

Advancing Weapons Technology and the Future of Warfare: Strategic, Legal and Ethical Perspectives

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Jenna Guest

University of Canterbury

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Acronyms

AFP	Air Force Pamphlet
AP I	Additional Protocol I of the Geneva Conventions
AP II	Additional Protocol II of the Geneva Conventions
AP III	Additional Protocol III of the Geneva Conventions
CIA	Central Intelligence Agency
COIN	Counterinsurgency
DoD	Department of Defense
FATA	Federally Administered Tribal Area
FAA	Federal Aviation Administration
GPS	Global Positioning System
ICC	International Criminal Court
IHL	International Humanitarian Law
ISAF	International Security Assistance Force
ISI	Inter-Services Intelligence (Pakistani Intelligence Agency)
JAG	Judge Advocate General
JDAM	Joint Direct Attack Munitions
NATO	North Atlantic Treaty Organisation
PGM	Precision Guided Munition
RAF	Royal Air Force
RMA	Revolution in Military Affairs
UAV	Unmanned Aerial Vehicle
UCAV	Unmanned Combat Air Vehicle
U.K.	United Kingdom of Great Britain and Northern Ireland
UN	United Nations
U.S.	United States of America

Abstract

As the role of technology within warfare continues to increase, it is important to investigate whether or not the consequences of these weapons are being adequately considered. The use of new weapons technologies, such as Unmanned Combat Aerial Vehicles and Precision Guided Munitions, have been both praised and condemned within the war in Afghanistan. Although praised as saving civilian lives due to the precision capabilities of the weaponry there are consistent civilian deaths attributed to these weapons systems. This study examines debates regarding new weapons technologies that have been utilised during the war in Afghanistan. Current literature regarding emerging weapons technology is examined in order to identify key debates. The literature was recognised as falling predominantly within three perspectives - strategy, law and ethics. By identifying the key debates within each perspective it is possible to identify where these debates overlap or diverge. This research concludes that the introduction of counterinsurgency strategy to modern warfare has led to an increasing concern with the ethical and legal dimensions of the debate surrounding new weapons technology.

Chapter 1: Introduction

During the war in Afghanistan a variety of new weapons technologies have been implemented. These weapons technologies have created new and unique challenges to those who work in the fields of strategy, law and ethics. Modern warfare has been deemed ‘war in the age of intelligent machines’ and is discussed and debated by both academics and in the global media (Owens 2003: 601). It is important that the effects and consequences of new weapons are analysed due to the rapid nature of their development. This thesis will look at the information and discussion that is available in regards to new weapons technology by evaluating contributions to the strategic, legal and ethical debates that are currently taking place globally. This is done in order to provide an overview of the variety of perspectives on the implementation and regulation of new weapons technologies and also to understand where the points of overlap and divergence between these different fields are. Historians call the isolation of disciplines “tunnel history” where each perspective merely draws on its own traditions and assumptions without looking for input from other fields (Smith 2002: 355). Through an analysis of the strategic, legal and ethical perspectives surrounding the use of new weapons technologies, I aim to provide a more comprehensive understanding of the effects and consequences that they entail.

The weapons technology that will be discussed in this thesis has been limited to Unmanned Aerial Vehicles (UAVs), Unmanned Combat Air Vehicle (UCAV)¹ and Precision Guided Munitions (PGMs). These technologies have been selected due to the significant impact they have had on modern warfare and the amount of controversy they have created. This controversy has especially been in response to lethal UCAV attacks, which have been described as “[i]llegal, immoral and strategically flawed” (Ezzatyar and Kabraji 2010). It has been argued that typically a preoccupation with the capabilities of new weapons technology takes precedent over investigation into the socio-political consequences of the changing face of warfare (Beier 2003: 411). This research will not focus on the capabilities of such developing weaponry but rather on the debates and consequences that have arisen from their implementation in the conflict now taking place in Afghanistan and Pakistan.

¹ UCAVs have a number of terms used to describe them. I have chosen to call them UCAVs as this term may be familiar for readers. Other names include Remotely Operated Aircrafts (as it emphasises the human element of control) (Vogel 2010: 102), Drone, Remotely Piloted Vehicle or Predator Drone. Similarly PGMs are also known as smart-bombs.

Precision Guided Munitions

During the Vietnam War laser-guided weapons were used but would not be considered advanced when compared to modern PGMs. It was not until the Gulf War in 1991 that PGMs, also known as ‘smart bombs’ came to public attention despite only 8% of the munitions used in the conflict being guided. The percentage of PGMs used has increased during subsequent conflicts to 29% in Kosovo, 60% in Afghanistan and 68% in Iraq (Mahnken 2008: 223). A PGM does not have an engine to guide the bomb to its target as a missile does; rather it relies on height and gravity for propulsion. Wings or fins move in response to guidance commands, in effect gliding the bomb to its target but still relying on gravity. This means PGMs need to be dropped from an aircraft and therefore cannot be launched from the ground or a ship.

Following their rapid development during the 1990’s, Joint Direct Attack Munitions (JDAMs) have become the weapon of choice for United States (U.S.) forces (Mahnken 2008: 200). JDAMs are strap on guidance kits that utilise Global Positioning Systems (GPS) to enhance the delivery of 1,000 to 2,000 pound bombs (Grasso 2002: 10). These kits have the ability to make a ‘dumb’ or free-falling bomb into a ‘smart’ or guided bomb and cost around US\$20,000 (Vries 2003). This is a comparatively cheap weapon; the Tomahawk missile delivers a 1,000 pound warhead with roughly the same precision, but costs closer to US\$600,000 (Vries 2003). The development of JDAMs has created a cheaper, more precise way for the U.S. Military to undertake warfare through air bombing campaigns. Such weaponry continues to be developed and it is argued that “the weapons of future will be more than smart – they will be ‘brilliant’” (M. Schmitt 1999: 164). Such developments are not without consequence, there have been many incidents where PGMs have killed civilians. However, as Maja Zehfuss (2010: 7) highlights “many of the spectacular ‘mistakes’ in recent wars have indeed not been due to weapon failure but – or so it was claimed – to intelligence failure.” The Royal Air Force (RAF) acknowledged that on 25th March 2011 Afghan civilians were killed by an RAF Reaper during an airstrike that targeted Taliban fighters (Hopkins 2011b). Nevertheless, it was made clear that “the British forces remain convinced about the use of Reapers and insist the civilian deaths were due to intelligence failures on the ground rather than problems with the aircraft” (Hopkins 2011b). Similar incidents can occur with PGMs, for example, an air controller confused the GPS coordinates of his team and those of the target, accidentally ordering a 2,000 pound bomb onto his units position (Mahnken 2008: 201). Despite the continued development of increasing autonomous technology, human error is an ongoing problem.

PGMs or ‘smart bombs’ are not the most recent or advanced technology to be used in Afghanistan. However, they are an important aspect of the strategies and tactics used during the war in Afghanistan

and have been used to a significant extent. The percentage of PGMs used in airstrikes is increasing; this is due to the low risk to U.S. soldiers, lower civilian casualty rates and highly visible success. These benefits have meant that air bombing campaigns have become more acceptable to both the general public and the military within the U.S. This is important as these groups are thought to have a lower tolerance for casualties, both military and civilian, than ever before (Allen 2007). By lessening the dangers to civilians PGMs have contributed to the popular acceptance of airstrikes and warfare, it can be argued that conflicts will become more frequent as the danger to civilian lives lessens. Noel Sharkey predicted that the development of UCAVs could “reduce the threshold for war... one of the great inhibitors of war is the body bag count, but that is undermined by the idea of riskless war” (Wan and Finn 2011).² The development of PGMs contributes to the perception of increasingly riskless warfare as there is now a cost effective way to strike targets while still minimising civilian casualties. These benefits have seen PGMs consistently praised by both military and academic commentators, even being described as “the gifts that keep on giving” (Meilinger 2009: 202).

Unmanned Aerial Vehicles and Unmanned Combat Aerial Vehicles

UAVs are defined by the Department of Defence as:

powered, aerial vehicles that do not carry a human operator, use aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload (Bone and Bolkcom 2003: 1).

UAVs were first introduced during the First World War but were criticised as being unreliable and inaccurate (Valavanis 2007: ix). They were subsequently used in Vietnam but did not ‘come of age’ until the conflicts of the 1990s, such as Operation Desert Storm and the Bosnian War, which increased interest in UAV technology (Mahnken 2008: 220; Valavanis 2007: 3). Before 9/11 UAVs were controversial as no one department within law enforcement or the military wanted neither the burden of responsibility nor the cost of the UAV programme. After 9/11 the importance of information and surveillance was made clear to the public and government creating a renewed interest in controlling and developing UAVs. The need for UCAVs became apparent as on at least two occasions during 2000 as UAVs, being used for surveillance in Afghanistan, were thought to see Bin Laden but had no way to strike (Mahnken 2008: 201). Hank Crumpton, then a CIA operative in Afghanistan, described the situation as having “‘too many political, legal and military constraints’, [so] the CIA couldn’t simply pull the trigger” (Ghosh and Thompson 2009). The inability to act prompted increased calls to government officials to allow UAVs to have a combat capability and a programme was launched to create the first UCAV in 2000 (Mahnken 2008: 201). The first Hellfire missile was successfully fired from a Predator on 16 February 2001, over six months before 9/11

² Further discussion of this issue can be found in Chapter 5 under the heading ‘Threshold for War’.

(Solomon and Bridis 2003). The ever increasing use of UCAVs in conflict situations, despite ethical concerns, does not seem to be in doubt. The *Quadrennial Defense Review* report released in 2006 claimed that nearly half of the future long-range strike force will be unmanned (Mahnken 2008: 224). This prediction is compatible with claims made by other writers and officials. Donald Rumsfeld (2002: 28) argued that Afghanistan showed “how effective unmanned aircraft could be – but also revealed their weaknesses and how few we have of them.” Rumsfeld (2002: 28) suggested that there needed to be a shift in the balance of the U.S. arsenal towards unmanned capabilities and away from manned systems. It is clear that UCAVs will continue to have a significant role in future conflicts.

There is increasing global interest in the development of UAV and UCAV technology. This is argued as an important trend strategically, the “U.S. military success with drones have changed strategic thinking worldwide and spurred a global rush for unmanned aircraft” (Wan and Finn 2011). More than 50 countries have purchased UAVs and many have begun development of UCAV technology (Wan and Finn 2011). As yet, UCAVs are not openly sold on the weapons market, with the exception of the U.S. selling to some close allies. Currently there is no country that could ‘match’ the U.S. UCAV capabilities. No other state possesses the weaponry, sensors or telecommunications systems that have provided the U.S with the ability to successfully deploy UCAVs worldwide (Wan and Finn 2011). However, other countries, especially China, are developing these capabilities and they will only improve. At the Zhuhai Air Show in November 2010 more than two dozen Chinese UAV models were put on display, however, the capabilities of these models have yet to be proven (Wan and Finn 2011).

Since first deployed, UAV technology has been increasingly developed to improve reliability and accuracy. There are now dozens of UAV and UCAV models available. They come in a variety of sizes and have a range of flight and combat abilities. An important feature of UAVs is that they are cheaper than manned planes to produce and maintain. UAVs do not need the same level of failsafe equipment or life support for a pilot (Brzezinski 2003; Kaplan 2006). The difference in cost is significant as it costs US\$4.2 million to build an F-22 plane, while for the same amount over 40 UAVs could have been produced (Kaplan 2006). These savings are important to a government and a military who are currently engaged in expensive wars, recovering from a recession and trying to reduce the country’s deficit. In 2011 the Air Force is proposing to acquire more unmanned than combat aircraft for the first time (Barnes 2010). The Department of Defense (DoD) has been described as the “Champion” of UAVs in regards to funding initiatives, research and development as well as procurement (Valavanis 2007: ix). Spending on Reapers and Predators grew from US\$877.5 million in 2010 to US\$1.4 billion in 2011, an increase of approximately 60% (Barnes 2010). In

comparison the overall DoD budget only grew by 7.1% to US\$708 billion in 2011 (Barnes 2010). This increase in spending highlights the Pentagon's focus on developing and producing unmanned aircrafts (Barnes 2010). These budget increases are important as UAV technology is advancing swiftly, therefore, the government needs to allow money for research to ensure the potential seen in UAV technology is fulfilled.

The DoD possess a variety of models of UAV and UCAV, including the Predator, Global Hawk, Reaper, Pioneer, Hunter, Shadow, Desert Hawk and Raven (Bone and Bolcom 2003; Chivers et al. 2010). These models range from the size of an airliner to an insect (Bone and Bolcom 2003). They have varying capabilities in respect to flight altitude and duration as well as munitions and armament. UAVs and UCAVs are used by all branches of the U.S. military, including the Army, Navy and Air Force, for a variety of tasks dependant on the needs of the force. Defense Secretary Robert Gates stated that "the more we have used [UAVs and UCAVs], the more we have identified their potential in a broader and broader set of circumstances" (Barnes 2010). The RQ-1 Predator is the most well known of the UAV models that the military operates and is currently in use in Afghanistan (Kaplan 2006). UAVs are often called "Predator Drones" by the media and public regardless of the model. The first Predator was delivered to the military in 1994 and first used in a combat situation during the intervention in Bosnia, logging over 150 hours of surveillance (Ghosh and Thompson 2009). During the conflict the Predator provided electro-optical, infrared, and synthetic aperture radar imagery (Mahnken 2008: 182). RQ-1 Predators were also the model chosen to be transformed into UCAVs by attaching two Hellfire air-to-surface missiles (Mahnken 2008: 201). The Predator is 27 foot in length, has a 50 foot wingspan, weighs only 1,130 pounds without fuel or bombs and can stay aloft for 24 hours on its 4 cylinder engine (Kaplan 2006). The Predator did not 'draw blood' for the first time until the 5th November 2002 (Ghosh and Thompson 2009). It was used to destroy an SUV in Yemen believed to be containing high ranking Al Qaeda leader, Ali Qaed Sinan al-Harithi, the attack killed six men (Ghosh and Thompson 2009)., Developing a variety of models allows the DoD to implement the model with the ability and design that best suits the needs of the operation.

The majority of U.S. UAVs and UCAVs currently deployed in Afghanistan are not controlled from within the country but rather by operators located at Nellis Air Force Base located outside Las Vegas (Kaplan 2006; Mahnken 2008: 224). An RAF squadron is based at the Creech Air Force Base, also located in Nevada, from which they to operate RAF UAVs and UCAVs in Afghanistan. The RAF squadron is based in the U.S. as it is recognised that the U.S. has 'taken the lead' in this weapons technology (Hopkins 2011a). Underground and underwater fibre-optic cables link the control stations in Nevada to Europe, where a satellite dish makes the connection directly to any predator in the

Middle East (Kaplan 2006). Local airfields launch the aircraft before operators in the U.S. take over (Kaplan 2006). Operators undertake training under the new 'Basic Sensor Operator Course' to operate unmanned aircraft (Tan 2010). The graduating class of February 12, 2010, contained airmen straight from basic training who may have never flown in or piloted an aircraft. Before this classes were undertaken by prior-service airmen who wanted to change careers (Tan 2010). These changes in careers can be motivated by a number of factors including job security. One airman described the reasoning behind his change in career as "looking for a job that was less support and more on the front lines" (Tan 2010). This is a quickly expanding field and the need for operators is clear as there are 600% more missions undertaken currently than five years ago (Tan 2010). These missions can take place domestically or internationally without operators having to leave the security or safety of home. Despite this increase in operator training a recent focus of development has been to make UAVs more autonomous, meaning that UAVs would increasingly respond to pre-programmed, computer instructions rather than being controlled remotely by a pilot (Mahnken 2008: 223).

The War in Afghanistan

The war in Afghanistan, which has now spilled over into Pakistan, is a suitable case study both PGMs and UAVs have been used within this conflict. The length of the conflict also allowed for a significant amount of discussion and debate to occur, creating sufficient sources and viewpoints for analysis. Furthermore, there has been considerable debate and controversy over the use of UCAVs to cross the Afghanistan border and carry out operations in Pakistan.. The U.S. is one of the primary actors in the war in Afghanistan and maintains the most technologically advanced military in the world, spending billions of dollars each year on continued weapons research and development. This allows them to implement new technologies on a scale that could not be achieved by any other military force in the world.

The war in Afghanistan utilises a counterinsurgency (COIN) strategy that has comprehensively incorporated advancing weapons technology. This has been acknowledged in the 2006 COIN Field Manual which states that "today's high-technology air and space systems have proven their worth in COIN operations. Unmanned aircraft systems, such as the Predator, give counterinsurgents unprecedented capabilities in surveillance and target acquisition" (Departments of the Army and Navy 2006: E-3). The use of advanced weaponry by the U.S. military is not limited to the latest conflict; rather it is arguably a historical trend. Thomas Mahnken (2008: 5) argues that "[r]eliance on advanced technology has been a central pillar of the American way of war. No other nation in recent history has placed greater emphasis upon the role of technology in planning and waging war than the U.S.". John Pike also see the advancement of military technology as an important part of American culture, going

as far as to say that “American ingenuity has been devoted to devising ever more efficient ways of killing the enemy and preventing the enemy from killing us” (Pike 2009). The desire to have the most advanced technology is important as it continues today and has driven the development of the technologies that are used within the war in Afghanistan.

Perspectives – Strategic, Legal and Ethical

By developing an understanding of how the technologies are being discussed from different perspectives, some of the implications of their use and development can be grasped, as well as identifying where there is a lack of understanding or focus that may need to be addressed. The three categories – strategic, legal and ethical - were decided upon after initial research indicated that the majority of available literature fell into these areas.

Strategic Perspectives

Several aspects of military strategy have been impacted by advancing weapons technology. This includes debate as to what effect these weapons are having on the face of warfare and how these changes will impact on future conflicts. The strengths and weaknesses of technologies are discussed as well as what strategies are suitable as modern warfare evolves. Future directions of weapons research are also considered. The strategic perspective takes into account the opinions of military personal, strategic planners and other military focused writers. Key works were considered including Colin Gray’s (2005) *Another Bloody Century: Future Warfare*. This book discusses the strategic future of warfare and argues that warfare will not change greatly in the next century, while it will contain new technology and take place in new contexts, it will remain organized violence in the pursuit of political goals. Mahnken’s (2008) book *Technology and the American Way of War since 1945* offers a detailed understanding of the use of technology by the U.S. military throughout its history, including the development and deployment of UCAV and PGM weaponry systems. Matthew Brzezinski’s (2003) article *The Unmanned Army*, published in the *New York Times*, discusses the use of robots in the battlefield to save U.S. soldiers lives. Brzezinski outlines the advantages and disadvantages of the U.S. military using machines to fight rather than soldiers. The issues raised within this article are fundamental factors within the strategic perspective, as the protection of soldiers’ lives continues to be a priority for the U.S military. Furthermore, Michael Schmitt’s (2008) *Asymmetrical Warfare and International Humanitarian Law* defines different forms of asymmetrical warfare as well as discussing the effects of asymmetrical warfare on the law governing methods and means of warfare. These books and articles are fundamental to this research as they provide a selection of perspectives as to what effect weapons development has had and will have on warfare and

the strategies utilised during combat. This overview of key literature demonstrates that there is a large variety of discussion regarding the strategic capabilities of new weaponry, some of which broach the subjects of ethical or legal concerns. However, as this research will show, the legal and ethical issues surrounding new weapons technology exceed those raised within the strategic literature.

