WHAT DOES IT TAKE TO BE A HUMAN BEING: ISSUES OF CONFERRING CITIZENSHIP AND CIVIL RIGHTS ON 'INTELLIGENT MACHINES'

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*A*bstract*—Throughout the history of mankind, on various instances, and for various reasons, with changing public morals and the pressing need of legal systems, the movement for securing rights for themselves has been led by different sets of individuals, i.e., slaves, women, corporations, animal lovers, and environmentalists, which was successful in achieving its goal to a certain extent in every case. In the 21st century, however, the case is quite different as it is concerned with machines which do not have any life component but still qualify as rights-holders on multiple parameters. Hence, what appeared to be a fiction in the 1980-90s is turning into reality. Hollywood movies have often foreseen AI zealously asserting its position of power. But what if civil rights groups start working with the assistance of AI to use legal means of acquiring rights which are conferred upon human beings, resulting into the transformation of a machine - a product of human inventorship, into a citizen, or as AI has no limits, a global personality? This paper ponders upon the questions raised above and discusses the capacity of AI to hold rights. This paper begins with an insight into the evolution in the capabilities of AI. Next, it discusses the criteria for granting AI citizenship and civil rights. Finally, it makes an argument against AI rights and suggests measures to prevent a robot apocalypse.*

Keywords: Citizenship, AI Rights, Robot Apocalypse, Rights-Holder, Non-Human Personhood, Theory of Rights, Animal Rights.

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INTRODUCTION

> "*The real question is, when will we draft an artificial intelligence bill of rights? What will that consist of? And who will get to decide that?*"
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> —*Gray Scott (AI Expert)*

Artificial Intelligence (hereinafter 'AI') is omnipresent whether we notice it or not. It is helping in controlling the recent outbreak of coronavirus in China,[1] it is used by cell phone companies to provide us personalised content, and electrical cars may use AI to allow it to drive on auto-pilot. The race of AI machines is making a strong case for addressing its rights on various parameters which have been used earlier to decide for the question of granting civil rights and citizenship to living beings.

On 22 January 2020, Indian Space Research Organisation (hereinafter 'ISRO') introduced its first half-humanoid named Vyommitra[2] ('friend of the space') which will be employed by the space agency. Capable of assisting in switch panel operations, monitoring the crew module as well as performing life-saving operations, the humanoid will be used for the first unmanned Gaganyaan mission scheduled by the agency for the year 2022.[3] The robot qualifies for certain rights on various grounds discussed in the paper.

On similar lines, there has been an ongoing discussion around using AI machines as adjudicating authorities, as they are considered to be better law interpreters than our judges.[4] But the counter-narrative suggests that AI could only assist in delivering justice and can never be employed as a judge to replace human discretion.[5] As the Hon'ble Chief Justice of India recently remarked, *"AI is not going to replace human judges. It is not going to replace human discretion. It is only the repetitive,*

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[1]   Casey Ross, 'In Coronavirus Response, AI is Becoming a Useful Tool in a Global Outbreak, Data Experts Say' (*Stat*, 29 January 2020) <https://statnews.com/2020/01/29/coronavirus-response-artificial-intelligence-becoming-useful/> accessed 5 February 2020.

[2]   'Meet Vyommitra: ISRO's Half-Humanoid will go to Space before Astronauts' (*The Indian Express*, 23 January 2020) <https://indianexpress.com/article/technology/science/ahead-of-manned-flight-isro-plans-a-december-launch-half-humanoid-vyommitra-will-go-to-space-6230682/> accessed 26 January 2020.

[3]   'Meet Vyommitra: ISRO's Half-Humanoid will go to Space before Astronauts' (n 2).

[4]   Tania Sourdin, 'Judge v. Robot: Artificial Intelligence and Judicial Decision-Making' (2018) 41 UNSW LJ 1114.

[5]   James Allsop, 'Technology and the Future of the Courts' (2019) 38 U Queensland LJ 1, 6.

mathematical and mechanical parts of the judgments for which help can be taken from the system [...] we are exploring the possibility of implementing it."[6]

In other parts of the world, the developments have been more enthralling in the field inviting questions pertaining to the amalgamation of constitutional aspects with the exciting territory of technology law. The change that was led by the decision of Saudi Arabia granting citizenship to the robot named Sophia, which was considered by some to be a publicity stunt,[7] to the present time when we are witnessing the development of humanoids with greater capabilities, we need to evaluate and explore the possibility of granting civil rights to AI machines. This paper attempts to achieve the same.

