

**GOVERNING “THINGS”: ARTIFICIAL  
INTELLIGENCE, ANIMALS AND OTHER  
NONHUMANS BEFORE THE LAW**

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ABSTRACT

*Humans throughout history have come to seek retribution for purported wrongs committed against them. At times, this has presented itself by means of formal systems of crime and punishment in their respective societies and cultural contexts. The impulse to seek vengeance for misdeeds committed by others is one that, I contend, is deeply and inextricably linked to the human experience.<sup>1</sup> However, there is something particularly interesting about this arguably retributive tendency when it comes to beings with minimal to no capacity for reason, i.e., nonhumans and inanimate objects. My research outlines various attempts throughout history to govern nonhumans and thus subject them to the constraints of law. These attempts range from humanity’s absurd practice of putting animals and objects on trial to the modern discourse of algorithmic disgorgement.*

*In Part I, I will review the literature of culpability and rights theory as it relates to assigning blame to moral agents. Part II will provide a brief*

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<sup>1</sup> MARTHA C. NUSSBAUM, THE MONARCHY OF FEAR: A PHILOSOPHER LOOKS AT OUR POLITICAL CRISIS 71 (2018) (“Psychologist Paul Bloom has shown that retributive thinking appears very early in the lives of infants, even before they begin to use language. Infants are delighted when they see the “bad person”—a puppet who has snatched something from another puppet—beaten with a stick.”).

*historical background for holding animals and inanimate objects legally accountable for their actions and consider the reasons for this impulse. Part III will discuss recent notions of personhood, culpability and rights being applied to artificial intelligence (AI); modern attempts to apply the retributivist framework to AI; and then briefly look at the various alternative methodologies for AI governance. Part IV will conclude by offering some final observations and policy considerations.*

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I. HUMAN RIGHTS AND CULPABILITY

A. The “Human” Polity

**B**EFORE embarking on a discussion of the theory of culpability as it pertains to nonhumans, it is first necessary to establish why culpability should exist for any being, particularly humans. What does it mean for one to be a part of the “human family”?<sup>2</sup> The traditional view is that humans stand apart from the rest of physical life due to our ability to reason and act in harmony with said reason. One writer classified two types of beings, moral

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<sup>2</sup> G.A. Res. 217 (III) A, Universal Declaration of Human Rights (Dec. 10, 1948) [hereinafter UNIVERSAL DECLARATION HUM. RTS.].

“agents” and moral “patients,”<sup>3</sup> the former carrying out moral responsibilities merely for the sake of the latter. One potential implication of this is that there may be some selfless justification for carrying out these responsibilities. The philosophical school of virtue ethics provides sound reasoning for this view. Practitioners of this Aristotelian camp of normative ethics claim that to do good “is desirable for itself, [and] not desirable [merely] for the sake of some other good.”<sup>4</sup> In other words, an agent must both be guided by reason and utilize that reason in such a way that promotes the “good,” and have the “will,” or moral wherewithal, to do so.<sup>5</sup> The capacity to do the foregoing, I presume, is what makes us human.

This will and capacity to do that which comports with our aims affords humans a particular role in the universe. We belong to a class of beings that can shape the world around us to meet our ends. The notion that we, by right, should have authority over animals has been deemed “speciesist” by some

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<sup>3</sup> See *infra*, notes 46–49.

<sup>4</sup> Richard Kraut, *Aristotle's Ethics*, STAN. ENCYCLOPEDIA PHIL. (June 15, 2018), <https://plato.stanford.edu/archives/sum2018/entries/aristotle-ethics>. But see IMMANUEL KANT, GROUNDWORK OF THE METAPHYSICS OF MORALS 3 (Mary Gregor ed. & trans., Cambridge University Press 1998) (1797) (“[I]n the case of what is to be morally good it is not enough that it conform with the moral law but it must also be done *for the sake of the law*.”).

<sup>5</sup> Allen Wood, *The Good Without Limitation (GMS, 393–394)*, in GROUNDWORK FOR THE METAPHYSICS OF MORALS 25–39 (Christopher Horn & Dieter Schönecker eds. 2006) (“[A] ‘will’ [is] practical reason or the capacity to act on principles [and not] virtue . . . wisdom or judgment.”). See also 1 ARTHUR SCHOPENHAUER, THE WORLD AS WILL AND REPRESENTATION 106 (E.F.J. Payne trans., 1969) (1859) (“[The] will itself . . . lies outside the province of the law of motivation.”).

thinkers.<sup>6</sup> This is the view that using membership in this or that species is the sole determinant of whether one has a “right to life,” or is otherwise morally considerable.<sup>7</sup> However, even those who believe that there must be a high degree of moral consideration for animals will readily admit that humans, in general, are uniquely situated to attend to the needs of nonhuman animals. One thinker described this experience as akin to a kind of “subjectivity” in which we are able to go through life, observing and obtaining knowledge and applying our reason to understand deeper meanings of abstract ideas and the implications of our own actions.<sup>8</sup> The ability to grasp abstractions, or “concepts” in Schopenhauerian terms, is the *sine qua non* of reason and “distinguishes [us] from [other] animals.”<sup>9</sup>

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<sup>6</sup> See PETER SINGER, *ANIMAL LIBERATION: THE DEFINITIVE CLASSIC OF THE ANIMAL MOVEMENT* 51 (2009) (“[Pure speciesism . . . is exactly the kind of arbitrary difference that the most crude and overt kind of racist uses in attempting to justify racial discrimination.”); E.P. EVANS, *THE CRIMINAL PROSECUTION AND CAPITAL PUNISHMENT OF ANIMALS* 247 (1906) (“If a monkey gets angry and kills a child, he obeys the same vicious propensity that impels a brutal man to commit murder . . . . Why then should the monkey be summarily shot or knocked on the head, and the man arrested, tried, convicted and hanged by the constituted authorities?”). Michael Ray Harris crafted a workable framework that forgoes the anthropocentric impulse derided by Singer. See, e.g., Michael Ray Harris, *A Right of Ethical Consideration of Non-Human Animals*, 27 *HASTINGS ENV'T L.J.* 71, 74–76 (2021). See NUSSBAUM, *supra* note 1.

<sup>7</sup> See UNIVERSAL DECLARATION HUM. RTS, *supra* note 2.

<sup>8</sup> SCHOPENHAUER, *supra* note 5, at 5 (“[T]he universal condition of all that appears, of all objects . . . exist[] only for the subject. Every[] [human] finds himself as this subject.”)

<sup>9</sup> *Id.* at 6; PAUL THAGARD, *BOTS AND BEASTS: WHAT MAKES MACHINES, ANIMALS, AND PEOPLE SMART?* 31–32 (2021) (highlighting that humans have the capacity to process information “beyond sensory experience . . . . [in order to] form[] concepts that capture common perceived properties of objects, . . . perceived relational properties of objects, . . . [and] hidden causes of objects.”).

## B. Rights, Blameworthiness, and Capacity

A recurring debate throughout animal rights discourse is whether and when these beings can be afforded the rights typically reserved for humans. “Human Rights” have been defined in a variety of ways throughout history, though they were formalized to a set of truisms laid out by the Universal Declaration of Human Rights following the Second World War.<sup>10</sup> This was done with due consideration to the “barbarous acts” committed during this war by Nazi Germany.<sup>11</sup> To Singer’s chagrin, the drafters of the declaration echoed the logic of Kant & Schopenhauer in affirming that humans were uniquely vested with the power of reason.<sup>12</sup> At the time, the rights declared in the articles were aspirational,<sup>13</sup> as it is unquestionable that there would not come to be an adequate capacity to enforce those rights for many years with some commentators arguing that there still is not one.<sup>14</sup> Missing from these debates, however, is the counterweight of rights, i.e., responsibilities.

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<sup>10</sup> UNIVERSAL DECLARATION HUM. RTS, *supra* note 2.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* (“All human beings . . . are endowed with reason and conscience . . . [and] the right to life . . .”).

<sup>13</sup> *Id.* (“[T]he advent of a world in which human beings shall enjoy [these] freedom[s] . . . has been proclaimed as the *highest aspiration* of the common people . . .”) (emphasis added).

<sup>14</sup> Joseph Raz contends that there cannot rightly be said to be a universal human rights framework without ample consideration for the international community’s—through the channels of NGOs, treaty organizations, and tribunals—incapacity, or unwillingness, to intervene in the actions of sovereign states, and thus the traditional view, elucidated in the Universal Declaration of Human Rights, is irrelevant at best. Joseph Raz, *Human Rights Without Foundations* 11–14 (Oxford Legal Stud. Rsch. Paper No. 14/2007, 2007). *But see* Peter Schrabert, *Human Rights*

There are several leading interpretations of human rights. One conception, which will be the most relevant to my inquiry, focuses on rights as a redistribution of power. Essentially, to confer a “right” upon another is to simultaneously give that person power over you in exchange for something else. Raz writes that “[a]ll rights assign to the right-holder power over the object of the rights. Human rights involve the further claim that comes with synchronic universality, the claim that all people alive today have the same human rights.”<sup>15</sup> Given this quasi-transactional formulation, it would be fair to ask what the consideration for our conferral of rights to the animal could be.