Legal Perspectives

Throughout human history there has been conflict. These conflicts and the resulting violence have become more organised over time leading to attempts to create normative architectures that could constrain and limit it (M. Schmitt 1998: 1051). Guidelines for modern warfare can be found within International Humanitarian Law (IHL), based primarily on the Geneva Conventions and its fundamental principles of proportionality, discrimination and military necessity. There are several challenges presented by advancing weapons technology, including the use of overwhelming force and the difficulty of defining the enemy. With the development of new weapons technology presenting such legal challenges there is increasing debate as to whether or not the existing IHL framework can cope with such significant change. In order to address this question the adaptability of law, the utility of normative restraint and legitimacy, as well as the use of law by powerful states, will be discussed. Law can be utilised either in reaction or pre-emptively to changes in warfare and has evolved to adapt to changes in warfare.

This perspective incorporates the opinions of both international lawyers and governments to establish the legality of development and deployment of new weapons technology. Key voices and literature were reviewed while considering these debates. Harold Koh (2010), a legal advisor to the US state department, presented a speech to the American Society of International Law entitled *The Obama Administration and International Law*. Through this speech Koh clearly outlined the Obama Administrations viewpoint on several topics including the legality of using of UCAV technology and precision targeting. This is an important perspective as it provides the U.S. government's response to legal criticisms of UCAV deployment. Thomas Smith's (2002) *The New Laws of War: Legitimizing Hi-Tech and Infrastructural Violence* provides a clear and detailed understanding of the legal objections that have been raised since the deployment of new weapons technology. Smith also discusses how humanitarian laws of war have been affected in light of a new generation of hi-tech weaponry and strategic theory. *Drone Warfare and the Law of Armed Conflict* by Ryan Vogel (2010) discusses the use of UCAVs or 'drones' in regards to the *jus in bello* principles of proportionality, military necessity, distinction and humanity. Vogel concludes his work by proposing legal and policy

guidelines for the lawful use of drones in armed conflict. During his career Michael Schmitt has published extensively on the issues of international law, warfare and weaponry, key works include: *Bellum Americanum: The U.S. view of Twenty-First Century War and its possible implications for the Law of Armed Conflict* (1998), *U.S. Security Strategies: A Legal Assessment* (2003-04), *Targeting and International Humanitarian Law in Afghanistan* (2009) as well as *21st Century Conflict: Can the Law Survive?* (2007). This selection of legal literature shows that there is a number of recent works that focus specifically on the legal issues raised by the deployment of advancing weapons technologies.

Ethical Perspectives

The introduction of advancing weapons technology has caused new debates over the ethics of war, resulting in a growing amount of literature that discusses the ethical implications of advancing weaponry. Zehfuss' (2010: 1) article *Targeting: Precision and the Production of Ethics* argues that "praise for precision not only produces Western warfare as ethical but also both relies upon and reproduces a particular kind of ethics, based upon the notion of non-combatant protection." This means that advancing weapons technology significantly influences the perception of ethical actions within warfare. Steinar Sanderød's (2009) *The use of Air Power Today: Have New Ethical Challenges Occurred?* discusses ethical concerns that have been raised as air capabilities have improved and asymmetrical warfare increases. Ethical issues that are discussed include: the effect on the threshold for war; the difficulty of discrimination; and the effect of creating distance from the battlefield. *Military Frameworks: Technological know-how and the Legitimization of Warfare* by John Kaag and Whitley Kaufman (2009: 585) argues that "the development of [PGMs], stand-off weaponry and military robots may force policymakers and strategists to experience new ethical tensions" rather than alleviating the ethical dilemmas that arise from the 'fog of war'. This means that while precision warfare and weaponry may have been advocated as ethical, due to an increasing ability to protect civilian lives, there are many new ethical concerns that are being raised and need to be addressed. This selection of ethical literature demonstrates the continued emergence of moral dilemmas that have arisen from the development of advanced weapons technologies. These works also reveal the variety of the debates that are taking place within the ethical perspective.

The ability to take lives without being in a conflict zone is a relatively recent development within warfare; it is only within the last century that such capabilities have become available. These developments in weapons technology have created ethical debates surrounding humanitarian warfare. While historical questions continue to be asked, for example does a moral end justify immoral means? New questions have also been raised; such as, is it ethical to take a life when not in danger, or will it

tarnish the humanitarian motives of a state if they are willing to participate in conflict but not to put soldiers in harm's way? Precision warfare has been seen as the future of conflict but this may have huge ethical implications if the technology is not as precise as has been claimed. The loss of civilian lives has always been a part of war, however, the use of precision weaponry means that these deaths are now deemed 'accidents'; such a definition arguably does not allow for blame or criticism on those who wield the technology (Owens 2003: 596). The development of weapons technology is becoming more rapid and weapons, such asUCAVs, are being designed to act more autonomously. This is to combat human error which is often the cause of accidents or mistakes. However, this raises several ethical issues as the choice of whether or not to take life has previously been a human judgement. Further debate considers the morality of continuing weapons research. It can be argued that all weapons research is immoral as weapons are capable of only harm and destruction and should therefore be stopped. On the other hand, if weaponry is created that could potentially lessen civilian casualties or save lives then it could be argued that researchers have a moral obligation to develop such weaponry. Moral judgements are often based upon cultural backgrounds and personal experience, making these debates nearly impossible to resolve as currently no universal moral code exists. It is up to the individual to decide which aspects of these debates hold merit and what military actions are ethically acceptable.

By examining the use ofUCAVs, UAVs and PGMs within the war in Afghanistan this thesis will analyse the similarities and differences between the debates occurring within the fields of strategy, law and ethics. Weapons technology is having a significant impact on how war is waged and can be a divisive subject. However, as this research will show, advancing weapons technologies have the ability to create an environment that encourages strategy to incorporate and learn from legal and ethical debates rather than overlook them. This ability is demonstrated through the emergence of COIN warfare as well as the renaissance of the discrimination norm.

Chapter 2: New Weapons Technology and the War in Afghanistan

In the early hours of Friday 13th January 2006, in the Pakistani village of Damadola, the U.S. military carried out a mission using UCAVs to destroy an enemy target using 10 Hellfire Missiles. Top ranking Al Qaeda member Ayman al-Zawahiri³ was believed to be having dinner at this location. Despite the information being based on “good reporting” it proved to be false (Lamb 2006). What resulted from the attack were the deaths of four or five Al Qaeda members as well as 18 Pakistani villagers, including at least eight women and five children who were “martyred” and “torn into pieces by the deadly missiles” (Pakistan Observer 2006). It could be argued that if the U.S. had reacted with a ground force rather than an aerial attack the lives of these civilians and the grief caused to their loved ones may have been spared. "I ran out and saw planes", said Shah Zaman, who lost two sons and a daughter in the attack, "I ran towards a nearby mountain with my wife. When we were running we heard three more explosions and I saw my home being hit" (Lamb 2006). Sahibzada Haroon Rashid, a member of parliament who lives nearby said "the houses have been razed. There is nothing left. Pieces of the missiles are scattered all around. Everything has been blackened in a 100-yard radius" (Lamb 2006). Despite the civilian deaths and the destruction of a significant area of the village, U.S. officials defended the strike as “the right course of action based on timely intelligence about Zawahiri’s whereabouts” (Lamb 2006). An editorial in the *Pakistan Observer* described the attack as “the latest gory incident” and “nothing but sheer terrorism” (Pakistan Observer 2006). There were several articles describing this event in international publications (Lamb 2006; Morgan and Cameron-Moore 2006; Pakistan Observer 2006; The Boston Globe 2006). Other civilian deaths and the destruction of property in both Afghanistan and Pakistan have not been so widely publicised. This tragic event and the many other similar ‘mistakes’ or targeted attacks that have caused civilian casualties, show the importance of having discussions about these technologies due to the intentional or accidental consequences that have resulted.

The context of the war in Afghanistan will be outlined within this chapter and the use of UCAVs and PGMs within this conflict will be discussed. This chapter will provide an understanding of what technologies are being used in Afghanistan, what effect they are having on the conflict as well as how public attitudes towards these weapons have developed in recent years. The public perspective is outlined within this chapter as the perspectives discussed in the following chapters are often from

³ Since Bin Laden’s death in May 2011 Zawahiri has been named as the new leader of Al Qaeda.

expert opinions such as lawyers, political scientists, politicians and military strategists. Since the visual and public nature of the Gulf War the perception has emerged that the U.S. military is increasingly in control of the devastation that occurs during warfare. However, this may be a distorted or exaggerated perception (Zehfuss 2010: 3). Before the technology of warfare continues to advance it is vital that the actions of current technology are reviewed in detail. This will provide a better understanding of what it will mean to continue or increase the use of existing weapons technologies, as well as highlighting the consequences of continued research and further advancement.

The War in Afghanistan

The war in Afghanistan has included the use of UAVs and UCAVs for surveillance and intelligence since the war was officially declared in October 2001 (U.S. Army 2010: i). However, it is unclear when UCAVs were first used in lethal operations. The U.S. participates in the conflict as a member of the International Security Assistance Force (ISAF) led by the North Atlantic Treaty Organisation (NATO). In 2001 the objective of the war was to remove the Taliban from power and bring about a transition to stable and democratic leadership in Afghanistan. In order to achieve this objective the Afghan Model was developed. This term describes the strategy implemented in Afghanistan which consisted of a comprehensive bombing campaign using both 'dumb' and 'smart' bombs, followed by a relatively small ground force consisting of elite U.S. soldiers and utilising the presence of an indigenous military force. This was originally regarded as very successful strategy as the Taliban fell from power in a matter of months and an interim government took control of the state. However, the Taliban regrouped and continued to fight, becoming insurgents within Afghanistan. The U.S. responded to this change by adapting a COIN strategy to effectively combat the insurgency. The current mission, ISAF states, is:

In support of the Government of the Islamic Republic of Afghanistan, ISAF conducts operations in Afghanistan to reduce the capability and will of the insurgency, support the growth in capacity and capability of the Afghan National Security Forces (ANSF), and facilitate improvements in governance and socio-economic development in order to provide a secure environment for sustainable stability that is observable to the population (International Security Assistance Force 2010).

Combating the insurgency is still a priority of the ISAF but there is also emphasis on reconstruction and creating stability. This is important as the goal has always been for the Afghan government and military to eventually be given back control from the ISAF.

In 2006 Lieutenant General David Petraeus and Lieutenant General James Amos oversaw the development of a new COIN field Manual, the fundamental ideas of which are still controversial (Fick and Nagl 2009: 43). These include focusing on protecting civilians over killing the enemy, assuming greater risk and using minimum not maximum force (Fick and Nagl 2009: 43). These key ideas will be discussed throughout this thesis. The U.S. military acknowledged that civilian casualties caused by PGMs and airstrikes within Afghanistan were causing anti-American sentiment within the population. In order to address this, strict new rules of engagement were developed and introduced in 2009, minimizing the use of airstrikes (Chivers et al. 2010). Despite these regulation there is still growing frustration. In May 2011 President Hamid Karzai stated that he was giving his 'last warning' to NATO forces as Afghan civilian casualties could no longer be tolerated (Sommerville 2011). Karzai claims he has repeatedly asked NATO not to undertake anymore unnecessary operations and to minimise the use of night raids and airstrikes (Moore 2011).

The increasing number of accidental civilian deaths has led to growing outrage at foreign forces. The New America Foundation think-tank estimates that "one in four of those killed by US drones since 2004 was an innocent civilian. The Brookings Institute says the ratio is higher" (Hopkins 2011a). Some examples of 'botched' NATO air raids include: the deaths of 27 civilians killed during a strike on a convoy of vehicles in February 2010; up to 142 were killed when fuel tankers were hit after being hijacked by Taliban soldiers in September 2009; and in August 2008 up to 90 people, including 60 children, were killed (Asian News International 2010). It is unclear which of these air strikes were carried out by manned aircraft or utilised advancing weapons technology such as PGMS orUCAVs. In December 2009 President Barak Obama stated that the U.S. would "begin the transfer of our forces out of Afghanistan in July of 2011" (Montopoli 2010). However, as this date approaches it is now claimed that the end of the war will be closer to 2014, but this date is also flexible and can be adjusted if necessary (Montopoli 2010).

Beyond the War in Afghanistan

Since 2004, the use ofUCAVs has spread beyond Afghanistan as the CIA has carried out a campaign against specific terrorist targets in Pakistan. Since 2009 the term 'AfPak' has been used to describe operations in Afghanistan and Pakistan. It is argued that this demonstrates the desire of the Obama Administration to take a "unified approach to policy and strategy for these two countries" (Prados 2009). The objectives of the campaign in Pakistan are to remove Al Qaeda's top leaders and to deny sanctuary within the Federally Administered Tribal Area (FATA) to Taliban and other fighters who

cross the border into Afghanistan and engage U.S. soldiers in combat (Ghosh and Thompson 2009). Operations within Pakistan are controlled by the CIA and are undertaken by the U.S. unilaterally. This is emphasised by the distancing of the United Kingdom (U.K.) air force, with RAF Wing Commander Chris Thirtle stating that the “UK Reaper only ever has, and only ever will, operate in Afghanistan. The border is absolutely sacrosanct, end of story” (Hopkins 2011a).

Despite the successful assassinations of some Al Qaeda and Taliban leaders, UCAV attacks have created tension. There has been some confusion as to whether or not the Pakistani Government was aware of and approved the attacks. Former Pakistani President Pervez Musharraf allowed drones to operate within Pakistan, but ensured there were limitations on when and where they could strike (Ghosh and Thompson 2009). After President Musharraf resigned in August 2008 a new “bargain” was struck giving the U.S. much more freedom (Ghosh and Thompson 2009). The new government, led by President Asif Ali Zardari and Chief of Staff General Ashfaq Kayani, enabled more drone operations while publically criticizing the U.S. for continuing the attacks (Ghosh and Thompson 2009). In 2004 there was only one reported UCAV attack within Pakistan (Roggio and Mayer 2010). By 2007 this number had increased to 5 attacks. In 2008 there was a significant increase to 35 and 53 in 2009. In 2010 this number more than doubled, peaking at 117 attacks. By May 2011, 26 attacks had been recorded (Roggio and Mayer 2010). The increase in UCAV operations shows a high level of commitment to the technology and strategy by the Obama Administration which came to power in 2008. The UCAV operations have been criticised as weakening the fragile government of President Asif Ali Zardari and raising anti-American sentiment within Pakistan (Ghosh and Thompson 2009). This has led to many asking if the risk of anti-American sentiment is worth the gains. David Kilcullen, a counterterrorism expert, points out that “if we wind up killing a whole bunch of Al Qaeda leaders and, at the same time, Pakistan implodes, that’s not a victory for us” (Ghosh and Thompson 2009). Pakistan officials have spoken out against the campaign, some going as far as to claim that the majority of strikes have either missed their objectives or killed civilians (Ghosh and Thompson 2009). As well as the ethical and legal debates surrounding the use of UCAVs, there are further issues that are raised when attacks cross borders. If the Pakistan Government did not give approval for the attacks then the actions of the U.S. can be seen as breaching Pakistan’s sovereign rights, this would be a violation of international law by the U.S.

How and when these technologies should be implemented is debated by the public and media in regards to overseas conflicts. Currently, however, the discussion also includes the implications of domestic use within the U.S. The number of UAVs owned by the military has increased significantly and new uses for the technology have been suggested. The use of UAVs domestically has been

welcomed by some while others are more cautious. UAVs are currently being used in Arizona and Texas to patrol the border between the U.S. and Mexico. The Department of Homeland Security use these UAVs to monitor the border in an effort to intercept the illegal traffic of people and drugs (McFeatters 2010). Both houses of Congress have passed legislation allowing UAVs to fly domestically. The Federal Aviation Administration (FAA) has been drafting a plan to grant flying rights to UAVs since 2006 (McFeatters 2010). However, there are a number of concerns to consider, the majority of which are related to safety. The amount of air traffic in the U.S. could cause problems and lead to a collision, this is not such an important factor in Iraq and Afghanistan as there is less air traffic. There are also concerns over the consequences if there were to be a loss of communication with the UAV, especially over populated areas. However, the most important issue for some U.S. citizens is a loss of privacy. Dave Bohon (2010) argues that the privacy of law abiding citizens may be in jeopardy:

While one might applaud the use of drones to protect America's borders and even to stop sundry criminal activities, the idea that there are potentially "many more uses" for the unmanned airplanes has the stamp of government intrusion all over it.

On the other hand, there are those that are pushing for the further implementation on UAVs in the U.S. The technology could be used in a variety of fields, such as, weather research, search and rescue, patrolling highways, hunting fugitives and monitoring pipelines (McFeatters 2010). Hank Krakowski, FAA's head of air-traffic operations, stated that "I think industry and some of the operators are frustrated that we're not moving fast enough, but safety is first" (Bohon 2010). The use of UAVs by the Department of Homeland Security shows that while it is still controversial, the benefits of using UAVs domestically may soon outweigh the risks. *A 21st Century Military for America* states that:

We need greater investment in advanced technology ranging from the revolutionary, like unmanned aerial vehicles and electronic warfare capabilities, to systems like the C-17 cargo and KC-X air refuelling aircraft—which may not be glamorous to politicians, but are the backbone of our future ability to extend global power (Obama for America 2008).

These sentiments were reiterated by Secretary Gates who foresaw that "we will continue to see significant growth for some years into the future even as the wars in Iraq and Afghanistan eventually wind down" (Barnes 2010). Such comments show the level of support within the Obama Administration for continued utilisation of UAV and UCAV technology.

General Perceptions of New Weapons Technology

How warfare is conducted is not based solely on what technology is available. Rather, as C. Gray (2005b: 120) highlights, “there is a dialogue among what technology permits, what politics requires, and what society allows.” How society reacts to the implementation of an advanced weapon will determine where and when these technologies will be utilised by a state. Throughout the war in Afghanistan there have been events and developments that have changed how specific technologies are viewed. These technologies have been and are currently being discussed within many fields, including the public domain through media exposure. When the media prioritise an issue it can have a significant effect on public debate. This is especially important as the public are often no longer engaged in active warfare if the conflict is on foreign soil. It is now argued that the U.S. public in particular view and comprehend warfare as a spectator would a sport (C. S. Gray 2005b: 62). This is due to the disconnection from any active participation in warfare and engaging only through the global visual media. This creates a context where warfare can be viewed as a source of “vicarious excitement and even pleasure” (C. S. Gray 2005b: 62).

How the media reports the use of technology changes over time as new events take place. Since advanced weapons technologies were first used in the war in Afghanistan there have been several key events that have been heavily reported by the global media. In June 2003 the U.S. media highlighted the early availability of UCAVs in 2001, resulting in several articles criticising the government for not heeding early warnings and deploying UCAVs into Afghanistan to kill Bin Laden (Solomon and Bridis 2003). This possibility was discussed, according to media sources, as little as a week before 9/11 (Solomon and Bridis 2003). However, the deployment and use of UCAVs in Afghanistan before 9/11 would have been illegal and highly provocative even though the technology was available. This shows support in the media for the technology when first implemented, if such pre-emptive measures avoid tragedies such as 9/11, despite the illegality of such action. Since 2003 there has been a significant amount of criticism of UCAVs due to the destruction they cause and the legal and ethical dilemmas they create.

