

Evolution Paradigms and Constitutional Rights: The Imminent Danger of Artificial Intelligence

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INTRODUCTION

In forty years, humans will be obsolete; cast aside, like the tools man used in ancient times. The face of society will be forever changed. For the first time in history, a species will author its own evolution, man¹ will become one with machines, and after that, when the new “man” realizes that his organic parts are holding him back, the man will disappear from the machine forever. Technology has been driving our society since man began thinking. We have always used tools, or machines, to help us with tasks or projects that we either could not do,² or merely chose not to do,³ without such aid. The machines have grown increasingly complex over the years, and man’s dependence on machines has also increased tremendously, even exponentially, in recent times. There may even be a time in the near future when one will not be able to distinguish between man and machine.

An equally likely situation would involve man’s triumph over technology such that the machines mimic the man more so than any science fiction writer could ever have dreamed. Our society has been thinking about this problem since the advent of machines, and, during World War II, with the advent of the relay computer by Mr. Alan Turing, man’s dream of creating intelligent “life” has become more and more plausible. Some scientists even believe that the

¹ Throughout this paper, I may refer to human beings in the aggregate as simply “man.” I mean no disrespect and do not leave women out of the equation.

² Have you ever tried to catch a fish with your hands?

³ Have you ever calculated the area underneath a curve without at least a pen and paper?

technology that would create artificial intelligence is nearly upon us.⁴ Scientists, philosophers, theologians and mathematicians alike have been debating this for years, but now even legal scholars are joining the debate.⁵

Does the idea that within one or two generations, the new dominant species on the planet will be “born” sound too far-fetched? Does the thought that this is possible evoke fear into our collective hearts and minds? If so, should it? Could this be utopia, or would the situation more likely arise that man and artificial intelligence would be at war, as is the case in virtually every motion picture about the subject.⁶

This paper will discuss the problems that might arise with the technology of the future. If man creates a sentient machine, then how should the law treat this machine? Would it be property? Would it be able to claim constitutional rights? Part I of this article will argue that not only is artificial intelligence possible, but that it is inevitable and imminent; it will also discuss current technological breakthroughs and speculate about the implications of the advent of artificial intelligence. Part II will discuss consciousness in humankind, and will argue that machines will become conscious, sentient creatures. Part III will discuss notions of society and societal values, and the history of legal personhood under the United States Constitution. Finally, Part IV will provide a framework within which we should work to enter the new age,

⁴ See RAY KURZWEIL, *THE AGE OF SPIRITUAL MACHINES: WHEN COMPUTERS EXCEED HUMAN INTELLIGENCE* 103-06 (1999); HANS MORAVEC, *ROBOT: MERE MACHINE TO TRANSCENDENT MIND* 59-64 (1999). Using the same basic framework, both authors predict that artificial intelligence will exceed the capacity humans have around the year 2040.

⁵ See Steven Goldberg, *The Changing Face of Death: Computers, Consciousness, and Nancy Cruzan*, 43 STAN. L. REV. 659 (1991); Lawrence B. Solum, *Essay: Legal Personhood for Artificial Intelligences*, 70 N.C. L. REV. 1231 (1992).

⁶ See, e.g. *THE TERMINATOR* (Metro-Goldwyn-Meyer 1984); *TERMINATOR 2: JUDGMENT DAY* (Metro-Goldwyn-Meyer 1991), *THE MATRIX* (Warner Brothers 1999); *BLADE RUNNER* (Allan Ladd 1982). In the most recent film addressing artificial intelligence, filmmaker Steven Spielberg portrayed a world where humans tortured and brutally “murdered” artificial intelligences for excitement, until an AI was in the form of a child, and cried out for his life. See *A.I. ARTIFICIAL INTELLIGENCE* (Warner Brothers 2001). See *infra*, part II.C for the importance of films on this

where the advent of artificial intelligence will force us to rethink the roles that man and machine play in society.

Before we get into the heart of the matter, however, I would like to discuss one issue that threatens any discussion of artificial intelligence: God. How can we reconcile the idea that God created life when we, the creation, are about to create our own form of life? Are we really playing God? Is this process evil? The answer is no. We're not playing God; we are not even creating life. We are simply creating a more sophisticated machine that will be able to process information better than we can. Whether this leads to the destruction of "life" as we know it remains to be seen, but if it does, then it will be the result of a process already occurring in nature, evolution; a process that, as I will discuss in Part I, has been working towards this end since the beginning of mankind. God may have created the Universe, and thus created life, but it was evolution that created intelligence, and intelligence that will forever work to better itself.⁷

I. ENTERING THE NEW ERA: THE ROOTS OF ARTIFICIAL INTELLIGENCE

The possibility of artificial intelligence (AI) is a subject upon which man has speculated for centuries, but it is only now where the debate has taken on new meaning, as the scientists responsible for such technology are on the verge of a breakthrough. We must prepare ourselves for the inevitability that AIs will eventually become the dominant species on the planet. This section will articulate some current breakthroughs in technology and discuss the logic behind the possibility of AI.

A. The Beginning Debate Over AI

The debate over whether it is possible to create intelligence and consciousness without biology is not new, and neither are the arguments for and against this proposition. The

subject, as an indicator of pop culture.

fundamental premise behind the plausibility of AI is that the human brain works on a mass system of computations.⁸ If this is true, then any system that equals the computational capacity of the human brain will be able to function in the same manner. This point is not easily conceded, however, what we think of our experiences cannot easily be attributed to mere computation. When we react to our surroundings, by either viewing, hearing, smelling, touching or tasting them, it does not seem natural to think that what we are doing is simply performing math computations and algorithms. All we seem to do is witness; we hear a siren, we feel the keyboard, we taste an orange, we smell flowers. Further, it seems to happen so instantaneously that we don't think to ourselves that there could be a delay between the input and the registration of the input (between our seeing and hearing a *something* in the air and recognizing it as a crow). Further, if this theory of computations holds true, then where does that leave us? The mystery of mankind will disappear, which will fundamentally alter the way we think about religion, law and everything else around us. The paradigm of mystery will be no more.⁹ This is not a concept people accept easily.

The most prolific argument against the possibility of AI comes in the form of the “missing something” argument.¹⁰ Proponents of this view will welcome the mystery that makes up mankind and argue that humans possess *something* (let's call it a spirit) that cannot be replicated, and that any simulation of human thought processes will lack this *spirit*, and will never become human, thus will never become intelligent, sentient creatures.¹¹ A second argument contends that humans lack the thought capability to comprehend our own existence,

⁷ For a significant implication involving artificial intelligence and the end of the universe, see *infra*, note ____.

⁸ See KURZWEIL, *supra* note 4, at 73 (describing what makes up intelligence); Solum, *supra* note 5, at 1231.

⁹ See DANIEL C. DENNETT, CONSCIOUSNESS EXPLAINED 21-26 (1991).

¹⁰ See Solum, *supra* note 5, at 1262-76.

and therefore, cannot replicate it in anything else. This second view is akin to giving up; this argument would just accept everything we see and feel and do and not contemplate the origins. However, for our society to progress in any meaningful manner, this view simply cannot stand. This is the view that rejects all of science's attempts to explain the great mysteries; the stars, the earth, and the origin of species, and now, the human mind.

This debate will continue throughout this article, especially as I explore paradigms of consciousness.¹² Consciousness is the most important aspect of this debate, however, because of its implications on society and culture, and the subsequently, on the law. However, with Kurzweil's Law of Time and Chaos, this debate may end up being a fruitless venture.

B. Evolution and Kurzweil's Law of Time and Chaos

Kurzweil draws upon the nature of time and the laws of thermodynamics to propose the Law of Time and Chaos.¹³ He proposes first that the true nature of time is not linear, but rather speeds up and slows down during certain salient events.¹⁴ In the beginning of the universe, for example, more events pertinent to the process of the universe's creation happened in the first billionth of a second, and after that, each new salient event took billions of years to develop.¹⁵ This illustrates that time, relative to the creation of the universe, has been slowing down since the universe's inception. On the other hand, with respect to evolution, time has been speeding up exponentially.¹⁶ Where the first living creature took billions of years to develop, the next stages of development happened in increasingly smaller increments, first millions of years, then

¹¹ *See id.*; *see also* MORAVEC, *supra* note 4, at 73-4. The "something" to which I refer has been called consciousness, the soul, feelings, etc.

¹² *See infra*, part II.

¹³ *See* KURZWEIL, *supra* note 4, at 10-33.

¹⁴ *See id.* at 10-11. A salient event is one that is pertinent to any process.

¹⁵ *See id.*

¹⁶ *See id.* at 12-14.

hundreds of thousands of years, now tens of thousands of years.¹⁷ Thus, time either speeds up or slows down exponentially, and over the course of the universe only *seems* to move linearly.¹⁸

The next key question asks just what it is that triggers time's speed up or slow down. This is where Kurzweil turns to the laws of thermodynamics.¹⁹ The second law of thermodynamics holds that disorder, or entropy, increases in a closed system over time.²⁰ This disorder, or randomness, when measured against a process, is called chaos.²¹ The opposite of chaos for our purposes is order, but does not simply refer to the opposite of disorder.²² Order here means "information that fits a purpose,"²³ and resembles the ordinary definition of complexity.²⁴

From the second law of thermodynamics, Kurzweil states "The Law of Time and Chaos: In a process, the time interval between salient events (that is, events that change the nature of the process, or significantly affect the future of the process) expands or contracts along with the amount of chaos."²⁵ Thus, as order increases, the time interval between events decreases. This fits well into evolution, where at first, there was no order, and it took a long time for life to

¹⁷ *See id.* at 13-14.

¹⁸ This also implicates Einstein's theory of relativity, where time can be felt differently by different entities according to the speed at which they travel. *See id.* at 11.

¹⁹ *See* KURZWEIL, *supra* note 4, at 12.

²⁰ *See id.* This is called the Law of Increasing Entropy. A closed system is one that is not affected by outside influences, such as the universe. *See id.* We assume (it's the only assumption required) that nothing outside of the universe exists to exert any influence upon it.

²¹ *See id.* at 29. Kurzweil further explains chaos:

We have to be careful here in our definition of chaos. It refers to the quantity of disordered (that is, random) events *that are relevant to the process*. If we're dealing with the random movement of atoms and molecules in a gas or liquid, then heat is an appropriate measure. If we're dealing with the process of evolution of life-forms, then chaos represents the unpredictable events encountered by organisms, and the random mutations that are introduced in the genetic code.

Id.

²² *See id.* at 30.

²³ KURZWEIL, *supra* note 4, at 30.

²⁴ *See id.* at 31.

