THE DIFFERENT ATTITUDES TOWARDS THE USE OF HUMANOID ROBOTS IN SCIENCE FICTION STORIES

By

The Lecturers

AZHAR HAMEED MANKI

IKLAS MOHAMMAD NATI

UNIVERSITY OF WASSIT

COLLEGE OF EDUCATION

April 2012

Abstract

This paper focuses on the use of the robots in science fiction stories and films , where it is supposed to be a combination of machine and human. This paper also asserts the proposition that the stories we shall examine foreshadow the threat of intelligent machines to our dominance of the planet, and therefore some stories treat them as enemies rather than friends . I have divided this paper into two parts: The first part looks at the positive or negative consequences of the creation of a human-level (and beyond human−level) machine intelligence and it maintains the terror and fascination in human responses to robot and artificial intelligence . While the second part discusses Isaac Asimov's 'Laws of Robotics'.

الملخص

يناقش هدا البحث استخدام الروبوتات في القصص العلميةاالتى يكون فيها الروبوت مركبا ن الانسان والالة لمجتمع و يركز هدا البحث على ان القصص التى تدرس الروبوتات البشرية تؤكد الفرضية القائلة بان الروبوتات قد تهدد هيمنتنا على كوكب الارض وبالتالى فان هدة الفصص تعامل هدة الروبوتات على انها أعداء بدلا من أصدقاء.لقد قسمت البحث الى قسمين القسم الاول يبحث فى النتائج الايجابية والسلبية فى صنع روبوت بمستوى الانسان او يفوق مستوى الانسان. والقسم الثانى يناقش قوانين الروبوتات لاسحاق اسيموف

Jonathan Cohen points out that It is always   a matter of discussion whether technological objects and future environments in a given science fiction film are at all probable, or whether they are simply theoretical possibilities that can be imagined on the basis of current science[1]. Science Fiction films are fictitious tales in which science and

technology play an essential role. One can understand the films' representations of future worlds as a kind of prediction of the societies that could come into being as a consequence of various modern technologies developing more and more. Robots are mechanical beings, often possessing artificial intelligence. They are used in a variety of roles and environments, often those considered too menial or too dangerous for humans and other species. Cohen adds that "Robots are also used in fields that required extensive specialization and knowledge".[2]

A robot is a word meaning "worker". It was invented by the writer Karel Capek in 1920. It has been an obsession for scientists to achieve things that can make human lives easier because they always seek the best for human interest. It is in robots that the scientists and researchers believe that people can be greatly helped in many aspects . Alfred Sidney in his *Science and Technology,* asserts that these robots take the form of humanoid assistants capable of performing multiple tasks and engaging in fairly sophisticated communication and interaction with people. In the depiction of the near future, human beings have become almost completely dependent upon robots to carry out any given task from their everyday lives. As technology has advanced, so too have the robots' capabilities.[3]

In general ,Sidney argues that science-fiction stories and films have sought to negotiate between the two poles represented by science fiction writers . Some writers thinks that technology is destructive, while others tend to emphasize the positive side of technology. Robots in Science-fiction stories constantly oscillate

between saviors and murderers .What a writer calls horrible, the other calls wonderful. Both are correct. The inevitable result is fear and fascination. Robot films do not only tell stories about robots, they also tackle a variety of delicate and serious issues like the dangers of technology, our attitude towards "artificial persons"[4], and the most important question of all, "What does it mean to be human?"[5]

Creating the artificial human ,McCorduck argues , has always been the desire of mankind and the dream for many scientists and engineers. In science fiction writers presented humanoid robots which become one of the hottest topics in 20th century .Driven by the desire to create fully autonomous humanoid robots that can think and move around like human beings ,and their interest to create 'models' of themselves the writers presents robots as more intelligent and more lifelike. With technology and science bringing new capabilities to the world, it is important that we explore how humanity will use and react to these new capabilities, good or bad[6].

