

Forum:	Disarmament Committee
Issue:	The usage of drones in warfare
Student Officer:	Lemuel Nelson
Position:	Deputy President of the Disarmament Committee

Introduction

Drones are unmanned aerial vehicles (UAVs) used in combat. They are controlled offsite by remotely controlled by pilots who pilot the vehicle at its home base. These vehicles are used for multiple purposes: war, espionage, bombing, intelligence etc. Drones are different to missiles in that their flight can be controlled while being in the air. Drones were first used when Austria attacked Venice with unmanned aerial 'balloons' filled with explosives in August 22 1849. This was the first usage or sign of drones in actual warfare. Drones started to be built shortly after World War I, during the inter war period. In September 12th the Hewitt-Sperry airplane was known as the flying bomb. In the 21st century, drones were mainly used in war between United States of America (USA) and other countries such as Pakistan. Significantly the arming of drones occurred after the devastating 9/11 event that occurred in the USA. With the knowledge of extensive recent attacks, many of the villagers in nations like Pakistan live in terror of being killed by sudden and unpredictable drones. No clear legal line exists as to the usage of drones. There is no agreed framework to prevent the usage of drones in warfare however, the United Nations (UN) briefly paid attention to it despite the attacks in the Middle East and Pakistan.

Definition of Key Terms

Surveillance Drones

These are Unmanned-Aerial-Vehicles (UAVs) that are harmless and only have communicational devices to satellites and instruments to create imagery via a camera that can be used to survey an area for a certain cause. It is a drone that is mainly used to gain intelligence into another state or nation.

Surveillance drones were used by the UN to survey the Democratic Republic of Congo to adhere to the rising issues of displaced civilian works and to help with the possibilities of a breach in human rights in the area. This was a useful application of drones as they were used to monitor unwanted

activities in Congo and show the authorities what implementations they can place in order to stabilize the country.

Unmanned Aerial Vehicles (UAVs), Remotely Piloted Vehicles (RPVs), Unmanned Aerial Systems (UASs), and Remotely Piloted Systems

These are different categories of drones. These are remotely controlled vehicles that are used in warfare or surveillance by the military that are controlled by pilots that are on the ground. Ground operators control the drones flight path, job, purpose etc.

AUVSI (Association for Unmanned Vehicle Systems International)

This is a non-profit organization solely wanting to promote and support the industry of robotics and mechanical warfare. It was established in 1942 when a group of US Air Force officers and contractors were affected by target drones used in the Vietnam war. AUVSI is an organization based in the USA and they annually produce publications to update the public on the maritime, ground and air baser UAVs. You can take a look at these at www.auvsi.org.

It kicked off in 1978 because that was when the organization changed name from NARPV (National Association of Remotely piloted vehicles) to AUVSI. This was because they wanted to change their thinking to all unmanned systems.

Customary International Law (CIS)

Customary International Law is derived from treaties, general principle laws, and the decisions made in the United Nations, International Court of Justice, and jurists that the vast majority of the world's nations abide by. Before the use of drones, it was crucial for the organization to thoroughly understand all the current CIS and be able to ensure that drones do not violate any treaties that should be respected and outlined in CIS.

The Drones Watch

Drones Watch is an organization that specializes in regulating and monitoring drones. It not only focuses on the international use of drones, but also the domestic uses including law enforcing agencies and border securities. The organization does not simply regulate and monitor the drones, it also interacts with the public by educating the people on both the merits and consequences with the use of drones. This enables Drones Watch to raise more awareness with the people through the powerful tool of education.

History

Drones usage in warfare has a long history. It started with the usage of balloons filled with explosives in Austria with the intent of causing as much damage on the city of Venice. It then evolved as unmanned

bombs, planes etc.

The beginning of drone development and use in World War II

Shortly after World War I, technology was advancing rapidly. The first drone built for warfare and proper use was created by Reginald Denny. He created a model plane shop on 1934 in Hollywood. Later in the decade, he produced the first prototype of the drone RP 1. This was used by US Marines and the air force to train gunners. However soon after this, the drones were then put into the battlefield. An improved drone was created specifically for warfare: The RP 2. The RP 4 won Denny a contract in the army and from 1939 he built and 15000 drones for the US army to use in World War II.



Figure - The RP 4 drone that was mass produced to be used in the army

The US navy had also been experimenting with drones at the time. This resulted in the finding of the Curtiss N2C-2 drone. This was adapted by the US army in 1939 to create aerial torpedoes that were used on a small scale section in world war.

Reconnaissance Drones

The USA started to invest a significant amount of their budget in the building and improvement of the quality of their drones for other missions. The USA and USSR (Union of Soviet Socialist Republics- the old name for Communist Russia) deployed drones and developed them after the Cold war. Drones were developing in between wars, not during them. A series of reconnaissance drones derived from the Firebee, the Ryan Model 147 Lightning Bug series, were used by the US to spy on North Vietnam, Communist China, and North Korea in the 1960s and early 1970s. This encouraged the usage of drones

worldwide for different purposes.

