

SALVE REGINA UNIVERSITY

“THE ALGORITHM DID IT”:

RESPONSIBILITY AND THE REGULATION OF ARTIFICIAL INTELLIGENCE

A DISSERTATION SUBMITTED TO

THE FACULTY OF THE

HUMANITIES PROGRAM IN

CANDIDACY FOR THE DEGREE

OF

DOCTOR OF PHILOSOPHY

BY

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NEWPORT, RHODE ISLAND

DECEMBER 2021

ABSTRACT

Artificial Intelligence has brought us to a crossroads in our evolution, with no clear decision to date how to move forward with AI control. The existing legal system, however, provides an existing means of regulation through its distinction between natural legal persons and artificial legal persons such as corporations. Positive law, without recourse to metaphysics or ontology, allows much needed regulation, while maintaining the integrity of non-legal beliefs. This approach is compatible with current developments in Artificial Intelligence, human neuroscience and the existing legal system. It also does not damage the rights and obligations of natural legal persons, or their ability to maintain moral principles, by its placement of individual moral decisions in a separate societal role from that of positive law.

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INTRODUCTION

“We can only see a short distance ahead, but we can see plenty there that needs to be done.”

- Alan Turing, 1950

Although we stand twenty years into the 21st Century, we, like Alan Turing, can still only see actual technological development a comparatively short distance ahead. We also, however, can and do imagine much further, to technological possibilities occurring generations from now. There is “plenty there” in each vision that needs to be done, and this makes deciding how to manage technology a multi-faceted exercise. We are deciding not only for the present, but we must also with those decisions provide at minimum a working framework for various hypothetical technological futures. We are deciding not only our future as “human beings,” but the future of all that exists on this planet and others, known and unknown.

The view of what exists now is easier in many ways to handle than a hypothetical future because we have empirical examples of positive and negative technological effects. The long-range view of potentiality is far more difficult to categorize. It can be highly subjective, shaped by our initial definitions for both technology and “what it means to be human.” Technology, the first part of the question, at first might seem relatively easy to define. However, even its definition is variable. We think we know what it means, but in all probability each of our definitions has significant differences.

Defining “what it means to be human” is even more problematic, assuming that this is even the most accurate way to phrase the issue. It invariably involves ethical and metaphysical questions which are not capable of one final, definitive answer with which all will agree. The result is that we are trapped by our own distinctive “human” nature which asks “why,” with as many

answers as there are individuals. Technological regulation has suffered as a result, more in some areas than others. The closer technology gets to what might be called the “human identity” issue, the harder this has become. At present, two of the most debated areas in this regard are those of biomedical technology such as stem cells and DNA modification, and the specter of artificial intelligence (AI) and its application in a wide range of uses. Regulation of the later is the focus of this inquiry.

Thomas Hughes sums it up well, “Technology is messy and complex. It is difficult to define and to understand. In its variety, it is full of contradictions, laden with human folly, saved by occasional benign deeds, and rich with unintended consequences.”¹ Hughes makes an accurate observation, and an additional definition demonstrates one of those complexities. He defines technology as “a creative process involving *human* ingenuity”² (Emphasis added). Artificial intelligence, however, appears to potentially put the human element of this process in doubt.

All of this involves an initial point must be recognized: we are afraid that a line somehow will be crossed where our distinctive “humanness” is lost, when in fact that line already is very blurred, a condition that has nothing to do with AI, androids or similar. We as a biologic entity may not be nearly as unique in many ways as we believe, including our neurological make up and such human practices as making tools, our ability to create and use technology. This issue is compounded by the fact that the word “human” is used in many contexts that include far more

¹ Thomas Park Hughes, *The Human Built World, How to Think About Technology and Culture* (Chicago: University of Chicago Press, 2004), 1.

² Ibid., 3.

than *Homo sapiens* species designation. We can define *Homo sapiens* by DNA, but “human” has a much less defined linguistic use.