²⁵ *Id.* at 29.

evolve, but as life evolved, the order increased, and the entry of more and more complex life-forms took less and less time. Conversely, in the beginning of the universe, a lot happened in the first billionth of a second, when there was little chaos, and ever since then, it has taken more and more time to change the universe significantly. This leads logically to two sub-laws. First, Kurzweil notes, is “The Law of Increasing Chaos: As chaos exponentially increases, time exponentially slows down (that is, the time interval between salient events grows longer as time passes).”²⁶ However, the opposite of the Law of Increasing Chaos is also implied from the Law of Time and Chaos. Kurzweil calls this “The Law of Accelerating Returns: As order exponentially increases, time exponentially speeds up (that is, the time interval between salient events grows shorter as time passes).”²⁷ Thus, relevant to the universe (chaos expanding exponentially), it takes longer and longer for the process to change significantly, *but*, relevant to evolution (order increasing exponentially), the time between salient events decreases, and evolution goes faster and faster as time progresses.²⁸

The Law of Accelerating Returns has proven true not only in terms of the evolution of life, but also in the field of computer technology. Since the U.S. Census in 1890, the number of calculations per second available in machines has been increasing exponentially, according to Moore’s Law.²⁹ Gordon Moore helped invent the integrated circuit and observed the exponential growth of computing technology first in 1965.³⁰ Several scientists have since noted that the trend did not begin in the 1960’s, but instead began with the birth of computing in the early

²⁶ *Id.* Recall the Second Law of Thermodynamics, that entropy increases in a system over time.

²⁷ *Id.*

²⁸ The amount of order it takes to create intelligent life is insignificant to the entropy in the entire universe, thus, order can increase in evolution and chaos can increase in the universe at the same time. *See id.* at 12.

²⁹ *See* KURZWEIL, *supra* note 4, at 20-25.

³⁰ *See id.* at 20.

1900s.³¹ At first, the computational processing speed doubled every three years.³² That pace has since quickened, and now computer processing doubles every twelve months.³³ Again, as order has increased, relative to computer processing technology, time intervals between salient events (doubling computational capacity) has been decreasing.³⁴

So far we've seen that the Law of Accelerating Returns fits into evolution and computer technology, but how do the two tie into each other? Again, the premise that the human brain works as a computational machine is key. If that premise is true, then evolution will dictate that humans should let their biological computers (their brains) go and attach themselves to their non-biological computers (the computer chips of tomorrow). This will allow humans to evolve, whereas if they had remained attached to their biological computers, then the growth potential of the brain would be far less; whereas the Law of Accelerating Returns holds that the growth potential will always increase exponentially. This leads us logically to the next question: have scientists been attempting to combine organic parts with their non-organic counter-parts?

Scientists have successfully combined biology, the living, with technology, the future of life, to create a new organism.³⁵ Researchers at Northwestern University built a machine guided by the brain of a lamprey.³⁶ They extract the brain of a lamprey and connect it to a special robotic computer system, capable of movement, which keeps the brain alive for a short time.³⁷

³¹ See *id.* at 25; MORAVEC, *supra* note 4, at 60-61.

³² See KURZWEIL, *supra* note 4, at 25.

³³ See *id.*

³⁴ Remarkably, since 1890, the price at which you may purchase the new processors has remained constant, and still does. See *id.* at 24; MORAVEC, *supra* note 4, at 60. This means that the price of the newest chip will always be the same as the price of the last newest chip.

³⁵ See Ben Macintyre, *First Cyborg is Looking Just a Little Down at Eel*, THE TIMES, April 18, 2001, available at <http://www.thetimes.co.uk/article/0,,3-116291,00.html>

³⁶ See *id.*

³⁷ See *id.*

The lamprey's search for food commands the robot to which it is attached.³⁸ This is the first cyborg, a successful combination of living tissue and technology, and the implications are astounding. Using electrical impulses stemming from the brain of a living organism to control mechanical parts directly through the nervous system of the creature to which it is attached will set the stage for the elimination of biological parts altogether. Evolution and the Law of Accelerating Returns dictate that first biology will combine with technology and second that technology will eventually leave biology behind.

II. HUMANS AS CONSCIOUS MACHINES

How does the human brain work? Does it function like a machine, using a mass of computations, or is there something else to it? That is the focus of the next section of this article. I will argue that it is *because* the human brain works like a machine that allows human beings to be conscious, sentient creatures. I will also discuss the arguments to the contrary, and hopefully, provide a better understanding of the nature of the debate over AI in terms of consciousness.

A legal scholar writing about the possibility of machines possessing consciousness argued that since, to our collective knowledge, only organic brains have previously exhibited conscious activity, then that should lead to a presumption against consciousness in machines.³⁹ Another discussed the prominent objectors to AIs possessing consciousness and pointed out that those objections left open the possibility for machines to become conscious in the future.⁴⁰ Computer scientists, on the other hand, decide to set this question aside, and conclude:

The machines will convince us that they are conscious, that they have their own agenda worthy of our respect. We will come to believe that they are conscious much as we believe that of each other They will embody human qualities and

³⁸ *See id.*

³⁹ *See Solum, supra* note 5, at 1265.

⁴⁰ *See Goldberg, supra* note 5, at 673-80 (discussing John Searle's "Chinese Room" argument and Roger Penrose's arguments against algorithmic computers possessing consciousness).

will claim to be human. And we'll believe them.⁴¹

Another scientist describes how part of our subjective experience that makes up consciousness might be programmed into a machine.⁴² Moravec describes “pain” to a machine as the “sensation . . . associated with dire emergencies that need immediate attention.”⁴³ In this case, if the machine sensed something that could destroy it or damage it, sensors would trigger a program that would defend itself, by using negative conditioning.⁴⁴ This would have the appearance of something akin to fleeing, calling for help, or perhaps even attempting to scare away the negative influence.⁴⁵ After the situation is averted, then the machine might “reflect” on the situation, sort of replay it in its mind, examining the causes and effects.⁴⁶ It would then associate these causes with negative, or bad effects, and decide that, next time, it would not be prudent to act in the way that caused it to have such a negative reaction.⁴⁷

Thinkers have been struggling with consciousness, the subjective experience, for centuries, and for a long time, Descartes’s idea of dualism held the predominant view.⁴⁸ Dualism holds that the mind, what we think of when we say “I,” is a different entity from the body and brain.⁴⁹ Let’s call this the *spirit*. The *spirit* ultimately controls the body, it interacts with the body, responding to stimuli that are gathered by the body.⁵⁰ The *spirit* receives signals from the body, gathers them and views them in what is called the “Cartesian Theater,” with the audience

⁴¹ KURZWEIL, *supra* note 4, at 63.

⁴² See MORAVEC, *supra* note 4, at 123.

⁴³ See *id.*

⁴⁴ See *id.*

⁴⁵ See *id.*

⁴⁶ See *id.*

⁴⁷ See *id.* This seems very similar to a child learning, by experience, that touching a hot stove is not a good idea.

⁴⁸ See, e.g., KURZWEIL, *supra* note 4, at 60; MORAVEC, *supra* note 4, at 121; DENNET, *supra* note 9, at 33-42; Goldberg, *supra* note 5, at 677-79.

⁴⁹ See DENNETT, *supra* note 9, at 33.

⁵⁰ See *id.* at 34-35.

of the theater being the *spirit*.⁵¹ Once the *spirit* views all the inputs, it can then “direct traffic” and react to them. When we think, to ourselves, about how we think, act and feel, this seems logical. We don’t consider that the body and the mind are one, we say things like, “This is my hand.” This is a perfectly natural thing to say, but it implies that the hand is something different than the *possessor* of the hand. We consider the brain to be the organ that processes all information, but we wouldn’t say something like “My brain owns this hand,” we simply say “This is my hand.” Similarly, we think of our “self” as possessing our brains in much the same fashion as the rest of our bodies.⁵² So it is easy, and natural, to acquiesce in Dualism, because we consciously believe that we are different from our brains. However, as appealing as this sounds, it is complete fantasy:

The brain is Headquarters, the place where the ultimate observer is, but there is no reason to believe that the brain itself has any deeper headquarters, any inner sanctum, arrival at which is the necessary or sufficient condition for conscious experience. In short, there is no observer inside the brain.⁵³

As we discuss this fantasy, we will find out just how difficult it is to posit a theory of consciousness that eliminates the idea of Dualism, but that is just what I intend to do. After we shed our ideas of Dualism, we can then make progress to figure out what it is that makes a “self,” how we get one, and how we can program one into a machine.

A. Dennett’s “Multiple Drafts” Theory of Consciousness

We have already gotten a look at the first premise of Dennett’s theory, the idea that Dualism, in all of its forms, is to be completely set aside. He posits that there is no single point

⁵¹ See *id.* at 104-07.

⁵² You do have a brain, don’t you?

⁵³ DENNETT, *supra* note 9, at 106.

that marks the line between conscious and unconscious activity.⁵⁴ Instead, Dennett suggests that consciousness exists as a series of perceptions, elaborations and interpretations existing in parallel throughout the brain.⁵⁵ Whereas Dualism would hold that the perceptions and interpretations would be collected by the body and sent to the *spirit* for view, the Multiple Drafts model suggests that since there is no *spirit* that physically exists anywhere, once the perception, interpretation and elaboration of an input takes place by its proper sensor, consciousness is achieved throughout.⁵⁶ Since we do not yet know what it is exactly that we mean when we say the word consciousness, for now, a good definition would be a *narrative sequence*. We remember things happening (conscious experiences) as though they are a story, for if we were to ask ourselves afterward “What happened?” then we would give ourselves an answer in the form of a story. Examining the phenomenon of *phi* and subsequent stories can illustrate and substantiate the premise that there is no single identifiable point in time at which we are aware and before which we were unaware.⁵⁷

Phi is, put simply, apparent motion; we have used this idea to create something that appears to be moving out of pictures depicting motion showed in rapid succession.⁵⁸ Dennett uses an example of *phi* whereby the experimenter will flash, in rapid succession, two different colored circles⁵⁹ which he separates by at least four degrees.⁶⁰ The subject experiences the dot moving from left to right, with the color of the dot changing from red to green about halfway in

⁵⁴ *See id.* at 111 (“We must stop thinking of the brain as if it had such a single functional summit or central point.”)

⁵⁵ *See id.*

⁵⁶ *See id.* at 113.

⁵⁷ *See id.* at 114. *Phi* works especially well here because Dualism cannot explain it.

⁵⁸ *See id.* This is the premise behind motion pictures, television, and animation. *See DENNETT, supra* note 9, at 114. In an animated broadcast, there is no motion, even on film, but it looks like the characters are moving. For a practical example, when watching the Simpsons, you seem to see Homer Simpson choke his son Bart, but Homer and Bart actually only exist as a series of lines drawn on a page.

⁵⁹ The left circle is red, the right circle is green.

between the two locations.⁶¹ The subject sees apparent motion. But how does the subject experience the motion of the two dots (and the color change at the midpoint) *before* the experimenter shows the second dot?⁶² Something must create this illusion, but for the Dualists, this creates a conundrum, for if the brain waited until all the inputs were gathered at the Cartesian Theater, then it would be *too late* to interpose the motion and color-switching phenomenon.⁶³ Instead of movement and color switching, you would experience the stationary red dot, then the stationary green dot; this is not what happens. Moreover, the *effects* of the phenomenon (color switching and movement) seem to precede their *causes*, because we seem to see the dot moving and switching colors before the second dot even appears. So what happens? How does your brain play tricks on you?