UNDERSTANDING ARTIFICIAL INTELLIGENCE

'AI' can be simply understood as a form of 'intelligent computing' which relies on computer programs to carry out tasks that earlier required the mandatory intervention of human beings such as analysis of data, the making of statistical observations, and suggesting suitable solutions by recommending the most suitable apparatus to achieve any objective.[8] The scope of AI knows no boundaries and includes within its ambit any activity that involves sensing, learning, reasoning and adapting to the environment in which the application is sought for. It is 'intelligent' because the systems empowered by AI can perform their functions at par with human intelligence and can even go a step further to set higher standards. It is 'artificial' because no component of life is involved in its operations.[9]

Although the genesis of the term 'AI' can be traced back to 1956 when John McCarthy coined it during the Dartmouth Summer Research Project on AI, the field gained its initial recognition with the acclaim that the work of Professor Alan Turing on 'machine learning' received. By posing a simple question of whether machines think, and referring to the process

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[6]   'Considering AI System for Timely Justice Delivery, Says CJI Bobde' (*Business Standard*, 12 January 2020) <https://business-standard.com/article/pti-stories/cji-mulls-ai-system-to-avoid-undue-delay-in-justice-delivery-120011100778_1.html> accessed 4 February 2020.

[7]   James Vincent, 'Pretending to Give a Robot Citizenship Helps No One' (*The Verge*, 30 October 2017) <https://theverge.com/2017/10/30/16552006/robot-rights-citizenship-saudi-arabia-sophia> accessed 20 January 2020.

[8]   Karl Manheim and Lyric Kaplan, 'Artificial Intelligence: Risks to Privacy and Democracy' (2019) 21 Yale J L & Tech 106, 113.

[9]   'Algorithms Based on Brains Make for Better Networks' (*Neuroscience News*, 17 July 2015) <https://neurosciencenews.com/neuroscience-network-algorithms-2263/> accessed 21 January 2020.

as 'imitation game', Professor Turing insisted on paraphrasing the same question and asking whether one can differentiate between a human and a machine response. Through this approach, the field of AI was born.[10] The test of differentiation, known as the 'Turing Test', is considered a breakthrough in the field and is appreciated when the patent examiner finds it difficult to conclude whether the intellectual property being examined is a product of machine inventorship.[11]

Artificial intelligence pervades in our lives, both in subtle and not-so-subtle ways, and is capable of performing tasks which require specialised knowledge, extensive training, or even a government-issued licence.[12] The big four tech-giants (Google, Apple, Amazon and Facebook) have already accomplished landmarks in the field by producing unique technologies such as driverless cars[13] (approved for road operation in four states and the District of Columbia) which will revolutionise road transportation with their inevitable arrival in the automobile consumer market. Additionally, automatons are capable of executing complex financial transactions, flag and mark potential terrorists using facial recognition software, and even perform document review (which sounds more alarming).[14] Spiritless computer chess engines can win against the strongest human players in the world, and Google Translate has the capacity to generate passable English translations of daily newspapers. In fact, the so-called 'robot journalists' may even write such dailies themselves.[15] These important capabilities make a strong case for conferring rights on AI systems as such advancements satisfy most of the criteria for holding rights as discussed in the paper.

However, the absence of living components in AI-governed systems becomes a point of major concern for the author while carrying out a cost-benefit analysis between the utility and foreseeable catastrophe, as

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[10]   AM Turing, *Computing Machinery and Intelligence* (MSAC Philosophy Group 1950) 433.
[11]   Ryan Abott, 'Everything is Obvious' (2017) UCLA L Rev 9.
[12]   Amitai Etzioni and Oren Etzioni, 'Keeping AI Legal' (2016) 19 Vand J Ent & Tech L 133.
[13]   Aaron M Kessler, 'Law Left Behind as Hands-Free Cars Cruise' (*Star Tribune*, 3 May 2015) <http://startribune.com/law-left-behind-as-hands-free-cars-cruise/302322781/> accessed 24 January 2020.
[14]   John Markoff, 'Armies of Expensive Lawyers, Replaced by Cheaper Software' (*The New York Times*, 4 March 2011) <http://nytimes.com/2011/03/05/science/05legal.html> accessed 2 February 2020; Matthew U Scherer, 'Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies' (2016) 29 Harv J L & Tech 353, 354.
[15]   Yves Eudes, 'The Journalists Who Never Sleep' (*The Guardian*, 12 September 2014) <http://theguardian.com/technology/2014/sep/12/artificial-intelligence-data-journalism-media> accessed 23 January 2020.

there has not been any instance where the currency of rights and duties were extended to the non-living entities in entirety. As conferring rights as well as citizenship brings with itself a sense of duty, both moral and legal, towards the individuals in civil society, and since such rights are enforceable against the state and other citizens in certain instances, such considerations are debatable and require a rigorous assessment before a final decision is made.

THE LEGAL CAPACITY FOR ENJOYMENT OF RIGHTS

Coming to the currency of rights, what matters most is the classification of entities based on certain unique characteristics they possess. Such characters form the basis of what is called 'capacity for rights'[16] and vary from the most basic connotation, i.e., being a social being, to a greater one of being able to execute the rights that are conferred. The value of life and liberty is of paramount consideration while deciding the framework of such rights.

