Moral Dynamics of Drone Warfare
By Chaplain (MAJ) Michael Keifman
September 14, 2012

Drones or unmanned aerial vehicles (UAVs) were once the stuff of science fiction. This is no longer the case. The use of drones by the United States and many other nations is dramatically on the rise. Contractors are speeding ahead to create the next wave of drones to meet the tactical needs of the military, our police forces, and Homeland Security. The U.S. military and C.I.A. are hungry for this technology, as it extends reach and capabilities to locate, and eliminate terrorists in nations such as Iraq, Pakistan and Afghanistan.

Drones are certainly not a new concept. Early attempts to develop drones were made as early as World War I. By World War II drones were employed as training aids for anti aircraft gunners. The term “Drone” stems from the rudimentary nature of these early UAVs, and the droning noise which emanated from their engines. Drones have come a long way from these early prototypes. The drones of today are remotely piloted by humans located half a world away, or guided by GPS systems. They have phenomenal surveillance capabilities, range and are capable of carrying out strikes against enemy targets with surgical precision. Drone technology is progressing so rapidly that P.W. Singer refers to the waves of technology we are now experiencing. In relation to drone warfare, he worries that we are perhaps producing more history than we can consume and as such, we may fail to notice the tidal shifts produced by rapid technological advancement.¹ Practically speaking, barely are one generation of drones developed, that newer, faster, longer ranging and more deadly variants almost immediately become available.

With such rapid progression in UAV technology, and the U.S. Government’s (not to mention the World’s) eagerness to employ these weapons, comes a necessity to identify, describe and consider some ethical ramifications. The particular focus of this paper concerns the moral issues of UAVs, as employed against terror cells, such as Al Qaeda and the Taliban.

As previously stated, the United States government has demonstrated an increasing eagerness to employ drones in the War on Terror. When coalition forces entered Iraq in 2003 no robotic systems were available for combat. However, by 2004, 150 robotic systems were being employed. At the end of 2005 the number was up to approximately 2,400. By 2006, 5000 robotic systems were part of the conflict. Not all of these systems were aerial, but as time has gone on drones have become a large segment of this new aspect of modern warfare. Predators have been, and continue to be one of the most utilized UAVs by the military and C.I.A. The Predator is twenty seven feet in length and is pushed through the air by a rear propeller. The Predator weighs 1130 pounds as it is made of composites as opposed to metal. The Predator sounds pricey at the cost of 4.5 million dollars per unit. However, the military can purchase eighty five predators for the cost of just one F-22 fighter jet. The Predator can provide a great deal of surveillance and bang for the buck.

Further evidence of the United States willingness to utilize drones is evident when one considers that in 2009 alone, there were 51 reported drone strikes in tribal areas in Pakistan. Compare this with the track record of the administration of George W. Bush, which launched

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2 The term “War on Terror” is not officially used by the Obama Administration. Rather, the term, “Overseas Contingency Operation,” is used by the administration to describe the current operations carried out against terrorists. The War on Terror is, however, is still commonly used by some politicians and the media.
3 Singer, p. 32.
4 Ibid., p. 33.
only 45 strikes during the entire administration.\(^5\) In 2009, perhaps as many as ten terrorist leaders were eliminated by drones utilized in Pakistan, not to mention hundreds of lower level associates.\(^6\) According to the New America Foundation, the frequency of drone strikes in Pakistan peeked in 2010 with one hundred strikes, and then fell in 2011 to seventy two strikes.\(^7\)

Pakistan is used as an example here to site the frequency of drone strikes in just one country, a country, incidentally, which the United States is not at war with. It should be noted that Pakistan remains an ally of America in the War on Terror. The use of UAVs, as a means of intelligence gathering, and in offensive operations, has been and continues to be prevalent in Iraq and Afghanistan, and in Western Pakistan.\(^8\) There are strong justifications for the utilization of drones to hunt terrorists. In the book, *Predator*, drone pilot - Lt. Col. Matt J. Martin describes in detail his attempts to locate terrorist targets in Fallujah during Operation Iraqi Freedom. He states,

“We could have sent troops busting through Fallujah rooting out the cancer house by house, except that would have been extremely dangerous and would have taken a lot of troops. Fallujah was a big city. Instead, we used spies and informants on the ground and Predators in the air (along with other airborne assets) to locate and track bad guys until we could take them out. With prejudice.”\(^9\)

The argument for the use of Predator drones is somewhat similar to the argument for the dropping of the atomic bombs on Japan in WWII. It was thought that doing so would spare many

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6 Ibid.