For instance, while a tie to what is called a human element is common in definitions of technology, primates as well as other animals also make and use tools which can be seen as a basic technology.³ The more precise tie is to *Homo sapiens* species designation. However, those working in the fields of primatology, anthropology, and neuroscience among others, are increasingly seeing the possibility that there is no sharp division between the defining biologic neuroscience biologic capacities of “*Homo sapiens*” and “non- *Homo sapiens*” including the intellectual ability to create and use basic technology. Rather, it is a sliding scale of abilities.

An even more complex concern arises when we look at technology in the form of AI, technology that acts like a “human being” in many respects but is not *Homo sapiens* in terms of biological constituents. “Being human” entails untold baggage having nothing to do with our DNA, composed of our practical interaction with the world and the theoretical concepts of rights and obligations we create in the social context. It is the premise of what follows, however, that it is not necessary to carry all that baggage when looking to regulate technology such as AI. Deciding what should be carried versus what is unnecessary or counter -productive is the initial step. At least in terms of AI regulation, what follows is the proposal that the primary baggage to carry is our current legal system and its distinction between natural and artificial persons.

The development of the idea of legal “personhood,” which in present day application includes artificial as well as biologic human beings, did not arise due to technology, but it is nevertheless applicable. The concept of an artificial “person” as a legal entity in fact arose as a

³ J. Lapuente, Hicks, TC, and Linsenmair, KE. Fluid dipping technology of chimpanzees in Comoé National Park, Ivory Coast. *Am J Primatol.* 2017; 79: e22628. <https://doi.org/10.1002/ajp.22628>. Accessed October 20, 2020.

side note to a Fourteenth Amendment U.S. Supreme Court decision.⁴ Later cases⁵ expanded this in definitive opinions about corporate rights and obligations as “artificial persons” to an extent that many might find surprising, since these decisions extended rights normally considered to belong exclusively to human “natural” persons to non-human legal entities.

There is no existing legal barrier to further expansion or application of this idea of artificial *legal* person, although the rights of such an artificial legal person are subject to dispute, as described in later Chapters. The fact that the concept of artificial personhood was extended to grant Constitutional rights to corporate entities indicates just how elastic the law can be, too much so for some. However, one must be careful to not discard the underlying notion of artificial legal personhood as a concept for placing an entity within the control of the law because one objects to the way in which legal rights, versus legal obligations, were allocated.

This issue of unnecessary allocation of certain rights to corporations has many potential sources, in part arising from the nature of a corporation entities formed by human shareholders. We usually see the people who manage and are employed by the corporation *as* the corporation, although legally the opposite is true. There is a fear that this will also happen with AI if it is given legal personhood, it will be seen as not just an entity having legal personhood obligations, but also one having natural person rights.

This fear is exacerbated by how often it is stressed that AI can do “human” things, create art and music, for instance. Even more confusing is when AI is placed into physical technology that is made to look “human” or at least biologic. All of this causes the reaction that to give AI

⁴ *Santa Clara County v. Southern Pacific R. Co.*, 118 U.S. 394 (1886).

⁵ *Citizens United v. Federal Election Comm'n*, 558 U.S. 310 (2010); *Burwell v. Hobby Lobby Stores, Inc.*, 573 U.S. 682 (2014).

artificial legal personhood will open a Pandora's box leading to artificial AI and "real" human entities being indistinguishable. However, that belief is not only inaccurate, but it also creates a situation where we in fact make AI's uncontrolled usurpation of human life far more likely.

The legal system has a long history of regulating in both civil and criminal law the artificial person entity of the corporation. The "person" in this instance is a *legal construct* only. It is not a building or a physical entity or an intangible mathematical creation. To see it as anything more than a legal construct is to make Ryle's category mistake.⁶ A corporation's physical manifestation of legal personhood is composed of its Articles of Incorporation, By Laws and similar, which taken together, physically represent the theoretical artificial person. The corporation's human manifestation, composed of its shareholders, management and employees, are separated from that artificial legal person by yet another theoretical legal concept, that of the "corporate veil."⁷

These human individuals behind that veil do not in most cases bear legal responsibility for the acts of the corporate entity. In fact, that legal protection is one of the benefits of incorporation, leading to the countless numbers of limited liability corporations, LLCs, that now exist. However, that veil can be pierced given the right set of facts. If that occurs, then in that instance, both the natural and the artificial legal persons becomes subject to legal process. This aspect of artificial existence is the subject of extensive litigation regarding whether that veil has

⁶ Ryle, Gilbert. *The Concept of Mind* (Chicago: University of Chicago Press, 2002).