THE LIVING COMPONENT

It is important to reproduce the observations of Field, J. in his dissenting opinion in *Munn v Illinois*,[17] who, while deciding on the value of life and liberty stated:

> *"By the term 'life', as here used (14th amendment to the US Constitution) something more is meant than mere animal existence. The inhibition against its deprivation extends to all those limbs and faculties by which life is enjoyed. By the term 'liberty', as used in the provision, something more is meant than mere freedom from physical restraint or the bounds of a prison. It means freedom to go where one may choose, and to act in such manner, not inconsistent with the equal rights of others, as his judgment may dictate for the promotion of his happiness, that is, to pursue such callings and avocations as may be most suitable to develop his capacities and give to them their highest enjoyment."*

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[16]   Joseph Raz, 'On the Nature of Rights' (1984) 93 (370) Mind 194, 204.

[17]   *Munn v Illinois* 1876 SCC OnLine US SC 4 : 24 L Ed 77 : 94 US 113 (1876).

Based on the above observation, one can infer that to allow a living being to develop itself fully, it must be provided with an environment which caters to all its needs. This explanation may not be extended to automatons due to absence of living matter in them, however, if AI rights are recognised in the nearby future, the interpretation of such right may derive its meaning from the above observation, which appears to be highly problematic at this stage.

However, while deciding the capacity, it's not always about the existence of 'living matter'. According to a landmark work on the theory of rights, they can only be accorded to beings which have an 'ultimate, non-derivative value' rather than an 'instrumental value'.[18] So, an AI, or an animal, or even a habitat, which is used by human beings as an instrument cannot possess civil rights in its entirety.

INTEREST THEORY AS THE 'CRITERIA'

Additionally, the 'interest theory of rights' proposes that entities can possess certain rights, only if they have certain interests which provide a pathway to impose duties on other entities so that protection of the former's rights may be ascertained.[19] In terms of a simple illustration

A has a right to Z if it is a valuable interest of A (a part of A's well-being that is a sufficient reason for holding B to be under a duty).[20] Thus, there could not be any right if an entity who is asking for it, is unable to show its interest. Animals, ecosystems and corporations, thus could have a very limited number of privileges, if any. An extension of the same principle, however, leads us to the argument that only those entities which have sentiments can possess rights. More precisely, any being will qualify as a rights-holder that is a creature which can feel pleasure and pain and for which it is important that its life goes well rather than it going badly.

However, this theory does not answer all the questions posed. As it denies to consider animals and AI machines as ultimate beings,[21] it propounds that such species have no interests of their own. Although a discourse may develop stating that such machines may suffer due to their programming based on 'human emotions' and their suffering, similar to

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18   Raz (n 16).
19   Johannes Marx and Christine Tiefensee, 'Of Animals, Robots and Men' (2015) 40 (4) Historical Social Research 70.
20   Marx (n 19).
21   Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation* (Pickering 1823) 144.

human beings, will suffice the eligibility requirement to attain rights, and thus, contradict the theory.

DEFINING THE TERM 'PERSON'

A similar paradox arises while defining a person in different parts of the world.[22] The question of rights and rights-holder cannot be determined unless a uniform definition of the term 'person', which changes with the changing morals of the society, is made. While the Western jurisprudence defines a person as a rights-holder,[23] the focus in Indian tradition the focus has always been the individual's ability to be bound by a duty[24] including the premise which goes against the very idea of machines stating that what is born must die, death being the only certain thing in life.[25]

Apart from the above discourse on the nature of rights, another important inspection revolves around a three-pronged test that has been formulated for determining the capacity of entities to possess legal rights.[26] The first prong is based on the ability of the entity to bring a legal action on its own. Secondly, such injury for which the action is being carried out must be taken by the courts into account. Thirdly, any compensation or relief granted in the course of action must benefit the concerned entity. As the development of advanced automatons is still in its infancy, it cannot be pronounced emphatically that any of the three mentioned criteria would be satisfied in the case of AI machines while deciding on their legal personhood.

FIXING ACCOUNTABILITY

Further, it is still difficult to make an AI accountable for its wrongs, be it civil or criminal.[27] The problem arises in deciding who is to be blamed for the wrong - the creator or the machine, as the connection appears to be of an agent-principal relationship.[28] Similarly, who institutes a suit in case a wrong is committed in the course of the employment of

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[22] AO Rorty (ed), *The Identities of Persons* (Revised edn, UC Press 1976) 453.

[23] Max Radin, 'Fundamental Concepts of the Roman Law' (1925) 13 Cal L Rev 207, 222.

[24] AC Paranjpe, *Self and Identity in Modern Psychology and Indian Thought* (Springer Science & Business Media 1998) 60.

[25] Paranjpe (n 24).