“...A month after the last American troops left Iraq, the State Department is operating a small fleet of surveillance drones here to help protect the United States Embassy and consulates, as well as American personnel.

Japanese and American lives. Using this utilitarian argument one defend America’s drone program which can provide America the advantage of sparing the lives of troops, and perhaps many civilians, from the rigors of house to house searches, which are in fact dangerous and time consuming. Additionally, these searches are often humiliating to local populations.

This is not to say that the use of UAVs is not time consuming. Lt. Col. Martin also explains, as he was hunting terrorists in Fallujah from his remote location in Nevada that, “Hunting terrorists and insurgent fighters required indefatigable patience. The business of intelligence gathering was long, slow, tedious, unglamorous work only occasionally punctuated by intrigue and excitement.”

Lt. Col. Martin portrays drone attacks as rare occurrences, used with caution. On the other side, Michael Ignatieff, in *Virtual War*, explores the new technology of war. He worries that new technology, to include UAVs, carries with it the responsibility to investigate the emerging morality governing its uses. In his words, “I came to realize the extent to which all exercises in political judgment depend on the creation of ‘virtual realities’, abstractions that simplify causes and consequences.” It should be noted that Ignatieff’s book concerns the war in Kosovo, when Predator and Hunter drone aircraft were first used for intelligence gathering. Precision targeting at that time (1998) was not the work of Predators, but rather of Tomahawk missiles. He aptly notes, “Ever since the moment during the Gulf War in 1991 when reporters saw cruise missiles ‘turning left at the traffic lights’ to strike the bunkers of the Iraqi regime, the Western public has come to think of war like laser surgery.” He further points out that such precision was now expected and perfection had become the expected norm.

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10 Ibid., p. 39.
12 Ibid., p.6.
13 Ibid., p. 92.
To manage this reality in Kosovo, General Wesley Clark, Supreme Allied Commander Europe had to develop a rapid reaction airborne targeting system. This became essential when President Clinton ruled out a ground war prior to the US congressional elections in 1998. The goal, in Ignatieff’s words was to, “Get their reaction times down so that they could spot and exploit targets of opportunity as they appeared on the radar and computer screens.”

At first, Clark’s commanders resisted, wanting to be assigned targets to take out. Clark impressed upon them that they were to develop the targets in real time using data collected from radar and drone intelligence. This mandate also came with the requirement of a real time legal review by a lawyer from the Judge Advocate General’s office at a base in Germany, whose job it was to sit in front of a computer screen and assess targets based on the Geneva Conventions law of war.

In this example we see the beginning of the development of true virtual war. Decisions now began to be made, not by ground commanders, who had firsthand knowledge of the battlefield, but by individuals watching targets on a computer screen, analyzing the data, and making the determinations to shoot, or not shoot. During the conflict in Kosovo pilots often had to radio into headquarters in Vicenza for final clearance when they identified a target of opportunity. In fairness, it should be noted that the final call to fire, or not fire, was up the pilots themselves who had to have visual recognition of the target. However, these pilots were themselves discriminating between targets using a mere 4.5 by 4.5 inch target monitor. This in itself left some degree target certainly to be desired.

For better or worse, we are now committed to virtual warfare. Incredible progress has been made with the capabilities provided by drone aircraft. Air Force Colonel Michael Downs, stated

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14 Ibid., p. 99.
15 Ibid., p. 100-101.
16 Ibid., p. 101.
“Our biggest challenge is no longer destroying targets, its finding them.”  
17 For example, it took about six hundred hours of surveillance for approximately ten minutes of dropping bombs during the operation which killed Abu Musab Al-Zarqawi in 2006.  
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This brand of warfare comes with certain unique challenges. One challenge is subjecting people to long periods of tedium as they watch screens, and analyze copious amounts of intelligence. COL Downs also has concerns about the stress imposed on young airman as they sometimes helplessly watch drone feed, in which ground forces are killed in enemy attacks. This comes with an ethical mandate to provide the right support for those who engage in drone warfare to prevent excessive mental anguish and suffering.