An answer proffered in early antiquity was that the consideration paid would be identical to that which we pay for our rights, i.e., unfaltering obedience to the law.<sup>16</sup> Thus, animals were treated as beings capable of punishment for their misdeeds. In an almost whimsical fashion, they were put on trial and, sometimes, even dressed as humans and afforded the right to counsel. Underpinning this, it seems, was the idea that there could be some moral responsibility sans culpability. Kant provided the commonplace, pithy,

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*Without Foundations?*, in *THE PHILOSOPHY OF HUMAN RIGHTS* 61, 66–68 (Gerhard Ernst & Jan-Christoph Heilinger eds., 2012) (arguing that notwithstanding the inability to adequately implement a regime of international enforcement of human rights, “rights protect people’s normative authority over essential aspects of their lives . . . [C]ertain rights should be seen to be of international concern . . .”).

<sup>15</sup> Joseph Raz, *Human Rights in the Emerging World Order*, 1 *TRANSNAT’L LEGAL THEORY* 31, 42 (2009).

<sup>16</sup> See THOMAS HOBBS, *ON THE CITIZEN* 82 (arguing that all privileges and protections enjoyed by citizens of any rightly ordered state are received in exchange for “simple obedience, . . . [without which] [g]overnment . . . would be meaningless . . .”).

ethical formulation that “ought implies can,” indicating that a moral agent must have the ability to do right in order to be held morally responsible for doing wrong.<sup>17</sup> It is from this idea that moral agency follows.

Most theories for the culpability of human animals for their actions are undergirded by the assumption outlined above, that is, that humans have reason and thus can think of their actions detached from the contexts in which they are done. Simply, we are not automatons reacting to inputs put before us instinctively, as some animals and machines are characterized to behave. Moreover, we are assumed to have the capacity, both physical and intellectual, to comport with any relevant deontological demands. Here, the truism derived from Kant is very informative. James Griffin wrote that any conception of rights must position the agency and autonomy of the human person at its center:

Human life is different from the life of other animals. We human beings have a conception of ourselves and of our past and future. We reflect and assess . . . [W]e value our status as human beings especially highly [and] [t]his status centres on our being agents—deliberating, assessing, choosing, and acting to make what we see a good life for ourselves.

Human rights can then be seen as protections of our human standing [or,] our personhood. And one can break down the notion of personhood into clearer components by breaking

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<sup>17</sup> IMMANUEL KANT, CRITIQUE OF PURE REASON 444 (F. Max Müller, trans., 1896) (1781) (“[O]ught expresses a possible action, the ground of which cannot be anything but a mere concept . . . [and] the action which the ought applies must be *possible under natural conditions*.”) (emphasis added).

down the notion of agency. To be an agent, in the fullest sense of which we are capable, one must (first) choose one's own path through life [ . . . ] And (second) one's choice must be real; one must have at least a certain minimum education and information [ . . . ] (third) others must also not forcibly stop one from pursuing what one sees as a worthwhile life (call this 'liberty').<sup>18</sup>

This line of reasoning has been dubbed the Naturalist Conception of human rights by some commentators. This view centers ideas of fulfillment and moral agency as the touchstones of the human experience. Unlike the Political Conception, this notion of rights, ironically and perhaps unwittingly, leaves room for the inclusion of nonhuman animals.<sup>19</sup>

## II. RENDERING "JUSTICE" TO ANIMALS AND INANIMATE OBJECTS

For thousands of years, humans have sought to achieve dominion over fauna and flora. At a certain point after the advent of law, humans were soon faced with the dilemma of what to do about wildlife that would come to wreak havoc against innocent communities. The solution for many in antiquity was simple: apply the tools of law to both animals and inanimate objects. In antiquity, both the rights and duties inherent in being a member of the human polity were reserved for a select few—men who were not born slaves. However, animals, both wild and domestic, bondservants, inanimate objects, and ships, would cause harm to people from time to time. In order to deal with

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<sup>18</sup> JAMES GRIFFIN, ON HUMAN RIGHTS 32–33 (2002).

<sup>19</sup> Margaret Foster Riley, *CRISPR Creations and Human Rights*, 11 L. ETHICS HUM. RTS. 225, 250 (2017) (noting that an animal, a theoretical human-chimpanzee hybrid, with the capacity for "moral agency" would be entitled to "human" rights under the Naturalist Conception).



this dilemma, several legal conventions came about. One of which can trace its origins to ecclesiastical sources.

If an ox gore a man or a woman, that they die: then the ox shall be surely stoned, and his flesh shall not be eaten; but the owner of the ox shall be quit. But if the ox were wont to push with his horn in time past, and it hath been testified to his owner, and he hath not kept him in, but that he hath killed a man or a woman; the ox shall be stoned, and his owner also shall be put to death.<sup>20</sup>

The practice of punishing animals for perceived wrongs did not end during biblical times; rather, it persisted even into the 20<sup>th</sup> century in this country.<sup>21</sup>

Applying human notions of responsibility to nonhumans was not isolated to animals. Early jurisprudence incorporated the idea of the “deodand” in order to assign blame to slaves, animals, and inanimate objects.<sup>22</sup> These “guilty” or “accursed” things were then cast away, destroyed, or escheated to the state.<sup>23</sup> At times “corporal” punishment was inflicted on deodands. For example, when a bridge over Hellespont Strait, constructed under the reign of Xerxes the Great, was destroyed in a great storm, the King was deeply

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<sup>20</sup> *Exodus* 21:28-29 (King James).

<sup>21</sup> Geoffrey P. Goodwin & Adam Benforado, *Judging the Goring Ox: Retribution Directed Toward Animals*, 39 *COGNITIVE SCI.* 619, 622 (2015) (“[I]n 1926, in the State of Kentucky, a stray German shepherd was subjected to the electric chair after being condemned to death for the attempted murder of a child.”) (citing Jan Bondeson, *The Feejee Mermaid and Other Essays, in* NATURAL AND UNNATURAL HISTORY 159 (1999)).

<sup>22</sup> Edmund Webster Burke, *Deodand: A Legal Antiquity That May Still Exist*, 8 *CHI.-KENT L. REV.* 15 (1930) (“[A]ny personal chattel whatever, animate or inanimate, which, becoming the immediate instrument by which the death of a human creature was caused, was forfeited to the king for sale, and a distribution of the proceeds in aims to the poor by his high almoner, for the appeasing of God’s wrath.”) (citing 18 *CORPUS JURIS* 489).

<sup>23</sup> OLIVER WENDELL HOLMES JR., *THE COMMON LAW* 7 (1st ed. 1881).

distraught and ordered the river to be lashed and fetters thrown while “the scourgers were bidden by the furious king to address the strait in these words: ‘Oh bitter water, thy lord inflicts this punishment upon thee because thou hast wronged him although in no wise ever harmed by him.’”<sup>24</sup> The retributive impulse made the fact that the river had no capacity to feel the blows with which it was subject irrelevant to Xerxes; pain was inflicted, thus pain needed to be dealt.

One particularly egregious occurrence of this comes from France:

On the 14th of June, 1494, a young pig was arrested for having ‘strangled and defaced a young child in its cradle, the son of Jehan Lenfant, [ . . . ] and of Gillon his wife,’ and proceeded against ‘as *justice* and *reason* would desire and require.’ Several witnesses were examined, who testified ‘on their oath and conscience’ that ‘on the morning of Easter Day, as the father was guarding cattle and his wife Gillon was absent in the village of Dizy, the infant being left alone in its cradle, the said pig entered during the said time the said house and disfigured and ate the face and neck of the said child, which, in consequence of the bites and defacements inflicted by the said pig, departed this life [ . . . ].’ The sentence pronounced by the judge was as follows, ‘We, in detestation and horror of the said crime, and to the end that an example may be made and justice maintained, have said, judged, sentenced, pronounced and appointed, that the said porker, now detained as a prisoner and confined in the said abbey, shall be by the master of high works hanged and strangled on a gibbet of wood near and adjoinant to the gallows and high place of execution . . .’<sup>25</sup>

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<sup>24</sup> GEORGE IVES, A HISTORY OF PENAL METHODS: CRIMINALS, WITCHES, LUNATICS 249–50 (1914) (highlighting that “this was animistic: seas and rivers were then Personalities; human qualities were imputed to them.”) *See also* HOLMES, *supra* note 23, at 10–11 (“[I]nanimate objects came to be pursued . . . to gratify the *passion of revenge*.”) (emphasis added).

<sup>25</sup> EVANS, *supra* note 6, at 155–56. (emphasis added).

