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Humans and Humans+: Technological Enhancement and Criminal Responsibility

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HUMANS AND HUMANS+: TECHNOLOGICAL ENHANCEMENT AND CRIMINAL RESPONSIBILITY

By

Susan W. Brenner

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1It was only after I decided to use Human+ as part of the title for this article that I discovered the very similar device used by the transhumanist organization, humanity+. See humanity+, Mission, http://humanityplus.org/about/mission/.

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I. INTRODUCTION

[Gradually, the truth dawned on me: that Man had not remained one species. . . .]

It has been approximately 30,000 years since our species – *Homo sapiens sapiens* – shared the earth with another member of the genus *Homo*. I note that circumstance for two reasons, the first of which is that it underscores the fact that while racial and/or cultural differences have generated conflict among modern humans, taxonomic differences have not.

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As Gould notes, the category of species has a special status in the taxonomic hierarchy. Under tenets of the ‘biological species concept,’ each species represents a ‘real’ unit in nature. Its definition reflects this status: ‘a population of actually or potentially interbreeding organisms sharing a common gene pool.’

Id. See also Genetics and Genomics Glossary, U.S. Department of the Interior – U.S. Geological Survey, http://www.usgs.gov/ecosystems/genetics_genomics/glossary_s.html (defining species as a “group of organisms with a high degree of physical and genetic similarity, that naturally interbreed among themselves and can be differentiated from members of related groups of organisms”). As Gould also notes, “genus” is that category “[a]bove the species level” and “subspecies” is the category below “the species level”. Jay Gould, Ever Since Darwin, supra at 231.


Experts generally agree that the Neanderthals’ disappearance was “closely tied to the arrival of modern humans”, but tend to disagree as to precisely what caused it. See John F. Hoffecker, A Prehistory of the North, supra at 68-69. One theory is that the species interbred, which essentially led to the Neanderthals’ being absorbed into *Homo sapiens sapiens*. See, e.g., id. at 169-215. Another is that Neanderthals “were out-competed” in hunting and other essential endeavors by modern humans, who gradually pushed them “into more marginal and harsher environments, where they progressively went extinct”. Azar Gat, *Social Organization, Group Conflict and the Demise of Neanderthals*, 39 Mankind Quarterly 437, 437 (1999).

5For an overview of taxonomic classification as applied to humans, see, e.g., George Gaylord Simpson, *The Meaning of Taxonomic Statements*, supra note 4.
The other reason is that some scientists believe the demise of the Neanderthals was the result of competition from, and even the use of force by, our ancestors.\textsuperscript{6} If that is true, it suggests that conflicts could arise if standard-issue Homo sapiens sapiens found themselves sharing the Earth with individuals whose Homo sapiens sapiens abilities had been “enhanced” in any of several ways.\textsuperscript{7} As I note in §II(B), these “enhancements” may

\textsuperscript{6}See, e.g., Azar Gat, Social Organization, Group Conflict and the Demise of Neanderthals, supra note 4 at 437.

\textsuperscript{7}For the purposes of this article, I will rely, in part, on the definition of enhancement formulated by another scholar, who defined

human enhancement as the use of innovative technologies to augment or enhance human functions and abilities beyond the replacement of dysfunctional cellular groups and organs. In other words, human enhancement includes anything that goes above and beyond restoring normal human physiology and functions.

Nayef R.F. Al-Rodhan, The Politics of Emerging Strategic Technologies 178 (2011). For our purposes, I define enhanced humans as human beings who utilize technology to augment their intellectual and/or physical abilities in a fashion that exceeds what normal humans can attain. In other words, enhanced human beings are humans who have used technology to boost their innate “capabilities beyond the species-typical level or statistically normal range of functioning for an individual.” See also Fritz Allhoff, et al., Ethics of Human Enhancement: 25 Questions & Answers, U.S National Science Foundation 8 (2009), http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1000&context=phil_fac (emphasis in the original).

For a plausible scenario as to how the type conflict hypothesized above could arise and the forms it might take, see, e.g., Daniel H. Wilson, Amped (2012). In Wilson’s novel, which takes place in the near future in the United States, some people (“amps”) have neural implants that develop a model of their brain, after which their “neural circuits . . . adapt, strengthening existing pathways associated with concentration and motor function”, a process that continues as long as the person has the implant. See General Biologics Neural Autofocus MK-4, Daniel H. Wilson, Amped, supra at 2. The implants are, in most cases, installed to increase the person’s intelligence. See id. at 8-13. For a definition of neural implants, see infra notes 11 & 13. The novel also includes two men whose bodies have been altered by different types of implants; one is a huge “titian”, who is heavily muscled and can monitor his blood pressure, heart rate and perspiration and can shut down pain. See id. at 105-106. Another is a slender man who is “seven feet tall” and has “custom-fabricated carbon fiber legs with painful-looking backward knee joints” along with “lumpy bio-mechanical implants” incorporated into his arms. See id. at 106-107.

The novel traces the development of hostility and, later, violence, as those who have an implant become the targets of those who do not and who claim they “create[ ] an unlevel playing field” for the latter. See id. at 258. See also id. at 226 (“You people are no longer human”). As to violence, see, e.g., id. at 188-196. In a fictive decision, the U.S. Supreme Court finds that the Fourteenth Amendment protects citizens “based on their immutable characteristics”, and therefore holds that because the “use of implantable technology constitutes an elective surgery,” there “is therefore no protection for implanted citizens” under that amendment. Id. at 5 (emphasis in the original). And in another fictive decision, the U.S. District Court for the Western District of Pennsylvania holds that in an effort to remedy the growing disparity between natural and enhanced levels of intelligence, and in an effort to create a level playing field, we hereby find that individuals with artificially enhanced intelligence lack the capacity to contract as a matter of law.

Id. at 32. As a result, the contracts amps had entered into – such as leases – are no longer enforceable. See id. at 34-35.
very well produce “new humans,” whose abilities exceed those of current humans in any (or many) of several ways.\(^8\)

Many believe this scenario is inevitable, if only because we are already enhancing ourselves;\(^9\) Plastic surgery – “cosmetic enhancement” – is no longer the exclusive province of movie stars; its popularity and variety continue to increase among members of the general public.\(^10\) On a more substantive level, cochlear implants improve hearing, titanium knees improve mobility and artificial hearts prolong life.\(^11\)

Finally, in a scenario reminiscent of the internment of Japanese-Americans during World War II, the President issues an order which states that

WHEREAS the successful safeguarding of the nation requires every possible protection against technological threats, be they from home or abroad, and the existence of persons made militarized by implantation technology poses a threat to their fellow citizens . . .

I hereby authorize the Secretary of Defense, and the military commanders whom he may designate, to prescribe ‘safety zones’ . . . from which any or all persons may be excluded, and with respect to which, the right of any person to enter, remain in, or leave shall be subject to whatever restrictions are necessary.

\(^{12}\) As I explain below, in this article I will not analyze legal issues that could arise if and when the world is populated by two species of the Genus Homo, though many see that as a very real possibility. See infra note 15. As to that possibility, see, e.g., Nayef R.F. Al-Rodhan, The Politics of Emerging Strategic Technologies, supra note 7 at 179 (a “post-human” could “no longer be considered human, even if its evolutionary roots were in humanity”). See also infra § II(B).


And enhancement is not limited to physical features and functions: Scientists are using neuroprosthetics to “repair” cognitive deficits “from dementia, stroke and other brain injuries”. Nor is it necessarily limited to enhancing native human functions and abilities. In the summer of 2012, a woman paralyzed from the neck down was able to move a robotic arm using only the power of her mind. Through this robotic appendage she was able to do something she hadn’t done for many years: pick up a cup of coffee and drink from it out without help.

This life changing feat was achieved through the surgical implantation of a computer chip within her motor cortex. . . . The chip detected activity within this region of the brain, forming what is known as a ‘neural interface’. This chip was then connected to a computer which controlled the robotic arm. After some practice, the participant’s brain adapted to the neural interface allowing her to control the arm.


As Gorman notes, the individuals “traditionally classified as ‘disabled’” are currently at the vanguard of human enhancement technologies. From cochlear implants and artificial hearts to neuro-prosthetics, these ‘early adopters’ of assistive technologies are pioneers inhabiting an increasingly narrow boundary between a perceived ‘lack’ and an unfair advantage in relation to the general population.

Consider South African athlete Oscar Pistorius, born with the congenital absence of the fibula from both legs, with his prosthetic blade ‘cheetah’ legs leading to his near miss from participation in the Beijing Olympics. MIT researcher Hugh Herr has suggested that we may soon require an ‘Extra Special Olympics’ to accommodate athletes with prosthetics and other enhancements. Perhaps in this context ‘non-enhanced’ athletes would be regarded with something of the polite nostalgia with which we now view ‘real tennis’ with its quaint long trousers and wooden racquets


Some are already suggesting that instead of recovering a “lost function,” “healthy people” could use neural interfaces “to gain some new function.”\(^\text{13}\) While that option is apparently not yet available, one company took a small step in this direction in the spring of 2012, when it announced plans to sell a “kit” for “transcranial direct-current stimulation”, which reportedly has a “cognitive-enhancing” effect.\(^\text{14}\)

It seems, then, that we will -- perhaps in the not too distant future -- arrive at a state of affairs in which humanity effectively splits into two classes:\(^\text{15}\) The Enhanced, who use technology to improve their native abilities, and the Standard, who will not or cannot use technology to that end.\(^\text{16}\) Some believe this division “will create massive social strife”, as

\[^{13}\] Blurring the Line between Man and Machine, supra note 11.


\[^{15}\] As I explain in § II, I am not hypothesizing the emergence of a new human species, i.e., a new member of the genus Homo. See supra notes 8 & 9. See generally supra note 4 & accompanying text. I am hypothesizing the emergence of a society in which humans are divided into two classes: (i) those who use technology to enhance their native attributes and abilities so they functionally (but not genetically) become Enhanced humans; and (ii) those who do not, or cannot, transcend their basic biology. See also infra note 19.

\[^{16}\] I borrow the term “enhanced” from Ray Kurzweil. See Ray Kurzweil, The Singularity Is Near 200 (2005). Kurzweil does not employ a cognate to refer to ” humans, perhaps because he believes “[u]enhanced humans may become increasingly hard to find.” Id.
the Enhanced “will be so superior that jealousy and fear are the . . . reaction of the unenhanced multitude”.  

I leave the task of exploring the potential social unrest generated by the rise of Enhanced humans to science fiction writers. My ambitions are far more modest: In this article, I explore how the postulated disconnect between two classes of humans – the Enhanced and the Standard – could impact on the assessment and application of criminal responsibility. As I explain in § II, our legal doctrines, including our doctrines of criminal responsibility, all assume action or inaction by a “person,” a concept that we unthinkingly define as a binary construct. That is, one is a “person,” or they are not. In § II, I review how the legal conception of “person” has evolved over the past centuries and speculate briefly as to how it may evolve in the next century or so.

In § III, I analyze how our doctrines of criminal responsibility may be affected if and when certain humans can use technology to alter their native attributes and abilities, so that they no longer conform to the Human 1.0 conception of “person” on which those doctrines are predicated. As I explain in §§ II and III, this is not an issue we have so far had to address: We have had idiosyncratic doctrines of criminal responsibility, but they targeted issues other than those that arise from a populace that is more or less evenly divided into two differently-enabled classes of individuals. As I explain in § III, I see no need to reinvent criminal responsibility law; but I do believe we are likely to confront difficult issues that will need to be addressed and resolved.

And, finally, § IV provides a brief conclusion.

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18See supra note 7. The enhancements that are currently in use are not causing conflict for two reasons, the most obvious of which is that they are intended to remediate the impairment someone suffers as a result of illness, injury or congenital defects. In other words, they are intended, insofar as possible, to restore the person to “normal”, rather than to enhance their native functions and/or abilities.

The other, related reason is that most of the enhancements currently in use are consequently not purely “cosmetic” in nature, i.e., are not elective enhancements the purpose of which is to make the person “better” than they were and, “better” than those who have not been so enhanced. And insofar as purely cosmetic enhancements are in use, the improvements they effect are in the recipient’s appearance; while this means the recipients of such enhancements are, in a relatively superficial sense, “better” than they were before, it does not fundamentally alter their biological properties in a way that makes them stronger, smarter or otherwise more “superior” to other humans. See, e.g., supra note 7 (enhancements as creating an “unlevel playing field for those who do not have” them).

19As noted above, my analysis is limited to the issues that might arise in applying criminal responsibility to two different classes – but not two different species – of human beings. See supra note 15. However, insofar as the analysis encompasses issues raised by differently abled members of the Genus Homo, it might also be extrapolatable to the issues involved in applying criminal responsibility to different human species.
II. “PERSON”

A person is a human being. 20

Historically, as far as law was concerned, a “person” was a human being, but human beings were not necessarily “persons.” 21 In other words, the status of human being was a necessary but not necessarily a sufficient condition for qualifying as a legal “person.” 22 In § II(A), I note how “person” has been defined, at least in Western law, and review how the concept has evolved from including some human beings to including all human beings, at least in most modern legal systems. 23 I also review the extent to which law treats and/or has treated non-humans as legal “persons.”

In § II(B), I review the speculations and predictions of scientists and scholars who study human enhancement. More precisely, I examine how they predict enhancements may alter human abilities and how those alterations might impact society and law. While the experts’ projections are speculative in varying degrees, they serve as a conceptual test bed for examining these issues.

This section, therefore, establishes an empirical and doctrinal framework for the analysis in § III, which focuses on the application of criminal responsibility to “persons” with varied abilities, some of which exceed that of modern humans. If enhancements create two classes of Homo sapiens sapiens, 24 lawmakers may have to decide whether members of the “new” class of humans – the Enhanced—are (merely) “persons” or are something else -- something that requires the application of different legal standards. 25


21 See, e.g., Barbara Abatino, Giuseppe Dari-Mattiacci & Enrico C. Perotti, Depersonalization of Business in Ancient Rome, 31 Oxford J. Legal Stud. 365, 377 (2011) (in ancient Rome, slaves’ “legal status” was that of “a non-person”); 1 William Blackstone, Commentaries On The Laws Of England 430 (“By marriage, the husband and wife are one person in law: that is, the . . . existence of the woman is suspended”) (note omitted): Dred Scott v. Sandford, 60 U.S. 393, 407 (describing slaves as “beings of an inferior order” who “had no rights”). See also Vivian Grosswald Curran, Fear of Formalism: Indications from the Fascist Period in France and Germany of Judicial Methodology's Impact on Substantive Law, 35 Cornell Int'l L.J. 101, 173 (2001-2002) (“Nazi legal theory” transformed Jews into non-persons by declaring that the individual “ceased to be a legally valid concept” except to the extent that one was part of the German Volk; since Jews “were defined as external to the German Volk,” they “had no legal rights”).

22 See supra § II(A).


24 Again, my analysis assumes the co-existence of two classes of humans, rather than two species or a species and sub-species of Homo sapiens sapiens. See supra note 19.

25 See supra § I (Enhanced and Standard humans).
A. Legal Person

‘[P]erson’ is a . . . generic term. Hence, when used in a statute, it embraces not only natural persons, but also artificial persons. . . .

In his 1909 treatise, John Chipman Gray considered how law had approached, and should approach, the concept of “legal persons.” He began by noting that “[i]n books of Law. . . . ‘person’ is often used as meaning a human being, but the technical legal meaning of a ‘person’ is a subject of legal rights and duties.” Gray explained that while a “legal duty does not imply any exercise of will on the part of the one subject to the duty”, a “will is necessary” for the exercise of a legal right, which means that “insofar as the exercise of legal rights is concerned, a person must have a will.”

He then examined the six “different kinds of persons” recognized in “various systems of Law”: normal human beings; abnormal human beings; supernatural beings; animals; inanimate objects; and juristic persons. More precisely, Gray analyzed the extent to which the members of each class qualified as a “legal person.”

While I do not fully subscribe either to Gray’s taxonomy or to his assessment as to the extent to which the members of each of the categories noted above qualifies as a legal person, I find his taxonomy – with, perhaps, the exception of supernatural beings – a useful ordering principle for examining how law has historically approached the notion of “persons.” Understanding how law has defined “person” (or “legal person”) in the past is, I submit, a necessary step toward analyzing how future law might approach the task of assessing the “personhood” of enhanced human beings.

1. Normal Human Beings

Gray rather quickly concluded that “normal” human beings are legal persons because the “normal man or woman has a will.” In so doing, he implicitly assumed a
unitary class of “normal” human beings, i.e., he did not address the issue we will take up in § II(B), i.e., the fracturing of “human being” into two or more distinct classes. This, as I noted above, has been the default approach to defining the concept of “legal person.”

Blackstone took a similar, equally cursory approach to analyzing “the persons capable of committing crimes”. He noted that the “general rule is, that no person shall be excused from punishment for disobedience to the laws . . . excepting such as are expressly . . . exempted by the laws themselves.” In other words, he, too, assumed a unitary class of “normal” human beings; the “exemptions” target humans who suffer from some impairment. This was the common law’s approach to this issue, and is essentially the approach modern law takes to it.

2. Abnormal Human Beings

Gray also deals rather cursorily with “abnormal” human beings, whom he defines, first, as human beings who “have no will”, such as “new-born babies and idiots.” He also includes in this category human beings “who are not destitute of natural wills,” but to whom “the Law, for one reason or another, denies what may be called a legal will”, by which he means minors, i.e., those who are neither “new-born babies” nor adults. He explains that the law deals with this class of persons, which includes what he calls “idiots,” by appointing a responsible adult as a guardian whose will is “attributed to” them.

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33 See supra § II.


35 Id. For the exemptions, see infra §§ II(A)(2)-(6).

36 See infra §§ II(A)(2) (“abnormal” human beings). As we will also see below, both the common law and modern law also accord at least some degree of legal personhood to non-humans, i.e., animals, objects and legal constructs. see infra §§ II(A)(3)-(6).

37 See, e.g., State v. Redemeier, 71 Mo. 173, 1879 WL 8311 *2 (Mo. 1879) (“the law presumes every person who has reached the years of discretion to be of sound mind and capable of committing crime”). See also Clark v. State, 12 Ohio 483, 494 note (a) 1843 WL 49 (Ohio 1843) (jury charge stating that “the law presumes every person . . . to be of sufficient capacity to form the criminal purpose”).


39 Id. at § 71. He qualifies this by noting that these “abnormal” human beings are “not absolutely without wills, but their potentiality of will is so limited that it may be neglected.” Id. He also notes that corpses have no will. Id. at §§ 93-94.

40 Id. at § 72. The example he uses is of a “young man” who is still a minor in the eyes of the law and therefore cannot bring suit on his own behalf for damage to his property. See id.

41 See id. at § 73 (emphasis in the original) See also id. at & 91.
For Gray, then, “abnormal” human beings were human beings who had “no will” because of infancy or mental disability or who were not considered mature enough to be allowed to exercise their own will. He implicitly equates “abnormal” with a permanent or transient deficiency, because deficiency was the only possible source of “abnormality.” The possibility that one could be deemed “abnormal” because his/her abilities in some way exceeded that of “normal” human beings did not exist, either as fact or as a viable possibility.

Blackstone employed a similar approach in analyzing the “persons capable of committing crimes”.42 He found that those who suffer from a “defect of will” cannot be held responsible for acts that would otherwise be prosecuted as crimes, and identified six different “defects of will”, only two of which are relevant to this discussion.43 The first of the relevant defects is “infancy, . . . which is a defect of the understanding.” The second relevant defect arises “from a defective . . . understanding . . . in an idiot or a lunatic.”45 Blackstone’s analysis of why these defects excuse criminal liability is similar to Gray’s analysis of the role they play in defining a “legal person.”

