attachment, and Taker Identity}, \textit{5 J. Empirical Legal Stud.} 713 (2008). These authors have noted that the disapproval rating for \textit{Kelo} was around 80–90\%. \textit{Id.} at 720. They added: “Our experiments suggest that subjective attachment to property looms far larger [than public purpose] in determining the perceived justice of a taking.” \textit{Id.} at 713.
\textsuperscript{218} Merrill & Smith, \textit{supra} note 194, at 1884. Professors Haidt and Bjorklund have argued: “Traditional utilitarianism, for example, does an admirable job of maximizing moral goods derived from the harm/care foundation. However, it often runs afoul of moral goods derived from the fairness/reciprocity foundation (e.g., rights), to say nothing of its violations of the ingroup/loyalty foundation (why treat outsiders equal to insiders?!), the authority/respect foundation (it respects no tradition or authority that demands anti-utilitarian practices), and the purity/sanctity foundation (spiritual pollution is discounted as superstition).” Haidt & Bjorklund, \textit{supra} note 19, at 215.
\textsuperscript{219} Stake, \textit{supra} note 187, at 1768.
\textsuperscript{220} \textit{Id.}
\textsuperscript{221} \textit{Id.} at 1772.
\textsuperscript{222} \textit{Id.} at 1769–70.
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single son, thereby maximizing that son’s chances of becoming an alpha male and, hence, his reproductive opportunities. Of course under different cultural conditions different rules will develop.

Society often limits a person’s ability to leave property to one’s relatives through inheritance taxes. Such taxes are often necessary for the good of the society—to support public projects. However, when a society takes too much of a person’s property upon death, it negates human nature. Part of the incentive to work is to leave property to those who share one’s genes. Studies have shown that the elderly do not consume all of their resources so that they can transfer those resources to their kin. Taking too much of a person’s property upon death destroys that incentive to work.

In sum, because property rights are a basic part of human evolution and morality, they have greater importance than many modern courts and writers have given them. Not only are they hardwired into our brains, they are also tied into our personhood and autonomy. Accordingly, they are equal to other basic rights, such as the right of liberty or the right of equal treatment. As Professor McGinnis has asserted: “If property is natural to man, a government that ignores the interests of mankind in property and exchange does so at its own peril.”

C. A RIGHT TO FAIRNESS

Fairness is universal, and mankind’s sense of fairness is based on the “Golden Rule” (“Do unto others as they would do unto you” and “Don’t do unto others as you would not have them do to you”). Our sense of fairness derives from our theory of mind working through our mirror neurons that allows us to identify with others. As mentioned in Part II, the parts of the mind that we use in doing an action are often the same parts that perceive that action when it involves others. Professors Terrence Chorvat and Kevin McCabe have written that “[a] relatively simple version of a TOM [theory of mind] would be to assume that the other person will do what we would do in the same situation.”

Similarly, Professor Pinker has asserted: “No creature equipped with circuitry to understand that it is immoral for you to hurt me could discover anything but that it is immoral

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223 Id.
224 McGinnis, supra note 37, at 215. Alan Wolfe has noted that Americans disfavor inheritance taxes because this is a type of family-related altruism that people understand. Alan Wolfe, The Moral Sense in Estate Tax Repeal, N.Y. TIMES, July 24, 2000, at A19.
225 See infra notes 321–24 and accompanying text on the Framers’ conception of property rights.
226 Merrill & Smith, supra note 194, at 1859.
227 McGinnis, supra note 37, at 222.
228 HAUSER, supra note 24, at 410; PFAFF, supra note 64, at 4, 10–12. For this paper, fairness is “the equitable distribution of goods or outcomes.” Golnuz Tabibnia & Matthew D. Lieberman, Fairness and Cooperation are Rewarding: Evidence from Social Cognitive Neuroscience, 1118 ANNUAL N.Y. ACAD. SCI. 90, 91 (2007).
229 As Professor Iacoboni has written, mirror neurons “show that we are not alone, but are biologically wired and evolutionarily designed to be deeply interconnected with one another.” IACOBONI, supra note 50, at 267. Philosopher Thomas Nagel recognized that “[a]ny social arrangement governing the relations among individuals, or between the individual and the collective, depends on a corresponding balance of forces within the self—its image in microcosm.” NAGEL, supra note 185, at 4.
230 See supra notes 71–83 and accompanying text.
231 Chorvat & McCabe, supra note 64, at 1729.
for me to hurt you.” Like the other rights mentioned in this paper, our sense of fair play helped individuals and groups survive because it produced evolutionary advantages over those individuals and groups that lacked a sense of fairness.

Humans innately sense when they are being treated fairly or unfairly by others. "People judge fairness . . . both on the distribution of gains and on the possible alternatives to a given outcome;" reciprocal exchanges must be relatively equal . . . . In other words, one derives the fairness of an outcome (e.g., property, money, goods) from a comparison of one’s outcome/input ratio to the outcome/input ratio of another. Individuals have positive emotions when they are treated fairly and strong negative emotions when they believe that they have been treated unfairly. The most common reactions to unfairness are anger, protest, spite, and outrage. Similarly, “when a worker perceives that another with similar inputs receives greater rewards, that worker will reduce effort.” People are also sympathetic to those who have treated them fairly.

In addition, reciprocal altruism is a part of our sense of fairness: “whenever people treat each other in a fair, sympathetic manner, they are exhibiting an essential understanding of the importance of reciprocity.” Cooperation is connected with reward-related neural activity, and it also depends on the other person’s reputation. Our sense of fair play probably first developed in sexual love and parental love and then spread to others in society.