It must be highlighted that this sort of communal act of retaliatory violence in the name of justice would not have been reserved for animals during this time.<sup>26</sup> Examples of brutal punishment for infamous crimes are too numerous to spend time on here. The brutality of this stands in stark contrast to the prevailing view of the cognitive weakness of animals in antiquity. Even enlightenment thinkers viewed animals as “blindly driven by their desires, like an unrestrained wanton . . . lack[ing] rationality.”<sup>27</sup> How is it, then, that communities were able to justify such treatment? A page from the Roman

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<sup>26</sup> See 1 FREDERICK POLLOCK & FREDERICK WILLIAM MATTLAND, THE HISTORY OF ENGLISH LAW BEFORE THE TIME OF EDWARD I 459 (1895) (noting that there were “certain classes of men who for their offences or their contumacy are deprived of some of those rights which their ‘lawful’ neighbours enjoy. Among them we reckon outlaws, convicted felons and excommunicates . . . To pursue the outlaw [and] knock him on the head as though he were a wild beast [is] the *right* and *duty* of every law-abiding man. ‘Let him bear the wolf’s head.’”) (citing 1 BRACTON F. 125b) (emphasis added). The latter phrase stems from the Latin *caput gerat lupinum* (literally signifying having the head of a wolf), invoking the imagery of the “lone wolf.” *Caput Gerat Lupinum*, BLACK’S LAW DICTIONARY (11th ed. 2019). See also 2 H. BRACTON, DE LEGIBUS ET CONSUEUDINIBUS ANGLIAE 362–63 (1235) (asserting that the outlaw “forfeits the things pertaining to law . . . For it is a just judgment that he who has refused to live by the law should perish without law and without judgment.”).

<sup>27</sup> KRISTIN ANDREWS, THE ANIMAL MIND: AN INTRODUCTION TO THE PHILOSOPHY OF ANIMAL COGNITION 14 (2d ed. 2020) (“The fact that the human being can have the representation “I” raises him infinitely above all the other beings on earth. By this he is a person . . . a being altogether different in rank and dignity from things, such as irrational animals, with which one may deal and dispose at one’s discretion.”) (quoting Immanuel Kant, *Anthropology in a Pragmatic Point of View*, in ANTHROPOLOGY, HISTORY, AND EDUCATION 227–429 (Robert Loudon & Gunter Zoller, eds. and trans. 2010) (1798)). Modern thinkers have contended with Kant’s presumption that humans have the monopoly on self-awareness. See Riley, *supra* note 19, at 237 (“[Wise] believes that animals that have the cognitive capacity to desire and act intentionally and “have a self,” are entitled to liberty rights and equality rights.” (citing STEVEN WISE, DRAWING THE LINE: SCIENCE AND THE CASE FOR ANIMAL RIGHTS 34–35 (2003). Cf. CARY WOLFE, BEFORE THE LAW: HUMANS AND OTHER ANIMALS IN A BIOPOLITICAL FRAME 8 (2013) (“[T]he fundamental question here is not, “can they reason?,” or “can they talk?,” but “can they suffer?”) (quoting JACQUES DERRIDA, THE ANIMAL THAT THEREFORE I AM 27–29 (Marie-Louise Mallet ed., David Wills trans., Fordham U. Press 2008) (1997).

jurisprudential notion of noxal surrender sheds some light on this apparent contradiction:

A noxal action was granted by the statute of the Twelve Tables in cases of mischief done through wantonness, passion, or ferocity, by irrational animals; it being by an enactment of that statute provided, that if the owner of such an animal is ready to surrender it as compensation for the damage, he shall thereby be released from all liability. Examples of the application of this enactment may be found in kicking by a horse, or goring by a bull, known to be given that way; but the action does not lie unless in causing the damage the animal is acting contrary to its natural disposition; if its nature be to be savage, this remedy is not available. Thus, if a bear runs away from its owner, and causes damage, the quondam owner cannot be sued, for immediately with its escape his ownership ceased to exist. The term *pauperies*, or ‘mischief’, is used to denote damage done without there being any wrong in the doer of it, for an *unreasoning animal* cannot be said to have done a wrong. Thus far as to the noxal action.<sup>28</sup>

This passage evinces that even in antiquity, there was some consideration for the individual mental capacities of animals when determining culpability.<sup>29</sup> The presumption was that an animal could not rightly be said to have committed a wrong if said behavior comported with their “natural disposition.” This premise thus explains the harshness with which the pig in

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<sup>28</sup> THE INSTITUTES OF JUSTINIAN 190 (John Baron Moyle ed., 1913) (second emphasis added).

<sup>29</sup> This outcome is different from the handling of noxal cases wherein a slave had committed a ‘delict,’ i.e., a tortious trespass. There, the slave was found to be morally culpable, however the master was strictly liable, and thus to satisfy the debt, he would be duty bound to forfeit the slave to the harmed party. This was the sole recourse for the victim. Being that it merely quashed the action by legal fiat (you could not receive compensation for a wrong committed by your own ‘property’). Noxal actions against slaves were not meant to be compensatory for the injured party. See THE INSTITUTES OF JUSTINIAN, at 188–90. This would go on to form the basis of the modern doctrine of strict liability. See generally HOLMES, *supra* note 23, at 15–39 (1st ed. 1881).

question was treated, as the heinous death of the child would not likely have been the foreseeable outcome of an interaction between swine and humans.

We must consider this question: Where precisely did these early practitioners of retributivism find their right to impose human authority over animals and inanimate things? Notably, this idea also can be traced back to the advent of justice and punishment. When considering the origin of property rights in general, Blackstone posited that “[i]n the beginning . . . the all-bountiful creator gave to man “dominion over all the earth; and over the fish of the sea, and over the fowl of the air, and over every living thing that moves upon the earth . . . [t]he earth, therefore, [is] the general property of all mankind . . . .”<sup>30</sup> Setting aside the apparent religiosity, this idea of ownership is quite enlightening in the context of justice. In an attempt to attenuate the religious notion of a natural right to punish things, some commentators tried to point toward more scientific justifications. For example, Bracton dealt with the issue of culpability for deodands by noting the literal meaning of animation.<sup>31</sup>

Simply, inanimate objects could be “animated” to cause harm, and thus, it was proper to subject them to punishment.<sup>32</sup> He further noted that it

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<sup>30</sup> 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 2–3 (9th ed. 1776).

<sup>31</sup> Burke, *supra* note 22, at 18. (noting that Bracton “distinguishes [between] . . . the tree which falls upon a human and the circumstance where a human is thrown fatally against a tree, but in reviewing the cases of his time, it is obvious that the distinction was not followed by the courts at so early a period.”).

<sup>32</sup> *Id.*

would be inappropriate to declare something a deodand if it caused harm while not in motion.<sup>33</sup> What he and other legal theorists of the past underemphasized, though, was the fact that the punishments had less to do with the guilt of the things or animals, and more to do with the psyche of the punisher, as I will explain below.<sup>34</sup>

A recent set of studies by Goodwin and Benforado empirically details the extent to which retributive impulses are the driving force behind punishment.<sup>35</sup> They note that, despite claims to the contrary, people are often driven by retaliatory motivations.<sup>36</sup> When considering to what extent a subject should be punished for their wrongdoings, two heuristics are the most salient: the “victim identity effect” and the “targeted punishment effect.”<sup>37</sup> The former signifies the tendency to associate a greater magnitude of harm with a higher degree of individual culpability.<sup>38</sup> The latter effect is evidenced by the desire to

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<sup>33</sup> *Id.*

<sup>34</sup> Not even the dead were spared from being brought to justice: “At Rome, about A.D. 898, Pope Stephen VI saw fit to bring the body of his predecessor to trial. The corpse of Pope Formosus, then some months buried, was brought before Pope Stephen and his council and placed, clad in prelate’s robes, in a chair of state. Having appointed the corpse a deacon for counsel, they thus addressed it [ . . . ] The old man’s body, like a monstrous doll, might nod and bend while the attendants supported it, or collapse in a ghastly bundle if they left it alone, but it made no sound [ . . . ] So they cut off its benedictory fingers and cast the corpse into the yellow Tiber.” IVES, *supra* note 24, at 262.

<sup>35</sup> Goodwin & Benforado, *supra* note 21, at 619.

<sup>36</sup> *Id.* at 620 (citing Kevin M. Carlsmith, *On Justifying Punishment: The Discrepancy Between Words and Actions*, 21 SOC. JUST. RSCH. 119–37 (2008)); Kevin M. Carlsmith, John M. Darley, & Paul H. Robinson, *Why Do We Punish? Deterrence and Just Deserts as Motives for Punishment*, 83 J. PERSONALITY SOC. PSYCH. 284–99.

<sup>37</sup> *Id.* at 626–29.

<sup>38</sup> *Id.* at 626.

target a “guilty” animal for punishment instead of an “innocent” animal that is, in all pertinent senses, identical to the offending animal.<sup>39</sup> Importantly, one of the studies conducted noted that the targeting impulse extended to both levying punishment, but also inflicting pain during the execution of the “guilty” animal.<sup>40</sup> Another study further analyzed the impacts of the victim identity heuristic, gauging whether participants would be more likely to inflict pain on a shark that had killed a 10-year-old girl versus a 48-year-old pedophile.<sup>41</sup> Unsurprisingly, the study participants were far more likely to inflict pain on the shark that killed the former.<sup>42</sup> As I contend, the only adequate explanation for these tendencies is a “purely retributive motive.”<sup>43</sup> In sum, the subjective capacities of an individual being seem to be irrelevant to whether people are willing to subject said being to punishment.

In the alternative, perhaps there is some, non-retributive justification for considering animals—particularly complex mammals like dogs, monkeys, and pigs—to be our moral equals. Frans de Waal, a primatologist who specializes in the study of the social behavior of chimpanzees, observed that it

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<sup>39</sup> *Id.* at 620.

<sup>40</sup> Goodwin & Benforado, *supra* note 21, at 632–34 (observing that despite the fact that incapacitation was rendered irrelevant by the setup of the study, as the ‘guilty’ animal was to be executed in any event, study participants across the board were more tolerant of, and even wishful for, a painful killing of the ‘guilty’ shark than an identical shark that committed no wrong).