⁷ https://www.law.cornell.edu/wex/piercing_the_corporate_veil. Accessed July 28, 2021.

been pierced,⁸ and it is likely that a comparable situation will exist with AI as discussed in concluding Chapters.

The law's treatment of this issue in the corporate context, artificial personhood existing in tandem with that of natural persons, aids in delineating how to treat the respective legal rights and liabilities of these entities. It also, therefore, can provide a procedural guide for separating the non-legal, ethical concerns which pepper AI, versus its developers. This allows the allocation of defined legal responsibility for consequences when things do not go according to plan with a particular algorithmic application, as a separate matter from allocation of ethical responsibility for involved human actors.

Corporations as artificial entities with legal personhood are not clearly "persons" as originally contemplated by the US Constitution. Nevertheless, they are now subject to most legal rights and obligations that exist under established law in their interactions with each other, the government, and natural persons. In addition, as with all such rights and obligations, the legal context in which they exist is fluid, capable of change to meet in new circumstances. Therefore, as we face the challenges presented by technology, and the failure to date to effectively regulate what now exists, much less what remains over the horizon, we do so with a ready tool that has been to a great extent ignored: the concept of artificial legal personhood.

One of the primary issues that has prevented a clear path to technological regulation in general is a disagreement about the moral principles which underlie nearly all arguments about technological development and use. One sees this most markedly in biomedical technology debates regarding stem cell research and similar. On a different but equally complex and

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Piercing%20the%20Corporate%20Veil%20in%20the%20US_%20%20NY%20Taxicabs%20and%20other%20Scary%20Adventures.pdf. Accessed July 28, 2021.

disputed level is the metaphysical concept of a person, when does a biologic human being exist to even be considered a “natural” person,⁹ much less a natural person with moral responsibility for his or her actions? These are important questions, the later appearing frequently in debates about AI. However, as noted above, at least in terms of legally regulating AI, it is not a necessary debate, and in terms of a method of satisfactory regulation, we are not starting from ground zero.

We do not need to debate these underlying philosophical issues to develop a viable scheme of technological regulation of AI. We do not need to engage in a futile debate about personhood in the metaphysical sense. Nor do we need to debate about moral responsibility for behavior by AI (or its creators) to place AI in a legal framework and create legal responsibility, any more than that was necessary to create artificial corporate personhood, or corporate legal liability for acts that violate the rights of persons, both natural and artificial.

This is not to say that these other questions do not exist, that they are not important, or do not need to be considered, but to suggest that to try to do so with legal regulation is misplaced effort. The question, instead, is to ask is how to include this new class of non-biologic entities that can at times seem “human” without unnecessarily attempting to fit them into an inappropriate “natural person” box. All that is needed to answer that question is to look at our current system of corporate law, the concept of artificial legal personhood.

Jacques Ellul in his critique of modern technological society uses the term “technique” in contrast to the word “technology.” Technique for Ellul meant “the *totality of methods rationally arrived at and having absolute efficiency* (for a given state of development) in *every* field of human activity a sociological phenomenon...”¹⁰ (emphasis in original). Law, the legal

⁹ *Roe v. Wade*, 410 U.S. 113 (1973).

¹⁰ Jacques Ellul, *The Technological Society* (New York: Vintage Books, 1964), xxvi.

system, is just such a method, rationally derived, encompassing nearly every field of human activity, and a sociological phenomenon. From one perspective therefore, what is needed is to use the legal system as technique, as method, including the law's idea of natural and artificial legal personhood, to control technology, specifically AI.