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232 PINKER, supra note 24, at 193.
233 PFAFF, supra note 64, at 7; Timothy Ketel & Bryan Koenig, Justice, Fairness, and Strategic Emotional Commitment, in ADVANCES IN THE PSYCHOLOGY OF JUSTICE AND AFFECT 133, 133 (David De Cremer ed., 2007).
234 See generally Tabibnia & Lieberman, supra note 228, at 94 (“Numerous behavioral and self-report studies using the ultimatum game have established that people dislike unfair treatment.”). See also Brosnan & de Waal, supra note 138, at 297 (“During the evolution of cooperation it may have become critical for individuals to compare their own efforts and pay-offs with those of others.”); John Richardson, How Negotiators Choose Standards of Fairness: A Look at Empirical Evidence and Some Steps Toward a Process Model, 12 HARV. NEGOT. L. REV. 415, 417, 421 (2007).
235 Brosnan & de Waal, supra note 138, at 299.
236 Hoffman, supra note 109, at 1671.
237 David De Cremer, Justice and Affect: When Two Friends Meet, in ADVANCES IN THE PSYCHOLOGY OF JUSTICE AND AFFECT 1, 3–4 (David De Cremer, ed. 2007). See also JAMES Q. WILSON, THE MORAL SENSE 70 (1993) (“[E]quity: People who are equal with respect to contributing should be equal with respect to outcomes.”); Tabibnia & Lieberman, supra note 228, at 90.
238 Tabibnia & Lieberman, supra note 228, at 91. In addition to human studies, Professors Brosnan & de Waal have demonstrated that monkeys have a sense of fairness. Brosnan & de Waal, supra note 138, at 297 (“Here, we demonstrate that a nonhuman primate, the brown capuchin monkey . . . , responds negatively to unequal reward distribution in exchanges with a human experimenter. Monkeys refused to participate if they witnessed a conspecific obtain a more attractive reward for equal effort, an effect amplified if the partner received such a reward without any effort at all.”).
239 Richardson, supra note 234, at 418–422.
240 Id. at 418.
241 Tabibnia & Lieberman, supra note 228, at 95 (“When viewing fair partners who appeared to be in pain, men and women both exhibited increased activity in insular and anterior cingulate regions, suggesting an empathetic response to pain.”); Richardson, supra note 234, at 416.
242 PFAFF, supra note 64, at 118.
243 Tabibnia & Lieberman, supra note 228, at 95.
244 Id. at 95–97. “Faces of cooperators, regardless of intention, were rated as more likable than neutral faces; and faces of defectors, particularly intentional defectors, were rated as less likeable than neutral faces.” Id. at 97.
245 PFAFF, supra note 64, at 5, 81.
keeps us from harming others. Similarly, “[p]eople define their norms of fairness through social processes; groups of people create norms and work to enforce them.”

Evolutionary psychologists have used the “ultimatum game” to study fairness in humans. The ultimatum game is a two player game in which A is given money to be divided between A and B in any portion A wants. If B accepts the offer, the players split the money, but if B rejects the offer, the players get nothing. One might expect that A would keep a very large portion (say 90%) for selfish reasons and B would accept a small portion (say 10%) because at least he would get something. However, A generally offers an average of 40%, and B usually rejects offers below 30%. This shows that “[h]umans have built-in regulators, evolved over aeons of intense social interaction, that tells us not to be unfair to each other, lest today’s player A will become tomorrow’s player B.” In addition those who receive unfair offers (those in the position of B) will often reject those offers even if he loses something, too, due to B’s sense of fairness and the desire to punish those who are unfair.

Our sense of fair play appears in brain activity that neuroscientists have detected and tracked. For example, neuroscientists have observed that unfair offers activate areas of the brain connected with both cognition and emotions. In addition, some neuroscientists believe that there is a Golden Rule hormone—oxytocin—which is produced in the hypothalamus and which may have evolved in connection with motherly love. Oxytocin increases feelings of trust, both in being willing to trust and creating trust in others.

Finally, studies have shown that when humans have strong moral convictions concerning a matter, they are more interested in substantive fairness than procedural fairness. This occurs because “people’s affective reactions [especially outrage] to outcomes color their judgments of fairness.” Accordingly, “[p]rocedural information may do little to offset the feelings of incensed outrage in reaction to an outcome that threatens a moral mandate: instead, anger and outrage may lead people to paint the entire situation as unfair.”

246 Id. at 22. “Fear can spur the Golden Rule circuitry into action, causing people to opt for ethical choices in a variety of situations.” Id. at 23.
247 Richardson, supra note 234, at 423.
248 E.g., Hoffman, supra note 109, at 1671.
249 Id.
250 Id.
251 Id.
252 PFaff, supra note 64, at 7; Rizzolatti & Sinigaglia, supra note 50, at 173–193.
253 Chorvat & McCabe, supra note 64, at 1731.
254 PFaff, supra note 64, at 100–01. Vasopressin may also be involved with the Golden Rule, especially in males. Id. at 104.
255 Id. at 104–05.
256 Mullen & Skitka, supra note 61, at 629.
257 Id. at 631.
258 Id.
D. Liberty Rights

Liberty rights derive from the autonomy of human beings. Man has a natural desire for liberty because it helps the autonomous individual survive by allowing choice.\textsuperscript{258} Evolutionary theorists realize that there is more than one possible goal or end to human life and that end which is chosen may depend in large part on the circumstances in which an individual finds himself.\textsuperscript{259} In other words, "[w]e need liberty in order to make up for our lack of knowledge of diverse human ends, and the diverse understanding of human ends leads to a justice in which each man lives according to his own conscience, as opposed to that of another."\textsuperscript{260} Furthermore, "[a] just society recognizes when it has squelched the individual, deleting the political conception of self."\textsuperscript{261} Finally, liberty is necessary for diversity in society; a group needs individuals who can perform specialized functions. In sum, liberty facilitates the experience and the natural genetic variations among human beings.

Mirror neurons facilitated the development of liberty rights. Through our theory of mind, along with our emotions of empathy, sympathy, and responsibility, an individual can see that others should be treated in the same way that the individual is (given the same liberty).