Another interesting facet of virtual warfare, made possible by UAVs, is that pilots and other support personnel are not deployed, but rather, operate out of bases, such as Beale Air Force base, north of Sacramento, California. This peculiar aspect is detailed in the book Predator, as Lt. Col. Miller describes the intensity of hunting high value terror targets during his shift, and then leaving to have dinner with his wife that same evening. What happens when pilots kill, and then, hours later show up at home or at Boy Scouts? Can humans deal with this peculiarity?

Additionally, the time difference between the drone pilot’s real world time and virtual world time, makes it difficult to establish a battle rhythm.  
19 Does a pilot’s performance and temperament differ when he or she is experiencing marital, or other types of stress, while operating drones? Do these factors distract pilots, or does it make them more aggressive and willing to pull the trigger? Some will argue that there are safeguards, and supervisors who must

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17 Singer, p. 345. Colonel Michael downs is quoted in Singer’s book. Downs function at Beale Air Force Base was to assist with leading and coordinating worldwide high-altitude unmanned operations.

18 Ibid.

19 Ibid, p. 347.
give clearance before a shot is fired. However, these people may be subject to the same types of stress and miscalculations as the pilots.

Virtual warfare has created a new dynamic that has not been encountered before, at least to the extent that it is now. In centuries past, commanders fought with their troops in the middle of battle, to inspire their troops. However, it is now possible for commanders to sit in an office and watch the battle unfold on a computer screen, which is fed video footage from a predator. This removes the commander from the immediate battle, and prohibits him from personally inspiring troops, as they share the dangers and hardships of combat. This allows commanders to make decisions, far removed from the battlefield. When this occurs, the commander is no longer able to inspire troops with his presence, nor can he see the full reality of the battle space, but only what can be displayed on the screen. P.W. Singer refers to such people as “Tactical Generals.”

A professor at the Air Command and Staff College explains, “It’s like crack for generals,” as it gives them a tremendous ability to intervene in a mission commander’s plans. We might ask how ethical it is to place a ground commander in a battle space, and then allow others to watch from afar and give orders, based on a virtual picture of the operation. For example, Predators beamed back video from Afghanistan during Operation Anaconda in 2002. This was one of the first occasions when Predators beamed surveillance video of an operation to generals at a remote location. In reference to this event, Major Louis Bello, an FSC for the 10th Mountain Division, observed that this video was “seductive” to commanders, who saw the video as the reality. In Bello’s opinion, in virtual warfare, one focuses on what one can see on the screen, and not what is happening just off the fringes of the camera’s eye. During Operation Anaconda, the generals

20 Ibid.
21 Chuck Kamps, quoted in Singer, Wired for War, p. 349.
22 Singer, p. 351.
saw what they thought were American soldiers, moving across a mountain. In reality these were not Americans, but al Qaeda fighters. The generals were fooled because according to the operations order, American troops should have been on the mountain.\textsuperscript{23}

Another ethical concern with drone warfare is the isolation of the target from decision makers. In his book, \textit{On Killing}, Dave Grossman advances the notion that distance from a victim is a factor which can cause, or allow a human to overcome an innate resistance to killing. The distance Grossman refers to is not merely physical, but also includes social factors such as culture and race. Distance can allow one to dehumanize the victim.\textsuperscript{24} Some dehumanization seems unavoidable, however, in Grossman’s opinion, too much dehumanization leads to an unhealthy hatred. It is from this situation that war atrocities and poor decisions in combat can come about. These aspects are certainly factors in drone strikes and as such should be considered for their moral implications.