The argument presented in what follows falls into six primary areas. The first of these is found in Chapter One, the current state of attempted technological regulation. This overview demonstrates why an innovative approach as proposed is needed; and that the frequently used recourse to moral principal arguments as a basis of regulation is not just unhelpful, but detrimental. It is a methodology that fails since it in fact is not "method" of all. It is also blind to what does exist as viable method: the current legal system classifications of persons artificial and natural. Under that later approach, as discussed in the Chapters Five and Six, extension of the case law that exists in the corporate artificial setting would be the immediate starting point, with potential creation of a uniform code of regulation applicable to AI, patterned after uniform codes already existing in other areas.

It is unnecessary under this approach to debate the innate nature of technology. Technology is not "good" or "evil" any more than the artificial corporation. It is the acts of these entities, their purposes, to which such adjectives apply. This is not to say one should not pay attention to such results, or that they do not involve the subjective human issues of right or wrong behavior, but that such a discussion belongs in another forum. Technology, including AI, in and of itself is an inanimate object or process, not instilled with any cultural, moral, or political agenda political agenda its own.¹¹ As observed by Norm Chomsky, "Technology is

¹¹ The issue of artificial intelligence in computers gone wrong as a moral issue raised by some science fiction (HAL in *2001 a Space Odyssey* or Ian McEwan's *Machines Like Me*) is a red herring. Artificial legal persons

basically neutral. A hammer doesn't care whether you use it to build a house or crush somebody's skull" ¹².

Defining technology is complex but manageable, defining what it means to be "human," as discussed, presents an impenetrable tangle of cultural, political, religious, biological, historical and ethical concepts. The beginning, therefore, for practical efficacy needs to be where we now stand, with what we now have, a legal system that can manage technological issues based on established and generally accepted principles of law. To do that, these principals must be defined, put into applicable context, and then a proposal for action going forward can be presented.

For those who view advances of technology as bringing us, if not into utopia, into at least a new golden age of achievement, a second Renaissance, what we need to do as human beings is to push the advances of technology as far and as fast as possible. We must get from point A of an idea, to point B of its implementation, to point C of mass use, all in the most expeditious manner. There can be no wanderings off the scientific path into other considerations, moral or legal. In fact, according to futurists like Ray Kurzweil, this single- minded trajectory is as inevitable as is its speed. ¹³ Disagreement over regulation is eliminated because regulation is seen as a tangential issue at best, an impediment to progress at worst, and therefore ignored.

To those who are more skeptical or even pessimistic about the alleged promises of AI and other technology, however, the path of technological development is full of potential ethical and social missteps, each bounded by a sharp precipice where to fail means that our humanity, however defined, is lost. Under this view, we are in constant danger of sliding down the proverbial

may have "personhood" legal rights, but they are not biologic human being persons. They are not subject to attribution of those characteristics, no matter how much they look and act like us, they are not us.

¹² <https://www.wired.co.uk/article/noam-chomsky-at-learning-without-frontiers>. Accessed October 28, 2020.

¹³ Joel Garreau, *Radical Evolution* (New York: Broadway Books, 2005), 94.

“slippery slope” to destruction as “human beings.” Resort to a slippery slope argument is often considered to be a logical fallacy, but it is useful here in one respect. It implies hazardous footing, with no ropes or safety nets to stop a fall off the narrow ledge of “humanness,” as we each conceive that word.

However, both positions ignore the far more pragmatic and feasible approach proposed, take what we have, our existing legal system, the exiting idea of legal personhood, natural and artificial, and use it. What that legal system now provides as a conceptual starting point in its concepts of natural and artificial persons, and how this evolved, is discussed in Chapter Two, and is a crucial element of the proposed solution. An entity is in the general class of “natural legal person” as a human being if one has the objective DNA criteria used to establish a *Homo sapiens* designation.¹⁴ However, different natural persons can have different legal personhoods, and as the abortion debate indicates, becoming a natural legal person initially must at least at present meet certain independent viability criteria.¹⁵

In addition, simply because one is not a natural person, does not mean that one is not subject to rights and obligations imposed on “persons” as an artificial corporate entity, assuming one meets the criteria for legal corporate existence. There are as well subcategories of passive and active natural legal personhood, for instance those under the age of eighteen, those who are found to be legally incompetent for whatever reason. This kind of further subdivision regarding active and passive rights may also prove useful to the AI situation and the “future problem solving” discussed in Chapter Six.