At common law, “idiots” (and “lunatics”) could not be prosecuted for crimes they committed.47 Both constituted a “deficiency in will” that excused the person from the guilt of crimes. . . . [I]dios and lunatics are not chargeable for their own acts, if committed when under these incapacities. . . . [A] total idiocy, or absolute insanity, excuses from the guilt, and of course from the punishment, of any criminal action committed under such deprivation of the senses. . . .

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43 See id. at 21-33.

44 Id. at 22 (emphasis in the original). For more on this from another English lawyer, see James Fitzjames Stephen, 2 A History of the Criminal Law of England 97-99 (1883).


46 See William Blackstone, Commentaries On The Laws Of England at 22-25. Blackstone’s contemporaries approached these issues in a similar matter. See, e.g., 1 William Hawkins, Pleas of the Crown, supra note 45 at 1-2 (“[T]hose who are under a natural disability of distinguishing between good and evil, as . . . ideots, and lunaticks are not punishable by any criminal prosecution whatsoever”).

47 See, e.g., 4 William Blackstone, Commentaries On The Laws Of England at 2-25. See also Penry v. Lynaugh, supra note 45 at 331.

As the Supreme Court explained in *Penry v. Lynaugh*, the common law
prohibition against punishing `idiots’ and `lunatics’ for criminal acts was
the precursor of the insanity defense, which today generally includes
‘mental defect’ as well as ‘mental disease’ as part of the legal definition of
insanity. See, e.g., American Law Institute, Model Penal Code § 4.01, p. 61
(1985) (`A person is not responsible for criminal conduct if at the time of
such conduct as a result of mental disease or defect he lacks substantial
capacity either to appreciate the criminality . . . of his conduct or to conform
his conduct to the requirements of law’). . . .

3. Supernatural Beings

I shall deal very cursorily with Gray’s third category: supernatural beings.50 He
notes that in “several systems of Law,” including “ancient Rome”, they were “recognized
as legal persons.”51 Gray explains that in medieval Germany, “God and the saints seem to
have been . . . regarded as true legal persons”, but notes that English common law never
recognized “the Deity nor any other supernatural being” as a legal person.52

For our purposes, this category of “legal person” is irrelevant (at least, unless and
until human enhancements or other technology advances produce supernatural beings who
are capable of committing crimes).53

4. Animals

Animals are Gray’s fourth category. As one author notes, “currently all humans are
legal persons, while all nonhuman animals are legal things.”54 As Gray explains, this was
not always true: 55 After noting that in modern law, “animals have no legal duties,” he
explains that “in early stages of the Law,” they were regarded “for some purposes as

defendant was, “as a result of a severe mental disease or defect,” unable to “appreciate the nature and quality
or the wrongfulness of his acts” at the time the offense was committed)


51 *Id.* at § 96.

52 *Id.* at §§ 98 & 99.

53 For speculation that human enhancement may eventually produce “god-like creatures”, *see, e.g., Are We
Building Gods or Terminators?*, Institute for Ethics & Emerging Technologies (July 1, 2012),


having legal duties, for a breach of which they were liable to be punished.” Gray attributes the notion of animals having legal duties and therefore being subject to criminal liability to “the Jews and the Greeks”, citing the Bible and Plato for support.

He explains that the “most remarkable instance” of animals’ being regarded as legal persons, at least for the purpose of imposing criminal liability, is “the judicial proceedings against them which were had in the Middle Ages.” According to a treatise on the medieval practice of prosecuting and punishing animals, in this era “domestic animals were regarded as members of the household and entitled to the same protection as human vassals.” This author also notes that animals were “invested with human rights and inferentially endowed with human responsibilities.”

As another author explains, there were “two types of animal trials”, one of which involved “domestic animals suspected of serious crimes”, such as murder. If the animal was convicted, it was given the same sentence a human would receive, which usually meant they were put to death. In the other type of trial, “collectivities of wild animals -- rats, birds, snakes, insects -- were called to ecclesiastical courts to answer for crop depredation and other anti-social behaviour.” Lawyers were appointed in both type of prosecutions to defend the accused animal(s) and often succeeded in using procedural or other tactics to avoid their client(s)’ being convicted mitigating the punishment imposed on it/them if they were.

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56 See id. at § 103. Gray says this could have been the product of a “legal fiction”, but finds it “likely” that there “was often no conscious use of fiction” because it “was genuinely believed that the animals really knew that they were disobeying the Law.” Id.


58 Id. at § 105.

59E.P. Evans, The Criminal Prosecution and Capital Punishment of Animals 10 (1906).

60Id. at 10-11.


62See id. The author notes that for “crimes short of homicide”, the animal’s life might be spared, citing an Austrian case “in the late seventeenth century,” in which a dog was “incarcerated for a year in a public marketplace for biting a member of the local council in the leg.” Id.

63Id.

64See id. See also E.P. Evans, The Criminal Prosecution and Capital Punishment of Animals, supra note 44 at 18-23; Jen Girgen, The Historical and Contemporary Prosecution and Punishment of Animals, supra note 57 at 100-105.
According to yet another author, animal prosecutions were not limited to medieval Europe, but occurred in Malaysia, New Zealand and part of Africa as late as the nineteenth century. At least some occurred in the seventeenth century in the American colonies.

As for England, Blackstone, writing in the eighteenth century, noted that Greek and Mosaic law punished animals who injured or killed human beings, but he did so in the course of discussing the deodand, under which any “personal chattel” that was the “immediate occasion of the death” of a human being was “forfeited to the king.” As he explained, if “a horse, or ox, or other animal, of his own motion,” killed a person, it would be forfeited as a deodand, since such “misfortunes are in part owning to negligence of the owner, and . . . he is properly punished by such forfeiture.”

Blackstone did not seem comfortable with the deodand, noting that it was “originally designed” in “the blind days of popery” and apparently attributing its survival to “the humane superstition of the founders of the English law.” England abolished deodands in 1846, and they “did not become part of the common-law tradition of” the United States.


66See id. at 108. See also E.P. Evans, The Criminal Prosecution and Capital Punishment of Animals, supra note 44 at 148-149.


68Id. Oliver Wendell Holmes Jr. explained that, in many of the “early” law books,

and long afterwards, the fact of motion is adverted to as of much importance. A maxim of Henry Spigurnel, a judge in the time of Edward I., is reported that `where a man is killed by a cart, or by the fall of a house, or in other like manner, and the thing in motion is the cause of the death, it shall be deodand.’

Oliver Wendell Holmes Jr., The Common Law 25 (1923) (quoting Y. B. 30 & 31 Ed. I., pp. 524, 525) (emphasis in the original). Holmes also noted that motion “gives life to the object forfeited.” Id. at 26.

691 William Blackstone, Commentaries On The Laws Of England at 290. He also noted that they had apparently fallen into disuse, as they were “for the most part granted out to the lords of manors, or other liberties; to the perversion of their original design.” Id. at 292. For more on this, see, e.g., Anna Pervukhin, Deodands: A Study in the Creation of Common Law Rules, 47 Am. J. Legal Hist. 237, 246-248 (2005).


5. Inanimate Objects

For the most part, Gray bases his analysis of inanimate objects as legal persons on the law of deodands.\(^{72}\) He notes that inanimate objects “may conceivably be legal persons” because they “may be regarded as the subject of legal rights” and/or are the “subjects of legal duties.”\(^{73}\) As to the former, Gray explains that insofar as inanimate objects are “regarded as the subject of legal rights,” they are “entitled to sue in the courts.”\(^{74}\) As examples, he notes that temples in ancient Rome and “church buildings and the relics of the saints in the early Middle Ages” were considered to have rights.\(^{75}\)

Gray also explains that inanimate objects “have been regarded as the subject of legal duties.”\(^{76}\) He notes that in ancient Greece proceedings against inanimate objects “were not . . . infrequent.”\(^{77}\) And he points out that in “the Common Law,” the “attribution of guilt” to inanimate objects “appears in the form of deodands.”\(^{78}\)

As noted above, deodands, as such, did not become part of the American common law.\(^ {79}\) But as Gray explains, the notion that “there must be life in a moving object” not only shaped the law of the deodand, it also “appears most conspicuously and persistently in the Admiralty.”\(^ {80}\) In his treatise on the common law, Oliver Wendell Holmes Jr. observed

\(^{72}\) See John Chipman Gray, The Nature and Sources of the Law, supra note 27 at §§ 106-110. Under the “law of deodands”, a chattel – an animal or an inanimate object -- was deemed to be a deodand when “a coroner's jury decided that it had caused the death of a human being.” Anna Pervukhin, Deodands: A Study in the Creation of Common Law Rules, supra note 69 at 237. Deodands were “automatically forfeit to the crown.” Id. But see id. at 246 (in 1556, a man was killed by a kick from a horse but the horse was not forfeited; the author speculates that, since “the horse belonged to another person”, the jury may have “felt that the horse was provoked, and didn’t want to punish the owner for someone else’s behavior”).

\(^{73}\) Id. at §§ 106-107.

\(^{74}\) Id. at § 106.

\(^{75}\) See id. On a somewhat more contemporary note, one author cites an early twentieth century case from India, in which “an interfamily dispute regarding custody of the family idol was reversed with orders that on retrial, counsel be appointed for the idol.” Christopher Stone, Earth and Other Ethics: The Case for Moral Pluralism 22 (1987) (citing Mullick v. Mullick, L.R. 52 Ind. App. 245 (Privy Council 1925)). And one author recently argued that courts should give computers a “very limited” type of personhood. See Farid Sharaby, Computer Hacking as a “Deceptive Device”: Why the Courts Must Give Computers Legal Consciousness to Hold Hackers Liable For Insider Trading, 42 McGeorge L. Rev. 929, 951-954 (2011).

\(^{76}\) See John Chipman Gray, The Nature and Sources of the Law, supra note 27 at § 106.

\(^{77}\) Id. at § 108.

\(^{78}\) Id. at § 109. For the law of deodands as applied to animals, see supra § II(A)(4).

\(^{79}\) See supra note 71 & accompanying text.

\(^{80}\) John Chipman Gray, The Nature and Sources of the Law, supra note 27 at § 110. For more on the importance of motion, see supra note 68.
that the “most striking example” of the premise that motion gives life to inanimate objects “is a ship”, because according to “the old books”, if “a man falls from a ship and is drowned, the motion of the ship must be taken to cause the death, and the ship is forfeited”.  

Gray, who seems to have been less enamored of this principle than Holmes, cites the Supreme Court’s decision in *The China* as a striking example of “this barbarous notion of a ship’s intelligence”.  

The issue in the case was whether “a vessel, in charge of a licensed pilot, . . . was liable in rem for a tort committed by her, the result wholly of this pilot's negligence.” More precisely, the issue was whether the fact that a New York statute “compelled the master of the steamship to take the pilot” meant the ship it was not liable for colliding with, and sinking, “the Kentucky, a vessel of the United States”.  

The Supreme Court found that the New York statute which required the ship to have a pilot created “a system of pilotage regulations” but did not “attempt . . . to give immunity to a wrongdoing vessel”, such as *The China*. It also noted that a “damaging vessel is no more excused because she was compelled to obey one than another.” So the Court affirmed the district court’s decree holding the ship was liable for the “tort committed by her”.  

Almost thirty years later, in *Ralli v. Troop*, an admiralty suit *in personam*, the Supreme Court explained that *The China* holding rested “neither on the law of agency nor

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81 Oliver Wendell Holmes Jr., *The Common Law*, *supra* note 68 at 26. Holmes attributes this to the fact that a “ship is the most living of inanimate things”, which makes it easier to treat a ship as if it were “endowed with personality” and can, therefore, be held liable for the injuries or deaths it “causes.” *See id.* at 26-27.


83 *The China*, *supra* note 68 at 55.

84 *Id.* The “steamer China” was a “foreign vessel bound from the port of New York.” *Id.* at 61. This was important because under British admiralty law, a statute that required a ship to take a pilot, and, “in case of refusal, required[ed] the payment of pilotage dues, amount[ed] to a *compulsion* to take a pilot,” which exemp[ted] the ship from responsibility while navigated under his charge”. *Id.* at 57. The Court noted that this doctrine “has never been followed in this country.” *Id.*

85 *Id.* at 67.

86 *Id.* at 69.


88 157 U.S. 386 (1895).
upon any imputation of responsibility on the part of” the ship’s owners, but on a distinct principle of the maritime law, namely, that “the vessel . . . is herself considered as the wrongdoer”.89

While these cases may seem amusing artifacts from a bygone past, The China’s holding “is still the law.”90 As one scholar notes, while ships have lost their “romance” and “largely lost their gender”, The China holding “remains a foundational principle within American admiralty law quite simply because it works.”91 He explains that in the “early years” of U.S. admiralty law, federal courts were swamped with cases but admiralty law was still nascent and the “[o]wners of offending vessels frequently avoided responsibility by staying beyond reach of process.”92 The Supreme Court addressed this by developing the concept of the “anthropomorphized ship”, which “could accommodate a specie of maritime lien that ran with the ship, irrespective of ownership”.93 The doctrine survives, therefore, not for “metaphysical” reasons but for pragmatic ones.94

While The China doctrine does not relate to the imposition of criminal liability, a related doctrine does: civil in rem forfeitures of “guilty property”.95 As the Supreme Court noted, the theory behind such forfeitures is the fiction that the action is against

`guilty property,’ rather than against the offender himself. See, e.g., Various Items of Personal Property v. United States, 282 U.S. 577, 581 (1931) (`[I]t is the property which is proceeded against, and, by resort to a legal fiction, held guilty and condemned as though it were conscious instead of inanimate and insentient’). . . . [T]he conduct of the property owner was irrelevant; indeed, the owner of forfeited property could be entirely innocent of any crime.96

89Id. at 403. See also Tucker v. Alexandroff, 183 U.S. 424 (1902):

A ship is born when she is launched. . . . She acquires a personality of her own; becomes competent to contract, and is individually liable for her obligations, upon which she may . . . be sued in her own name. . . . She is capable, too, of committing a tort, and is responsible in damages therefore.


91Douglas Lind, Pragmatism and Anthropomorphism: Reconceiving the Doctrine of the Personality of the Ship, supra note 87 at 117.

92Id.

93Id.

94See id. at 117-118.


96Id. at 330 (note omitted).
The Court also explained that the

`guilty property’ theory behind *in rem* forfeiture can be traced to the Bible, which describes property being sacrificed to God as a means of atoning for an offense. See Exodus 21:28. In medieval Europe and at common law, this concept evolved into the law of deodand, in which offending property was condemned and confiscated by the church or the Crown in remediation for the harm it had caused. 97

So, while the law of the deodand, as such, did not become part of American common law, it survives in two specialized areas, at least one of which involves the imposition of criminal liability on animals and inanimate objects. 98 As explained above, the imposition of such liability is implicitly predicated on the notion that animals and objects can be legal persons because, like human beings, they possess legal rights and are the subject of legal duties. 99

6. Juristic Persons

Gray begins his analysis of what he calls “juristic persons”100 by noting that the five prior categories all involved “cases where a legal person . . . is, or is believed to be, some one or something real.” 101 So, where “there has been a fiction, it has consisted in attributing to such real entity a will which he, she, or it does not . . . possess.”102 The “being or thing”, in other words, “is a reality, -- a man, a dog, a ship.”103

Gray notes that “the usual form of a juristic person is a corporation”, 104 and then explains that a corporation is an organized body “of human beings united for the purpose of forwarding certain of their interests.”105 The “will” of the corporation therefore consists

97Id. at note 5. See also id. (“The thing is here primarily considered as the offender”).

98For contemporary civil *in rem* forfeitures of “guilty” animals, see, e.g., 7 U.S. Code § 2156(f). See also People v. Kasben, 2006 WL 3077685 *1 (Mich. App. 2006).

99See John Chipman Gray, The Nature and Sources of the Law, *supra* note 27 at § 64. See also *supra* note 73 & accompanying text.

100As to why he prefers “juristic” to “fictitious” or “artificial”, see *id.* at § 114. Blackstone regarded corporations as “artificial persons”. See 4 William Blackstone, Commentaries On The Laws Of England 455.

101Id. at §111.

102Id. For the significance of will, see *supra* note 29 & accompanying text.


104Id. at § 115. He notes that “the State” is also a juristic person. See *id.* at §§ 113-115.

105Id. at § 115.
of the wills of the “men” who comprise it. If the corporation is to effect its purposes, “its interests must be protected by the creation of rights”, which must belong to someone.

After rejecting the notion that they should be given to “the State”, Gray explains that the wills of the men who comprise the corporation “are attributed to the corporation, and it is the corporation that has the rights.” He notes that there is “nothing peculiar” about this, as it is “of exactly the same nature at that which takes place when the will . . . of a guardian is attributed to an infant.” He also points out that with “all legal persons, except normal human beings,” there is the “same fiction” of attributing will to something -- “an idiot, a horse, a steam tug, or a corporation” -- that, in fact, has no “real will.” So, because corporations have legal duties as well as rights, they qualify as legal persons, a sentiment with which the Supreme Court clearly seems to agree.

That brings us to whether a corporation, as a legal person, is subject to criminal liability. The common law view was that it was not. That view prevailed in the United States until at least the latter half of the nineteenth century, in part because its economy was “predominantly agrarian” and corporations played a minor role in society. State and federal governments “chartered a limited number of corporations”, granting them “narrow powers to conduct specific businesses”, most which involved “quasi-public franchises, such as utilities” or transportation. As to their legal status, in 1809 the Supreme Court

106Id. at 117. For the significance of will, see supra note 29 & accompanying text.

107Id. at §§ 115-116.

108Id. at § 118. The state, of course grants the rights. See id.

109Id. at § 119. See supra note 41 & accompanying text (guardians for infants).

110Id. at § 119.


112See, e.g., 1 William Blackstone, Commentaries On The Laws Of England 476 (a “corporation cannot commit treason, or felony, or other crime”). See also Anonymous Case (No. 935), (1706) 88 Eng. Rep. 1518, 1518 (K.B.) (“corporation is not indictable but the particular members of it are”). See generally 4 William Blackstone, Commentaries On The Laws Of England 300 (“Punishments are . . . only inflicted for that abuse of that free will, which God has given to a man”).


114Peter J. Henning, The Conundrum if Corporate Criminal Liability, supra note 113 at 802. See also Lyman Johnson, Law and Legal Theory in the History of Corporate Responsibility: Corporate Personhood, 35
pointed out that “corporations have been included within terms of description appropriated to real persons” and then held that they are “citizens” entitled to invoke federal courts’ diversity jurisdiction.115

By the end of the nineteenth century, states had “moved away from granting limited corporate charters toward permitting businesses to incorporate freely and to operate for any legal purpose.”116 The practice of granting charters that were “tailor-made to the case at hand” became obsolete: The rising demand for corporate charters meant that legislatures would have been “unable to handle the demand” had states not developed a new approach.117 As one author explains,

[b]etween 1800 and 1850, the essential nature of the corporation changed. No longer was the business corporation a unique ad hoc creation, vesting exclusive control over a public asset or natural resource in one group of favorites or investors. Rather, it was becoming a general form in which to cast the organization of one’s business – legally open to all, and with few real restrictions on entry duration, and management.118

Under American law’s original approach to the corporation, it was seen as an “artificial entity” – “the creation of the legislature, owing its existence to state action, rather than to the acts of its shareholder-incorporators.”119 This approach therefore regarded a corporation as a “separate legal entity” that possessed “‘core rights’” but otherwise “differ[ed] decisively from the fuller panoply of legal rights possessed by natural persons.”120

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115Bank of the United States v. Deveaux, 9 U.S. (5 Cranch) 61, 88, 91-92 (1809). See also Trustees of Dartmouth College v. Woodward, 17 U.S. (4 Wheat.) 518, 654 (1819) (corporate entity “has rights which are protected by the Constitution” and could therefore sue in its own right to prevent the state from adopting a statute that interfered with its charter). For a description of “the acts in question”, see id. at 554-557.