Singer sums up what these factors could mean in the future. He points out that the lieutenant of today may one day be the general, watching war based on video feed sent from a drone. However, the lieutenant may not know how to make effective decisions to effect the desired outcome of combat. This would be due to the fact that when the general was a lieutenant, deployed years prior, he or she was not permitted to make decisions in combat, as these were made for him or her by a previous commander who watched them from a TV screen outside the theatre of war.\textsuperscript{25}

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\item \textsuperscript{23} Ibid.
\item \textsuperscript{24} Dave Grossman, \textit{On Killing: The Psychological Cost of Learning to Kill in War and Society}, New York, Back Bay Company, 1996. pp. 188-189. Grossman details four types of distance; social, cultural, moral, and mechanical. Mechanical distance seems most relevant here as it, “includes the sterile ‘video game’ unreality of killing through a TV Screen, a thermal sight, a sniper sight, or some other kind of mechanical buffer.”
\item \textsuperscript{25} Singer, p. 353.
\end{itemize}
Since Kosovo, virtual drone warfare has advanced rapidly. Drones have gone from mere surveillance tools, to carrying three varieties of hellfire missiles.\textsuperscript{26} Predators and other UAVs are now able to sight targets, providing the information to a pilot and commanders in remote locations. Predators are typically launched by Launch and Recovery Teams (LRE’s) in country, or from a country near the target destination.\textsuperscript{27} The link with computers means that there is a two second lag time between the pilot’s flight control and the aircrafts reaction. This lag is what makes LRE’s essential for launch and recovery of the drone.

This is true virtual warfare. Drone pilot, Lt. Col. Martin describes how he communicated, via chat rooms (like those on the internet), with supported ground units and air traffic controllers in Iraq.\textsuperscript{28} In one instance, Martin details his communication with an AC-130, which he typed messages back and forth with, and also had video relayed from his Predator to the AC-130. A mechanized patrol encountering gun fire from the top of a college in Bagdad was spotted by LTC Martin’s Predator. Martin could see machine gun fire coming from several windows of the building. The AC-130 asked him to mark the target with an infrared laser. The AC-130 then dispatched a hail of gunfire from its Gatling guns. The Bradleys' radioed their thanks and moved out.\textsuperscript{29}

Interestingly, Martin details his emotional responses during this virtual warfare experience. Many of these reactions are similar to those of ground troops, and pilots of manned aircraft. On the particular occasion just described, Martin felt tightness in his chest and shallow breathing, as

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\item Martin and Sasser, p. 42. As of 2010, described by Martin, the M Model utilizes a delayed fuse to bust through armor or concrete and detonate inside the target, the K-Model designed originally to destroy helicopters, and later used against armored vehicles, and the “Special K” or K Model with two detonating charges which splits the missile and sends shrapnel in all directions, meant to cut down anyone within a 20 foot radius.
\item In Lt. Col. Martin’s case, he piloted the Drone from Nevada, while an LRE launched and recovered an MQ-1 Predator at Ballad, Iraq.
\item Martin and Sasser, p. 31.
\item Ibid.
\end{enumerate}
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well as feeling “electrified,” and “adrenalized.” In other words, he experienced many of the same physiological and psychological effects soldiers feel when in combat. This similarity may mean that people who engage in drone warfare might experience similar successes and failures as compared to their real world, on the ground counterparts. But there does not seem to be enough date yet to make such a determination. In a sobering epilogue to the event involving the college, Martin states, “My team won. We had shot the technical college full of holes, destroying large portions of it and killing only God knew how many people. It would take some time for the reality of what happened so far away to sink in, for ‘real’ to become real.” In Martin’s case, even though he experienced some of the same feelings that ground forces go through, this attack was in some ways a surreal experience. This lends credence to the old saying, “I guess you had to be there.”

Martin’s recollection of the ambiguity of the number of civilian deaths leads to important ethical considerations. What level of justification under jus in bello is required to carry out a drone strike on known and suspected terrorists? What level of collateral damage is acceptable and how do the principles of discrimination and proportionality apply under these circumstances? Of course, these have long been issues associated with waging war, but drones add some new twists to these old issues.

In her book, The War on Terror and the New International Order, Tatiana Waisberg sees 9/11 as the critical turning point in drone warfare, “Leading to a shift at the use of force discourse that dramatically changed the way terrorism is approached while also legitimizing new approaches to

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30 Ibid.  
31 Ibid.
act in self defense.” International Law prohibits indiscriminate attacks on civilian populations. Having said this, it is not always easy to determine what constitutes an indiscriminate attack. Clearly, by today’s standards, the dropping of the atomic bombs on Nagasaki and Hiroshima, and the My Lai Massacre, were indiscriminate attacks against civilians. As such, the atomic bomb has not been utilized in such a fashion since World War II, and My Lai stands as a historical testament to the immorality of indiscriminate killing in war. Currently, concerning drone strikes, what constitutes an indiscriminate attack lacks definition. What is more certain is that attacking a group of innocent, unarmed civilians, simply to demoralize the population would violate the principle of discrimination. Under international laws regulating the use of force, *jus in bello*, four basic principles must be considered. These are distinction, necessity, proportionality and humanity. Distinction is perhaps the most critical of these four, for this discussion.