Another important event that influenced public perceptions of UCAV technology was the hacking of a U.S. military video feed from a UAV. This isolated incident was widely covered around the 17th and 18th of December 2009. The breach was criticised as a major failure in security for the U.S. military. Meanwhile, the “largest Predator attack ever” occurred in Waziristan on the same day, 17th December 2009 (B. Williams 2009). However, this event was not covered with the same level of attention. Only one reference to the attack was found on the NBC nightly news and was mentioned as part of the

overseas headlines, leaving the number of deaths or outcome of the attack unknown (B. Williams 2009). As Jon Williams (2009) speculates in a letter to the editor of the *Los Angeles Times* in 2009:

The Times reports, in sterile, coldblooded terms, that our military has carried out 48 attacks by unmanned Predator and Reaper aircraft this year alone. Yet 10 is the number of supposedly high-level Taliban leaders you estimate we've killed. Were the remaining targets empty buildings? Or have we already taken hundreds, perhaps thousands, of lives through our cowardly actions?

These are important questions as they address the global media's lack of focus on the outcome of the attacks, the destruction and death caused, focusing instead on the deaths of Taliban or Al Qaeda terrorists. Similarly, reporter Lloyd De Vries (2003) states that even the accidental bombings of innocent Afghans have received few reports in the media. It is hard to find accurate accounts of what civilian casualties and destruction is occurring in Afghanistan in Western media as a result of each attack. While there is some information on the effects in Pakistan due to the controversial nature of U.S. military action taking place, there is no such interest in what is happening to the Afghani people. Only large scale "mistakes" are reported in any depth, such as the 2002 bombing of a wedding party in village in the Uruzgan province. This bombing killed at least 30 civilians, although once again other reports conflict putting the death toll much higher (BBC News 2002).

There are several writers who have consistently reported UCAV killings and argued against the use of the technology for lethal operations. *The Statesman* published the article entitled *The ongoing American Predator attacks are illegal and immoral* by Ali Ezzatyar and Shahpur Kabraji on the 13th April 2010. In this article Ezzatyar and Kabraji highlight the illegality of breaching the sovereignty of Pakistan as well as the human rights of the victims. They describe the use of the technology as "[i]llegal, immoral and strategically flawed" (Ezzatyar and Kabraji 2010). Furthermore, they emphasize that the attacks are "assassinations", a term the U.S. has avoided preferring to describe and frame the attacks as part of an armed conflict, despite the fact that many of the victims are removed from any war zone. This article is one example of the argument against the use of technology in Afghanistan; however, such articles have been scarce. Occasionally there are articles that give accounts of the effects of U.S. air strikes such as *Forgotten Victims*, published by the Guardian in 2002. It tells the story of a family forced to flee their home due to the U.S. bombings of their village. Two year old Asaq Mohammed and his six month old brother Abdul died of exposure after leaving their home (Steele 2002). The author Jonathan Steele asks "who killed Asaq Mohammed?" While the bombs did not directly kill him they did force his family to leave the shelter of their home. Steele also states that "the full cost of U.S. airstrikes will never be known, but many more died than those killed directly by bombs" (Steele 2002).

In July 2010, a group known as WikiLeaks released to the public classified documents belonging to the U.S. military. These documents provide insight into what has been occurring in Afghanistan at a level never before accessible by the media. Reporters and experts state that the documents “illustrate in mosaic detail why, after the U.S. has spent almost \$300 billion on the war in Afghanistan, the Taliban are stronger than any time since 2001” (Chivers et al. 2010). Several insights into the documents have been claimed, the most significant being that while the U.S. military has not directly lied to the media there have been several misleading statements allowing the public to think the war was progressing more so than it really was (Chivers et al. 2010). These claims, while severe, are not verified. Many of these documents may be discredited in time; however, their release will continue to affect not only the relationship between the U.S. and Pakistan but also the continuing military strategy within Afghanistan.

A further insight, identified during initial readings of the documents, refers specifically to the perceptions and use of UAVs and UCAVs. Chivers et al. (2010) claim that while the military employ more and more UAV technology “their performance is less impressive than officially portrayed.” This is due to several collisions or crashes that have caused U.S. troops to take risks to recover the technology. Despite the claim that UAVs are expendable, the U.S. military still try to keep the technology out of enemy hands. Several of the documents refer to the use of drones, describing mundane missions or incidents where mistakes were made. One such incident occurred on the 12th September 2009 when communication with a Reaper Drone was lost. Smaller UAVs such as the Raven or Desert Hawk are close to the size of a model plane and are often lost. The loss of a Reaper, however, had not occurred before (Chivers et al. 2010). Commanders were forced to have a manned plane shoot a missile at the \$13 million piece of equipment before it flew into neighbouring Tajikistan. The satellite link was restored but the engine had been destroyed by the missile and controllers flew the Reaper into a mountain. These kinds of incidents may not be as rare as government and military leaders have caused the public to believe.

The way in which advanced technology is framed by the global media differs depending on which technology is being discussed. The use of UCAVs in particular has been portrayed both positively and negatively by the media at various times. One way to view the development of UCAVs is as a milestone of technology. Brzezinski (2003) quotes an officer who stated that “in the annals of aviation, these were milestones, not unlike Sputnik or Lindbergh.” Those that share this viewpoint perceive the development of technology as inevitable and believe this cutting edge technology will

help America to move forward and improve lives. A contributor to *The Wall Street Journal* went as far as to claim that “drones have made war-fighting more humane” (The Wall Street Journal 2009). However, not all media has been positive. Many of the criticisms of these attacks point out the moral or legal objections to the technology and the way in which the military is implementing it. On the other hand, PGMs have received relatively little negative publicity. While the use of air bombing campaigns as a strategy has been criticised, these munitions are perceived as saving lives as carpet bombing an area is no longer necessary and to do so would be immoral or barbaric when PGMs are available. The perception that PGMs limit civilian casualties, whether this is accurate or not, creates an environment where air bombing campaigns are more acceptable to the public. The only negative publicity identified criticised the lack of information available about the number of civilians who are killed during such operations. Although precision weapons appear to be killing fewer civilians there is no real way to know (Vries 2003). There is no official count of the civilian casualties that have occurred during the war in Afghanistan and neither side of the conflict can agree on the number of civilian casualties (Zehfuss 2010: 11). Al Qaeda and the Taliban have been accused of exaggerating numbers; the U.S. in turn has been accused of covering up how many civilian casualties their bombs have caused. Media reports on the war in Afghanistan often refer to civilian deaths as resulting from ‘airstrikes’. This is problematic as it is unclear if these attacks were carried out by a manned or unmanned aircraft or whether ‘smart’ or ‘dumb’ munitions were used. Another trend when looking at PGMs in the media is the focus on the Iraq War. While PGMs are used extensively in both the Iraq and Afghanistan Wars the majority of media coverage has focused on Iraq. This is true in relation to all media coverage of the two conflicts, not just in the coverage of PGMs. The war in Afghanistan has often been referred to as “America’s other war” and has had to compete for resources and attention with the Iraq war which, due to its controversial nature, has gained much more government and public awareness (Bowman and Dale 2009).

The entertainment industry is also a source of information for a large percentage of the western population. This is a potential resource for the public, who could view and learn about technologies that would otherwise be outside the realm of their experience. This is true for many aspects of life, especially if there is an aspect of sensationalism as there often is with weapons technology. As James Der Derian (2001: 166) argues that “the military and the movie industry have been in a technical relay race for seeing and killing the enemy while securing and seducing the citizen.” A recent example is the movie *Transformers* (Bay 2007). This is a high-grossing, blockbuster movie viewed by millions. It features a UAV being used for surveillance of a battle field. A UAV arrives quickly to assess the situation, however, it is important to note that the U.S. military assesses the situation using the UAV but send in a manned aircraft to drop PGMs using laser targeting which helps the ‘good guys’ of the

movie. The role of a UAV was also portrayed in the movie *Body of Lies* (Scott 2008). This is a spy movie based in the Middle East during the War on Terror. At one point a CIA operative has a meeting in the desert and is picked up by a convoy of trucks. His colleagues in the U.S. watch the situation by way of a UAV, however, they cannot tell what truck he is in when they separate due to a cloud of dust and he is captured. In this case UAV technology is portrayed as inadequate. At other times in the movie, however, the real time capabilities and the technology used by the U.S. are shown as powerful and accurate. These portrayals of military technology, whether in the media or movies, have the potential to have a significant impact on how the public perceive the use of these military technologies in real conflicts, such as Afghanistan.

Conclusion

The implications of usingUCAVs and PGMs have been discussed and will be further considered as they are causing death and destruction on a large scale. WhileUCAV and PGM technology can seem futuristic, they have in fact been used by the U.S. military in Afghanistan since 2001. Over the last decade this technology has been responsible for thousands of deaths and an immeasurable amount of damage to public and private property in Afghanistan. These technologies have been developed over time and are now becoming an integral aspect of modern conflicts.UCAV and PGM technology have been implemented outside of the war in Afghanistan and the frequency of use is increasing. Public opinion on such an inflammatory issue is never stagnant and is influenced by the government, the media and the entertainment industry, which have portrayed the technology both positively and negatively. The impacts of using these technologies in the war in Afghanistan need to be examined to understand the implications of these technologies for the future of war-fighting. In order to achieve this, a thorough understanding of the strategic, legal and ethical debates surrounding the use of these technologies is needed. Through analysis of the different schools of thought relevant to the use of these technologies, a greater understanding of the potential benefits and dangers of such weapons can be developed, as well as insights into the areas that require further examination. Moreover, areas that may benefit from increased interaction between the strategic, legal and ethical perspectives may be identified. At this time an increase inUCAV warfare seems inevitable. The purpose of such research is to better anticipate the resulting consequences to the largest extent possible, in an attempt to avoid making critical mistakes in years to come.

Chapter 3: Strategic Perspectives

In order to understand the 'strategic perspective' it is necessary to look at the debates within the military and government concerning the strategic strengths and weakness of new weapons technology. Such discussion will help to provide insight into future military strategy and structure. This is an important part of military planning as "strategic thinking needs to keep up with technology in order to avoid being overwhelmed by it" (C. S. Gray 2005b: 373-74). The increasing importance of technology means that military strategy needs to adapt to incorporate these changes. The strategic perspective is important to consider separately as, although constrained by legal and ethical boundaries, these limitations can be adaptable and reactive. While strategies need to comply with current International Humanitarian Law (IHL) and ethical boundaries, when first implemented there is no legal or ethical precedent on which to judge the actions. As new strategies are put in place it is the reaction to the event, either positive or negative, that creates new legal and ethical standards. For example, if a strategy is used that is received negatively by the public and international community laws are developed in an attempt to limit its implementation. On the other hand, if a strategy is well received by the public and international community then this could be framed as the ethically superior strategy and encouraged as the best option. There are many strategic advantages available to the U.S. military due to their technological superiority, including high levels of surveillance, decreased casualty phobia, cost savings, lessening civilian casualties and new tactical manoeuvres that a manned plane could not achieve. However, there are also strategic weaknesses to using advanced technology, such as a lack of trust in the technology, susceptibility to enemy adaption and overwhelmed bandwidth. It is argued that technology will only increase in importance in the foreseeable future. This would lead to smaller armies that will need to be compensated "for their loss of personnel and equipment by leveraging technology to allow them to fight asymmetrically against larger forces" (M. Schmitt 1998: 1055). The need for changing strategies has led to a large amount of debate within the military as to what would be the best course of action. There is extensive debate amongst both military strategists and academics as to what the 'face of war' has become. This refers to the type of warfare that is carried out as well as the rules guiding combatant's behaviour within such conflicts. The strategies used to implement new weapons technology within conflict are important to consider when attempting to understand the implications of advancing weapons.

The Changing Face of Warfare

The continued development of weapons technology has played a significant role in what techniques and strategies are utilised in modern conflicts. Mahnken (2008: 223) identifies the development of new ways of war, for example increasing use of PGMs, UAVs and UCAVs, as evidence that the character of warfare is changing. M. Schmitt (1999: 143) concurs with Mahnken, describing warfare as a constantly evolving phenomenon. New weapons technologies have allowed for new strategies and manoeuvres that would not have previously been available. Therefore, the development of weapons technology will continue to have a significant effect on how war is waged (M. Schmitt 1999: 143). J. Marshall Beier (2003: 412) highlights the popularity of such claims as “these remarkable new capabilities are touted as a strategic watershed that is profoundly changing the very nature of war.” On the other hand, C. Gray (2005a: 19) argues that “war is not changing its character, let alone miraculously accomplishing the impossible and changing its nature.” While future warfare may occur in new contexts, C. Gray (2005b: 165-66) argues that, the “continuities will far outreach the discontinuities.” This would mean that while advanced weapons continue to be developed warfare is still essentially the same since the origin of conflict in its nature and purpose (C. S. Gray 2005b: 167). For this purpose the recent changes within warfare are referred to in this thesis as the ‘face’ of warfare rather than the ‘nature’ of warfare. While it can be argued that the fundamentals of warfare have remained the same, the ‘character’ or ‘face’ are significantly changing as technology continues to create new opportunities for strategies and warfare.

The Revolution in Military Affairs (RMA) is a theory that was largely prominent as a result of the Gulf War and continuing throughout the 1990s. Andrew Latham (2002: 231) describes the RMA as a term “that is used both to describe and explain the momentous changes in warfare that appear to be taking place in the current era.” However, such broad descriptions mean that the precise meaning and significance of the term are still fiercely debated within academic and military circles (Latham 2002: 231). RMA enthusiasts argue there have been fundamental changes to the character and conduct of war since the end of the Gulf War. These enthusiasts argue that technology will give the U.S. a large strategic advantage and warn against the dangers of not evolving the military to meet modern threats (Mahnken 2008: 220). The result of a technologically advanced military would be the limitation of “the costs of war by defeating their adversaries in a rapid, decisive manner” (Stone 2004: 408). To limit the cost of war it is argued that precision missile strikes would become the future of warfare and the struggle for information supremacy would dominate the battlefield (Biddle 1996: 141). There are, however, RMA sceptics who warn against placing faith in advancing technology. Sceptics argue that technology rarely delivers on its promise. Moreover, it is argued that technology distracts from what is really needed, such as training, to achieve a more effective military force (Mahnken 2008: 220). It

is hard to overcome the conviction that war cannot be won without putting soldiers in the line of fire (Brzezinski 2003). Conflict situations where there is little or no danger for soldiers could lead to the U.S. being labelled as cowards. This is demonstrated by the attacks within Pakistan where it is felt that U.S. strikes are feeding the perception of Americans as cowards as they are “too frightened to shed blood in battle” (Ghosh and Thompson 2009). Stephen Biddle (1996: 141) describes the belief in the RMA as a “fundamental misreading” of the future of warfare. Debates continue regarding the causes, nature and consequences of the current RMA. The RMA was a dominant military theory of the 1990s and early 2000s; however, since the beginning of the wars in Afghanistan and Iraq the idea that the U.S. could engage in short, hi-tech conflicts has been largely discredited (Hawkins 2006). William Hawkins (2006) asserts that “no plan survives contact with the enemy” and the theory of RMA appears to have fallen victim to this truism. In its place new theories surrounding the nature of warfare are emerging.

In recent years “asymmetry” has replaced the RMA as the catch-phrase *du jour*, according to M. Schmitt (2008: 2). Stephen Metz and Douglas Johnson of the U.S. Army War College define asymmetry “in the realm of military affairs and national security” as “acting, organizing and thinking differently than opponents to maximise one’s own advantages, exploit and opponents weakness, attain the initiative, or gain greater freedom of action” (M. Schmitt 2008: 3). M. Schmitt (2008) outlines several forms of warfare that have been affected by asymmetry including technological, doctrinal, normative, participatory and legal or moral standing. The theory of technological asymmetry in warfare is the most notable form of asymmetry and is especially relevant to this thesis. Technological asymmetry refers to the unprecedented technological advantages the U.S. maintains in relation to the rest of the world.⁴ Modern battlefields no longer have one ‘front’ on which they are fought but rather are multidimensional. Therefore, in modern warfare traditional capabilities such as range, precision and mobility are less important to a modern force which requires the ability to “rapidly gather, process, and react to information about an opponent, while hindering the enemy’s ability to do the same” (M. Schmitt 2008: 8). Asymmetry in the battlefield is a very important aspect of the changing face of warfare. The current U.S. technological advantage is so significant, due to large development and security budgets, that it is unlikely any other nation will be able to compete in the foreseeable future.

There have been several new strategies put forward and debated since the beginning of the war in Afghanistan, beginning with the Afghan Model. As previously noted, this strategy essentially

⁴ From this point any reference of asymmetrical warfare is defined as technological asymmetry within warfare.

consisted of a strong air bombing campaign to destabilise the regime, followed by a relatively small number of elite ground troops supported by an indigenous, surrogate force and ongoing air support. After the initial successes of Operation Enduring Freedom, this strategy was intensely debated as the future of U.S. combat strategy. Many have since discredited the strategy for implementation in future conflicts as it relies on many variables, such as no enemy air force and the presence of a surrogate force. COIN strategies have since been applied to the war in Afghanistan with key principles that insist on protecting civilians over combatants and using only the minimum force required (Fick and Nagl 2009: 43). These goals are increasingly similar to those outlined in the following chapters regarding humanitarian law and ethical critique. Rumsfeld (2002: 21, 30) suggests that rather than searching for one strategy, such as the Afghan Model or COIN warfare, and preparing to refight the last war, the U.S. needs a military who are open to new thinking and are prepared to address new issues as they arise.

Strategic Advantages

The development of new weapons technology has provided the U.S. with strategic advantages that would not have previously been possible. An example of this is the high level of surveillance gained through the deployment of UAVs. The opportunities that this advantage provides are important in a COIN conflict such as the war in Afghanistan; this is acknowledged in the 2006 COIN manual which states:

Given the challenges faced by human intelligence assets in finding and penetrating insurgent networks, counterinsurgents must effectively employ all available intelligence collection capabilities. A combination of unmanned aircraft systems, manned aircraft, and space-based platforms can provide counterinsurgents with many collection capabilities (Departments of the Army and Navy 2006: E-2).

By using unmanned aircrafts there is no risk to a pilot's life, only those targeted, and this allows UAVs to be sent into areas that would previously have been too dangerous for a manned plane to enter. Soldiers on the ground can have real time aerial surveillance during combat situations, as UAVs and UCAVs can loiter in one position, giving them a significant advantage over the enemy. The ability to hover over buildings is also effective when attempting to intimidate those inside and flush combatants out (Brzezinski 2003). UCAVs allow Special Forces to not only have surveillance on a building but by stacking two or three drones over a compound they have the ability to track everyone who comes and goes (Drew 2010a). This tactic has reportedly been used to attack "Taliban leaders and bomb-making networks in eastern and southern Afghanistan" (Drew 2010a). This manoeuvre

would be dangerous for a manned air craft as staying stationary for any length of time creates a target for enemy soldiers, therefore, putting the pilot at too great a risk (Brzezinski 2003). On the other hand, if aUCAV is destroyed there is no pilot whose life could be lost or who could be taken as a hostage. The only casualty of such an event is a machine that is replaceable and of only financial significance. Chris Thirtle describes the Reaper as the “by far the most reliable aeroplane that we [the RAF] have ever operated” (Hopkins 2011a). As Mahnken (2008: 221) notes, “[o]ver the past fifteen years technology has helped create a series of lopsided battlefield outcomes between the United States and Iraq (twice), Serbia (twice), and Afghanistan.” The use of advanced weaponry has helped to increase this significant imbalance on the battlefield.