During the EEA, man was completely free (liberty is prior to the state). However, by entering into a social contract (which increases an individual’s ability to survive), man must give up some liberty, but only the liberty which is necessary for society’s protection.\textsuperscript{262} Liberty is what man receives from the social contract in exchange for what he gives society; liberty is part of reciprocal altruism on the societal level. In addition, the more liberty a society allows its inhabitants, the more likely those inhabitants are to remain part of that society. Liberty also breeds personal responsibility: “[b]y taking away freedom we essentially deny that the individual has any responsibility for himself, negating his moral worth, and further negating the possibility for political friendship between citizens.”\textsuperscript{263} As Professor Lauren Hall has noted: “[a]s autonomous individuals, selected by natural selection with certain desires and needs, we alone hold the responsibility

\textsuperscript{258} Hall, supra note 183, at *11, *13, *16. “Hunter-gatherer societies, with relatively egalitarian social structures, would have allowed little direct physical coercion since few would have the requisite power necessary to exert such control.” Id. at *10. Throughout history, humans have taken great risks to protect their freedoms. RUBIN, supra note 46, at 113.

\textsuperscript{259} Hall, supra note 183, at *10. Professor Arnhart has written that “[t]he human good is variable insofar as what is desirable for human beings varies according to individual temperament, individual history, social custom, and particular circumstances.” ARNHART, supra note 115, at 17. He has identified twenty natural desires that are rooted in human nature and which vary in the individual and a particular society based on the above factors: “a complete life, parental care, sexual identity, sexual mating, familial bonding, friendship, social ranking, justice as reciprocity, political rule, war, health, beauty, wealth, speech, practical habituation, practical reasoning, practical arts, aesthetic pleasure, religious understanding, and intellectual understanding.” Id. at 29. See also RUBIN, supra note 46, at 14 ([H]umans are highly individualistic.

\textsuperscript{260} Id. at 29.

\textsuperscript{261} Hall, supra note 183, at 10.

\textsuperscript{262} HAUER, supra note 24, at 187.

\textsuperscript{263} According to John Locke, “[a]nything that is not transferred remains beyond the government’s authority, still as a matter not of power but of right.” WEINREB, supra note 3, at 132. This is based on “the assumption that the individual is fully formed prior to any action of the state.” Id. at 133.

\textsuperscript{264} Hall, supra note 183, at 25.
for our own survival and that of our children.”\textsuperscript{264} Moreover, since liberty is part of human nature, groups that grant more liberty will generally work more efficiently and require less coercion.\textsuperscript{265} Finally, when people have liberty rights, they do not have to fight for liberty, thus increasing their survival chances.

That liberty is a central part of human nature does not mean that individuals should be allowed to do whatever they please.\textsuperscript{266} As Professor John Rawls recognized, “arguments for restricting liberty proceed from the principle of liberty itself.”\textsuperscript{267} By entering into society, individuals must obey the group’s rules, or the group will collapse. While this may restrict the individual somewhat, it increases the survival chances for all.

Society can also limit liberty when that liberty interferes with another individual’s liberty.\textsuperscript{268} As discussed in detail in the next section, individuals are equal under the social contract, which increases their chances of survival. For example, criminal laws interfere with liberty, but such laws are necessary to protect other individuals. Similarly, government can step in when someone is overreaching in the marketplace.

Society, however, should only restrict individual liberty when it is necessary for the good of society. This means that there should be few restrictions on “morality.” For example, since homosexuality does no real harm to society, it should be permitted. On the other hand, society can restrict sexual activity when there is the danger of harm, such as protecting children by banning sex between adults and children.

Slavery is the opposite of liberty because it takes away all liberty rights. It also treats an individual as a means to an end. As Professor Larry Arnhart has noted, humans are not naturally adapted for slavery.\textsuperscript{269} A slave has no autonomy and no dignity, which are central to man’s nature. Slavery also goes against mankind’s natural moral sense, which was shaped by natural selection.\textsuperscript{270} In particular, slavery contradicts man’s moral sense not to be exploited.\textsuperscript{271} In addition, a master/slave relationship lacks the reciprocity that is central to society based on human nature. Slavery also interferes with liberty because it interferes with the subcategories of liberty.

\textsuperscript{264} Id. at 25.
\textsuperscript{265} See id. at 2.
\textsuperscript{266} Professor Hall has asserted that “[j]ust as in the classical liberal tradition, evolutionary liberty is not simply license, doing whatever one wants to win the evolutionary race.” Id. at 2. She added: “Evolutionary liberty . . . is liberty within the constraints of other aspects of human nature. . . . To protect social relationships, natural selection has instilled in us a moral sense which prevents (most of the time) our desire for liberty from becoming a desire for license.” Id. at 22.
\textsuperscript{267} John Rawls, A THEORY OF JUSTICE 213 (2d ed. 1999).
\textsuperscript{268} Herbert Spencer “took it for granted that restraints to prevent a person from ‘directly or indirectly aggressing on his fellows’ were not only consistent with liberty but essential to it.” WEINREB, supra note 3, at 132 (quoting THE MAN VERSUS THE STATE 27 (Ind.: Liberty Classics) (1981)). Similarly, J. S. Mill wrote that “the only purpose for which power can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others.” JOHN STUART MILL, ON LIBERTY 96 (1951). Although this author generally agrees with Mill, Mill’s statement is based on a utilitarian view of law, while this author’s view derives from biology.
\textsuperscript{269} See ARNHART, supra note 115, at 161.
\textsuperscript{270} Id.
\textsuperscript{271} Id. at 163, 169.
discussed below, such as the right of association, the right to choose one’s mate, and the right of parents to raise their children as they please.