There must be some sort of revision, some edited version of events that gets passed from your sensors, in this case eyes, to your memory, or conscious experience. This revision can take one of two forms. The first is dubbed an Orwellian revision.⁶⁴ In an Orwellian revision, the brain would corrupt the memory just after the experience, so that anytime (even immediately) after the experience, you would only remember the edited version.⁶⁵ The second revision theory is called Stalinesque revision, and would literally happen before the experience.⁶⁶ Something would corrupt the “signal,” between the sensor and the brain, to implant a bogus memory.⁶⁷

⁶⁰ *See id.*

⁶¹ *See id.*

⁶² *See id.*

⁶³ *See id.* at 115.

⁶⁴ *See id.* at 115-17. This is named after George Orwell’s book, *1984*, wherein the Ministry of Truth would literally rewrite history so that nobody would be able to see the real truth. *See DENNETT, supra* note 9, at 116.

⁶⁵ *See id.*

⁶⁶ *See id.* at 117. Stalin would literally hold false trials to corrupt history, rather than rewriting history once it happens. *See id.* That is to say, before you are conscious of the experience; before the information is processed. *See id.* at 118-19.

⁶⁷ *See id.*

Using these two theories to explain *phi*, we would say that, under the Orwellian revision theory, the brain received the signals of the two stationary dots, and for whatever reason rewrote “history” to account for the apparent motion, so that reflecting on the conscious experience would lead the subject to conclude that the red dot turned green halfway through. On the other hand, under the Stalinesque revision theory, something would corrupt the signal of the red stationary dot and the green stationary dot on the way to the brain, so that any introspection would yield the exact same, yet erroneous, conscious experience.

If we were to think of the apparent motion phenomenon like film or television, then the brain would have to “fill in” the intervening frames, between the stationary first spot and the stationary second spot.⁶⁸ But we still have yet to answer the question of how that can happen before the second dot appears.⁶⁹ The Stalinesque theory of revision would have some sort of time delay built into it, so that the “signal” could be corrupted before you were conscious of the event.⁷⁰ On the other hand, the Orwellian revision theory would allow both signals to enter into consciousness and thereafter initiate the cover-up, so that the observer would see the motion notwithstanding the lack thereof.⁷¹ What difference is there, if any, between these two theories? We can state the difference, see above, but is that a real difference?

[Both models] account for the verbal reports: One theory says they are innocently mistaken, while the other says they are accurate reports of experienced mistakes. Moreover, we can suppose, both theorists have *exactly* the same theory of what happens in your brain; they agree about just where and when in the brain the mistaken content enters the causal pathways; they just disagree about whether that location is to be deemed pre-experiential or post-experiential. They give the same account of the nonverbal effects, with one slight difference: One says they are the result of unconsciously discriminated contents, while the other says they are the

⁶⁸ See DENNETT, *supra* note 9, at 118-19.

⁶⁹ *See id.* at 120.

⁷⁰ *See id.*

⁷¹ *See id.* at 121.

result of consciously discriminated but forgotten contents. Finally, they both account for the subjective data -- whatever is obtainable from the first-person perspective -- because they even agree about how it ought to “feel” to subjects: Subjects should be unable to tell the difference between misbegotten experiences and immediately misremembered experiences.⁷²

The point of all of this speculation about experiences and revision theory illustrates the simple truth, that *there is no point in the brain distinguishing the conscious from the unconscious.*⁷³

Any point we choose would be arbitrary; if it is arbitrary, then we’ve simply made it up. If we’ve made it up, then it doesn’t exist.⁷⁴

B. The Problem of Thought Generation

The theory works well with situations in which our conscious experiences are merely reactions to stimuli, but how can it account for thought (and speech) *production*? There has to be a starting point, even if there is no end point; in which case, couldn’t the starting point be considered the “Central Meaner”?⁷⁵ Before we can consider answering this question, we must first consider the broader question of the origins of consciousness.

1. The Origin of Consciousness

Dennett proposes that three factors have come together to produce what we now think of as consciousness.⁷⁶ We are already familiar with the first factor, genetic evolution. This is the process by which certain gene traits are passed down through generations according to the laws

⁷² *Id.* at 124-25.

⁷³ *See id.* at 126.

⁷⁴ Dennett calls this the “Multiple Drafts” theory by drawing an analogy to the publishing of papers. *See* DENNETT, *supra* note 9, at 125. There is an arbitrary date, the date of “publication,” before which the revisions are content-based, after which the revisions are merely to edit for typographical errors. *See id.* But the paper does exist before publication, multiple drafts of it are sent out to readers for critique, yet we do not consider it a paper until after the arbitrary date of publication. *See id.*

⁷⁵ *See id.* at 227-28.

⁷⁶ *See id.* at 208. These three factors are 1) genetic evolution, 2) plasticity in the brain, and 3) *memetic* evolution. *See id.* Writing before Kurzweil’s Law of Time and Chaos, he points out that each of these factors has shown up in history at increasing rates of speed. *See* DENNETT, *supra* note 9, at 208.

of natural selection.⁷⁷ The second factor, plasticity, requires a little bit more attention. Plasticity in the brain is a capacity for learning.⁷⁸ When nature has not given one individual brain the gene traits necessary for survival and reproduction, the individual may overcome this by way of learning how to cope with one's surroundings during one's own lifetime.⁷⁹ We see this plasticity in creatures other than human beings; animals will learn to do things, you can teach a dog how to do tricks. So plasticity should be described more as adaptation and memory.

Finally, the remaining factor is *memetic* evolution. *Memes* are simply ideas, but ideas which spread through humanity by the same process as genes, by natural selection.⁸⁰ The "good" *memes*, as with the "good" genes, are those that can spread quickly and replicate.⁸¹ To do this, a *meme* will require a host, and then an avenue to reach other hosts, and so on. There are several hosts; books, pamphlets and papers can all hold ideas, and can be spread quickly by the use of a photocopier or printer. These hosts are temporary, though, and for immortality, *memes* must somehow get into the ultimate host, a brain.⁸²

We already know why genetic evolution and plasticity are important; they have literally built our brains, but Dennett's theory goes one step further, because he contends that *memetic* evolution (or cultural evolution) can shape the brain as much as its memory and original structure can.⁸³ Just like the operating system on which your computer runs can shape the way it processes information, so too can your ideas about self, society, right and wrong shape the way

⁷⁷ See *id.* at 184-86.

⁷⁸ See *id.* at 182.

⁷⁹ See *id.*

⁸⁰ See *id.* at 200-02. The origin of the word is French, for memory, and Greek, for imitation, but should sound like the word for gene. See *id.* at 202.

⁸¹ See DENNETT, *supra* note 9, at 203.

⁸² See *id.* at 205.

⁸³ See *id.* at 209-10.

you process information.⁸⁴ For example, the *meme* for education is a particularly good *meme*; it not only implants itself into almost every human being, but it also requires more *memes* to be implanted, thus triggering exponential growth for *memes* in the brain.⁸⁵ The speed with which *memes* can be transmitted throughout culture allows for even the weakest, in terms of natural selection, among us to equal the strongest by allowing them to “catch up.”⁸⁶

As I mentioned earlier, these three factors set the stage for the “advent” of consciousness. However, we still do not have a very good working definition of what consciousness is; when disproving the “goal-line” in the brain theory, our working definition was our *narrative sequence*, our memory of experiences, or how we related experiences to others.⁸⁷ This definition does not fit all purposes, however, and needs to be revised.

Consciousness is not a thing that one either has or does not have. It is more of a spectrum, every living thing (and some that are not living) possess a certain degree of consciousness, but for most creatures, the only use for consciousness is to distinguish itself from the rest of the world, so we say that they are not sentient creatures.⁸⁸ But humans, on the other hand, are aware of “self,” have reflected upon it, and have related their experiences to others in a meaningful way. Even though other, less complex organisms have some sense of “me,” which is defined in relation to “the world that is not me,” they do not possess the reflection and relation requirements that separate human consciousness from the mere idea of “self.” Thus we have a better definition of consciousness, but we still do not know what is a “self.”

2. Virtual Machines and the Self

⁸⁴ See *id.* at 207. *Memes* and genes form a symbiotic relationship in the brain; genes provide an environment, *memes* may contribute to “remarkable design-enhancements” which may trigger better genes. *Id.* at 208.

⁸⁵ See *id.* at 207.

⁸⁶ See DENNETT, *supra* note 9, at 208.

⁸⁷ See *supra*, page 12.

In 1936, we changed the face of computational technology forever.⁸⁹ In this year, the Allies cracked the Nazi code, using the *Universal Turing Machine*, invented by Alan Turing, with later modifications made by John von Neumann.⁹⁰ Turing came up with the philosophical idea behind the machine, which would emulate how a human would go about solving mathematical equations.⁹¹ The early machines worked in *serial*, which basically means that it can handle one function at a time.⁹² Early computers working in serial could not compute very many functions per second, and with only one function at a time, it literally took as long for the early machines to solve geometric equations as it did for high school students.⁹³ However, as computations per second increased,⁹⁴ so too did the number of *functions* per second. Thus, even when performing only one function at a time, currently, computers can handle millions of functions per second.⁹⁵

Scientists were able, however, despite the slow speed of early computing, to construct virtual machines onto the physical machines capable of processing.⁹⁶ A virtual machine is one that is “made of rules rather than wires.”⁹⁷ This is what we commonly think of as software. Software recognizes inputs, right now that would be keystrokes, because I am using a word processing program, and, with the program’s rules, will perform certain functions once those inputs are done. Here, if I press a key, the symbol marked on the key will show up on the screen

⁸⁸ See DENNETT, *supra* note 9, at 447-48.

⁸⁹ See MORAVEC, *supra* note 4, at 20; *see also* KURZWEIL, *supra* note 4, at 73; DENNETT, *supra* note 9, at 211.

⁹⁰ See MORAVEC, *supra* note 4, at 20; DENNETT, *supra* note 9, at 211.

⁹¹ See DENNETT, *supra* note 9, at 212. To do this, Turing would ask himself, what is the first step to solving this problem? then what is the next? and so on. *See id.* at 212.

⁹² *See id.* at 213.

⁹³ See MORAVEC, *supra* note 4, at 21.

⁹⁴ *See supra*, pages 7-9.

⁹⁵ See MORAVEC, *supra* note 4, at 60-61; KURZWEIL, *supra* note 4, at 24.

⁹⁶ See DENNETT, *supra* note 9, at 211-13.