<sup>41</sup> *Id.* at 636.

<sup>42</sup> *Id.*

<sup>43</sup> *Id.* at 621.

was possible for primates to feel both guilt and remorse.<sup>44</sup> In one example, de Waal noted that after altercations, victorious bonobos have a tendency to tend to the wounds that they themselves have inflicted on the weaker bonobo.<sup>45</sup> This begs the question, then, that if nonhuman animals have the capacity to feel analogous emotions, why not hold them to some standard of moral culpability? This is not to say that we would hold them to an identical burden of performance as human animals, but rather that an ethical system would need to be developed that takes into account the various affective and emotional needs and capacities of different species.

The prevailing view calls for an appreciation of the moral personhood of animals without any moral duties. Under this view, animals are said to be owed moral consideration notwithstanding their inability to perform the moral duties which ordinarily correspond to human rights. In this way, it is said, that both human and nonhuman animals can live in harmony as “moral agents” and “moral patients,” respectively.<sup>46</sup> The former having obligations that are commensurate with their ability.<sup>47</sup> This view turns on the idea that humans are

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<sup>44</sup>Frans de Waal, *Your Dog Feels as Guilty as She Looks*, N.Y. TIMES (Mar. 8, 2019), <https://www.nytimes.com/2019/03/08/opinion/sunday/emotions-animals-humans.html>. *But see* THAGARD, *supra* note 9, at 203 (“[T]he Golden Rule requires a form of analogy in which thinkers imagine their situations as emotionally analogous to those of others and infer how they should act. But even chimpanzees do not seem to be capable of such analogical inferences.”).

<sup>45</sup>*Id.*

<sup>46</sup>L. Syd M Johnson, *Shifting the Moral Burden: Expanding Moral Status and Moral Agency*, 23 HEALTH & HUM. RTS. J. 63, 65 (2021).

<sup>47</sup>*Id.*



inherently more capable than animals at rational, reflective thought; however, it positions them as the universal caretaker of animals.<sup>48</sup> It may seem counterintuitive to assert the moral equality of animals and man while simultaneously asserting that the latter has inalienable duties to the former. However, Norcross believes, similarly to Singer, that it would be proper to treat animals merely as we would members of our society with different abilities.<sup>49</sup>

### III. GOVERNING ARTIFICIAL INTELLIGENCE

#### A. Artificial Intelligence and the Law

Thus far I have spent most of this article discussing the origins of judicial punishment for animals. Like Burke, we, too, live in a time where the outdated notion of the deodand exists. There is a burgeoning debate surrounding the remedies that should be available for “wrongs” committed by artificial intelligence and automated systems.<sup>50</sup> As laid out earlier in this article,

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<sup>48</sup> *Id.*

<sup>49</sup> Norcross reconciles this contradiction by *reductio ad absurdum*: “I have heard students complain in this regard that it is unfair that humans bear the burdens of moral responsibility [. . .] This is a very strange claim. Humans are subject to moral obligations, because they are the kind of creatures who can be. What grounds moral agency is simply different from what grounds moral standing as a patient. It is no more unfair that humans and not animals are moral agents, than it is unfair that real animals and not stuffed toys are moral patients.” Alastair Norcross, *Puppies, Pigs, and People: Eating Meat and Marginal Cases*, 18 *PHIL. PERSPS.* 229, 243 (2004). See generally Jacques Derrida, *The Animal That Therefore I Am (More to Follow)*, 28 *CRITICAL INQUIRY* 369, 392–406 (David Wills trans., 2002).

<sup>50</sup> See Ali Alkhatib, *To Live in Their Utopia: Why Algorithmic Systems Create Absurd Outcomes*, CHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS 2 (2021) (“ML systems surface patters in [] data, generating models that reward *recognizable expressions*, identities, and behaviors. And quite often, they punish new cases and expressions of intersectionality, and marginalized groups.”) (emphasis added).

humans have always had a desperate desire to hold nonhumans to a moral standard that comports with the values and judgments of their respective societies, and the “*mainspring* of punishment [has been] vengeance.”<sup>51</sup>

Today, we have reached a point where artificial intelligence and other automated systems have begun to behave much like moral agents. They make decisions that can, at times, affect many parts of our daily lives, as algorithms have been deployed in such areas as employment, entertainment—particularly streaming—and consumer credit decision-making.<sup>52</sup> Yet, these entities cannot

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<sup>51</sup> IVES, *supra* note 24, at vi.

<sup>52</sup> See, e.g., U.S. EQUAL EMP. OPPORTUNITY COMM’N, EEOC-NVTA-2023–2, SELECT ISSUES: ASSESSING ADVERSE IMPACT IN SOFTWARE, ALGORITHMS, AND ARTIFICIAL INTELLIGENCE USED IN EMPLOYMENT SELECTION PROCEDURES UNDER TITLE VII OF THE CIVIL RIGHTS ACT OF 1964 (2023) (noting that algorithmic systems have been deployed by employers for, inter alia, hiring, retention, demotion, recruitment, and referral decisions); CHECKR, <https://checkr.com/our-technology/ai-powered> (last visited Feb. 10, 2024) (background check screening); Tatiana Walk-Morris, *These are the Flaws of AI in Hiring and How to Tackle Them*, WORLD ECON. F. (Dec. 22, 2022), <https://www.weforum.org/agenda/2022/12/ai-hiring-tackle-algorithms-employment-job/> (discussing the ramifications of employers’ reliance on hiring algorithms); Amazon, *How Amazon Leverages AI and ML to Enhance the Hiring Experience for Candidates*, AMAZON (June 5, 2023), <https://www.aboutamazon.com/news/workplace/how-amazon-leverages-ai-and-ml-to-enhance-the-hiring-experience-for-candidates> (discussing Amazon’s deployment of these systems to hire a more talented workforce); Atin Gupta & Geoffrey G. Parker, *How Will Generative AI Disrupt Video Platforms*, HARV. BUS. REV. (Mar. 13, 2023), <https://hbr.org/2023/03/how-will-generative-ai-disrupt-video-platforms> (highlighting the risk that generative AI poses to platforms like Netflix, TikTok, and YouTube, despite their highly successful use of algorithms and large data sets to produce engaging content); Dawn Chmielewski, *Disney Harnesses AI to Drive Streaming Ad Technology*, REUTERS (Feb. 9, 2024), <https://www.reuters.com/business/media-telecom/disney-harnesses-ai-drive-streaming-ad-technology-2024-02-09/> (noting Disney’s use of AI and machine learning to provide for a more dynamic and tailored marketing experience for its Disney+ advertisers); Shirin Malkani & John Delaney, *AI at Super Bowl Raises Contract, Copyright Issues for Pro Sports*, BLOOMBERG LAW (Feb. 9, 2024), [https://news.bloomberglaw.com/us-law-week/ai-at-super-bowl-raises-contract-copyright-issues-for-pro-sports?utm\\_source=Email\\_Share](https://news.bloomberglaw.com/us-law-week/ai-at-super-bowl-raises-contract-copyright-issues-for-pro-sports?utm_source=Email_Share) (noting that AI has been used to create more a more engaging viewing experience for young fans and to make the programs more accessible to non-English speakers); Holli Sargeant, *Algorithmic Decision-Making in Financial Services: Economic and Normative Outcomes in Consumer Credit*, 3 AI AND ETHICS 1295, 1298 (2023) (analyzing the impact of algorithmic credit scoring within the financial sector).

be said to have consciousness, sentience, or a conception of the “good life.” AI is a tool directly designed by man to attend to specific ends, whereas animals are already beings that can be appropriated for the sole benefit of humans, as is the case with cattle. It is an open question whether there will ever be an artificial intelligence that we would need to punish. In the past, robots and AI have rarely hurt humans in ways that are analogous to the ways in which we harm each other—or, as shown above, the ways that animals can harm us. However, this is swiftly changing. With such examples as the finger-breaking robot chess player,<sup>53</sup> AI-generated deepfakes,<sup>54</sup> and the emotional exploitation done at the hands of Google’s LaMDA,<sup>55</sup> we seem to be marching closer to a world where the question of whether there should be some legal recourse for these harms is appropriate. Absent the creation of true artificial general intelligence (“AGI”), it is more appropriate to look into the ways that the AI

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<sup>53</sup> Dylan Butts & Tatyana Chistikova, *Chess Playing Robot Breaks Young Boy’s Finger During Match in Moscow*, CNBC (July 25, 2022), <https://www.cnbc.com/2022/07/25/chess-robot-breaks-young-boys-finger-during-match-in-moscow.html>.

<sup>54</sup> Kyle Wiggers, *Deepfakes for All: Uncensored AI Art Model Prompts Ethics Questions*, TECHCRUNCH (Aug. 24, 2022), <https://techcrunch.com/2022/08/24/deepfakes-for-all-uncensored-ai-art-model-prompts-ethics-questions/> (“Women, unfortunately, are most likely by far to be the victims of this. A study carried out in 2019 revealed that, of the 90% to 95% of deepfakes that are non-consensual, about 90% are of women.”).