Liberty rights are the basis of many of our more detailed rights like the right to privacy or the right to free speech. “What makes liberty different from . . . other human goods is that it embraces more political goods than any other good can, and it leaves man to choose the goods which fit his particular circumstances and attributes.”272 Fundamental to liberty is the right of privacy. In Lawrence v. Texas, the Supreme Court formulated a broad concept of the right of privacy:

Liberty protects the person from unwarranted government intrusions into a dwelling or other private places. In our tradition the State is not omnipresent in the home. And there are other spheres of our lives and existence, outside the home, where the State should not be a dominant presence. Freedom extends beyond spatial bounds. Liberty presumes an autonomy of self that includes freedom of thought, belief, expression, and certain intimate conduct.273

This broad concept of privacy is consistent with the right to liberty which is intrinsic to human behavior and the social contract. The state should not be a dominant presence in areas where it has no interest; man did not give up all his natural freedom when he entered into society. The state should not interfere with a person’s home, unless there is a significant reason to do so, such as protection of a child or a spouse. Because intimacy between human beings is an essential part of human nature, intimacy should be especially protected from state interference. Also, outside the home people should be able to do as they please, as long as it does not interfere with a significant state interest or another person’s liberty. As Lawrence noted, freedom of thought, belief, and expression are essential to autonomous human beings. Man was free before the social contract to think, believe, and express himself as he pleased. Society does not have a reason to interfere with those natural freedoms except in extreme circumstances.

Another part of liberty is the right of free association. Free association furthers productivity and thus survival because it allows individuals to work with whomever they please. It allows an individual to develop a life plan with the help of others. It also helps hold society together because a lack of free association could cause individuals to exit that society.

Another part of liberty is the freedom to choose one’s spouse. As noted above, mate selection is a central part of evolution because it affects reproductive success.274 A related liberty is the liberty for parents to raise their children as they please, unless the parents pose a risk of danger to the children. Experiments in kibbutzim where children were raised communally were failures because of human nature—mothers did not want to give up their children.275 In addition, children are better off with their

272 Hall, supra note 183, at *10.
274 ARNHART, supra note 115, at 132–33.
275 Id. at 95–101 (“Mammalian young need social interaction with a primary caretaker for their physical and emotional health, and most Mammalian mothers desire to provide such care.”); Haidt & Bjorklund,
parents because parents give more attention to their children because they carry their genes.

E. **RIGHT TO EQUAL TREATMENT**

There is no equality in the natural world. The powerful rule, and the weak are eaten. This is, of course, part of the evolutionary process.

Equal treatment came into the biological picture when man created the social contract. As stated earlier, when mankind developed societies, individuals gave up some of their liberty in exchange for the survival benefits of living in a society. Although individuals gave up some liberty, equal treatment from the government was part of the bargain because no one would enter into a society to be treated as an inferior, especially if this would decrease survival chances. Professor Thomas Nagel has summarized this basis of equality best:

The pure ideal of political legitimacy is that the use of state power should be capable of being *authorized* by each citizen—not in direct detail but through acceptance of the principles, institutions, and procedures which determine how the power will be used. This requires the possibility of unanimous agreement at some significantly high level for if there are citizens who can legitimately object to the way state power is used against them or in their name, the state is not legitimate.\(^\text{276}\)

Similarly, the sense of fairness discussed above requires that leaders treat their subjects equally. Individuals demand equal treatment from their sovereigns, and our emotions are brought into play when we see that others are not treated equally. Finally, equal treatment is required as part of the respect that autonomous human beings deserve—all persons are moral equals.\(^\text{277}\) Professor Dworkin wrote that “majoritarianism does not guarantee self-government unless all the members of the community in question are moral members . . . .”\(^\text{278}\) Further, as Professor Lloyd Weinreb has asserted: “Each person should be able to develop and grow as a person; he should have a sense of his own capacity as an actor in the world, who makes things happen according to his own plans.”\(^\text{279}\) This is Thomas Jefferson’s “pursuit of happiness.”

Equality under behavioral biology means equality of opportunity, not equality of outcome. Equality of outcome is contrary to the evolutionary

\(^\text{supra} \text{ note 19, at 201 ("The resistance of children to arbitrary or unusual socialization has been the downfall of many utopian efforts."); Hall, supra note 183, at 7.}\)

\(^\text{276} \text{NAGEL, supra note 185, at 8.}\)

\(^\text{277} \text{Writers have generally based equality on an individual’s humanity. WEINREB, supra note 3, at 167; RAWLS, supra note 267, at 442 (explaining that “the capacity for moral personality” is a sufficient condition for the entitlement to equal justice).}\)

\(^\text{278} \text{RONALD DWORKIN, FREEDOM’S LAW: THE MORAL READING OF THE AMERICAN CONSTITUTION 23 (1996) [hereinafter DWORKIN, FREEDOM’S LAW]. Professor Dworkin added that “[m]oral membership involved reciprocity: a person is not a member unless he is treated as a member by others, which means that they treat the consequences of any collective decision for his life as equally significant a reason for or against that decision as are comparable consequences for the life of anyone else.” Id. at 25.}\)

\(^\text{279} \text{WEINREB, supra note 3, at 175.}\)
process. If everyone were made equal, the survival chances of all would diminish. Incentives to help society would disappear because individuals who worked hard would not reap the benefits of their work. Moreover, if individuals did not receive a significant portion of their labors, they would leave the society, and the social contract would fall apart. As Professor Hall argued: “[w]hile there are certainly evils in inequality, the coercion necessary to create absolute equality (if even possible) would be worse for human psychology and the overall quality of human life than the inequality which presently exists.”

Similarly, equality of outputs ignores individual autonomy, which is basic to humans and necessary for survival. As Professor Weinreb has asserted:

Unlike equality of opportunity, which recognizes persons as distinct actors who exercise individual capacities, the central significance of equality of result is that it denies the relevance of individuality in some respect. Where equality of result applies, persons are not actors who determine for themselves; they are recipients (or donors) who, whatever their individual characteristics, receive (or donate) according to a general rule that they are individually unable to vary.