The lack of danger for pilots and increased resources for soldiers, provided by new weapons technology, also helps to combat casualty phobia. Casualty phobia is “a profound aversion, bordering on the phobic, to incurring American casualties”, also known as the “body bag factor” (Record 2002; Robinson 2009). This affects the general American public as well as dominating much of the decision-making within the U.S. military and government (Record 2002). However, Jeffery Record (2002) argues that as the war in Afghanistan was a response to a devastating loss of American lives and an attack on the homeland there was more public willingness to spill American blood than in earlier interventions, such as in Somalia. This has led to debate over the extent of the phobia as some believe it is exaggerated (Record 2002). Casualty phobia is arguably felt even more strongly by the military leadership than civilians as they do not want to send soldiers into situations where they could be killed or they are unsure of the outcome (Record 2002). Without adequate surveillance the risk of casualties or failure of a mission increases significantly. Military leaders are increasingly reluctant to act without prior surveillance. The reliance on surveillance before a mission is described as akin to an ‘addiction’ (Mahnken 2008: 202). Mahnken (2008: 202) quotes an officer who describes the Special Operations community as not able to act unless “a UAV is looking at it or an AC-130 is looking at it.” This reliance could lead to issues in future conflicts if the technology is not available in that region or where the enemy has a capable Air Force. In such situations the need for unmanned aerial surveillance becomes a liability as technology cannot always be relied upon. UAVs have not yet been used in conflicts where the enemy has a capable Air Force and, as UAVs have no way to defend themselves, it is unlikely they would be as effective in such a situation (Brzezinski 2003).

The accuracy of PGMs means enemy combatants can now be more effectively targeted while minimising civilian casualties. Nicholas Wheeler (2002: 210) argues this means militaries “can now reduce risk of civilian casualties without sacrificing military effectiveness.” However, this is disputed by those who argue that the development of precision weaponry can come at the cost of strategy. It is

claimed that “on occasions a high body count, not entirely excluding the innocent, is the pathway to strategic effectiveness” (C. S. Gray 2005b: 163). Despite these arguments keeping civilian casualties to a minimum is a continuing priority of the U.S. military. The perception that bombing campaigns are now a ‘precision’ exercise means that they can be a regularly used strategy without a significant public outcry or casualty phobia.

Another benefit of using unmanned technology is that UAV operators can spend less time training and gain more experience in real combat situations. Air Force pilots usually work in twenty-month cycles, of which only four months is spent in deployment (Kaplan 2006). UAV operators, on the other hand, can work in active combat for twenty months (Kaplan 2006). This means greater cost savings for the military as the time that previously would have been used for training is now used to build up high levels of “visual familiarity and expertise” while participating in active combat (Kaplan 2006). Thirtle argues that controlling UAVs and UCAVs creates a more conducive environment for pilots to carry out their missions (Hopkins 2011a). UCAV operators do not have to contend with the ‘discomfort’ of flying in a confined and hot environment, removing the effects of g-force and noise, therefore, making the experience less physically stressful (Hopkins 2011a).

UCAVs provide strategic benefits over manned planes as they were designed to have capabilities that manned planes lack. One such design feature is the ability to fly slowly. While it may be assumed that speed would be beneficial it is the Predator's ability to fly slowly that provides a significant advantage in COIN operations (Kaplan 2006). In situations where the goal is to hunt and kill individuals or small groups of fighters, speed would hinder rather than help the operation (Kaplan 2006). The Predator has the added advantage of flying at 15,000 feet where no one on the ground can hear or even see it (Kaplan 2006). In addition, the low speeds at which it can fly means there is less wear and tear on the equipment. This is reflected in the fact that the predator requires less maintenance than any other aircraft (Kaplan 2006). UCAVs are also designed to need little maintenance while in storage. The planes are hooked up to internal diagnostic systems that run function checks (Brzezinski 2003). These climate-controlled containers can sustain an inactive UCAV for up to 20 years (Brzezinski 2003). This method of storage has also led to the nickname “bomber in a box” (Brzezinski 2003). Less maintenance again means greater cost saving as there are fewer technicians and replacement components needed.

Strategic Weaknesses

While the U.S. enjoys a strategic advantage due to the possession of new weapons technology there are several significant problems that have yet to be addressed. Some within the U.S. military find it hard to trust new weapons technology as it is unfamiliar (Brzezinski 2003). Military leaders prefer to rely on technology they have used and seen in action creating vast pockets of resistance to implementing new and advanced technology within the military (Brzezinski 2003). In regards to UCAVs this distrust has been reinforced by some negative performance issues. In particular, UAVs and UCAVs crash more often than manned fighters (Brzezinski 2003). Several crashes have been reported in Pakistan where UCAVs are carrying out attacks (Ghosh and Thompson 2009). In addition, UAVs and UCAVs can only cover a small amount of territory at a time and thermal cameras are well known for producing blurry images (Ghosh and Thompson 2009). There is also a level of inaccuracy from available information after the attack has been carried out. Mustafa Abu al-Yazid, third in command of Al Qaeda, was killed in Pakistan during a missile attack in May 2010. He was previously reported as killed by an air-strike in Pakistan in August 2008 but later re-emerged and continued to be an important member of Al Qaeda (E. Schmitt 2010). Without ground troops in support it is hard to confirm the number and identity of casualties that are caused by the attacks.

Another concern with the long-term use of UCAVs is that strategists do not always take into account the adaptability of the enemy. Strategies that enemies traditionally implement to mask their actions and movements, such as utilising darkness, poor weather and difficult terrain, are no longer effective (M. Schmitt 2008: 8). However, enemy combatants will soon learn how to counteract the advantages gained by the use of UCAVs. This could include the development of advanced surface-to-air weapons to knock down drones and eventually satellites (Brzezinski 2003). As stated within *Joint Vision 2020* “we should not expect opponents in 2020 to fight with strictly ‘industrial age’ tools” (M. Schmitt 2003-2004: 741). This document recognises that the enemy will begin to gain advancing weapons technology and must adapt their strategies to combat this. The enemy’s adaptability also extends to new tactics to avoid thermal imaging and have implemented the use of decoys at all times as they are aware they can now be under constant aerial surveillance, even when UAVs are not visible. Enemy combatants have recognised that the U.S. military want to avoid taking civilian casualties, PGMs can target specific buildings but will most likely not be used if the building also contains civilians. Therefore, they have begun to use schools and mosques to stay and hide their weapons (Owens 2003). Despite focus on hi-tech weaponry terrorists are still able to utilise low-tech methods to reach gain some advantage. The planes used during the 9/11 attack, for example, were hijacked using box cutters, as Susan Gray (2009: 82) states this does “not reflect 21st century technology by any means.” Regardless of such adaptability the continued development of weapons technology is still perceived as

vital in order for the U.S. military to maintain its strategic advantage and requires large commitments of money and resources from the U.S. government.

A further problem that arises with the use of UCAVs is that the airwaves, or bandwidth, over airfields are becoming crowded (Brzezinski 2003). This causes large problems for the operators as these airwaves are utilised to control the UAVs and UCAVs. John Keggler (2007: 46) describes the airwaves over battlefields as “so saturated with military voice, video and data streams that if this information were in the visible spectrum the air would resemble a London fog at the turn of the 19th Century.” This means communications in other areas could be compromised, as well as limiting the number of UAVs and UCAVs that can be in use at one time. There is also the threat of enemies deliberately ‘jamming’ such communication (Robinson 2009). This problem could be exacerbated if the satellites that provide the airwaves come under threat. The solution to the problem could be to make UCAV technology more autonomous, therefore, not providing the constant stream of information that is using up the bandwidth (Robinson 2009). The use of autonomous UCAVs raises ethical questions in regards to how much power we wish to give technology over human life. Is it acceptable to allow a machine to ‘pull the trigger’? This will be discussed further within the ethical perspective.

The use of UCAVs and PGMs are creating feelings of resentment and revenge from the families of those whose loved ones are killed during the attacks. Mustafa Abu al-Yazid claimed that the suicide bombing of CIA base in Khost was revenge for the number of high level Al Qaeda leaders killed in UCAV attacks. It has been reported that militant leaders such as Baitullah Mehsud like to boast that “each drone attack brings him three or four suicide bombers” (Ghosh and Thompson 2009). The U.S. has recognised the importance of ‘winning hearts and minds’ and has created policies to this effect. The current COIN manual states that:

[a]ny use of force generates a series of reactions. . . . Counterinsurgents should calculate carefully the type and amount of force to be applied and who wields it for any operation. An operation that kills five insurgents is counterproductive if collateral damage leads to the recruitment of fifty more insurgents. . . . [Thus,] it is vital for commanders to adopt appropriate and measured levels of force and apply that force precisely so that it accomplishes the mission without causing unnecessary loss of life or suffering (Departments of the Army and Navy 2006: 1-25).

The manual also reinforces the importance of using proportional force as “using substantial force . . . increases the opportunity for insurgent propaganda to portray lethal military activities as brutal, [while] using force precisely and discriminately strengthens the rule of law that needs to be established” (Departments of the Army and Navy 2006: 1-27). If there is growing frustration on the battlefield, due to the asymmetrical nature of the war in Afghanistan, this could also cause an increase of terrorism within America. The threat of domestic terrorism creates a “paradoxical situation in which the military’s capacity for riskless application of force makes our own lives substantially riskier” (Kahn 2002: 7). As no other military force can currently compete with the U.S. on the battlefield, due to the strategic advantage gained by new weapons technology, the enemy needs to implement strategies that could give them an advantage, even if they do not comply with current IHLs. While these issues impact on strategic discussions, they also weigh heavily on ethical and legal debates and will, therefore, be addressed again in later chapters of this research.

Another strategic weakness in the use PGMs can also be associated with many other advanced technologies that the U.S. military is currently using. Kaag and Kaufman (2009: 603) argue that the use of torture to gain targets for precision bombing puts more pressure on interrogators to extract information using abuse and torture. Previously the U.S. would not have had the resources or technology to immediately act on specific information but now have the capability due to the development of UCAVs and PGMs. This would mean that advancing weapons technologies are, therefore, causing increasing suffering to suspects. While this is hard to prove and perhaps an unforeseeable by-product of the use of advanced technology it is important that all consequences of their use are analysed and weighed against the benefits of using advanced technologies.

One of the most significant debates within the military is taking place between the U.S. military and its pilots. Air Force pilots, as a collective, do not completely agree with continuing to increase the use of UAVs over manned planes. The development of UCAVs has benefitted pilots in many ways. There is less danger to pilots, this is especially important as air defence networks and technology advances (Robinson 2009). It also means that pilots do not need to undergo the ordeal of arduous 30-hour missions as UCAVs are being designed to endure such lengthy assignments (Sweetman 2003). However, there are still valid objections that are being put forward on behalf of pilots. One such problem is the lack of glory. Currently, it is by acting with courage while flying that pilots are recognised for awards or promotion (Brzezinski 2003). These acknowledgements are far less likely when piloting from the ground. Bill Sweetman argues that “every Air Force in the world is run by fighter pilots. You are never going to sell [UAVs] to them” (Brzezinski 2003). Air Force Colonel

Mike Francis⁵ argued in 1997, before the development and implementation of UCAVs, “most of us realize that [UCAVs] will ultimately happen, but no pilot wants them to happen on his watch” (Sweetman 1997). PGMs are also having a significant effect on the role of the pilot. The development of PGMs means that, unlike pilots of previous eras, there is no longer the need to identify their targets or even aim. A pilot’s new role is to fly within the weapon’s effective envelope and drop the bomb, which will then use its guidance system to reach the target, pilots in effect have little control over the bombing itself (Mahnken 2008: 200). Although this action still requires the skill to pilot an aircraft and avoid detection there is the possibility that pilots will become nothing more than “glorified truck drivers” due to these advancing technologies (Mahnken 2008: 224). The shifting role and identity of the fighter pilot is potentially an important consequence of advancing weapons technologies. Colonel Francis realised that the implementation of new technology, such as UCAVs, would be difficult as “not offending the culture is a big concern” (Sweetman 1997). The culture within the Air Force has meant that for over half a century the pilot has been seen as the “central actor in air combat” and have been described as “the ‘mounted knight’ of our age” (Robinson 2009). This is challenged by advancing weapons technologies that will continue to cause significant changes in the image and identity of the fighter pilot. These changes will affect not only how the pilots perceive themselves but also how they are perceived by the public. Tim Robinson (2009) identified the challenge to the culture of the pilot as the “most difficult obstacle to overcome” as UCAV research and development continues.

Conclusion

There are several debates to consider within the ‘strategic perspective’. These include those taking place within the military, the strengths and weaknesses of advancing technology that are already in use as well as the changing ‘face of warfare’ to predict the structure of future conflicts. The benefits of implementing UCAVs and PGMs have been numerous; they provide surveillance and manoeuvrability, are cheaper and provide some protection for pilot and civilian lives. However, there are also strategic weaknesses to using such technology; as yet these systems are not trusted by some within the military, the enemy will soon develop counter-strategies, there is finite bandwidth above battlefields, increasing feelings of resentment and frustrations from civilians who have lost loved ones as well as opposition from fighter pilots whose cultural identities are being affected. Despite these weaknesses UCAV and PGM technology continues to be argued by many as the future of warfare. The strategic benefits of these technologies outweigh any negative strategic arguments and have become an invaluable asset to advanced militaries.

⁵ Defense Airborne Reconnaissance Office

The future of weapons development seems to have few limits. The weapons of today would have seemed to past generations as belonging within science fiction. As Colonel Christopher B. Cerlile states “the difference between science fiction and science is timing” (U.S. Army 2010: 4). As yet, no one has claimed that conflicts will soon be free of danger or death. Therefore, important goals for future weapons will continue to be the protection of military assets and the ability to distinguish between soldiers and civilians. PGMs continue to be developed but for more specific situations. For example, new earth-penetrating and thermobaric weapons have been created and used in conflict situations, such as Afghanistan (Rumsfeld 2002: 27). This enables the U.S. to destroy underground tunnels, storage facilities and hiding places of enemies that were previously unreachable.UCAV technology is also continuing to be developed. They are being designed to be more autonomous so that a mission can be programmed into the onboard computer and carried out without a pilot. It is assumed that higher levels of UAV autonomy will improve performance while reducing cost, risk and personnel (U.S. Army 2010: 7). However, the use of essentially ‘robots’ to kill humans raises many ethical issues that have not yet been thoroughly discussed. Despite this concern the U.S. army envisions that within 25 years the number of UAVs and UCAVs it maintains will first quadruple and then double again as “needs and capabilities increase” (U.S. Army 2010: 72). With these sorts of advancements in capability and number already planned it is vital that we understand the implications of such changes before they take place.

Advancing weapons technologies have had and will continue to have a significant impact on the face of warfare. The most important impacts so far have been the increase in technologically asymmetrical warfare and the development of COIN strategies. In light of such changes powerful countries, such as the U.S., will need to be flexible and understand that strategies and militaries will need to adapt to new situations rather than prepare to refight past conflicts (Rumsfeld 2002: 30). The implementation of COIN warfare shows a willingness to adapt to changing environments within conflict. Modern legal and ethical standards need to be discussed to establish if they are reacting to these changes and challenges. The next chapter addresses the legal issues and asks if, in light of the new strategies that are being employed, IHLs are coping with the introduction of advancing weapons technology?

Chapter 4: Legal Perspectives

“No legal requirement for a ‘fair fight’ exists”

(M. N. Schmitt 2007: 468)

The role of law in war is ever changing. Law has a significant role within warfare as it can be argued that “even in the midst of war, legal arguments retain an aura of legitimacy that is missing in ‘political’ justifications” (Smith 2002: 370). While Cicero stated that “in war the law is silent”, it has since been argued that the destructive power possessed by advancing weaponry is so momentous that it must be regulated to minimise the risk of catastrophe (Baer 2002: 7). In modern conflicts the laws of war⁶ are increasingly invoked and are used to provide legitimacy to military action (Smith 2002: 355). The role of law during conflict has increased to the point where the term ‘lawfare’ has been adopted by some and warfare is considered a “modern legal institution” (Kennedy 2006: 5). This is, in part, due to the development of new weapons technology. The perception of what military action is deemed as legitimate and legal has been significantly influenced by the development of new weapons technology. This is not a recent development, as law has proven to be responsive and adaptable to the changing nature of warfare (M. Schmitt 1999: 145).

The legal perspective is important to discuss as the guidelines created by IHL are the most visible and influential way of setting a standard of behaviour during war. IHLs, unlike ethical guidelines, are written and ratified, creating a sense of legitimacy and a framework for acceptable action during conflict. However, the clarity of international law is at times challenged due to often subjective and ambiguous legal terminology. The laws of war have evolved over hundreds of years and have developed from earlier work on the concept of just war; however, the foundation for modern IHL is the Geneva Conventions.

This chapter will outline what aspects of the Geneva Conventions are relevant to advancing weapons technology and what further challenges have arisen for IHL. There has been some condemnation of

⁶ While there are slight variations when defining the terms Laws of War, Laws of Armed Conflict and International Humanitarian Law I use these terms interchangeably for this research.

the U.S. for utilising UCAV technology; in particular it has been questioned if using UCAVs for lethal operations breaches the principles of Proportionality, Discrimination or Military Necessity (Smith 2002; Vogel 2010). To combat increasing criticism and condemnation the Obama Administration has claimed that lethal UCAV operations comply “with all applicable law, including the laws of war, in all aspects of these ongoing armed conflicts” (Koh 2010). Despite these claims there are still many who question and criticise the use of UCAV technology on a legal basis, often focusing on the use of assassinations and the doctrine of overwhelming force. Discussion surrounding the use of new weapons technology has led to questioning of the relevance of the Geneva Conventions in modern warfare. The adaptability of IHL, the effect of normative restraint and the extent to which law is dictated by the powerful are discussed to address this issue.

The Laws of War

Geneva Conventions

The Geneva Conventions are one of the key foundations of IHL but have endured frequent challenges and face obsolescence due to the advancement of weapons technology and the changing face of warfare. Additional Protocol (AP) I was signed in 1977 and relates to the Protection of Victims of International Armed Conflicts; AP II was signed in 1977 and relates to the Protection of Victims of Non-International Armed Conflict; AP III was signed in 2005 and relates to the Adoption of an Additional Distinctive Emblem (International Committee of the Red Cross: 2010). There are currently 194 states that are party to the Conventions (Roberts 2009: 7). The Conventions purpose is to provide protection for classes within society who are not actively participating in warfare or conflict; these include civilians, prisoners of war and medical personal.

The conventions are based on key principles such as proportionality, discrimination⁷ and necessity. Proportionality is addressed in AP I Article 51 which prohibits:

attack[s] which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination of thereof, which would be excessive in relation to the concrete and direct military advantage anticipated (Vogel 2010: 110).

⁷ Also known as the Principle of Distinction

Article 35 of AP I outlines proportionality by stating that “it is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering” (The Geneva Conventions AP I 1977). This means that that no unnecessary suffering can be inflicted on either civilians or combatants due to the use of weaponry or strategies, if implementing an alternative could have lessened this suffering.

AP I Article 57 also acknowledges proportionality as it requires military planners and decision makers to “[r]efrain from deciding to launch any attack which may be expected to cause incidental ... [but] excessive [losses] ... in relation to the concrete and direct military advantage anticipated” (Vogel 2010: 110).

Vogel (2010: 107) highlights the importance of discrimination within the conventions. This principle is outlined within AP I, in particular Articles 48, 51 and 52:

Article 48 of AP I requires that all parties to a conflict ‘at all times distinguish between the civilian population and combatants, and between civilian objects and military objectives.’ Article 52 then defines those military objectives as ‘those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.’ Focusing on the non-combatants in close proximity to the conflict, Article 51 of AP I requires parties to ensure that ‘the civilian population and individual civilians ... enjoy general protection against dangers arising from military operations’ and ‘not to be the object of attack’. Article 51 also prohibits and defines ‘indiscriminate attacks’. Ambiguously, and therefore more controversially, Article 51 forbids the targeting of civilians ‘unless and for such time as they take direct part in hostilities.’