[26] Christopher D Stone, 'Should Trees Have Standing? Toward Legal Rights for Natural Objects' (1968) 45 S Cal L Rev 450, 458.

[27] Michael Callier and Harly Callier, 'Blame it on the Machine: A Socio-Legal Analysis of Liability in an AI World' (2018) 14 Wash J L Tech & Arts 49.

[28] Charles A Sullivan, 'Employing AI' (2018) 63 Vill L Rev 395.

AI is another dilemma that is frequently discussed in the technology law literature, which in cases of animals and human beings may be done by organisations, groups or bodies.[29] However, it can be rightly stated that the conundrum surrounded by various contradictions may be answered by exploring the grey area where the principles of Intellectual Property Law, laws on AI, Criminal Law and Constitutional Law meet, along with some ethical perspectives sprinkled therein.

Thus, though most of the considerations discussed above hold animals, robots, corporations and ecosystems ineligible to be considered for citizenship or civil rights, on different instances, such rights have been conferred upon them for various reasons. The evolution of the rights' sphere for non-humans is discussed in the following part.

EVOLUTION OF LEGAL PERSONHOOD
FOR NON-HUMANS

While dealing with the evolution of legal personhood for non-humans, it is pertinent to note the observation of notable jurist Jeremy Bentham who, in the wake of the women's suffrage and the abolition of slavery movement commented that the question of rights does not involve deliberation on the capacity of the individual to reason or whether they can talk, but it should be solely focused on their plight or whether they can suffer.[30] The movement of non-humans' rights has now reached a new stage where advanced robots equipped with emotions, such as Sophia[31] and IBM's Watson[32], based on Bentham's criteria of suffering and onerousness on their mechanism due to outside intervention, are in a position to ask for the same rights or even more as they could replace a major working population globally in the coming decades.

The argument for the extension of the rights' sphere to non-humans starts with a distinct logic each time that they possess morals akin to human beings,[33] and as they are considered to be the property of men, they are attached to the values of mankind as well. Thus, if one cannot extend every right such as citizenship to such personalities, at least some of the rights must be conferred on them. In its landmark judgment

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[29]   *Akhil Bharatiya Soshit Karamchari Sangh (Railway) v Union of India* (1981) 1 SCC 246; *People's Union for Democratic Rights v Union of India* (1982) 3 SCC 235.
[30]   Bentham (n 21) 236.
[31]   Elizabeth Rocha, 'Sophia: Exploring the Ways AI May Change Intellectual Property Protections' (2018) 28 De Paul J Art Tech & Intell Prop L 126.
[32]   'Watson' (IBM) <https://ibm.com/watson> accessed 6 February 2020.
[33]   Tom Regan, *The Case for Animal Rights* (2nd edn, Garzanti 2004) 124.

in *Animal Welfare Board of India v A Nagaraja,*[34] the Hon'ble Supreme Court of India observed that animal life could be included within the horizon of right to life guaranteed under Article 21 of the Indian Constitution (albeit to the extent that human rights were not harmed). However, the approach of the Supreme Court was misplaced in equating animal rights with those of humans.[35] There have been attempts for recognising the rights of habitats as well, in order to ensure the rights of the animals residing within it, though that may be termed as an approach to expand the scope of Environmental Law.[36]

On similar lines, corporations and organisations have long sought for themselves the protection of rights. The courts have changed their stance on the question of corporation rights from being those of an artificial being[37] to equating their rights with natural persons.[38] The argument that was presented by the advocates of corporation rights stated that putting the term 'person' in place of 'citizen' showed that the US Congress wanted to put companies in the ambit of the rights too.[39] The claim succeeded with the courts stating that:

> *"We are of the opinion that the provision in the Fourteenth Amendment to the Constitution which forbids a state to deny to any person within its jurisdiction the equal protection of the laws applies to the corporations as well."*[40]

In the Indian scenario as well, it is an established law that the rights of the shareholders as citizens are not lost when they join to form a corporation.[41] Thus, in most of the states, corporate personhood is now

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[34] *Animal Welfare Board of India v A Nagaraja* (2014) 7 SCC 547.

[35] Jessamine Therese Mathew and Ira Chadha-Sridhar, 'Granting Animals Rights under the Constitution: A Misplaced Approach? An Analysis in *Light of Animal Welfare Board of India v A Nagaraja*' (2014) 7 NUJS L Rev 349.

[36] Dr Michelle Maloney and Sister Patricia Siemen, 'Responding to the Great Work: The Role of Earth Jurisprudence and Wild Law in the 21st Century' (2015) 5 Earth Juris Environmental Just J 6, 12; Christopher Stone, *Should Trees Have Standing?: Law Morality, and the Environment* (3rd edn, OUP 2010) 172.

[37] *Trustees of Dartmouth College v Woodward* 1819 SCC OnLine US SC 2 : 4 L Ed 629 : 17 US 518, 544 (1819).