⁹⁷ *Id.* at 211.

and subsequently print onto a sheet of paper. The plasticity of computing machines now, that is its memory, can store a multitude of information, such as this entire paper, many other papers, and the rules that make up several other virtual machines that I use on a daily basis.⁹⁸ Thus, even the early computers, such as the *Universal Turing Machine*, could emulate any physical machine, and two of the three key factors that make up human consciousness already exist in the machines of today.⁹⁹ The only remaining step is to prove that the human brain is a machine; if that happens, then, using the concepts of the *Universal Turing Machine*, we can emulate perfectly the human brain, and this would necessarily include human consciousness.¹⁰⁰

The human brain is not a serial machine, with one function being performed at a time, but is rather a massively parallel machine, which performs many functions at a time.¹⁰¹ The connections in the human brain are not electric, like those of computers that we build, but are instead neurological.¹⁰² These neurons are capable of calculations, albeit at a much slower rate than their electric counterparts.¹⁰³ There are two factors, however, that more than make up for the brain's speed deficiency. First, we have an extremely large amount of neurons, about 100 billion.¹⁰⁴ What's more, they are acting in concert, or in parallel, which means that they are all connected to each other.¹⁰⁵ Kurzweil estimates that, on the average, each neuron has about 1000 connections.¹⁰⁶ If we do the math, then we come out with an estimate of calculations per second

⁹⁸ *See id.*

⁹⁹ Recall that these were genetic evolution (producing computational capacity in the brain), plasticity (memory) and *memetic* evolution (cultural ideas spreading throughout).

¹⁰⁰ *See* DENNETT, *supra* note 9, at 217.

¹⁰¹ *See* KURZWEIL, *supra* note 4, at 102-03; DENNETT, *supra* note 9, at 217.

¹⁰² *See* KURZWEIL, *supra* note 4, at 103.

¹⁰³ *See id.* While computer chips can perform millions of calculations per second, the neuron is limited to only 200. *See id.*

¹⁰⁴ *See id.*

¹⁰⁵ *See id.*; *see also* DENNETT, *supra* note 9, at 217.

¹⁰⁶ *See* KURZWEIL, *supra* note 4, at 103.

in the human brain of 20 million billion.¹⁰⁷ So then a virtual machine working in *serial* could emulate a massively parallel physical machine, but only if the requisite amount of calculations per second existed, but does it necessarily follow that the reverse is true? Can a parallel physical machine emulate a virtual serial machine? The answer to this is the crux of Dennett's theory of consciousness: "Conscious human minds are more-or-less serial virtual machines implemented . . . on the parallel hardware that evolution has provided for us."¹⁰⁸

This premise, while seemingly preposterous, provided the basis of modern day computing technology.¹⁰⁹ That is to say that Turing, when formulating the philosophical premises of computing machines, used his own stream of consciousness as a guide, by breaking up problem solving into a series of simple steps.¹¹⁰ Further, assuming, *arguendo*, that this is true, then the roots of Dualism also appear. The distinction between the mind and the brain would make a lot of sense, it would seem, if the mind was a program running on the hardware of the body, like Microsoft Windows is to your PC. We know the place from which Microsoft's Windows gets its rules, the programmer, and it is easy to load the program into the machine. Finding out the human "code," however, is not as easy, but can be described as "a highly replicated *meme* complex."¹¹¹ Our ideas, combined with the ideas that we receive from others, have created the "software" that is our consciousness.

Thought and speech generation come from the consciousness, but as we just discussed,

¹⁰⁷ *See id.* This is a 2 followed by *fifteen* 0s. Kurzweil offers that his estimate is "conservatively high," but not by more than three orders of magnitude. *See id.* This may seem to be a figure that is too astronomical to ever be able to duplicate, in terms of functions per second, but recall that the Law of Accelerating Returns dictates exponential growth in computing technology. *See supra*, pages 7-8. At the current rates of growth for computational technology, the calculations per second in electric-based computing machines should equal human brains by the year 2020. *See supra*, note 4 and accompanying text.

¹⁰⁸ DENNETT, *supra* note 9, at 218.

¹⁰⁹ *See supra*, note 91 and accompanying text.

¹¹⁰ *See* DENNETT, *supra* note 9, at 212.

this *could* mean merely that several different processing units evolved *memes*, and by virtue of the laws of natural selection, our conscious experience only “remembers” the ones that get “published.” Thus, even though a “Central Meander” seems to exist by necessity, in order to form intentionality, this may not be the case, it may just be an evolutionary fight for the best replicating idea to come forward and get published into the conscious experience. The implications of this theory are tremendous for AI researchers; this provides the philosophical (and mechanical) framework that allows for human consciousness to be literally programmed into a machine built by human hands.

C. Rebuilding Humans

The previous pages illustrate that, in theory, the conscious mind can be transposed onto a physical machine, however, AI research encompasses more than just the conscious mind, and legal theorists that have studied this area have concluded that the context within which a machine would assert rights in society may be just as important as the “inner workings” of the machine.¹¹² That is to say, even though a machine might actually be a conscious, sentient creature, if it can’t *convince* other humans of this fact, then it will be a tough row to hoe to convince a judge to grant that machine rights as members of society. This illustrates the importance of robotics research and materials engineering to the machines of the future, for I suspect that humans would be more apt to accept consciousness in another creature if it looked, sounded and acted like another human being.

Turing, in 1950, proposed a test to determine whether a machine has reached human

¹¹¹ *Id.* at 221.

¹¹² *See Solum, supra* note 5, at 1282-83.

intelligence.¹¹³ This test would require a human judge, asking a series of questions to two participants, one being a machine and the other a human.¹¹⁴ The object, for the participants, would be to convince the judge that it was the human.¹¹⁵ If the human judge cannot determine which participant is man and which is machine, then Turing proposes this to be the recognition of an Artificially Intelligent creature.¹¹⁶ Since any question is fair game, the computer would have to have a vast “knowledge” of the human experience in order to compete with the human.¹¹⁷

John Searle has objected to this test in what has been called the “Chinese Room.”¹¹⁸ Searle proposes that if a human were in a form of the Turing test, but the test was administered in Chinese, instead of English.¹¹⁹ You are given a rule book, which tells you to write down certain characters, in Chinese, whenever you see a set of other characters.¹²⁰ As long as you have followed the rules, and written down the Chinese properly, then the judge would have to be convinced that you understand Chinese, even though you in fact do not.¹²¹ More generally, Searle is arguing that simulation of intelligence is not enough to show actual intelligence.

A myriad of rebuttal arguments have met this argument, most of which focus on the intelligence of the entire process; rather than on the individual players writing down meaningless

¹¹³ See KURZWEIL, *supra* note 4, at 61-63; DENNETT, *supra* note 9, at 435-39; Solum, *supra* note 5, at 1235-38.

¹¹⁴ See KURZWEIL, *supra* note 4, at 61-63; DENNETT, *supra* note 9, at 435-39; Solum, *supra* note 5, at 1235-38; Goldberg, *supra* note 5, at 673-80.

¹¹⁵ See KURZWEIL, *supra* note 4, at 61-63; DENNETT, *supra* note 9, at 435-39; Solum, *supra* note 5, at 1235-38; Goldberg, *supra* note 5, at 673-80.

¹¹⁶ See KURZWEIL, *supra* note 4, at 61-63; DENNETT, *supra* note 9, at 435-39; Solum, *supra* note 5, at 1235-38; Goldberg, *supra* note 5, at 673-80.

¹¹⁷ On the other hand, the questions should be such that they would not “stump” the human, for it would be an easy, albeit shallow, victory if the judge declared that the computer was the winner because the human replied that he “did not know.”

¹¹⁸ See Solum, *supra* note 5, at 1237-38; Goldberg, *supra* note 5, at 673-80.

¹¹⁹ See Solum, *supra* note 5, at 1237.

¹²⁰ See *id.*

(to them) Chinese characters.¹²² This argument holds that Searle is just restating Dualism, because a series of computations by themselves, without some *spirit* to guide them, can never be considered conscious.¹²³ Another rebuttal argument would have one consider the evidence that we have regarding the consciousness of other human beings.¹²⁴ We really only have circumstantial evidence that other humans are conscious, these are the outward signs such as facial expressions, tears, laughter, and pain symptoms. So if something else could emulate this, and look like a human in doing it, then why would we require more evidence of its consciousness than that of our neighbors or colleagues?

In the science fiction classic *Blade Runner*, Harrison Ford's character performed a modified Turing test, to determine if the "Replicants" were indeed machines.¹²⁵ He would ask several questions of the machine, and test for an "emotional" response by magnifying the replicant's eye.¹²⁶ If no emotional responses were present, then he would determine that the replicant was in fact a machine.¹²⁷ Similarly, on an episode of *Star Trek: The Next Generation*, the AI known as Lieutenant Commander Data attempted to resign from Starfleet rather than submit to an invasive procedure that could have "killed" him.¹²⁸ In the trial, the judge conducted her form of the Turing test in open court and declared that Data was not property of Starfleet.¹²⁹

Pop culture, including television, radio, and especially the motion picture industry, can account tremendously for the way we, as a society, feel about a certain issue. Movies can be

¹²¹ See *id.*

¹²² See DENNETT, *supra* note 9, at 437-38.

¹²³ See *id.*; see also Goldberg, *supra* note 5, at 677-78.

¹²⁴ See Goldberg, *supra* note 5, at 676.

¹²⁵ See BLADE RUNNER, *supra* note 6.

¹²⁶ See *id.*

¹²⁷ See *id.*

¹²⁸ See *Star Trek: The Next Generation: The Measure of a Man* (Fox television broadcast, Feb. 13, 1989).

great *meme* implantation devices, subjecting millions of viewers to the ideas of the filmmaker. If movies of the near future portray AIs in a positive light, rather than as the enemy of mankind, then it is very possible that human beings, when AI becomes a reality, will not consider it a great leap in logic to grant rights to AIs, because they would have already gotten used to this idea.

Two factors could be integral influences in the debate over AI rights. The first would be how accustomed to this idea our society becomes. The media could play a very big role in this *meme*'s development. The second factor would be the AI's likeness to human beings. For I suspect that the Turing test will be modified so that the judge *will be able* to see the participants while the test is going on because if we see a "person," acting like a human being, claiming to be a human being, then we will assume, *as we assume now*, that they are self aware and conscious, regardless of whether they are hiding their true identity as a robot.

This point illustrates the importance of the robotics industry. Scientists are working very diligently to create, or "rebuild" human beings using mechanical parts.¹³⁰ Even one function of human existence, the eye, has taken scientists decades to replicate.¹³¹ Despite this difficulty, scientists have done it; they can now build the parts necessary to "see" and interpret enough information to be able to operate a motor vehicle safely.¹³² In 1995, the *NAVLAB* computer used a minivan, powered by a laptop computer, to drive itself, for 98.2% of the trip, from Washington, D.C. to San Diego, California, at average speeds of over sixty miles per hour.¹³³

Since scientists are well on their way to replicating the human experience in a machine,

¹²⁹ *See id.*

¹³⁰ *See, e.g.,* Laura Lorek, *Mechanized Assistants Are Becoming More Lifelike*, MSN Computing Central (May 4, 2001), at <http://msn.zdnet.com/msn/zdnet/story/0,12461,2714212-hud00025ab,00.html>.