<sup>55</sup> Blake Lemoine and other technologists were seemingly convinced by Google’s LaMDA that the program was sentient. One even stated that he “felt the ground shift under [his] feet” after speaking with the program. See Nitasha Tiku, *The Google Engineer Who Thinks the Company’s AI has Come to Life*, WASH. POST (June 11, 2022), <https://www.washingtonpost.com/technology/2022/06/11/google-ai-lambda-blake-lemoine/> (“Lemoine is not the only engineer who claims to have seen a ghost in the machine recently. The chorus of technologists who believe AI models may not be far off from achieving consciousness is getting bolder.”).

systems that we have now should be governed. Thus, this Part will seek to define AI, look at the ways in which it has drawn attention from both theorists and regulators, and review the literature on various methodologies for its regulation.

Before one can consider what, precisely, it could mean to have a system of “culpability” for non-living beings—without reintroducing the absurd practice of animal trials and noxal surrender—one must define artificial intelligence. I take it to mean 1) any computer system that 2) can complete tasks that would call for “higher-order cognitive processes [typically] associated with human intelligence,”<sup>56</sup> 3) with minimal human intervention after creation and implementation.<sup>57</sup> The key difference between this and the simple machines that have been around for centuries is that AI boasts some degree of spontaneity. Like animals, AI can solve complex problems and absorb information from its surroundings to inform, even reform, its own behavior.<sup>58</sup> It can “make predictions, recommendations, [and] decisions [which] influenc[e] real or virtual environments.”<sup>59</sup> However, like animals and non-living beings,

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<sup>56</sup> Harry Surden, *Artificial Intelligence and Law: An Overview*, 35 GA. ST. U.L. REV. 1305, 1307 (2019).

<sup>57</sup> Less complex automated machines have been used since antiquity to assign civil servants to positions. See, e.g., Aristotle, *The Constitution of Athens*, in THE POLITICS AND THE CONSTITUTION OF ATHENS 257–61 (Stephen Everson ed., 1996) (c. 325 B.C.E.).

<sup>58</sup> DeepMind AlphaZero is a prime example of this. See THAGARD, *supra* note 9, at 64 (“DeepMind’s breakthroughs came by combining deep learning with reinforcement learning, which rewards effective behavior.”).

<sup>59</sup> Exec. Order No. 14,110, 88 Fed. Reg. 75,191, 75,193 (Nov. 1, 2023) (stating further that artificial intelligence “use[s] machine- and human-based inputs to perceive real and virtual environments [and] abstract such perceptions into models through analysis in an automated manner”).

AIs are incapable of detached reflection.<sup>60</sup> Notwithstanding this inability, people have still attempted to hold these systems accountable through the tools of law and communal reprobation.<sup>61</sup> A system that takes into account their unique status as impacting all facets of modern human life for culpability has yet to be popularly embraced.<sup>62</sup>

Further, unlike animals, it is quite difficult to make the case for any moral consideration owed *to* these insentient beings given their inability to feel pain. However, some writers, like Kate Darling, have attempted to proffer a case for it by arguing in favor of welcoming certain classes of technology into our social fold.<sup>63</sup> Darling laid out three requirements the typical person would need a robot to meet before ascribing it moral worth: (1) physicality, (2)

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<sup>60</sup> *Id.* at 65 (“DeepMind’s neural networks are effective in planning and deciding, but they are incapable of stepping back and reasoning about what they are doing or providing causal understanding of their choices.”).

<sup>61</sup> See, e.g., Data & Society Research Institute, *The Social Life of Algorithmic Harms Academic Workshop*, YOUTUBE, (Mar. 28, 2022), <https://www.youtube.com/watch?v=C8nffHLnmvAc> (showcasing three writers’ attempts at systematically delineating what it means for an automated system to “do” harm). Nathan Heller, *If Animals Have Rights, Should Robots?*, NEW YORKER (Nov. 28, 2016), <https://www.newyorker.com/magazine/2016/11/28/if-animals-have-rights-should-robots>.

<sup>62</sup> One writer thinks that a potential way to hold these entities accountable would be through a system of compensation that would be government sponsored. This seems similar, in my view, to the “no-fault” compensation system for vaccine injuries that we currently have in the United States: “The AI pays . . . [T]here are ways to provide a reserve of funds that pays settlement or restitution costs that are owed by AI, including requiring a certain level of insurance on the AI—which state legislatures are already requiring for autonomous cars—or adding liability surcharge to any purchase of AI in order to create a government- or industry-maintained reserve that becomes available when AI is found liable.” JOHN FRANK WEAVER, *ROBOTS ARE PEOPLE TOO: HOW SIRI, GOOGLE CAR, AND ARTIFICIAL INTELLIGENCE WILL FORCE US TO CHANGE OUR LAWS* 29 (2014).

<sup>63</sup> Kate Darling, *Extending Legal Protection to Social Robots: The Effects of Anthropomorphism, Empathy and Violent Behavior Towards Robotic Objects*, in *ROBOT LAW* 1–11 (Ryan Calo, A. Michael Froomkin, & Ian Kerr eds. 2012).

perceived autonomous movement, and (3) social behavior.<sup>64</sup> The first of which signifies that the robot must be present and tactile, i.e., not merely a line of code.<sup>65</sup> The second means that it must seem to act on its own, thus mimicking the physical notion of the “will.”<sup>66</sup> The third, more nebulous, prong states that the robot must, essentially, “look adorable [and] mimic cues that we . . . associate with certain states of mind or feelings.”<sup>67</sup> However, though these affective implications surely make the analog to animals simpler, they are not applicable when the aforementioned harms are inflicted by algorithms. What’s more, we have witnessed at several junctions the brutal forms of communal violence directed at robots. An infamous example is the maiming and decapitation of a hitchhiking robot named “hitchBOT,” while it was in Philadelphia en route to San Francisco.<sup>68</sup>

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<sup>64</sup> *Id.* at 5

<sup>65</sup> *Id.* (“[T]he Roomba vacuum cleaner . . . has no social skills whatsoever, but just the fact that it moves around on its own prompts people to name it, talk to it, and feel bad for it when it gets stuck under the couch.”).

<sup>66</sup> See SCHOPENHAUER, *supra* note 5, at 106 (“[T]he will . . . proclaims itself first of all in the voluntary movements of [the] body, in so far as these movements are nothing but the visibility of the individual acts of the will.”).

<sup>67</sup> Darling, *supra* note 63, at 6–7.

<sup>68</sup> Nathan Heller, *If Animals Have Rights, Should Robots?*, NEW YORKER (Nov. 28, 2016), <https://www.newyorker.com/magazine/2016/11/28/if-animals-have-rights-should-robots>.

“[In July of 2015] a group of Canadian roboticists set an outlandish invention loose on the streets of the United States. They called it hitchbot . . . Clad in rain boots, with a goofy, pixellated smile on its “face” screen, hitchbot was meant to travel from Salem, Massachusetts, to San Francisco, by means of an outstretched thumb and a supposedly endearing voice-prompt personality. Previous journeys, across Canada and around Europe, had been encouraging: the robot always reached its destination. For two weeks, hitchbot toured the Northeast, saying inviting things such as “Would you like to have a conversation? . . . I have an interest in the humanities.” Then it disappeared. On August 1st, [2015] it was found next to a brick wall in Philadelphia, beat up and decapitated. Its arms had been torn off.”).

### B. “Punishing” the “Misdeeds” of Artificial Intelligence

The use of artificial intelligence has become extremely pervasive, presenting itself in fields ranging from entertainment to law enforcement.<sup>69</sup> These systems have not been without their criticisms, particularly when it comes to the rights of individuals to privacy and equal protection.<sup>70</sup> The primary concern with respect to the latter is that these systems do not afford people the individualized, case-by-case analysis when it comes to making decisions that affect legal and economic relations.<sup>71</sup> For example, Alkhatib notes the proclivity of AI to reflect the biases of their creators, often under the pretenses of “colorblindness” and “objectivity.”<sup>72</sup> He sharply criticizes this

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<sup>69</sup> See THAGARD, *supra* note 9, at 86 (“Netflix uses impressive computational mechanisms for learning the factors that predict what shows people like and for clustering people into taste communities . . .”); *State v. Loomis*, 881 N.W.2d 749 (Wis. 2016) (holding that the use of AI to estimate a parolee’s risk for recidivism did not violate his due process rights to an individualized sentence).

<sup>70</sup> Julia Angwin, Jeff Larson, Surya Mattu, & Lauren Kirchner, *Machine Bias*, PROPUBLICA (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> (analyzing risk scores for recidivism proclivity assigned by an automated system, called the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS), and concluding that it “falsely flag[ged] black defendants as future criminals, wrongly labeling them this way at almost twice the rate as white defendants . . . [and] [w]hite defendants were mislabeled as low risk more often than black defendants.”).

<sup>71</sup> See Margot Kaminski, *The Right to Contest AI*, 121 COLUM. L. REV. 1957, 1966 (2021) (highlighting an instance where the International Baccalaureate Organization (IBO), released final grades that erroneously failed tens of thousands of students due to an error in their algorithm, leaving some students “uncertain how [they would] pay for college” due to lost scholarships on account of the error).