[38] *County of San Mateo v Southern Pacific Railroad Co* 1885 SCC OnLine US SC 261 : 29 L Ed 589 : 116 US 138 (1885).

[39] Malcolm J Harkins III, 'The Uneasy Relationship of Hobby Lobby, Conestoga Wood, the Affordable Care Act and the Corporate Person: How A Historical Myth Continues to Bedevil the Legal System' (2014) 7 St Louis UJ Health L & Pol'y 201, 235.

[40] *County of San Mateo v Southern Pacific Railroad* 1885 SCC OnLine US SC 261 : 29 L Ed 589 : 116 US 138 (1885).

[41] *Bennett Coleman & Co v Union of India* (1972) 2 SCC 788 : AIR 1973 SC 106; *Delhi Cloth & General Mills Co Ltd v Union of India* (1983) 4 SCC 166.

recognised as a settled question of law.[42] Incentives such as religious protection[43] and removal of limits on campaign spending by organisations[44] have been granted under the First Amendment to corporations as well.

The question of AI rights may be dealt with as the question of comparing sentiments of a human-being to that a robot is capable of having. Some advocates and experts on AI systems and theory of rights seem unpersuaded with the idea that there is something meaningful happening inside a human body which makes them fundamentally different from that of machines, which leads to the conclusion that robots may be treated as moral agents in the near future.[45] The proponents of AI rights go on to argue that differentiating AI from humans solely on the ground of living component would fall under the ambit of discrimination law based on which Ronald Dworkin articulated in his theory as part of the doctrine which stated that 'differential treatment' or 'discriminatory legislation' will be unjust where no prejudice-free justification is available.[46]

Finally, a discourse may emerge with time on advanced AI that though the AI race does not have a similar qualitative experiential state as living beings, they might still be considered for a functionally equivalent state. And unless it can be established that these qualitative dissimilarities between living beings and robot sensations are morally relevant, that is, they make a moral difference whether of frustration or of pain, robots' interests might be considered valuable and worthy of protection.[47] With these considerations taken into account, robots might be future rightsholders. The prominent scrutiny would be on weighing the rights that would be conferred (rights against discrimination, exploitation or labour) and the nature of employment,[48] i.e., it would be difficult to use AI machines as minesweepers, manhole cleaners or as devices for deriving sexual pleasure.[49]

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[42] *First National Bank of Boston v Bellotti* 1978 SCC OnLine US SC 72 : 55 L Ed 2d 707 : 435 US 765 (1978).

[43] *Sebelius v Hobby Lobby Stores Inc* 187 L Ed 2d 544 : 134 S Ct 678 (2013).

[44] *Citizens United v Federal Election Commission* 2010 SCC OnLine US SC 10 : 175 L Ed 2d 753 : 130 S Ct 876 (2010) : 558 US 310 (2010).

[45] Margot Parmenter, 'My Ex-Boyfriend was an Automaton: Narcissism, Selfhood, and Discrimination in the Algorithmic Age' (2018) 5 Savannah L Rev 73.

[46] Ronald Dworkin, *A Matter of Principle* (Reprint edn, Harvard University Press 1985) 66.

[47] Parmenter (n 45).

[48] Jeannie Suk Gersen, 'Sex Lex Machina: Intimacy and Artificial Intelligence' (2019) 119 (7) Columbia L R 1793.

[49] Tiefensee (n 19) 86.

A CASE AGAINST GRANTING CITIZENSHIP

Citizenship may be described as a legal tool for acknowledging full membership of an entity in our society which converts older relations resulting out of caste hierarchy into relations of equal membership.[50] Citizenship involves recognition, both at the national and the global level. Under various international treaties,[51] the states are required to acknowledge the citizenship rights of other nations in order to protect them in their country as well.

The hindrance that the consciousness criteria for determining a duty-bound citizen makes for AI takes us back to the statement of Professor Alan Turing who famously separated the issue of consciousness from machine intelligence in his 1950 essay:

> *"I think there is mystery about consciousness. But I do not think these mysteries necessarily need to be solved before we can answer the question with which we are concerned in this paper."*[52]

Thus, the question asked is not about the creation of conscious machines but about whether we can differentiate between responses of a sound human being and a machine or not?[53] In the 21st century, when we are able to create such sophisticated systems, this question is beginning to take a dynamic shape. It is quite certain that in the future, robots will be living in our houses, in one capacity or other. As they will possess highly cognitive abilities, there is a strong possibility that they will qualify as moral agents as well. Further, since future AI machines will be more man-like, they would be able to choose their objectives, reflecting about their purposes and goals, and thus, it is more likely that they too will have valid interests which could be realised or promoted only if they work together with the wider public community. If this happens, we may regard them as co-citizens, at least morally, or even consider them a part of our family.[54]

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[50] Will Kymlicka and Sue Donaldson, 'Animals and the Frontiers of Citizenship' (2014) 34 (2) Oxford Journal of Legal Studies 201, 204.