¹⁴ The existence of chimera is a potential issue here, since mixed DNA is involved, but still would appear capable of definition along objective lines, (i.e.) to be a particular species one must have “X” DNA, if one has “Y” then one is a new species, one having human as well as other species DNA. DNA in both can be measured.

¹⁵ *Roe v Wade*, Ibid.

The factual elements of AI to date and prognosis for the future, as well as the issues with AI that have been identified to date which must be considered as part of this proposal are the subject of Chapters Three and Four, which outline how corporate law principles of artificial personhood might be specifically applied to AI development. Taken together, these Chapters form the basic argument for the legal procedure and procedural principles to be used for AI regulation. This establishes the first part of what is proposed overall, predominantly from a procedural aspect.

However, procedure cannot stand alone, it needs to be procedure about substantive content. As observed by Sheila Jasanoff: “Technological advances can make the divisions between public and private spaces in ways that affect not only personal autonomy and opportunities for public deliberation, but also and perhaps most significantly, the norms of individual and collective responsibility.”¹⁶ Jasanoff highlights with this observation what has been one of most serious impediments to date to meaningful substantive technological regulation, as well as a substantive element that must be considered, the inescapable connection to rights and obligations.

She elsewhere places this in an ethical context. However, the idea of rights and responsibilities is ingrained into the concepts of our legal system, existing apart from any moral considerations. Much of Jasanoff’s discussion is linked to a what she considers a failure of “technological justice;” a failure to consider moral principles and the ethical consequences of given technologies. However, it is precisely the debate about the meaning of justice, technological or otherwise, the subjective nature of opinions about the content and applicability of moral principles, which has caused the very problem she raises. Certainly, there is a problem, but it is not the failure to consider these concerns that is at issue, it is considering them in an

¹⁶ Sheila Jasanoff, *The Ethics of Invention* (New York: W.W. Norton & Co., 2016), 262.

inappropriate forum; their use in a manner destined to fail as outlined in Chapter One as a means of technological regulation.

The theoretical origins of this problem are as noted important, and as such are addressed in Chapter Five, which looks at specific substantive areas of current law in the context of AI. In many circumstances, we simply do not agree about what is right or wrong behavior, or what constitutes justice. We may agree that there is “something” that exists independently from us which must be recognized as part of our “humanness,” but we cannot agree as to what that something is, all while disregarding established legal principles which can provide a framework far less subjective. Again, debates about these kinds of issues are important, they are in fact a mark of our humanness, but they are not the lynch pin for technological regulation, particularly with AI.

It is granted that moral principles in general may have a significant, at times depository, effect on the practical efficacy and survival of a political institution and /or its legal system, However, as will be indicated by earlier Chapters, they appear to be of limited use in terms of the practicalities of technological regulation. They fail because while they may cause lively and worthwhile debate, particularly as we attempt to define who we are in the world, they do not produce practical solutions.

The legal system, in contrast, while adversarial, is adversarial with a clear end purpose, a final, enforceable rule for conduct. Opinion may not be unanimous it does not have to be. All that is necessary is that already established and articulated legal rules of substance and procedure are properly followed. This is, in turn, a system and process of rules and principles that have been developed, tested and proven to work overtime.

Chapter Six, the concluding chapter, concerns what has been called in other fields “future problem solving.” Assuming the concept of legal artificial and natural persons is applied to AI and related technology, what other problems may arise? Perhaps even more importantly, how can this concept be expanded and adapted to new forms of technology that advance beyond the issues presented with AI? We may eliminate the issue of irreconcilable moral views, only to replace it with one or more issues equally problematic if what is proposed is not so adaptable. However, as discussed in Chapter Six it is considered that whatever issues may arise, and there certainly will be many, these can be resolved. Just as there was and are with the concept of artificial corporate legal personhood, the as a tool, as a method, is flexible, we control the uses to which it is applied and how.

