Abstract—Since the attack of the terrorists in the World Trade Center in New York on September 11, 2001[1] the United States has done several measures that aims to prevent the incident from happening again. Thus, it paved way to the development of war technology specifically in surveillance. With the signing of the Patriot Act[2], one of its tools for implementation, which is unknown to many, are the drones. The military didn’t just only used drones for monitoring certain people or keeping in track of them, but can also be used as a lethal force in modern warfare.

According to the Long War Journal, drone strikes in Pakistan recorded a casualty of 2,018 militants and 138 civilians from 2006 up to mid-2011[3]. Controversies about the roles of the drones in invading a person’s privacy has been taken seriously by the masses, and media had disclosed information towards the lack of policies involving the use and regulation of drones in monitoring a certain person. Individual privacy and law’s due process has been a strong counter-narrative for the use of drones as a tool for surveillance[4]. The paper aims to visualize the development of drones in the future, to enumerate the negative and positive issues towards the use of drones and to provide possible solutions on drones being a tool of privacy invasion and due process bypasses.

Keywords: Drones, Unmanned Aerial Vehicle, Privacy, Due Process, Surveillance

I. INTRODUCTION

Drones, specifically known as the Unmanned Aerial Vehicles (UAV), it is basically an aircraft without a human pilot aboard. The flight of UAVs may be operational from the remote control of an operator or by onboard computers.[6]

Historically, it is just a remotely piloted aircraft but nowadays autonomous control is being employed. UAV is currently a technology being used by various fields like military, aviation, radiocommunication, automation and artificial intelligence.

Drones have been a substitute for missions that are not safe for a manned aircraft to execute. The likes are that of search-and-rescue missions, 360-degree surveillance, dangerous intel report gatherings, and many more.[7]

The early developments of drones started as early as the 19th century, when Austria sent unmanned, explosive-filled balloons to attack Venice in 1849. UAV development continued until the World War I with the Dayton-Wright Airplane Company invented an unmanned aerial torpedo that would drop and detonate at a preset time.[8] Drones had also been a major technology in World War II, primarily used as a training dummy for anti-aircraft gunners and a tool for fly attack missions that proved deadly for soldiers inland.

In 1973, Israel developed the first real-time surveillance unmanned aircraft to neutralize the Syrian air defenses at the start of the Lebanon war (1982) without a single pilot casualty. Drones has also been a major advantage for latter wars being participated by the United States.[9][10]

On June 19, 2013, FBI Director Robert Mueller III admitted that they had used aerial surveillance drones to aid them in investigating certain persons involved. Even though the FBI claimed that they had only used the technology in very rare occasions, it draws that attention of the masses and calls for a further political debate and legislation to govern their use and protect the privacy of the people.[11]

Violation of the due process has also been seen as a problem for the new technology. Ohio Representative Rex Damschroder, who proposed drone regulations had stated, "Right now police can't come into your house without a search warrant, but with drones, they can come right over your backyard and take pictures."[12]

The drones have been proven helpful for the military so many ways. The main reason why The United States has been a major developer of this technology is to gain advantage of the drones’ capability of unnoticed surveillance, hence, gaining the upper hand for intel reports and war strategies. It also comes with low cost of development and longer operational hours as compared to a traditional aircraft.

Even with the advantages involved, its vulnerability to
cyber attacks had been the main reason why drones are still classified as a risky technology. Being it easy to handle, even an average programmer can manipulate the use of drones and use it into his/her advantage.

Like the recent innovations, drones have limited abilities. Drones are unable to communicate with civilians for increased information and detailed intelligence resulting into unnecessary casualties provided by drone combats.\footnote{23}

\section*{II. PROBLEM STATEMENT}

With the increasing number of drones set to fly in the skies in the upcoming years, the public yearns for its regulation because it can be used as a tool for privacy invasion and unapproved surveillance which can result to offended reactions of the mass. It can cause few technical disturbances as it is not really granted secured because the technology is just being embraced by the society.