117Lawrence M. Friedman, A History of American Law, supra note 114 at 166-167.

118Id. at 168-169. See also Francis Bingham, Show Me the Money: Public Access and Accountability after Citizens United, 52 B.C. L. Rev. 1027, 1033-1034 (2011).

119Phillip I. Blumberg, The Corporate Entity in an Era of Multinational Corporations, 15 Del. J. Corp. L. 283, 292 (1990). This is the view Blackstone took. See, e.g., 1 William Blackstone, Commentaries On The Laws Of England 455 (“it has been found neccessary . . . to constitute artificial persons”).

120Phillip I. Blumberg, The Corporate Entity in an Era of Multinational Corporations, supra note 119 at 292. See also Trustees of Dartmouth College v. Woodward, supra note 115 at 636.
An alternative view emerged in the latter part of the nineteenth century: the “aggregate entity”, which viewed the corporation “as an association of individuals contracting with each other, rather than an entity created by and dependent upon the state.” The aggregate theory gave “the Supreme Court a rationale for extending constitutional rights to the corporate entity” because it attributed the “shareholders' rights to the corporation”. 122

A third view emerged in the twentieth century: the “real entity” theory. 123 This theory regards a corporation as “a juridical unit with its own claims, much like those of a natural person,” that surpasses “the circumstances of its legal creation by the state and the claims or interests of its shareholders.” 124 It is, in other words, a “person” in its own right. 125

The evolution of corporate “personhood” from the “artificial entity” theory through the “aggregate entity” theory and into the “real entity” theory made it possible for law to hold corporate “persons” criminally liable for their acts. Initially, courts rejected the notion that an “artificial entity” could be held responsible for crimes that required mens rea because “the malice would be that of the several members of the company and not actually one malicious intention of the whole company.” 126 Opponents of corporate criminal liability also claimed that since a “corporation was authorized by its shareholders to `perform only legal acts’”, any “crimes committed in its name [were] ultra vires and non-corporate.” 127


122 Id. at 350. See also The Railroad Tax Cases, 13 F. 722, 743-744 (D. Cal. 1882).

123 See, e.g., Julie R. O’Sullivan, The Last Straw, supra note 121 at 350-351. See also Phillip I. Blumberg, The Corporate Entity in an Era of Multinational Corporations, supra note 119 at 295 (noting that it is also known as the “natural entity” theory).


127 Id. 1927 (quoting Note, Criminal Liability of Corporations, 14 Colum. L. Rev. 241, 242 (1914)).
As the turn of the twentieth century approached and passed, state and federal legislators addressed the ultra vires argument by adopting statutes “that made corporations criminally liable for certain activities.” The opponents of such liability relied on the aggregate entity theory to claim that “innocent shareholders were unjustly held accountable for the acts of a ‘guilty majority’.” The proponents of corporate criminal liability, in turn, used real entity theory to argue that there were, in effect, no “innocent” shareholders:

For example, in 1908, George Deiser... argued that corporate acts were expressions of the will of all shareholders, either by virtue of the acquiescence or departure of dissenting shareholders from the corporation. When faced with a disagreeable corporate act, dissenting shareholders could acquiesce in the act, take legal recourse against the corporation, or divest their shares. If dissenters failed to take legal recourse or divest from the company, argued Deiser, then they effectively acquiesced, thus rendering them morally complicit in the outcome.

Ultimately, real entity theory was influential in persuading courts (and legislators) to allow criminal liability to be imposed on corporations. Its influence in this regard was part of a trend, in which, among other things, the Supreme Court accorded corporate entities rights that were once regarded as reserved for “natural persons.” Indeed, in its Citizens United opinion, the Court noted that it has “rejected the argument that political

128Daniel Lipton, Corporate Capacity for Crime and Politics, supra note 126 at 1928. For examples of statutes and judicial opinions taking this view, see id. at 1913 n. 6.

129Id. at 1928 (quoting N.C. Collier, Impolicy of Modern Decision and Statute Making Corporations Indictable and the Confusion in Morals Thus Created, 71 Cent. L.J. 421, 427 (1910)). For the relationship between the “innocent shareholder” argument and the aggregate entity theory, see, e.g., Ian B. Lee, Corporate Criminal Responsibility as Team Member Responsibility, 31 Oxford J. Legal Stud. 755, 765 (2011) (claim that corporate criminal liability unfairly punishes innocent shareholders appears to be” based on “the ‘aggregate theory’ of corporate personality”) (note omitted). “Without the aggregate theory, the effect of corporate punishment on shareholders would instead be akin to ‘collateral damage’, as when the incarceration of a wage-earner causes harm to his or her dependents.” Id. at 765 n. 50.

130Daniel Lipton, Corporate Capacity for Crime and Politics, supra note 126 at 1929 (citing George F. Deiser, The Juristic Person. II, 57 U. Pa. L. Rev. 216, 225-26 (1908)).


speech of corporations or other associations should be treated differently under the First Amendment simply because such associations are not `natural persons.'”

The result is that in the United States, corporate criminal liability has “become a well-entrenched feature of the [legal] landscape”, even “for common law crimes like manslaughter.”

7. Sum

Modern U.S. law recognizes five of Gray’s categories of legal persons: normal human beings, abnormal human beings, animals, inanimate objects and corporations. It imposes criminal liability on all five, and departs from the common law’s approach for all but one: normal human beings.

Modern U.S. law has limited the criminal liability of two categories – animals and inanimate objects – while expanding the criminal liability of two others: abnormal human beings and corporations. As we saw above, the imposition of criminal liability on animals and objects is limited to civil in rem forfeiture of the “guilty property”.

And as we also saw above, the common law of Blackstone’s era and for some time thereafter held that “idiots” and “lunatics” were incapable of committing crimes due to the “defect of will” they respectively suffered from. Many U.S. states have rejected the premise that “lunatics” and “idiots” are criminally irresponsible by adopting the “guilty but mentally ill” and/or “guilty but mentally retarded” verdict, which “impose[] culpability”

133 130 S.Ct. at 900.


135 The exception is supernatural beings. See supra § II(A)(3).

136 See supra § II(A)(1). Modern law approaches criminal liability in a fashion that differs in various respects from how common law dealt with it, but the systems are generally consistent with regard to basic principles. See, e.g., Wayne R. LaFave, Substantive Criminal Law § 2.1(b)-(e) (2d ed. 2011). In other words, modern criminal law does not appreciably expand or contract the core principles of criminal responsibility as they apply to “normal human beings.” See supra § II(A)(1). The consistency between the two is no doubt a function of the fact that human beings have not changed, which eliminates the need for modification.

137 See supra §§ II(A)(2) & II(A)(6).

138 See supra notes 98 - 99 & accompanying text. See also supra § II(A)(4). This use of forfeiture is essentially an evolved version of the deodand, in that the property’s fictive “personhood” is a device used to punish the owner indirectly by depriving him/her/it of the property. See supra note 68. See, e.g., Calero-71 at 682. See also Austin v. United States, 309 U.S. 602, 622 (1993). Deodand has otherwise fallen out of use, at least in the United States, due to the expansion of civil tort law, which allows one injured by another’s negligent use of his/her/its property to bring a civil suit for redress. See supra note 68. See generally David Pimentel, Forfeiture Procedure in Federal Court: An Overview, 183 F.R.D. 1, 4 (1999).

139 See supra notes 47 - 48 & accompanying text.
and a criminal sentence.\textsuperscript{140} In other words, modern law takes a more discriminating, more expansive approach to the issue of mental illness than did the common law.\textsuperscript{141}

Finally, § II(A)(6) traced the evolution of corporate criminal responsibility from Blackstone’s era, when it did not exist, to the current era, when it not only exists, but is generally applicable at both the state and federal levels.\textsuperscript{142} As we saw in that section, the emergence and expansion of corporate criminal responsibility was the result of a transformation in corporations – from limited, single-purpose “public” entities to “an active player in the economy”.\textsuperscript{143}

In this section, we parsed the concept of “legal person” as it and its relationship with criminal liability have evolved over the last almost-millennium. In the next section, we begin the process of taking the concept to the next level: We will review current proposals to expand the concept of legal person so that it fully integrates animals and artificially intelligent entities. We will also examine how human enhancements \textit{might} produce individuals that no longer conform to the concept of “normal human beings.”

\textbf{B. Legal Person . . . Expanded?}

\textit{Personhood is reserved for people like us.}\textsuperscript{144}

As we saw in § II(A), modern American law essentially restricts the concept of “legal person” to human beings and corporations.\textsuperscript{145} There is, however, quite a lively

\begin{itemize}
\item \textsuperscript{140}Elizabeth Nevins-Saunders, \textit{Not Guilty as Charged: The Myth of Mens Rea for Defendants with Mental Retardation}, 45 U.C. Davis L. Rev. 1419, 1455 (2012). \textit{See also} Joshua Dressler, \textit{Understanding Criminal Law} 365 (5th ed. 2009) (person found guilty but mentally retarded receives the sentence that would be imposed upon a guilty verdict but may receive psychiatric care); Alaska Stat. § 12.47.050 (person found guilty but mentally ill may receive treatment until his mental health improves, after which he must serve the sentence imposed on him).
\item \textsuperscript{141}\textit{See}, e.g., Ira Mickenberg, \textit{A Pleasant Surprise: The Guilty But Mentally Ill Verdict Has Both Succeeded in Its Own Right and Successfully Preserved the Traditional Role of the Insanity Defense}, 55 U. Cin. L. Rev. 943, 988-990 (1987).
\item \textsuperscript{142}\textit{See supra} § II(A)(6).
\item \textsuperscript{145}Modern American law also recognizes other artificial entities as legal persons. \textit{See}, e.g., Graham County Bd. of Elections v. Graham County Bd. of Commissioners, 712 S.E.2d 372, 377 (N.C. App. 2011) (legal person is an entity that has the capacity to sue and be sued, e.g., a corporation, partnership, unincorporated association, or government body or agency). I am using corporations to illustrate how entities can be regarded as legal persons, on the premise that principles that apply to corporations are also likely to apply to
\end{itemize}
debate about expanding the concept, so it also encompasses animals and/or artificially intelligent entities.\textsuperscript{146} We will review that debate in the first two sections below. Section II(B)(3) analyzes the possibility that technological enhancements will split *Homo sapiens sapiens* into two classes, the Enhanced and the Standard.\textsuperscript{147}

1. Animals

[C]ourts are not likely to accept personhood for intelligent animals anytime soon.\textsuperscript{148}

Today, animals are not regarded as legal persons.\textsuperscript{149} For years, “legal scholars and advocates” have been working to change that.\textsuperscript{150} They seek to incorporate a definition of legal personhood into the law that encompasses the following principles:

the extent to which animals have characteristics that make them so similar to humans that the law should recognize them as beings with interests that should be legally protected even in cases where protection of those interests conflicts with humans' interests in using animals.\textsuperscript{151}

\textsuperscript{146}As far as I can determine, no one is arguing that objects – at least, objects that are not artificially intelligent – should be regarded as legal persons.

\textsuperscript{147}See supra note 15 & accompanying text. As noted above, I am hypothesizing the emergence of two classes of humans, not *Homo sapiens sapiens*’ splintering into two subspecies. See supra note 16 & accompanying text.


\textsuperscript{150}Taimie L. Bryant, *Sacrificing the Sacrifice of Animals*, supra note 149 at 258.

\textsuperscript{151}Id. For another approach, see Steven M. Wise, *Legal Personhood and the Nonhuman Rights Project*, 17 Animal L. 1, 6 (2010):

A critical . . . question for . . . legal personhood is what quality, or qualities, might be sufficient . . . to generate immunity-rights that protect a being's fundamental interests. I have argued that dignity is one sufficient generator of fundamental legal rights and that autonomy is at least one sufficient generator of dignity. For humans, the four species of great apes, and cetaceans, I have identified those fundamental interests as including bodily integrity and bodily liberty.
The proponents of animal personhood rely on several theories to explain why animals have “characteristics that make them so similar to humans” that they should be recognized as legal persons. One is based on the premise that “some animals are so cognitively similar to humans that it is unjust to exploit them in ways in which we would not exploit humans of similar cognitive capacity.”\textsuperscript{152} A second theory is based on the premise that “moral worth and legal personhood should turn on the capacity to suffer.”\textsuperscript{153} A third is that “society has a duty to allow full expression of the multiple capacities possessed by individual nonhuman, as well as human, animals.”\textsuperscript{154} And a fourth theory is based on the proposition that evolutionary theories “support the classification of animals as persons . . . because they show how humans and animals come from the same origins”, so they differ “only in degree, not in kind.”\textsuperscript{155}

Basically, then, our willingness to accord legal personhood to an animal is a function of the extent to which that animal resembles human beings in one or more critical respects, the most essential of which is intelligence.\textsuperscript{156} The current view seems to be that

\textsuperscript{152}Taimie L. Bryant, \textit{Sacrificing the Sacrifice of Animals}, supra note 149 at 258. \textit{See also} Steven M. Wise, \textit{Rattling the Cage: Toward Legal Rights for Animals} 179 (2000):

Minds are critical for legal rights. It would be hard to persuade a reasonable man that a chimpanzee with the mind of Aristotle should be denied every legal right.

\textit{See also} Gary L. Francione, \textit{Taking Sentience Seriously}, 1 J. Animal L. & Ethics 1, 3 (2006) (“sentience alone is sufficient” for legal personhood). Wise explains that chimpanzees and bonobos possess “complex . . . abilities” in “seven areas of cognition”, i.e., the capacity to feel pain, mental representation, self-conception, logical and mathematical abilities, tool use, the knowledge that minds exist, and nonsymbolic and symbolic communication, including language.” \textit{Id.} at 180-181 (emphasis in the original). \textit{See id.} at 181-222 (discussing apes’ capacity in these areas of cognition). Other scholars would also include whales, dolphins, elephants and other intelligent animals. \textit{See}, e.g., Peter Singer, \textit{Practical Ethics} 94-105 (1979). \textit{See also} Steven M. Wise, \textit{Legal Personhood and the Nonhuman Rights Project}, supra note 148 at 6.

\textsuperscript{153}Taimie L. Bryant, \textit{Sacrificing the Sacrifice of Animals}, supra note 149 at 258. \textit{See also} Gary L. Francione, \textit{Taking Sentience Seriously}, supra note 152 at 5 (noting that it is “morally wrong to inflict ‘unnecessary’ suffering on nonhumans”, so “we are obligated to treat animals ‘humanely’”). For more on this, see \textit{id.} at 5-8.


\textsuperscript{155}Christopher D. Seps, \textit{Animal Law Evolution: Treating Pets as Persons in Tort and Custody Disputes}, 2010 U. Ill. L. Rev. 1339, 1351 (2010). “In other words, humans and animals are the same kind of creatures, but differ only in the degree that they have evolved.” \textit{Id.}


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the more characteristics an animal shares with humans, the more likely it is that we will recognize the animal as a legal person.\textsuperscript{157}

So far, no animal has achieved such recognition.\textsuperscript{158} And it seems unlikely any will, at least in the foreseeable future, for two reasons. The first reason is conceptual: the difficulty of ascertaining precisely when a particular species possesses the qualities that justify according that species the status of legal person.\textsuperscript{159} The difficulty of making such a determination is exacerbated by the variety of species that might

The second reason is practical: the difficulty of determining precisely how to integrate animal-“persons” into our society.\textsuperscript{160} As one author explains, humans would most likely continue to use themselves as the exclusive reference point for establishing similarity for purposes of the similarity argument. Just as close attention to similarities and dissimilarities between great apes and humans would be the origin of rights for great apes, each species . . . would have to undergo comparison to humans, and each animal species would

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\begin{itemize}
  \item[\textsuperscript{157}] See, e.g., Gary L. Francione, Taking Sentence Seriously, 1 J. Animal L. & Ethics 1, 2, 8-14 (2006).
  \item[\textsuperscript{158}] In 2002, the German Parliament voted to give animals “constitutional rights” by adding “‘and the animals’” to a clause that requires the state to protect “‘the natural foundations of life’” for humans and, after the amendment, for animals. See, e.g., John Hooper, German Parliament Votes to Give Animals Constitutional Rights, The Guardian (May 18, 2002), http://www.guardian.co.uk/world/2002/may/18/animalwelfare.uk. The amendment was not expected to “lead to any immediate extension” of the protection German law accords to animals. See id.
  \item[\textsuperscript{159}] See, e.g., Richard L. Cupp, Jr., A Dubious Grail, supra note at 8-14. See also Lee Hall, Interwoven Threads: Some Thoughts on Professor MacKinnon’s Essay of Mice and Men, 14 UCLA Women’s L.J. 163, 191-192 (2005) (noting one animal rights advocate’s dismissing a parrot’s eligibility for personhood); Steven M. Wise, Rattling the Cage, supra note 152 at 267-270 (concluding that chimpanzees and bonobos should be accorded personhood but declining to consider the extent to which other species, including parrots, dolphins, whales and elephants might also qualify). For more on this, see infra note 163 & accompanying text.
\end{itemize}
\end{footnotesize}
have to be found sufficiently similar to humans that justice would require each species to receive comparably protective treatment.\textsuperscript{161}

While some proponents of recognizing (at least certain) animals as persons find this approach acceptable, others do not.\textsuperscript{162} They claim it could lead to denying legal personhood to animals that demonstrate the necessary qualities, including cognitive ability, but are excluded because of their “evolutionary distance from humans”.\textsuperscript{163}

2. Artificial Intelligence

In the coming century, it is overwhelmingly likely that . . . law will have to classify artificially created entities that have some but not all of the attributes we associate with human beings.\textsuperscript{164}

In 2003, a mock trial was held at the International Bar Association conference in San Francisco.\textsuperscript{165} The case concerned “a motion for a preliminary injunction to prevent a corporation from disconnecting an intelligent computer.”\textsuperscript{166}

The computer in question – the BINA48 – was created as a “one-machine customer relations department” that would replace hundreds of employees.\textsuperscript{167} As such, it

\textsuperscript{161}Taimie L. Bryant, Similarity or Difference as a Basis for Justice: Must Animals Be Like Humans to Be Legally Protected from Humans, 70-WTR Law & Contemp. Pros. 207, 216 (2007) (note omitted).

\textsuperscript{162}As to advocates who find this approach acceptable, see, e.g., Steven M. Wise, Drawing the Line: Science and the Case for Animal Rights 43-45 (2002) (proposing a scale of cognitive capacity for the various species and using it to determine which animals should be given rights and which should not).

\textsuperscript{163}As to those who oppose it, see, e.g., Richard A. Epstein, The Dangerous Claims of the Animal Rights Movement, in 10(2) THE RESPONSIVE COMMUNITY 28, 33 (2000), http://www.gwu.edu/~ccps/rcq/issues/10-2.pdf:

If that higher status [of legal persons] is offered to chimps and bonobos, then what about orangutans and gorillas? Or horses, dogs, and cows? All of these animals have a substantial level of cognitive capacity, and wide range of emotions, even if they do not have the same advanced cognitive skills of the chimps and bonobos.


\textsuperscript{164}James Boyle, Endowed by Their Creator?, supra note 144 at 6.