If one looks at corporate and legal history, development while at times veering off to one extreme or another, eventually becomes more centered, and overall strives for a consistent theoretical approach, and this is part of the solution to future problem solving. The founding documents of United States government; its Constitution, and in particular, the myriad court opinions, statutes, amendments, executive orders, and codes of regulation that followed all strive to be ultimately consistent at a basic level; and it is this that is the glue that holds our legal system together. Artificial legal personhood for AI fits comfortably within that framework, even if it requires adjustment in other aspects of the law and practical society.

That is not a new or unique situation, it is one that is occurring continually, albeit unrecognized until the “big” case is a subject of the news and/or public commentary.

The law is composed of many discrete areas, civil, criminal, corporate to name just a few. These in turn are further subdivided. Yet all return at the end to one basic principle, the concept of a political society composed of legal “persons,” *both* natural and artificial, each subject to the rule

of law in various, at times different, at times the same, ways. Nothing about technology changes that basic concept. What is necessary is that this concept be recognized and applied.

This is by no means a smooth process. “Person” is never defined in foundation documents; it is a term that has been defined only by succeeding case and statutory interpretations, expanded in this process to include more than the framers’ likely concept of natural Homo sapiens entities. Opinions are issued, appealed, overturned; dicta as well as opinion black letter law ruling are used in new contexts to create new law, in a continually evolving process. However, basic principles survive.

This indicates that the approach proposed is not simply theoretically feasible. It has been done and works, while remaining within founding document parameters. It is “persons,” however defined, who are referenced and protected in our political institution and its laws, and there have been over two hundred years of inquiry and explanation as to what exactly these words mean in terms of those protections and obligations. At times this has been a tortuous process, but the resulting distinctions between legal personhood, natural and artificial persons, as well as natural persons who are the beneficiaries of legal rights but without legal obligation, are significant for more than just positive law; they lay a useful theoretical ground for considering the broader issues involved in technological regulation. They indicate just how flexible a legal system can be in adjusting to new practical issues such as AI, while maintaining basic human principles.

Chief Justice Kennedy in *Planned Parenthood v. Casey*, 505 U.S. 833 (1992), framed the philosophic issue at stake in considering the regulatory process. Liberty (as used in the Constitution and related documents) is not simply freedom from government action, but “*the right to define one’s own concept of existence, of meaning, of the universe and the mystery of*

human life”¹⁷ (Emphasis added). Some may object that the reliance on artificial legal personhood in AI and related technology to solve at least those technological issues abandons the “human” element articulated by Justice Kennedy. Corporations are not people, and technology threatens *people* in previously unimagined ways.

That is true, but only to a limited extent. The legal system, the legal distinction between natural and artificial persons, is a human product, it is human *technique*. As such it is an important aspect of our communal effort to define existence and meaning. Therefore, the law and distinctions that arise out of that process, including the distinction between artificial and natural persons, are an important manifestation of the principle articulated by Justice Kennedy. To consider AI in that context not only more accurately reflects what AI is, an artificial human creation, but places it in a far more accurate, and manageable position in terms of rights and obligations in comparison to those of natural persons.

¹⁷ *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833 (1991).

Chapter One

Standing on the Slippery Slope

“Users of slippery slope arguments should take skiing lessons—you really can choose to stop.”

- Nigel Warburton

“Technology is a useful servant, but a dangerous master.”

- Christian Lous Lange

Technology is everywhere, overt and covert, presenting both benefits and risks that are now so common- place that they are often barely noticed, if at all. This is one of the insidious, and perhaps most dangerous, risks that technology presents. Its presence is so familiar that it is no longer seen for what it really is, what it is doing not only for us but also to us. Dystopian writer Aldous Huxley saw the events of his time as placing all on a “slippery slope” to human ruin, a result of technology. He dramatizes this warning in *Brave New World*,¹ a society with utopian aspirations turned to dystopian actuality, where at least a large segment of the population has an appearance of everything they could want, but in fact have lost much of their humanity. In Huxley, technology has become Lange’s dangerous master, with human assent to machine dependence and dominance resulting from inaction. Human consent to being controlled through application of technology, an application that then becomes self-perpetuating and self-sustaining.