These three articles confirm that under IHL there must be some attempt to distinguish between civilian and combatant at all times. Deliberate targeting of civilians, or failure to adequately discriminate between civilian and combatant, are violations of the Geneva Conventions.

The principle of military necessity is outlined in Article 52 of AP I. This law requires that armed attacks in wartime be “limited strictly to military objectives” and offer “a definite military advantage” (Vogel 2010: 106).⁸ The level of military advantage gained is important to

⁸ These concepts are reiterated in the U.S. Army field manual, Hague IV and the Rome Statute (Vogel 2010: 106).

justify the use of force during conflict. Advancing weapons technologies have challenged aspects of the outlined principles; these consequences will be discussed later in this chapter.

Challenges to Law by Advancing Weapons Technology

Condemnation

Under the United Nations (UN) Charter the war in Afghanistan does have a legal basis (O'Connell 2003). However, the legal strategies and technologies employed by the U.S. during the war in Afghanistan have caused debate over the legality of U.S. actions. The increasing use of advancing technologies, such as UCAVs and PGMS, has led to a varying amount of international condemnation. The level of criticism towards the U.S. has been inconsistent. It has been argued that the U.S. has received little backlash over the use of UCAV technology (O'Connell 2003). However, there have been several examples of criticisms from international organisations, the most internationally recognised and legitimate of which came from the U.N. Special Rapportuer Philip Alston, who condemned U.S. use of UCAVs to carry out lethal operations and questioned whether the U.S. was violating IHL (United Nations 2010). Alston's 2010 report asked for the U.S. to be more "upfront" about its programme as it is not possible to answer questions about the legality of these actions without more information in regards to how targets are being selected (United Nations 2010). Alston also asked the U.S. to provide evidence that they are taking the correct steps to ensure compliance with the humanitarian principles of discrimination, proportionality, necessity and precaution (United Nations 2010). The international community warned that the U.S. need to become more open with information as it has created a situation where:

the Central Intelligence Agency (CIA) is running a programme that is killing a significant number of people, and there is absolutely no accountability in terms of the relevant international law (United Nations 2010).

More specifically Alston asked that the U.S. need to provide the legal basis on which it was operating, make it clear who was running the programme and what accountability measures had been put into place domestically to ensure compliance with IHL (United Nations 2010). It was argued that self investigation "did not enhance credibility"; therefore, it is time for the U.S. become more transparent in its actions (United Nations 2010).

In response U.S. officials have stated that Air Force personnel who operate UCAVs follow a legal code, including “international obligations observed during an armed conflict” (Asian News International 2010). Head of the Office of Public Affairs for the CIA Paul Gimigliano⁹ and his deputy George Little were quoted as claiming that “the accountability is real, and it would be wrong for anyone to suggest otherwise” (Asian News International 2010). However, they would not discuss or confirm any specific action or programme except to state that there was close government oversight (Asian News International 2010). Koh¹⁰ took the opportunity as keynote speaker at the 2011 Annual meeting of the American Society of International Law, to address some of the concerns being raised over the use of UCAVs (Koh 2010). He stated that “great care is taken to adhere [the principles of distinction and proportionality] ... in both planning and execution” (Vogel 2010: 102). Koh (2010) also claimed that:

Some have challenged the very use of advanced weapons systems, such as unmanned aerial vehicles, for lethal operations. But the rules that govern targeting do not turn on the type of weapons system used, and there is no prohibition under the laws of war on the use of technologically advanced weapons systems in armed conflict – such as pilotless aircraft or so called smart-bombs – so long as they are employed in conformity with applicable laws of war.

While not specifically addressing the concerns raised by Alston, Koh (2010) vehemently denied that the U.S. had breached any international laws or the principles of proportionality and distinction in carrying out lethal operations using UCAVs. However, Koh did not address the issue of CIA management nor international accountability.

The majority of criticisms have been directed at the CIA as it is a civilian agency and therefore, not part of the regular armed forces. Vogel (2010: 115) contends that “even some of those who are fully on board with nearly every other aspect of drone warfare find themselves uneasy with civilian personnel performing a combat function.” Under the Geneva Conventions combatants are only recognised as such if they fulfil the legal requirements, for example wear insignia, have a commander, carry weapons openly and comply with the law and customs of war (O’Connell 2003: 328; Vogel 2010: 115). While operators of UCAVs fulfil some of these requirements, such as wearing a uniform¹¹ and chain of command, it is argued that the operators of UCAVs do not carry weapons openly and are, therefore, breaching IHL (O’Connell 2003: 328; Vogel 2010: 115). A further criticism of CIA

⁹ Paul Gimigliano stepped down as Head of the Office of Public relations in September 2010 and was succeeded by his deputy George Little.

¹⁰ Legal Advisor within the U.S. Department of State.

¹¹ UCAV operators wear flight suits but CIA personnel are not otherwise distinguishable by a uniform.

involvement is the lack of training in the laws of war. In contrast, the military invests a lot of time in training its personnel to understanding and complying with the laws (Vogel 2010: 116). The military is also subject to not only international laws but also internal rules and regulations. The CIA may have similar rules in place, although due to the secrecy of the agency these particulars are not available to the public so remain ambiguous (Vogel 2010: 116).

New weapons technology is required by the Geneva Convention to be evaluated by lawyers who establish that it has been developed in “good faith” and that it conforms “with the applicable rules of humanitarian law” (Koplow 2005: 746). It has been claimed that “the U.S. government has never tried to justify its use of Predator drones on a legal basis” (Ezzatyar and Kabraji 2010). However, David Koplow (2005: 746) argues that the U.S. does, in fact, subject any weapons under development to legal scrutiny during both early fabrication and, once fully developed, before deployment is authorised. According to U.S. domestic law all weapons bought or developed by the U.S. must comply with international law.¹² Koh (2010) argues that:

While further ethical or moral exploration may be required with regard to remotely conducted attacks performed far from the battlefield, the law of armed conflict does not present any additional limitations or prohibitions in this respect. There is no difference under the law of war if a ship fires a rocket at a military objective hundreds or thousands of miles away ashore, or if a domestic missile installation fires an intercontinental ballistic missile at a lawful target halfway across the globe, so long as the attacks are carried out within the rules of armed conflict.

This means that there is no specific law of war that bans the use ofUCAV operations for lethal strikes. However, these operations must still comply with all current laws of war as do all military operations. Despite these requirements there have been challenges to the legality of U.S. deployment ofUCAVs to conduct operations within the war in Afghanistan. WhilePGMs have been used in the war in Afghanistan there are few legal objections to their operational use.

¹² Air Force Policy Directive 51-4 26th April 1993 states “The Air Force will make sure all weapons it buys or develops are consistent with international law, particularly LOAC. To do so, HQ USAF/JAI will conduct a timely legal review of all weapons and their effects” U.S. Air Force, 'Air Force Policy Directive 51-4 Compliance with the Law of Armed Conflict', (Secretary of the Air Force, 1993).

Moreover, Army Regulation 27-53 1st February 1979 states: “Prescribes procedures and assigns responsibilities for submission of weapons or weapon systems to The Judge Advocate General (TJAG) for legal review under international law. This regulation applies to: The development or procurement of all weapons or weapon systems which are intended to be used in combat, including major and nonmajor systems” Department of the Army, 'Review of Legality of Weapons under International Law', *Army Regulation 27-53* (Washington, 1979).

Principle of Proportionality

The doctrine of overwhelming or decisive force has caused a fundamental legal argument throughout the war in Afghanistan as implementing this strategy may breach the principle of proportionality (Hoffman 1996; Smith 2002: 359). This doctrine is arguably a defining characteristic of the U.S. strategic culture and is commonly known as the ‘Powell Doctrine’ due to Colin Powell’s¹³ belief that “military actions should pursue well-defined interests and use overwhelming force” (Smith 2002: 359). The development of advanced weapons technology such as PGMs and UCAVs has conformed to this doctrine by increasing the U.S. military’s ability to achieve an overwhelming advantage on the battlefield. However, the use of overwhelming force conflicts with some facets of *jus in bello* and AP I, in particular the principle of proportionality and the need to avoid “superfluous injury” and “unnecessary suffering” (Koplow 2005: 745). The desire to ‘overwhelm’ could mean that the force used by the U.S. military is not in proportion to the crimes committed by the enemy and could unnecessarily endanger civilian lives and property. However, the exact amount of force needed is hard to calculate and, as Koplow (2005: 703) points out, there are consequences for any miscalculations:

In confrontations with recalcitrant opposing forces, the authorities must recognise that if they exercise too much power, they incur an unacceptable danger of ‘collateral damage,’ unintended casualties to civilians and unnecessary destruction of valuable property. On the other hand, if they exercise too little power, they may risk the safety of their own personnel and compromise the accomplishment of an important and legitimate mission.

The concept of a proportional response is of particular importance in the modern context of asymmetric warfare and the increasing gap between the technological haves and have-nots. If the punishment is in excess of the crime then the negative consequences of such action could outweigh any positive gains it achieves. Since the implementation of COIN warfare in the war in Afghanistan the need to use the minimum force possible to achieve the objective has been emphasised.

The Obama Administration maintains that the “U.S. targeting practices, including lethal operations conducted with the use of unmanned aerial vehicles, comply with all applicable law, including the laws of war” (Koh 2010). The U.S. rules of engagement are founded principally on the 1907 Hague Convention Respecting the Laws and Customs of War on Land (“Hague IV”) (Smith 2002: 360).¹⁴ These rules are outlined in the Air Force Pamphlet (AFP) 110-31, *International Law-The Conduct of*

¹³ Colin Powell was the U.S. Secretary of State 2001 – 2005 under the Bush Administration.

¹⁴ “The general limitation of means (Art. 22), avoiding unnecessary suffering (Art. 23), prohibiting attacks on undefended civilian centers (Art. 25), and sparing cultural and religious sites, historical monuments, and hospitals (Art. 27)” (Smith 2002: 360).

Armed Conflict and Air Operations (Smith 2002: 360). This pamphlet provides guidelines for conduct based on proportionality and discrimination, similar to those found in the Geneva Conventions (Walne 1987: 22). AFP 110-31 recognises that civilian protections, at times, have been undermined by “the development of new weapons systems including aircraft and missiles which extend the struggle beyond the immediate battlefield” (Smith 2002: 360). The principle of proportionality takes into consideration the effects upon civilians and objects during an operation in relation to the military advantage achieved (Vogel 2010: 110). Any protection provided extends only to the immediate effects on civilians, such as injury or death due to bombing or bullet, it does not extend to any of the longer lasting effects of war, such as contaminated water, lack of shelter or lack of food (Smith 2002: 361). Under the Geneva Conventions is it not against the law to cause civilian casualties during an operation; however, “reckless attacks that result in civilian deaths or destruction, or attacks that knowingly take civilian lives clearly in excess of what is necessary for accomplishing the military objective could violate the principle of proportionality and constitute war crimes” (Vogel 2010: 111). What operations are deemed ‘reckless’ or what actions are seen to be in ‘excess’ are judgements that are made by soldiers in the moment and then debated by lawyers’ months after the fact. As M. Schmitt (1999: 170) emphasises many of the rules governing proportionality are ambiguous:

No one would suggest, for example, that capturing a single low-ranking soldier would justify the death of hundreds of civilians. Similarly, the military advantage of destroying a command and control centre would seldom be outweighed by damage to an uninhabited building. The complexity emerges when one moves from the extremes along the proportionality continuum toward the centre.¹⁵

The principle of proportionality is further complicated by the ambiguous terminology used within AP I, for example, the need to avoid “superfluous injury” and “unnecessary suffering” (The Geneva Conventions AP I 1977). What level of force would create acceptable suffering and what would result in unnecessary suffering is hard to determine when in a conflict situation (Koplow 2005: 745). The difficulty in quantifying what is ‘proportionate’ is important to the ongoing development of weapons as, despite challenges, the Geneva Conventions remain the legal “touchstone” against which new weapons are assessed (Koplow 2005: 745).

¹⁵ Article 51 of the Geneva Convention states that ambiguity and doubt should be resolved in favour of the protection of the civilian population (Lippman 2002: 36). Therefore, any doubt over proportionality should be ruled in favour of civilians and against excessive use of military force.

Principle of Discrimination

The principle of discrimination is very important when considering the legality of advancing weapons technology. Koplow (2005: 745) describes a valid weapon that complies with discrimination, as being “designed and employed in a fashion that enables it to be sufficiently precise, to attack only legitimate targets.” It can be argued that highly accurate targeting technology, like that developed for PGMs and UCAVs, achieve discrimination to a level no previous weapons could have (Enemark 2008: 201). If discrimination is best achieved by precision technology then this reinforces the perception that those who possess such technology have more legitimacy in regards to conduct within warfare (Beier 2003: 411). The norm of discrimination both helps to limit the use of indiscriminate weaponry as well as limiting the indiscriminate use of weapons regardless of their precision capabilities (M. Schmitt 1999: 147, 48). Deliberately targeting civilians or civilian objects is illegal, according to the laws of war. It has become important to define exactly when an individual is deemed a civilian and when they are a combatant. A civilian may only be legally targeted if they have participated in hostilities, thereby forfeiting any protection given to civilians (Vogel 2010: 108). After six years of “expert discussions and research” the International Committee of the Red Cross (ICRC) published *Interpretive Guidance on the Notion of Direct Participation in Hostilities Under International Humanitarian Law* to clarify what actions should be considered as direct participation in hostilities (International Committee of the Red Cross 2009). The ICRC concluded that protection is removed from civilians for only the length of time they participate; “civilians who engage in such temporary or non-combat conduct, may only be targeted for the time they are engaged in hostile conduct” (Vogel 2010: 108). Despite the conclusions made by the ICRC this is still a contentious issue. It has been argued that individuals cannot be simultaneously a combatant and a civilian, therefore, an individual cannot participate in a conflict during the day and then regain the protections given to civilians at night (Vogel 2010: 108). There is ongoing debate as to the degree of participation that distinguishes a civilian from a combatant. Despite this tension UCAVs have been praised for being able to distinguish between civilians to a higher degree than other weapons currently available and can therefore be seen as fulfilling the requirements of the principle of discrimination (Vogel 2010: 110).

The U.S. relies on the concept of dual use to address the issue of discrimination between civilian and military targets in urban areas. Targets that may have previously been considered off limits due to civilian use could now become a legitimate military target if enemy combatants are also benefiting. Modern warfare is now largely urbanised creating more assets and infrastructure that are used by both enemy combatants and the civilian population. Under IHL the destruction of dual-use facilities is legal; “[a]rticle 54 [of the Geneva Convention] prohibits military operations ‘to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population’. This

includes attacking foodstuffs, crops, livestock, drinking water installations and irrigations works for the specific purpose of denying sustenance to the civilian population” (Lippman 2002: 37). As the intent of these attacks is not to ‘deny sustenance’ to civilians, but rather enemy combatants who also benefit, they are not ‘technically’ a violation of the Geneva Convention.

While the protection of civilians continues to be a high priority of the U.S. military, the distinction between military and civilian assets is no longer clear, and often described as ‘blurry’ (M. Schmitt 1999: 160). This is due to an enemy who understands the reluctance to endanger civilians so deliberately hides amongst them. Koh (2010) stresses that such behaviour makes “the applications of international law more difficult and more critical for the protection of innocent civilians.” It has been predicted that this blurring of distinction between civilian and combatant will continue in future conflicts:

The concept of military objective will remain beleaguered as civilian activities are further militarized, and military activities are increasingly civilianized, especially in technologically advanced States (M. Schmitt 1999: 159).

M. Schmitt (1999: 159) gives the example of a computer chip manufacturer to emphasise this point; how does one distinguish a company that sells exclusively to civilians from one that has military contracts. This is further complicated as these chips may be used for military purposes without the knowledge of the company, is the company still a legal and legitimate target? Smith (2002: 361) points out that there has been a “loosening” of what constitutes a legitimate military target to resolve the dilemma of distinguishing military from civilian resources to target enemy combatants’ assets. However, M. Schmitt (1999: 161) stresses “humanitarian principles dictate that any consequent urge to simplify legal criteria by relaxing them should be opposed.”

While it is rarely claimed that the U.S. or coalition forces have deliberately targeted civilian populations or property, it is questioned whether or not the U.S. has taken “every feasible measure to ensure that military rather than civilian populations and objectives were attacked” (Lippman 2002: 64). For example, it is often argued that the deployment of more ground troops rather than a reliance on air strikes would have put more U.S. soldiers at risk but could have spared some civilian lives, making it the preferred strategy under IHL (Zehfuss 2010: 11). Whether or not an operation was discriminate or proportionate needs to be assessed on a case by case basis and while this applies to all operations it is important that lethal UCAV missions are examined closely due to their frequent use in civilian contexts (Vogel 2010: 112). Despite criticisms, Koh (2010) argues that the Obama

Administration has taken great care to “adhere to these principles [proportionality and distinction] in both planning and execution, to ensure that only legitimate objectives are targeted and that collateral damage is kept to a minimum.” Moreover, Koh (2010) states that these principles are followed during all operations carried out against Al Qaeda and its associated forces, including lethal strikes undertaken during UCAV operations.

Principle of Military Necessity

What constitutes military necessity, like proportionality and discrimination, is decided in many cases by lawyers and military leaders. UCAV and PGM technology have been implemented for a significant amount of time, but it has been argued that it is only recently that public officials, experts, practitioners, operators and lawyers have come to fully understand “the legal framework for the emerging use of drones [UCAVs]” in order to create guidelines for future use (Vogel 2010: 102). During the first Gulf War lawyers ensured targets were “vetted in light of the Geneva Convention and calculated whether or not the overall advantage to be gained outweighed any expected civilian spillover” (Smith 2002: 369). In Afghanistan it is standard practice to have military lawyers review targets and evaluate the level of risk posed to civilians (Lippman 2002: 57). This is important to ensure that a significant military advantage is gained to justify an operation using the principle of military necessity. This type of legal scrutiny can only be implemented by states that possess the money and technology to sustain such a highly bureaucratic system, such as the U.S.

“Precision-Guided Law” is a concept put forward by Smith (2002: 368) to illustrate the modern use of law during warfare. Smith argues that over the past decade there has been a significant shift in legal focus from restraining violence to legitimizing it. Decisions made by lawyers provide “harried decision-makers with a critical guarantee of legal coverage, turning complex issues of morality into technical issues of legality” (Smith 2002: 369). S. Keeva argues that “the relationship of corporate counsel to CEO, the JAG’s [Judge Advocate General] role is not to create obstacles, but to find legal ways to achieve his client’s goals - even when those goals are to blow things up and kill people” (Smith 2002: 368). This legal scrutiny of military action has created a system that has “legal fine print” in a symbiotic relationship with technology (Smith 2002: 369). The laws of war have merged with military life to the extent that individual battle tactics are now assessed for legality (Kennedy 2006: 7). A “common legal vocabulary” has developed for assessing the legitimacy of actions that is utilised by both international lawyers and military personnel (Kennedy 2006: 7). In modern warfare it appears that debate has shifted to address legal technicalities, such as the military necessity of each

operation, rather than the underlying legality of war itself and the violence, death and destruction that it creates.

The military necessity of UCAVs is not often questioned. As discussed in the preceding chapter, there has been consistent praise from military officials on the significant military advantage UCAV and PGM technology provides to U.S. armed forces (Vogel 2010: 107). However, it has been hypothesised that “a greater use of ground troops and special forces in particular could have reduced the risks for civilians” (Zehfuss 2010: 11). Critics argue that the civilian casualties caused by UCAV operations are far in excess of any military advantage (Vogel 2010: 111). The U.S. have shown that they will allow for higher risks to civilians if the individual targeted is of a sufficiently high rank and therefore, capable of substantial future harm (Vogel 2010: 111). The harm caused by such operations is seen in not only the civilian casualties but also the hostile sentiments of communities who have lost loved ones in a UCAV strike (Vogel 2010: 111).

