

IMPACT OF ROBOTICS ON HUMAN AND SOCIETY

by:

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The introduction of robotics has completely changed how people use technology, changing entire sectors and society. The area of robotics, which combines engineering, AI, and machine learning, has produced automated devices that can accurately and efficiently complete challenging jobs. Robots are now essential for increasing production and raising living standards in a variety of fields, including healthcare, manufacturing, education, and home use. But this quick adoption of robotics also begs the question of its wider ramifications, such as moral dilemmas, employment displacement, and the development of human-robot relationships. To fully utilize robotics' promise and appropriately handle its obstacles, it is imperative to comprehend the complex effects technology has on people and society.

Kinza Yasar and Katie Terrell Hanna (2023) define robotics as a field of computer science and engineering that deals with the ideation, design, production, and use of robots. The goal of robotics is to build intelligent devices that can harm people in many ways. Through ongoing study, the area has been able to enhance and expand its capabilities for use in a range of contexts, including those involving people and society.

Robotics has greatly benefited several industries, including people. Elisha Blessing and Hubert Klaus (2024) claim that robots are being used in a variety of industries, including retail, customer service, and hospitality. In these situations, robots can handle jobs like cleaning, shelf stocking, and customer service, freeing up human employees to concentrate on more intricate and imaginative facets of their jobs. Wait times are shortened, service quality is raised, and productivity is increased as a result. From this

vantage point, we can conclude that robotics benefits people. When used appropriately, robotics may improve people's lives, increase industry efficiency and safety, open up new career opportunities, and open up new possibilities for the future.

One of the benefits of robotics for humans is the development of "Social Robots." According to Cynthia Breazeal et al. (2016), "Social" or "sociable" robots are made to interact with people in a natural, interpersonal way, often to achieve positive outcomes in a variety of applications, including education, health, quality of life, entertainment, communication, and tasks requiring collaborative teamwork. To have an effective impact on humans, the social robots must be able to communicate with people in a natural way using both verbal and nonverbal cues, have a theory of other minds to comprehend human behavior, and be intuitively understood by humans.

To achieve their objectives, a multidisciplinary approach is needed, in which robotics, artificial intelligence, psychology, neurology, human factors, design, anthropology, and other fields are used to inform the design of social robot technologies and approaches. This demonstrates that with the aid of substantial technological and cognitive science research, a social robot with human-like cognition and emotions has been created. It is intended to engage with people in a natural way and can effectively contribute to people's everyday lives.

In addition to increasing productivity and efficiency, the incorporation of robotics has had a revolutionary effect on a number of industries, claim Blessings and Klaus (2024). Additionally, according to Blessing and Klaus (2024), robotics has benefited several industries, including the healthcare sector, where surgical robots under the direction of surgeons are being used to help patients experience less trauma, pain, and recovery time. Additionally, it benefits the transportation and logistics sector, which uses autonomous vehicles, such as self-driving cars, trucks, and drones, as well as robot-powered warehouse automation that aids the logistics to deliver and move things in a far more cost-effective, safe, and efficient manner. Lastly, they talked about the advantages

it provides for the construction and infrastructure industries, where robotic systems are utilized to automate repetitive and physically demanding jobs like bricklaying, concrete pouring, and welding, reducing worker dangers.

Society has benefited much from the field of robotics. According to Abdulqayyum (2024), robotics has advanced significantly in the last several years, and there is even more promise for the future. It is anticipated that robotics developments will further transform sectors like industry, healthcare, transportation, and entertainment. Robots are becoming smarter, more flexible, and able to carry out challenging jobs thanks to the development of artificial intelligence (AI) and machine learning. They can work with humans more successfully and complete activities that were previously thought to be unachievable or too dangerous tasks to their heightened intellect. However the development of robotics may also bring about several important aspects that could impact society. The distribution of wealth and power, shifts in social norms and relationships, and employment displacement are some of the elements that need to be taken into account, according to Unlimited Robots (2023).

All things considered, humanity and society are greatly impacted by robotics. Robotics' revolution of industries has benefited people and society in many ways, including faster, safer, and more efficient methods of accomplishing tasks. To ensure a seamless transition, fair access to opportunities, and the appropriate deployment of robotic systems, it is also critical to proactively consider the issues as humans and society continue to embrace robotics. With the help of research, robotics will continue to develop and expand its possibilities in the future while keeping ethical and legal issues in mind.

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