People may view the slope of the “slippery slope” argument in diverse ways. It can be taken literally in comparison to a ski slope, a steadily down incline, or as incremental. It is the latter which is the usual application of this argument, where giving a little here leads bit by bit to future decisions with a presumed negative impact. The kind of slope, however, is not the point, the point

¹ Aldous Huxley, *Brave New World* (London, England: Vintage, 2010).

is the power to exercise control, regardless of the type of slope, to make the decision to stop. The Warburton quote goes to the ever-present ability and decision to exercise control, to not allow oneself to become out of control. There are slopes literal and figurative where complete loss of control is a more than likely possibility, depending on our expertise in that terrain. We are warned, therefore, to look early on at the possibility of complete loss of control, and account for that eventuality.

Therefore, while society may be in danger of sliding down a dystopian path of some sort, it also can choose to stop and regulate. In turn, to do so first requires consideration of where exactly things now stand. Where have the past decades taken us, both in terms of technology and regulatory effort? In another context Huxley noted, “That men do not learn very much from the lessons of history is the most important of all the lessons of history.”² The past is ignored at one’s peril, and it is important to examine not only what happened, but why. One of the foremost initial steps of technological regulation, therefore, particularly in respect to artificial intelligence (AI), is to identify not only known and foreseeable consequences, but also to identify those risks that are known or suspected but have not been addressed in a definitive manner because it was considered too controversial or theoretically too difficult to do so.

When one speaks of AI, one often conjures images of androids, mysterious circuitry encased in not only a mechanical form, but perhaps a material shell made to look as *Homo sapiens* and act as “human” as possible. It is the latter that causes the most concern, the fear that human beings are being replaced. The forms in which AI can manifest itself are already innumerable, with no real limits in sight. However, these forms are all an outer skin, infinitely changeable, and it is, therefore, important that in seeking to regulate AI use one goes to the core of the matter.

² Aldous Huxley, *Collected Essays* (New York: Harper Colophon, 1971).

This AI core is its algorithms, the artificially created mathematical formulas that are then manipulated to suit a vast array of purposes in countless incarnations. However, the number and types of these algorithms is itself a broad and ever-expanding subject. At present there are numerous algorithms that form AI, from the basic decision tree of “if then statements” to the complex “deep learning,” “boost” algorithms,³ bringing us potentially to the Stanley Kubrick’s HAL 9000.⁴ This aspect must also be considered in any proposed scheme of regulation: specifically, just how much do we as human beings wish to have machines “learn” to act without direct human involvement once the original machine learning algorithm starts the process?

Algorithms exist abstractly, how they are used is concrete. We cannot name much less regulate on a case-by- case basis their use in one form or another. However, we can and must most certainly regulate within some framework the development and application of algorithmic entities themselves. These are the artificial entity that require control from the beginning, to avoid our becoming “out of control” on a very steep technological slope. The key to this regulation, in turn, is recognition of the fact that AI is an artificial creation, and the mechanical or physical shells into which it is placed are equally artificial, no matter how “real” in human terms they may seem.

Algorithms, whether in a self-driving car, a Google search engine or the most sophisticated android, are the Wizard of Oz behind the curtain, and it is that Wizard which needs to be regulated as an artificial entity, in a manner like existing control other artificial entities considered to have legal personhood. As discussed earlier and in what follows, a legal structure already exists for this, in the idea of artificial corporate entities. This can be used as the basis for viewing AI as a new

³ <https://www.kdnuggets.com/2021/01/machine-learning-algorithms-2021.html>. Accessed September 4, 2021.

⁴ Stanley Kubrick, et al. 2001, *a space odyssey*.

type of artificial person for regulatory purposes, regardless of the external form in which AI might appear or be applied.

However, to understand how to build a framework for this new artificial legal entity, one must examine where we now stand in regulating technology in general as well as AI in particular. Unfortunately, such a review indicates that attempts at regulation to date have had a rocky path, with results often at best inadequate and at worst failed. Where regulation does exist, it is often not integrated or consistent with an overall regulatory scheme, and as a result, produces colliding legal principles when interpretation and enforcement issues are addressed by the courts. This is both unnecessary and damaging to societal human beings, individually and collectively.

