

Ethical Issues and Response Strategies of Intelligent Robot Technology

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Abstract

In response to the ethical issues arising from the development of intelligent robot technology, this paper first analyzes the ethical issues that have arisen in the development of intelligent robot technology from three aspects: the impact on the definition of human subjectivity, the impact on human creativity, and the impact on human privacy. Then, from the technical, institutional, and moral perspectives, targeted strategies are proposed to address ethical issues related to intelligent robot technology.

Keywords

Intelligent Robot Technology; Ethical Issues; Response Strategies.

1. Introduction

The development of intelligent robot technology is themed around science and technology, and with the support of technology, intelligent robot technology is constantly evolving. However, any technology has two sides, with both good and evil sides, and the development of intelligent robot technology is no exception. While intelligent robot technology benefits humanity and society, it has also brought many problems, such as social ethics, safety responsibility, legal issues, policy issues, ecological issues, etc. For the problems that exist in the development process of intelligent robot technology, active measures and countermeasures should be taken to solve these problems and promote the better development of intelligent robot technology.

Therefore, in order to explore the ethical issues in the application of intelligent robots, this article first analyzes the ethical issues that arise in the development of intelligent robot technology from three aspects: the impact on the definition of human subjectivity, the impact on human creativity, and the impact on human privacy. Then, from the technical, institutional, and moral perspectives, targeted strategies are proposed to address ethical issues related to intelligent robot technology.

2. Ethical Issues in the Development of Intelligent Robot Technology

The rapid development of intelligent robot technology has brought convenience to human life, but it has also brought some ethical issues, including weakening human subjectivity, affecting human creativity, and affecting human privacy.

2.1. Weakening Human Subjectivity

In the process of human history, as the subject of practice, humans have continuously improved production tools and invented intelligent robots due to their pursuit of work efficiency and quality of life. Intelligent robots, with their high efficiency, precision and other performance, have brought new forms to human life and subtly changed people's thinking patterns and values.

With the evolution of intelligent robot technology, the performance of its sensory and other functions allows human functions to be replaced by intelligent robots within a certain range. As

people's dependence on intelligent robots deepens, their initiative is weakened and their main role is gradually weakened. In addition, the uncontrollability of safety hazards in intelligent robots poses a threat to human autonomy in controlling their personal freedom and physical and mental health. If the service robot experiences power outages or malfunctions, causing the operating system to automatically execute relevant instructions, it will cause harm to the user. It can be said that in modern society, humans use intelligent robots, and intelligent robots are also controlling humans.

2.2. Influence People's Creativity

People overly rely on intelligent robots to suppress their creativity. Intelligent robots were originally technological tools, but with the rapid development of artificial intelligence, humans are increasingly relying on intelligent robots, and even being replaced by them. Human brain and manual abilities are not fully utilized, which in turn affects the creativity of human thinking and labor.

Once the intelligent robot intelligent system encounters problems and cannot function properly, human life cannot proceed normally. Labor plays a decisive role in the generation of consciousness, therefore human labor cannot be replaced by intelligent robots in all aspects, especially in the field of human brain function. Therefore, the development of intelligent robot technology should fully consider these issues. The development and application of intelligent robots should appropriately grasp their "instrumental" boundaries and control their "human brain" functions, otherwise humans will lose their goals and affect the rapid development process of human society.

2.3. Invading Human Privacy

The application of intelligent robot technology poses risks such as infringing on human information privacy and physical privacy. Police drones, as the wings of intelligent policing, greatly enhance the scope of policing monitoring and improve its efficiency with their seamless, full coverage monitoring, and real-time feedback through live streaming. At the same time, the concealment and continuity of drone police surveillance have intensified the risk of violating personal privacy. On the one hand, the full coverage and no blind spots of drones allow for a clear view of the life details of the monitored person. On the other hand, the application of thermal imaging devices for drone payloads has made human privacy in public spaces a public information. The wide coverage, concealment, and natural shielding and physical isolation performance of drone monitoring make people in a monitored state unaware, and people cannot consciously protect their privacy, increasing the risk of privacy infringement.