He added that “[o]ur common humanity does not consist of or depend on particular characteristics that all have alike. On the contrary, its essence is our common capacity for individual self-determination as a unique person.”

Finally, differences in outputs is not unfair. As Professor F.A. Hayek noted, “[a] bare fact, or state of affairs, which no one can change, may be good or bad, but not just or unjust.” More specifically, Professor Paul Rubin has asserted that inequality exists generally because “some individuals are vastly more productive than others. . .” and that productivity is good for society as a whole.

While a few scholars have noted that some hunter-gatherer societies were egalitarian, this is a different type of egalitarianism than is sometimes advocated for today. This egalitarianism was not a concern for others, but
rather a desire not to be dominated. Thus, individuals banded together to avoid the creation of a dominant hierarchy. Accordingly, this dominance-avoiding type of egalitarianism supports the argument that human behavior resists attempts to impose artificial equality by dominance, as was argued in the previous paragraph.

Mankind does have a sense of minimal distributional fairness, which is probably the result of our theory of mind. Studies have suggested that mankind has adopted the “principle that maximized the overall resources of the group while preventing the worst off from dropping below some pre-established level of income.” This allows “for extra benefits to flow toward those who contribute more to society,” while providing “a safety net for those who are disadvantaged.” In other words, while equality in human nature is equality of inputs, not outputs, there may be a right to minimum subsistence.

Establishing equality of opportunity as the basis of equal treatment does not entail the adoption of “Social Darwinism.” Social Darwinism, which is generally associated with Herbert Spencer, is not consistent with behavioral biology or for that matter with Darwin himself. Darwin’s theory was not a theory about progress, and his evolution was not to a positive end. More importantly, Social Darwinism is contrary to the biological basis of rights set forth in this paper. A theory of human nature that views certain individuals as superior interferes with natural property rights, fairness rights, liberty rights, and equal treatment rights.

Equality means that society cannot discriminate based on superficial differences such as race. Behavioral biology demonstrates that one should be judged by individual characteristics, not as members of an artificial group to which one belongs. “One of the downsides to essentialist thinking and certain aspects of categorization more generally is that we readily develop stereotypes and prejudices.” Because there are an astronomical number of possible genetic combinations, each human is genetically unique. On the other hand, behavioral biology also demonstrates that there is little difference between the races. There has not been enough time in the human evolutionary process for significant differences to occur among localized populations. Professor Goldsmith averred, “Even when members of different human populations look different and when there are demonstrable differences in gene frequencies underlying physical characteristics, the presumption remains that cultural differences reflect

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287 Id.
288 Id.
289 HAUSER, supra note 24, at 83.
290 Id. at 88.
291 Id.
292 Graefrath, supra note 17, at 373.
293 HAUSER, supra note 24, at 212. See also Jones & Goldsmith, supra note 102, at 496 (“Yet biology offers no support for the existence of discrete genetically distinct populations of humans different from each other in important ways.”).
294 Pinker, supra note 24, at 143 (“People are qualitatively the same but may differ quantitatively. The quantitative differences are small in biological terms, and they are found to a far greater extent among the individual members of an ethnic group than between ethnic groups or races.”).
295 Jones & Goldsmith, supra note 102, at 477.
alternative phenotypic expressions of a common genetic heritage.” In other words, when one shows that the mind is the same in all humans, unimportant biological aspects like skin color become irrelevant.

In addition, equal treatment under behavioral biology should not be limited to a traitist approach, but should protect all individuals from differing treatment by the government. For example, the Jeffersonians stood for “equal rights for all, special privileges for none.” In other words, the minority should be protected from the majority, regardless of the characteristics of the minority and majority. As the court declared in State v. Goodwill:

[T]he rights of every individual must stand or fall by the same rule of law that governs every other member of the body politic under similar circumstances; and every partial or private law which directly proposes to destroy or affect individual rights, or does the same thing by restricting the privileges of certain classes of citizens and not others, when there is no public necessity for such discrimination, is unconstitutional or void. Were it otherwise, odious individuals or corporate bodies would be governed by one law, and the mass of the community, and those who make the law by another one.

The court, of course, was stating a version of the rule of law.

F. SOME IMPLICATIONS

From the above, it should be clear that sometimes there is not just one right answer to rights questions. Different right-creating behaviors (from different modules in the brain) can conflict. In addition, different cultures realize fundamental rights in different ways.

For instance, behavioral biology sometimes does not supply an answer when equality rights and liberty rights clash. Both are vital for human survival and holding together the social contract. As Professor Weinreb remarked, “[i]n a just social order we believe, liberty and equality are consistent, because the law establishes what we call equality of opportunity: not equality as such but the proper bounds of liberty, within which all persons alike are allowed to exercise their individual capacities.” However, he also admitted that in any society there will inevitably be clashes between liberty and equality. While liberty rights are probably much older than equality rights since liberty rights probably existed before the social contract, equality rights are also important because, as stated above, they help hold the social contract together and they relate to mankind’s sense of fairness. In addition, the answer to the question of how liberty relates to equality varies by culture, with the

296 GOLDSMITH, supra note 165, at 125.
299 WEINREB, supra note 3, at 10.
300 Id.
emphasis on liberty or equality probably being determined by that culture’s combination of the Haidt-Joseph five moral modules.