As noted in the Introduction, the status of regulation is often a result of reliance on unnecessary metaphysical principles, about which, due to the nature of human existence in society, there is little if any chance for agreement. The proposal of a new category of AI as an artificial person would to a great extent resolve these issues. However, to be successful, any such attempt must take into consideration the law, regulations and societal conventions that already exist. This first Chapter, therefore, steps back to obtain a broad overview of just how far down any “slippery slope” to losing what we consider our “humanness” today’s society is, if at all.

What kind of technological regulation now exists, and most importantly for the specific question initially posed, how do past approaches affect the ability to regulate AI, and how would an innovative approach address those issues? The prognosis for using current methods to regulate AI is not good, in large part because the state of technological regulation overall to date has been at best a patchwork effort, and at worst one step forward and two steps back. In few, if any, areas have a consistent approach been taken that works, legally, and/or in terms of non-empirical values, as indicated by the following review.

Technology in Industrial Applications

In the eyes of many, AI has an alarming potential to destroy “what it means to be human.” However, it also has a potential for extensive benefits, a tension recognized by those working in the AI field. As noted by the International Conference on AI held in Athens in 2019:

In recent years we have learned that with great AI power comes great social responsibility. Thus, we studied the major societal benefits of AI in the areas of health care, education, and agriculture, discussing the positive change that AI has brought to each. We further address the risks society faces when AI is practiced without proper care, lack of responsibility, poor assessment of bias, and a complete disregard for ethically aligned designs. We aim to expose where we fall short so that we can move forward as a society.⁵

The use of AI application in various forms means that one has a layered set of regulatory concerns. The uppermost layer is what has occurred in the past, the outcomes of technology conceived and used for a discrete task, a nuclear reactor to produce split atoms, an internal combustion engine to power a car.

AI, however, now adds a second deeper level of technology, it becomes what once was the human hand behind the power plant or engine operation, increasingly reducing human involvement. Unfortunately, success in controlling the obvious layer has become limited, much less a new more hidden layer of AI. The use of AI, therefore, raises the same issues addressed by technological ethicists such as Sheila Jasanoff⁶ in the industrial setting, and we therefore need to know how this past regulation has succeeded or failed, and why.

⁵ <https://www.proquest.com/openview/948f175a64dc75872c1f11a106eea571/1?pq-origsite=gscholar&cbl=1976349>, 452, Accessed 08/23/2021.

⁶ Sheila Jasanoff, *The Ethics of Invention* (New York: W.W. Norton & Company, 2016).

Jasanoff discusses significant technologically related industrial accidents with enormous human cost and little assessment of legal responsibility, an issue compounded by AI. In her view, this prior result in industrial technology control was the result of a faulty process of risk analysis in regulatory efforts. Technology is not one dimensional, it is not a straightforward means to an end, but this is often overlooked in conducting risk analysis assessments and is one of the cause of past regulatory failures. Technologies in addition evolve; what is developed for one use may then be applied in other uses, at times with unforeseen, negative results. This is where we already stand with AI.

AI is centered around the development of dynamic systems, algorithms, which can be used to teach artificial entities to make decisions, predictions, and eventually independently learn new skills, at least within a certain context. Applications utilizing AI have been used in a diverse variety of fields including health care, education, agriculture and business.⁷ However, it is not all positive.⁸ The benefits AI brings to a wide range of areas are numerous and often lead to groundbreaking advancements, but this comes with equally significant practical and ethical problems. This is especially true for assessing legal liability and responsibility when things go wrong, one of the issues resolved by the legal fiction of an artificial person being proposed.

Jasanoff uses the example of the basic automobile in describing our relationship with technology. Few drivers understand the complexities that make cars easier and safer to drive, and as a result, they also do not understand what can and does happen when that technology goes wrong, when an airbag wrongfully inflates, or a car stops dead in traffic due to computer chip

⁷ International Convention on AI, Ibid.

⁸ <https://bernardmarr.com/what-are-the-negative-impacts-of-artificial-intelligence-ai/> Accessed 08/21/2021.