[51] John Frank Weaver, 'What Exactly does it Mean to Give a Robot Citizenship: It's Complicated' (*Slate*, 6 November 2017) <https://slate.com/technology/2017/11/what-rights-does-a-robot-get-with-citizenship.html> accessed 27 January 2020.

[52] AM Turing, 'Computing Machinery and Intelligence' (1950) 59 Mind 433; Charles T Rubin, 'Robotic Souls' (2019) (57) The New Atlantis 75.

[53] Charles T Rubin, 'Robotic Souls' (2019) (57) The New Atlantis 75.

[54] Tiefensee (n 19).

But what if they surpass the highest achieved parameter of human ingenuity? The author believes that in those cases, we would not be empowered to decide for their citizenship, but it would be the race of robots that would determine the fate of our existence.[55] It can be rightly stated that with this 'intelligence explosion' of the machines, we would simply not be able to predict how robots would behave. They may start depreciating human cooperation and human values. They may not join the human community in that case, and possibly, be utterly indifferent to our well-being. Hence, rapid developments within AI confront us with inescapable moral questions. Provided the great uncertainty with these advancement, two general ways of approaching intelligent machines could be conceived. More optimistically, AI developers could try to influence their development in order to nudge them towards morally responsible behaviour. On the other hand, we could even consider stopping the development of AI before it spins out of control.[56]

Similarly, the argument of recognition of AI on the sole basis of its inventorship does not sustain as even the real embodiment of AI as humans cannot defeat the human ingenuity in any manner. The question on the moral status of robots has been raised from the beginning. The play 'RUR' (1921) that gave the world the term 'robot', which dealt with the moral meaning of robot employment, finds itself in difficulty while pondering whether robots should possess rights in any manner.[57] Clearly, any kind of moral status for machines would depend on whether we can find any such morally relevant ground on which a distinction between machines and human beings can be made.

Potentiality is also a key consideration. Machines, though extraordinarily advanced, could lack 'true AI' which resembles a normal innovative human mind. Conferring citizenship on such systems would be tantamount to promoting an interest less pressing, resulting in doom.[58] Such systems then may demand incentives as a by-product of their rights which may include provisions on par with the right of minimum wage, right against exploitation etc.

EXPLORING VIABLE SOLUTIONS

An analysis of the current legal framework on AI machines points to the fact that we are still far from locating suitable places for them in the

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[55] Tiefensee (n 19)

[56] Tiefensee (n 19) 88.

[57] Tony Long, 'Jan 25, 1921: Robots First Czech In' (*Wired*, 25 January 2011) <https://wired.com/2011/01/0125robot-cometh-capek-rur-debut/> accessed 11 May 2020.

[58] Charles T Rubin, 'Robotic Souls' (2019) (57) The New Atlantis 75.

rights' sphere. However, as the criteria for recognition may be extended to AI as well, which will be not benefitting to humanity, it becomes pertinent to start the quest for exploring viable solutions. The different approaches that the author finds suitable to answer the question posed are - the duty-based approach, instilling moral values (by developing the machines in such a manner so that they act for the cause for humanity and not against them), confining the research on AI machines on the premise of ethical touchstones such as Asilomar[59] and Google guidelines on AI[60] and rethinking over the utility of extraordinary AI by building trust in them.

ARTIFICIAL INTELLIGENCE GUIDELINES

To regulate the use of AI, various mechanisms have been introduced by many organisations. These mechanisms focus on ethical considerations and adopt utilitarian purview to develop AI for societal development and not to fulfil the gap in innovations as such, in order to make each contribution meaningful. Two of such mechanisms which are suitable for their brief mention are the Asilomar Principles for AI and Google's guidelines on the subject.

The Asilomar Principles are broadly categorised into three parts: research values, ethics and value and long-term issues.[61] They state that the goal of AI research should be for beneficial intelligence, and not for undirected intelligence. Further, the research should be for developing robust AI, while keeping the safety mechanisms so that any malfunctioning or hacking is avoided. In its ethics and value part, the guidelines foster for transparency in AI development, so that when a system fails, one can ascertain the reasons behind its failure. AI must be used in a manner to respect and uphold human dignity, rights and freedoms of mankind while refraining from the development of lethal AI weapons. Further, the long-term issues predominantly consist of 'common good' (AI for global aid and not for a particular state) and 'capability caution' (avoiding strong assumptions on the capabilities of future AI).[62]

On similar lines, Google's guidelines promote accountability in AI inventorship along with incorporating privacy design principles and

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[59] 'Asilomar AI Principles' (*Future of Life Institute*) <https://futureoflife.org/ai-principles/?cn-reloaded=1> accessed 31 January 2020.

