Cyber Robotics

Austin Johns

ITT-306

Professor Kris Peters

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**Part 1: Cyber Weapons Development**

For this part of the assignment, view “The Dawn of Killer Robots” and “More Parkour Atlas.” Then, complete the following:

1. Are robotic weapons inevitable? Summarize the opposing answers that both David Conner (Robots Engineer) and Judy Williams (Campaign to Stop Killer Robots) are giving to this question. What evidence does each person provide to justify their point of view?
   1. On both sides of the argument, there are valid points. To begin, there is an argument surrounding the risk of robots that become too smart, or too capable, for human control. The argument is that robots will take over and do more harm than good. In David Conner’s perspective, the robots are controlled and are only used by the controlling entity’s choices. On the other hand, Jodi’s point is that anything, especially in this case, funded by the military, can be weaponized. She believes that although robots on their own are harmless, likely ulterior motives are surrounding the creation of military-funded robots. I agree with Jodi. In this case, the robots are being created by the military and will eventually be weaponized.
2. Are drones effective in removing enemies or do they just create new enemies? Summarize the answer of each person interviewed (Rafik Rehman, Adam Patterson, and Christine Fair) to this question. What evidence does each person provide to justify their answer?
   1. After viewing the interview of each individual, it was clear that the drones create more enemies than they do removing them. In the Rehman family, Rafik’s daughter was afraid to attend school after a drone attack, his son was physically injured and endured multiple surgeries after an attack, Rafik himself lost his mother. According to the video, thousands are dead thanks to drone attacks, and a portion of these are civilians, and of these civilians, children. In my personal opinion, if there is a risk of even one child or one civilian, the attack is not worth it. That valuable life has a purpose and should not be ended early by the use of drones.
3. What is the current state of robot capabilities and what can we expect in the future? What scenario does Professor Tegmark worry about most in the future of robotic warfare? How does he recommend we deal with this issue?
   1. Tegmark worries about a similar scenario to the nuclear climate of the cold war. For example, the scientists created the nuclear bomb, and they never thought the bomb would be dropped on civilians. Unfortunately, the bomb was dropped on a major Japanese city. The same worry perseveres in this perspective. This professor believes that amazing engineers will create robotic technology, but that it will be used in ways that are unimaginable to our current time. He suggests putting into place major restrictions on robotic development to help preserve the safety of the public.

**Part 2: Cyborg Bugs**

View the video “The Cyborg Beetles Designed to Save Human Lives.” Then, complete the following:

1. Summarize the goals and methods used in the cyborg beetle program.
   1. The goal of the cyborg beetle program is to develop and implement a system that helps control the muscular movements of beetles. This can be for many different purposes, but these students are focusing on the implementation of search and rescue. The students are studying this manipulation of the beetle’s muscular system by tapping into the muscles using an electric current, controlled by a small computer. There are different settings coded into the system that allows the beetle to run or walk, and help to control the beetle in flight.
2. Compare the arguments in the cyborg program to the people talking in the Cyborg Beetles videos. What similarities do you see between the two technologies?
   1. There are similarities in the two projects because they are both a step forward in robotic technology. Each project and mission are surrounding public health, and each is being created by engineers that are hungry for progress. However, this is where the similarities end. In the cyborg program, the robots are being created from scratch. The engineers are creating computers and machines that work together to follow human direction. In the cyborg beetles video, the engineers are manipulating the beetles, which are already existing, to create search and rescue drones that are harmless to the public. These two projects are very different because the cyborgs can be weaponized, while the beetles cannot. The beetles are so small that they can house some small sensors like heat and motion sensors to help rescue humans that need help. Cyborg robots are different because they can be used in multiple other ways, good or bad.