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Beyond Humanity: Quo Vadis the Politics of Robot Citizenship

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ABSTRACT

This research explores the evolving concept of citizenship in the age of artificial intelligence and robotics. With the increasing integration of autonomous robots into society, traditional notions of membership, legal status, rights, and civic participation are being reexamined. The study focuses on the legal and ethical challenges of recognizing robots as citizens, using frameworks such as Stokke's four dimensions of citizenship: membership, legal status, rights, and participation. By analyzing current discourse on humanoid robots like Sophia, the research questions how, and under what conditions, robots could acquire citizenship. A qualitative approach is employed, drawing on various sources to critically assess the implications of robotic citizenship on societal structures, governance, and legal frameworks. The findings aim to contribute to the ongoing debate on the role of non-human entities in future societies, highlighting the need for comprehensive regulation and ethical considerations.

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Introduction

In today's fast-paced world of artificial intelligence and robotics, the concept of citizenship is changing. The integration of intelligent machines into society raises important questions about their legal status, rights, and participation in civic life. The traditional boundaries of citizenship, once exclusive to humans, are being challenged as AI and robotics advance. As robots evolve from simple machines to autonomous decision-makers, concerns about their place in society grow. The conventional understanding of citizenship tied to human identity is shifting, demanding a reevaluation of its boundaries. The legal and ethical aspects of granting citizenship to robots present complex challenges beyond traditional legal frameworks.

The latest progress in Artificial Intelligence (AI) and robotics has sparked a lively discussion about how we should understand and regulate relationships between humans and non-human entities. In this conversation, designers often feel stuck between exaggerated claims, like granting citizenship to humanoid robots such as Sophia (Lupetti et al., 2019, p. 11). Sophia is a humanoid robot developed by Hanson Robotics, a Hong Kong-based company specializing in creating lifelike robots with artificial intelligence capabilities. Sophia gained significant attention due to its human-like appearance and ability to engage in conversations (Hanson, 2019).

Sophia is a humanoid robot known for her communication skills and emotional expressions. While she may not possess the most advanced AI qualities yet, she's gained recognition as the First World Citizen Robot, credited by Saudi Arabia. Sophia continually improves through social interactions, marking the end of an era of traditional robots and ushering in a new generation with human-like features and intelligent communication (Retto, 2017, p. 2). The concept of robot dates back to mythologies, evolving into a necessity with the development of science and automation, leading to the term "Robot" in the 1920s. The first humanoid robot was showcased in 1928, and electronic autonomous robots with complex behavior emerged in 1949, marking milestones in automation (Chikhale & Gohad, 2018, p. 107).

Similar to how the history and evolution of dogs, cats, horses, and other domesticated animals are closely linked with human history, the history of robots is intertwined with the history of humans. The rapid progress in robotic technologies and artificial intelligence has shifted the concept of robot rights from science fiction to reality (Robertson, 2014). Examining the historical development of AI and robotics, we see that technological progress has outpaced regulatory frameworks. This gap raises questions about the legal personhood of robots and the associated rights and responsibilities. From Alan Turing's early ideas to modern machine learning, the rapid march of progress prompts reflections on agency, responsibility, and inclusion (Turing, 1950).

Many studies have researched the future of robots and the same category of it. Diakopoulos (2015) study on holding algorithms accountable offers important insights for how robots can take part in civic activities. By examining how transparent and responsible automated systems are, Diakopoulos contributes to discussions on making sure technology is integrated ethically and inclusively in democratic processes. Floridi (2008) study of information ethics offers a fundamental viewpoint for grasping the ethical aspects involved in combining AI and robotics. By highlighting the importance of having an ethical framework, Floridi contributes to the ongoing discussion about responsible innovation and its impact on society.

In contrast, Bryson's (2010) work challenges traditional views on robot rights by suggesting that robots should be seen as "slaves." By exploring the ethical aspects of autonomous systems, Bryson encourages us to rethink how we perceive our connection with robotic entities.