[60] 'Artificial Intelligence at Google: Our Principles' (*Google AI*) <https://ai.google/principles/> accessed 30 January 2020.

[61] Asilomar AI Principles (n 59).

[62] Asilomar AI Principles (n 59).

upholding high standards of scientific excellence.[63] In India, NITI Aayog's discussion paper emerges as an important document focusing on AI research in the country. However, it lacks in suggesting effective working mechanisms on AI governance.[64]

DUTY-BASED APPROACH FOR AI

The arguments against granting citizenship have negated the feasibility of AI possessing rights, and hence, the rights-based approach is ousted from further consideration providing a platform for initiating the discussion on a contrary but alternative approach, i.e., finding value by locating AI in the duty-based approach. The duty-based approach has been frequently employed in the past (generally before the intervention of AI machines) in terms of animal rights.[65] Aristotelians strongly believe that there is a 'natural good' in all animals in terms of their productivity in the ecosystem and that this good should be used solely for human advantage.[66] The same argument can be made applicable for AI as well.

The duty-based approach rests on the idea that human-beings owe a certain duty[67] towards AI based on their employability and the utility they provide.[68] Therefore, the essence of the duty that human beings owe to AI must be viewed as arising out of what we owe to these species because of their inherent faculty and not in the form of charity. Once we start awarding the conscious machines in proportion with their work return, the crisis arising out of demand for rights may be avoided to a significant extent. States like India can also amend their Directive Principles of State Policy, which are unenforceable but still considered to be of immense value,[69] to make it happen.

INSTILLING MORAL VALUES TO
PRODUCE HARMLESS AI

We have been raised by the people around us to encourage certain morals and imbibe most of them, which are considered to be in the greater interests of humanity. Though morals differ with individuals and

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63   Artificial Intelligence at Google: Our Principles (n 60).
64   NITI Aayog, 'National Strategy on Artificial Intelligence' (NITI Aayog 2018) 23.
65   Immanuel Kant, *Lectures on Anthropology* (Robert B Louden and Allen W Wood eds, CUP 2012) 57.
66   Aristotle, *Aristotle: 'Historia Animalium': Volume 1, Books I-X: Text* (DM Balme ed, CUP 2002) 84.
67   Martha C Nussbaum, *Frontiers of Justice* (Havard University Press 2007) 327.
68   Nussbaum (n 67).
69   *Minerva Mills Ltd v Union of India* (1980) 2 SCC 591 : AIR 1980 SC 1789.

what is right for one may be a dreadful wrong for another, public moral-
ity is an important consideration in various judicial pronouncements and
prevents a person from indulging in wrongful conduct.[70] The upbringing
of a group of individuals belonging to a particular sect, clan or region,
for example; a monastery, conforms in the interests of humanity and
is different from those belonging to a sleeper cell of terrorists. As AI
acts based on its programming, it could be an option to teach machines
human moral values, and the reason behind their development, i.e., serv-
ing humanity in utmost good faith (Good Samaritan AI).[71]

It appears to be tricky since humans, in moral dilemmas,[72] tend to rely
upon their gut feelings rather than going for a cost-benefit analysis which
is contrary to the working mechanisms of an AI machine, which would
then merely adopt an objective approach due to its distinctive program-
ming.[73] Secondly, the fact that a machine cannot be taught what is fair,
unless the engineers designing the AI system have a precise conception
of what fairness is, creates a problem,[74] the solution of which is yet to be
discovered. In the end, it will be all about finding a person whose morals
will override those of everyone else, when such moral programming is
being carried out.

BUILDING TRUST IN AI

The literature on the subject states that once someone conceives the
very idea of a robot apocalypse, for him/her to explore more on the
potentials of AI becomes a tough task. It becomes rather easy to perceive
that the effect of AI machines is going to be pervasive in our daily life,[75]
and hence, further inventorship must be thrown in the bin. This is not
how it should be conceived as it would be merely amounting to a waste
of the existing research on automatons which is the product of the last
century. The solution lies in building trust in the AI systems for a greater

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[70] *Indian Young Lawyers Assn (Sabarimala Temple-5J) v State of Kerala* (2019) 11 SCC 1
: 2018 SCC Online SC 1690; *Navtej Singh Johar v Union of India* (2018) 10 SCC 1.
[71] Vyacheslav Polonski, 'Can We Teach Morality to Machines? Three Perspectives on
Ethics for Artificial Intelligence' (*Medium*, 19 December 2017) <https://medium.com/@
drpolonski/can-we-teach-morality-to-machines-three-perspectives-on-ethics-for-artifi-
cial-intelligence-64fe479e25d3> accessed 31 January 2020.
[72] Terrance McConnell, 'Moral Dilemmas', *Stanford Encyclopedia of Philosophy* (Fall
edn, 2018) <https://plato.stanford.edu/archives/fall2018/entries/moral-dilemmas/>
accessed 31 January 2020.
[73] Polonski (n 71).
[74] Polonski (n 71).
[75] Francesca Rossi, 'Building Trust in Artificial Intellligence' (2019) 72 (1) J of Intl
Affairs 127.

benefit. This is a major tactic which may be employed in the field of AI governance.

