Cyber Robotics

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**Part 1: Cyber Weapons Development**

**Are robotic weapons inevitable?**

The robotics engineer, David Conner, believes that robotic weapons are inevitable and that technology is rapidly advancing. In order to maintain a strategic advantage, he argues that robotics will become increasingly important to national security and that developing these weapons is essential, (Motherboard, 2015).

The coordinator of the Campaign to Stop Killer Robots, Judy Williams, argues, however, that robotic weapons are not inevitable and that they should be banned before further development occurs. It is her belief that autonomous weapons systems will create more problems than they solve, and that other methods of conflict resolution should be pursued, (Boston Dynamics, 2019).

**Do Drones Create or Destroy Enemies?**

A Pakistani journalist, Rasik Rehman, believes drone attacks are more harmful than they are effective because they cause collateral damage and are viewed as a violation of national sovereignty by the public, (Motherboard, 2015). Using drone strikes to eliminate specific targets is effective, but it is important to use them sparingly to prevent the creation of new enemies, according to Adam Patterson, a former drone pilot. Political scientist Christine Fair argues that drone strikes are just one part of a broader strategy and are only effective if used in conjunction with other measures, (Motherboard, 2015).

**Current & Future Robot Capabilities**

It is currently already possible for robotic systems to make decisions without human intervention, but technological advances are accelerating rapidly. In the near future, we can expect more advanced autonomous systems. In Tegmark's opinion, autonomous weapons systems have the potential to create a feedback loop that could lead to an arms race and ultimately to an unintended conflict if they are used in a negative way. He recommends that international norms and regulations be developed to prevent this scenario from occurring.

**Part 2: Cyborg Bugs**

**What is the Cyborg Beetle Program?**

Using surgically implanted electrodes into the nervous system of beetles, the cyborg beetle program hopes to develop a new type of remote-controlled drone, (Motherboard, 2016). Researchers will be able to control the movements of the beetles using a computer via these electrodes. This program aims to develop a new type of surveillance and reconnaissance tool that can be applied to various situations, (Motherboard, 2016).

**Beetle Tech Similarities**

There is a strong focus on developing new types of remote-controlled drones in both the cyborg beetle program and the videos of the Cyborg Beetles, (Motherboard, 2016). The cyborg beetle program utilizes live insects as a means of achieving this goal. The videos of the Cyborg Beetles use microrobots. Due to their small size and agility, these technologies can reach areas that traditional drones are unable to reach, (Motherboard, 2016). These technologies can also be applied in a variety of fields, such as search and rescue, surveillance, and military operations.

# References

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