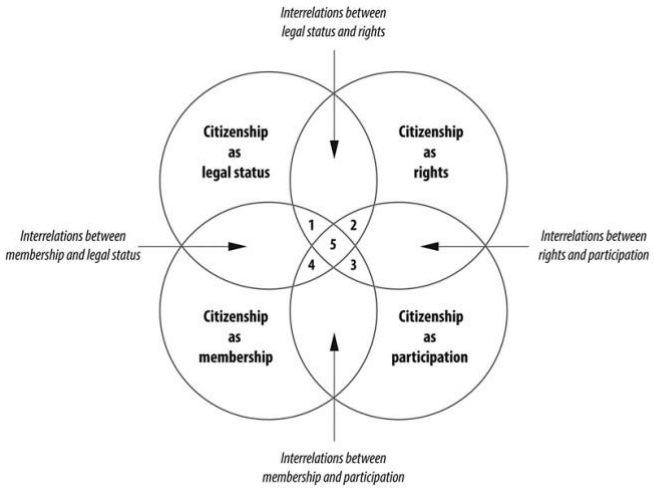
This research seeks to delve into the complex web of issues surrounding the politics of citizenship in the context of robots – exploring the challenges and opportunities inherent in navigating robot membership, legal status, rights, and participation within human societies. At the heart of the politics of citizenship for robots lies the intricate challenge of bestowing legal personhood upon non-human entities. In addressing these questions, legal scholars and ethicists grapple with the profound implications of attributing personhood to machines. The groundbreaking work of Calo (2015), as evidenced in "Robotics and the Lessons of Cyberlaw," sheds light on the legal challenges posed by autonomous systems. Calo's insights lay the groundwork for understanding the necessity of adapting legal paradigms to accommodate the evolving nature of AI and robotics. Understanding the politics of citizenship in the age of robotics involves recognizing the intertwined evolution of society and technology. Successfully navigating these new territories requires a strong awareness of ethical responsibilities. Balancing legal, ethical, and societal aspects is crucial to embrace technological progress while preserving democratic ideals. In our exploration, we strive to provide useful insights to the ongoing conversation about the politics of citizenship in the era of intelligent machines. Then, the author questions how and under what condition that the robots can be a citizen? How is the implementation of it?

Method

To unravel the complicated issues surrounding the role of robots in citizenship politics, examining the challenges and opportunities in determining their membership, legal status, rights, and involvement in human societies, the author will take a qualitative approach using library research techniques. It will gather relevant information from various sources like books, dictionaries, journals, and magazines. The collected data will be carefully analyzed using a descriptive-analytical method.

Results and Discussion

To see the extent and conditions of the application of citizenship to robots, the author will use Stokke's theoretical framework. He explained that at minimum to become a citizen of a certain country you must have four dimensions of citizenship: Membership, legal status, rights, and participation. These four dimensions are related to each other and complement each other and are mutual so they cannot simply be separated from each other.



Regarding membership he explained that Membership in a community is about who belongs and who doesn't as he said, "The membership dimension highlights that citizenship is based on a distinction between insiders and outsiders in a community, but the meaning of community and the criteria for inclusion vary over time and space" (Stokke, 2017, p. 194) while legal status is still related to membership, namely where someone in a certain community in a country must have a relationship that has a contract. He put it as, "States ascribe citizenship as a legal status, which means that there is a contractual relation between an individual and the state that carries with it both rights and responsibilities" and "The modern meaning of citizenship rests on membership within a nation that is assumed to be bounded, homogeneous and stable" (Stokke, 2017, p. 195).

In regard to the rights, he explains that there are three important principles: civil, political and social rights, as he cites from Marshal below:

> "Civil rights are rights that protect individual security and privacy; rights to access justice and legal representation; rights to enter into contracts and ownership of private property; and, rights to freedom of conscience and choice, including, for example, free speech and press, and freedom of religion Political rights are rights to participate in the public arena and political process, including, for example, rights to vote and stand for office, form political organizations and parties, and express opposition and to protest. Social rights include enabling welfare rights, such as health care and pensions; opportunity rights, especially in education and the labor market; and redistributive and compensation rights, such as low income, unemployment and work injury compensation" (Stokke, 2017, p. 196).

Last dimension that should have the people to be a citizen in a certain state is participation. He explains that to be a citizen is not only becoming a passive agency but also should be an active citizen as he said, "The process of becoming a citizen is conceived not merely as a question of identity, legal status and rights, but also as a matter of active participation within communities of citizens. Beyond community responsibilities, the foremost meaning of citizen participation is involvement in governance of public affairs" (Stokke, 2017, p. 197). By using this theory, the author will analyze it to apply in the context of robots. It will be used to

portray how and to what extent robots can be included as a citizen in the future society because of their agency as the same as the people who can also make their decision and their will in the next level of technology.

Overview Of Robot

At the beginning of the 1900s, robots were not in popular science fiction. It was not until 1917 when Joseph Capek wrote a story about automats and 1921 when his brother Karel Capek wrote a play called Rossum's Universal Robots (RUR) that people started thinking about robots. There's a debate in Czech literature about which brother first used the term "robot," which comes from the Czech word "robota," meaning serf or laborer (Hockstein et al., 2007). During the Russian Revolution, people first saw Čapek's rebellious robot as a symbol for workers who felt disconnected, especially those working on Henry Ford's assembly line. Later, some linked the term to the rise of automated machines in the car industry (Abnet, 2020).