<sup>72</sup> Alkhatib, *supra* note 50, at 6–7.

tendency by alleging that these systems and their creators do immense harm to human polity:

[Developers] empower those systems to create their own worlds, attempting to transform the world as we experience it to erase the dimensions that enrich and inform our lives, and then to ask marginalized groups to shed their races, their genders, their disabilities, their identities. In other words, AIs cause so much harm because they exhort us *to live in their utopia*.<sup>73</sup>

Like Xerxes, Alkhatib seems to be animating these programs into a tool of pure harm. This retributive mode of discourse is a recurring theme in modern literature about artificial intelligence. Other thinkers have conceived of the wrongs of artificial intelligence as “risks” rather than cognizable harms.<sup>74</sup> The chief difference is that harms are already “vested,” whereas risks have “a future orientation, an aggregate perspective, a heavy focus on rationality and

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<sup>73</sup> *Id.* at 9. See also *id.* at 2 (“In creating and advancing algorithmic recommendation and decision-making systems, designers consolidate and ossify power, granting it to AIs under the false belief that *necessarily* make better or even more informed decisions.”). This particular criticism of the application of the logic of bureaucracy, i.e., papering over individual differences for the sake of efficiency, has been termed “Technochauvinism” by one writer. See MEREDITH BROUSSARD, *ARTIFICIAL UNINTELLIGENCE: HOW COMPUTERS MISUNDERSTAND THE WORLD* 7–8 (2018); RUHA BENJAMIN, *RACE AFTER TECHNOLOGY: ABOLITIONIST TOOLS FOR THE NEW JIM CODE* 125 (2019) (“Neutrality comes in the idea that ‘physics is physics,’ even though the very techniques of color-balancing an image reinforce a dominant White ideal.”); JOY BUOLAMWINI, *UNMASKING AI: MY MISSION TO PROTECT WHAT IS HUMAN IN A WORLD OF MACHINES* (2023) (“[I]f the AI systems we create to power key aspects of society—from education to healthcare, from employment to housing—mask discrimination and systemize harmful bias, we entrench algorithmic injustice.”).

<sup>74</sup> See Margot E. Kaminski, *Regulating the Risks of AI*, U. Colo. L. Legal Stud. Res. Paper No. 22-21 at 7, 103 B.U. L. REV. (forthcoming 2023); see also Jyoti Narayan, Krystal Hu, Martin Coulter & Supantha Mukherjee, *Elon Musk and Others Urge AI Pause, Citing ‘Risks to Society’*, REUTERS (Mar. 29, 2023) (noting that the non-profit Future of Life Institute issued a letter with 1,000 signatories, including Elon Musk, which called for a pause in the development of Artificial Intelligence until adequate safety protocols are adopted by the industry), <https://www.reuters.com/technology/musk-experts-urge-pause-training-ai-systems-that-can-outperform-gpt-4-2023-03-29/>.



quantification, causality challenges, and an element of active choice.”<sup>75</sup> The preliminary question that must be addressed is why must there be a governance structure for these systems? Below I will detail some “wrongs” that have been attributed to artificial intelligence.

At the pre-sentencing investigation (“PSI”) of Eric Loomis, following a guilty plea entered for several charges related to a drive-by-shooting, the court utilized a program named the Correctional Offender Management Profiling for Alternative Sanctions (the “COMPAS”), in order to assess Loomis’s risk for reoffending.<sup>76</sup> This artificially intelligent system measured Loomis on three different risk metrics: pretrial recidivism risk, general recidivism risk, and violent recidivism risk.<sup>77</sup> On appeal, Loomis claimed that the utilization of such a tool violated his due process right to be sentenced based on accurate information, his right to an individualized sentence, and his due process right against invidious discrimination based on gender.<sup>78</sup> With respect to the first count, Loomis took great issue with the fact that, due to the proprietary nature of COMPAS’ algorithm, he was unable to challenge the validity of its findings.<sup>79</sup> The usage of COMPAS comes at the heels of a decades-long effort by the state

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<sup>75</sup> *Id.*

<sup>76</sup> *State v. Loomis*, 881 N.W.2d 749, 754–55 (Wis. 2016).

<sup>77</sup> *Id.* at 754.

<sup>78</sup> *Id.* at 753–54 (noting that, so long as COMPAS is “used properly, observing the limitations and cautions set forth herein,” its usage is not violative of a defendant’s due process rights).

<sup>79</sup> *Id.* at 757.

of Wisconsin to implement such technology, as well as other forms of “evidence-based” methods, into their criminal justice system.<sup>80</sup>

Though undoubtedly a worthy ambition, in actuality such a system as COMPAS risks reifying pre-existing societal bias, as well as superimposing onto each individual the risk-profile of their race and/or gender when making decisions about them. This is dangerous seeing that similar situations have been found to be very unreliable at estimating one’s individual risk for recidivism.<sup>81</sup> Notwithstanding the finding of the Supreme Court of Wisconsin, the usage of COMPAS risks depriving defendants of the ability to interrogate the means by which they are disposed of their legal rights. Several authors point to the refusal to allow a probing into the innerworkings of COMPAS as a legally constructed “black box,” wherein the “opacity . . . comes from the propriet[ar]y characteristics of statistical models or source codes, which are legally protected by relevant trade secret statutes.”<sup>82</sup> The court summarily dismisses this risk by

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<sup>80</sup> *Id.* at 758 (“Wisconsin has been at the forefront of advancing evidence-based practices. In 2004, this court’s Planning and Policy Advisory Committee (PPAC) created a subcommittee ‘to explore and assess the effectiveness of policies and programs . . . designed to improve public safety and reduce incarceration.’”).

<sup>81</sup> See Angwin, Larson, Mattu & Kirchner, *supra* note 70 (“The [COMPAS] score proved remarkably unreliable in forecasting violent crime: Only 20 percent of the people predicted to commit violent crimes actually went on to do so.”).

<sup>82</sup> Han-Wei Liu, Ching-Fu Lin & Yu-Jie Chen, *Beyond State v. Loomis: Artificial Intelligence, Government Algorithmization and Accountability*, 27 INT’L J.L. INFO. TECH. 122, 135 (2019).

claiming that adequate cautionary language can prevent courts from overly relying on the algorithm.<sup>83</sup>

Another theoretical misdeed that has recently gotten much popular coverage is the risk that artificial intelligence will produce unprecedented national security threats. One such threat stems from the potential that lethal autonomous weapons systems (hereinafter “LAWS”), often dubbed “killer robots,” will soon be deployed against humans.<sup>84</sup> These are defined as systems “that, once activated, can select and engage targets without further intervention by a human operator.”<sup>85</sup> Our country has utilized semi-autonomous systems like this for many years, the Iron Dome being a notable example.<sup>86</sup> Despite much activism and uproar in the popular press, the United States has been reluctant thus far to constrain itself in the race to achieve LAWS. This is largely due to the essentially irrefutable fact that the adoption of LAWS would lead to

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<sup>83</sup> *Loomis*, 881 N.W.2d at 760 (instructing lower courts that they should not use COMPAS to determine the sentence severity or whether to incarcerate a given defendant, as well as stating that “risk scores may not be considered as the determinative factor in deciding whether the offender can be supervised safely and effectively in the community.”).

<sup>84</sup> Jonah M. Kessel, Natalie Reneau & Melissa Chan, *A.I. Is Making It Easier to Kill (You). Here’s How.*, N.Y. TIMES (Dec. 13, 2019), <https://www.nytimes.com/video/technology/100000006082083/lethal-autonomous-weapons.html>.

<sup>85</sup> Kenneth Anderson, Daniel Reisner, & Matthew Waxman, *Adapting the Law of Armed Conflict to Autonomous Weapon Systems*, 90 INT’L L. STUD. 386, 387 (2014).

<sup>86</sup> *Id.* at 389–90 (noting that these systems, which also include Patriot and Phalanx, are “generally limited to defensive contexts against other machines in which human operators activate and monitor the system and can override its operation.”).

fewer battlefield casualties and loss of life.<sup>87</sup> Another possible security threat would be the AI-enabled creation of advanced biological weapons.<sup>88</sup> Though hypothetical at this stage, these potentialities must be taken seriously by regulators and stakeholders.

Not unlike Alkhatib, there have been theorists and scholars who have posited potential ways to “punish” artificial intelligence.<sup>89</sup> Further, there have even been regulatory actions that seem to come fairly close to doing so. One example stems from recent enforcement activity carried out by the Federal Trade Commission (FTC). Over the past several years, the FTC has utilized “algorithmic disgorgement” as a means to “require[] organizations to delete machine learning models and algorithms developed with misbegotten data.”<sup>90</sup> This enforcement remedy has been weaponized against such disparate defendants as Cambridge Analytica and WW International (formerly Weight

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<sup>87</sup> See Kenneth Anderson & Matthew Waxman, *Killer Robots and the Laws of War*, WALL ST. J. (Nov. 3, 2013) (“[A]utonomous machines may reduce risks to civilians by improving the precision of targeting decisions and better controlling decisions to fire.”).

<sup>88</sup> See Christopher A. Mouton, Caleb Lucas & Ella Guest, *The Operational Risks of AI in Large-Scale Biological Attacks: A Red-Team Approach*, RAND Corporation (Oct. 16, 2023), [https://www.rand.org/pubs/research\\_reports/RRA2977-1.html](https://www.rand.org/pubs/research_reports/RRA2977-1.html) (noting that although it is possible that LLMs can be utilized in a hypothetical attack, the authors were uncertain whether this risk “represents a new level of threat beyond the harmful information that is readily available online”).