Another implication from the above is that anthropocentric rights should generally prevail over utilitarianism (cost-benefit analysis).\textsuperscript{301} Darwinists are individual oriented.\textsuperscript{302} Under Darwinism, society grows out of the individual, not the other way around. While the social contract is important, under behavioral biology, individuals are more important because they are autonomous beings and they had total liberty before the social contract. Individuals are the basic unit of the social contract. In addition, utilitarianism can interfere with property rights, liberty rights, fairness rights, and the right to equal treatment. For example, while it may be socially beneficial for the government to turn over an individual’s house to a developer who will build a mall that will economically improve the neighborhood, this violates an individual’s property rights as discussed above. As Professor Rawls declared, “[e]ach person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override.”\textsuperscript{303} In other words, “utilitarianism does not take seriously the distinction between persons.”\textsuperscript{304} In addition, a neuroscientific study of patients with damage to the ventrodemial prefrontal cortex, a part of the brain involved with social emotions, supports the proposition that humans value the individual over the utilitarian answer.\textsuperscript{305} These brain damaged patients acted in a much more utilitarian manner than normal individuals when faced with a high conflict personal dilemma, such as the trolley problem.\textsuperscript{306}

Thus, a system of rights based on human behavior will adopt the Kantian notion of not using an individual as a mean to an end.\textsuperscript{307} In addition, “[t]he concept of morality’s producing the greatest good for the greatest number is consistent with evolutionary principles only when the interests of individuals are very similar.”\textsuperscript{308} On the other hand, when basic behavioral rights are not involved, it is perfectly legitimate to adopt a cost-benefit utilitarian approach to law making.\textsuperscript{309}

\textsuperscript{301} Professor Greene has shown that emotions cause us to value our non-utilitarian intuitions over a cost benefit analysis. Joshua Greene, Cognitive Neuroscience and the Structure of the Moral Mind, in THE INNATE MIND: STRUCTURE AND CONTENTS 338, 344–50 (Peter Carruthers et. al. eds., 2005). In addition, utilitarian rights do not protect minorities, while rights based on human behavior are for all individuals. Thus, rights based on human behavior are better at providing protection against racism, sexism, etc., than other bases of rights, especially those rights that are considered social constructs.

\textsuperscript{302} Kuklin, Politics, supra note 35, at 1216. See also McGinnis, supra note 37, at 225.

\textsuperscript{303} RAWS, supra note 267, at 3. See also DERSHOWITZ, supra note 8, at 156 ("The greatest crises for a constitutional democracy occur when the majority demands that minority rights be abridged in the name of strongly held preferences or claims of necessity.").

\textsuperscript{304} NAGEL, supra note 185, at 66–67.

\textsuperscript{305} Michael Koenigs et. al., Damage to the Prefrontal Cortex Increases Utilitarian Moral Judgements, 446 NATURE 908 (2007).

\textsuperscript{306} Id.

\textsuperscript{307} MURPHY & COLEMAN, supra note 3, at 79.

\textsuperscript{308} GOLDSMITH, supra note 165, at 123.

\textsuperscript{309} For example, a city may have several acres of vacant land that it wants to put to a productive use. Some citizens want to employ the land for a basketball stadium so that the city can attract an NBA team. Others may think that the best use for the land would be as an industrial park to improve the city’s economy. Still others may want it to be a public park for recreation. None of these reasons involve basic human rights. Therefore, the city can make its decision based on democratic and/or cost/benefit grounds.
IV. BIOLOGICAL RIGHTS IN PARTICULAR CULTURES

A. BIOLOGICAL RIGHTS AND THE AMERICAN CONSTITUTION

Judge Hoffman believes that there is an evolutionary link between justice and democracy:

The ability of any justice system to accommodate the biological tension between individual freedom and social norms depends to a great extent on its own ability to develop those norms as a free expression of social consensus. The best laws work because they efficiently confer, and express, enough long-term benefits on enough individuals that those individuals are willing to remain in the group and pay the short-term price of compliance. The genius of democracy is that it provides a continuous feedback mechanism on those social norms, constantly recalibrating them to current individual preferences.310

Thus, “democracy creates a market for the governed, in which conflicting preferences for individual freedom and social restraint compete freely to obtain optimal results.”311 This connection between justice and democracy is not an artificial social construct, but rather shows the effect that conflicting notions of individual freedom and social constraints have had on the evolution of mankind.312 In addition, a free market economy furthers this connection because it allows for reciprocal exchanges, which, as noted above, are essential to human nature.”313

More specifically, Professor McGinnis believes that “biology—the interaction of genetically shaped behavior with particular environments—better explains the structure of the [United States] Constitution than other theories . . . .”314 He continues, “[t]he vocabulary with which the Framers discussed human nature is in fact close to that now used to describe the elements of human nature from an evolutionary viewpoint.”315 Similarly, “Jefferson argued that American colonists ‘felt their rights before they had thought through their explanation.’”316

We actually have two constitutions: 1) the original Constitution, which mainly dealt with the imperfections of human nature though a division of sovereignty; and 2) the Bill of Rights and other amendments, which granted specific rights. In the original Constitution, the Framers tried to address four human factors (all of which have been discussed above): 1) that self-interest created limitations on altruistic behavior among unrelated individuals; 2) that self-interest could be consistent with “gains from trade

310 Hoffman, supra note 109, at 1674.
311 Id.
312 Id.
313 Id.
314 McGinnis, supra note 37, at 212.
315 Id. at 212–13.
316 Dershowitz, supra note 8, at 42. Professor Strahlendorf has elaborated: “Natural-law philosophers have stated that there are a set of basic human values that are ‘self-evident.’ This means that humans sense that these values are good. . . . The point here . . . is . . . to suggest that there must be sets of biological mechanisms (epigenetic rules and Darwinian algorithms) that make things ‘self-evidently’ good.” Strahlendorf, supra note 104, at 154.
through cooperation because man has a natural sense of exchange and property”; 3) that “individuals have substantial differences in their natural endowments, creating peculiar risks of expropriation through politics”; and 4) that “the natural desire to increase status may, in some circumstances, be less beneficial to society as a whole than wealth production.”