When applied to a conflict situation, Chris af Jochnick and Roger Normand (1994: 50) argue “that ‘the structured impotence’ and ‘permissive language’ of black-letter laws of war have lent a ‘facade of legitimacy’ to existing wartime practices” (Smith 2002: 357). Therefore, in regards to conflict situations the laws have been created in a way that prioritise military necessity over humanitarian needs and values (Smith 2002: 357). This has led Jochnick and Normand (1994: 55) to conclude that legal warfare is not more humane than illegal warfare and that “progress in humanitarian law is fiction” (Smith 2002: 357). In 1953, Hersch Lauterpacht predicted that:

we shall utterly fail to understand the true character of the law of war unless we are to realize that its purpose is almost entirely humanitarian in the literal sense of the battle and passion. This, and not the regulation and direction of hostilities, is its essential purpose (Smith 2002: 358).

Unfortunately this prediction, that the purpose of IHL would be forgotten in the need for military justification, is proving true as the use and manipulation of IHL by militaries is increasing with each new conflict.

Assassination

Assassinations are illegal under IHL. Suspects cannot be killed anytime, anywhere, and it can therefore be argued that the U.S. is violating international law by carrying out “extrajudicial assassinations” by using UCAVs to kill terror suspects (Ezzatyar and Kabraji 2010; O’Connell 2003: 326). Executive Order 11905 states that “no employee of the United States Government shall engage in, or conspire to engage in, political assassination” (U.S. Government 1976).¹⁶ Ezzatyar and Kabraji (2010) argue that it is due to this executive that the U.S. have tried to avoid the term assassination when describing the attacks. The Obama Administration asserts that these assassinations are legal as they are taking place within the context of an armed conflict (Koh 2010). Koh (2010) maintains that:

Some have argued that the use of lethal force against specific individuals fails to provide adequate process and thus constitutes unlawful extrajudicial killing. But a state that is engaged in an armed conflict or in legitimate self-defense is not required to provide targets with legal process before the state may use legal force.

Current U.S. policy only prohibits assassination of civilians in peacetime; however, it allows for the assassination of combatants during war so long as collateral damage is avoided (Ignatieff 2004: 118)¹⁷.

Under IHL a suspect must be given the chance to surrender and, using UCAVs to carry out attacks means there is no way an individual could surrender (O’Connell 2003: 330). However, the U.S. defends the use of UCAV technology for lethal operations. In Yemen, for example, the assassination of Harithi was justified by the U.S. as he was a member of Al Qaeda and, as arrest was not a feasible option in this situation, assassination was a “legitimate tactic” (Hajjar 2006: 34). While it has never been possible to surrender to any form of aerial attack, traditionally these attacks focused on military targets, not on individuals. It is this distinction, while seemingly insignificant, that has had a large impact on the legality of UCAV missions.

Lethal UCAV operations are also criticised as illegal as they often take place when the situation is below the threshold of armed conflict (O’Connell 2003: 330). When a suspect is not engaged in active combat, is removed from a warzone or the chain of command, then it is argued that it is not “legally or logically” feasible to describe them as enemy combatants; rather they should be regarded as civilians (Ezzatyar and Kabraji 2010). Following this logic the actions of the U.S. could be seen as

¹⁶ President Gerald R. Ford’s Executive Order 11905: United States Foreign Intelligence Activities, February 18, 1976.

¹⁷ Hays Parks Memorandum on Executive Order 12333 and Assassination, 1989.

violation of both human rights law and international law as they are intentionally targeting men who are defined under the protected status of civilian. The assassinations carried out by UCAVs have been described as “shortcuts with a cavalier disregard for legality” and are condemned by many (Ezzatyar and Kabraji 2010). However, the U.S. continues to deploy UCAVs to carry out these lethal operations.

Can the Laws of War cope with advancing Weapons Technology?

The laws of war have existed in various forms for centuries. They are traditionally flexible and have so far adapted to any social or political issues that have arisen. However, the challenges facing the laws of war by new weapons technology means that the laws may need to once again be revised to weather these challenges. It can be argued that the law will adapt to this as it has to other challenges and that the pressures of legitimacy and normative restraint means that the law will remain. On the other hand, the law is dominated by powerful nations and adds legitimacy only to the states that can afford to uphold it. This allows such states to continue to use strategies that are controversial and weakens the authority of IHL. It is increasingly argued that the Geneva Conventions are no longer compatible with the realities of modern warfare. Matthew Lippman (2002: 39) describes the Geneva protocols framework of analysis as being “swept aside” by modern warfare, especially by the advancing technology of aerial warfare. Alberto Gonzales¹⁸ is quoted as referring to the Geneva Conventions as “quaint” and “obsolete” (Hajjar 2006: 32). Over half a century since it was originally signed the Conventions are still the basis of IHL, although modern wars may be very different to those envisioned by the creators. Since the end of World War II the majority of conflicts have been civil wars, this means that the rules regarding interstate wars and uniformed armies that are described in the Conventions are less applicable (Roberts 2009: 7). The U.S. is not a signatory to AP I but claims to recognise the concepts of proportionality and discrimination as binding due to customary international law (Lippman 2002: 66). The U.S. claim a constitutional right to declare the Geneva Conventions inapplicable to the war in Afghanistan as terrorists do not respect IHL, voiding the premise of reciprocity on which it is based (Hajjar 2006: 31). Lisa Hajjar (2006: 32) argues that the Geneva Conventions were purposefully pushed aside by the Bush Administration to:

avoid the legal penalties and risks of prosecution for IHL violations (i.e. no crime without law), to ‘maximize’ options form the conduct of war and the treatment of captured enemies..., and to assert that *this war* was ‘unprecedented’ and thus constituted a new legal *terra nulla*.

¹⁸ At this time Gonzales was the White House Council, he would later become Attorney General.

The changing face of warfare creates an environment where it has become necessary to incorporate new technologies and strategies to set a new legal standard; this would ensure that the legitimacy of IHL is maintained. Adam Roberts (2009: 6) raises the idea that “by little-noticed process of common law, the Conventions have already adapted, although incompletely, to changes in war. The question now is: should there be further adaptation or a completely new convention?”

Adaptability of Law

It is now recognised that any international law is subject to political and social changes and pressures, and are consequently no longer perceived as a “closed universe of norms” (Smith 2002: 357). Smith (2002: 357) states that “law shapes the popular perception of an act by imbuing it with the “physical trappings” of legality, reinforcing a chimera of shared values and international society and cultivating a sense of obligation to the “civilized” order. While international law is recognised as legitimate by the majority of the states it is, arguably, voluntary and changeable. As the “chimera of shared values” changes over time the law must be adjusted to suit the new environment (Smith 2002: 357). The Geneva Conventions were created to provide protection during warfare for specific classes of people, including civilians. However, civilian deaths during conflict still occur and disturbing statistics are emerging that suggest up to 80% or 90% of all deaths within a conflict are now civilian (Roberts 2009: 7).¹⁹ Roberts (2009: 7) highlights that even if these statistics are exaggerated, as many claim they are, it still shows the limits of the protection the conventions actually provide. The need to revise the conventions has been commented on by members of the Bush Administration, as well as the U.K. Defence Minister John Reid in 2006 (Roberts 2009: 8). However, as Roberts (2009: 8) notes these statements were never followed by genuine suggestions as to what changes should be made and how these would eventuate. It has been argued that these statements were designed to “cast a shadow over the application of existing routes” rather than to inspire a new treaty (Roberts 2009: 8). While law is adaptable it is clearly being suggested that to adapt to modern warfare the Geneva Conventions must be reviewed or a new legal standard put in place. On the other hand, Roberts (2009: 8) argues that “in marking sixty years of the conventions, it is not just their endurance that should be praised, but their little-noted but remarkable capacity to adapt to changing circumstances.”²⁰ The Geneva Conventions have adapted overtime but may not be evolving fast enough to counteract the significant challenges being created by advancing weapons technology.

¹⁹ These statistics have yet to be irrefutably proven due to difficulties identifying between the bodies of combatants and civilian casualties as combatants do not always wear a uniform.

²⁰ Roberts cites changes to the law surrounding the repatriation of POWs and the denial of rights to POWs at Guantanamo Bay that are guaranteed under the Geneva Conventions (Roberts 2009: 8).

Normative Restraint and Legitimacy

Normative restraint is another important concept when discussing international law in a modern context. Terry Nardin (2008: 398) states that:

To speak of the international rule of law, we must make several assumptions. We must assume ... that law can be effective without legislation, adjudication, and centralised enforcement – that laws can be created, their meanings in particular cases authoritatively determined, and observance secured in other ways.

Normative restraint provides a way of securing observance by those who could otherwise wield power without consequence. International law, due to a lack of an international governing body capable of enforcing law on all states, is not binding and sanctionable on the entire international community. Indeed, Ashraf (2009: 177) states that:

The absence of effective and independent international legal enforcement has allowed states and non-state actors to ignore or interpret the laws as they see fit. The increasing influence of the media and the empowerment of public opinion has become the final arbiter of acceptability.

Normative restraint can have a significant impact on the actions of states within the international community. This reinforces President Obama's claim that "[a]dhering to standards, international standards, strengthens those who do, and isolated those who don't" (Koh 2010). For example, if a state was considering an action that would breach international law and there was no way to force compliance on the state then the international community, through its negative reaction, could potentially alter the state's action. This demonstrates that while international law is criticised as being non-enforceable by traditional means such as a court, the law can still be enforced within the international community through other means and is, therefore, still relevant in a modern context.

The concepts of legality and legitimacy are both important to warfare; however, they are very different in application and intent. Legitimacy is often a normative restraint so is not enforced through law but rather international pressure from states, media and non-governmental organisations. This means that what is deemed legitimate is not necessarily related to the standard set out in IHL, rather it is dependent on the political and social context, often changing to adapt to changes in the moral standing of the international community. The introduction of COIN to modern warfare has made the concept of legitimacy of equal importance to that of legality. The need for all actions to appear not

only legal but also legitimate can be exaggerated by what M. Schmitt (2007: 443) describes as the ‘bully syndrome’. This is a tendency by the global media and non-governmental organisations to hold the more technologically advanced force to a higher standard of legitimate behaviour (M. Schmitt 2007: 443). This means that, at times, a blind eye is turned to atrocities committed by the ‘underdog’ that would be deemed illegitimate if committed by the technologically advanced ‘bully’ (M. Schmitt 2007: 469). Several highly visible ‘mistakes’ during the early stages of the war in Afghanistan as well as an increasingly global media meant that U.S. conduct was scrutinised internationally. This scrutiny created an environment within which even lawful collateral damage needed to be avoided (M. Schmitt 2009: 312).

In Afghanistan, for instance, authorization to conduct attacks which would otherwise comport with the proportionality principle was sometimes denied as risking “bad press” or negative communicative consequence. The requirement to take *feasible* precautions in attack seems to be slowly slipping toward a standard of *all possible* precautions (M. Schmitt 2009: 329).

Within the COIN manual the term legitimacy appears 131 times (M. Schmitt 2009: 310). This shows an emphasis on legitimacy to accomplish the specific objectives of a COIN conflict such as the war in Afghanistan. As of 2008, legitimacy, perseverance and restraint are the ‘principles of war’ for U.S. joint operations. In addition, legitimacy became one of the traditional principles of targeting (M. Schmitt 2009: 310). The emphasis on legitimate was put into practice during the war in Afghanistan:

For instance, the International Security Assistance Force Commander directed his forces to employ precision munitions whenever possible; IHL imposes no such requirement. Additionally, he directed on-scene commanders to make every effort to ensure houses from which their troops received fire were free of innocent civilians before responding, even though, as a matter of IHL, returning fire in such circumstances is governed by the rule of proportionality and the requirement to take feasible precautions in attack, not by the mere presence of civilians (M. Schmitt 2009: 312).

This shows that advancing weapons technology is allowing an adherence to aspects of international human rights law that was not previously possible. While legitimacy, not IHL, may now be setting the standard for conduct in war this standard is still unattainable by all but the most advanced militaries.

Law Dictated by the Powerful

The divide between technological haves and have-nots is exaggerated by the understanding and implementation of legal warfare. By contrast older weapons and strategies, such as blanket bombing

campaigns, appear “criminally blunt” (Smith 2002: 362). The ability to utilise PGMs alone, which to an extent are already seen as an older technology, creates an image that the U.S. are fighting in a cleaner, more legitimate or legal way than their counterparts. It could be argued that the U.S. is the only country in the world that is able to wage legal warfare on a large scale as they continue to set the standard, a standard that could only ever hope to be reached by a few of the most technologically advanced militaries in the world (Beier 2003: 422).

Smith (2002: 362) identifies a dilemma within the application of IHL framework. He argues that humanitarian laws have been “crucial in condemning atrocities, including sexual violence, associated with ethnic and other civil conflicts.” However, these types of crimes and conflicts would generally be associated with a low-tech, or a technological have-not, force or military. Such militaries often need to implement military strategies that are seen as outdated or barbaric in an attempt to gain some advantage. On the other hand, hi-tech states are rarely prosecuted. Smith concludes that if “hi-tech violence is shielded from prosecution, this may sap the moral force of the law and allow low-end offenders to paint themselves as victims of politicized proceedings” (Smith 2002: 362). Koh (2010) highlighted that the U.S. needs to follow “universal standards not double standards” and understands that doing so made the U.S. “stronger and safer”. The ability to control the legality of military action is almost as important as the technology itself. There would be little reason to developUCAV or PGM technology if there was not the legal context within which to legitimately implement them. This legal inequality is especially apparent in the International Criminal Court (ICC) Statute which is “weighted toward hi-tech states in that machete murder is more likely to be criminalized than a nuclear holocaust” (Smith 2002: 359). Currently, the ICC will not oppose modern warfare so long as civilian casualties are unintentional or indirect (Smith 2002: 359). Although setting the standard for legal warfare has created a context within which the U.S. is unlikely to be put under scrutiny, there is growing frustration and anger from those who wish to see international law applied equally to all states, not just those who do not possess advanced weapons technologies. If these laws are seen as biased or manipulated this could lead to diminishing confidence in the legitimacy of IHL.

Conclusion

The questions surrounding the laws of war and their relation to advanced weapons technologies are ongoing. While it can be argued that the Geneva Conventions are no longer applicable to modern warfare there has yet to be an alternate solution proposed that has been met with sufficient support. It is important to acknowledge that the current IHL framework is no longer sufficient to protect civilians

due to advancing weapons technology and the subsequent changing nature of warfare. The U.S. did not ratify API but abide by the standard of conduct outlined within the document as a matter of policy to maintain legitimacy. However, it can be argued that:

The United States [does not] ignore IHL; rather, they seek to reinterpret it in a manner that permits the pursuit (militarised or otherwise) of political agendas, even while claiming the reinterpretation to be legally valid (Hajjar 2006: 21).

The interpretations of international law, such as those put forward by the U.S., have been continually challenged. The UN has begun to call on the U.S. to justify its actions legally. However, there is little or no legal accountability for a state as influential and powerful as the U.S. except through normative restraint. The perception of legitimacy is becoming more important in a legal and a strategic sense as it has become clear that ‘winning the hearts and minds’ of the people is now vital to achieving military goals. Despite the questions raised about the legality of its actions, the U.S. shows no signs of stopping or even decreasing its use of UCAVs for lethal operations. The Obama Administration has stated that:

the rules that govern targeting do not turn on the type of weapons system used, and there is no prohibition under the laws of war on the use of technologically advanced weapons systems – such as pilotless aircraft or so-called smart bombs – so as they are employed in conformity with applicable laws of war (Vogel 2010: 117).

This has led to the conclusion that “the law of armed conflict is more than adequate to govern their [UCAVs] wartime deployment” (Vogel 2010: 117). Currently, the use of UCAVs has yet to be proven to breach IHL despite legal challenges over the use of assassinations, overwhelming force and discrimination. While it is important to attempt to limit violence using law it is also important to remember that by discussing a strategy, such as aerial bombing, using only a legal narrative it can oversimplify or even obscure the “moral choices” involved in such a destructive act (Smith 2002: 369). Jeffrey Gingras and Tomislavz Ruby (2000: 108) argue that “given the danger of collateral damage, these superfluous strikes “may have been legal, but [they were] not morally justifiable.” A military strategy may be deemed legal but it can still be condemned as immoral. The consequences of breaching ethical standards can be argued as comparable to violating IHL.

Chapter 5: Ethical Perspectives

“There has always been a tension between man’s desire to use violence for political purposes and his desire to restrain violence for ethical reasons”
(Ashraf 2009: 162).

Ethics are by nature ‘subjective and value-based’; the ethics of warfare are no exception and have, therefore, always been the subject of moral questioning (Ashraf 2009: 161). The morality of taking another life, whether it is in self defence, for land or power, or in the pursuit of democracy and freedom, has always been debated. New questions are now being considered as a result of advancing weapons technology and will be discussed in this chapter. One key debate asks if it is morally justifiable to kill without being in danger. UCAV operators are further from the battlefield than ever before and are in no personal danger. Moreover, is it acceptable, or does it weaken the moral conviction of the conflict, if one side is not willing to put its soldiers in danger? Further ethical debate analyses the role of weapons technology in a morally motivated conflict. Does a moral end justify the use of immoral strategies to achieve it? Is war becoming more acceptable to the public because of technology? Is conflict being prolonged to protect soldiers? As weapons technology becomes more widely available would symmetrical and, to a large extent, bloodless warfare resolve the underlying issues behind conflict? Carl von Clausewitz believed that “well-meaning attempts to avoid or minimize slaughter are a dangerous mistake; that war is not, and cannot be, user-friendly” (Enemark 2008: 204). In this case the continued development of weapons technology to lessen civilian casualties may lead to longer and more destructive wars in the future.

There are also moral dilemmas in regards to the continuation and direction of weapons research. Can it be morally acceptable to continue to develop a product that is only capable of causing harm? Or is it justifiable as by developing more discriminate weapons civilian lives could be saved? As more autonomous technology is developed there are also questions as to whether or not it is acceptable for a robot to decide if a human lives or dies. Is it morally repugnant that technology could ever make such a complex decision, or are autonomous robots the answer to the ethical dilemmas that are often confronted by soldiers by removing the possibility of a human error in judgement? While the ethical benefits of technology, such as increased discrimination between civilians and soldiers, are valuable there are still those who are arguing for caution:

For all that technology can do to improve human life, there is no reason at present to believe that it can solve ethical problems that have challenged humans for thousands of years, or to eliminate the fog of war (Kaag and Kaufman 2009: 602).

The introduction of new weapons technology and strategies means that longstanding moral standards need to be reevaluated and discussed, including the morality of conflict, the use of precision warfare and the increasingly autonomous nature of technology.

