HUMAN RIGHTS FOR ROBOTS: IS THERE A POSSIBILITY?

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Abstract

what is reality and what is a dream, the thin line that distinguish it is the awareness. It is consciousness that renders us mindful of our actions and defines us as cognitive beings. The distinction between humans and robots began to diminish in 2015 when a robot succeeded in self-awareness test, conclusively proving that robots are becoming more cognitive. The legal ramifications of this AI milestone are still unclear. If robots are developing cognition, we must access their entitlement to any human-like rights under human rights regime. Qualitative research methodology is applied in this study in order to perform a comprehensive analysis of this intricate subject by leveraging existing literature on computer technology, ethics, and law. The study concludes by forwarding recommendations and open research questions.

Key Words:Human Rights, Ethics, Law, Computer Technology, Robots

INTRODUCTION

As artificial intelligence technology advances, ethical and practical problems of integrating such powerful robots into society arise. The development of silicone-based robots could lead to significant scientific advancements when their capacities surpass those of carbon-based organisms like humans. During the COVID-19 pandemic, medical robots supplemented human medical personnel to offer care and protect humans from dangerous exposure. The subject of whether cognitively capable beings should have human rights to ensure their survival and better functioning is a controversial one. Scientific advancement alone does not justify delegating human rights to robots. A cross-disciplinary approach is needed to evaluate this proposal. Diverse perspectives help analyze complex topics in cross-disciplinary studies.

[1] This paper examines the potential for human rights for robots by reviewing scholarly sources in computer science, ethics, and law.

Computer science researchers study whether robots can mimic human cognition and behavior. Hardware construction, software design, and algorithms must be examined. Computer scientists expect that modern robots should have human rights, thus this data is utilized to evaluate them. With that knowledge, we examine robot ethics and morality. A spectrum of ethics can be applied to robot activities depending on algorithms. First, determine the traits that make humans ethical. To test if these traits can be accurately synthesized and implanted into robots. This determines if autonomous robots can behave ethically like humans with the right software. Examining the ethical

implications of granting human rights to robots can spark debate and both traditional and unorthodox viewpoints.

The court system's response to robot human rights is also examined. Robots are new, hence the legal system has not passed laws on sentient technology. The legal approach explores human rights' origins and judicial delegation with legal scholars. It examines legal arguments for and against robot human rights. Examining the legal consequences of granting human rights to robots is crucial, as it could potentially impact existing legal rights regime for human.[2] While studying robot ethics, contemporary research ignores robot hardware and software.[3] This study seeks to bridge the gap between existing research and the need to consider applying human rights to robots in light of computer science, ethics, and law.

A Computer Science Perspective

Computer science principles influence the decision to provide human rights to robots. This includes design and application studies.[4]

1. Process of Robot Design. Robots' software is usually human-made and follows Isaac Asimov's three rules of robotics.[5] Robot software is designed to mimic human behavior and cognition because only human contribute to its development.[6] Humans can feel and act ethically. Similar arguments apply to animals, however modeling their decision-making process is challenging due to their inability to communicate effectively. Thus, humans are the ideal example for teaching robots morality and decision-making. The criterion for robots is human physical abilities. Ineffective robots may result from not using humans as design models, as there is no structure to duplicate. Thus, humans are the ideal for robot construction, intellect, and ethics. Some scholars argue that the relevance of human intervention justifies the delegation of human rights; if robots can do duties as well as or better than humans, ask why they are not given the same legal status[7].

Manufacturing robots with one decision-making algorithm is impossible because humans don't have a single formula to do all under all the circumstances. To improve efficiency, robots could use hybrid algorithms to make decisions in various situations. Brain-Computer Interface robots employ effective hybrid algorithms,[8] enabling them to filter possibilities and choose the best one, a previously human-only cognitive function. Sorting algorithms help robots navigate, they can identify impediments and choose a safer way around them to move more like humans.

