ANALYSIS: AN INVESTIGATION ABOUT THE EFFECTS OF THE UNMANNED AIR SYSTEMS ON THE FUTURE WARFIELD UNMANNED WARRIORS

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Abstract— Although it is not exactly known when the first battle happened, the wars never have come to an end throughout the history. The wars broken out for the national interests never finished and human history turned into a history of war. The weapons have developed by the time and even weapons for mass destruction were developed. Moreover wars extended beyond the battlefields and sometimes some innocent people were affected. The last destination of war is "space" which brought a new perspective to the military issues. Now the era of battles fought with swords are far behind and humankind stepped into the world of new battles rapidly. During last century firstly balloons, then zeppelins and lastly jet aircrafts were seen in the sky… Besides, recently Unmanned Air Vehicles are made and over the last decade majority of military authorities are aware of the importance of UAVs for the new military systems. Because it doesn't need to provide systems to ensure the security of the crew, the law cost of the UAVs is only one of their most important advantages. Also it seems that the abilities of a small and isolated unit can dramatically increase by using UAVs. On the other hand there are a number of doubts about the UAVs. The last UAV strikes caused the emergence of the discussions of ethical issues on the international platform. In fact, some of the researchers think that, the emergence of autonomous weapon systems is seen as a crisis in terms of ethics and the law of war. According to some of the military visionaries, by using artificial intelligence an ethical justification can be provided for the spy planes, however today there are some other serious ethical problems. According to the law of war, combatants must be willing to throw themselves into danger; but the pilot of a spy plane, can hug his small daughter tenderly after he killed lots of people a few minutes ago in another part of the world where he has never gone. Also the doubt about that spy plane will lower the political threshold required for a war and perhaps in the future they will make the leaders war addicts, is another serious question. Despite these ideas there may be some positive contributions of UAVs to the humanity, can we create robots that behave towards people better than the way today's soldiers behave towards each other? In fact these words let us to imagine the wars between the humans and robots like in the movies. So would this same technology protect humans if future robots try to capture entire world? However thanks to the robots maybe our children will have a more comfortable world. Time will show us the answers of these questions. Despite the fact that the UAVs are thought to have an important place in the future air forces, it seems as if the pilot in the cockpit who makes decisions between life and death, will be likely the best choice for many missions and won't be absent for a long time.

Keywords— War, UAV, Ethic, Technology, Future.

Although it is not exactly known when the first battle happened, the wars never have come to an end throughout the history. Some countries were established while some countries collapsed; hundreds, thousands years past; all of the people and entire world changed but wars have never finished. In the history, there is not any society which has, one way or another, never fought. Not only unlettered nations but also privileged ones fought. Both barbarian tribes and civilized society had lots of wars in their history. Almost every kind of people who have different colors, different religions and different languages whatever their world views are; have participated a war either willingly or unwillingly during the history. Despite the efforts of the optimistic thinkers, the number of wars has never decreased and even got more brutal by the years.

According to the H.Grotius, war is defined as "a struggle that a society, a nation or a group of states gets into in order to force other societies or states accept their demands". The wars broken out for the national interests never finished and human history turned into a history of war. Especially great world wars which caused death of numerous humans and material damages showed how destructive a war is but the results of these painful wars were not enough for the humans to stop.

Firstly, people set up some groups of about a few hundred men to fight with other people, and then huge forces and armies were established. One thousand, ten thousands or maybe hundred thousands of soldiers have struggled in the battlefields. During the history variety kind of weapons have been made, sold and bought by the people. In the beginning knifes swords, then rifles and artillery, and then aircrafts, missiles… As military requirements have increased technology have tried to find solutions; as technology have found the solutions military requirements increased. So battles got bigger and more expensive and became more destructive. While the cost of the wars increased the powerless countries could not effort them and these small countries had to take help of the big brothers. Military power became directly proportional to the economy; it developed as much as the economy developed. Unfortunately neither military requirements nor wars came to an end. The weapons have developed gradually and mass destruction weapons were developed. Moreover wars extended beyond the battlefields and sometimes some innocent people were affected.