Stated differently, “[t]he Framer’s whole new science of politics was premised on this view of human psychology: government could not depend on man’s benevolence or virtue.” In particular, “[w]hat was unique about James Madison and the Founding Fathers, however, was not just that they based government on the consent of the people, but that they based government on individuals and a people that they understood to be not always virtuous.”

On one hand, the Framers believed that man’s self-interest worked well in the private sphere because it created gains in commerce. They protected the private sphere by giving Congress the authority to regulate trade through the Commerce Clause, rather than allowing states to do this separately, and by protecting property and trade through the Contracts Clause and the Takings Clause (part of the Bill of Rights). On the other hand, the Framers feared factions and abuses of power in the public sphere. The Framers were particularly concerned about the protection of property. As Professor McGinnis has written, “[u]nder the Framers’ system, national democracy was primarily an attempt to preserve wealth from public expropriation that could result from coalition building.” In other words, “[n]atural inequality exacerbates the danger of factions because it creates a reserve of individuals readily persuaded to expropriate the property of the more talented.”

The Framers dealt with this problem through separation of power between the federal and state governments (federalism), bicameralism, and separation of power between the federal government’s three branches.

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317 McGinnis, supra note 37, at 231.
318 Id. at 232.
320 McGinnis, supra note 37, at 232.
321 See also id.
322 Id. at 232–235.
323 See also G Edward White, Revisiting the Ideas of the Founding, 77 U. CIN. L. REV. 969, 979 (“It was only when Americans began to reflect upon factionalism in state legislatures, and to consider how to avoid the evils of that phenomenon, in a revised federal government, that more robust concentrations of separate branches and powers in a single government began to emerge.”). As James Madison wrote:

[...]

324 McGinnis, supra note 37, at 235.
325 Id. at 234.
While the original Constitution mainly protected against human nature by division of authority, the Bill of Rights directly created rights, some of which are very specific while others are abstract. As this part will show, these rights are details of the rights discussed in Part III based on the culture of late eighteenth-century America.

Our freedom of speech right in the First Amendment flowed from the natural right to liberty. As noted in Part III, freedom of thought and expression are part of man in the EEA, and man did not give up this liberty when he entered into the social contract. However, this liberty can be limited when harm to others is involved, such as defamation or falsely shouting fire in a crowded theater. Freedom of speech also arises from individual autonomy and dignity. “We retain our dignity, as individuals, only by insisting that no one—no official and no majority—has the right to withhold an opinion from us on the ground that we are not fit to hear and consider it.”

Likewise, government interferes with our autonomy and dignity when it prevents us from expressing our opinions to others. Finally, free speech promotes reciprocity and cooperation.

The details of freedom of speech differ among cultures. For example, the United States generally limits speech less than European nations. “[T]he U.S. First Amendment is far more protective than other countries’ laws of hate speech, libel, commercial speech, and publication of national security information,” and this greater protection grew out of America’s “peculiar social, political, and economic history.”

Other constitutional rights are less obviously grounded in biology, but most of the Bill of Rights relates to human behavior. The Third Amendment states, “No soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.” Obviously, there was no specific right against quartering soldiers in a home on the savannah. However, this right is a specification of the right to liberty and privacy. The British quartering soldiers in colonists’ homes was a specific problem related to liberty, which the Founders protected against in the Constitution. Notice that this right is narrower in war time when greater incursions on liberty might be justified for survival.

Similarly, our Second Amendment right to bear arms was not a part of mankind’s early rights. Nevertheless, it relates to an individual’s interest in personal autonomy and liberty. Under these concepts, an individual has the right to protect oneself. As Professor Hauser has stated, “[w]e can
break self-defense down into factors that feed into our moral faculty” because “[t]he agent’s intention . . . is not to kill the thief but to defend himself from being killed.” Thus, the Second Amendment right to bear arms is a late eighteenth century manifestation of the right to protect oneself. Likewise, the criminal procedure rights in the Fourth, Fifth, and Sixth Amendments and the Seventh Amendment right to a trial by jury are manifestations of the rights to fairness and liberty discussed above. For example, while the right to a jury trial is not universal, it is one of America’s methods of insuring the biological right to fairness.

Finally, the Ninth Amendment supports the proposition that, for the Founders, rights are in the people (individuals), and individuals do give up their basic rights when they enter society. The Ninth Amendment states: “The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.” Thus, the people created the government and gave it its authority. The government did not grant rights to individuals; they already had these rights. As Professor Randy Barnett has written, the Founders’ view was “first come rights, and then comes the Constitution.” Professor Barnett believes those rights to be liberty rights, and he has proposed a “Presumption of Liberty” when interpreting the Constitution. This corresponds with the arguments above that one gives up only a necessary portion of liberty when entering into the social contract.

B. LIBERTY IN AMERICAN AND GERMAN LAW

One can see how different cultures create different kinds of liberty by comparing our Constitution’s idea of liberty with that of the German Constitution. Our constitutional liberty is a negative liberty (a freedom from government)—“the freedom to pursue one’s own vision in life, as one chooses.” American liberty is valueneutral and is based on individuality and personal choice.

In contrast, German freedom is based on the Kantian notion of human dignity—“that each person is valuable per se as an end in himself, which government and fellow citizens must give due respect.” German rights are based upon the free development of personality and thus on a person’s

possess them for other reasons—a stronger case can be made for its near-universality....” Dershowitz, supra note 8, at 55.