Connecting neural networks to a robot's central circuit combines hardware and software. Neurons form chemical and electrical pathways when connected to the circuit. These let the robot's brain manage it, making it easier to do human-like activities. The biological brain in a robot can blur human-robot distinction, raising serious question whether to confer human rights to such entity

2. Robotic Applications for Specific Domains. Robots evaluated and medicated COVID-19 patients, especially quarantined ones. AI scientists and engineers programmed them to do medical duties. Medical professionals were protected from COVID-19 treatment dangers since the robots were intended to help. During a global pandemic, tremendous contribution was made by medical robots.[9] Such robots understand verbal commands and have advanced visual algorithms. They can find and retrieve patient-requested objects. Through an electroencephalogram (EEG)-based e-robot agent that scientists are currently developing could be connected to a patients' biological brains, enabling

him to control it with ideas and motions without speaking[10]. Humans would provide orders, but robots would perform life-changing treatments.

An Ethical Perspective

Understanding how algorithms steer robots through human duties is essential to determining whether robots should have human rights. Human evolution, model construction, and other achievements are considered.

1. Human Evolution, Ethics. Monitor humans, a moral species, to set a benchmark for ethics before judging if robots may be ethical.[11] Humans make robots, thus their talents come from them. They must be designed by ethical individuals to behave ethically.[12]

Humans can be moral because they are biologically predisposed to it.[13] Evolutionary changes from prehistoric to present times caused this. Humans learned by trial and error. They learned from utilitarianism that certain behaviors yielded good results[14]. Humans have evolved ethically and are born with natural capacity to undertake ethical behaviors, separating them from machines. Robots are not born, therefore the question of whether they can become ethical arises. The question might be changed from “evolving” to “creating” ethical individuals.

2. Creating an Ethics Model. To construct an ethical robot, it is crucial to define its required actions. Since scientists may extract an ethical model from humans, this requires their input.[15] To implant this model in robots, scientists must make precise copies. This is a research-intensive procedure.[16] Developing a consistent ethical paradigm is a monumental task that needs scientists to create traits that cannot be properly monitored. While translating biological processes to machine-readable languages is difficult, scientists have made significant progress. Regarding this topic, two revolutionary methods are discussed.[17]

3. Silicone Brain Ethics Implants. Robotic silicone brains have neural networks, sensors, and actuators like human brains.[18] Silicone-brain robots think like humans. By considering several options, robots learn the value of rational reasoning, a trait typically found in humans. Robots can discern ethical from unethical behavior with rational thought. Robots are programmed to notice problems and assess options before acting. Situational responses are not explicitly stated. Instead, people choose from a matrix of actions and results. This matrix is fundamental to humans by ethical evolution.

4. Ethics on Biochips. Robots can be implanted with biochips, DNA microchips that boost cognition.[19] Clinical samples yield a lot of data using DNA microarray technology. Biochips operate faster than silicone brains and are sensitive to basic emotions since they are made from DNA fragments.[20] Biochips can help robots perceive emotions and make ethical, rational decisions.[21] This promotes ethical robots and brings robots closer to consciousness and sentience.

5. Raising Awareness and Sensitivity. A few decades ago, authors imagined robot rights in the future.[22] Such works raise consciousness and sentience difficulties. Sentience refers to the ability to perceive emotions and self-reflect, which is part of "consciousness." The literature defines awareness as the ability to be aware of oneself, mind, and environment.[23] Robots have sensors and actuators to sense and interact with their surroundings. They are linked to humans by brain monitoring, designed to boost cognition and after weighing outcomes, the most viable option is chosen. If robots are self-aware, they can identify themselves from their surroundings.[24] This involves self-reflection and

emotional communication, both inherent in humans. From a “ethics” perspective, robots' intricate rationalization is unprecedented, making it worthy of human rights consideration.

Legal Perspectives

Legislators, lawyers, and judges can free or stifle new citizens. Robots are new, thus the legal system has not regulated them. This deserves analysis.