Science-fiction stories often express society's anxiety about the unknown future. What the designers were clearly afraid of is that robots would become completely indistinguishable from humans, which would make it impossible to treat them differently, legally or in any other way. McCorduck negotiates that the basic reason humans both "fear and revere robots is that they can do what we do, and sometimes do it better. Robots remind us of ourselves, and that can be truly terrifying"[7].

The fear of robots has existed as long as the idea of robots has been around. Designers, Allison Muri Says ,faced a fundamental

paradox—"make the robots overly intelligent, and they might rebel; yet make the robots not intelligent enough and they would be ineffectual"[8]. In a way, these fears are justified because many people create robots to replace peoples' risky works. However, there are also some people who use robots to do a job which is actually not too risky to replace people's work. This phenomenon is very dangerous for us because if there are many people use robots to work with us, then there is a large portion of people will be turned jobless and unemployed . Besides, robots will also lead people to be lazy. There will be no struggle anymore for many people since they can finish their works using robots. They just sit down in a chair while the robots do all their work for the.They can be good or evil, often depending on the disposition of their masters. In some cases, they grow beyond the control of their creator. Muri points out that designers assume that robots are not to be treated as fellow persons because "when they become smart enough they might make us pay for their oppression, therefore; we are fortunate that such machine do not yet exists"[9].Bruce Buchnan adds that science fiction writers, however, have gone and dreamed up new fears. Now, it is not so much the fear that robots and artificial intelligence will replace workers, but that these new technologies could replace human beings all together.[10] Bleak views of the future offer the idea that in creating robots and artificial intelligence, humanity has suicidally created the means to our own extinction .Muri agrees that "when improperly implemented, robots can evolve past their original programming, causing conflict with their masters. People on the receiving end of robotic aggression may experience emotions

ranging from fear to contempt"[11].He points out that robots prompt one to ask whether a machine could manifest consciousness, take on life of its own, transcend its programming. They make one ponder whether our performances could be distinguished from theirs—whether we could in fact be replaced by our creations.[11]

Science fiction writers can only feel safe when these robots learn how to protect their masters. They seem to be saying that human intelligence and purposefulness can probably be copied and amplified in machines, but in order to be genuinely human, they have to learn feelings. In *The Terminator* film, there is a robot that develops over the course of the film and become more "human"[12]. So, it's very easy to interpret the film's implicit assertion of what it is that specifically defines the human. This is expressed through stiff movements and a ruthless determination, which seem intensely frightening, particularly in the first Terminator film. But as they develop, the robot's movements become more gentle and spontaneous and they also start to exhibit more feelings. In the first *Terminator* film, the hero plays a robot sent back from a future ruled by machines. He must eliminate a woman who will otherwise bear a son that will lead a future human uprising against the machines. The woman's name is Sarah Connor. The Terminator sets to work systematically looking for everyone in the telephone directory with the name Sarah Connor. In the scene where the Terminator executes the first Sarah Connor, the frighteningly rigid and purposeful behavior is clearly expressed. We see a car pull up outside a house. A toy lies under the car and we already know what will happen. The Terminator moves towards the house. His eyes are

fixed on his goal and the body moves strangely independently of the head's fixed gaze on the target[13]. In *Terminator 2,* the hero robot returns. This time in a helping role, because he's been reprogrammed by humans to be on their side. Here we see how Sarah Connor's son – the future leader of the uprising – teaches the robot about human spontaneity, humor, attitudes and feelings –Sarah Connor looks at her son together with the Terminator. She believes that the robot will never hurt her son, violate the family or get drunk. The Terminator is just as single-minded and dedicated to the protection of the little family as he was to the elimination of Sara Connor in the first film. The mother also acknowledges that the cyborg does not have the faults usually associated with real biological human life.[14] The massage we get from these two films is that robotics and technological advancement is not to be feared but it must expiated and managed .No science fiction author has done more to establish the role of robots in the genre than the Russian-born American author Isaac Asimov(1920–1992) who is the grand master of modern science fiction. He deserves much of the credit for popularizing robots; his narratives, and especially the *Three Laws of Robotics* set the stage for late twentieth-century science fiction. He was the acknowledged creator of the term "robotics."[15] Asimov's *I, Robot* was published in 1950 and includes stories written in the 1940's. In this book Asimov made use of the short stories to connect the idea of human and robot interactions in this new futuristic civilization to show the helpfulness of robots and the need for more ethical, moral responsibility from mankind. His first story *I Robbie* is a heartwarming story about a