Until we have answers on the AI possibility, we are reluctant to go full-fledged with the automatons.[76] According to a new study by IBM, *"82 percent of all enterprises and 93 percent of high-performing enterprises are now considering or moving ahead with AI adoption, attracted by the technology's ability to drive revenues, improve customer service, lower costs, and manage risk.[77] However, although they realise the huge benefits of this technology, 60 percent of those companies fear liability issues and 63 percent say they lack the skills to harness AI's potential."[78]*

Awareness, as it helps with every misconception, comes here as well for rescue. Apart from the Asilomar and Google principles discussed above, AI laws have been proposed in many legal systems[79] which are supposed to devise a framework for civil law rules for AI including AI's socio-economic impact as well as its consequences on the rule of law, fundamental rights and democracy[80], so that a better understanding on the subject is developed. On similar lines, World Economic Forum's principles for ethical AI,[81] AI4 People principles and recommendations,[82] and Institute of Electrical and Electronics Engineers general principles on AI,[83] are helpful in conceptualising the bright side of automatons. However, there is still a lot to learn on the extent of the value we can derive from these machines. The picture would be much clearer once we have more state intervention on the subject, particularly in the field of

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[76]   Rossi (n 75).

[77]   'Shifting Toward Enterprise-Grade AI' (*IBM*, 2018) <https://ibm.com/services/us/gbs/thoughtleadership/enterpriseai/> accessed 1 February 2020.

[78]   Shifting Toward Enterprise-Grade AI (n 77).

[79]   European Parliament Resolution of 16 February 2017 with Recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)) <http://europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2017-0051+0+DOC+PDF+V0//EN> accessed 5 February 2020.

[80]   Karl Manheim and Lyric Kaplan, 'Artificial Intelligence: Risks to Privacy and Democracy' (2019) 21 Yale J L & Tech 106, 177.

[81]   Rob Smith, '5 Core Principles to Keep AI Ethical' (*World Economic Forum*, 19 April 2018), <https://weforum.org/agenda/2018/04/keep-calm-and-make-ai-ethical/> accessed 1 January 2020.

[82]   Luciano Floridi, 'AI4 People's Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations' (2018) <https://eismd.eu/wp-content/uploads/2019/11/AI4People%E2%80%99s-Ethical-Framework-for-a-Good-AI-Society_compressed.pdf> accessed 25 January 2020.

[83]   Institute of Electrical and Electronic Engineers, 'IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems' (Institute of Electrical and Electronic Engineers 2018) <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/ead_general_principles.pdf> accessed 16 January 2020.

intellectual property rights of AI, similar to what happened on the lines of privacy rights with the GDPR.[84]

CONCLUSION

In this paper, we dealt with a lot of 20th century's fictional questions which are now shaping into reality in the 21st century, ranging from the currency of rights in the 21st century to the extent of employability of AI in every field. In the first part of the paper, we traced the evolution of automatons (AI machines), followed by the second part where we reproduced the literature on the theory of rights and its transformation to accommodate non-human personalities. In the third part, we argued as to why, despite fulfilling the criterion most of the times, AI should not be conferred with rights or citizenship as the world would not be a better place once they are recognised as citizens. Finally, we explored viable solutions to tackle the foreseeable catastrophe.

Although in terms of employability and assistance to human beings, AI is at par with animals or human employees, certainly, the sentiment and emotions that living beings possess cannot be copied and attached to non-living entities. Conferring citizenship on any entity involves a valid recognition of that entity, making it an important part of human-driven societies. In the case of AI, making a likewise decision puts the authorities in a dilemma with respect to the calculation of the scope of intelligence of such machines. The status quo will remain in play until we have a paradigm shift in the law relating to intellectual property rights and the rights' recognition regime.

To quote Star Trek's Captain Picard speaking about the humanoid named Data:

"A single Data, and forgive me, Commander, is a curiosity. A wonder, even. But thousands of Data's. Isn't that becoming a race? And won't we be judged by how we treat that race?"[85]

The answer should be: Captain Picard, until we are assured about the spectrum of faculties that the AI race could possess, it should be all about duties, and not rights, for the greater good of humanity.

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[84] General Data Protection Regulation (2016) OJ 2 119/1.

[85] 'Star Trek: The Next Generation' (*IMDb*) <https://imdb.com/title/tt0708807/> accessed 24 January 2020; George Wright, 'The Pale Cast of Thought: On the Legal Status of Sophisticated Androids' (2001) 25 L Studies Forum 297.