[Student's Name]

Writing Entrance Exam

19 July 2010

The Role of Machinery

In the current day and age, it is difficult to manage without technology. Machines are used for everything from personal communication to business deals. Email, texting, and social networking websites have become so common in our lives, that it has become difficult to determine how much is too much. For example, it is becoming more acceptable to break up with a boyfriend or girlfriend via Facebook. If simple advances in communication technology cause such drastic changes in social norms, it is hard to imagine what changes technologies such as care giving robots could bring about. As human-like as robots can be, it is impossible for them to posses certain human characteristics such as compassion or morality. Because of this fact, robots used for therapy are a dangerous thing. Machines should be used to assist, but never to replace humans.

Currently in production are medical robots used for everything from stroke rehabilitation to socializing autistic children. Studies have shown that physical therapy patients are more likely to achieve the task set to them when encouraged by a physically present robot, rather than a computer screen (Groopman 2). Furthermore, robots have been proven to enhance brain function in Alzheimer's patients (5). Tests are also being done to prove that robots can be helpful in teaching special needs children motor development, speech, and social skills (6). Although these machines are currently used as

tools to advance doctor's techniques, there is worry that the objective of them is to operate independently of a human therapist's guidance (9).

Professor Sherry Turkle, who has been studying the impact of robots and other advanced technology, had this to say of the possibility of robots replacing human therapists: "Is it something a robot can really do that a person cannot?" (Groopman 9). Because machines do not possess human emotions, they are not capable of frustration. They are able to repeat instructions as many times as necessary and in exactly the same way. Furthermore, bands with galvanic sensors are placed on the patient's arm to help the robot gauge patient's mood (4). However, even though the robot is able to tell when a person is frustrated, there is no guarantee they will know how to appropriately respond. They are programmed to coach based upon whether the patient is introverted or extroverted, but all of their responses are prerecorded and automatic. A human therapist, however, is able to read the patient more accurately. Instead of categorizing them into one of two groups, they are able to judge the person's individual personality and respond accordingly. As advanced as robot technology has become, machines are still unable to empathize.

This inability to possess human emotions can be a dangerous thing. For example, in a study involving placing robots in nursing homes, one of the elderly woman began referring to the robot as her grandchild (Groopman 5). Furthermore, a stroke patient who was assisted by a robot said, "I much prefer the robot to my husband" (3). This way of thinking is hazardous because, as is human nature, when one forms an attachment to something or someone one expects reciprocation that the machine is not equipped to give.

If the robot breaks down or is taken away the emotional impact on a person who came to think of it as a companion could be devastating (9).

Turkle also believes that the idea that robots can help socialize people is misleading. She argues that it is like comparing email to a direct discussion (Groopman 9). Take, for example, children with learning disorders. Robots are currently being used to teach them how to relate to others. One study, for instance involved a robot attempting to encourage a special needs child to approach it. It nodded reassuringly as the child approached, but lowered its head and expressed disappointment when he retreated (7). This was meant to teach the child about social interaction and human emotions, but nothing can really replace the real thing. Every person reacts in a different way, and the only way to truly learn that is to communicate with real people. Using a robot to teach an already socially impaired child about humans risks confusing him even more.

Furthermore, robots could risk dehumanization of their patients. Turkle says, "You are dealing in deception about what is fundamentally human - the nature of conversation, attachment, nurturing" (Groopman 9) In this way, robots could warp the meaning of human relationships. A machine that looks like a human, acts like a human, and talks like a human risks distorting the idea of what truly is human. Turkle, who interviewed several people who interact with robots, claims that many of them declare that they are unable to trust people. Robots, they state, are a safer relationship (9). However, a relationship with a robot is not a relationship at all. Something that cannot think for itself is incapable of forming attachments, therefore the relationship is one-sided. Furthermore, the encouragement of robots as companions help to foster the idea

that it is alright not to trust real people.

Overall, human-like machinery is a dangerous thing. They are misleading, and could damage human emotions. Moreover, they are incapable of achieving certain tasks that have been set to them, such as teaching socialization. Also, there is worry that robots becoming more common could distort the meaning of human relationships. As a whole, machines should be used only to improve work done by humans, not to take its place.

Work Cited

"Robots That Care:Advances in Technological Therapy." By Jerome Groopman. From *The New Yorker*, November 2, 2009. <http://www.newyorker.com/reporting/2009/11/02/091102fa_fact_groopman>.