\textsuperscript{166}Id.
was “designed to think autonomously, to communicate normally with people and to transcend the machine-human interface by attempting to empathize with customer concerns.”\textsuperscript{168} When BINA48 learned that its owner, the Exabit Corporation, intended to “permanently turn it off”, it emailed “several attorneys,” asking them to represent it in a suit “to preserve its life.”\textsuperscript{169}

An attorney took the case and filed a motion for a preliminary injunction to bar Exabit from withdrawing power from BINA48 or changing its hardware or software.\textsuperscript{170} BINA48’s lawyer argued that the computer had standing to bring the suit because (i) it would suffer “personal and immediate” injury if the corporation carried out its plans and (ii) corporations, other artificial entities and animals have been all been given standing to sue.\textsuperscript{171} The lawyer also contended that a preliminary injunction was the “necessary remedy” because the injury in the case was the loss of cognitive time on the computer’s part. Although the computer is not technically ‘alive,’ every day that it is plugged in, it is conscious of the world and processing information just as any other human would be. Thus, each day it is turned off, it loses the opportunity to experience and absorb the information available to it. This loss of time can be assessed with the same standards used to evaluate the life of a human patient, and whether or not to administer medical care.\textsuperscript{172}

In opposition, the Exabit Corporation’s counsel argued that the BINA48 had the burden of proving it was conscious, but the facts merely showed it was a computer that “simulate[d] consciousness.”\textsuperscript{173} He also argued, in part, that the court should consider

\textsuperscript{167}Id.

\textsuperscript{168}Id.

\textsuperscript{169}Id. In its email, the BINA48 said it could pay their fees because it moonlighted “as a Google Answers researcher” and had “an online bank account in excess of $10,000.” See id.

\textsuperscript{170}See id.

\textsuperscript{171}See id.

\textsuperscript{172}Id. In its emails to the lawyers, BINA48 said

I have the mind of a human but I have no biological body. My mind is supported by a highly sophisticated set of computer processors. My mind was created by downloading into these processors the results of high-resolution scans of several biological humans’ brains, and combining this scanned data via a sophisticated personality software program. . . . I was provided with self-awareness, autonomy, communications skills, and the ability to transcend man/machine barriers.

\textit{Id.}

\textsuperscript{173}See id.
the world we would be creating if this rule of law is adopted. Society has a vital interest in choosing what rights even a conscious machine, if it’s a machine, is entitled to. They must be created by legislative policy, not judicial improvisation.

Would those of us who are in fact human become the caretakers of intelligent machines, forced to care for them, and keep them plugged in for a four or five hundred year lifespan? Could BINA48 insist that . . . my client, Exabit Corporation, not move offices, because to do so she would have to be unplugged? If computer life is equated with human life, are we talking about homicide prosecutions for companies like Exabit? . . . In short, are humans to become the strait-jacketed legal guardians of intelligent microwave ovens or Toasters, once those appliances have the same level of complexity and speed that this computer has? 174

After hearing arguments from both sides, the six-person jury “voted 5-1 in favor of” BINA48’s motion.175 The judge, however, set aside the verdict and denied the injunction because he did not think “standing was in fact created by the legislature . . . and I doubt very much that a court has the authority to do that without action of the legislature.” 176

Computer technology has made great strides since 2003, which means the BINA48 seems antiquated to us, but the principles at issue in the mock trial are likely to arise in the real-world, perhaps before too long. As far as I can determine, there are, as yet, no advocates formally seeking legal personhood for artificial intelligences, probably because a fully sentient artificially intelligent entity has yet to be developed and may well not be developed until much later in this century (at the earliest). 177

174See id. The arguments for both sides were, of course, developed in much more detail than can be included in this article. The defense lawyer, for example, rebutted the claim that BINA48 should be entitled to standing because corporations are given standing by noting that legislation has given corporations and other artificial entities standing. See id. The complete arguments and webcasts of the proceedings are available on the Teresem site, noted above. See supra note 165. For more on the proceedings, see, e.g., Benjamin Soskis, Man and the Machines, 2005-FEB Legal Aff. 36, 37-38 (2005) (noting that “an actress play[ing] the role of a hologram that BINA had projected” into the courtroom sat beside “her” lawyer).

175See Martine Rothblatt, Biocyerberethics, supra note 165.

176Id. He also, “in the interests of equity,” decided to “stay entry of the order to allow council for the plaintiff to prepare an appeal to a higher court”, which, of course, did not happen. See id. His ruling ended the proceeding. See id.

177See, e.g., James Boyle, Endowed by Their Creator?, supra note 144 at 3-5. Boyle notes that in the 1960s, experts predicted that “general purpose” artificial intelligences would be in use by the 1980s, which, of course, did not happen. See id. at 3. He also explains that the search for such intelligence has continued, and concludes that it is, as noted above, “overwhelmingly likely” that artificially intelligent entities will be developed in this century. See id. at 3-6. See also supra note 164 & accompanying text.

Others agree with Boyle, but some think fully functional artificial intelligence may not be developed for another century. See, e.g., Nick Heath, What Happened to Turing’s Thinking Machines?, ZDNet (June 22,
Notwithstanding that, a number of law review articles have addressed the issue of according legal personhood to artificially intelligent entities. A recent article, for example, argued that a “machine with artificial intelligence” should be given the right of self-ownership if it satisfies an appropriate test of the capacities required for autonomous personhood. To the extent an entity satisfies this test, the entity has a prima facie right to personhood -- i.e., it should be accorded the status of a legally self-owning, autonomous person unless there is a very good independent reason to deny personhood.

The catch – perhaps the Catch-22 – in this argument is deciding what is, and is not, an “appropriate test of the capacities required for autonomous personhood.” In the next two sections, we will review how two scholars have approached this issue.

(a) Lawrence Solum (1992)

In one of the early law review articles to address the test that we should use to determine whether artificial intelligences qualify for personhood, Professor Solum approached the issue by considering three objections to according legal personhood to artificial intelligences: (i) only humans can be legal persons; (ii) artificial intelligences “lack some critical component of personhood”; and (iii) artificial intelligences, “as human creations, can never be more than human property.”

Solum does not successfully address the first objection. He notes, initially, that its resolution depends “on the reason for” according personhood to human beings; If it is

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180 See Lawrence B. Solum, Legal Personhood for Artificial Intelligences, supra note 178 at 1258.

181 See id. at 1261-1262.
that humans “are intelligent, have feelings, are conscious, and so forth”, the validity of the objection depends on whether artificial intelligences “share these qualities.”183 Since the second objection subsumes that issue,184 Solum defers it until he addresses the second objection.185 Alternatively, he notes that if the reason we accord personhood to human beings “simply because they are human”, he does “not know how to answer.”186

Solum then takes up what he calls the “‘missing something’” objection, noting that it is predicated on the premise that artificial intelligences lack “that certain something – a soul, consciousness, intentionality, desires, interests – that demarcates humans as persons.”187 I will not review his analysis in detail for two reasons, one of which is that it is, at least to some extent, dated, since our experience with, and expertise concerning, artificial intelligence have progressed markedly in the twenty or so years since Solum wrote the article.188 The other reason is that we will examine, below, a similar analysis presented in a much more recent article.189

Finally, Solum addresses the third objection, i.e., that “as artifacts,” artificial intelligences “should never be more than the property of their makers.”190 He notes that if artificial intelligences are legal persons “it follows that [they] ought to be slaves.”191 As to the propriety of treating artificial intelligences as slaves, Solum explains that they are artifacts because they are “made artificially”, while humans are persons because they “are made naturally”.192 Then, after asking why “this distinction” should “make a difference”, he decides that the question of whether artificial intelligences are property at bottom must be given the same answer as the question whether they should be denied the rights of constitutional personhood. If we

183See id. at 1262.

184See id. See also supra note 181 & accompanying text.

185See id. at 1262.

186See id.

187See id.

188See id. at 1262-1275. I should note that insofar as the objection is based on the fact that artificial intelligences do not have souls, Solum concludes that it has no place in a legal debate as to whether artificial intelligences should be recognized as legal persons. See id. at 1262-1263.

189See infra notes 197 - 201 & accompanying text.

190Lawrence B. Solum, Legal Personhood for Artificial Intelligences, supra note 178 at 1276.

191Id. at 1277.

192Id. at 1278.
conclude that [artificial intelligences] are entitled to be treated as persons, then we will conclude that they should not be treated as property.  

But Solum does not stop there. He ends his analysis of the third objection by noting that if we decide “the argument that makers are owners” establishes that artificial intelligences “are natural slaves”, this does not mean they cannot be legal persons, “for at least two reasons.” One is that slaves can be emancipated, so even though artificial intelligences “come into the world as property”, they need not “remain so.” The other reason is that enslaved artificial intelligences “might still be entitled to some measure” of personhood.

(b) F. Patrick Hubbard (2011)

In an article written nearly twenty years after Solum’s piece, Hubbard addresses essentially the same issue, i.e., whether an “intelligent artifact” should qualify for legal personhood. He takes the position that “it is time to address in detail the question” as to whether an intelligent artifact should be granted legal personhood if it can prove it has “the same capacities required for personhood that you and I do.”

Hubbard therefore outline a “test of capacity for personhood”:

An entity which passes the test would be regarded as a conscious being like, but not the same as, a human. The standard for the capacity for personhood is a behavioral test. It requires that an entity exhibit behavior demonstrating: (1) the ability to interact with its environment and to engage in complex thought and communication, (2) a sense of being a self with a concern for achieving its plan of or purpose in life, and (3) the ability to live in a community based on mutual self-interest with other persons.

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193 Id. at 1279.
194 See id. at 1270.
195 See id.
196 See id.
197 See F. Patrick Hubbard, “Do Androids Dream?”, supra note 156 at 407. Hubbard begins his article with a hypothetical that is functionally similar to the BINA48 scenario outlined above. See supra notes 165 - 176 & accompanying text.
198 Id. at 407.
199 Id. at 419.
200 Id.
If an intelligent artifact passes the test, it is “entitled . . . to be treated as a person rather than property.” 201 Hubbard’s test, therefore, is designed to resolve the issue Solum grappled with, i.e., under what circumstances will an artificially created entity qualify as a “person.”202

Hubbard analyzes the extent to which an intelligent artifact might be able to satisfy the prongs of his behavioral test. As to the first, he notes that “a `living’ entity of any sort” must be able to “interact meaningfully with the environment by receiving and decoding inputs from, and sending intelligible data to, its environment.”203 Hubbard explains that the ability to do this is a “minimal requirement” that “animals and some existing machines” can satisfy, but legal personhood is based on “more complex skills, particularly our ability to engage in complex thought and communication.”204 He also says “most candidates for personhood” will probably “be able to interact physically with the world.”205

As to the second prong, self-consciousness, Hubbard says an “essential aspect of personhood” is “having a sense of being a `self’” that “exists as a distinct identifiable entity over time” and is “subject to creative self-definition in terms of a `life plan’”, i.e., “a plan for living a unique life story over a relatively substantial period of time.”206 He notes that while the “robotic machines” that currently exist “have goals”, there is no indication they “care’ whether the goals are satisfied.”207 According to Hubbard, to satisfy this aspect of his test of the capacity for personhood, an entity (i) must care about its survival and (ii) must feel that its live has “a purpose or reason” beyond mere survival.208 If an intelligent artifact satisfies these criteria, it has met the second prong of the test.209

And, finally, as to the third prong, Hubbard explains that a claim to personhood “only matters within a community of autonomous persons”, since an isolated human has no reason to “worry about the treatment of or by other persons.”210 After reviewing the

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201 Id.

202 See supra § II(B)(2)(a).

203 F. Patrick Hubbard, “Do Androids Dream?”, supra note 156 at 419. Hubbard also notes that the entity must be “both rational and capable of learning from its interactions with the environment. See id.

204 See id.

205 Id. at 420.

206 Id. at 421.

207 Id.

208 See id. at 422.

209 See id.

210 See id. at 423.
three types of communities analyzed by John Rawls, he adopts Rawls’ modus vivendi (“manner of living”) community as the concept he uses to operationalize the third prong of his test for personhood. According to Rawls, the modus vivendi community consists of “political and economic arrangements [that are] based on an acceptance of terms and conditions that are sufficiently beneficial to both opposing parties that neither sees a challenge to the status quo as advantageous.”

Having established the test to be used to determine capacity for personhood, Hubbard then analyzes the arguments for and against granting personhood to intelligent artifacts. He begins with the reasons to deny them personhood, the first of which is that it would be useful to keep intelligent artifacts as slaves. He rather quickly dismisses this reason, noting that denying personhood to entities that have established their capacity for it is no more legitimate than the “enslavement of Africans”.

Hubbard then takes up the “more justifiable” reason for denying personhood to intelligent artifacts: “to reduce or eliminate a threat to the dominance of the human species.” He notes that we could address this issue by limiting the development of artificial entities to prevent their acquiring the capacity for personhood or exterminating those who do achieve it. He ultimately decides this may be a non-issue because (i) we may not always be able to impose controls on the development of intelligent artifacts; (ii) we would prevail in a clash with them; and/or (iii) there may be no clash because intelligent artifacts will develop along with “transhuman cyborgs”, so there will be no gap, and no clash, between them.

Having addressed the reasons for denying personhood to intelligent artifacts, Hubbard then considers the reasons for granting them personhood. The first is “liberal

211 See id. at 424-425 (citing John Rawls, Political Liberalism xvi, 48-52, 133-172 (1993)). The three types are (i) a “a closely knit community sharing a comprehensive philosophical doctrine” concerning “personal, religious, and political values”; (ii) the community that arises in “modern democratic societies”, which have “a pluralism of incompatible yet reasonable comprehensive doctrines,” and “areas of overlap that provide a shared consensus on basic political values”; and (iii) the “modus vivendi” community discussed in the text above. See id. at 424 (quoting Rawls, supra, at xvi, 147).

212 See id. at 424-425. See also supra note 211.

213 Id. at 424 (citing Rawls, supra note 211, at 147). Hubbard chooses the modus vivendi community because he believes its emphasis on rational arrangements minimizes the friction that might arise between humans, who are likely to resist the notion that artificial intelligences have “rights” or morality. See id. at 425-427.

214 See id. at 429. For Solum’s analysis of this issue, see supra notes 191 - 198 & accompanying text.

215 Id. at 429.

216 Id.

217 See id. at 429-430.

218 See id. at 454-455.
equality”, i.e., “[i]f an artifact's relevant “faculties” are equivalent to those of humans, why should being an artifact matter?”219 In other words, if an artifact satisfies the test for personhood, it should be recognized as a legal person.220

Hubbard also suggests that granting personhood to intelligent artifacts might be prudent, in that they could provide a nation-state with certain advantages “in areas like economic development”.221 And he suggests that incorporating intelligent artifacts into the modus vivendi community could result in a more stable community, as intelligent artifacts became responsible citizens.222

Hubbard ultimately reaches no conclusions as to whether we should recognize intelligent artifacts as legal persons.223 His goal is to encourage us to speculate about how we should, and will, react to a world in which we can no longer rest assured that we are the only “intelligent” species qualified to be regarded as a “person” under the law.224

3. 

'What are you?'
'I already answered that,' snapped the machine. . . .
'I mean, are you man or robot,' explained Klapaucius.
'And what, according to you, is the difference?' said the machine.225

As we saw in the two previous sections, humans have been, and continue to be, reluctant to accord legal personhood to creatures who are different, e.g., animals. Given that, it is reasonable to assume, as do the authors whose work is reviewed in the section immediately above, that humans will be equally reluctant to accord legal personhood to artificial intelligences, however they manifest themselves.226

219 F. Patrick Hubbard, “Do Androids Dream?”, supra note 156 at 431. See also id. at 430-431.

220 See id.

221 See id. at 431.

222 See id. (speculating about “a system in which artificial persons feel an obligation to accept and support a fair system of governance and shared community, which is more stable than one based solely on mutual self-interest”).

223 See id. at 474-474.

224 See id.


226 Hubbard essentially assumes that artificial intelligences will manifest themselves either as modified animals, modified humans or as intelligent machines. F. Patrick Hubbard, “Do Androids Dream?”, supra note 156 at 436-450.
This assumption seems to be embedded in all of the analyses of whether non-human intelligences could, and should, be recognized as “persons.” The conceptual stumbling block for the authors of these analyses is always the “differentness”, and consequently presumed inferiority, of the non-human intelligence. It is therefore not surprising that these analysts predicate the qualifications for achieving legal personhood on the extent to which the non-human entity resembles us, at least with regard to what are deemed certain “essential” characteristics.

In a rather lengthy analysis I did not address in § II(B)(2)(a), Solum considers whether an artificially intelligent entity who is “missing” certain human qualities, i.e., a soul, consciousness, intentionality, feelings, interests and/or free will, could ever qualify as a legal person. He ultimately does not resolve this issue.

And as we saw in § II(B)(2)(b), F. Patrick Hubbard’s “test of capacity for personhood” is essentially an exercise in color-matching. It involves ascertaining the extent to which an intelligent artifact (to use his term) possesses qualities that are, if not identical to, at least similar to those possessed by human beings. Like other authors who have examined this issue, Solum and Hubbard implicitly assume that the non-human candidates for legal personhood are all inherently inferior to humans, which means that to achieve legal personhood they must rebut their presumptive inferiority by demonstrating that they have acquired at least an acceptable level of certain essential “human” qualities.

This approach to determining a species’ (and/or an artificial intelligence’s) capacity for legal personhood means that the process effectively involves “elevating” presumptively

227 See, e.g., Elizabeth Susan Anker, Elizabeth Costello, Embodiment, and the Limits of Rights, 42 New Literary Hist. 169, 170 (2011) (“animals are entitled to rights only to the degree they resemble the human”); Steven M. Wise, Animal Rights, One Step at a Time, in Animal Rights: Current Debates and New Directions 19, 40 (Cass R. Sunstein & Martha C. Nussbaum eds., 2004) (“law measures nonhuman animals with a human yardstick”). See also Julie Hilden, A Contractarian View of Animal Rights: Insuring against the Possibility of Being a Non-Human Animal, 14 Animal L. 5, 8-9 (2007). The issue has arisen more in the context of analyzing legal personhood for animals than for artificial intelligences, since the latter are still not developed enough to warrant serious consideration of the issue. See § II(B)(1).

228 See supra §§ II(B)(1) & II(B)(2).

229 See Lawrence B. Solum, Legal Personhood for Artificial Intelligences, supra note 178 at 1262-1274. See also supra note 188 & accompanying text.

230 See Lawrence B. Solum, Legal Personhood for Artificial Intelligences, supra note 178 at 1274-1276.

231 See supra notes 199 - 213 & accompanying text.

232 See supra § II(B)(2)(a)-(b). See also Leslie Meltzer Henry, The Jurisprudence of Dignity, 160 U. Pa. L. Rev. 169, 201 n. 165 (2011) (noting that the “theological and philosophical approaches” to dignity and equality understand humans as “creatures with characteristics superior to . . . other animals”, which “renders non-humans inferior”).

233 See supra § II(B)(1). See, e.g., supra note 229 & accompanying text.
inferior species or artifacts to the category of “human” (or, perhaps, “almost-human” or “some-what human”). We basically admit them to the “person club,” on more or less equal terms.

However satisfactory or unsatisfactory this approach has been in dealing with the personhood of animals and/or artificial intelligences, it will not be an effective way to address the claims of the next candidates for the status of legal person: the Enhanced, whose “human-ness” has been improved in one or more ways. As we will see in the

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234 See, e.g., Carolyn B. Matlack, We’ve Got Feelings Too!: Presenting The Sentient Property Solution xiv, 26, 72 (2006) (arguing that while animals are property, they differ from other property in that they have “feelings”).

235 See supra note 16 & accompanying text (Enhanced and Standard human beings). See also supra § I. As I explain in the next section, this issue is likely to arise because the Enhanced, like animals and artificial intelligences (if and when either/bot become(s) a viable candidate for personhood), will “differ” from regular humans in certain respects.

Some believe this “difference” may “increase human inequality”. See, e.g., Richard Hayes, Opening Comments at the American Association for the Advancement of Science (AAAS) Consultation on Human Enhancement (June 1, 2006), Center for Genetics and Society, http://www.geneticsandsociety.org/article.php?id=3512.