3. Strategies to Address Ethical Issues in Intelligent Robot Technology

In response to the ethical issues brought about by the development of intelligent robot technology, measures must be taken to regulate the ethics of intelligent robots. This article formulates strategies to address ethical issues related to intelligent robot technology from three levels: technical, institutional, and ethical.

3.1. Technical Level

Although intelligent robot technology is constantly evolving, there are still ethical risks caused by technological issues. To prevent and avoid ethical risks, it is necessary to strengthen the technological advancement of intelligent robots, set reasonable technological boundaries, and improve the stability and reliability of intelligent robots. At the same time, ethical principles should also be integrated into technological programming, incorporating human needs into the value system of robotics technology, improving the ethical standards of intelligent robots,

strengthening human-machine coexistence and cooperation, enhancing human-machine interaction, and building a mutually beneficial community between humans and machines.

3.2. At the Institutional Level

Without rules, no square or circle can be formed. The development of intelligent robot technology cannot be separated from the constraints and norms of government systems. Firstly, it is necessary to regulate and guide the development of intelligent robots through legislation and relevant policies, drawing boundaries for the development of intelligent robots, strengthening ethical norms for artificial intelligence, and providing value guidance for the rational and legal development of intelligent robots.

Secondly, the government should establish a specialized department for intelligent robots to strengthen ethical review of intelligent robots. From development to application, every specific step should strengthen the ethical and moral review of legal supervision, and strictly limit the collection and infringement of personal privacy by relevant designs. Once again, the government should take the lead in establishing a collaborative mechanism with universities and enterprises to jointly address the development and application of intelligent robots.

3.3. On a Moral Level

Whether relevant research institutions and their R&D personnel abide by ethical and moral standards, and whether they comply with relevant laws and regulations, is The key to ethical issues arising from intelligent robots. Strengthen the education and moral education of relevant laws and regulations for scientific research institutions and R&D personnel, strengthen the construction of scientific research teams, and enhance the consciousness and sense of mission of scientific and technological personnel to abide by scientific and technological ethics and morals. This will enable them to consciously integrate the value pursuit of respecting human rights and maintaining social fairness and justice into the design of intelligent robot research and development. In addition, the diversity of the world and cultural differences require intelligent robot developers and designers to have rich moral imagination to meet the diverse needs of people from different cultural backgrounds.

4. Conclusion

The development of intelligent robot technology has made the impact of intelligent robots on human life increasingly widespread, while also bringing corresponding ethical issues. In response to the ethical issues arising from the development of intelligent robot technology, firstly, analyze the ethical issues that have arisen in the development of intelligent robot technology from three aspects: the impact on defining human subjectivity, the impact on human creativity, and the impact on human privacy. Then, from the technical, institutional, and moral perspectives, targeted strategies are proposed to address ethical issues related to intelligent robot technology.

References

- [1] K.R. Yan: The Moral Hazard of Artificial Intelligence and Its Avoidance Paths, Journal of Shanghai Normal University, Vol. 47(2018) No. 2, p.40-47.
- [2] Y.T. Ji: Functional Review and Risk Regulation of Police Drone Applications, Journal of People's Public Security University of China, Vol. 37(2021) No. 4, p. 139-149.
- [3] M.W. Li, F. Xu, Qi.Yan et al: Design and practice of ethical risk assessment methods for artificial intelligence in the field of service robots, China Science and Technology Forum, (2023) No. 10, p. 74-84.

- [4] L.L. Zhao and Y.Guo: Ethical risks of intelligent medical robots: types, causes, and prevention control strategies, *Medicine and Philosophy*, Vol. 44(2023) No.12, p. 35-39.
- [5] X.P. Zhang and Z.Zhang :The Subject Status and Legal Governance of Strong Artificial Intelligence Robots,*China Science and Technology Forum*, (2022) No.1, p. 161-171.