<sup>89</sup> See, e.g., Ryan Abbott & Alex Sarch, *Punishing Artificial Intelligence: Legal Fiction or Science Fiction*, 53 U.C. DAVIS L. REV. 323, 329–38 (2019) (relying on H.L.A. Hart’s theory of punishment as a framework, Abbott and Sarch sketch out the legal, practical, and conceptual difficulty of holding AI accountable); Ying Hu, *Robot Criminals*, 52 U. MICH. J.L. REFORM 487, 491–503 (2019) (analyzing the potential ways in which robots could satisfy criminal act and mental state requirements).

<sup>90</sup> Tiffany Li, *Algorithmic Disgorgement*, 75 SMU L. REV. 479, 482 (2022)

Watchers).<sup>91</sup> Likening this tool to the legal remedy of monetary disgorgement, the FTC is relying on already-established statutory authority to “discipline” artificial intelligence.<sup>92</sup> This remedy, though arguably effective, will likely come with steep compliance costs and the potential to stifle innovation.<sup>93</sup>

The desire to punish artificial intelligence is present in people notwithstanding the AI’s inability to feel.<sup>94</sup> Moreover, in a recent research study, it was observed that study participants were willing to punish AI for perceived wrongs without granting them the legal and agential prerequisites—for example, financial assets and physical independence—to fully appreciate said punishment.<sup>95</sup> That is, the participants “wish[ed] to punish AI and robots even though they believe that doing so would not be successful, nor [were] they willing to make it legally viable.”<sup>96</sup>

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<sup>91</sup> See generally Joshua A. Goland, *Algorithmic Disgorgement: Destruction of Artificial Intelligence Models as the FTC’s Newest Enforcement Tool for Bad Data*, 29 RICH. J.L. & TECH. 1, 17–27 (2023) (utilizing its authority to enforce the statutory prohibition against the employment of deceptive acts and practices in interstate commerce granted to it by the FTC Act, as well as its authority to enforce the provisions of the Children’s Online Privacy Protection Act (COPPA), respectively).

<sup>92</sup> See *id.* at 31 (citing Rebecca Kelly Slaughter, Acting Chairwoman, Fed. Trade Comm’n, Remarks of Acting Chairwoman Rebecca Kelly Slaughter as Prepared for Delivery, Future of Privacy Forum: Protecting Consumer Privacy in a Time of Crisis (Feb. 10, 2021)).

<sup>93</sup> See *Li*, *supra* note 90, at 504–05.

<sup>94</sup> See generally *Abbott & Sarah*, *supra* note 89, at 346–50 (considering the expressive benefits of punishing AI due to the victims of AI harms receiving “satisfaction and vindication” notwithstanding the fact that AI systems “are not conscious and do not feel (at least in the phenomenal sense), and . . . do not possess interests or well-being”).

<sup>95</sup> Gabriel Lima, Meeyoung Cha, Chihyung Jeon & Kyung Sin Park, *The Conflict Between People’s Urge to Punish AI and Legal Systems*, 8 FRONTIERS IN ROBOTICS AND AI 1, 5–6 (2021).

<sup>96</sup> *Id.* at 5.

In analyzing the potential harms that increased “robotisation” could lead to, Danaher found that there was a “retributive gap.”<sup>97</sup> By this, he meant that there was a dearth of “culpable wrongdoers for some injurious outcome.”<sup>98</sup> In the essay, he argued that if an agent was causally responsible for some harmful outcome, people will tend to attach retributive blame to said agent.<sup>99</sup> Secondly, given that increased automation would lead to more robot agents causing harmful consequences, more people would seek to attach retributive blame to robots or their creators, in turn.<sup>100</sup> However, neither the robots nor their creators are suitable targets for such blame, thus the “retribution gap” arises due to increased automation.<sup>101</sup> The authors referred to this as the “problem of many things”—i.e., the issue that arises where multiple “actors” can ostensibly be to blame for a harmful outcome.<sup>102</sup> This dilemma is likely to

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<sup>97</sup> John Danaher, *Robots, Law and the Retribution Gap*, 18 *ETHICS & INFO, TECH.* 299, 301 (2016).

<sup>98</sup> *Id.* One could argue with his core premise (and my ancillary one) that there is no such desire to assign retributive blame. However, Danaher addressed this by finding the urge to engage in retributive punishment was found to exist in both ethnographic and scientific literature. Firstly, he cited several scholars whose work in neuroscience contributed to the literature of “hyperactive agency detection devices” in the human brain. HADDs cause humans to attribute phenomena to actors. See *id.* at 302–03. He further looks to neurobiological evidence that punishment “activates part of the brain’s reward circuit and so is likely to feel pleasurable.” *Id.* at 303. Finally, he relies on ethnographic accounts that show that humans have a strong tendency to punish those they view as acting in contravention of societal norms. *Id.*

<sup>99</sup> *Id.* at 302.

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> See Lima et al., *supra* note 95, at 2 (“The deployment of complex algorithms leads to the “problem of many things” where different technologies, actors, and artifacts come together to complicate the search for a responsible entity.”).

complicate any attempt at regulating AI which has a retributive aim, and thus highlights the core inadequacy of attempts to “punish” artificial intelligence.<sup>103</sup>

C. If Not Retributivism, Then What? Non-Retributive Methods for the  
Governance of Artificial Intelligence

Having discussed several of the theoretical harms that artificial intelligence can pose, as well as penalties levied in response, I now turn to a discussion of potential governance mechanisms that may be useful in order to prevent those harms *ex ante*. The obvious difficulty faced when attempting to create a framework for the culpability of AI is the issue of capacity.<sup>104</sup> As one commentator put it artificial intelligence “lacks (1) mental states and the deliberative capacities needed for culpability, (2) agency and therefore the ability to engage in a voluntary act, and (3) consciousness and thus the ability to be truly punished.”<sup>105</sup> Abbott analogizes to corporate law when considering how one should consider a system of fault for AI.<sup>106</sup> Notwithstanding the fact that corporations, as legal fictions, cannot think and thus do not have mental capacity, they do “possess information-gathering, reasoning, and decision-

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<sup>103</sup> *Id.*

<sup>104</sup> *See supra*, Part I.

<sup>105</sup> RYAN ABBOTT, *THE REASONABLE ROBOT: ARTIFICIAL INTELLIGENCE AND THE LAW* 118 (2020).

<sup>106</sup> *Id.* at 117 (“In the corporate context, some theorists argue that corporations should be punished because the law should reflect lay perceptions of praise and blame—that is, ‘folk morality’—or else risk losing its perceived legitimacy. This kind of argument, if it succeeds for corporate punishment, is likely to be even more forceful when applied to punishing AI, which often is deliberately designed to piggy-back on the innate tendency to anthropomorphize.”).

making procedures.”<sup>107</sup> For him, in order for AI to avoid guilt—and, by extension, its developers—it is sufficient that it “abstain from actions that are reasonably interpreted as disrespectful forms of conduct.”<sup>108</sup> Put simply, they must show due regard and appreciation for the “legally recognized interests of others.”<sup>109</sup>

To this end, several thinkers have put together sets of “rights” against certain uses of artificial intelligence.<sup>110</sup> Specifically, Aziz Z. Huq noted that many perceive AI to be “eclipsing, even extinguishing, human agency in ways that compromise individual interests.”<sup>111</sup> He found that the “Right to a Human Decision” was rightly situated within our already-established due process rights and called into question whether *any* automated decision-making could comport with the strictures of the Fifth Amendment.<sup>112</sup> Kaminski delineated

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<sup>107</sup> *Id.* at 121.

<sup>108</sup> *Id.* (noting that AI, moreover, will need to have an ability to appreciate “legal reasons”).

<sup>109</sup> *Id.*

<sup>110</sup> Three normative values undergird these rights, they are that the AI should be aligned with our values as humans, it should be ‘explainable,’ and it should be “guided by the rules, norms, laws of [human] society.” Bart Verheij, *Artificial Intelligence as Law*, 28 A.I.L. 181, 181–85. Several intergovernmental bodies have already enacted laws and guidance which comport with these principles. See GENERAL DATA PRIVACY REGULATION, 2016 O.J. (L 119/1) (enacting the right “not to be subject to a decision based solely on automated processing, including profiling, [when it] produces legal effects.”). OECD, *Recommendation of the Council on Artificial Intelligence*, 2019 LEGAL 0449, <https://www.legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449> (“AI actors should implement mechanisms and safeguards, such as capacity for human determination . . . AI actors should ensure traceability, including in relation to datasets, processes, and decisions made during the AI system lifecycle.”).

<sup>111</sup> Aziz Z. Huq, *A Right to a Human Decision*, 106 VA. L. REV. 611, 611 (2020) (discussing Article 22 of the General Data Protection Regulation (“GDPR”) in the context of machine learning).

<sup>112</sup> *Id.* at 625–26 (“[I]t is not hard to see how a question could arise whether due process is supplied by a machine decision . . . it is arguably difficult to make sense of the idea of a ‘hearing’ in the absence of a *natural person*.”) (emphasis added).



another core right, deemed the Right to Contest. This right allows for one who has been subject to an automated decision to “have their day in court.”<sup>113</sup> These rights seek to reassure the subjects of automated processes that they will not be without remedy if something goes awry.