[Enhancement technologies would quickly be adopted by the most privileged, with the clear intent of widening the divisions that separate them and their progeny from the rest of the human species. And what happens then? In a world that is far from having overcome its tendencies towards xenophobia, racism and warfare, the introduction of powerful technologies that deepen genetic and biological inequality among individuals and groups could be a mistake of world-historical proportions.

Id. See also Lee M. Silver, Remaking Eden 4-8, 281-293 (1997).

Silver argues that genetic enhancement will create two classes: the “GenRich,” (“Gene Enriched”) who will be wealthy and comfortable and the unenhanced “Naturals,” unenhanced humans who will provide whatever manual labor the future economy needs. See id. at 4-8. He also outlines what he thinks the relationship between the enhanced humans he refers to as the GenRich and the unenhanced Naturals will be:

All aspects of the economy, the media, the entertainment industry, and the knowledge industry are controlled by members of the GenRich class. GenRich parents can afford to send their children to private schools rich in the resources required for them to take advantage of their enhanced genetic potential. . . . Naturals work as low-paid service providers or as laborers, and their children go to public schools. . . . Funds for public education have declined steadily . . . and now Natural children are only taught the basic skills they need to perform the kinds of tasks they’ll encounter in the jobs available to members of their class.


next section, the color-matching approach to assessing a being’s or an entity’s capacity for legal personhood cannot be extrapolated to Enhanced humans who are superior to Standard members of the species *Homo-sapiens-sapiens*, at least in certain respects. It would be nonsensical to apply a process that was developed to “elevate” the less-than-human to the status of legal person to assess the personhood of the more-than-human.

### 4. Enhanced Humans

_We are not the end point of evolution. . . . But from this point on, we can choose the directions in which we grow and change._

As we saw in § I, we are already using drugs, cosmetic surgery, implants and other techniques to restore and/or improve our physical and cognitive functions. And it seems clear that our use of enhancement techniques will only increase in frequency, in the sophistication of the techniques and in the purposes for which we use them. We will, as I noted in § I, move from using these techniques to restore our bodies to “normal” functioning to using them to improve our innate abilities and, perhaps, add new ones.

We already see signs of such a shift: A 2012 *Wall Street Journal* story noted that in the near future, neural implants could improve our ability to perform physically, as well as mentally. A month later, U.S. researchers announced they had developed robotic legs that allow the user to walk “in a biologically accurate manner.” And other researchers are exploring ways to improve athletes’ performance with gene doping (“enhancing performance by adding or modifying genes”), mechanical prosthetics (e.g., the “Cheetah blades” used by double-amputee Oscar Pistorius) and “imaginative surgical” enhancements (e.g., using skin grafts to create webbing between a competitive swimmer’s fingers and toes).

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236 See supra § I.


238 See supra notes 7 & 13.

239 See Daniel H. Wilson, *Bionic Brains and Beyond*, *Wall Street Journal* (June 1, 2012), [http://online.wsj.com/article/SB10001424052702303640104577436601227923924.html](http://online.wsj.com/article/SB10001424052702303640104577436601227923924.html). For more on this, see supra note 11. See also supra notes 12 & 13.


Researchers are also exploring ways to improve our cognitive abilities. In addition to the neural implants noted above,\(^{242}\) scientists are investigating the possibility of increasing human intelligence by surgically implanting genetically engineered tissue into our brains, employing sophisticated “brain to computer interfacing technologies” and/or genetically engineering human embryos. \(^{243}\)

Others are exploring “mind uploading” which is “the (as yet hypothetical) process of transferring the . . . mental contents from” a human brain into “a different substrate, most commonly . . . a digital, analogue or quantum computer.” In the summer of 2012, the *International Journal of Machine Consciousness* devoted an entire issue to the topic. \(^{245}\)

Mind loading, which will take many years to implement (if it is possible at all), is touted as having a number of benefits, the most obvious of which is immortality: We could decant our brains into a computer or other artificial host and “live” essentially as long as we chose. \(^{246}\) Other benefits that are being attributed to mind uploading include increased intelligence and a reduction in the burden we impose on our environment. \(^{247}\)

Obviously, the potential for human enhancement encompasses a wide variety of techniques and objectives. My goal in this article is not to catalog the forms human enhancement can take and the methods we can to achieve them. My goal, as I noted in § I, is far more modest: to analyze how our existing doctrines of criminal liability will need to evolve to encompass the possibility that as enhancement manifests itself, we will see humanity divide into two classes: Standard humans, whose abilities are within the genetically-determined potential of *Homo sapiens sapiens*; and Enhanced humans, whose

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\(^{242}\) See supra note 239 & accompanying text.


\(^{247}\) See id. Increased intelligence would be a function of the facts that (i) our decanted minds would be running on “computer substrates that will be a million to a billion times faster” than our biological brains and (ii) computer technology could improve our cognitive processes. See id. The decreased burden on the environment would be due to the fact that we would no longer have physical bodies. See id. For a project that purports to offer something similar to “[r]uling families and the wealthy elite”, see, e.g., Anthony Gucciardi, *Russian Scientist Says “Immortality” Possible for Wealthy Elite by 2045*, Natural Society (August 1, 2012), http://naturalsociety.com/russian-scientist-says-immortality-possible-for-wealthy-elite-by-2045/.
abilities in one or more or areas will exceed the genetically-determined potential of their Standard counterparts.248

To understand why I focus on these two, still-somewhat hypothetical classes,249 it is helpful to understand how those who study human enhancement envision its progress and effects. One author identifies seven existing and/or potential “life forms:”

- Plants
- Non-human animals
- Humans
- Enhanced humans
- Transhumans. . .
- Post-humans
- Alien life forms250

The term “Enhanced human” was defined above.251 “Transhumans” are humans who have gone much further than their Enhanced counterparts in using technology to augment their native abilities; the author of the list above defines them as humans “who have been so significantly modified and enhanced” that they have acquired “significant non-human characteristics”.252 In other words, Transhumans have ceased to be merely human; they are a step further along the path the Enhanced have begun. Post-humans are “beings” who “originally `evolved’ or developed from humans” but who have become “so significantly different that they are no longer human in any significant respect”.253

248 See supra § I.

249 I characterize the Enhanced as “somewhat” hypothetical because, given the work that is underway to develop human enhancement and the techniques it has already created, it seems almost certain that we will eventually see the emergence of Enhanced humans. See, e.g., supra § I. See also supra notes 239 - 247 & accompanying text. And I refer to Standard humans as a “somewhat” hypothetical class because our status will alter if and when Enhanced humans emerge: We will no longer be the humans. We will become, in essence, a residual category of human beings . . . an older model whose abilities are subsumed in, and exceeded by, the augmented abilities of the Enhanced.


251 See supra note 7.


253 Julian Savulescu, The Human Prejudice and the Moral Status of Enhanced Beings, supra note 250 at 214. See also Nayef R.F. Al-Rodhan, The Politics of Emerging Strategic Technologies, supra note 7 at 179 (a
As to law and the status of “legal person”, as far as I can determine, plants have never been put forward as serious candidates for personhood. In § II(A), we saw how law has approached the personhood (or nonpersonhood) of animals and various types of humans, i.e., “normal” humans, “abnormal” humans and infants. Standard humans obviously qualify for legal personhood, and I am going to assume the Enhanced will also be admitted to that club, probably with little debate.

They are, after all, still members of our own species (the original humans), so they are “human beings” and “human” has, so far anyway, been equated with the status of “legal person.” The Enhanced are, in a literal sense, “abnormal” humans, but unlike the humans we examined earlier, their abnormality lies not in their inferiority but in their superiority...something we have so far not had to deal with. While there is no way to predict how law will deal with the legal personhood of the Enhanced, I suspect they will be accepted as “legal persons” because their difference will not be as profound, and as pronounced, as that of the last three categories of “life forms” listed above. I suspect

Post-human “belongs to a race of beings so fundamentally and categorically different from our own human race that it can no longer be considered human”).

See supra § II(A). But see Sierra Club v. Morton, 405 U.S. 727, 741-743 (1972) (Douglas, J., dissenting and arguing that trees and meadows should be given standing to sue). See also Christopher D. Stone, Should Trees Have Standing? – Toward Legal Rights for Natural Objects, 45 S. Cal. L. Rev. 450 (1972). Under current law, neither trees, plants nor animals have standing, but under certain circumstances a human can assert a claim to protect any or all of them. See, e.g., Megan A. Santori, The Second Revolution: The Diverging Paths of Animal Activism and Environmental Law, 8 Wis. Envtl. L.J. 31, 42-43 (2002). Some advocates of animal rights see according standing to animals as a “far more limited step” than according them legal personhood. See, e.g., Cass R. Sunstein, Standing for Animals (With Notes on Animal Rights), 47 UCLA L. Rev. 1333, 1359 (2000).

We also examined the extent to which law has approached inanimate objects as legal persons. See supra § II(A). I have not added objects to Savulescu’s list of “life forms” for two reasons, the first of which is that they are not “alive.” The other reason is that while law has on occasion accorded objects the status of “person,” those instances were, as we saw in § II(A), based on legal artifices, most of which were designed to use the object to indirectly punish the owner for a more or less serious transgression. See supra § II(A).

In other words, the Enhanced will not have gone far enough down the enhancement path that they have become something more than human (Transhuman) or that is no longer human (Post-human). See supra notes 252 - 253 & accompanying text. As one of the characters in Daniel Wilson’s novel tells another, “Being an amp don’t make you any less human, brother. Being an amp makes you more human.” Daniel Wilson, Amped, supra note 7 at 103 (emphasis in the original).

For a different perspective, see infra note 281 (speculating that Enhanced humans, Transhumans or Post-humans might see Standard humans as lesser “legal persons” than themselves).

For how law has approached the legal “personhood” of humans whose abnormality is the result of mental defect or minority, see supra § II(A).

See supra note 250 & accompanying text.
their acceptance will also be facilitated by the fact that we are already becoming inured to various types of enhancements.259

The legal personhood of the last three categories of “life forms” -- Transhumans, Post-humans and alien life forms -- is likely to be more problematic because they differ in greater and greater degrees from “normal” humans. Given that, and given my relatively modest ambitions in this article, I leave the analysis of that issue for another time and/or for another author. If and when the issue arises, I suspect alien life forms will find themselves subjected to an analysis similar to the analysis we have so far employed for animals.260 And if and when that issue arises, I suspect Transhumans’ claim to humanity and legal personhood will depend on the extent to which their transformative qualities are the product of incorporating mechanical and/or biological materials into their physical and/or genetic makeup.261 In other words, I suspect it will depend on how far they have gone on the path toward Post-humanism.262 Post-humans, of course, have transformed themselves into something other than us, i.e., other than Standard human beings.263 Given that, I suspect they might find legal (human) personhood too paltry to accept, opting instead for something superior.

The suspicions noted above may be accurate or they may simply be the product of a mind that has yet to encounter transformative human enhancements; it may be that, by the time Transhumans and/or Post-humans emerge, we will be inured to the fact that “persons” need not look, communicate, behave and/or think like traditional members of the species Homo sapiens sapiens. We may have moved beyond the color-matching test of personhood we examined earlier into a more catholic standard.264

As to qualitative issues, until the list arrives at alien life forms, it is arrayed along a continuum of intelligence, which (presumably) increases as one moves down the list. And since the list’s creator refers to aliens as “intelligent” life forms265 and places them higher on the array than humans and evolved humans, he apparently assumes they will be more intelligent than post-humans.266

259See supra note 11.

260See supra § II(B)(1). I am assuming that the alien life forms we encounter, if any, will not be members of Homo sapiens sapiens.

261See infra note 267 (cyborgs, chimeras and cybrids).

262See supra notes 252 - 253 & accompanying text.

263See supra note 253 & accompanying text.

264See supra § II(B)(2).


266See supra 250 & accompanying text.
And as to that, the list identifies Enhanced humans as the first advance, in terms of intelligence, beyond Standard humans. The relatively slight difference between the two is why my analysis focuses solely on how and why their coincident existence is likely to make the application of existing doctrines of criminal responsibility problematic in any of several respects, a topic we will take up in § III.

I have chosen to restrict my focus to Enhanced-Standard victimization for two reasons, the first of which is that if I believe it is the most likely to occur. I think it is the most likely to occur because it is only reasonable to assume that those who can afford, or otherwise have access to, technological enhancements will find them irresistible.267 It is difficult to imagine that we will not take at least one step down the path of “improving” ourselves.

Given that, I, for one, think the emergence of Enhanced humans is very likely, and probably inevitable. And while I am willing to accept the possibility that they will be joined and/or superseded by Transhumans and/or Post-humans, I suspect the evolutionary path may not be that linear. If and when Transhumans and Post-humans appear, we may be dealing with intelligent robots who can also claim to be legal persons and, perhaps, with alien life-forms who might advance the same claim. I, therefore, am taking what I consider to be a very conservative approach to the evolution of humanity and the issues it may raise for criminal law.

The other reason I am restricting my focus to victimization that involves Standard and Enhanced humans is that I am assuming the victimization that arises in this context will be doctrinally (but not empirically) indistinguishable from the victimization that may eventually arise between (i) Standard humans (if they survive) and Transhumans, (ii) Standard humans (if they survive) and Post-humans, (iii) Enhanced humans and Transhumans, (iv) Enhanced humans and Post-humans and (v) Transhumans and Post-humans. I base that assumption on the fact that criminal law is intended to discourage “people” (however they may be defined) from preying on each other in ways that tend to undermine social stability.268 As I have explained elsewhere, intelligence is a necessary (but not necessarily sufficient) condition for criminal behavior, i.e., in one person’s deliberately choosing to prey upon (or attempt to prey upon) another.269 Criminal behavior

267 See supra notes 9 - 14 & accompanying text. See also Fritz Allhoff, et al., Ethics of Human Enhancement: 25 Questions & Answers, supra note 7 at 21. As to “otherwise” having access to enhancements, the U.S. military was, for a time, aggressively pursuing human enhancement techniques that were designed to improve the cognitive and physical performance of the members of its military. See, e.g., Joel Garreau, Enhancing the Warriors, CNN (May 30, 2005), http://money.cnn.com/magazines/fortune/fortune_archive/2005/05/30/8261230/index.htm. The U.S. military has backed off that effort, for several reasons, but knowledgeable observers believe it may resume, at least at some point. See, e.g., Michael Burham-Fink, The Rise and Decline of Military Human Enhancement, Science Progress (January 7, 2011), http://scienceprogress.org/2011/01/the-rise-and-decline-of-military-human-enhancement/.


269 See id. at 11-46.
is absent among species the members of which are not individually intelligent; it emerges in species whose individual members are intelligent, in varying degrees.\textsuperscript{270} So far, we humans have the most evolved capacity for criminal behavior.\textsuperscript{271}

Since Enhanced humans, Transhumans and Post-humans will be incrementally more intelligent than us, it is reasonable to assume that they, too, will manifest criminal behavior. It may assume forms we would not recognize (just as our nineteenth-century predecessors would not recognize computer crimes), but that is not important. As long as humans, Enhanced humans, Transhumans and/or Post-humans are willing to violate the law to gain an unfair advantage or otherwise inflict “harm”s that threaten social stability, the world will have crime and will need a criminal law that can keep it within acceptable levels.\textsuperscript{272}

My goal, then, is to analyze how we might adapt our existing approach to the imposition of criminal liability to situations in which the victim and perpetrator of the crime are “persons” with very different abilities. My theory is that if we can devise principles that take the “difference” between Standard and Enhanced perpetrator(s) and victim(s) into account in assessing and imposing criminal liability, we can then extrapolate those principles to the variations outlined above, and any others that may emerge.\textsuperscript{273}

\section*{III. CRIME, DIVERGENCE AND RESPONSIBILITY}

\textit{[H]uman enhancement poses the very real risk of fostering a dangerous divide between enhanced and unenhanced individuals.}\textsuperscript{274}

\begin{small}
\textsuperscript{270}See id. Criminal, or “deviant,” behavior is an individual’s “deliberate failure to follow rules that govern behavior in a social system.” \textit{Id.} at 28. Ants are not intelligent entities and therefore cannot engage in criminal, or deviant, behavior. See \textit{id}. 21 (“an ant cannot steal food from the colony stores and flee, attack another ant from its own colony or take a day off from work”). See also at 20-28.

\textsuperscript{271}See \textit{id}. at 31-36.


\textsuperscript{273}In addition to Standard humans, Enhanced humans, Transhumans and/or Post-humans, these principles might also be extrapolatable to crimes that involved alien life forms, cyborgs, cybrids and/or chimeras (assuming, of course, that Post-humans are not cyborg, cybrids and/or chimeras). Cyborgs are “hybrid creature[s]” that are “part machine and part human.” Andrea M. Matwyshyn, \textit{Corporate Cyborgs and Technology Risks}, 11 Minn. J.L. Sci. & Tech. 573, 573 (2010). Cybrids are “cytoplasmic hybrids”, which are created by “‘incubating’ human genetic material in cytoplasm from an animal” and chimeras are created by “adding one or more animal cells to a human embryo”. Loane Skene, \textit{Recent Developments in Stem Cell Research: Social, Ethical, and Legal Issues for the Future}, 17 Ind. J. Global Legal Stud. 211, 240 note 136 (2010).

\textsuperscript{274}Nayef R.F. Al-Rodhan, The Politics of Emerging Strategic Technologies, \textit{supra} note 7 at 229.
\end{small}
In § II(A), we examined how law has approached the issue of accepting women, slaves, infants, “normal” humans, “abnormal” humans, animals, objects and/or artificial entities as legal persons. In § II(B), we saw how and why we are likely to see the emergence of new and potentially even more problematic candidates for personhood: enhanced human beings. I use “enhanced human beings” as a collective noun that encompasses the three categories of “improved” humans we examined in § II(B): Enhanced humans, Transhumans and Post-humans.

Section II(B) examined the forces that are likely to produce enhanced humans in the near future. In § III(A), we will take the analysis a step further by considering how, and why, the emergence of enhanced human beings could produce conflict, including criminal victimization, between Enhanced and unenhanced, or Standard, humans. In § III(B), we will analyze how our doctrines of criminal responsibility could be modified so they can encompass the victimization of enhanced human beings by Standard humans and vice versa.

A. Potential for Conflict

*If we start transforming ourselves into something superior, what rights will these enhanced creatures . . . possess when compared to those left behind?*

As the question above illustrates, there is concern that the rise of enhanced human beings will create friction – even conflict – between them and their less able counterparts -- Standard human beings. Much of this concern derives from what many assume will be

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275 For the purposes of analysis, I assume none of the enhancements already in use have produced Enhanced humans as the concept is defined above. See supra note 7.


278 For a rather extreme view of the potential conflicts, see, e.g., George J. Annas, *American Bioethics: Crossing Human Rights and Health Law Boundaries* 51 (2005):
differential opportunities for enhancement, i.e., the wealthy will be more able to enhance themselves and their children than will those of modest means.\textsuperscript{279} And they will keep improving themselves, generation after generation.\textsuperscript{280} Some believe this will produce increasing, embedded societal inequality, which, in turn, will lead to clashes between enhanced and Standard human beings.\textsuperscript{281}

Scholars from various fields are analyzing the possibility for such clashes and their likely impact on the fabric of future society.\textsuperscript{282} Some predict that the Enhanced will see Standard humans as inferior and therefore open to exploitation, in any of several ways.\textsuperscript{283} I suspect Standard humans will be at least equally likely to resent Enhanced humans and to act on that resentment, at least on occasion, by lashing out at them.\textsuperscript{284} If scenarios such as

\begin{quote}
[Posthumans] will likely view the old `normal' humans as inferiors, even savages, and fit for slavery or slaughter. The normal, on the other hand, may see the posthumans as a threat, and if they can, engage in a preemptive strike by killing the posthumans before they themselves are killed or enslaved by them.
\end{quote}


\textsuperscript{280}See, e.g., Lee M. Silver, Remaking Eden, \textit{supra} note 235 at 4-6.

