

# Are robots beneficial for the society essay



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Modern-day society currently owes its well-being thanks to advanced machines capable of undertaking tasks that would either be impossible for a human being to fulfil or it would take him a long time to accomplish.

Machines are faster, more accurate, tireless and uncomplaining. Either if we realize it or not, robots play a key role in making our daily lives easier and better. From mass-production in industry, to cutting edge precision within the medical field, robots are nowadays capable of tremendously more than their former ancestors.

As technology developed, artificial intelligence has been used to make robots more capable of serving people in much more diverse areas and better than ever before. Scientists are interested in robotics because they represent the key to future medicine, warfare, economy and wellbeing. Because their importance within society cannot be ignored, we will try to find out how robots influence society and their impact on our daily lives. Medical sector  
Once robots were introduced in the medical sector they rapidly started improving sub-fields such as surgery.

The first robots-assisted surgery took place in 1985 when Puma 520 was used to perform a neurological biopsy. Since then robot-assisted surgery has constantly perfected as better machines were slowly built and doctors got better in operating them. Robots are able to perform major operations while only making small incisions. Thus patients can benefit immensely if the operation succeeds. The benefits are less-trauma, fewer infections, decreased healing time and a faster release from hospital. Dangerous, dirty and toxic environments

Another purpose for developing robots was to release people from having to work in dangerous, dirty or toxic environments. An example of such a robot is Anatrroller Ari-1000, a modular robots used for cleaning toxic environments. Robots are frequently used to clean the toxic and tight places that make up, for example, a building's duct work. Such places can be inaccessible to a human worker and could take several hours to clean. Primarily robots were used to clean in the industrial and institutional sectors since they could do the work faster and keep people safe from hazardous chemicals.

High-security institutions such as prisons also depend on these robot cleaners since they can clean without disturbing security measures. In countries such as Canada it is compulsory that such duct cleaning robots exist to clean hospitals or government buildings that work with hazardous chemicals (i. e. nuclear reactors). Special robots were also developed to explore dangerous and inaccessible environments such as a volcano. The CMU Field Robotics Center (FRC) developed Dante II a walking robots which was used to explore the Mt. Spurr volcano (Alaska) in 1994.

Dante was able to descend down the crater walls and take samples from the crater floor while withstanding high temperatures. The expedition was a success and demonstrated that it is possible to send robots in harsh environments for research purposes. This was probably also a reply to the 1993 accident in which eight volcanologists were killed in two different events while sampling and monitoring volcanoes. As we have just seen above robots can play a hedge role in protecting human lives as well as

gathering scientific information from environments that are otherwise too dangerous.

**Exploration** During the cold war countries such as the United States and Russia raced to be the first country that conquers space. This constituted the beginning of the space exploration era. The deployment of space probes into space was made in order to obtain more knowledge about the Solar System. Most of the unmanned probes ever launched are considered to be robots, starting with the Russian probe Luna 9 launched in 1966 and continuing with the Voyager and Galileo probes.

These types of robots are very important to human kind since they have been the key to understanding the Solar System and gave us clues on how the Universe might have come to exist. **Education** Currently, robots are used as test subjects for medical students. For example, pregnant humanoid robots (such as BirthSIM) are used to prepare students for various birth complications. This is most important as it teaches them how to act when meeting specific situations and thus they could manage to help save lives.

**Administration** Robots are currently used to manage the way in which medications are being distributed, either in hospitals, nursing homes or pharmacies. The use of robots in the administrative section of medical institutions is highly beneficial for the health of patients. The purpose of these robots is to administrate adequate medication to the patients in need while committing less errors and reducing the number of staff and time required performing this activity. After the introduction of such robots a decrease in both medication dispensing errors and time has been recorded.

Unfortunately, thanks to a study made recently, it has been showed that these machines still commit a lot of errors. Out of a total of 2, 025, medication given to a number of 127 clients, 428 errors were recorded (21. 2%) . The most common types of mistakes were related to the use of wrong administration techniques and wrong time errors (i. e. the time set for administration was at least 1h early or late). Entertainment Robots have also found their way into the field of entertainment.

Toy robots, humanoid robots that dance, sing and occasionally model fashion shows, they all have one purpose: to attract an audience and entertain people. Ever since the ancestors of robots (the automations that had the role to amuse people, presented in the “ Pre-robotic period” section), were used as a source of entertainment, human beings have been attracted by new innovations and by the idea that it is possible to interact with something as unique as a robot.

Nowadays robot technology has reached an unprecedented level of AI and something as simple as a toy dog (i. e. i-Cybie) can now be capable of recognizing movement and sounds, express its emotions, interact with other fellow robot dogs, avoid obstacles, self-charge and the list can go on. Such a device is an ideal choice for a family who could not afford to keep a dog either from financial reasons or health reasons. Apart from being an interesting sight to see, the owners of such a robot could gradually establish a bond with the toy animal fact that could help make their lives more pleasant and enjoyable.

Similar to toy robots, humanoid robots that sing, dance and perform other amusing activities (such as HRP-4C or ASIMO) can be considered a source of public entertainment which should forecast on the audience a shade of good mood and maybe amazement. Such events can easily break the daily routine of a person and add a bit of new into a person's life. Household Ever since the 1950s futurists pictured a future in which servant robots that will help people in their daily-lives. Starting with the year 2000 this idea took shape in the form of robot vacuum cleaners.

Two mentionable examples are Roomba from iRobot and Trilobite from Electrolux. Next to be developed were robot floor washers and lawn mowers. Introducing this types of robots into society meant a relieve from house duties which meant that people now had the possibility to redirect their time towards other, more important, activities. These inventions are extremely valuable in our technological fast-moving lives. Agriculture Nowadays robots have found their way even in the field of agriculture.

Capable of harvesting fruit these robots possess vision that can identify the colour of fruit as well as their position relative to the harvesting machine. Available in countries such as Italy, China, Japan, the fruit harvesting robots fulfil their duties with precision and speeds greater than that of humans and do not require payment. Another invention that is currently being used is the cow milking robot. This robot enables cows to choose how often they want to be milked. Thanks to an electronic tag attached on each cow, the robot is able to identify each individual and determines when a cow needs to be milked.

As soon as the milking procedure ends, the milk obtained is measured and all the information obtained is stored in the computer's system. Such a robot is beneficial for humans as well as for the animals since it does not require human interference (besides maintenance) and it knows exactly when a cow needs milking (thus the animal can choose for itself and is less stressed). As a result of advances in the field of robotics and good interaction between humans and robots we can predict that the robots will continue to affect our lives in an overall positive way by ensuring the quality of our lives.

If robots that perfectly mimic human appearance will be introduced into society in the future, how will the society perceive them? To answer this question we must first take into consideration how other major inventions have been "greeted" by humans. The answer would be that after a beginning period in which they might be skeptical and uncomfortable with their existence, people might end up accepting them as a normal part of society. This process could be accelerated by the fact that nowadays people are quite fond of robots.