1. Human rights in Pakistan and UN. Fundamental rights are protected under Article 8-28 of the Constitution of Islamic Republic of Pakistan, 1973. Article 25 of the constitution declares that All humans are equal and deserve equal protection of law. Modern robots experience their surroundings like people with silicone brains or biochips. Silicone brains are made using the same hardware engineering technique, but the software design differs with each brain.[25] Thus, all robots are equal. This is similar to how persons are born with identical traits but differ in individuality. Born knowing little, toddlers learn by experiencing and watching. Robots with silicone brains don't know how to navigate unless they try each possibility. Robots store information about successful activities in memory and use it as needed, like humans.

Humans are no longer the sole sentient, rational species. According to the Universal Declaration of Human Rights (UDHR), humans are agents with conscience and reason.[26] Silicone brains or biochips give robots reason and consciousness. These let robots choose their own actions rather than blindly following system directives.[27] The robots do this without human intervention which resembles humans.

2. Arguments in Support of Robot Human Rights. Robots' rationality and autonomy are the main arguments for giving them human rights. Nowadays, robots are more than remote-controlled toys. Their silicone brains and biochips prepare them for human scenarios. Robots can choose and work toward their goals. Humans alone can match their autonomy.[28] Robot talents are approaching a level that may allow them to form their own social group.

Another viewpoint that suggests protecting robots for their survival is benefiting humanity, this resembles the protection of VIP bodyguards or troops who risk their lives for others. Misuse of robots without penalty compromises their safety, harming humans and the environment. Instead, granting robots human rights might expose their destroyers to litigation.

Another argument concerns robot fairness and impartiality. In some circumstances,[29] gender, ethnicity, and other biases can make court rulings unfair. Robot attorneys/judges could improve justice and optimality. Other areas would require robots to have more common-sense knowledge.[30]

4. Arguments in the Opposition of Robot Human Rights. Although robots' cognitive abilities have increased, some experts remain unconvinced. They advocate for individuals lacking adequate human rights. A better investment than acknowledging robots would be to help disadvantaged people globally who lack fundamental rights. As global citizens, we must protect existing humans before introducing new ones. If US robots had more rights than certain developing country humans, there would be a riot. According to certain researchers, animals have real life, hence robots cannot have more rights than them.[31]

Robots in the courts could cause a downward spiral. Global law firm Baker and Hostetler's 2016 hire of robot lawyer ROSS for bankruptcy practice and research sparked criticism.[32] According to some,

some court issues are too sensitive for machines and require intuitive reasoning and emotion. As it is impossible to predict a robot's genuine intents, we cannot assume that they will not hurt us.Furthermore, Robots could seek asylum under human rights legislation if they put themselves in risk after gaining their rights. To prevent conflict between humans and robots, it is crucial to deny robots access to human rights.

There's another employment perspective. Many postal, grocery, and industrial workers lost their employment due to automated services becoming more efficient and cost-effective. Giving robots human rights would increase their employment, causing more human unemployment.

Discussion

Computer science, ethics, and law scholars disagree on robot human rights. We highlight important elements and debate present and future challenges.

1. Computer Science, Ethics, and Law highlights. Computer experts disagree on creating a new robotic citizen class. Some see this as a chance to display technology, but others think robots may pose problems. Ethics researchers also doubt robots' abilities. Robots are independent but need instructions to sense their surroundings. Without consensus, legal scholars cannot defend human rights for robots in this tornado of conflicts.

Even felons have human rights. Some robots are more moral than humans and serve humanity better. If given human rights to survive and protect, certain robots could improve the world for law-abiding humans. Conversely, if near-perfect robots continually outperform humans, they may harm people.

Further consideration requires collaboration between computer science and robot ethics academics to ensure ethical behavior, equal performance, and benefit to humanity. Turing Tests must be completed and ethically passed.

2. News and opinions. Former UK theoretical physicist Professor Dr. Stephen Hawking warned about robots. He warned the BBC that the rise of artificial intelligence could lead to the extinction of humanity. Dr. Hawking, who suffers from ALS, uses AI for communication. In an interview with the BBC, he favored basic AI systems but dreaded super-AIs. He argued that slow biological evolution limits humans' ability to compete and threatens our existence with AI-created thinking machines.[33] His arguments strongly oppose robots acquiring human rights and future progress in robot-human relations. Fully autonomous robots could wage war on humans. Humans die naturally but robots live forever, this puts them ahead of us and could cause the extinction of humanity.