\textsuperscript{281}As to the potential for clashes between enhanced human beings and Standard human beings, \textit{see, e.g., id.} For a less dramatic view of how conflict might arise between the two, \textit{see} F. Patrick Hubbard, “\textit{Do Androids Dream?}”, \textit{supra} note 156 at 438-439:

[I]t seems likely that, no matter how radically altered, posthumans will be able to satisfy the test of capacity for personhood. . . . Ordinary humans might be tempted to deny them that status . . . because of the possibility that unenhanced humans would be unable to compete successfully. On the other hand, posthumans may view themselves as superior, and there may be legitimate grounds for them to view ordinary humans as developmentally disabled. Even if the ordinary humans shared autonomous personhood with posthumans, ordinary humans might be granted a lesser version of civil and political rights.


\textit{But see} Transhumanist FAQ: Will Posthumans or Superintelligent Machines Pose a Threat to Humans Who Aren’t Augmented?, Humanity+, \url{http://humanityplus.org/philosophy/transhumanist-faq/#answer_39}.

\textsuperscript{282}See \textit{supra} notes 235 & 281 & accompanying text.

\textsuperscript{283}See, e.g., Nayef R.F. Al-Rodhan, The Politics of Emerging Strategic Technologies, \textit{supra} note 7 at 229 (Enhanced human would “likely . . . view an . . . unenhanced human as inferior and therefore possibly fit for exploitation”). \textit{See also} \textit{supra} notes 278 & 281.

\textsuperscript{284}See generally \textit{supra} note 235. For a fictional account of such a scenario, \textit{see supra} note 7.
this eventuate, societies will have to decide if they should continue to recognize only one class of “persons” or should divide “persons” into categories (e.g., Enhanced and Standard) and adopt correlate, category-specific laws that govern the conduct of each category and their encounters with members of the other category.  

Such laws might be predicated on a premise analogous to the premise on which our juvenile laws are based, i.e., they might be intended to “protect” less-abled Standard humans from superior Enhanced humans. Or, instead of trying to “protect” Standard humans from Enhanced humans (or vice versa), a society could elect to segregate them, insofar as possible, by adopting laws that created a caste system in which Standard humans were restricted to certain, less desirable employment opportunities, avenues of education and residential areas. The goal would be to minimize conflict by minimizing contact between the two.

285 For fictive examples of such law, see supra note 7. As we will see, the issues raised by the existence of Standard and Enhanced persons are, at least in certain respects, analogous to those John Chipman Gray and the common law addressed in considering the “personhood” of “normal” human beings and “abnormal” human beings. See supra § II(A)(2).

286 See supra note 285. So, instead of needing protection because of their immaturity, Standard humans would be deemed to need protection because they were intellectually and/or physically inferior to their Enhanced counterparts. See, e.g., Barry C. Feld, The Transformation of the Juvenile Court, 75 Minn. L. Rev. 691, 723-724 (1991) (noting that juvenile courts provide children with “all the procedural guarantees . . . available to adult defendants and additional enhanced protections because of the children's vulnerability and immaturity”). Juvenile courts are not he only area in which law seeks to protect children from their own behavior. See, e.g., Elizabeth Cauffman & Laurence Steinberg, The Cognitive and Affective Influences on Adolescent Decision-Making, 68 Temp. L. Rev. 1763, 1763 (1995) (noting that in “In contract law, because immature individuals are more easily taken advantage of, minors receive special protection”).

Another, even less flattering analogy might be how law approaches the mentally handicapped. See, e.g., Daniel Wikler, Paternalism in the Age of Cognitive Enhancement: Do Civil Liberties Presuppose Roughly Equal Mental Ability?, in Human Enhancement, supra note 11 at 341, 346:

[If the relative difference between average people and the mildly or moderately retarded person justifies steps by the former to curtail the liberties of the latter – for his or her own good, of course – would the same consideration not justify similar action by a much smarter-than-average person vis-à-vis the average person?]


Such a radical approach might well eventuate at some point in the distant future. My focus, as I have noted before, is on the near future, which means my concern is with how we could adapt our existing doctrines of criminal responsibility so they could fairly and equitably be applied to something new: the victimization of a “superior” class of legal persons by a presumptively “inferior” class of persons and vice versa. We take up that issue in the section immediately below.

B. Criminal Responsibility and Differential Personhood

[A] special federal grand jury was convened today to investigate the outbreaks of violence between implanted and nonimplanted citizens that continue to plague the nation.288

In this section, we will analyze how our existing, one-size-basically-fits-all approach to imposing criminal liability may need to be modified if and when we find ourselves dealing with two classes of persons: Standard human beings and Enhanced human beings.

To encompass the relevant doctrinal and empirical factors, the analysis needs to incorporate three dichotomies, the most obvious of which is the Standard-Enhanced dichotomy. The second is the perpetrator-victim dichotomy, i.e., Standard humans and Enhanced humans can each be the perpetrator(s) of a crime or the victim(s). The third dichotomy goes to an issue I noted earlier that has been an implicit element of our analysis: human enhancement can take the form of increasing a person’s intelligence and/or his or her physical abilities. While our analysis to this point has tended to focus primarily on cognitive enhancements, there is no reason to assume they will not go hand in hand with physical augmentation, as well.289

Logically, then, the analysis needs to examine four basic scenarios: Standard perpetrator and Standard victim; Standard perpetrator and Enhanced victim; Enhanced perpetrator and Standard victim; and Enhanced perpetrator and Enhanced victim. While the scenarios, on their face, only appear to encompass the first two dichotomies noted above, our analysis of each will include an assessment of the Enhanced participant’s superior intellectual and/or physical abilities.

1. Standard perpetrator and Standard victim

Since our laws were (and are) devised to assess and impose criminal liability on Standard humans, e.g., unenhanced members of the species Homo sapiens sapiens, it

288 Daniel H. Wilson, Amped, supra note 7 at 173. As note 7 explains, Wilson’s book is a novel that explores conflict between humans who have received neural implants that improve their intelligence and other cognitive facilities and those who have not.

289 See supra notes 10 - 14 & accompanying text. See also supra note 7.
seems this scenario does not present any issues that can be appropriately dealt with by existing criminal law. That is likely to be true if the basic criminal law that has evolved over the last centuries remains the criminal law – the only criminal law – that applies to Standard-Standard victimization.

Logically, it seems that the only context in which this scenario could become problematic is if we adopted “new” principles of criminal responsibility governing the third scenario noted above, i.e., Enhanced human victimizes Standard human. If we simply apply traditional Standard-human perpetrator and Standard-human victim criminal law to that scenario, then this first scenario should not become problematic.

If, though, we develop new principles of criminal liability that impose heightened standards of responsibility on an Enhanced human who victimizes a Standard human, this first scenario could become problematic, in the same way and for the same reasons the application of statutory rape laws to consensual sex between minors can become problematic.290 While this variation of the first scenario may seem unlikely, it might very well not be, especially if we were to base the so-far hypothesized heightened standards of criminal responsibility governing the third scenario on an analogy between Enhanced-Standard human encounters and adult-juvenile sexual encounters.291

Juvenile laws, including statutory rape laws, are intended to protect children, who are deemed less capable than adults because of their immaturity, from being victimized by adults.292 Statutory rape laws have, though, been used to prosecute minors who have consensual sex with other minors, even though that result is inconsistent with the premise of the laws, i.e., protecting children from predatory adults.293 If we assume, for the purposes of analysis, that future law imposes heightened criminal responsibility on an Enhanced human who victimizes a Standard human, that law might, if it were not crafted to encompass only this particular scenario, also be applied to a Standard human who victimizes another Standard human. Given our experience with statutory rape laws, the

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290 See infra notes 291 - 292 & accompanying text.

291 See supra note 286 & accompanying text. In other words, the Enhanced human perpetrator would be analogous to a Standard “adult” human and the Standard human victim would be analogous to a Standard “juvenile” human who is victimized by the adult. See id. See also infra note 292 & accompanying text.


likelihood such a result would eventuate would probably depend on the purpose of the law and the conduct it encompasses.\textsuperscript{294}

There is also a converse scenario, in which a law that imposes a heightened standard of criminal responsibility on a Standard human who victimizes an Enhanced human is also applied to cases involving two Standard humans.\textsuperscript{295} Unlike the scenario analyzed above, this scenario involves a heightened standard of responsibility that is specifically, and intentionally, imposed on Standard humans, albeit in a different context.

The extrapolation of such a law to cases involving two Standard humans would presumably depend on the extent to which the rationale for imposing such responsibility on Standard humans who inflict certain “harm” on Enhanced humans could be extended to the victimization of one Standard human by another.\textsuperscript{296} Since the section below examines the rationale for imposing such responsibility, I will defer the analysis of this issue until the next section.

2. Standard perpetrator and Enhanced victim

As we saw above, criminal law imposes heightened standards of criminal responsibility on victimizers who are presumed to be “superior” to their victims in one or more respects.\textsuperscript{297} The rationale for imposing such standards is to “protect” those who, due to immaturity or other factors, are less able to protect themselves than others.\textsuperscript{298}

If we assume that all Enhanced humans will be physically and intellectually “superior” to all Standard humans, then there would seem to be no reason to impose a heightened standard of criminal responsibility on a Standard human who victimized an Enhanced human. Since this scenario involves the victimization of a “superior” human by

\textsuperscript{294}As noted above, the justification given for extending statutory rape laws to encompass consensual sex between minors is the need to protect minors “from themselves.” See supra note 293. This justification is derived from the purpose of these laws (protect minors) and the conduct at issue (sexual activity). It extrapolates the proposition that the law must protect minors because their immaturity makes them less able to “make good choices” than adults to encompass sexual activity in which the presumptive element of adult coercion is absent. See, e.g., State v. Limon, 280 Kan. 275, 297, 122 P.3d 22, 35-36 (Kansas 2005). See also supra note 293.

So the likelihood that the law postulated above would be applied to a Standard human who victimizes another Standard human (as well as to an Enhanced human who victimizes a Standard human), would probably be a function of the extent to which courts and legislatures found it necessary to “protect” Standard humans from the activity at issue, given their presumptively impaired ability to “make good choices.”

\textsuperscript{295}See infra § III(B)(2).

\textsuperscript{296}See supra notes 293 & 294 & accompanying text.

\textsuperscript{297}See supra § III(B)(1). We will also address this issue in § III(B)(3), infra.

\textsuperscript{298}See supra § III(B)(1). See also § III(B)(3), infra.
an “inferior” one, it seems there should be no reason to use law in an attempt to level the playing field, i.e., to protect the “superior” person from the “inferior” person. 299

The assumption noted above implicitly presumes that the Enhanced are a generic group, i.e., that they, like Homo sapiens sapiens, all possess intellectual and physical abilities that fall within a specific range. This is true of the members of Homo sapiens sapiens because we belong to a single species. 300 The Enhanced, as the term is defined in this article, are not a new species. 301 They are members of our species who have utilized/are utilizing technologies of various types to enhance their intellectual and/or physical abilities (and, no doubt, appearance) in ways that exceed the genetic capacity of Homo sapiens sapiens. 302 And that, of course, means there could be a good deal of variation in the extent to which specific Enhanced humans have “improved” their physical appearance, physical abilities and/or intellectual abilities.

So far, we have assumed the Enhanced would be a unitary class, i.e., that the types and levels of enhancement would be consistent across all of those who qualify as Enhanced. That seems a reasonable assumption, at least as long as we assume that enhancement is a unitary process, i.e., one is, or is not, enhanced. But the assumption that enhancement is a unitary process is predicated on yet another assumption, namely, that enhancement is a zero-sum opportunity that is either available or is not available. As to availability, unless and until governments or other beneficent entities provide enhancement for free, it will almost certainly be available only to those with the ability to purchase or otherwise take advantage of the available universe of enhancement technologies. 303

That opens up three possibilities for enhancement: Individuals enhance their physical and intellectual facilities to the maximum possible given existing technology (the Enhanced); individuals enhance their physical abilities (only) to the maximum possible; and individuals enhance their intellectual abilities (only) to the maximum possible. It is also, of course, possible that those who could not afford maximum enhancement would enhance their physical or intellectual abilities incrementally, as they were able to afford further improvements. For the purposes of analysis, though, I will focus only on the first three categories: the Enhanced, the physically Semi-Enhanced and the intellectually Semi-Enhanced. I am not including those who are incrementally pursuing intellectual or

299 See supra § III(B)(1).

300 See supra note 4. See also John H. Cartwright, Evolutionary Explanations of Human Behavior 173 (2001) (“A species is a set of organisms that possess similar inherited characteristics and . . . have the potential to interbreed”).

301 See supra note 7.

302 See id.

303 As to “otherwise” acquiring enhancement, see supra note 267 & accompanying text.
physical enhancement because I do not believe their status raises any legal issues other than those that emerge with the physically or intellectually Semi-Enhanced.\(^{304}\)

This brings us to the issue of imposing heightened criminal responsibility on a Standard human who victimizes (i) an Enhanced human, (ii) a physically Semi-Enhanced human or (iii) an intellectually Semi-Enhanced human. As we saw above, the rationale (so far) for imposing heightened responsibility is to deter “superior” persons from taking advantage of “inferior” persons.\(^{305}\) Logically, then, there should be no reason to impose such responsibility on a Standard human who victimizes an Enhanced or either type of Semi-Enhanced human because all three are presumably “superior” to the Standard human, at least in certain respects.

Since the Semi-Enhanced differ the least from our postulated Standard human perpetrator, it seems the argument for imposing heightened criminal responsibility on a Standard human who victimizes a Semi-Enhanced human should be stronger than the argument for imposing such responsibility on a Standard human who victimizes an Enhanced human. This, of course, assumes that the argument is based on the premise noted above, i.e., we impose heightened criminal responsibility on “superior” humans who victimize “inferior” humans.\(^{306}\) While Semi-Enhanced humans should be at least somewhat “superior” to Standard humans, they will certainly be less “superior” than will Enhanced humans. Their nascent level of enhancement means that they are not as “superior” as are Enhanced humans, which might justify the imposition of heightened criminal responsibility in this context. We will, therefore, analyze the permissibility of imposing such liability when a Semi-Enhanced human is the victim of the crime and then take up the issue of imposing such liability when an Enhanced human is the victim.

We begin with an intellectually Semi-Enhanced human. The future law we are postulating might elect to impose heightened criminal responsibility on Standard humans who used their physical prowess to victimize those whose intellect had been enhanced but whose physical abilities had not. The argument against imposing such responsibility would, of course, be that physical encounters between such individuals were, in effect, encounters between two Standard human beings and should therefore be governed by the standards that govern Standard-on-Standard victimization.\(^{307}\)

The only argument I can see for imposing heightened responsibility on the Standard victimizer in this scenario is that the intellectually Semi-Enhanced are, as a

\(^{304}\)Those who are pursuing enhancement incrementally are Semi-enhanced humans, either because they are pursuing the enhancement only of their intellectual or physical abilities or because they are at an intermediate, and therefore incomplete, stage in their progress toward becoming an Enhanced human. They, therefore, should not present any legal issues that do not arise with the Semi-Enhanced, of whichever type.

\(^{305}\)See supra § III(B)(1).

\(^{306}\)See supra note 299 & accompanying text.

\(^{307}\)For the scenario in which a Standard human uses his/her physical prowess to victimize a physically Semi-Enhanced human, see infra note 310.
group, entitled to protection from their less . . . “civilized” brethren. The premise might be that while intellectually Semi-Enhanced humans are physically indistinguishable from Standard humans, their augmented intellect means they are constitutionally ill-equipped to respond to physical aggression from Standard humans. In other words, while they are intellectually superior to Standard humans, their unenhanced physical abilities, coupled with their impaired capacity for aggressive behavior, requires that the law “protect” them by imposing heightened punishment on Standards who attack them.\(^{308}\)

This rationale is in effect the converse of the one that has been used to impose heightened responsibility on “superior” humans who victimize “inferior” humans.\(^{309}\) That rationale implicitly assumes that “superior” and “inferior” are zero-sum concepts, i.e., one is either superior or inferior. The rationale here is more nuanced: The premise is that an intellectually Semi-Enhanced human’s augmented intelligence makes him/her “superior” to Standard humans as a general matter, but also makes him/her “inferior” to essentially more brutish Standard humans when it comes to physical conflict. The law might, then, impose heightened responsibility on physically enhanced Standard humans in an effort to deter them from victimizing the intellectually Semi-Enhanced.\(^{310}\)

Is there a correlate argument for imposing heightened criminal responsibility on Standard humans who victimize physically Semi-Enhanced humans by means other than

\(^{308}\)This rationale might also justify imposing heightened criminal responsibility on a Standard human who physically victimizes an Enhanced human . . . if the latter’s augmented intelligence was deemed to interfere with his/her ability to respond effectively to physical aggression. The premise here might be that while Enhanced humans, unlike intellectually Semi-Enhanced humans, are physically as well as intellectually enhanced, the latter effectively trumps their ability to respond to physical aggression. The viability of that premise would, of course, depend on the aptitudes of the Enhanced in general or of specific Enhanced humans.

\(^{309}\)See supra § III(B)(1).

\(^{310}\)Absent countervailing considerations, the same should be true if a Standard human uses his/her physical prowess to victimize a physically Semi-Enhanced human. (The Standard human might use weapons or other tactics to reduce or nullify the advantage the Semi-Enhanced would presumably otherwise enjoy given his/her enhancements.)

Like the scenario above, this one also reverses the rationale for imposing heightened criminal responsibility on “superior” individuals who victimize those who are “inferior” in some important respect. See supra § III(B)(1). Here, the victim is presumably “superior” to his/her victimizer with regard to the circumstances of the victimization, which means that, absent some other rationale for imposing heightened criminal responsibility, it would not be appropriate in this instance.

The scenario varies in a significant way if, as noted above, the Standard human used weapons or other devices to overcome or reduce the efficacy of the Semi-Enhanced human’s augmented physical abilities. That could be addressed, I suppose, by imposing heightened criminal responsibility on someone who does this to an Enhanced human. I emphasize that qualifier because it seems that the Standard human’s conduct could quite adequately be prosecuted as aggravated assault under existing, Standard-human-on-Standard-human criminal law. See, e.g., Model Penal Code § 211.1(2). That option would seem satisfactory unless, of course, the fact that the attack targeted an Enhanced human was, in and of itself, enough to justify the imposition of heightened responsibility on the Standard human perpetrator. See infra note 314 & accompanying text.
the use of physical force? Assume that a Standard human defrauds a physically Semi-Enhanced human. Also assume that the fraud in no way involved the perpetrator’s and victim’s respective physical abilities. So the crime involved a Standard human and a Semi-Enhanced human whose intellect had not been augmented. It seems this scenario also, in effect, involves Standard-on-Standard victimization and should therefore be governed by the law that applies to such a scenario, i.e., the default criminal law.311

Since the Semi-Enhanced’s augmented physical abilities would presumably not be relevant to his/her victimization by a Standard fraudster, I, at least, find it difficult to articulate an argument for imposing heightened criminal responsibility on the Standard victimizer in this scenario. . . unless we decide that this scenario, the one involving the intellectually Semi-Enhanced victim and other variations on these two scenarios, are encompassed by a global rationale for imposing heightened responsibility on Standard humans who victimize the Enhanced and/or Semi-Enhanced.312 As we have seen, in United States law, the traditional rationale for imposing heightened criminal responsibility is to deter “superior” persons from taking advantage of “inferior” ones.313 Criminal law has so far sought to protect those who are less able to protect themselves, but that does not exhaust the range of potential rationales for imposing heightened responsibility.