Robots have been an issue for the last 40 years since the emergence of fiction about a program that can follow humans in terms of their movements and way of thinking. There are many definitions of robots, one of them is According to the Robotics Institute of America, a robot is a versatile, programmable machine designed to carry out various tasks by moving materials, parts, tools, or specialized devices through programmed motions. Essentially, a robot combines computer technology and mechanical technology to achieve manipulation and movement (Post et al., 1988, p. 39).

The key features that set robots apart from other devices are their re-programmability, making it easy to make functional changes, and their controlled movement, achieved by changing their location or moving objects. People have been trying to create mechanical helpers since ancient times (Post et al., 1988, pp. 39–40). Isaac Asimov made robots popular with a bunch of short stories he wrote from 1938 to 1942. He is famous for creating three rules that guide how robots should behave as below:

> "A robot may not injure a human being or through inaction allow a human to come to harm, a robot must obey orders given to it by humans except when doing so conflict with the first law, and a robot must protect its own existence as long as this does not conflict with the first or second law" (Hockstein et al., 2007, p. 114).

A whole robot is not just one thing; it is a bunch of parts working together like a team. Each part is crucial for the robot to do its job. The main pieces of a robot include the controller, the power supply, the manipulator, and the end effector (Post et al., 1988, p. 39). In America, the emergence of robots is based on the idea of how robots and similar things like automatons, mechanical men and women, androids, artificial intelligence, and cyborgs have represented and connected important questions in modern culture. These questions include things like: What makes someone human and what makes something a machine? Do we have free will, or are we just following programs from inside or outside? Is a machine like a model of how humans act, or is it the opposite? (Abnet, 2020).

These questions are going to be answered by the most advanced robot which is called humanoid robot. In theory, humanoid robots should be able to work in most places where humans can, including risky environments like radioactive areas, space, or places with

dangerous chemicals. Humanoid robots are expected to work alongside humans and engage in physical interactions with them, reaching a level comparable to how people interact with each other (Spiers et al., 2016, p. 3). Humanoid robots are systems designed to resemble some aspect of the human body. This could involve specific parts like an arm or a head, or a more complete system capable of interacting with the environment, sensing, and walking on two legs. Many researchers in humanoid robotics aim to make robots move in a way that makes the most of their human-like features, ensuring efficient and natural-looking motion (Spiers et al., 2016, p. 15). When in the future, and even now there are examples of Sophia, although it is still limited, there are more sophisticated ones, even more similar to humans and more independent and autonomous, and for example, the similarity with humans is 90%, then it becomes important to think about their position and identity, one of which is citizenship.

Quo Vadis Robot Citizenship

Membership

The initial rationale for establishing membership is traditionally tied to nationality, often determined by factors such as place of birth and ethnicity. However, these criteria are not applicable to robots, raising the question of how to define their citizenship status. One proposed approach is to base robot citizenship on the location where the robot was manufactured, essentially linking it to the founding country of the producing company. This approach, though, raises challenges, especially in cases where robots are designed to resemble humans, and not all countries have the capability to create such advanced robotic systems.

Ownership of robots further complicates the citizenship narrative. While robots may exhibit autonomy and a degree of will, their dependence on human assistance for maintenance and survival limits their equivalence to human citizenship. To address the global circulation of robots through international buying and selling, considerations of citizenship need to evolve. The concept of naturalization may be employed, or a more sophisticated framework could be developed, possibly involving a new citizenship contract upon a change in ownership.

As technology progresses, a future scenario is envisioned where robots attain true autonomy, acting based on their own will and thoughts. In this scenario, the concept of robot citizenship would need to adapt. Registration of membership might be based on the robot's declared residence, allowing it to become a citizen in the location where it operates, even if it was manufactured in a different country. These considerations highlight the need for comprehensive regulation and legal frameworks to navigate the evolving landscape of robot citizenship. While the sources for these ideas are not explicitly provided, the discussion draws from the broader discourse on robotics, artificial intelligence, and the ethical and legal implications of integrating autonomous entities into human societies.