The main issue of the drones according to people is its ability to invade the privacy of others. In definition, invasion of privacy is the intrusion into the personal life of another, without his or her knowledge or approval.\footnote{14} Prior to the fact that the FBI admitted its usage of drones to its investigation activities has caused turmoil and slight tension to the citizenry, knowing that the government cannot be trusted, as they are monitoring their daily activities. If this will not be solved, this technology can cause distrust of the people to their government, for it violates one of the main principles of democracy – right to privacy and to a private sphere of life free from governmental interference.\footnote{13}

With relation to the issue of privacy invasion, comes also the issue of bypassing the due process. US President Barack Obama had said in his speech last May 23, 2013 on the National Defense University that drone attacks are used to take down high leaders of the terrorist groups and has been successful in crippling them without the casualties being recorded on the side of the US Armed Forces\footnote{16}. It could have been a good thing if it did not overstep a certain policy being exercised by all justice-seeking countries – due process. Up until today, the US government do not have a concrete explanation on how the efficacy of drones in taking down assumed menaces of society outweighs the importance of due process.\footnote{17} If not taken seriously, it can cause anarchy for the lack of due process means killing a person without even proving if he is guilty or not.\footnote{18}

The last issue being upheld questions the vulnerabilities of the drones. Being it easy to operate, can be a leeway for hackers to use hacked drones for bad things\footnote{19} and the government cannot do anything with it – like every DDoS attack. Even though developed with good intentions, the drones can be detrimental to the society if used by the wrong hands. It also dissents the value of true warfare, for you can just eliminate thousands of enemies by just manipulating the device from afar. It can change the landscape of warfare and this kind of warfare is very detrimental for the people because there’s no way we can escape from the dangers of drones.\footnote{20}

\section*{III. RESULTS AND DISCUSSION}

Not everyone has access to drones, in fact, the military is the only entity which operates the largest number of drones. In the United States, for example, its Armed Forces houses 10,691 UAVs, the largest in any army in the world.\footnote{21} Therefore, the civilians like us have nothing to do with its operational use. We don’t have the power to dictate what we are going to do with the drones. Only the military, as of now, has the absolute power to turn things according to their decisions, as much to the dismay of the legislators and citizens themselves.

Prior to the issues of invasion of privacy and bypassing of due process, there is only one way to say no to us being monitored – pass a certain law that will regulate the use of drones. Drone regulation laws should focus on safety and privacy to preserve its main purpose and at the same time never be a tool for abuse and a threat to democracy.\footnote{22} This is the only way to warn the authorities when should they do that and when they are overstepping the line already. As of 2014, a law regulation for drones has been implemented in the state of Connecticut\footnote{23}, and many advocates of the campaign wishes that it must be a blanket policy to all states.

If the use of drones will be regulated, then the military will be forced to switch back to the traditional form of hunting down enemies, with the assumed perpetrators having a chance to defend their side in court and giving them time to disprove what the prosecution is charging them, thus making way to an ever-healthy justice system.

About the issue of the drones’ vulnerability to unauthorized use and its potential dangers to society, the only way to avoid it is to not let it be at the wrong person’s hands. In the military, it is best to have a strong security program towards the control system of unit to ensure there will be no unauthorized person that will breach inside the ever-sensitive premises of control room\footnote{24}.

\section*{IV. CONCLUSION AND RECOMMENDATION}

Drones, or UAV, are identified as an aircraft without a pilot aboard, it gets the job done that a human cannot without sacrificing human casualties. It has certain advantages, like being a go-to device in search-and-rescue operations, a powerful hidden military strategy and taking down notorious criminals without sacrificing a single droplet of blood.

Every advantage has its counterparts, and in this case the true power of drones, if let loose, oversteps the limitations a man can do in a liberal democratic country. The government can provide exceptions for the military, but it will be proven worse, knowing that the citizens are well aware of the rights they have. Therefore, drones are creating a tension between national security and individual
privacy that initiates a never ending debate.

This case study therefore concludes that the right of one’s person to privacy must be encouraged. Despite the good intentions of drones tracking down suspicious persons without their consent, at the end of the day, every person has a right to privacy and it must be exercised all of the time. The effective measures law enforcers and military can have is to have their used of drones regulated do that the tension between the people and the state will be relieved, knowing that the sole purpose of drones will be as their protector, not an invisible eye monitoring every step the you will take.

As part of the authors’ research, the following are some recommendations on how to be safe from the eyes of the drones: (1) Firstly, be aware of your surroundings because someone might be monitoring you. (2) Lastly, participate in discussion groups regarding the regulations of the drones, in a liberal democratic country, every voice of a citizen matters, the more vocal the people is, the more the state will be proactive in asserting the people's needs.

V. REFERENCES