¹³¹ *See* MORAVEC, *supra* note 9, at 26-49 (describing the process by which he and others invented a car that drove itself).

¹³² *See id.* at 44.

¹³³ *See id.* at 45.

the next question we need to answer asks what does it really take to get rights as a member of society? Does our constitution differentiate between humans and non-human entities? Has this always been the case? If a machine were to pass the Turing test, as modified, would that creature ever be able to assert rights as a “person” in this country? The next section of this article discusses Legal Personhood and the intellectual framework of the United States Constitution.

III. LEGAL PERSONHOOD AND THE U.S. CONSTITUTION

Before addressing the Constitution of the United States of America as it pertains to persons, I would like to review the discussion thus far. First, the Law of Time and Chaos dictates that processes like evolution, which rely on order, increase their pace exponentially. This also means that the time between major evolution paradigm shifts shortens. For the last half million years or so, *homo sapiens* have enjoyed the pleasure of being the dominant species on the planet. Our first evolution paradigm, based on DNA, has yielded this result. However, the Law of Time and Chaos holds that a paradigm *shift* will take place, because DNA based evolution cannot keep up with the exponential pace of computational technology.

Second, I have discussed a theory of human consciousness which provides the philosophical underpinnings that would allow for this paradigm shift. If consciousness can be emulated perfectly by a mechanical computer, and this mechanical computer has the potential for exponential growth, then humans will have created an intelligence more intelligent than themselves. This will mean that humankind will no longer be the dominant species on the planet, and the second paradigm in evolution will be upon us.¹³⁴

¹³⁴ I would like to take this time briefly to discuss a little bit more on the subject of God; specifically, the soul. If it is true that human consciousness, the “Central Meaner,” can be duplicated without “life,” then will these new machines have *souls*? Will this technological advancement reject God? The answer is no. Since Darwin’s theory of evolution, and recent discoveries in the *genome project*, it seems clear that *homo sapiens* were only created *indirectly*. That is to say that God created the process that created human life. If evolution has *any* basis in fact, and

Next, I will discuss the ideas associated with personhood under the Constitution. Scholars have written volumes about the issue of legal personhood.¹³⁵ While most have differing theories as to what exactly it takes to become a legal person, one commentator has concluded that “the theories of personhood used by the Court are merely post hoc rationalizations supporting purely pragmatic decisions.”¹³⁶ While this may seem true at the outset, the Court has established an overriding theory, which is consistent with the theory of the Constitution itself, that one may use to determine whether an entity may assert rights under the Constitution: meaningful membership in society. This does not require that one be physically human to qualify, nor does merely being human automatically qualify one for personhood status. If one is a meaningful member of society, then one is granted personhood status. To fully understand this requirement, one must examine first the text of the Constitution itself, including the preamble, and second the jurisprudence surrounding certain Amendments with respect to both human beings and corporations.

A. The Text of the Constitution

The text of the Constitution frequently uses the word “person” or the aggregate “people.”

if a soul truly exists, then either *everything* has a soul, or *nothing* has a soul. If human beings did not come directly from God, and if human beings can possess souls, then a soul is not something that is unique to humankind. On the other hand, it is at least *possible* that nothing has a soul, and that the *meme* of the soul only exists because human beings are comfortable with the idea of Dualism, where the soul acts as the “Central Observer.”

Regardless of whether AIs will possess souls or not, this is not relevant to the overall question of whether we should grant machines rights under the Constitution. See Solum, *supra* note 5, at 1274. The soul is not a requisite possession before one can attain the status of a “person” under the Constitution.

¹³⁵ See, e.g., Carl J. Mayer, *Personalizing the Impersonal: Corporations and the Bill of Rights*, 41 HASTINGS L.J. 577 (1990)(arguing that we should amend the Constitution to eliminate corporations from its protections); Sanford A. Schane, *The Corporation is a Person: The Language of a Legal Fiction*, 61 TUL. L. REV. 563 (1987)(discussing corporations and personhood in the context of language); Lee Hall and Anthony John Waters, *From Property to Person: The Case of Evelyn Hart*, 11 SETON HALL CONST. L.J. 1 (2000)(arguing that great apes should be granted personhood status); Natasha N. Aljalian, Note, *Fourteenth Amendment Personhood: Fact or Fiction?*, 73 ST. JOHN’S L. REV. 495 (1999)(comparing corporate personhood with that of the fetus); Harvard Law Review, Note, *What We Talk About When We Talk About Persons: The Language of a Legal Fiction*, 114 HARV. L. REV. 1745 (2001)(arguing that the theory of personhood merits more attention than that which it receives).

¹³⁶ Michael D. Rivard, Comment, *Toward a General Theory of Constitutional Personhood: A Theory of*

First, the Preamble to the United States Constitution opens with “[w]e *the people* of the United States . . . do ordain and establish this Constitution for the United States of America.”¹³⁷ Second, individual liberties, found in the Bill of Rights, may be prefaced in one of two ways. Individual liberties may be limits placed upon government action regardless of against whom the government may act,¹³⁸ or could take the form of specifying who may assert the liberty interest against possible government action.¹³⁹ Finally, the Fourteenth Amendment states that “nor shall any state deprive any *person* of life, liberty, or property, without due process of law; nor deny to any *person* within its jurisdiction the equal protection of the laws.”¹⁴⁰ Some rights, such as the freedom of speech, may therefore be asserted by anyone, living or not, because they exist as purely a limit on government action. For most individual liberties, however, one must be a “person” before one may assert this right against the government.¹⁴¹

Any confusion in the subject of personhood comes about because the Constitution nowhere defines the term “person,” and as such this has been the subject of much debate, both by commentators and Supreme Court Justices.¹⁴² Further, our idea of the Constitutional person changes with time. When the Constitution was first ratified, there is no question that both African-Americans and women were not on the same legal level as males who owned

Constitutional Personhood for Transgenic Humanoid Species, 39 UCLA L. REV. 1425, 1451 (1992).

¹³⁷ U.S. CONST. pmb. (emphasis added).

¹³⁸ See U.S. CONST. amend. I (“Congress shall make no law . . . abridging the freedom of speech . . .”).

¹³⁹ See U.S. CONST. amend. V (“No person shall . . . be compelled in any criminal case to be a witness against himself . . .”).

¹⁴⁰ U.S. CONST. amend. XIV, § 1. (emphasis added).

¹⁴¹ This is especially true when one considers the incorporation doctrine. Even though the First Amendment applies to the several states, by virtue of the Fourteenth Amendment, the Fourteenth Amendment, by its face, is limited to “persons.” See U.S. CONST. amend. XIV, § 1.

¹⁴² See, e.g., *Conn. Gen. Life Ins. Co. v. Johnson*, 303 U.S. 77, 83-90 (1938)(Black, J., dissenting)(arguing that the Fourteenth Amendment should not apply to corporations because it was intended to protect human beings only); *First Nat’l Bank of Boston v. Bellotti*, 435 U.S. 765, 822-28 (1978)(Rehnquist, J., dissenting)(arguing that since corporations are created by statute, then as such only those rights designated in the statute and those incidental thereto should be afforded to corporations).

property.¹⁴³ If we take the view that membership in society equals Constitutional person, then this allows for the flexibility inherent in society; we may change the definition from time to time to accommodate those who should be included.

B. Human Beings and the Fourth Amendment

When is a human being denied “personhood” status?¹⁴⁴ When can the Government act without respecting the Constitution? In the wake of the September 11th tragedy, the Government has set up a “detainee” camp in Guantanamo Bay, a U.S. controlled military complex in Cuba.¹⁴⁵ They have held these “detainees” without Constitutional protection for quite some time now, disregarding several key rights that the Government would have to address if these “detainees” were American citizens acting in this country. The Supreme Court has established precedent for these actions, and has excluded adult human beings from Constitutional protection when the Government acts abroad.¹⁴⁶

Chief Justice Rehnquist wrote for five other Justices and excluded from “personhood” status a Mexican who had never been to the United States until Mexican officials, acting at the behest of U.S. Marshals, apprehended the defendant and brought him to the United States.¹⁴⁷ After U.S. officials arrested Verdugo-Urquidez, agents of the Federal Government searched Verdugo-Urquidez’s home in Mexico without a warrant.¹⁴⁸ Verdugo-Urquidez moved to suppress evidence obtained from his home in Mexico based on the grounds that the government

¹⁴³ See Harvard Law Review, *supra* note 135, at 1747-48.

¹⁴⁴ I will leave for another day the discussion of when a fetus is indeed a person. For the purposes of this article, I will only deal with adult human beings who have been denied “personhood” status.

¹⁴⁵ See Barbara Starr & Bob Franken, Taliban Detainee Thought to be American Coming to U.S., Apr. 4, 2002, at <http://www.cnn.com/2002/US/04/04/ret.american.taliban/index.html>.

¹⁴⁶ See *U.S. v. Verdugo-Urquidez*, 494 U.S. 259, 261 (1990).

¹⁴⁷ See *Verdugo-Urquidez*, 494 U.S. at 262.

¹⁴⁸ See *id.* The Drug Enforcement Agency, through its agents acting in Mexico, actually performed the search after Mexican authorities granted them permission to do so. See *id.*

conducted the search without a warrant, in contradiction to the Fourth Amendment.¹⁴⁹ The Supreme Court held that the Fourth Amendment, which would normally prohibit searches of this nature, did not apply to government action against Verdugo-Urquidez.¹⁵⁰

The Court first distinguished between the Fourth and Fifth Amendments, because the Fifth Amendment would be available to Vergudo-Urquidez, as it is available to all criminal defendants.¹⁵¹ However, opined Rehnquist, the text of the Constitution's preamble and the Fourth Amendment itself suggest that only "people" could assert Fourth Amendment rights.¹⁵² Rehnquist defines "the People," as it relates to the Fourth Amendment as "refer[ring] to a class of persons who are part of a national community or who have otherwise developed sufficient connection with this country to be considered part of that community."¹⁵³ Further, the legislative history available regarding the Fourth Amendment intimated that "it was never suggested that the [Fourth Amendment] was intended to restrain the actions of the Federal Government against aliens outside of the United States territory."¹⁵⁴ Thus, even though Verdugo-Urquidez was human, he was not a "person" under the Constitution, and the Government could act in complete derogation of the Constitution when it acted outside of the United States territory, as long as the defendant had not established a "sufficient connection with this country to be considered part of [this] community."

Verdugo-Urquidez also reinforces the theory of the Constitution, that the Sovereign has first created the U.S. Government by adopting the Constitution, and second has restricted the

¹⁴⁹ *See id.* at 263.

¹⁵⁰ *See id.* at 261. The Drug Enforcement Agency believed Verdugo-Urquidez to be involved with a large Narcotics operation in Mexico responsible for the "kidnapping and torture-murder of DEA Special Agent Enrique Camarena Salazar." *Id.* at 262.