[^32]: Hauser, supra note 24, at 149.
[^33]: Dershowitz, supra note 8, at 52.
[^34]: U.S. CONST. amend. IX.
[^36]: The main argument against including a bill of rights in the original Constitution was that it was unnecessary because rights were in the people. For example, Alexander Hamilton argued that bills of right “have no application to constitutions professedly founded upon the power of the people, and executed by their immediate representatives and servants. Here, in strictness, the people surrender nothing, and as they retain everything, they have no need of particular reservations.” The Federalist No. 84, at 534 (Alexander Hamilton) (Benjamin Fletcher Wright, ed., 1961).
[^37]: Id. at 1.
[^38]: Id. at 3.
[^39]: Id. at 3–4.
integrity and security.\footnote{Id. at 4.} For example, in one case, the German Constitutional Court “invalidated a court-ordered sampling of a defendant’s spinal column to test his involvement in a crime on the ground it violated his physical integrity.”\footnote{Id. at 17.} Similarly, confidentiality and inquiry into certain personal matters are carefully protected under the German system.\footnote{Id. at 25.} This idea of dignity affects both public and private law.\footnote{Id. at 5.} For instance, the German Constitutional Court recast “the private law interests of reputation and privacy into the capacious language of human dignity and personality, thereby constitutionalizing the doctrine.”\footnote{Id. at 31.} In addition, German freedom rejects the American notion of the atomistic individual, and instead it views individuals as being connected.\footnote{Id. at 14.} In other words, “[i]ndividual choice is bounded by community, civility norms and a sense of the responsibility.”\footnote{Id. at 5–5.} Consequently, unlike American liberty, German freedom creates both rights against the state and duties for citizens.\footnote{Id. at 13.} Under the German conception of freedom, “people are spiritual-moral beings who act freely, but their actions are bound by a sense of moral duty. Actions are to be guided by a sense of social solidarity, human and social need, and personal responsibility.”\footnote{Id. at 36.} This coupling of rights and duties developed from Kant’s notion of universal law that applies to all.\footnote{Id. at 38.} Examples include a parent’s rights and duties in raising children and the German notion of academic freedom that does not release anyone from his allegiance to the Constitution.\footnote{Id. at 46.}

The German version of the rule of law (Rechtsstaat) applies to both law and justice, and justice can include natural or moral law.\footnote{Id. at 5–6, 52. Of course, American law deals with welfare through legislation. Id. at 52.} Another important idea under German freedom is the “Social State (Sozialstaat), which obligates the state to provide for the security of its citizens, including a minimal level of existence.”\footnote{Id. at 59.}

In sum, in Germany, “[t]he state became the focus for the fount of freedom, in comparison to the American idea that the state is the object against which freedom is directed: limiting state power to empower individual liberty.”\footnote{Id. at 65–66.} This is because, under the American system, “man comes from the state of nature and then forms a social contract,” while the German system “does not exclusively rely upon a social foundation for a view of man as the founding element of society . . .”; “[r]ather, man is conceived as a social animal who is part of a community.”\footnote{Id. at 65–66.}
Neither the American concept of liberty based on freedom from government nor the German concept of freedom based on dignity is superior. Rather, each developed from human behavior based on the needs of the particular society. Americans were rebelling from an English king and parliament, which limited their freedom. They also feared factions within their own country. Consequently, they were most interested in protection from government. Based on the existence of slavery, the eighteenth century status of women, and differences between landowners and non-landowners and other class differences, the idea of universal human dignity was not central to the Founders. Similarly, because individuals had abundant access to land they could farm and other natural resources, providing for each member of society was a foreign concept.

The German idea of dignity is based both on the German reaction to the atrocities of Nazism and Germany’s intellectual history. After World War II, Germans had to face the horrors of Nazism. The country’s reaction was to emphasize the dignity and autonomy of human beings. Freedom from government was not enough to protect society; rather, positive action from the government and duties of citizens were necessary. Also, part of the Nazi intrusion was into the private sphere, which helped them identify Jews and other “undesirables.” Further, in an industrialized society with a greater population, equality is a greater problem and not all people have access to basic resources.

V. CONCLUSION

Rabbi Joseph Telushkin declared, “[t]o this day there is ultimately no philosophically compelling answer to the question ‘Why was Hitler wrong?’ aside from ‘Because God said so.’” This Article has tried to counter this argument by showing that there a universal, innate set of rights that evolved to help mankind survive. While the details of rights differ by culture, the fundamental rights that exist in all societies, especially the autonomy of all humans, demonstrates that Hitler was wrong.

Similarly, Professor Dershowitz has argued against natural law: “[b]ut we must remind ourselves that natural law has also been invoked in support of slavery, racism, sexism, homophobia, terrorism, the blocking of abortion clinics, and the refusal to pay taxes.” First, almost all philosophies have been used to justify evil. If a philosophy is misused, it doesn’t make that philosophy bad. More importantly, earlier versions of natural law were mainly based on opinion, not science. For example, homosexuality is not against scientifically supported natural law or natural morality, but rather homosexuality may serve a natural function. The anthropocentric version of rights employed in this Article is based on extensive scientific studies.

355 Professor White has noted that modern civil liberties were not a concern of the drafters and that the idea of equality was muted in the founding era. White, supra note 321.
356 Id. at 18.
357 JOSEPH TELUSHKIN, JEWISH WISDOM (1994).
358 Dershowitz, supra note 8, at 67.
359 Professor Wilson has stated, “[h]omosexuality is above all a form of bonding.” EDWARD O. WILSON, ON HUMAN NATURE 144–145 (1978). He has conjectured that close relatives of homosexuals may have
Science has given us a better view of human nature, and legal scholars can use that better view to create a better legal system. While there is still much work to be done, any investigation of law that ignores the facts of human nature will be seriously flawed. As Professor Alasdair MacIntyre declared, “[t]he notion that the moral philosopher can study the concepts of morality merely by reflecting, Oxford armchair style, on what he or she and those around him or her say and do is barren.”

been able to have more children as a result of their presence: “The homosexual members of primitive societies could have helped members of the same sex, either while hunting and gathering or in more domestic occupations at the dwelling sites. Freed from special obligations of parental duties, they would have been in the position to operate with special efficiency in assisting close relatives.” Id.