Vietnam War- usage of drones

In the Vietnam War, the Vietnamese deployed a variety of drones (see Figure 2). The USA had not very many drones left to their use. They were affected by negative publicity not allowing their soldiers to be in the Vietnamese climate as this was dangerous. So the only drone(U-2) was adapted and then used to fight the Vietnamese. This drone did not last very long. It was destroyed and as a result of this, the USA called for a new program: The Red Wagon. This program entailed the USA to create larger, sophisticated drones to use in the time of war. The first birds (drones) would be Ryan 147Bs (AQM-34s) piggy-backed on C-130s, after completing their missions they would be parachuted for recovery near Taiwan. This tactic gave the USA a forefront on the battlefield as they had more sophisticated equipment.

The drones deployed by the USAF on Southern areas of Vietnam were different. These were Ryan Firebee drones. The drones used by the USA were shot down by the Vietnamese air force. Only 6 of them were shot down. This shows that the USA's drones were better than manned aerial vehicles. This could be used to say that unmanned aerial vehicles are better than manned vehicles.

Date	Interceptor Type/Weapon Type	Interceptor Unit	Drone Type	USAF Unit/Remarks
3/04/1966	MIG-21/AA-2 Atoll (K-13) Air to Air Missile	921st Fighter Regiment (FR)	Ryan Firebee AQM-34 series ^[20]	350th Strategic Reconnaissance Squadron (SRS), 100th Strategic Reconnaissance Wing (SRW) ^[20] This was the first U.S. drone downed by the NVAF.
3/05/1966	MIG-21/AA-2 Atoll	921st FR	AQM-34	350th SRS, 100th SRW
9/21/1968	MIG-21/Unknown	921st FR	AQM-34	350th SRS, 100th SRW
12/7/1969	MIG-21/Unknown	921st FR	AQM-34	350th SRS, 100th SRWboth December kills were made by Nguyen Van Coc ^[21]
12/7/1969	MIG-21/Unknown	921st FR	AQM-34	350th SRS, 100th SRW
3/6/1971	MIG-17/23mm & 37mm cannon	923rd FR	AQM-34	350th SRS, 100th SRWShortly after destroying the drone, the attacking MiG and pilot were lost to unknown causes. ^[15]

Figure 2- Intercepted Drones of the Vietnamese against USA

Modern Usage of Drones

Drones are now starting to be increasingly used in the modern era. More and more countries are starting to use drones because they reduce the manpower needed. The statistics show that the number of flight hours made by UAVs has increased exponentially in the past 5 years. We are increasingly relying on technology even in warfare.

The USA is a nation that is increasingly using drones in warfare. Pakistan and Afghanistan's Federally Administered Tribal Areas (FATA) have been the main locations of these strikes.

The many drone attacks in Pakistan began in 2004, when President George W. Bush, along with the Central Intelligence Agency (CIA) attempted to take out the Taliban and Al-Qaeda militants. Initially, the drones targeted the Federally Administered Tribal Area as well as the Afghan border near the Northwest of Pakistan, through strikes have gradually increased to encompass wider areas. The drone strikes in Pakistan as well as Afghanistan have been considered successful in diminishing the power of Al-Qaeda. On the other hand the number of civilians killed by the unmanned aerial vehicles greatly outnumbered the few militants that were killed. For example, from January 2006 to April 2009, only 14 wanted Al-Qaeda leaders were successfully killed while 687 Pakistani civilians died in the process. In the FATA the drone strikes were meant to fight the Al- Qaeda and the other 7 tribal terrorist organizations.