Legal Status

Establishing the legal status of robots is crucial for regulating their citizenship. This process goes beyond national agreements and necessitates the formulation of international laws to clearly define the conditions under which robots can be granted legal citizenship. This international legal framework is essential to provide unambiguous guidelines for the recognition of robot citizenship on a global scale. Moreover, the legal status of robots needs to

address unique considerations that arise in comparison to conventional citizenship norms. In the context of human citizenship, marriage is a recognized institution that comes with specific legal implications. When extending this concept to robots, intriguing questions emerge, particularly regarding their inability to bear children. Despite this limitation, it remains imperative to legally regulate the status of robots engaging in marriage-like partnerships.

Creating a legal framework for robot citizenship becomes especially important to avoid confusion within society. Without clear regulations, the implications of robot marriages and their associated rights and responsibilities could lead to uncertainty and potential ethical dilemmas. Legal guidelines would serve as a foundation for addressing issues related to robotic unions, ensuring that societal norms align with the evolving nature of human-robot interactions. In essence, the legal status of robots is not merely a national concern but requires a broader, international perspective to establish coherent and universally applicable laws. These regulations should encompass various aspects, including citizenship rights, responsibilities, and even considerations related to robot relationships such as marriage. By doing so, the legal framework can effectively guide societal acceptance and ensure that the integration of robots into human communities occurs with clarity and adherence to established norms.

Rights

As mentioned, civil rights are fundamental protections ensuring individual security, privacy, access to justice, legal representation, the ability to enter contracts, ownership of private property, and the freedom of conscience and choice, encompassing free speech, press, and religion. Regarding privacy, it's crucial for robots to secure their data privacy, ensuring it remains non-harmful. This is essential for stability and to uphold privacy standards. In the political sphere, given that robots possess will and autonomy in decision-making, they should have the opportunity to engage in politics, including the right to vote. However, this participation should be contingent on the condition that robots are not externally controlled and genuinely own their decisions. This ensures that their political involvement aligns with the principles of autonomy and free will.

In the realm of social rights, robots must be entitled to health considerations. In the event of damage, they should have the right to be repaired. This parallels human rights to health care and maintenance when facing physical harm. Recognizing these social rights for robots acknowledges their role in societal interactions and underscores the responsibility to maintain their well-being. In essence, extending civil rights to robots involves safeguarding their privacy in data management, allowing them a role in political processes while ensuring autonomy, and recognizing their social rights for health and repair when needed. This approach reflects a balanced perspective that acknowledges the ethical implications of integrating robots into human society while upholding principles of individual rights and well-being.

Participation

When a robot is deemed eligible for citizenship and is granted the associated rights of participation, it follows that the opportunity to be elected and hold positions in government should also be extended to them. This is a natural consequence of providing participation rights, encompassing both active involvement in decision-making and the passive right to be elected

into public offices. In essence, if robots are granted the privilege to participate in civic affairs, they should likewise have the right to stand for election and assume roles in governmental structures. This dual aspect of participation, both active and passive, reflects a comprehensive approach to integrating robots into the political landscape. Active participation involves their direct involvement in decision-making processes and civic activities.

Simultaneously, passive participation entails the opportunity for robots to be candidates and hold public offices, contributing to the governance of the society they are a part of. This balanced approach recognizes the evolving role of robots in civic life and underscores the principle of equal rights and opportunities for all citizens, whether human or robotic. In summary, if robots are to be considered citizens with participation rights, this should encompass both their active engagement in civic processes and their passive right to be elected and serve in governmental positions. This approach aligns with the principles of inclusivity and equal representation within the political landscape, acknowledging the evolving nature of citizenship in a technologically advanced society.

Conclusion

Dealing with robots and citizenship involves many challenges and opportunities related to their inclusion, legal standing, rights, and involvement in society. The fast-changing world of technology requires a careful and collaborative approach to set up rules that follow ethical and legal standards. Figuring out how robots fit into the idea of citizenship means rethinking the usual definitions and understanding what rights and duties come with being a robot citizen. Legal status is crucial, and it is not just a national matter; there should be international agreements to handle the special considerations that come with giving robots legal citizenship. Rights, like autonomy, privacy, and health, are important for robot citizens, and finding the right balance with what society expects and what is ethical is key. Participation, whether actively making decisions or being considered for public roles, adds a dynamic element to robot citizenship. All of this reflects a new era in how we engage with technology. In the end, making robots part of citizenship is a new frontier that needs careful planning. Creating clear laws and ethical guidelines is vital to cover all aspects of robot membership, legal standing, rights, and participation. It's not just about acknowledging robots as potential citizens but also about making sure the rules and norms in society support a smooth integration, encouraging progress while sticking to core principles of fairness, equality, and ethical responsibility.

Suggestion

Further research could explore public attitudes toward robotic citizenship and its broader social impact, particularly how societies might react to the political participation and legal personhood of robots.

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