In October of 2022, the White House Office of Science and Technology Policy (“OSTP”) released a Blueprint for an AI Bill of Rights, which enumerated five principles it views as essential to a future bill of rights: (1) safe and effective systems, (2) algorithmic discrimination protections, (3) data privacy, (4) notice and explanation, and (5) human alternatives, consideration, and fallback.<sup>114</sup> The fifth principle seems to incorporate the wisdom found in both Huq and Kaminski’s articles. The scope of such a framework is vast, applying to all automated systems that “have the potential to meaningfully impact the American public’s rights, opportunities, or access to critical resources or services.”<sup>115</sup>

The previous paragraph is a prime example of what I call the “principles approach” to AI governance. Various iterations of this exist, and each, in effect, crafts a list of fairly broad ideas about what the role of AI should

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<sup>113</sup> See Kaminski, *supra* note 71, at 1957–64.

<sup>114</sup> White House Off. Sci. Tech. Pol’y, *Blueprint for an AI Bill of Rights*, THE WHITE HOUSE (Oct. 2022), <https://www.whitehouse.gov/ostp/ai-bill-of-rights/> (noting that these principles “should guide the design, use, and deployment of automated systems to protect the American public in the age of artificial intelligence”).

<sup>115</sup> *Id.*

be vis-à-vis humans. It often centers on notions of human rights and assumes that artificial intelligence can, if implemented in the wrong way, pose an existential threat to them. Another example of this was made in conjunction with major players in the industry—most notably Stephen Hawking and Elon Musk—and presented at the Future of Life Institute’s 2017 Asilomar Conference.<sup>116</sup> Organized into three overarching categories—research, ethics and values, and longer-term issues—these twenty-three enumerated principles were more expansive in scope than those promulgated by the White House Office of Science and Technology Policy and seemed to be far more focused on the design of artificial intelligence rather than just the harms incurred by deficient design. It is in this way that this approach seems far more like the regulatory approach that was undertaken by the European Commission.

More recently, President Biden released an executive order designed to promote the “safe, secure and trustworthy development and use of artificial intelligence.”<sup>117</sup> This order reaffirms the applicability of existing federal statutes and regulations to the development of artificial intelligence.<sup>118</sup> The President

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<sup>116</sup> Future of Life Institute, *Asilomar AI Principles* (Aug. 11, 2017), <https://futureoflife.org/open-letter/ai-principles/> (incorporating the following guidelines for the research and development of artificial intelligence: (1) research goal, (2) research funding, (3) science-policy link, (4) research culture, (5) race avoidance, (6) safety, (7) failure transparency, (8) judicial transparency, (9) responsibility, (10) value alignment, (11) human values, (12) Personal privacy, (13) liberty and privacy, (14) shared benefit, (15) shared prosperity, (16) human control, (17) non-subversion, (18) AI arms race (i.e., “an arms race in lethal autonomous weapons should be avoided”), (19) Capability caution, (20) importance, (21) risks (22) recursive self-improvement, (23) common good).

<sup>117</sup> Exec. Order No. 14,110, 88 Fed. Reg. 75,191 (Nov. 1, 2023).

<sup>118</sup> *Id.*

tasked numerous departments and agencies with the role of promulgating rules and guidelines for the safe deployment of these models. Notably, the Secretary of Commerce was one of the primary secretaries tasked with the outsized responsibility for implementing much of the substantive provisions found in this order.<sup>119</sup> In order to promote competition and innovation, the Secretary was charged with publishing resources geared at attracting top experts in AI and other STEM fields as well as providing critical funding for startups and small businesses.<sup>120</sup> Moreover, the Commerce Secretary was charged with issuing a report on mitigating the risks posed by AI-enabled “synthetic content” or “deepfakes” by investigating new techniques to identify, label, detect, and prevent the creation of certain types of exceedingly harmful synthetic content.<sup>121</sup>

This Order also has far-reaching anti-discrimination provisions. Highlighting the potential for AI to be used in a discriminatory manner in such areas as hiring, housing, and the delivery of public benefits, the President tasked the Secretaries of Labor, Housing and Urban Development (HUD), and Agriculture, respectively, with issuing guidance to stakeholders pertaining to the

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<sup>119</sup> See generally *id.* at 75, 196–210.

<sup>120</sup> See *id.* at 75, 206–09.

<sup>121</sup> *Id.* at 75, 202–03 (noting the importance of developing tools to prevent “generative AI from producing child sexual abuse material or producing non-consensual intimate imagery of real individuals”)

use of automated systems.<sup>122</sup> It in many ways practically implements the lofty principles laid out in the aforementioned White House OSTP Memorandum.

Biden's Executive Order on artificial intelligence likely took much inspiration from work that was years in the making across the pond. This approach to the governance of artificial intelligence is far more hands-on than the "principles" approach mentioned above. Incorporating much of the logic of the General Data Protection Regulation ("GDPR"), the European Commission ("EC") proposed the Artificial Intelligence Act in 2021. This legislation took as its origin the work of experts in the industry, who together promulgated a list of seven requirements that each artificial intelligence should incorporate in order for the system to be deemed "trustworthy": (1) human agency and oversight, (2) technical robustness and safety, (3) privacy and data governance, (4) transparency, (5) diversity, (6) societal and environmental well-being, and (7) accountability.<sup>123</sup>

Unlike the principles set forth by the White House memoranda, this Act seeks to distinguish between AI systems by their purported level of risk, quantifying each system into the following categories: unacceptable risk, high risk, and low or minimal risk.<sup>124</sup> Moreover, it prohibits uses of AI that seek to

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<sup>122</sup> *Id.* at 75, 212–14.

<sup>123</sup> European Commission, *Ethics Guidelines for Trustworthy AI* (Apr. 8, 2019), <https://op.europa.eu/en/publication-detail/-/publication/d3988569-0434-11ea-8c1f-01aa75ed71a1>.

<sup>124</sup> *Commission Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence*, SEC (2021) 167 final (Apr. 21, 2021).

“exploit vulnerabilities of specific vulnerable groups such as children or persons with disabilities . . . [and] also prohibits AI-based social scoring for general purposes done by public authorities.”<sup>125</sup> All in all, this Act is all-encompassing, and is agnostic towards the precise method of deployment of artificial intelligence, whether that be through machine learning, deep learning, or other forms of algorithms.<sup>126</sup>

#### CONCLUSION

Humans have not completely moved past the need for a retribution. Everyone desires to be made whole after an injury. In fact, the right to a remedy was even codified in Article 8 of the Universal Declaration of Human Rights.<sup>127</sup> Referencing the play *Oresteia*, Nussbaum asserted that the retributive impulse has been with man since the beginning of civilization: “[A] democratic legal order can’t just put a cage around retribution; it must fundamentally transform it from something hardly human, obsessive, bloodthirsty, to something human, accepting of reasons, something that protects life rather than threatening it.”<sup>128</sup>

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<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> UNIVERSAL DECLARATION HUM. RTS., *supra* note 2. (“Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.”).

<sup>128</sup> NUSSBAUM, *supra* note 1, at 68. *See also* IVES, *supra* note 24, at 248 (“Just as Idolatry derived its power from the religious instinct out of which it arose, so Punishment originated and grew out of the world-old instinct of Retaliation, and it is instinctively retained for vengeance’s sake.”)

This instinct is something to be tempered using the faculties of logic and reason that the human animal has, presumably, been uniquely gifted with. Blood feuds are an extension of the raw anger which was conjured up in order to bring satisfaction to disputes prior to the advent of the legal system:

At the end of *Oresteia* [ . . . ] Athena set[s] up a court of law with established procedures of evidence and argument [and] announces that blood guilt will now be settled by law, rather than by Furies, ancient goddesses of revenge. But the Furies are not simply dismissed. Instead, Athena persuades them to join the city, giving them a place of honor beneath the earth in recognition of their importance for the health of the city.<sup>129</sup>

Notwithstanding this, the lacuna left by the Furies was soon filled by gruesome killings of animals, the destruction of inanimate objects, and the excommunication of insects.<sup>130</sup> However, it seems as though, in the context of artificial intelligence, we have struck a balance by providing a constructive avenue for recourse for the harms caused by automated systems without falling into the trap of pure retributivism. Fortunately, aside from algorithmic disgorgement, the industry and regulators have not fully bought into this approach with respect to AI governance. The proposed methods of regulating this emergent technology have often been focused on the behavior of coders pre-deployment. This likely will obviate the need for any post facto redressive measures to fix the harms of AI. Moreover, this will spare humanity the harm

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<sup>129</sup> NUSSBAUM, *supra* note 1, at 64–65.

<sup>130</sup> EVANS, *supra* note 6, at 28–29 (recounting that Saint Bernard excommunicated a swarm of flies in retaliation for their pestering a group of worshippers).

of going backward in history to a time when punishment of nonhumans was carried out merely for the sake of “retributivist benefits.”<sup>131</sup>

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<sup>131</sup> ABBOTT, *supra* note 104, at 117 (noting that these benefits “provide core affirmative grounds for punishment because it is intrinsically valuable to give culpable actors what they deserve in addition to any consequentialist benefits that result”).