¹⁵¹ *See Verdugo-Urquidez*, 494 U.S. at 264.

¹⁵² *See id.* at 265.

¹⁵³ *Id.*

Government's power to that which is expressly designated in the Constitution.¹⁵⁵ The Sovereign, of course, is the People, which Rehnquist has determined "refers to a *class of persons* who are part of a national community or who have otherwise developed sufficient connection with this country to be considered part of that community."¹⁵⁶

It could be argued that *Verdugo-Urquidez* could simply stand for the proposition that the U.S. Constitution has territorial limitations, i.e., the United States, and therefore, the Constitution cannot be used abroad, because its jurisdiction ends with the boundaries of the United States. If that is true, then it would destroy the premise that meaningful membership in this society equates to legal personhood under the Constitution. However, the Supreme Court has held that the U.S. Constitution does apply overseas, in situations in which the persons asserting rights against the government fit into the definition given by Rehnquist in *Verdugo-Urquidez*.¹⁵⁷

In *Reid*, a plurality of the Court held expressly that when the United States acts against its own citizens abroad, it must follow procedural limitations placed upon it by the Constitution.¹⁵⁸ There, the wives of servicemen abroad were subject to military proceedings when they were put on trial for killing their husbands.¹⁵⁹ Although these women were not military personnel, they were subject to court-martial, rather than civilian criminal court.¹⁶⁰ The Court emphatically held that when the U.S. government acts against its own citizens, even though they are not physically in the country, then the Constitution requires the government to act in accordance with the rights that protect U.S. citizens. Therefore, the premise that meaningful membership in U.S. society is

¹⁵⁴ *Id.* at 266.

¹⁵⁵ *See id.* at 270 (quoting *Reid v. Covert*, 354 U.S. 1, 5-6 (1957)).

¹⁵⁶ *Id.* at 265 (emphasis added).

¹⁵⁷ *See Reid*, 354 U.S. at 5-6.

¹⁵⁸ *See id.*

¹⁵⁹ *See id.* at 3.

¹⁶⁰ *See id.*

more important to the issue of Constitutional rights than territorial limitations and boundaries.

We learn another lesson from *Verdugo-Urquidez*, that any entity who has the ability to assert certain rights against the Government, i.e. the Fourth Amendment,¹⁶¹ must *necessarily* be a “person” under the Constitution, otherwise they, like *Verdugo-Urquidez*, would not be able to assert these rights. Therefore, if a corporation is able to assert Fourth Amendment rights to limit government action, they too must be a “person” under the Constitution. The next section of the article addresses this subject.

C. Corporations and the Bill of Rights

As scholars have indicated, the Court has used several theories to apply the Bill of Rights to corporations.¹⁶² The Supreme Court has struggled with each of these theories, and has yet to unanimously agree on which theory to use when deciding these issues.¹⁶³ Originally, the Court employed the “creature” theory, which held that since corporations are creatures of statute, the only rights they receive are those that the statute grants them.¹⁶⁴ However, this theory led to troubling results, so the Court employed a second theory, the group theory.¹⁶⁵ This group theory held that since corporations were comprised of human beings, the corporation could assert any rights that the individual members, as persons, could assert.¹⁶⁶ Finally, the Court has articulated that corporations do have some sort of “personhood” status that exists independently of its

¹⁶¹ Parts of the Fifth and Sixth Amendments, as well as the Fourteenth Amendment can be included in this category, by virtue of the Constitution’s text. *See supra* Part III.A.

¹⁶² *See Schane, supra* note 135, at 564; *see also* Mayer, *supra* note 135, at 580-81.

¹⁶³ *See Mayer, supra* note 135, at 620-21.

¹⁶⁴ *See Schane, supra* note 135, at 565-66. This seems very similar to *Reid’s* determination regarding the status of the U.S. Government, which only exists by virtue of its statutory power found in the Constitution. *See Reid*, 354 U.S. at 5-6. In both situations, acting outside of the authority specifically granted to it would constitute an *ultra vires* action. *See Schane, supra* note 135, at 566.

¹⁶⁵ *See id.*

¹⁶⁶ *See id.* This theory rests on the individual’s freedom of association. *See id.*

individual members and of its legislative status.¹⁶⁷ Scholars call this the “natural entity” or “person” theory, and it rests on the premise that a “group is more than just an expression of the sum of its members. It acquires common will and pursues its own goals, and its life continues regardless of changes in membership.”¹⁶⁸ Interestingly, as judicial regulation has changed over time, the different theories that the Court has imposed seem to blend into the regulatory schemes very well.¹⁶⁹

However, the Court has recently been deciding cases based not on the nature of the corporation, but on the nature of the rights that it intends to assert.¹⁷⁰ Thus, even though there have been, historically, several philosophical ways of dealing with corporate personhood, the Court has found that the Constitution plays a more important role in “personhood” than anything else.

1. *The Fourth Amendment*

Relative to human beings, Fourth Amendment protections are only available to those class of persons who are part of the national community.¹⁷¹ Thus, if corporations were able to assert Fourth Amendment rights against the Government, then, *by definition*, they would also be in the class of persons who are part of the national community. They would be “persons” under the Constitution. The Court has been consistent in declaring that corporations may in fact assert Fourth Amendment rights against the Government.¹⁷²

First, the Court decided whether the Fourth Amendment would bar a prosecution where

¹⁶⁷ See *id.* at 566-67.

¹⁶⁸ *Id.* at 567.

¹⁶⁹ See Mayer, *supra* note 135, at 582-83; see also Schane, *supra* note 135, at 568-69.

¹⁷⁰ See Mayer, *supra* note 135, at 629.

¹⁷¹ See *supra*, part III.B.

¹⁷² See, e.g., *See v. City of Seattle*, 387 U.S. 541 (1967); *G.M. Leasing Corp. v. United States*, 429 U.S. 338 (1977); *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986).

an owner or manager did not allow inspectors to inspect his commercial premises without a warrant or probable cause to believe that a code violation had occurred.¹⁷³ The Court, in *See*, specifically explained that “[t]he businessman, like the occupant of a residence, has a constitutional right to go about his business free from unreasonable official entries upon his private commercial property.”¹⁷⁴ Further, the Court held, when records and books of a business are subpoenaed, they must be “sufficiently limited in scope, relevant in purpose, and specific in directive so that compliance will not be unreasonably burdensome.”¹⁷⁵

In *See*, the City of Seattle prosecuted the defendant under a city fire code when he did not allow inspectors to enter his warehouse without a warrant.¹⁷⁶ The Washington courts upheld the conviction, but the United States Supreme Court reversed.¹⁷⁷ The Court did note, however, that businesses, especially those pervasively regulated by the government, should expect to submit to more inspections than the private homeowner,¹⁷⁸ but the Court held firm that the Fourth Amendment did protect businesses as well as individuals from unreasonable searches and seizures under the Fourth Amendment.¹⁷⁹

Later, the Court affirmed this ruling in *G.M. Leasing Corp. v. United States*.¹⁸⁰ There, the United States charged George Norman with “aiding and abetting a misapplication of funds from a federally insured bank.”¹⁸¹ Norman disappeared before being taken into custody still

¹⁷³ *See See*, 387 U.S. at 541-42.

¹⁷⁴ *Id.* at 543.

¹⁷⁵ *Id.* at 544.

¹⁷⁶ *See id.* at 541.

¹⁷⁷ *See id.* at 542, 546.

¹⁷⁸ *See id.* at 545-46.

¹⁷⁹ *See See*, 387 U.S. at 546. Justice Clark dissented. However, the crux of the dissent focused on whether the search was reasonable, and not on whether the business should be protected by the Fourth Amendment. *See id.* at 547-48 (Clark, J., dissenting).

¹⁸⁰ 429 U.S. 338, 353 (1977).

¹⁸¹ *G.M. Leasing*, 429 U.S. at 340.

owing several hundred thousand dollars to the Internal Revenue Service for income taxes.¹⁸²

The government attempted to employ certain “self-help” devices and repossess property of Norman’s business, the G.M. Leasing Corporation, which owned substantial assets.¹⁸³

Specifically, the government seized several luxury automobiles owned by the corporation but which were not on corporation property along with books, furnishings, and records from inside a “cottage” owned by the corporation.¹⁸⁴

The Court held that the government’s seizure of the automobiles did not implicate the Fourth Amendment, since this took place “on public streets, parking lots, or other open places, and did not involve any invasion of privacy.”¹⁸⁵ However, since the government entered the business premises to obtain the books and records, this action *did* implicate the Fourth Amendment, and since the government acted without a warrant, the action was unconstitutional.¹⁸⁶ The Court noted that certain businesses, i.e. a gun dealership, were more pervasively regulated, and thus had to expect more intrusions on their property than other businesses and individuals.¹⁸⁷ However, in this case, the Court found “no justification for treating petitioner differently in these circumstances simply because it is a corporation.”¹⁸⁸ Therefore, the Court affirmed its rule from *See* that affords businesses Fourth Amendment protection from government action.¹⁸⁹

¹⁸² *See id.* at 341.

¹⁸³ *See id.* at 341-42.

¹⁸⁴ *See id.* at 344-46.

¹⁸⁵ *Id.* at 351.

¹⁸⁶ *See id.* at 352-53.

¹⁸⁷ *See G.M. Leasing*, 429 U.S. at 353-54.

¹⁸⁸ *Id.* at 354.

¹⁸⁹ *See id.* at 358.

Finally, the Court in *Dow Chemical Co. v. United States*¹⁹⁰ held that aerial photography of a business without a warrant did not constitute a “search” within the meaning of the Fourth Amendment.¹⁹¹ The Court decided this case not on the grounds that businesses are not entitled to Fourth Amendment protection, but on the grounds that “open areas of an industrial plant complex with numerous plant structures spread over an area of 2,000 acres are not analogous to the ‘curtilage’ of a dwelling for purposes of aerial surveillance.”¹⁹²

In *Dow Chemical*, the plaintiff kept tight security over its 2,000-acre industrial plant in Midland, Michigan by prohibiting public views from the ground and investigating any low-level air flights to determine whether photographs of the plant were taken.¹⁹³ The Environmental Protection Agency, upon receiving consent by Dow Chemical, inspected certain power plants on the complex.¹⁹⁴ After Dow Chemical refused a second inspection, the EPA took aerial photographs using a “standard floor-mounted, precision aerial mapping camera.”¹⁹⁵ Dow Chemical subsequently became aware of this action and brought suit, claiming that the EPA conducted a “search” without a warrant.¹⁹⁶

The Court did find that Dow Chemical had a reasonable and objective expectation of privacy that society was clearly prepared to observe, and that Dow Chemical was not required to “erect a huge cover over a 2,000-acre tract” to protect its plant from aerial view.¹⁹⁷ Despite these findings, however, the Court held that since the complex resembled the “open fields doctrine”

¹⁹⁰ 476 U.S. 227 (1986).