Humanitarian Warfare

Ethical warfare has historically been based on the theory of just war. This theory led to the development of two branches of the 'laws of war', *jus ad bellum* (just cause of war) and *jus in bello* (just conduct of war). Although not of legal status, these laws of war provide a moral basis on which the decisions regarding the causes of war and the conduct within the war can be measured. The laws are enforced by the concept of reciprocity, meaning that forces agree to abide by these guidelines as it benefits them if their enemy does the same (M. Schmitt 2008: 42). However, it has been argued that the just war doctrine has been undermined by the changing nature of warfare (Goldstein and Pevehouse 2006: 287). Asymmetrical warfare has put pressure on what was previously a relatively stable legal management of warfare (Kennedy 2006: 12). During asymmetric conflicts the force that does not possess a technological advantage may violate IHL to gain some advantage; this lessens the incentive to comply for all involved (M. Schmitt 2008: 42). Smith (2002: 358) identifies an increase in the use of procedural rules, as found in *jus in bello*, and the subsequent decline of rules for going to war, *jus ad bellum*. This increase is, in part, for practical reasons; often a breach of *jus ad bellum* laws is based on motives and planning making them harder to prove. On the other hand, upholding the laws of *jus in bello* is easier as there may be forensic evidence. The undermining of the just war theory is also due to ever changing interpretations of morality. Louis Henkin argues that reasons for conflict, especially intervention, are easy to fabricate as there can always be some sort of humanitarian grounds on which conflict can be justified (Smith 2002: 358). In relation to advancing weapons technology this is important as the "legal interpretations of ad bellum rules, and an expansive view of military necessity are coalescing in a regime of legal warfare that licenses hi-tech states to launch wars as long as their conduct is deemed just" (Smith 2002: 355). This means that states and forces that do not have such a thorough understanding of the law and do not possess advanced weaponry are perceived as acting illegally or immorally.

Humanitarian intervention is based on a perceived moral obligation to help fellow human beings who are suffering. In order to give this help, a state must intervene in another state despite the principle of sovereignty. Supporting the principle of sovereignty is the statist paradigm that argues “state leaders and citizens do not have moral responsibilities or obligations to aid those beyond their borders” (Wheeler 1997: 10). Statists argue that there is no moral right given to state leaders to intervene on behalf of mankind (Wheeler 1997: 10). However, since the early 1990s humanitarian intervention has been utilised as a legitimate justification for conflict and judged on moral criteria. Recent debate has focused on criteria derived from the just war theory (Pattison 2007: 569). According to James Pattison (2007: 569) criteria for just war include the following:

- 1) The number of violations of basic human rights is large enough to justify humanitarian intervention.
- 2) There is a reasonable prospect of successfully tackling the humanitarian crisis.
- 3) The use of force is the last resort.
- 4) The intervener is a legitimate authority or has been authorized by a legitimate authority (which is typically taken to mean the United Nations Security Council).
- 5) The intervener has the right intent.
- 6) The intervener uses means to conduct the war that are consistent with its humanitarian aim.

The most important of these criteria in relation to advancing weapons technology is that “the intervener uses means to conduct the war that are consistent with its humanitarian aim” (Pattison 2007: 569). This means that moral ends should be achieved through moral means. Moreover Kahn argues that:

a regime capable of targeting and destroying others with the push of a button, with no human intervention but only the operation of the ultimate hi-tech weapon, propels us well beyond the ethics of warfare. Such a deployment of force might be morally justified – it might be used to promote morally appropriate ends – but we cannot appeal to the morality of warfare to justify this mode of combat (Kahn 2002: 3).

If a conflict is justified based on humanitarian motivations then the strategies implemented within the conflict should also be humanitarian in nature. If the moral intent behind a conflict is brought into question it can lead to greater scrutiny of actions, causing ethical transgressions to be perceived as worse than they would have perhaps been otherwise (Enemark 2008: 204). The increase in asymmetrical warfare has the potential to bring into question any conflict that is justified by humanitarian motives, if a state can intervene without risk to its own force then this could lead to claims of neo-colonialism. As Kahn (2002: 7) asserts “[g]ood intentions are not enough.” On the other hand, it can be argued that we are witness to “a fortuitous coming together of technology and morality” (Zehfuss 2010: 5). This is due to the normative and legal pressure on states to abide by

humanitarian principles. As Zehfuss (2010: 5) argues “technology has ‘created *pressure* to be good by removing a possible excuse to be bad’.” If advancing weapons technologies are used humanely then they allow states to abide by humanitarian law to an extent previously unachievable; however, if they are not utilised humanely then the concept of humanitarian warfare will remain out of reach.

The most significant questions being asked are in relation to the lack of danger to intervening soldiers. Is there a moral right to kill when you yourself are not in danger? This is emphatically denied by just war theorist Michael Walzer who suggests that “you can’t kill unless you are prepared to die” (Owens 2003: 610). This argument is expanded by David Wetham, who states that “a whole new generation of weapons demonstrate a willingness to kill but not to die for a cause” (Sanderød 2009: 234). Therefore, UCAV and PGM technologies have contributed to the idea that it is acceptable to be willing to kill while not being in danger. Furthermore, Paul Kahn (2002: 4) argues that “without the imposition of mutual risk, warfare is not war at all.” On the other hand, Chris Thirtle acknowledges the ethical dilemma but argues for the use of UCAVs:

Is it right that you can hold your opponent at risk without any physical risk directly to yourself? That is a valid point, but there is another side of the argument.[...] Flying a Reaper I can turn up over a target area and choose the moment I strike. I can wait hours, days, weeks for the best moment to minimise the risk to those not involved in the conflict (Hopkins 2011a).

The increasing use of UCAV technology by the U.S. demonstrates a belief that the strategic advantages gained by the technology outweigh any moral dilemma for the operator.

Many ethical dilemmas have arisen from the ability to take lives, using new weapons technology, while not in danger.²¹ The most important of which is highlighted by David Luban (2007: 178) who argues that in a fully asymmetrical war killing uniformed troops is no more hazardous than killing civilians and, therefore, equally morally deplorable. Kahn (2002: 5) also argues this viewpoint stating that:

If combatants are no longer a threat, however, then they are no more appropriate targets than noncombatants. Both may be the victims of a repressive regime. To identify combatants as appropriate targets under these circumstances is not morally different from identifying the winners of a macabre lottery as the appropriate targets.

²¹ Further issues are discussed in more detail later in this chapter under the heading ‘The Effects of Distance’.

If operators are not participating in conflict but still taking lives it could be argued to be as the moral equivalent to murder. On the other hand, many would disagree with this assertion. Arguably there is a significant moral distinction due to the combatant's intention to cause harm. This question needs to be openly and publicly addressed as asymmetrical warfare is increasingly common in modern warfare and the risk to soldiers is lessening.

As a result of the ability to take lives while not in danger the question has been raised; does it show a lack of moral conviction if a state is willing to intervene but not at the cost of its own soldier's lives? There is concern that participating in conflict where there is little risk to soldiers is immoral even if the intention seems morally acceptable, such as humanitarian intervention (Owens 2003: 612). It can be argued that the lack of danger to soldiers takes away from the moral commitment made when participating in humanitarian intervention.

[Through the Kosovo conflict] not only did NATO blacken the idea of humanitarian intervention by equating it with zero casualties and aerial bombing, but the choice of means suggested that preventing genocidal atrocities was not worth the lives of a few Alliance troops (Smith 2002: 366).

As Kahn (2002: 2) argues, "riskless warfare, which increasingly characterizes U.S. military policy, pushes up against the limits of the traditional moral justification of combat." However, the COIN field manual calls for the U.S. military to assume "greater risk" showing a significant change in policy away from the riskless warfare that could be a consequence of continued weapons development (Fick and Nagl 2009: 43). These moral questions do not just apply to humanitarian intervention but all conflicts. The development of weapons technology and the subsequent asymmetrical warfare that has occurred raises significant moral issues in relation to humanitarian warfare that have yet to be resolved.

Precision Warfare

Precision weaponry still has a significant level of inaccuracy but can be described as 'precision' technology in comparison to unguided munitions. A PGM could land 10 metres from a target but still be within an acceptable range. Often distances of this amount will not have much of an effect as the blast radius ensures that the target is destroyed none the less. As Carl Conetta emphasises "[m]ost everything will be severely damaged, injured, destroyed, or killed within 20 meters of a 500-pound bomb blast and 35 meters of a 2000 lb [sic] blast" (Zehfuss 2010: 9). In the context of Afghanistan

this is highly significant as Taliban and Al Qaeda leaders have used populated areas to hide within. If these weapons were being used in the desert and did not hit the target directly then the only consequence is the waste of munitions (Zehfuss 2010: 7). However, in urban warfare such as that used during the war in Afghanistan a PGM that does not land on its target will most likely result in the loss of civilian life and property (Zehfuss 2010: 7). By using the term 'precision' it creates the perception that all munitions land 'precisely' on target. However, this is an exaggeration makes the use of PGMs in urban areas more acceptable as the use of imprecise munitions would be seen as immoral.

Civilian casualties within warfare are seen as inevitable and unavoidable. However, as the century has progressed there is an increasing loss of public support for any collateral damage during conflict (Beier 2003: 421). The development of advancing weapons technologies has created what can be described as a 'false impression' that zero collateral damage is possible (M. Schmitt 2009: 324). This would mean that any civilian casualties that do occur would be perceived as due to a lack of precautions. Patricia Owens (2003: 596) argues that this had led the U.S. and its allies to be cautious and describe any civilian casualties in the course of warfare as 'accidents'. This is significant as an accident does not allow for responsibility, or even criticism. In doing so civilian casualties are normalised and, therefore, made permissible (Owens 2003: 595). This contributes to the perception that moral means are being employed to achieve a humanitarian outcome. This is due to the perception that accidents are unavoidable and occur despite our best efforts (Owens 2003: 597).

There is no question that there have been civilian casualties during the war in Afghanistan. The U.S. claims that despite the use of aerial bombardment there have been limited casualties or collateral damage (Lippman 2002: 57-58). However, it has been argued that the use of UCAVs and the "high-tech, out-of-harms-way strategy" that they enable, has led to a large number of civilian deaths. In February 2010 surveillance from a UAV was used by military commanders who ordered a helicopter strike on a convoy believed to contain insurgents and weapons (Drew 2010b). This strike killed 23 Afghan civilians and wounded a further 12. In September 2010 a military investigation into the incident showed that the UAV operators played down two warnings about the presence of children, the pilots have since been disciplined for failing to adequately relay these warnings to the battle commanders (Drew 2010b). This incident and others like it have inflamed the tensions over civilian casualties. However, no one has claimed that the U.S. intentionally targets civilians; therefore, as these deaths are unintended the U.S. can label them as accidents, mistakes or errors (Lippman 2002: 58-59).

The U.S. tends to shift blame away from the consequences of its actions by highlighting the actions taken by Al Qaeda and the Taliban, providing reminders that it was not the U.S. that started the war but rather were provoked through acts of terrorism. This strategy lays the blame or liability of any civilian lives lost, even if it was U.S. soldiers or technology directly responsible, at the feet of Al Qaeda and the Taliban (Lippman 2002: 63; Owens 2003: 605). On the other hand, *New York Times* columnist Nicholas D. Kristof went as far as to claim that “despite the loss of civilian life the American intervention in Afghanistan was a supreme humanitarian gesture” (Lippman 2002: 63). Thereby, claiming that removing the Taliban from power was the most humanitarian option, even with the loss of some civilian lives, as it created the opportunity for better lives for all within Afghanistan. While civilian casualties are still abhorred, the lack of accountability in modern warfare means that these ‘accidents’ may become more acceptable in the future and less able to be held up for legal and ethical scrutiny.

The increasing use of precision bombing campaigns from both manned and unmanned planes has raised several ethical questions. Historically, soldiers have been seen as having a different ‘moral status’ than civilians. Soldiers take greater risks and the loss of civilian life was less morally acceptable than the life of a soldier who actively participated in the conflict. Just war theorists argue the Pentagon “has weakened, if not reversed, that assumption” (Smith 2002: 361). The U.S. government has continually developed technology to protect soldiers’ lives. This increasing concern for preserving soldiers’ lives counteracts casualty phobia and morally justifies strategies, such as the use ofUCAVs, despite the increased risk to civilians. However, protecting soldiers is not without controversy:

by removing what is perhaps the greatest restraint on the use of force – the possibility of soldiers dying – law and technology have given rise to the novel moral hazards of a “postmodern, risk-free, painless war (Smith 2002: 370).

This has inspired debate as to whether or not a bloodless war would actually achieve anything or if it merely prolongs conflicts and never sufficiently addresses the fundamental issues (Enemark 2008: 203). By using strategies that protect soldiers and make warfare more ‘humane’, such as bombing campaigns andUCAVs, the conflict can be prolonged (Meron 2000: 241). This can extend the suffering of the people that the intervention was meant to help (Meron 2000: 241).

Gingras and Ruby (2000: 111) state that “[c]ertain actions are simply wrong and must be avoided.” On the other hand, there is yet to be a universal morality to which every state adheres. Under this assumption, who decides what is acceptable and what is not? By providing an interpretation of IHL the U.S. are able to set the moral standard as there is an assumption that what is legal is moral or at least justifiable. Through this logic it can be argued that it is the U.S. government who determine right from wrong (Ezzatyar and Kabraji 2010). If it is powerful nations that are deciding what is moral and what is not who within society makes these decisions? Liberal citizens are becoming “mere ‘spectators’” of war showing a lack of engagement and participation in such an important decision made by their leaders (Owens 2003: 610). For the most part governments and leaders make moral judgements but on the rare occasion when there is substantial public outrage over an issue, the public can have an influence (Ezzatyar and Kabraji 2010). It should be noted that there has been little domestic outrage or protest over the use ofUCAV and precision technology as the protection this provides soldiers is welcomed by the majority of the U.S. public (Ezzatyar and Kabraji 2010). Once again the strategic use of assassinations by the U.S. is important as they are setting the moral standard to which other developed nations will conform. By carrying out such assassinations without judicial processes or sufficient authority Ezzatyar and Kabraji (2010) argue that such action “perpetuates the image that America is an insincere hegemon that devalues the lives of people in the region.” Although the U.S. is currently seen as morally driven this image could be eroded if their actions do not match the rhetoric of morality.

Threshold for War

The idea that the development of new weapons technology has the potential to lower the threshold for war creates an ethical dilemma (Sanderød 2009: 227). If the threshold were lowered it would mean that more conflicts could occur more frequently and with less justification. This is a dilemma as the development of weapons technology is thought to create more humanitarian warfare; however, if it is creating more violence then it is no longer ethically acceptable. Michael Ignatieff highlights this issue by stating that; “[t]he accuracy of new airborne weapons systems lowered – or appeared to lower – the political costs of using them. Clinton went to war [in Kosovo], believing that new technology would bring speedy, risk-free victory” (Sanderød 2009: 227). However, the ongoing nature of the wars in Afghanistan and Iraq has largely discredited the idea that the U.S. could engage in short, hi-tech conflicts (Hawkins 2006). The belief that new weapons technology could create fast, ‘clean’ wars is a temptation to engage in more conflicts. Previously, the loss of human life was a significant deterrent and set a high threshold for engaging in war. The effect of new weapons technology may mean that in

contemporary warfare it is the cost of time and resources that create a new threshold and restrain nations from engaging in warfare.

The Consequences of Distance

The use of weapons technology such as UCAVs has led Der Derian to argue that “there is a high risk that one learns how to kill but not take responsibility for it” (Owens 2003: 612). This is achieved by removing the operator from the battlefield so that there is a disconnection from the violence that they are participating in. This is not an entirely new concept. After the Kosovo war there was already concern over the depersonalisation of the strategies that were used. Smith (2002: 367) stated that “[t]he conduct of the [Kosovo] war also confirmed that old-fashioned chivalry had been eclipsed by the depersonalization and distance of modern technology and technical law.”

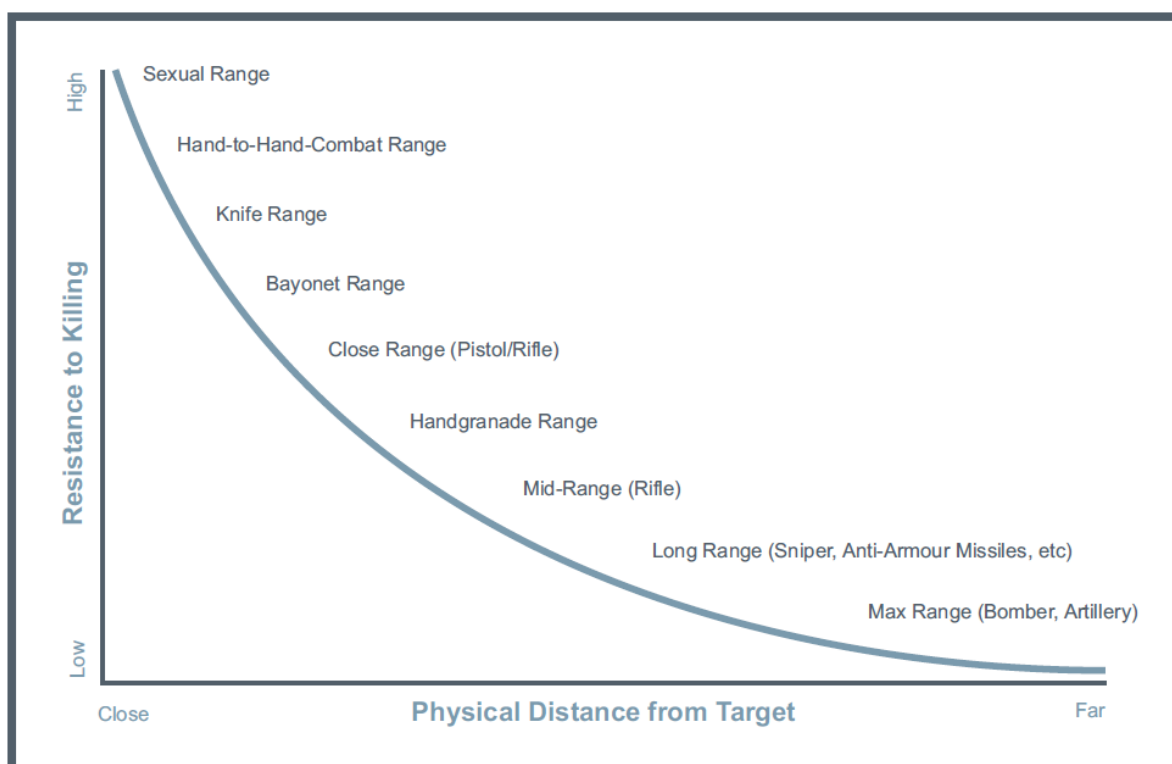
While UCAV operators are able to view the destruction caused by their actions they are removed from any danger and do not experience “the noise and smell of the battlefield” (Sanderød 2009: 232). It is further argued that as there is no longer a difference between a simulation and a live mission the operators will experience ‘alienation’ from the battlefield. This alienation will have ethical implications:

My claim is that distance, due to the characteristics and the increasing use of air power, has created and will create ethically challenging situations. The danger is that airmen put a mental distance between themselves and what happens on the ground and then let this distance influence their judgment (Sanderød 2009: 232).

This could have significant consequences as an operator, who is not on the battlefield, could choose targets that would be deemed unacceptable by someone present on the battlefield. The distance does not allow for the operator to feel the emotion of the victim nor experience the full extent of the consequences, although they can now view the aftermath. There are arguments against the claim of alienation. When asked if such conditions encourage a ‘Play Station’ mentality, Thirtle emphatically denied such claims and described the accusation as ‘insulting’ (Hopkins 2011a). Furthermore, Thirtle claimed that “one of [the operators] hardest jobs is not to get emotionally involved in the fight. They have to stay within the rules ... no matter how aware they are of what is going on on the ground” (Hopkins 2011a). He also stated that all of the RAF operators at the Creech Air Force Base are fighter pilots who have retrained to operate Reapers, however, it is now possible to train to be an operator

without any fighter pilot experience; this could exaggerate the issue of alienation from the battlefield. New operators may not have any experience of such an environment and, therefore, an incomplete understanding of the consequences of their actions.