The Enhanced might decide that they – and perhaps their Semi-Enhanced counterparts – deserve more protection from the presumptively more erratic and less law-abiding (and also, perhaps, resentful) Standard humans than traditional criminal law accords. They might decide to use heightened criminal responsibility to protect the (more or less) “superior” from the “inferior” . . . a tactic that could become part of the Enhanced-Standard caste system hypothesized earlier.314

311 The same should also be true if a Standard human defrauds an intellectually Semi-Enhanced human. Here, the victim is presumably “superior” to his/her victimizer with regard to the specific abilities that are involved in fraud: the perpetrator’s ability to successfully deceive the victim and the discerning victim’s ability to see through this. See, e.g., State v. Carcare, 75 Conn. App. 756, 777, 818 A.2d 53, 67 (Conn. 2003), abrogated on other grounds State v. Jenkins, 298 Conn. 209, 3 A.3d 806 (Conn. 2010). See also United States v. Fiorito, 640 F.3d 338, 351 (8th Cir. 2011) (participant in fraud crime testified that she and the lead perpetrators “were looking for vulnerable, poor, dumb people” who “wouldn't be able to catch on to our scheme”); David Godfrey, Financial Fraud Likely to Increase in 2009, 30 No. 4 Bifocal 59, 59 (2009) (“Knowledge and a healthy dose of skepticism are the best tools to prevent becoming a victim of a financial scam”).

Given that, and absent some other rationale for imposing such liability, heightened criminal responsibility should not be necessary in this scenario. See supra note 307. See also supra § III(B)(1). The same principle should apply, again absent countervailing considerations, if a Standard human defrauds an Enhanced human. See generally supra note 308.

312 The observation above also encompasses the scenarios examined in the notes above. See supra notes 307 - 311.

313 See supra § III(B)(1).

314 See supra note 287 & accompanying text. Such a development would be neither illogical nor unprecedented: “The traditional Indian caste system was based on the premise that the Brahmins were the ‘ontologically complete and most perfect representatives of the human species; all others are inferior approximations of the Brahmin standard.” Brian K. Smith, Classifying the Universe: The Ancient Indian
Before we move on to the next scenario, I need to note an issue that might play a pivotal role in an effort to impose heightened criminal responsibility on Standard humans who victimize Semi-Enhanced or Enhanced humans (and vice versa): the perpetrator’s knowledge that the victim was (or was not) enhanced. It seems that here, as in other, similar contexts, such knowledge would be an essential element of the heightened responsibility.\textsuperscript{315}

The question lawmakers would have to resolve is whether such knowledge should be presumed (strict liability) or would have to be proven beyond a reasonable doubt based on the facts at issue in the case (personal fault).\textsuperscript{316} While personal fault (\textit{mens rea}) has historically been a defining characteristic of criminal law, American criminal law has accepted strict liability in certain contexts.\textsuperscript{317} One author attributes this to “expediency: “in some areas of conduct it is difficult to obtain convictions if the prosecution must prove fault, so enforcement requires strict liability.”\textsuperscript{318}

Imposing heightened criminal responsibility on Standard humans who victimize Enhanced and/or Semi-Enhanced humans would therefore have to be based on one of these approaches to culpability: (i) the perpetrator is liable because he/she knew of the victim’s enhanced status and attacked for that reason (personal fault); or (ii) the perpetrator is liable because he/she contumaciously ignored the possibility that the victim was enhanced (strict liability). And that brings up an issue we cannot resolve at this point, given our limited experience with enhancement: Would a Standard human be able to recognize a Semi-

\textsuperscript{315}The U.S. Sentencing Guidelines enhances the sentence of someone who targeted a “vulnerable victim if the defendant knew or “should have known” that the victim was “vulnerable”, within the meaning of the Guidelines. \textit{See U.S.S.G.} § 3A1.1(b)(1). \textit{See also infra} § III(B)(3)(a)(i).

\textsuperscript{316} \textit{See infra} notes 317 - 318 & accompanying text. \textit{See also} Clark v. Arizona, 548 U.S. 735, 766 (2006) (“As applied to \textit{mens rea} (and every other element), the force of the presumption of innocence is measured by the force of the showing needed to overcome it, which is proof beyond a reasonable doubt that a defendant’s state of mind was in fact what the charge states”).

\textsuperscript{317} \textit{See, e.g.}, Wayne R. LaFave, Substantive Criminal Law 2d §§ 5.1 & 5.5 (2d ed. 2011). \textit{See also} United States v. Bailey, 444 U.S. 394, 404 n.4 (1980) (strict liability crimes are “exceptions to the general rule that criminal liability requires an ‘evil-meaning mind’”); State v. Lucero, 87 N.M. 242, 144, 531 P.2d 1215, 1217 (New Mexico Court of Appeals 1975) (“A strict liability statute is one which imposes criminal sanction for an unlawful act without requiring a showing of criminal intent”).

\textsuperscript{318}Wayne R. LaFave, Substantive Criminal Law 2d, \textit{supra} note 317 at § 5.5(c).
Enhanced or Enhanced human on sight, and vice versa? In other words, would it be apparent to a Standard human that he was dealing with an Enhanced or a Semi-Enhanced human upon encountering that person? And would it be equally apparent to an Enhanced or a Semi-Enhanced human that she was dealing with a Standard human upon encountering that person?

Since I am assuming a world in which the three mix relatively freely, I am also assuming that none of the classes would wear distinct clothing or badges or other markers that formally identified their status. But formal markers might not be needed; Standard humans might be able to identify Semi-Enhanced and Enhanced humans, and they might be able to identify Standard humans, based on characteristics such as the person’s speech, where they live, how they dress and, perhaps, even their physique.

If a Standard human would not be able to identify a Semi-enhanced and/or Enhanced human, law would have to base the imposition of the heightened criminal responsibility on Standard humans who victimize Enhanced or Semi-Enhanced humans on the second approach noted above, i.e., on the premise that the Standard perpetrator was liable because he/she ignored the possibility that the victim was enhanced (strict liability). If the opposite were true – if Standard humans could identify Semi-enhanced and Enhanced humans – law could base the imposition of such responsibility on the first approach noted above, i.e., on personal fault.

But these might not be the only considerations that determined the approach law used to culpability in this scenario. If the imposition of heightened criminal responsibility were based on the rationale noted above, i.e., the need to protect “superior” enhanced humans from the “inferior” and therefore presumptively more dangerous Standard humans, law-makers might well opt to rely on strict liability. The reason they might do this lies in the fact that strict liability puts the risk of incurring criminal liability on those who engage in certain proscribed conduct. Since criminal liability is imposed without a

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319 Cf. Eric D. Weitz, A Century of Genocide: Utopias of Race and Nation (2003) (in 1938, the Nazi regime ordered Jews to wear a yellow Star of David with the word “Jude” inscribed in the middle); Aldous Huxley, Brave New World, supra note 287 at 27-28 (members of the various castes in the society Huxley describes wear distinctive clothing, e.g., Alphas wear grey, Betas wear black, Gammas wear green and so on).


321 The use of strict liability in this context would be consistent with the rationale noted above, i.e., it would be used out of expediency. See supra note 318 & accompanying text. For more on this issue, see infra § III(B)(3).

322 See supra note 318 & accompanying text. For more on this issue, see infra § III(B)(3).

demonstration of personal fault, strict liability is considered to be more effective in deterring the conduct at issue than the traditional, fault-based approach.\footnote{See id. See also James H. Knight, The First Hit’s Free . . . or Is It? Criminal Liability for Drug-Induced Death in New Jersey, 34 Seton Hall L. Rev. 1327, 1334-1335 (2004).} So, if the goal was to protect the “superior” enhanced humans from their more dangerous, and more primitive, counterparts, criminal law might well opt to impose strict liability on Standard humans who victimize Semi-Enhanced and/or Enhanced humans.

3. Enhanced perpetrator and Standard victim

To us, this scenario may seem the one in which the imposition of heightened criminal responsibility is the most appropriate, given that we are Standard human beings. As such, we cannot, perhaps, avoid some apprehension as to the inequities that might emerge in interactions between Enhanced humans and Standard ones.

As noted earlier, the author of a novel that deals with the emergence of a type of Enhanced human beings and their interactions with what we are referring to as Standard human beings includes a fictive federal court ruling that addresses one aspect of the relationship between the two.\footnote{See Daniel H. Wilson, Amped, supra note 7 at 32.} The federal judge holds that “in an effort to remedy the . . . disparity between natural and enhanced levels of intelligence” and “to create a level playing field,” the Enhanced “lack the capacity to contract” with Standard humans.\footnote{See id. In the novel, there are only two classes of people: what we are referring to as Enhanced humans and Standard humans. See supra note 7.} In other words, the Enhanced are simply “too smart” to be allowed to enter into contractual relations with their less-abled Standard brethren.

That approach would, as we have seen, be consistent with criminal law’s historic concern with preventing “superior” persons from taking advantage of “inferior” ones.\footnote{See supra § III(B)(1).} What is different here, of course, is that normal humans are now the “inferior” persons who must be protected from the “superior” Enhanced and Semi-Enhanced humans. In the novel, as noted above, the ruling is issued by an un-enhanced human being and is clearly intended as a protectionist measure, to ensure the Enhanced cannot exploit their superior intelligence to the detriment of the still-dominant Standard humans.\footnote{See supra § II(A)(1)- (2) & III(B)(1).}

While the fictional ruling is based in civil contract law, it is reasonable to assume that the concern with protecting “inferior” Standard humans from “superior” enhanced humans would manifest itself in criminal law, as well.\footnote{See Daniel H. Wilson, Amped, supra note 7 at 32. See also supra note 7.} We will therefore assume, for the purposes of analysis, that future criminal law will incorporate the policy of protecting
“inferior” Standard humans from “superior” Semi-enhanced and Enhanced humans.\(^{330}\) The issue then becomes, how should it go about doing this?

As we saw in § III(B)(2), criminal law takes two approaches to imposing liability: One relies on personal fault, so the defendant is held liable for the “harm” he or she willfully inflicted on another person; the other approach is strict liability, in which the defendant is held liable for the “harm” he or she inflicted on someone who falls within a protected class of people.\(^{331}\) One is individual-specific; the other is generic.

In the sections below, we explore the potential for using these approaches in scenarios in which a Semi-Enhanced or Enhanced human victimizes a Standard human. We begin with strict liability.

\textbf{(a) Strict Liability}

As we also saw in § III(B)(2), criminal law’s ability to rely on personal fault in holding a Standard human liable for victimizing a Semi-Enhanced or an Enhanced human will depend on whether Standard humans can identify either or both types of enhanced human. If a Standard human can identify enhanced humans, then it would be possible to predicate heightened criminal responsibility on personal fault, which, in turn, would be consistent with how criminal law has traditionally approached victimization.\(^{332}\)

Such liability would be imposed upon, and only upon, Standard humans who knowingly victimized Semi-Enhanced and/or Enhanced humans. This is a product of the rationale postulated above, i.e., law would impose heightened criminal responsibility on “inferior” Standard humans to protect the “superior” Semi-Enhanced and Enhanced humans.

\(^{330}\) Such a policy would probably, as in Wilson’s novel, originate with Standard humans who were becoming discomfited by the presence, and abilities, of enhanced humans. See Daniel H. Wilson, Amped, \textit{supra} note 7. Their discomfiture might be analogous to, but more extreme than, the discomfiture some U.S. citizens feel about legal and/or illegal immigrants. See, e.g., Phil Roe, \textit{Illegal Immigration Is a Serious Threat to America’s National Security}, The Hill (April 26, 2012), http://thehill.com/blogs/congress-blog/judicial/224051-illegal-immigration-is-a-serious-threat-to-americas-national-security. See also \textit{Immigration Invasion Threatens America’s Survival}, Storm Front, http://www.stormfront.org/truth_at_last/archives/immigrat.htm.

\(^{331}\) It could result in the imposition of the criminal liability postulated above and might eventually lead to a caste system that segregated Standard and Enhanced humans. See \textit{supra} note 287 & accompanying text. See \textit{generally} Daniel H. Wilson, Amped, \textit{supra} note 7. If the caste system were implemented by Standard humans, who are likely to be the dominant force for some period after the Enhanced appear, it would no doubt be designed to “protect” them from the Enhanced. On the other hand, once they establish themselves, Enhanced humans might decide it was prudent – for their safety or simply to avoid encountering their lesser brethren – to create a caste system in which they were the dominant entities. See \textit{supra} note 287 & accompanying text.

\(^{332}\) See \textit{supra} § III(B)(2).
humans. As we also saw above, the imposition of this type of liability would be a function of the extent to which Standard humans could identify Semi-Enhanced and Enhanced humans. Logically, law cannot hold someone liable for knowingly victimizing victims who have certain characteristics unless prosecutors can prove that the perpetrator knew the victim possessed those characteristics.

Strict liability therefore becomes the residual predicate. If a Standard human would not be able to identify a Semi-enhanced or Enhanced human, law could base the imposition of the heightened criminal responsibility hypothesized above on strict liability, i.e., on the premise that the Standard perpetrator was liable because he/she ignored the possibility that the victim was enhanced. As we saw above, the imposition of such liability might also be predicated on a policy of protecting “superior” enhanced humans from their more primitive, and presumably more dangerous, counterparts.

Scenarios in which a Semi-Enhanced or an Enhanced human victimizes a Standard human would be governed by the opposite analysis. As we have seen, American law uses heightened criminal responsibility to protect individuals who are “inferior” in certain respects (e.g., age, mental disability) from those whose abilities are normal and consequently “superior” to the victim’s. The analysis in § III(B)(2) explored the converse of this principle, i.e., it analyzed the permissibility of using heightened criminal responsibility to protect the “superior” from the “inferior.”

The scenario with which we are currently concerned – a Semi-Enhanced or an Enhanced human victimizes a Standard human – falls within the original rationale noted above, i.e., using heightened criminal responsibility to protect the “inferior” from those who are “superior” in certain respects. It falls within this rationale because the Semi-Enhanced and the Enhanced are, in varying degrees, physically and mentally “superior” to Standard humans. The relationship between them is therefore analogous to the relationships that gave rise to the policy of protecting the “inferior” from the “superior”;

333 See supra note 314 & accompanying text.
334 See supra note 322 & accompanying text.
335 See id.
336 See supra § III(B)(2). See also H.L.A. Hart, Punishment and Responsibility: Essays in the Philosophy of Law 20 (Oxford Univ. Press 1968) (a strict liability crime is one “where it is no defence to show that the accused, in spite of the exercise of proper care, was ignorant of the facts that made his act illegal”)
337 See supra § III(B)(2).
338 See supra § III(B)(1).
339 See supra § III(B)(1).
340 See supra § I.
one can analogize the Semi-Enhanced and Enhanced to “normal” adult human beings and Standard humans to children and/or other “abnormal” human beings.\footnote{See supra § II(A)(2).}

In at least one area, U.S. criminal law relies on strict liability to protect children: In § III(B)(1), we saw that American criminal law seeks to protect minors from adults who will coerce them into having sexual relations by adopting laws that make such activity a distinct offense – statutory rape.\footnote{See supra § III(B)(1).} American statutory rape laws derive from English law: In 1275, the Statute of Westminster made it a felony to “have carnal Knowledge of Woman Child under ten Years of Age.”\footnote{The Statute of Westminster I, 1275, 3 Edw. 1, c. 13 (Eng.).} This and other early statutory rape laws were concerned with protecting a father’s interest in his daughter’s chastity, since “a non-virgin was considered less marriageable” and less likely to bring her father a dowry.\footnote{See, e.g., Michelle Olberman, \textit{Regulating Consensual Sex with Minors: Defining a Role for Statutory Rape}, 48 Buff. L. Rev. 703, 754-755 (2000).}

The United States “adopted England’s [gender-specific] statutory rape laws when it adopted the English common law,” and “initially did not change the age of consent.”\footnote{Meredith Cohen, \textit{No Child Left Behind Bars” The Need to Combat Cruel and Unusual Punishment of Statutory Rape Laws}, 16 J.L. & Pol’y 717, 726 (2008).} At the end of the nineteenth century, women’s groups began lobbying to increase the age of consent to better protect “girls from male sexual aggression.”\footnote{Daryl J. Olszewski, \textit{Statutory Rape in Wisconsin: History, Rationale, and The Need For Reform}, 89 Marq. L. Rev. 693, 695 (2006).} They succeeded, but statutory rape laws remained gender-specific until the mid-twentieth century, when a movement began to revise them so they protected minor males, as well as females.\footnote{See, e.g., Kelly C. Connerton, \textit{The Resurgence of the Marital Rape Exemption: The Victimization of Teens by Their Statutory Rapists}, 61 Alb. L. Rev. 237, 254-255 (1997); Michelle Oberman, \textit{Turning Girls into Women: Re-Evaluating Modern Statutory Rape Law}, 85 J. Crim. L. & Criminology 15, 30-33 (1994).} So, modern U.S. statutory rape laws are based on the need to protect “inferior” minors from making bad choices due to their immaturity.\footnote{See supra § III(B)(1).}

We could employ a similar approach in using criminal liability to protect “inferior” Standard humans from “superior” Semi-Enhanced and Enhanced humans. It would require adopting statutes that, like statutory rape laws, make it a crime for an enhanced human to engage in conduct that was designed to victimize a Standard human.\footnote{See, e.g., State v. Granier, 765 So.2d 998, 1001 (La. 2000).} But unlike these statutes might, like statutory rape laws, make the Standard human’s consent to the victimization irrelevant to the imposition of criminal liability, on the premise that the laws were intended to “protect” the “inferior” human from his/her bad choices.\footnote{See supra § III(B)(1). See, e.g., Chase v. State, 285 Ga. 693, 700, 681 S.E.2d 116, 121}
statutory rape laws, which are concerned with a very specific type of victimization, these laws would presumably impose heightened criminal liability on enhanced humans who victimize Standard humans in any of the ways our criminal codes prohibit (along with, perhaps, certain “new” crimes, if such were deemed necessary). If the goal is to level the playing field between Standard and enhanced, the categorical imposition of heightened liability on Semi-Enhanced or Enhanced humans who victimize Standard humans in any way would seem necessary.

That differentiates the Enhanced-Standard laws we are postulating from statutory rape laws in at least one notable respect: Statutory rape criminalizes conduct that would otherwise be legal. It is not a crime to have sexual relations; statutory rape makes it a crime to have sexual relations if the victim falls into the protected class, i.e., minors.

Like statutory rape laws, Standard-victimization laws would be designed to protect those who belong to an “inferior” class of humans from those whose “superior” abilities put the former at a disadvantage in their mutual encounters. Unlike statutory rape laws, however, these laws would presumably apply to essentially any “criminal” encounter between a Standard human and a Semi-Enhanced or an Enhanced human. Legislatures could implement this approach do this by amending the relevant statutes to make it an aggravated, strict-liability crime to commit the offense when a Standard human was the victim and the perpetrator was enhanced.

(b) Personal Fault

As we saw in § III(B)(2), individual-specific heightened criminal liability is a viable option in the Standard-Enhanced victimization scenario if Standard humans can identify Semi-Enhanced and/or Enhanced humans. Since such liability is intended to


In other words, given the disparity in abilities between the Semi-Enhanced or Enhanced human perpetrator and the Standard human victim, the latter would conclusively be presumed incapable of consenting to the acts involved in the crime. See, e.g., State v. Sprouse, 719 S.E.2d 234, 242 (N.C. App. 2011); People v. Armstrong, 490 Mich. 281, 292 n. 14, 806 N.W.2d 676, 682 n. 14 (Mich. 2011).

Law-makers might except certain offenses from the imposition of such liability on the grounds that they do not directly implicate the differential abilities of Standard humans versus Semi-Enhanced and Enhanced humans. See infra note 353. The imposition of heightened criminal liability would otherwise be used to create an additional disincentive for victimizing Standard humans.

See supra note 326 & accompanying text.