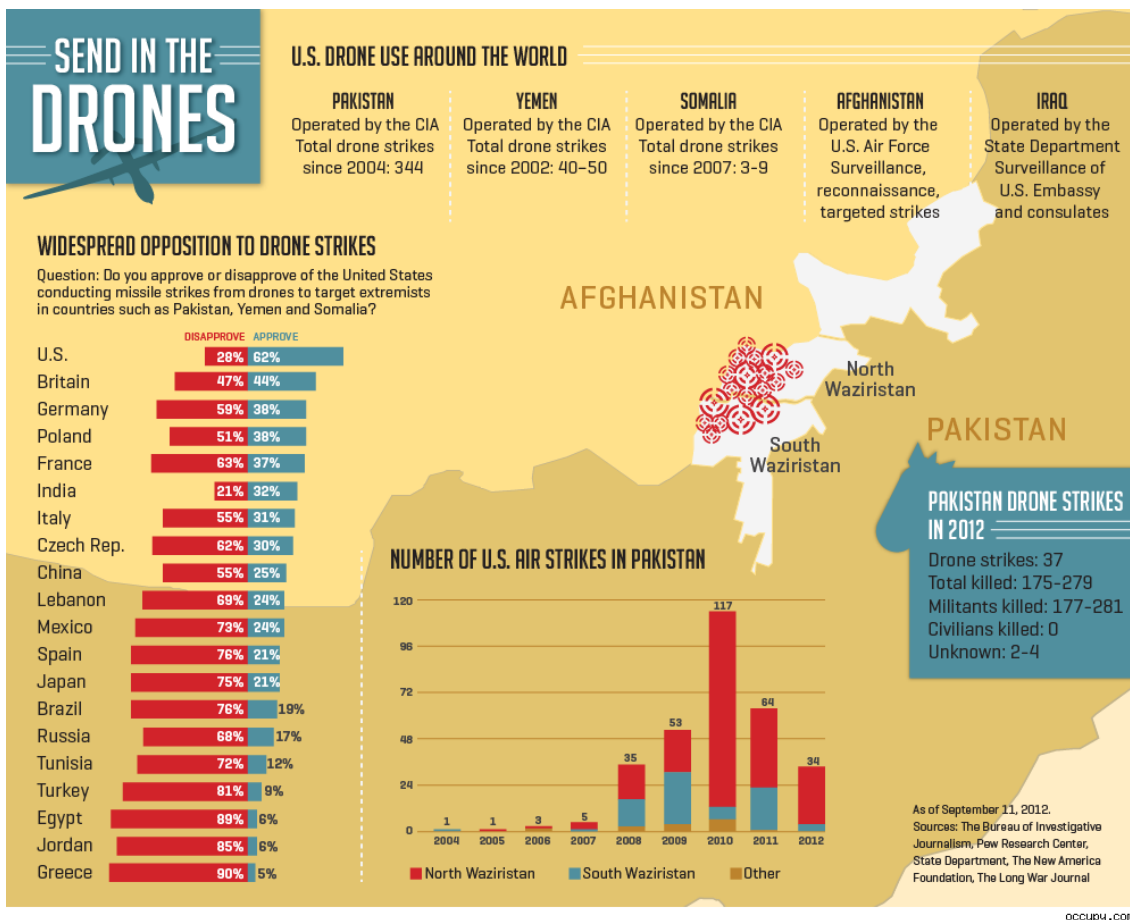


Figure - Information and background to drone strikes in the FATA

Major parties involved

The United States of America

The United States of America is heavily involved in the drones business. They encouraged usage of drones in warfare for the main purposes of counter terrorism. They unleashed an array of devastating strikes in Pakistan, allying with Yemen in the process to fight Al-Qaeda. President Obama has said that drones are a very effective way of protecting American civilians from danger and this suggests that the usage of drones will continue to be a necessary military equipment for the Americans.

Association for Unmanned Vehicle Systems International

The Association for Unmanned Vehicle Systems International is a non-profit organization that is dedicated to supporting and promoting the unmanned vehicles as well as robotics. It was first established under the name of National Association of Remotely Piloted Vehicles, in 1972 when drones were used in the Vietnam War. By 1978, the organization expanded its focus to create more discipline in the use of drones by creating regulations and laws.

Drones Watch

Drones Watch is an organization that specializes in regulating and monitoring drones. It not only focuses on the international use of drones, but also the domestic uses including law enforcing agencies and border securities. The organization does not only regulate and monitor the drones, it also interacts with the public by educating the people on both the benefits and consequences with the use of drones. This enables Drones Watch to raise more awareness with the people through education. Solutions with drones could go through this organization as they are vastly informed of the systems and the key to drones in warfare.

Timeline of Events

Evaluation of Previous attempts to resolve the issue

There have been previous attempts to increase the awareness and the usage of drones in the world. Several governments have increased the awareness and benefits of the usage of drones by collaborating to fight rebel terrorist groups. The strikes unleashed in the Middle East and South Asia has shown people the effectiveness of drones in warfare. An alliance formed by the USA, Yemen and Pakistan has shown the public that drones in warfare are beneficial. However, one thing that needs to be considered is the civilian casualties and collateral damage as a result of these strikes. Many nations have used drones in the past but it has taught the postmodernist world nothing in trying to increase the usage of drones in warfare.

A government should always put civilian safety before anything else, but with the powerful group, many nations have little choice in combating terrorist organizations without harming the innocents. Most importantly, the number of civilian casualty must be taken into consideration and the lives of those, innocent people must be put as the top priority.

Possible Solutions

Education is always the key to raising awareness, with public awareness and movements that urge the government to take action in enforcing previous attempts to regulate the UAVs and to create and draft more effective resolutions to safeguard the people's rights and safety. When you educate people they are more likely to encourage drone usage, however they would probably suggest that drones should only be used where there are no civilians.

You could reduce the effect of drones on civilians by actually limiting the capabilities of the drone itself. For instance, you could reduce the blast radius of the drone so that its limited blast radius will cause the least amount of damage to civilians. Where there is an army or a terrorist group is usually a remote area, so reducing the blast radius will just limit its effect to the battlefield.

Another way that you could ensure drones don't violate the privacy conditions in airspace could be the usage and the fitting of safety implants that protects the rights of surrounding nations. Many people are violated as the drones can be fitted with cameras and sensors to detect and spy on people so privacy

measures are required to prevent this. The FAA have created a roadmap which can be found at:

http://www.faa.gov/about/initiatives/uas/media/uas_roadmap_2013.pdf

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