International Law states that civilians may never be targeted intentionally. This creates an ironic situation for the C.I.A., which carries out many of the current drone operations. The C.I.A. is not subject to the laws of war, in the same way as military forces. This, on one hand gives them a certain level of freedom, not enjoyed by the military, but which also means they are not protected by the laws of war, as members of the military are when in combat. The C.I.A is not constrained by the Geneva Conventions laws of war. This provides the organization with more latitude to utilize drones when targeting terror threats as they operation outside of the norms of DOD policies regarding ethics in war. At the same time, some argue that C.I.A. operatives, like the militant terrorists they target, could be charged with a crime, under international law, for

using drones to kill terrorists, if they knowingly target terrorists who are surrounded by civilians. This argument is being advanced due to the fact that the terrorists and C.I.A. alike are not military forces, but rather, they are civilians. Of course, one key difference is that the C.I.A. is acting under the authority of the U.S. Government, whereas, al Qaeda is not sponsored or supported by any government. However, the fact remains that the C.I.A. is not protected by the same laws of war, which state that a combatant cannot be charged with a crime for using legitimate force, even if it results in collateral damage and death of civilians who are not intentionally targeted.\textsuperscript{34}

The Central Intelligence Agency’s actions in Khost, Afghanistan are an example of complications involved with utilizing the C.I.A. for drone attacks. On December 30, 2009 an informant, who was trusted by the C.I.A., entered a base in Khost, Afghanistan. The informant detonated a bomb, killing him, and seven others, who worked for the C.I.A. In weeks that followed the level of UAV attacks in Western Pakistan was increased dramatically by the U.S.\textsuperscript{35} This event and others like it periodically raise interest in the C.I.A.’s role in carrying out offensive operations with drones. Again, because the Agency is not a military entity, it is not subject to the same constraints as military units. However, the other edge of the sword is that they are not protected under such laws.

\textsuperscript{34} Ibid. O’Connell points out that many of the drone strikes conducted by the C.I.A. are carried out in Pakistan, which is outside the combat zone in Afghanistan. She believes al Qaeda is dangerous, but that it should be treated as a criminal organization. As such, law enforcement rules should apply, rather than combat actions. In, \emph{The Just War Revisited}, Oliver O’Donovan agrees with O’Connell to some extent. However, he believes that counter insurgency law does not exist in isolation between two legal systems. Rather, he envisions a hybrid version of justice which combines civil justice and the rules of war. He states, “If we are to conceive of a law that governs insurgency and counter-insurgency operations, we must draw analogies from existing legal thinking. O’Donnell believes that one result of this thinking would be a greater level of discrimination.

\textsuperscript{35} Ibid., p.1.
Returning to the issue of civilian casualties, it can be said with certainty that estimates of civilian deaths resulting from drone strikes differ depending on the source cited. Early in July 2010, Pakistani authorities compiled statistics on civilian deaths directly resulting from drone strikes. These statistics indicated that more than 700 civilians were killed by drone attacks in 2009. Conversely, an article, which was published in the New York Times on December 3, 2009 reported that estimates of civilian deaths in Pakistan rest heavily on numbers reported in the Pakistani press. Some of these estimates range in the hundreds. In response to these higher estimates, one U.S. government official spoke on condition of unanimity in a New York Times Article. The article reported,

“About 80 missile attacks from drones in less than two years have killed ‘more than 400’ enemy fighters, the official said, offering a number lower than most estimates but in the same range. His account of collateral damage, however, was strikingly lower than many unofficial counts: “We believe the number of civilian casualties is just over 20, and those were people who were either at the side of major terrorists or were at facilities used by terrorists.”