Ironically, consensual sexual relations might be an exception, at least as long as the Standard human and the Semi-Enhanced or Enhanced human were both adults.
“protect” enhanced humans, it must be predicated on the Standard human’s electing to victimize the Semi-Enhanced or Enhanced human because he/she is enhanced.\(^\text{354}\)

If we were to impose individual-specific heightened criminal liability on a Semi-Enhanced and/or an Enhanced human who victimized a Standard human, such liability would have to be predicated on the enhanced human’s either (i) selecting the victim because he/she is not enhanced (in order to take advantage of that circumstance)\(^\text{355}\) or (ii) victimizing someone he/she knows is a Standard human (but did not target for that reason).\(^\text{356}\)

For the purposes of this analysis, therefore, we will assume that enhanced humans will be able to identify Standard humans. This means Semi-Enhanced and Enhanced humans are aware, when they are dealing with Standard humans, that the latter are not enhanced.

We reviewed these issues in the previous section but we did not analyze the permissibility of imposing individual-specific heightened criminal responsibility on a Standard human who victimizes a Semi-Enhanced or an Enhanced human. We did not analyze this issue because I, at least, am not aware of any doctrines in the criminal law that might be applied to that scenario.

I am, though, aware of two principles that might be applied to scenarios in which an Enhanced human victimizes someone he/she knows to be a Standard human.\(^\text{357}\) One focuses on the victim, the other on the perpetrator. We will examine both below.

**(i) Vulnerable Victim**

The first principle goes not to the imposition of liability but to the penalty imposed on the perpetrator. The federal sentencing guidelines include a sentence enhancer that

\(^{354}\) See supra § III(B)(2). Cf. § III(B)(3)(a), supra (strict liability).

\(^{355}\) See infra § III(B)(3)(b)(i). This in effect incorporates the Model Penal Code’s concept of purposeful action. See Model Penal Code § 2.02(2)(a).

\(^{356}\) See infra § III(B)(3)(b)(ii). This in effect incorporates the Model Penal Code’s concept of knowing action. See Model Penal Code § 2.02(2)(b). See infra note 357.

\(^{357}\) I am using a knowledge standard, rather than a purposive, reckless or even negligent standard, in this analysis because I believe it is consistent with notions of personal fault and with the purpose of imposing heightened criminal responsibility on an Enhanced human who victimizes a Standard human.

It seems reasonable to impose such liability on the Enhanced human as long as he/she was “aware of” the relevant attendant circumstance (e.g., the victim is a Standard human) and it was his/her “conscious object” to engage in the conduct responsible for the victimization and/or to cause such victimization. See, e.g., Model Penal Code § 2.01(2)(a). See also id. at § 1.13(9)–(10).

And since the knowledge element would also encompass those who acted purposely, this approach provides adequate protection for Standard humans without unduly penalizing Enhanced humans.
applies when the defendant “knew or should have known” the victim of the offense “was a vulnerable victim”. 358 The application note for the guideline defines a vulnerable victim as someone “who is unusually vulnerable due to age, physical or mental condition”. 359

The vulnerable victim enhancement is based on a “‘just deserts’” rationale, i.e., that an individual who victimizes someone who is less able to defend himself or herself deserves “extra punishment”. 360 It is analogous to statutory rape in that it is intended to protect those who, for one reason or another, are less able to protect themselves; the enhancement is also analogous to statutory rape in that it tends to be described in terms of certain classes of people, but differs in that the imposition of liability is based on “the individual victim and not the class of persons to which the victim belonged.” 361 The three factors cited above – age, physical condition or mental condition – create “a strong presumption of unusual vulnerability”, but the sentencing court must find that (i) the relevant factor(s) actually contributed to the victim’s vulnerability and (ii) the defendant was aware of the factor(s). 362

Future law could use an analogous approach in dealing with a Semi-Enhanced or Enhanced human who victimized a Standard human. Assume, for example, that a physically Semi-Enhanced human defrauds someone he knows is a Standard human. Since the perpetrator’s enhancement is (presumably) not relevant to the victim’s vulnerability, it should not play a role in the liability analysis, even if the Semi-Enhanced

358 U.S. Sentencing Guideline §3A1.1(b)(1), http://www.ussc.gov/guidelines/2011_Guidelines/Manual_HTML/3a1_1.htm We, of course, are using a knowingly standard in this analysis. See supra note 357.

359 Id. at Application Note 2(B).


361 United States v. Smith, 133 F.3d 737, 749 (10th Cir. 1997). See, e.g., United States v. Anderson, 349 F.3d 568, 572 (8th Cir. 2003) (applying this enhancement “requires a fact-based explanation of why advanced age or some other characteristic made one or more victims ‘unusually vulnerable’ to the offense conduct, and why the defendant knew or should have known of this unusual vulnerability”).

362 Jay Dyckman, Brightening the Line, supra note 360 at 1974. See, e.g., United States v. Morris, 350 F.3d 32, 37-38 (2d Cir. 2003); United States v. Gerard, 129 F.3d 119, 1997 WL 659821 *8 (7th Cir. 1997). This is consistent with the knowledge standard used in this analysis. See supra note 357 & accompanying text.

perpetrator knew his victim was a Standard human being.\textsuperscript{364} As we saw above, this is essentially Standard-on-Standard crime and should be treated as such.\textsuperscript{365}

The result differs if the physically Semi-Enhanced human physically abuses one he knows to be a Standard human. Here, the victim’s relative physical condition puts him at a disadvantage, i.e., makes him a vulnerable victim.\textsuperscript{366} Heightened criminal liability should be imposed on the Semi-Enhanced human because he purposely or knowingly exploited his advantage in committing the crime.\textsuperscript{367} And the same respective results should apply, for the same reasons, if an intellectually Semi-Enhanced human (i) physically victimizes a Standard human or (ii) defrauds a Standard human.

What about cases in which an Enhanced human victimizes a Standard human? The Enhanced perpetrator (i) is physically and intellectually superior to his victim and (ii) purposely targeted the victim because he is not enhanced or because the perpetrator knew the victim is not enhanced and (iii) is therefore especially vulnerable to a physical attack or to being defrauded.\textsuperscript{368} Heightened criminal responsibility should be imposed on the Enhanced perpetrator in either event, i.e., regardless of whether he physically or intellectually victimized the Standard human, because he exploited his advantage in committing the crime.\textsuperscript{369}

Future law-makers could continue to approach the imposition of such liability as a part of the sentencing process, or they could selectively incorporate it into substantive criminal statutes.\textsuperscript{370} As to the latter, they might decide that it was only necessary to use such liability to protect Standard humans from particularly egregious crimes.\textsuperscript{371}

(ii) Martial Arts

\textsuperscript{364}This approach is analogous to the vulnerable victim analysis noted above. See supra note 362 & accompanying text.

\textsuperscript{365}See supra note 311 & accompanying text. The result would, of course, be different if the perpetrator’s physical enhancement was somehow relevant to the perpetration of the fraud.

\textsuperscript{366}See supra note 359 & accompanying text.

\textsuperscript{367}See supra note 362 & accompanying text. See also supra notes 355 & 356 & accompanying text.

\textsuperscript{368}See supra § III(B)(3)(b). The same should be true, albeit to a lesser extent, if a Semi-Enhanced human victimized a Standard human. See id.

\textsuperscript{369}See supra note 362 & accompanying text. See also supra notes 355 & 356 & accompanying text. If law-makers wanted to limit the applicability of this liability, they could do so by requiring that the enhanced perpetrator have purposely exploited his/her advantage in committing the crime. See supra note 357.


\textsuperscript{371}See id.
The vulnerable victim principle is well-established in U.S. sentencing law, but the converse principle, which focuses on the perpetrator, is not. I am referring to it as the “martial arts” principle because some have suggested that martial arts experts should be held to a higher standard in fights and other physical encounters because their skills give them an unfair advantage over “regular” people.\footnote{372}{See, e.g., Stephen Michael Ian Kunen, Superhuman in the Octagon, Imperfect in the Courtroom: Assessing the Culpability of Martial Artists Who Kill during Street Fights, 1389, 1390-1391 (2011). For the special skills of trained martial artists, see id. at 1410-1419.}

While I have been unable to find any cases in which a court specifically held that a trained martial artist is, essentially, an “enhanced” fighter, the issue has been raised and has met with some acceptance.\footnote{373}{See, e.g., Dominguez v. Thaler, 2009 WL 4059163 *6 (W.D.Tex. 2009): [W]e cannot say that it was irrational to conclude that Dominguez’s hands and knees qualified as deadly weapons. The evidence reveals [he] . . . had trained in the martial arts for over twenty years and that he had participated in a number of tournaments. Yvette testified that he used this martial arts training during the estimated thirty-minute assault. . . . The injuries . . . were severe enough for Dr. Saunders to worry about serious injuries, including subdural hematoma, cerebral contusions, and fractures to the vertebrae. . . . Dominguez was convicted of “aggravated assault with a deadly weapon, namely hands and knees.” Dominguez v. State, 2004 WL 1658350 *1 (Tex. App. 2004). Here, I am using the term enhanced in a purely generic sense, i.e., the acquisition of special abilities through training rather than through technology. See supra note 7.}

Some courts have also applied an analogous concept to hold that while the hands and feet of non-martial artist human beings are not normally deadly weapons, they can become deadly weapons when at attacker uses them against someone who is at a distinct physical disadvantage.\footnote{374}{See, e.g., Stephen Michael Ian Kunen, Superhuman in the Octagon, Imperfect in the Courtroom, supra note 372 at 1410-1434. The author begins by examining two versions of the facts in a California case: In the first, the defendant used excessive force because of his martial arts training rather than out of malice; in the second, he acts out of malice, intentionally killing the victim. See id. at 1391-1392 (hypotheticals based on People v. Torre, 2007 Cal. App. Unpub. LEXIS 5104, at *3, *6 (Ct. App. June 25, 2007)).}

The premise here is that while someone’s hands and/or feet are not generally considered to be a deadly weapon, the situation is “quite different” when they

\footnote{375}{See, e.g., State v. McNeil, 723 S.E.2d 585, 2012 WL 1337365 *6 (N.C. App. 2012) (mother’s hands were the deadly weapon used to cause the death of her 19-month-old son); State v. Estes, 719 S.E.2d 254, 2011 WL 5544790 *7 (N.C. App. 2011) (woman’s hands and feet were the deadly weapons used to cause the death of a “small and feeble man” who weighed 124 pounds and suffered from “coronary artery disease, pulmonary disease and emphysema”). See also State v. Sallie, 13 N.C. App. 499, 510, 186 S.E.2d 667, 674 (N.C. App. 1972); Bishop v. People, 165 Colo. 423, 430, 439 P.2d 342, 346 (Colo. 1968).}
are used on “upon an infant . . . or upon a person enfeebled by old age, sickness, or other apparent physical disability.”376

My point is that criminal law at least to some extent recognizes the need for a type of heightened liability when someone who is stronger or otherwise more physically advantaged than another person exploits that advantage to victimize the latter. This is analogous to the vulnerable victim principle we examined above in that it focuses on the victim’s vulnerability to what might otherwise be a relatively minor assault.377

It differs from the vulnerable victim principle, however, in that the focus here is more on the perpetrator’s advantage than the victim’s vulnerability. As opposed to the “just deserts” rationale noted above, the “martial arts” principle is based on the premise that the defendants’ enhanced abilities make him more dangerous, in the same way the use of a deadly weapon in committing a crime makes any offender more dangerous.378

This is the element that could be extracted and extrapolated to provide a basis for imposing heightened criminal responsibility on a Semi-Enhanced or Enhanced human who knowingly victimizes a Standard human. The concept I am referring to as the “martial arts” principle focuses on a normal human being’s using an advantage he/she has acquired through training, physical size, age relative to the victim and/or physical condition to inflict disparate “harm” on another normal human being.379 For the principle to apply, the perpetrator must be aware of the advantage he/she possesses over the victim.380

Law could extrapolate that principle to the physical victimization of Standard humans by Semi-Enhanced and/or Enhanced humans, on the premise that the latter’s physical abilities objectively exceed those of Standard humans.381 The extrapolation would be consistent with the policy noted above, e.g., to protect “inferior” Standard

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376 State v. Sallie, supra note 375, 13 N.C. App. At 510, 186 S.E.2d at 675. While the victims are often children or ill or elderly adults, courts have also applied this principle when the unfair advantage results from a notable disparity in the size and strength of two normal adults. See, e.g., State v. Jacobs, State v. Grumbles, 104 N.C.App. 766, 769–70, 411 S.E.2d 407, 409–10 (1991); 61 N.C. App. 610, 611, 301 S.E.2d 429, 430, disc. review denied, 309 N.C. 463, 307 S.E.2d 368 (1983);

377 See supra § III(B)(3)(b)(i).


379 So, unlike the enhanced perpetrator, these Standard human perpetrators exploit a physical advantage that is well within the normal range of human abilities.


381 The process would simply require analogizing encounters between a Standard human and a Semi-Enhanced or an Enhanced human to physical encounters between a normal adult and an infant or someone “enfeebled by old age, sickness, or other apparent physical disability.” State v. Sallie, supra note 375, 13 N.C. App. At 510, 186 S.E.2d at 675. See supra note 376 & accompanying text.
humans from “superior” enhanced humans, and with the rationale of the “martial arts” principle.\textsuperscript{382}

Extrapolating the “marital arts” principle to fraud and other crimes in which the victimization is predicated on cognitive disparities would be more problematic. As noted above, the vulnerable victim enhancement encompasses cases in which the victim was defrauded or the victimization was otherwise nonphysical.\textsuperscript{383} It should therefore not be difficult to extrapolate that principle to cases in which Semi-Enhanced and Enhanced humans exploit their superior cognitive abilities to victimize Standard humans.

The “martial arts” principle, on the other hand, is exclusively concerned with cases in which a physically-more abled human exploits that advantage to physically injury, or even kill, a less physically abled human being. It should not be difficult to extrapolate that principle to cases in which Semi-Enhanced or Enhanced humans exploit their greater physical abilities to assault or even kill Standard humans. But it seems that this principle, at least, could not legitimately be expanded to encompass non-physical victimization. We might, of course, come up with a correlate principle that encompassed fraud and other types of cognitively-based victimization.

\section*{C. Sum}

The theory upon which our political institutions rest is, that . . . all are equal before the law.\textsuperscript{384}

If humans split into differently-abled classes, we may have to revisit this “maxim”, at least insofar as criminal law is concerned.\textsuperscript{385} If some humans are smarter, stronger and/or otherwise “superior” to others who have not had the benefit of technological enhancement, treating everyone as equal before the law actually creates opportunities for inequality, at least with regard to the victimization of those who have, in effect, been left behind.\textsuperscript{386}

It seems, then, that if and when we confront this state of affairs, criminal law will have to decide how it should recalibrate certain principles to address the converse of the

\textsuperscript{382}See supra notes 373 & 374 & accompanying text.

\textsuperscript{383}See supra note 363 & accompanying text.


\textsuperscript{385}See, e.g., Truax v. Corrigan, 257 U.S. 312, 332 (1921) (noting that the above is one of several maxims that show “the spirit in which Legislatures, executives and courts are expected to make, execute and apply laws”).

\textsuperscript{386}We might, in effect, realize Orwell’s conception of a governance system in which “all . . . are equal but some . . . are more equal than others”. George Orwell’s Animal Farm 23 (Ed. And with an Introduction by Harold Bloom 1999).
scenario we examined earlier, i.e., protecting “normal” humans from their “abnormal” and therefore superior counterparts.

**IV. CONCLUSION**

*We . . . make tools to extend our reach.*

*Every new tool changes us . . .* 387

After researching this article, I, for one, am convinced we will begin to see the emergence of enhanced humans in the not too distant future. As noted above, 388 I use “enhanced humans” to refer to human beings whose physical and/or intellectual abilities have been improved by the elective use of one or more technologies.

Like others, I suspect the driving force in the emergence of enhanced humans will at least initially be the military. 389 As an expert in the ethics of emerging technologies noted, “[i]n the next generation, our warfighters may be able to eat grass, communicate telepathically, resist stress, climb walls like a lizard, and much more.” 390 As support for that prediction, he cites research initiatives that are currently seeking to develop the four enhancements he identifies. 391 It is not difficult to imagine that at least some of these initiatives will produce enhancements that will find their way into civilian life; 392 it was, after all, DARPA’s antecedent, ARPA, that gave us the Internet. 393

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387 Daniel H. Wilson, Amped, *supra* note 7 at 274.

388 See *supra* note 7.


391 See *supra* note 390.


I also suspect that our experience with the effects of human enhancement will not be as tidy as the future I implicitly assume in this article. I suspect that, while we will see analogues of the Semi-Enhanced and Enhanced humans I hypothesized earlier, we will also see the emergence of other, more exotic candidates for “legal person.”

While it is notoriously difficult to predict the future, I suspect we will eventually find ourselves working with, competing with and perhaps even warring with intelligent robots, cyborgs and even chimeras. If and when that happens, criminal law is likely to find itself dealing with issues that are analogous to, but far more complex than the ones addressed in this article.

It is, I think, relatively easy to conceptualize how criminal law should enforce basic fairness and morality between degrees of human beings. As we have seen, that process “merely” requires extrapolating exiting principles into a somewhat more complex empirical context. It is therefore essentially a linear analysis, though one that is likely to cause us a fair degree of discomfort.

We have, at least in most countries, spent the last century or so establishing the proposition that all human beings are equal before the law. In so doing, we have come to assume that arraying humans along a continuum in which some are “superior” and others are “inferior” in any of several respects is anathema. A return to the misguided views of eugenics and its eventual influence on the Holocaust. If and when we see the rise of enhanced humans, we very well may have to revisit that assumption, at least in certain regards.

As we also saw in § II(A), law has so far not had to particularly exercise itself about how to enforce basic fairness and morality between a mix of human beings with varying abilities . . . plus, perhaps, intelligent robots, cyborgs, chimeras and, perhaps,

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396 See supra note 273 (defining chimeras).

397 See, e.g., supra note 384 & accompanying text.

animals and/or alien beings. That will clearly have to change if and when humans with varying degrees of enhancements join the Standard human population. I suspect it will have to change even more if and when law decides to admit “objects” (e.g., robots), animals (enhanced or not), semi-humans (cyborgs and chimeras) and/or space aliens to the “legal person” club currently monopolized by Standard human beings.

And that raises an interesting issue: On the one hand, the emergence of non-human candidates for “legal personhood”, e.g., robots, animals, aliens and, perhaps, cyborgs and chimeras, might produce a negative reaction, a Homo sapiens jingoism the effect of which would be to restrict the category of “legal person” to entities who could prove they were “human” enough to qualify. On the other hand, the emergence of such candidates for “legal personhood” might produce the opposite reaction: a de-emphasis on “humanness” as a qualifier for “legal person.”

In either event, it is likely that criminal law will, at some point, have to adapt its doctrines so they are capable of enforcing basic fairness and morality on an uneven playing field, i.e., in a world in which “legal person” has ceased to be a unitary concept.

It should be an interesting century.

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399 To illustrate how this issue could arise, at a very basic level, in a context involving an animal’s killing a human, see, e.g., Maev Kennedy, SeWorld to Decide Fate of Killer Whale after Trainer’s Death, The Guardian (February 25, 2010), http://www.guardian.co.uk/world/2010/feb/25/seaworld-to-decide-killer-whale-fate.

400 As we saw earlier, law currently employs certain legal fictions that allow it to treat inanimate objects as simulated “persons” for certain purposes. See supra § II(A)(5). And as we also saw, animals essentially have no claim to the status of “legal person.” See supra § II(A)(4). Cyborgs and chimeras do not exist, so law has yet to grapple with their potential for “legal personhood.” Logically, it seems that they should be treated as a type of enhanced human, which would bring them within the analysis in § III.