Microsoft founder Bill Gates' statements are significant. Mr. Gates stated in an interview that “Robots who take human jobs should pay taxes”. Directly taxing robots is impossible. hence, “taxing robots would, in reality, be a tax on the capital employed by businesses in using them.” However, businesses would transmit this tax burden to employees through reduced compensation and customers through higher pricing, producing other issues. Mr. Gates says we might use this tax income to finance human jobs like eldercare and childcare, which we are superior at. [34] Consider paralegal robot ROSS. ROSS, an AI-powered robot, uses Watson technology to quickly search through billions of legal texts and citations online.[35] ROSS can give equal or better service than human paralegals without bias, however the deployment of such robots in law firms may lead to job loss for paralegals with at least 4 years

of experience.[36] Mr. Gates' recommendations raise the question of whether legal firms should pay greater taxes for their robotic employees, considering the impact on their human staff.

3. Future Perspective. Neural network research is needed to advance robotics. This includes deeper learning studies[37] using CNNs, RNNs, LSTMs, and autoencoders to better comprehend the human brain. Recent advances in deep learning include transformer models like BERT, GPT, and T5 that effectively handle natural language similar to humans.[38] Advanced deep learning models can be utilized to construct robots closer to human cognition. For instance, Osaka University Professor Hiroshi Ishiguro created "Erica".[39] Erica, a robot for investigating human-robot interaction, understands common language, speaks like a human, and shows facial expressions. Professor Ishiguro's team is "working to improve the conversation skills, facial expressions, and body language of their robots, hoping that those abilities will one day become indistinguishable from our own." Which would, undoubtedly, require extensive research.

Similar issues exist with common-sense knowledge. Although modern robots excel in some areas, they may lack essential and intuitive common sense. This may negatively impact performance, as seen in failed road tests for autonomous vehicles. A vehicle smashed into a truck it thought was an overpass.[40] While human drivers can discern between trucks and overpasses, robot drivers may be confused by their similar appearance, especially when seeing them for the first time. Thus, CSK research and autonomous vehicle use are beneficial [36]. Recent surveys of CSK repositories[41] and related advancements may be beneficial here. Common sense is essential in object identification,[42] autonomous driving, smart mobility,[43] and smart manufacturing[44] for safety. Building and improving AI systems using CSK would improve robotics. If robots have common sense, this could help answer the human rights challenge.[45]

Robot learning from demos (LfD) is an essential research subject that will strengthen robot-human connections and offer a fresh viewpoint on robot, human, and human-robot rights.[46] Robots can be programmed in real time by emulating human demonstrations and working with humans in new collaborative jobs. In this situation, human workers who do not need professional experience or coding abilities can only update the robot's working instructions through demonstrations to enable autonomous task performance.[47] Additionally, the R4 law gives robots broader rights in human-robot interaction. The R4 law requires robots to actively work with humans to deliver/pick up the Right parts to/from the Right person at the Right time in the Right method in shared working environments.[48] That is, the robot must have high-level cognitive ability to interpret human actions/intentions and choose its next moves to collaborate with its human partner.[49]

Given COVID-19, robotics and human rights must be considered. As Surf stated, "I wonder what aspects of our daily working lives will be permanently altered, post-COVID-19."[50] Regarding AI, the author says, "There is no doubt in my mind that our profession and the products it creates will have a prominent role in shaping our post-COVID-19 society" This suggests that AI and robotics are considerably more important and cannot be considered as property. If robots are not protected at work, a modern rebellion could present similar difficulties as in the past when workers formed trade unions. Post-COVID-19 robot use research should include human rights considerations. COVID-19 therapy typically required robots that outperformed humans. Their efforts saved numerous lives. In

the future, robots could help detect COVID-19 symptoms by being extensively educated in machine learning-based detection processes. Recently developed computer vision models and transfer learning could be employed with robotics. This work would be especially beneficial in places with limited testing kits and healthcare professionals, such as physicians, for conducting comprehensive COVID-19 tests. Other automated detection approaches could be used in robots for many disorders, helping medicine and clinicians. This shows robots' futuristic usefulness, notably in healthcare.