Thus not only poor countries but also superpowers began to worry about their security. Because it is realized that a war between the countries which have such powerful weapons can destroy whole the world. As a result of this, some precautions were taken and many international agreements were signed by the leader countries. In fact having understood how much destructive a war is, became an opportunity to prevent the occurrence of great wars and especially small countries began to follow defense-oriented policies rather than offensive ones and deterrence became more important.

"Space", which is the last destination of war, brought a brand-new dimension to the military issues. Now the era of battles fought with swords are far behind and humankind stepped into the world of new battles rapidly. So, as the majority of the well-known military techniques and many weapons lost their value; new military doctrines appeared for the new war field. Many weapons once used as the latest technology were rendered obsolete. As a result of technology air and space power was created recently and takes an important role in the today's wars. Because air force cannot be limited by land or oceans, it began to be a much more efficient and striking force compared with the conventional land and navy forces. Used as an asymmetric power,air force begins to determine the fate of the wars. Of course, it has easily been realized that in order to achieve this asymmetry it is necessary to have a more efficient air force than your enemies.

Nevertheless, an efficient air force means an efficient technology. Superpowers, which have utterly got into a technology race in this field, made huge progress in a short while. During last century firstly balloons, then zeppelins and lastly jet aircrafts were seen in the sky… Thus, today's air forces were shaped just within a century and they continue to develop at the same pace. Finally Unmanned Air Vehicles, which are nowadays new favorite of air forces, have begun to enter the inventories.

Besides, recently one of the most important parts of technology has became Unmanned Air Vehicles and over the last decade majority of military authorities are aware of the importance of UAVs for the new military systems. Unmanned aerial vehicles (UAVs) can generally be defined as an "aircraft that can be controlled remotely and that has no need for an on-board pilot".[1]Despite recent growth in this technology, in fact UAVs have a relatively long history. The first unmanned aircraft was a torpedo developed in 1915, which was designed to fly to a specific location and drive into its target.[2] UAVs, known also as spy planes, which gave a new dimension to inspection, intelligence and reconnaissance operations, can have different shapes and sizes.

Spy planes may have various kinds according to the user's demands. Some are working with a jet engine, and very huge. These can control hundreds of thousands of square mile-area, and also are able to fly between continents without refueling. On the other hand some can be smaller and cheaper because they do not have the system to ensure the safety of the crew. For example a UAV which just looks like a butterfly can enter through the window of the enemy headquarters. Although this idea is just a fiction today but not a dream in the future. This is why we also call them spy planes.

Meanwhile they can provide more detailed information so usually shoot the target perfectly and cause fewer civilian casualties. In fact the most important advantage of UAVs is concealed in the word "unmanned". Because the limit of a device depends on its pilot whose life security is important as much as completing the mission. Also being unmanned means that it does not carry a human body, not need more space for him and there is not possibility to cancel the mission because of pilot absence. So spy planes can fly for long hours and that makes them a great advantage for air supremacy.

Also the majority of supporting teams are required for spy planes, are far away from battle fields and they do not need to be rotated around the war zone so, especially the fight against terrorism made them a primary weapon, such as Predators in Afghanistan. Hopefully thanks to spy planes maybe the damages of terrorism will decrease and the security of the armies will get stronger in the future.

The low cost of the UAVs is only one of their most important advantages because they don't need to provide systems to ensure the security of the crew. In fact, as it's known, one of the worst results of a war is the high cost which is a great problem for economies. After a war generally countries struggle with the economic problem for a long time. In a war the cost of human needs in the battle are too high because of food, clothes or medicines for requirements of soldiers. So as it seems, using UAVs will reduce the cost of the wars. "If the army continues to reduce the human cost in the wars, you won't need to spend such a big effort to prevent them" said US Navy Commander Edwart BARETT, who teaches ethics in the War Academy. Now the question is that what will be the effects of eliminating one of the most fearful results of the wars? It seems very difficult to predict.

