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Drones in National Security and Defense

In 1935, the term "drone" was adapted from a British model of radio controlled aircraft that was being used for target practice, named the "Queen Bee." The word is thought to be inspired by the fact that male worker bees were called drones, and unmanned aerial vehicles (or UAVs/UCAVs) made a humming sound reminiscent of bees. The name also implies that, like worker bees, they are expendable in defense. The very concept of drones is suggested in the name, **unmanned** aerial vehicles. The existence of effective means for reconnaissance, defense, transportation, and even search and rescue missions without endangering the life of a soldier or even multiple within the vehicle is truly invaluable. The United States has been the leading power in drone technology, possessing 30.5% of the world's UCAVs and having the most at a whopping 334 unmanned combat aerial vehicles alone according to armedforces.eu in 2019. The number of "Unmanned Aerial Systems" is over 30 times the number of combat aerial vehicles, sitting at 11,000 as relayed by the Department of Defense. Constant innovation is required in order to ensure that the United States can eliminate any threat posed to her, and drone technology has proven to be vital in doing so.

Between 2014-2018, the MQ-9 Reaper assigned to the Air Force fulfilled 2,400 missions on ISIS in Syria and Iraq, proving essential to the US in the conflict, and are credited with the death of Al-Qaeda's leader in 2022. Not only do drones prove to be effective internationally, but they also are key to domestic affairs as well, being able to be deployed quickly and efficiently. Although drones are a cutting edge advancement in technology that promote the preservation of human life, some argue that the costs of technical support outweigh their effectiveness, and even question if drones are really as precise as technicians claim. The MQ-9 Reaper, for example,

started at 14 million dollars in 2008, and costs more than doubled at 32 million dollars on average in 2020. These prices call for a cheaper model as materials are becoming more expensive. The Reaper, however, can remain deployed for 40 hours, more than doubling the amount of time the most advanced airplanes can remain in the air. Not only outstanding aircraft in air time, the Reaper is also equipped with AGM-114 Hellfire Missiles and a Multi-spectral Targeting System, which according to the MDAA, are designed to be incredibly accurate, decreasing the possibility of collateral damage substantially.

Furthermore, the expenses of drones are well reflected in their capabilities, and still cost far less on average, starting at 700k, than manned aircraft in the Air Force, which start at 70 million dollars. It is also fundamental to the American zeitgeist in understanding that the United States is constantly in a state of innovation. Akin to the space race and moon landing in 1969, The United States is in a permanent race against similar countries in industrializing and innovating, as humanity has been in since the very discovery of coal and machinery. Drones have become far more used by other countries as well, so much so that the United States now has a protocol in "Anti-Drone Technology." This suggests that the United States does not have a choice in opting to use UAVs, because if she does not, she would be at a substantial disadvantage to those that have this technology, such as Turkey and China. The use of drones also elevates the standards of international affairs as well, seeking to eliminate collateral damage even in enemy territory. Drones and unmanned aerial systems have proven to be an effective, cheaper alternative to manned aircrafts, and embracing this new technology will provide an opportunity for the United States to remain protected on an unprecedented level that is required of the new technology that is constantly emerging.