It doesn’t take a math degree to see the wide range between the Pakistani estimate of 700 dead civilians, and the U.S. government’s official, who cited just over twenty civilian casualties. What are we to make of this? Firstly, it is not always clear who is a terrorist and who is not. Secondly, those who are opposed to drone strikes consistently estimate on the high side when counting civilian casualties, and those who support the practice tend to be more conservative in their estimates. The truth is that in the fog of war, it is impossible to know the exact number of civilians, and terrorists who are hit in drone strikes. It is also true that most countries will use civilian death counts to their own advantages. What can be hoped for is that in all cases, the U.S. is acting with necessity, discrimination and

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36 Bergen and Tiedemann, p.2.
proportionality; carefully weighing targets to be sure they are of military necessity. When this is determined the principles of discrimination and proportionality must be employed to guide targeting decisions. These principles must not be compromised in favor the advantages of virtual warfare.

In the earliest days of the Obama administrations utilization of Predator’s to target terrorists, there seemed to be some hesitation in talking about the justification for the program. However, in March 2010, Harold Koh, the State Department Legal Advisor had the following to say regarding the legal basis for targeted strikes: “In this ongoing armed conflict, the United States has the authority under international law, and the responsibility to its citizens, to use force, including lethal force, to defend itself, including by targeting persons such as high-level al Qaeda leaders who are planning attacks.” Koh’s comments indicate that the Obama administration believes it is acting in the best interest of the American people and within the bounds of international law, and it may well be. Yet, international law itself has some catching up to do regarding the use of drone aircraft used to deliver attacks. This is evident in the criticisms which continue from some scholars and politicians. The issue is far from being resolved. For example, in response to Koh’s remarks, Jonathan Manes, who is a lawyer on the American Civil Liberties Union’s National Security Project stated, “The speech did not say where the government draws the line between legitimate targets-combatants and those taking part in hostilities-and civilians, who cannot be targeted. The speech also did not set out any rules on where drone strikes

can be used to target and kill individuals.”

Clearly some definition and parameters remain to be set for the use of Predators and other UAVs which deliver munitions. For now, the former Bush administration and current Obama administrations have rested their justifications on the post 9/11 congressional authorization, popularly known as the Bush Doctrine to wage the War on Terror and combat terrorists using UAVs. There will most certainly come a point in the future when a President and Congress face a new threat for which this authorization will not apply.

Estimates of how many countries have drone programs range from 40 to 77. Drone production is increasing rapidly and companies are racing to create the next generation of even more advanced UAVs. Oliver O’Donovan makes an important observation concerning this race to build a better drone. He states,

“The military ethos used to rely on courage and tactical imagination for its most important innovations, accepting technological advances as they arose, but without especially looking for them. The intense pursuit of military technology, however, must, as Mark Twain saw in his Connecticut Yankee, make the military enterprise less noble, breeding a race of inventors who do not have to contemplate at close quarters the harm that their inventions will do.”

O’Donovan does well to remind us that we dare not let technology drive our ethos. Rather, our ethos must master the technology the inventors are all too eager to provide us with. It is not only the role of the military to employ weapons of destruction, but also to do so in a manner that is consistent with the Profession of Arms the Warrior Ethos.

The U.S., as well as the world community, must face this issue and determine some clear ethical guidelines for the use of these new weapons, which will serve in the future beyond the War on Terror. Otherwise, nations may begin to play fast and loose with their drone programs, if

39 Ibid.
they are not already doing so. The U.S. has an opportunity to serve a leader for the world community in this endeavor. To do so, our Nation needs to look beyond the immediate War on Terrorism, with our current expectations and objectives, and attempt to peer into the future, being forward thinkers in the area of International Law as it could apply to unmanned aerial operations. In this way we may not be so different from those who have come before us, who could not even imagine possessing drone technology. Like them, we cannot know the future, but it is ours to mold. O’Donovan provides some advice for the International Community in this pursuit. He says, “Law is like a dyke built to contain the stream of human aspirations and ambitions: if we want to contain the floodwaters, we must leave a channel just large enough for them to find their way to the sea.”\(^{42}\) In this case, perhaps we could say guidelines for the use of UAVs to wage war should be just large enough for them to find their way to the skies.

\(^{42}\) Ibid., p. 91.
Works Cited