In addition to this, using unmanned aerial vehicles is rapidly changing the way of the wars. For example you can get data about movements in the field just on the time action happens, so you have control towards each direction miles and miles away. It means increasing the abilities of a normally small and isolated unit in a striking way.

[1] Quoted from Aviation Safety Unmanned Aircraft Programme Office, 2008, in McBride Paul. Beyond Orwell: the application of unmanned aircraft systems in domestic surveillance operations. Journal of Air Law and Commerce Summer 2009;74(3):627–62, 628.

[2] Dunlap Travis. Comment: we've got our eyes on you: when surveillance by unmanned aircraft systems constitutes a Fourth amendment search. South Texas Law Review Fall 2009;51(1):173–204.

On the other hand there are a number of doubts about the UAVs. Today one of the biggest problems of UAVs is the delay time of decision-making between spy plane and its pilot. Compared to a UAV's pilot who is far away from the field, the pilot in a cockpit can respond threats more quickly.

The last UAV strikes caused the emergence of the discussions of ethical issues on the international platform. The main topic of these discussions is the ability to kill even from a different continent. In fact, some of the researchers think that, the emergence of autonomous weapon systems is seen as a crisis in terms of ethics and the law of war.

In fact the legal and ethical evaluation of a new weapons system is nothing new; it is a longstanding requirement of the laws of war, one taken seriously by U.S. military lawyers. For example American military judges did not accept some new weapons, including laser weapons and various cyber-technologies, because of the law of war.

BlayWhitby, a lecturer in Computer Science and Artificial Intelligence at the University of Sussex and a philosopher concerned with technology ethics, worries that although artificial intelligence works well in a simplified factory environment, a battlefield environment is too complex for the technology. "The AI that the military robots are using is pretty primitive," he says. "If you've got an AI device that has very limited intelligence, you can simplify its environment in a factory, but on the battlefield you're putting an essentially limited technology into a very complex and fast-moving environment. Will things go wrong? Sure they'll go wrong; it's just a question of what."

The countries who study on this subject try to design the UAVs which can take critical decisions while flying together autonomously. Additionally according to some military visionaries, by using artificial intelligence an ethical justification can be provided for the spy planes, however today there are some other serious ethical problems. According to the law of war, combatants must be willing to throw themselves into danger; but the pilot of a spy plane, can hug his small daughter tenderly after he killed lots of people a few minutes ago in another part of the world where he has never gone.This is unacceptable for some visionaries.

According to Robert E. Lee" Terrible effects of the war is a good thing for us, otherwise we would be addicted to war" But the pilots of UAVs just sit on their chairs and use their computers being far away from the battlefields. They are far from both their UAVs and the humans they kill.

Meanwhile the idea that UAVs would lower the political threshold for a war is another doubt. Terrible consequences of war and the pressure of the public prevent the political leaders to go into war easily in spite of all the national interests. What if these fears fade? Consequently, UAVs may make the leaders war junkies.

Thus in this case, the battle field and aircrafts are sharply divided. The technology of "press the button" also brings some deep ethical and moral questions. Will spy planes which controlled by the pilots thousands of miles away from the battle field make the war looks like a simple computer game? So now killing a human become such effortless like in a game.

However, we need to be aware of the temptation to use technology in ways otherwise we wouldn't do, especially in legally questionable activities. It is possible that we maybe accused for that. For instance, this charge has already been made against our use of UAVs to hunt down terrorists. Some call it "shooting targets", while others maintain that it's a "murder." This is still very much an open question, because "murder" has not been clearly defined in international law or domestic law, e.g.[3]

Despite these ideas there may be some positive contributions of UAVs to the humanity, can we create robots that behave towards people better than the way today's soldiers behave towards each other? Or they will maybe try to kill their owners. In fact these words associate the wars between the humans and robots like in the movies. So would this same technology protect humans if future robots try to capture entire world? However, maybe thanks to the robots our children will have a more comfortable world. Time will show us the answers of these questions.

What needs to be kept in mind is that although the UAVs are thought to have an important place in the future air force, it seems as if the pilot in the cockpit won't be absent for a long time.

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