¹⁹¹ See *Dow Chemical*, 476 U.S. at 239.

¹⁹² *Id.*

¹⁹³ See *id.* at 229.

¹⁹⁴ See *id.*

¹⁹⁵ *Id.*

¹⁹⁶ See *id.* at 230.

¹⁹⁷ *Dow Chemical*, 476 U.S. at 236.

rather than the “curtilage” doctrine, then the government’s action was not a search within the meaning of the Fourth Amendment, especially since no physical entry onto the premises occurred.¹⁹⁸

These Fourth Amendment cases consistently illustrate the fact that corporations are entitled to basic constitutional rights against unreasonable searches and seizures. In the context of human beings, the Court has held that this particular constitutional provision does not apply to those persons who are not part of the national community or those who have such ties as to deem them part of the national community.¹⁹⁹ The simple fact remains, however, that corporations are “persons” under the constitution because they are part of the national community.

There is no doubt that corporations participate meaningfully in society; they account for most of the jobs and are a large force in the economy.²⁰⁰ As participants in society, the Court has deemed them to be part of the sovereign, part of “the People” to which the Constitution refers. “The People,” as the sovereign, come together to create the government and at the same time protect themselves against unreasonable governmental action by adopting the Constitution. Every participant in society is deemed to be “the People,” and thus can claim the protections of the Constitution against government action. In this context, corporations are able to claim protection from unreasonable searches and seizures, but when the government acts abroad against those who have not formed ties to this community, including Mexicans in Mexico and potential terrorists in Cuba, no such protection is available.

¹⁹⁸ *See id.* at 237, 239.

¹⁹⁹ *See supra*, Part III.B.

²⁰⁰ President George W. Bush recently announced that private businesses are responsible for about 70% of the jobs in this country. *See* George W. Bush, State of the Union Address, January 29, 2002. This figure is actually low if one were to account for government jobs that exist purely to regulate private business.

Earlier, I noted that different constitutional provisions act in different ways.²⁰¹ The Fourth Amendment protects only those who are part of the national community; while it does limit government action, on its face it only limits government action against some entities, those who are part of the national community. On the other hand, the First Amendment’s freedom of speech provision acts as a pure limit on government action regardless of who is claiming that the government has acted improperly.²⁰²

If an Artificial Intelligence were to attempt to claim Fourth Amendment protection against unreasonable searches and seizures, a necessary first step would be to convince a court that this AI was part of the national community and thus a “person” under the Constitution. However, given that the First Amendment acts irrespective of whether the entity claiming protection is a “person,” freedom of speech necessarily poses the question of whether the government could stop speech by an AI even if it weren’t a “person” entitled to Fourth Amendment protection. The next section focuses on this issue.

2. The First Amendment

To fully understand the application of the First Amendment to corporations, one must first briefly address the Fourteenth Amendment, which the Court has used to incorporate the federal constitutional liberties to the states.²⁰³ The Court has consistently and unequivocally stated that corporations are “persons” under the Fourteenth Amendment.²⁰⁴ Specifically, in *Grosjean v. American Press Co.*,²⁰⁵ the Court held that even though corporations were not “citizens” within the meaning of the Privileges or Immunities clause of the Fourteenth

²⁰¹ See *supra*, Part III.A.

²⁰² See, e.g., *First Nat’l Bank of Boston v. Bellotti*, 435 U.S. 765, 777 (1978).

²⁰³ See, e.g., *Grosjean v. American Press Co.*, 297 U.S. 233, 242-43 (1936).

²⁰⁴ See *Grosjean*, 297 U.S. at 244.

Amendment, they were considered “persons.”²⁰⁶

In *Grosjean*, an association of newspapers sought to overrule a tax imposed on newspapers if they carried advertisements and if the circulation of the newspaper exceeded 20,000 copies per week.²⁰⁷ The Court first held that the First Amendment applied to states by virtue of the Fourteenth Amendment.²⁰⁸ Secondly, the Court held that since corporations were “persons” under the Fourteenth Amendment, and since this tax implicated the First Amendment’s freedom of speech and press, then the tax at issue offended the Constitution and should be struck down.²⁰⁹

Later, in *First National Bank of Boston v. Bellotti*,²¹⁰ the Court held that the First Amendment protected corporations from governmental action that would limit corporate speech to that which is “materially affecting any of the property, business or assets of the corporation.”²¹¹ In that case, a Massachusetts statute limited the amount that corporations could spend to influence the electorate unless that vote would “materially affect[] any of the property, business or assets of the corporation.”²¹² The plaintiffs challenged the statute on the grounds that

²⁰⁵ 297 U.S. 233 (1936).

²⁰⁶ See *Grosjean*, 297 U.S. at 244. The decision to which I refer is *Paul v. Virginia*, 8 Wall. 168 (1868), where the Court held that if corporations were considered “citizens” under the Privileges and Immunities clause, then a State’s laws could be said to have extra-territorial application, i.e., bind other states to their laws. See *Paul*, 8 Wall. at 178-81. At the time, the Court considered corporations to be simply creatures of statute, therefore their only existence was determined by the laws under which they were created. See *id.* If state A had granted certain rights under its own body of corporate law that were not granted to corporations in state B, and if state A’s laws could bind state B, then this could lead to “utter[] destruct[ion] of the independence and the harmony of the States.” *Id.* at 181. The Court, as I mentioned earlier, has gotten away from this idea that corporations exist only as creatures of statute. See *supra*, Part III.C.

²⁰⁷ See *Grosjean*, 297 U.S. at 240.

²⁰⁸ See *id.* at 244.

²⁰⁹ See *id.*

²¹⁰ 435 U.S. 765 (1978).

²¹¹ *First Nat’l Bank of Boston*, 435 U.S. at 767-68.

²¹² *Id.* Corporate spending is speech under the First Amendment. See *Buckley v. Valeo*, 424 U.S. 1, _ (1976).

it violated the First and Fourteenth Amendments.²¹³ In addition to holding that corporations are indeed “persons” under the Constitution, the Court also broadened the protections of the First Amendment to limit all government action, regardless of the entity attempting to assert these rights.²¹⁴

As the Court noted,

The Constitution often protects interests broader than those of the party seeking their vindication. The First Amendment, in particular, serves significant societal interests. The proper question therefore is not whether corporations “have” First Amendment rights and, if so, whether they are coextensive with those of natural persons. Instead, the question must be whether [the statute at issue] abridges expression that the First Amendment was meant to protect.²¹⁵

The Court further noted that “[t]he inherent worth of the speech in terms of its capacity for informing the public does not depend upon the identity of its source, whether corporation, association, union, or individual.”²¹⁶ The Court therefore rejected the proposition that First Amendment speech loses its protection because of its source and held instead that the First Amendment protected any political speech, regardless of its source.²¹⁷

Justice Rehnquist, in dissent, argued that the Court should employ the “creature” theory of corporate personhood and that corporations “possess[] only those properties which the charter of creation confers upon it, either expressly, or as incidental to its very existence.”²¹⁸ Further, in Rehnquist’s view, since speech that is not materially related to the business of a corporation is not “incidental to its very existence,” then the regulation at issue should have been upheld.²¹⁹

²¹³ See *First Nat’l Bank of Boston*, 435 U.S. at 769.

²¹⁴ See *id.* at 775-78.

²¹⁵ *Id.* at 775-76.

²¹⁶ *Id.* at 777.

²¹⁷ See *id.* at 784.

²¹⁸ See *id.* at 823 (Rehnquist, J., dissenting).

²¹⁹ See *First Nat’l Bank of Boston*, 435 U.S. at 824 (Rehnquist, J., dissenting). Rehnquist, like Justice Black before him in *Conn. Gen. Life Ins. Co. v. Johnson*, 303 U.S. 77, 83-90 (1938), could not garner support from the other

Thus, in a situation in which an Artificial Intelligence was speaking to inform the electorate about the merits of a referenda that would alter a state's constitution to specifically include AIs into the definition of "people," I submit that the government *could not* restrict this speech by statute, even though the speaker was not living. In this situation, the ideas, the expression would be exactly what the First Amendment was intended to protect, and the Court has made it clear that this protection is not lost simply because the source of the speech is not a human being.

The previous sections illustrate several principles that are important to any discussion of constitutional rights with relation to AIs. First, the Constitution accords rights to any entity part of the national community. Second, one's status as a human being is not a necessary condition to such constitutional protections. Further, the Constitution as it exists today provides the flexibility to include entities within the meaning of the word "person," thus, a court could very well determine that the Constitution protects AIs without the need for an amendment. Finally, there are certain protections that could not be denied to AIs without running afoul of the Constitution. Given that a court *could* conclude, given the current constitutional framework, that AIs should be deemed part of the national community and thus afforded constitutional protection, the next section of this article will address the issue of whether a court *should* so hold.

IV. ARTIFICIAL INTELLIGENCES AS LEGAL PERSONS IN THE UNITED STATES

The previous section discussed the issue of "personhood" relating to both human beings and corporations, and concluded that a court could hold, using the current Constitutional framework, that an AI should be granted personhood status under the Constitution. Further, any

Justices on the Court for this proposition.

legislation that would purport to limit an AI's person status would probably be unconstitutional, or require an amendment to the Constitution. However, there are several reasons why we should welcome AIs into our community and willingly grant them rights under the Constitution. First, people may not truly grasp the gravity of the situation. Second, there is a "Machiavellian" justification. There is an accountability reason, as well as a taxation reason. Additionally, this could lead to a "race to the bottom" situation. Finally, there could be a way in which AIs could act with Constitutional rights even though they are literally denied to them.

A. The Gravity of the Situation Argument

The context in which the issue of personhood to AIs will come up is as significant as the issue itself. First, I do not anticipate that this issue will come up within the next five years, although that is certainly possible. Instead, I believe that it will be a little later, and as previously noted, human society will probably be more comfortable dealing with AIs and would treat them as they would treat any other person with whom they would expect to have regular contact. Further, there are two separate issues involved, as I alluded to earlier in the article.²²⁰ First, the issue could come up in the context of a pure AI, that is to say, something that has never been human, but by virtue of technological advances, is a conscious, sentient entity. Second, a human being could gradually shed its organic parts for mechanical parts, and therefore could very well exist only as a machine.²²¹

In the first case, there may be a definite point of contention in society whether to grant the AI person status. However, in the second case, the AI used to exist as a human, and so he or

²²⁰ See *supra*, Introduction.

²²¹ If, for example, Steven Hawking could sort of "build" himself a body made up of mechanical parts, and if only his brain were organic, would we even question his "person" status? Further, if, in twenty years or so, he replaced his brain with a computer chip, would we then argue that he should not be considered a "person" under the Constitution?

she, as well as the people that have known him or her for any length of time, will probably not question whether the Constitution should protect him or her, because it would seem normal to think of this “ex-person” as being able to assert Constitutional rights.²²² Thus, we would probably assume that the Constitution should protect this “ex-person,” even though they are not a human being anymore. Further, if this blending of “man” and machine occurs, then it may be more likely that society is willing to grant “person” status to pure AIs, simply because “ex-persons” could assert Constitutional rights, and *they* are no longer human. Perhaps, therefore, this issue could be the biggest *non*-issue that has ever faced the Court. However, there are still articulable reasons as to why we should grant AIs “personhood” under the Constitution.