young girl named Gloria who has a pet robot named Robbie. Robbie was created as a nursemaid robot by U.S.R (United States Robotics). Robbie was Gloria's best friend and companion. They had an innocent and sweet relationship. Robbie was her guardian and sort of a pet. Besides Robbie, Gloria didn't have any real friends and that started to worry her parents, especially her mother. Her mother didn't approve of her pet friend saying that he can be dangerous and that a terrible accident may happen. This is because they are a wealthy family and considered high class, she was also concerned about what the people in the neighborhood say. As time passed, Mrs. Weston convinced Mr. Weston to get rid of the robot and replace him with a dog. Gloria wasn't very happy about this. As time passed, she became very depressed and lonely.[23] These stories introduce some fascinating and sometimes unsettling ideas: where does one draw the fine line between intelligent robot and human? Can man and robot form a balanced relationship? Can a robot's creator reliably predict its behavior based upon its programming? Can logic alone be used to determine what is best for humanity? Before Asimov began writing, the majority of artificial intelligence in fiction followed the Frankenstein pattern where the robot turned around and destroyed its creator. Asimov found this unbearably tedious. He explained in 1964 that

> … one of the stock plots of science fiction was … robots were created and destroyed by their creator. Knowledge has its dangers, yes, but is the response to be a retreat from knowledge? Or is knowledge to be used as itself a barrier to the dangers it brings? With all this in mind I began, in 1940,

to write robot stories of my own – but robot stories of a new variety. Never, never, was one of my robots to turn stupidly on his creator for no purpose but to demonstrate, for one more weary time, the crime and punishment of Faust.[16]

He developed a set of ethical rules governing the behavior of these robots. He called them *The Three Laws of Robotics.* Asimov's laws, first formulated in 1940, have been used by other writers and filmmakers too[17]. They would seem to provide an efficient set of laws for ensuring that robots and humans can co-exist safely. Simply put, the laws factor in desirable properties of any tool: safety (a robot may not injure a human being through action or inaction); usefulness (a robot must obey humans, unless it conflicts with the first law); and longevity (a robot must protect its own existence, unless it conflicts with the first or second law).With this, Asimov changed our perception of robots forever when he formulated the laws governing their behavior. He reflects upon the evolution of these robots and discusses how little humanity really understands about the artificial intelligence it has created[18].

Garden Martine argues that the laws treat robots as things not persons. Important things perhaps, so they need to be treated with care, but not with respect. Since it is unworkable to expect humans always to treat robots 'humanely', one might hope that there would be additional laws that prevented robots from being exploited. After all, children are assumed to be unable to protect themselves from exploitation, so there are legal constraints on adults to defend them[19].

Asimov's remedy for this anxiety – of having to share the world with intelligent robots – is to ensure that they are totally and absolutely under our control. Asimov develops his laws because people always asked how we can keep robots under control , or how we can integrate robots intro society. Asimov asserts that the questions is not that of dominance or coexistence but creation . It does not make sense to ask whether robots will be friendly or hostile . But the question is what we create in them. They will be what we want them to be depending on the way we make them. Asimov meant to say" robots are like pancakes. They can be everything we want them to be, we just have to stuff them with the right filling, ..., programming"[20]. He wrote also " my robots are machines designed by engineers , not pseudo– men created by blasphemers"[21]. In his stories humans develop affection for robots particularly robot that look like humans. Asimov states that the robot design would have to incorporate a high order controller –a conscience –that would cause a robot to detect any potential   for noncompliance with the laws and reports the problem or immobilize itself. This means that a robot may not act unless the actions are subject to the laws of robotics .A another of Asimov requirements is that a robot must protect itself .A robot would have to protect another robot on which it depends.[22]