One AI robot per household is a key future vision. This term usually refers to robots like Alexa and Roomba that assist humans, but it can be understood differently. Future problems include whether humans would want robots in their homes as personal companions, if robots would own and rent houses with other robots, whether robots would marry and procreate, and whether robots would vote and run for office. Sophia, a Saudi Arabian robot, received citizenship recently, sparking global controversy, including claims that it has more rights than some women in the kingdom and that it was likely a publicity hoax. Future examples may spark global outrage.

A Japanese therapeutic robot PARO mimics a seal and is popular as a pet in nursing homes and other social settings because it provides pleasure without discomfort. It reduces stress and improves depression in dementia patients. Sony's old robotic dog Aibo has been studied behaviorally which proved to be kid- and adult-friendly. Many conference attendees took pictures and movies with the robotic dog and wanted to buy it. While real pets can relieve stress, they also cause biting, clawing, allergies, terror, etc. Hospitals, and nursing homes etc. prefer robotic pets over real/alive ones. Today, this seems beneficial, but may it hurt us later? Could this lead to people preferring robots as roommates and life partners? This might have devastating social and biological consequences. Not needing other humans at home and preferring robots could harm humanity. Thus, robot human rights require further study for numerous reasons.

Before granting human rights to robots, computer scientists must thoroughly study the decision-making processes of advanced robots to illuminate the decision-making "black box." They must be able to examine robot neural networks to distinguish independent robot behavior from hardcoded robot behavior. In doing so, computer scientists may demonstrate robot capabilities in favor of or against human rights. Only then can law and ethical researchers collaborate to answer this complex subject.

Subjectivity is a major concern in AAAI-2020. Can robots be subjective like humans in certain situations? Will subjectivity always be used positively? If robots make their own decisions, might they intentionally injure people like immoral drones? Can robots automatically attack humans? All are crucial questions. It helps determine:

(i) Can human rights be revoked?

(ii) How much rights should be granted (partial, like life, versus full, like voting)

(iii) Other open concerns need further attention in the future. Their research may provide additional clarity on the relationship between robotics and human rights.

CONCLUSIONS

This study reviews the idea of giving robots human rights. We examine computer science, ethics, and law literature. Important arguments for this premise include:

i. Modern robots have silicone brains/biochips and are autonomous.
ii. Human-like robots must be protected to better serve humanity.
iii. Robots can be more ethical, law-abiding, and bias-free than certain people (who have unconditional human rights).
iv. Robots are equal but unique, like people.
v. Robots often outperform humans in important applications.

Despite these considerations, many scientists and professionals oppose robot human rights, their arguments include:

(i) Needs of the poor humans must be satisfied before considering robot citizens.
(ii) Robots cannot compete with humans in sensitive situations like court hearings.
(iii) As robots constitute a danger to human employment, granting them human rights may negatively impact human rights.
(iv) Many robots lack the level of common sense intrinsic to humans.
(v) Animals have a life, but robots don't; human rights for robots appear unjustified.
(vi) Robots could wipe out humanity in extreme cases.

All of these factors make us indifferent on robot human rights, rather negative at this stage. The following future recommendations would clarify the premise:

(i) Computer science, ethics, and law scholars must collaborate for the further advancement in this field.
(ii) Enhanced neural network and deep learning research is needed to unlock robotics' "black box."
(iii) Researching common sense knowledge and robotics might be helpful.
(iv) Determining whether human rights can be partially granted and revoked if necessary.
(v) It is necessary to investigate whether robots can be classified between human and machine in order to establish appropriate rights.

Finally, who would suffer if robots don't have human rights? Our research argues that in providing human rights to robots, this is the most significant question. More research on the pros and cons of this hypothesis would aid decision-making. The issue would be further illuminated by additional research on this topic in collaboration with experts in the fields of law, computer science, and ethics. Universally, robotics and humanity would benefit from such advancements..

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