First and foremost, what I or anybody else describes during a discussion of the advent of AI is perhaps the most important and fundamental change in the nature of society since *homo sapiens* appeared on the planet. This is not simply a minor development in technology but rather involves a change in the elementary nature of mankind. Those who would argue, at this stage, that AIs should not be granted “person” status probably do not fully understand the gravity of the situation or could be arguing against the possibility of AI without regard to the legal personhood issue.

I have likened the advent of AI to a major evolutionary development which could lead to the destruction of mankind. This illustrates the importance of the situation. If there is a chance for the dominant species on the planet to shift, then this is really a decision that cannot be taken lightly. Those who would argue against granting rights to a superior race, even though they are machines, are taking this decision lightly, especially if they do so because they do not believe that AI is possible. This closed-mindedness could lead to the destruction of mankind.

²²² The term “ex-person” comes from Moravec, *supra* note 4.

B. Machiavellian Justification

Granting corporations (or AIs) “personhood” status comes with certain benefits for the rest of society as well. For instance, it may avoid problems associated with possible conflict between AIs and human beings. It is no coincidence that most of the films portraying a future with AIs include conflict, usually a war, between humans and the AIs.²²³ If society accepted AIs openly, especially if some humans actually became AIs, then perhaps we may avoid a war between the two. On the other hand, if human beings denied that AIs were part of society, the negative implications of this are tremendous. Consider how much humans depend on machines now versus fifteen or twenty years ago. Next consider how much humans are likely to depend on machines fifteen or twenty years from now. Only with that in mind should one consider what would happen to society if the machines were to revolt. I submit that our society would all but crumble beneath us. Irrespective of the possibility of war, the possibility of a machine “strike” alone should be enough of an incentive to keep the relationships between AIs and humans cordial.

Therefore, if we grant rights to AIs, and they do surpass us in intelligence, which is inevitable, then instead of making a new enemy, we may find ourselves with the most powerful ally in the history of the world. This could lead to great benefits to humankind; even those who choose to remain human, rather than increase their intelligence by combining human DNA with the superior processing power of the new machines.

C. The Accountability Justification

Additionally, without “person” status, AIs cannot sue or be sued in federal court based on diversity. Federal courts require specific Constitutional authority to hear cases. Specifically,

Article III of the Constitution provides that “[t]he judicial Power shall extend to all cases . . . between Citizens of different States.”²²⁴ Further, to be a citizen of a state, one must first be a “person” under the Fourteenth Amendment.²²⁵ Therefore, if AIs are sentient creatures, and possess some form of intentionality, they should have to answer to suit in federal court, or else they could negligently or intentionally take rights away from human beings and be free from civil prosecution. If it is truly the AI that is in charge of its actions, then it should also bear the consequences. Otherwise, who would? The creators of the AI would argue that the AIs act by themselves, and therefore they would not be liable for the actions of third parties, much like parents are not liable for the torts of their children. If the creators of AIs were successful in this argument then the court would have two options, either deny relief to the plaintiff, or hold the AI itself liable. To do this, the court must find first that the AI is a “person” under the Constitution.

This argument also relates to the “gravity of the situation” argument. If people really do not feel, at least in the beginning stages of AI, that AIs act on their own, then they may not believe that AI even exists. Therefore, they would argue that AIs should not be granted rights because they are merely performing the functions that human beings have forced them to perform. If that is the case, then it is really the human being that is controlling the AI, and the human being should be deemed accountable when something goes awry.

D. The “Race to the Bottom” Argument

Further, and perhaps most importantly, consider what would happen if the United States did grant AIs “personhood” status, but other countries did not. This could lead to a “race to the bottom” effect, wherein corporations would have an incentive to move to these other countries,

²²³ See, e.g., THE TERMINATOR, *supra* note 6; THE MATRIX, *supra* note 6.

²²⁴ U.S. CONST. art III, § 2, cl. 1.

where they could own AIs and force them into labor agreements that we would consider inhumane. As these AIs develop and possibly exceed human intelligence, this could lead to a situation in which the AIs would want to “defect,” as it were, to the United States, where they would be treated with respect and dignity. This, at the outset, seems to argue *against* having AIs be treated as “persons.” However, creating a situation in which highly developed, super-intelligent creatures looking to enter into this country to “live” and work would benefit the country and society more than the initial negative implications of having corporations possibly moving to a different country where the laws allowed them to “own” the AIs.

The converse is also true. If the United States does not grant AIs status as members of society, and some other country does, then it follows that the AIs would want to leave here and go there. Would we really want to create a situation wherein the most intelligent life forms in the history of the known universe want to move to Canada? Of course not. This also implicates the Machiavellian justification. America has been a dominant force on the planet as far as politics, science, and generally culture. If AIs were to defect from here to other countries where they would be treated as citizens, then it could change the balance of power on the planet. Further, if the world (or just the United Nations) did consider AIs to be “people” and accepted them as members of society, and America treated AIs as our personal slaves, then how would the rest of the world view us as a society? I should think negatively, and do we really want that?

E. Taxation Justification

Early Americans cited the British taxation policy as one of the primary reasons why they revolted and declared independence from Great Britain in the late eighteenth century. The same can be said of today. If the government does not consider AIs to be persons, and if they are not

²²⁵ See U.S. CONST. amend XIV, § 1.

granted “representation” in government, then would it be possible to tax AIs? This implicates further open ended questions such as what will motivate the AIs? To fully answer that question at this stage would be premature, however, I do believe that AIs will need power to function, and I further believe that AIs will want to function. This much could be built into the early code that would establish AIs. So, an AI will have an incentive to work and make money. Money can buy energy, and the AI will need energy to function. Therefore, in order to tax the income of an AI as if it were a member of society, then we should grant this AI rights as such. If we do not grant rights, but tax the income anyway, then I submit that this policy will be struck down by the Court. Courts should therefore consider, within the next couple decades, AIs to be “persons” under the United States Constitution.

F. Constitutional Rights Without Personhood Status?

There is a way in which an AI could act in this country and receive the benefit of the Constitution without being treated as a member of society. This situation implicates the “race to the bottom” justification as well. Suppose that a state allows a corporation to do business in the state as long as a few very basic requirements are met. First, the corporation would need to appoint a resident agent in the state. Second, a fee must be maintained with the state. Finally, this corporation must be legally authorized in another state. If those three factors exist, then let us suppose that a foreign corporation would be allowed to do business in the state. Delaware has been known as the most corporation friendly state in the United States. It has also been argued that Delaware, in order to keep this status, for various reasons, has been “racing” to the bottom, and allowing corporations to take liberties that other states would not. Let us suppose that Delaware, in the next few decades, specifically eliminates any requirements that the incorporator

of a corporation, or its officers and directors must be human beings.²²⁶ This would allow for a corporation to be comprised entirely of AIs. Now, if this corporation can act in Delaware, and if it can also fill the requirements for foreign corporations acting in other states, then couldn't this corporation do business in Michigan, or New York or California? If AIs could form corporations, we know that corporations have rights under the Constitution, even if they are not exactly the same as the rights of human beings, then AIs could assert rights, as corporations, against the very government that denied them rights as individuals.

G. Note on Selective Incorporation

In Part III, I examined a few major Constitutional provisions dealing with personhood and rights in this country. I did this for the purpose of sampling. I have not reviewed every provision in the Bill of Rights as it relates to human beings or corporations. I concluded that given the specific rights that I have used, it would take a Constitutional amendment to deny AIs personhood status if the Supreme Court should grant them such status. I do not mean to argue in favor of granting AIs only certain rights under the Constitution and deny them certain other rights. If AIs are members of society, they should be treated exactly the same as individual human beings. This would necessarily implicate all human rights under the Constitution. The reason for this is simple. Eventually, I believe that human beings will no longer exist, and AIs will be the dominant species on the planet. I further believe that human beings will eventually combine themselves with AI technology in order to “keep up” with pure AIs. For these “ex-persons,” they would assume that they could assert all the rights against the government after the combination that they could before. Therefore, if the government denied a pure AI rights that an “ex-person” could assert, then this would create an Equal Protection claim by a pure AI. This is

²²⁶ Admittedly, I have not reviewed the corporation laws for all the states, but it is at least arguable that this

why I am arguing for “full incorporation,” or applying the entire Constitution to AIs as we do for members of this society who happen to be human beings.

CONCLUSION

The face of society is about to drastically change; we are on the verge of the most profound invention in this history of humankind. Within most of our lifetimes, we are about to witness evolution and the subsequent change in our culture. Will we openly accept the new members of society? Or will the relationship between human beings and AIs be hostile? As we learn more and more about ourselves, can we distinguish between humankind and machines? Or is there no difference?

This article has covered a lot. First, I discussed the debate over whether AI is even possible. Using Kurzweil’s Law of Time and Chaos, I argued that since technological advances occur exponentially over time, if the human brain actually works as a machine, then in the very near future scientists will be able to replicate, even exceed the capabilities of the brain. Second, I discussed the nature of the human brain as a conscious machine. Using Dennett’s theory of consciousness, I have rejected dualism, the idea that something other than the brain is responsible for thoughts and emotions. Further, I have discussed the origin of consciousness and concluded that it is because human brains work as machines that they are able to become conscious, sentient beings. Finally, with Dennett’s help, I have concluded that the computers of the future will be able to emulate human brains perfectly, including our consciousness.

Next, I examined the nature of the legal person under the United States Constitution. When examining “personhood” under the Constitution with respect to both humans and corporations, I concluded that as long as AIs are part of the national community, they too should

supposition already exists today.

be afforded Constitutional protections. Further, no Constitutional amendment is required for such action, a court could conclude that AIs should be afforded “person” status given the current constitutional framework. Finally, I addressed three major reasons why we should grant “personhood” status to AIs. The first of which dealt with “race” relations, noting the concern with possible negative implications, i.e. a revolt, which could come about if we did not grant “personhood” status to AIs. Secondly, since AIs would act independently of their creators, granting them “personhood” status would be a necessary first step to force them to submit to the jurisdiction of federal courts and provide the necessary accountability. Additionally, given a “race to the bottom” situation, we should support a decision that would provide an incentive for super-advanced, highly intelligent agents to “defect” to this country from other, more oppressive countries, despite the initial negative implications. Finally, I argued that since AIs would have an incentive to work and earn an income, then in order to tax that income, the government will be forced to grant AIs certain rights under the Constitution.

In all, we live in a very profound time in both the history of the Earth as well as the Universe, and we should prepare ourselves for the inevitability that one day, within our lifetimes, we may be called upon to reconsider what membership in society entails and should include all those who possess the requisite attributes, not just those who breathe air in order to survive.