Designers find that these laws are not absolute. they negotiate that what if harming a human being would save ten others or even three million others .Would a robot stick to the first law and protect the one person at the expense of the three million? Therefore; the first law might be modified into "a robot must not hurt a human being ,

unless he can think of a way to prove it is for the human being's ultimate good after all."[23]

CONCLUSION

Jonathan Cohen points out that science fact and fiction have been explicitly intermingled for most of the twentieth century that has brought some fascinating explorations into the specific relationship between science fiction and actual technologies that are being built. Science fiction writers have written about the space age both before and after it happened. They have dreamed about the canals of Mars and the realities of that fascinating red planet.   Science fiction prototypes allow us to create multiple worlds and a wide variety of futures so that we may study and explore the intricacies of modern science .Also science fiction allows us to see ourselves in a new light, in the light of a new future; one that is not our own but reflects directly upon who we are and where we might be headed .After extensive research on the field of robotics in science fiction , I found that robots have practical effects, some positive and some negative. If we can reduce some of these negative effects by thinking ahead about the questions technology will give rise to, then the world is left in a little better shape than it was found because robots are able to perform tasks that even humans are not able to[24].

Notes

[1] Jonathan Cohen, *Human Robots in Myth and Science*(NY: A.S.Barnes, 1967),p.63.

[2] Ibid.p. 67.

[3] Sidney Alfred ,*Science and Technology :Androids*(NY: Joseph Henry Press. 1995),p.12.

[4]Ibid.p.24.

[5]Ibid.p.23.

[6]Pamela McCorduck, *Machines Who Think*(San Francisco: W.H. Freeman press, 1979),p.128.

[7]Ibid,p.126.

[8]Allison Muri, *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660–1830*(Toronto: University of Toronto Press, 2001),p.87

[9]Ibid.p.77.

[10]Bruce Buchanan G. *A, (Very) Brief History of Artificial Intelligence*(AI Magazine 26(4): Winter 2005),p.59

[11]Allison Muri,p.78.

[12]Ibid.p.79.

[13]Ibid.p.72.

[14]Judith Halberstam, and Ira Livingston, *Post human Bodies*(Bloomington: Indiana University Press, 1995),193.

[15]Feldman Housman, J. (eds.) *Science Fiction*(NY: McGraw–Hill, 1983),p.98.

[16]Ibid,p.96.

[17]Anne Balsamo, *Technologies of the Gendered Body: Reading Cyborg Women*(Durham: Duke University Press, 1996),p.32.

[18]Gardneraq Martin, *Logic Machines & Diagrams*(NY: McGraw–Hill, 1958),45.

[19]Ibid,p.46.

[20]Ibid,p.49.

[21]Ibid,p.42.

[22]Andy Clark, *Natural–Born Cyborgs*(Oxford: Oxford University Press, 1989),p.123.

[23]Gardner, Martin.54.

[24]Ibid.p.55.

Bibliography

Alfred, Sidney .*Science and Technology :Androids*. NY: Joseph Henry Press. 1995.

Balsamo, Anne. *Technologies of the Gendered Body: Reading Cyborg Women*. Durham: Duke University Press, 1996.

Buchanan, Bruce G. *A (Very) Brief History of Artificial Intelligence*. AI Magazine 26(4): Winter 2005.

Cohen, Jonathan. *Human Robots in Myth and Science*. NY: A.S.Barnes, 1967.

Clark, Andy. *Natural-Born Cyborgs*. Oxford: Oxford University Press, 1989

Housman , E.A. & Feldman, J. (eds.) *Science Fiction*. NY: McGraw-Hill, 1983.

Halberstam, Judith, and Ira Livingston. *Post human Bodies.* Bloomington: Indiana University Press, 1995.

Gardner, Martin. *Logic Machines & Diagrams*. NY: McGraw-Hill, 1958.

McCorduck ,Pamela. *Machines Who Think*. San Francisco: W.H. Freeman press, 1979.

Muri, Allison. *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660–1830.* Toronto: University of Toronto Press, 2001