Sanderød (2009: 233) states that “the physical distance corresponds to a mental distance and therefore has ethical implications.” Sanderød (2009: 233) demonstrated this argument clearly with this simple diagram;



While this diagram may be an oversimplification²², it illustrates clearly that there is a correlation between an increasing physical distance from the battlefield and a decreasing resistance to kill. It is ethically important that an operator is aware of the consequences of their actions as it is emotion and human judgement that are relied upon to make decisions in any given situation. While ethics are personal and are often based on culture and personal nature, it is important that emotions continue to contribute to decision making during conflict or previously unethical actions may become acceptable due to the distance weapons technology provides.

²² It must be noted that this diagram is based on data from WWII and UCAV operators now have a much clearer understanding of what is occurring on the battlefield due to advanced in camera and sensor technologies.

Autonomous Decision Making

As stated in a previous chapter UCAV technology is becoming more autonomous. As technology moves in this direction the moral consequences of allowing a robot to make a moral decision about life or death, are being considered. Moral decisions have, until now, always been made by humans, there has been no alternative. It is still perceived as an “unshakably human endeavour” due to the ever changing nature of such decisions (Kaag and Kaufman 2009: 590). However, there is growing support for the use of robots to make such decisions. Ronald Arkin (2009: 30) argues that this should not come as a surprise as artificial intelligence is surpassing the capabilities of humans in many ways. Robots can go places that we cannot and can make split second calculations at a speed that the human mind could not (Arkin 2009: 30). As previously argued it is often not the technology that malfunctions, rather it is the human element that has led to mistakes and failures:

One of the problems in Afghanistan was that sensors and aircrew were not usually the limiting factor in putting weapons on target. Rather, the reason for delay in the kill cycle was often human; the time necessary to make a decision based on a deluge of intelligence data. The problem was not a dearth of information – a problem in times past– but the need for commanders to sift through the abundance of information and rapidly arrive at an appropriate decision. One of the major reasons for this need to pause was the increasing necessity to ensure the target struck was the correct one and that minimal collateral damage would occur when it was hit (Meilinger 2009: 198).

Moreover, it is argued that:

before responding with lethal forces, robots can integrate more information from more sources far more quickly than a human can in real time. This information and data can arise from multiple remote sensors and intelligence (including human) sources, as part of the Army’s network-centric warfare concept and the concurrent development of the Global Information Grid. ‘Military systems (including weapons) now on the horizon will be too fast, too small, too numerous, and will create an environment too complex for humans to direct’ (Arkin 2009: 32).

Furthermore, it is claimed that due to a lack of emotion robots can conduct warfare effectively and could also be more humane than human soldiers (Arkin 2009: 30). Soldiers often act on emotions such as anger, fear, frustration and revenge; at times causing a disregard of IHL or military regulation (Arkin 2009: 30). There is also a lack of self-preservation as a motivation for action. They can be used in a self-sacrificing way by commanding officers without moral anguish (Arkin 2009: 31). Arkin (2009: 31) concludes that “[p]eople have not evolved to function in these conditions, but robots can be engineered to function well in them.” This belief in technology to solve problems has been described

by David Noble as the ‘religion of technology’ (Kaag and Kaufman 2009: 597). Noble describes the secular religion of technology as having the same goals as traditional religions such as the idea of “salvation by overcoming human imperfection and creating a new and better being (often an immortal one)” (Kaag and Kaufman 2009: 597). Policy makers are also investing a lot of faith in technology to solve ethical issues that arise in the ‘fog of war’ which often clouds or impedes decision making (Kaag and Kaufman 2009: 585).

Alternatively, there is strong and consistent opposition to robots being given the ability to make life and death decisions. Humans have the ability to make moral decisions based on “a unique interpretation of virtue” (Kaag and Kaufman 2009: 590). While humans by no means make the right decision every time, the choice of whether or not to take a life is less morally questionable when made by another human. The decision as to what and who legitimate targets are is often not straight forward but rather a “matter of degree” (Kaag and Kaufman 2009: 599). Kaag and Kaufman (2009: 599) argue that:

at the one end of the spectrum is the man firing the gun; at the other is end is a civilian playing no role in the attack. In between is a continuum of cases varying by the level of involvement or support being provided in the attack... It is unlikely that any set of rules can be prescribed in advance to determine when lethal force is permissible.

This can be forgotten by military strategists who are caught up in the capabilities of weapons technology and forget the humanity needed in such situations. Rather they perceive “fallibility [as] something to be fully overcome in the course of scientific investigation” (Kaag and Kaufman 2009: 589). Although Ronald Arkin (2009: 31) advocates in favour of the use of autonomous robots he acknowledges that many within his field of robotic development do not agree with him and raises some of the issues that the opposition have put forward. For example, who are held accountable if an autonomous robot makes an error in judgement? (Arkin 2009: 32). Could a robot refuse an order that it deems unethical? There is the possibility that this technology may be too complex to design, the intelligence necessary to discriminate targets may not yet be possible (Arkin 2009: 32). The effect on human soldiers should also be considered, they would be required to fight alongside a machine that the soldier will inevitably be replaced by (Arkin 2009: 32). The use of robots would also make ‘winning hearts and minds’ nearly impossible without the human element (Arkin 2009: 32). Finally the proliferation of such technology to other nations or terrorist organisations could have disastrous consequences (Arkin 2009: 32). Kaag and Kaufman (2009: 586) conclude that:

warfare must be regarded as a strictly human activity and that moral responsibility can never be transferred to the technology that is employed therein.

By developing more autonomous weapons and technology there is the possibility that these decisions have already begun to be made by machines. It is important to remember that while technology can aid in making ethical and moral decisions they cannot begin to make these decision for us as there are too many questions still unanswered.

Weapons Research

Jane Arrigo (2000: 302) states that the central moral question in weapons research is “[f]or what moral constraints on weapons research are we willing to lose a battle, a city, a war, the nation...?” This question needs to be answered by individual researchers and governments alike and the standard of what is acceptable adapts as new technology is developed and norms emerge.²³ The purpose of weapons is to harm others; however, it is argued that only through continued research will there be developments, such as more precise weaponry, that could save lives. These motives are often put forward as justifications for the continued development of weapons technology. Development of PGMs and other advancing technology is hard for ethicists to criticise as the reason for developing weapons capable of distinction between civilians and combatants is traditionally ethically motivated (Kaag and Kaufman 2009: 594). Richard De George (2007: 302) argues for continued weapons research as without such developments more civilian lives could be lost and further suffering inflicted, such research is a “moral imperative” if it can save lives²⁴. In fact, not doing so “would be to choose to accept less precise bombs that cause more collateral damage to innocent noncombatants. This violates the injunction not to harm noncombatants if at all possible” (De George 2007: 302). Furthermore, it is alleged that the U.S. should be attempting to attain the capability to engage in war with zero collateral damage and that technology is the way to attain this goal. Therefore, it is ethical to continue to develop technology to lessen civilian casualties (Maine et al.: 1). It is argued that countries that are developing or have such weaponry have a moral obligation not only to use it, despite the additional monetary cost, to spare lives but also to share the technology with other countries (De George 2007: 302, 05). Symmetrical warfare using advanced weapons technology has

²³ For example, creating weapons capable of mass destruction, such as nuclear capabilities, could be seen by a researcher as unethical; however, if such weapons are being created by other states or forces then the same researcher then could see it as necessary to obtain the technology to help to defend oneself and ones country. What has been seen by researchers and governments as acceptable in regards to weapons development has changed over time and perceptions of new technologies will inevitably evolve.

²⁴ De George puts forward several principles for the development of immunity for non-combatants during warfare, the most relevant of which is his *Principle of Morally Obligatory Smart Weapons Development* (De George 2007).

not yet been seen, there is an understandable hesitation to share technology that may one day be used by enemy forces (De George 2007: 305).

In contrast, it can be argued that weapons research is undertaken with the intention of causing harm and is, therefore, immoral as is any production of armaments (De George 2007: 302-3).²⁵ John Forge (2004: 538) gives the example of the inventor of scissors, while they have been used to harm people this was not the intention and, therefore, the inventor cannot be blamed. Weapons developers, however, know how the weapons will be utilised and must share in the responsibility of the destruction and loss of life. Creating technology, such as PGMS, has the potential to make war more acceptable to the public and in doing so increases the likelihood that war will occur. It could be argued therefore, that PGMs “should not be developed, and it is unethical to contribute to their development” (De George 2007: 304). Moreover, Kaag and Kaufman (2009: 587) argue that “PGM strikes can satisfy traditional ethical standards, but in so doing make us numb to additional ethical quandaries that accompany their use.” A further ethical issue raised by weapons research is the impact on social services and trust. The large amount of taxpayers’ money that is used to fund weapons research is not able to be accounted for to the public for security reasons (Arrigo 2000: 306). This secrecy leaves the public with no way to review the financial or moral implication of the research they are funding (Arrigo 2000: 302). This means that the only moral views that are expressed or accepted are from ‘insiders’ (Arrigo 2000: 307).²⁶ The sheer amount of money that is spent on weapons research also needs to be questioned morally as there are many other social and economic issues within the U.S. that need funding (Maine et al.: 9). This has also been argued by Scientists for Global Research that asserts:

there needs to be a major shift in both resources and emphasis away from military science and technology towards areas such as clean technology, research on non-violent conflict resolution, and science and technology for poverty alleviation (Maine et al.: 9).

This contention over funding is not a recent development, in 1996, to commemorate the 50th anniversary of the bombing of Hiroshima, school teacher Susan Crane disarmed a Trident D-5 missile. She argued that:

‘Each day thousands of children die around the world from hunger-related diseases. Still we build Trident missiles. These missiles are cared for in air-conditioned or heated

²⁵ While De George argues for continued weapons research he is referenced several times during the discussion of the immorality of weapons research due to the comprehensive nature of discussion in his work *Non-Combatant Immunity in an Age of High Tech Warfare*.

²⁶ This was previously questioned by ethicist Alasdair MacIntyre in 1994 (Arrigo 2000: 307).

rooms, never neglected, never homeless. We take better care of these weapons than our own children' (Arrigo 2000: 305).

In 1996 the U.S. DoD spent US\$39.4 billion on research and development (The White House 2011). It is estimated that in 2011 the DoD total spending on research and development will be US\$85.064 billion (The White House 2011). This number does not only apply to weapons research but gives an indication of how significantly spending on research and technology has increased in the last 15 years.

If weapons are to be used in self-defence it could be argued that the development of these weapons would be morally acceptable. Forge (2004: 536), however, argues that there is no such thing as a purely defensive weapon.²⁷ Internationally it is recognised that every state has the right to self defence. Therefore, developing the capabilities to enforce this right should also be permissible (De George 2007: 303). On the other hand, the U.S. would, at this time, have the capability to defend itself from attack from any other nation. De George (2007: 303) highlights that this could mean that the U.S. has "no justification for its continuing to develop and produce new armaments." Nevertheless, if the U.S. were to stop weapons development it may no longer have the capabilities to defend itself from new technologies developed by other states, therefore, providing the moral right to continue development. This rather circular logic shows the subjective nature of weapons research, the moral judgement of which is often a personal decision.

Conclusion

While the use of hi-tech weapons in war can be deemed legal, if they are not also widely viewed as moral then there can be condemnation from the public and the international community. There have always been moral questions in relation to warfare. However, the development of weapons has created previously unrealised situations. Is a soldier killing an enemy combatant while not in danger the moral equivalent to murder? Does a moral end justify immoral strategies? Does weapons technology save civilian lives or draw out conflicts and stop any resolution of the underlying issues? Is UCAV technology making war more acceptable to the public? All of these questions are still being debated. Any conclusions to such moral questioning are primarily based on personal judgement and, therefore, demonstrate the subjective nature of weapons research. Despite this, weapons technologies such as UCAVs are being implemented before these issues are fully resolved. While autonomous

²⁷ Forge argues that defensive weaponry could lead to the development of aggressive weaponry or if the weapon itself is used defensively the presence of the weapon could allow for more soldiers to take part in aggressive manoeuvres rather than defensive.

weaponry is seen as beneficial by some there are others who are cautioning that reliance on robots to make ethical decisions would be a mistake and that the decision to take human life needs to remain a purely human judgement. Caution is advised for policymakers and strategists who are reminded that technology cannot be relied upon to eliminate the 'fog of war' or solve ethical conundrums which have plagued war for hundreds of years. While some argue that weapons research is morally repugnant as its product can only destroy, others argue that is only through continued research that advances will be made that will save lives. The legitimacy of government action relies on being able to morally justify actions, however, the use of advancing weapons technology is increasingly being criticised as immoral. It is possible to mistake the ease of using technology with a sense that it is morally superior (Kaag and Kaufman 2009: 592). U.S. military leaders are mistaking the capability to achieve a goal with the moral permission to do so, this "reverses the Kantian ethical maxim the 'ought implies can' by insisting that 'can implies ought'" (Kaag and Kaufman 2009: 591).

There are many similarities and differences between the strategic, legal and ethical perceptions that have been discussed in this research. It was necessary to discuss and analyse each of these viewpoints separately to understand how they individually address the issues around advancing weapons technology. However, a thorough discussion of how these different positions interact is now required to understand the relationships between them.

Chapter 6: Discussion and Conclusion

On the 25th March, 2011, an RAF Reaper fired missiles at two vehicles that were understood to be carrying Taliban commanders (Hopkins 2011a). ISAF launched an investigation into the attack and in July 2011 it was confirmed that in addition to the Taliban leaders there were civilians inside the vehicles. As a result of this UCAV operation 4 civilians were killed and 2 were injured (Hopkins 2011a). This is the first time that the U.K. Ministry of Defence have confirmed that civilians were killed by an RAF UCAV in Afghanistan (Hopkins 2011a). This event is unfortunately not unique as similar civilian deaths have occurred throughout the war in Afghanistan. What it illustrates, however, is that ISAF forces continue to use advanced weapons technology within the conflict, at times with tragic results. Advancing weapons technology has given the ISAF the ability to respond to bullets with bombs. Resentment and anger have grown increasingly strong over the decade of war due to the accidental, but consistent, killing of Afghan civilians by foreign forces (Moore 2011; Sommerville 2011). The U.K. Ministry of Defence spokesperson has stated: “any incident involving civilian casualties is a matter of deep regret and we take every possible measure to avoid such incidents” (Hopkins 2011b).

The strategic, legal and ethical perspectives that have been identified in this thesis each cast different light upon the significance of developing weapons technology. However, overall there seems to be more harmony than discord. These are essentially interconnected fields and the issues around advancing weapons technology cannot be fully separated. The implementation of advancing weapons technology in Afghanistan has caused debates that are of equal significance within the legal, strategic and ethical perspectives. While the debates discussed within this research are interrelated, it is clear that a significant variety of debates can result from the development of a single weapons technology. The implementation of UCAV systems, for example, caused debate within the legal perspective as to the weapons adherence to the IHL. Strategically it is the capability of the weapon and how that can result in further advantage that is of upmost importance. On the other hand, the ethical perspective looks at the moral ramifications of killing without being in danger and continuing weapons research. These debates are related as they all stem from the implementation of advancing weapons technology and should be considered as of equal importance; however, each perspective discusses the issue with a different focus. Investigating the effects of advancing weapons technology from just one perspective would limit the debate and would not give a comprehensive understanding.

Influence and Interaction

The debates discussed within the three perspectives have significant distinctions between them. Each perspective has a unique focus and emphasis on what is significant or important within warfare and weapons development. During conflict an action could be justified as strategically valuable and lawful but not ethically acceptable. One example can be identified in the statement by General Mueller who described U.S. UCAV strikes as typically occurring “when troops were caught in firefights or the drones came across people who appeared to be planting homemade bombs, the biggest source of allied casualties” (Drew 2010a). Striking a combatant as they planted a bomb would be seen as strategically valuable as they prevent future casualties. It also demonstrates the enormous strategic benefits of maintaining surveillance on a suspect and the ability to strike without warning. Legally this would be a valid operation as they comply with the principles of proportionality, discrimination and military necessity.²⁸ However, ethically there are still issues that are not being addressed. As discussed in the previous chapter it can be argued that killing enemy combatants, using UCAVs while the operator is not within the conflict area, is the moral equivalent of murder. Also, the suspect is not given a chance to surrender. This is ethically questionable but can be considered legal as the combatant forfeited many legal protections by actively engaging in the conflict. These kinds of strikes show that the strategic advantages gained have so far outweighed any challenging ethical or legal arguments that have been put forward. Individually, the objections raised within each perspective are not influential enough to make the U.S. rethink its use of weapons technology within conflict. Objections would need to be supported from within all three perspectives to gain the level of credibility needed to instigate significant public interest. Without support from those within the field of strategy and law it is unlikely that any ethical objection will gain a level of public interest that is significant enough to impact on the deployment of UCAV or PGM technology.

That said, the development of COIN warfare represents recognition of the need to incorporate IHL and ethical concerns into contemporary military strategies. The increasingly similar goals of the three perspectives can be perceived as a “fortuitous coming together of technology and morality” (Zehfuss 2010: 5). As new technologies and strategies are utilised it is the public and military reaction to the event, either positive or negative, that creates new standards of legitimate and ethical practice. In order to inspire a positive reaction new technologies are often described using sympathetic humanitarian rhetoric, and as a consequence the legal, ethical and strategic perspectives are increasingly using the same humanitarian language. The use of humanitarian language to describe conflicts that utilise new weapons technology has been ethically questioned. The moral convictions behind actions, especially when deemed humanitarian, are called into question when the intervening

²⁸ Assuming the strike is not taking place in a heavily populated area or unnecessarily endangering civilians.

state prioritises the safety of its soldiers by using new weapons technology. This is arguably seen in Afghanistan as it has been claimed that ground troops would have been more effective, and caused fewer civilian deaths, than the deployment of advanced weapons systems (Zehfuss 2010: 11). COIN warfare attempts to combat this argument as it is made clear within the COIN manual that civilian lives are to be prioritised and discrimination used at all times:

The principles of discrimination in the use of force and proportionality in actions are important to counterinsurgents for practical reasons as well as for their ethical or moral implications [...] The use of discriminating, proportionate force as a mindset goes beyond the adherence to the rules of engagement. Proportionality and discrimination applied in COIN require leaders to ensure that their units employ the right tools correctly with mature discernment, good judgment and moral resolve (Departments of the Army and Navy 2006: 7-37).

On the other hand, it cannot be claimed that by implementing COIN warfare the ethical and strategic dilemmas raised by implementing new weapons technologies have been resolved. This research demonstrates that while COIN warfare acknowledges the need to incorporate legal and ethical concerns during modern warfare, there are still many questions and dilemmas that have yet to be adequately addressed.

Discrimination Norm

A clear example of how advanced weapons technologies have created a context, in which legal and ethical concerns have become central to strategic planning, can be seen in the increasing importance of the discrimination norm. During the Cold War there was little regard for discrimination due to a reliance on nuclear deterrence (Beier 2003: 418). As demonstrated in Hiroshima and Nagasaki, nuclear weapons do not distinguish between civilian and combatant. Since the end of the Cold War there has been a renaissance of discrimination values. There were several key factors that led to the re-emergence of the discrimination norm during the 1990s. The development of the global media meant that conflicts around the world could now be scrutinised as images of the destruction were broadcast worldwide. Several conflicts, such as those in Rwanda and Bosnia, emphasised the importance of human rights and need to protect innocent civilians. After witnessing such atrocities new weapons technologies, such as UAVs, UCAVs and PGMs, were embraced as they were seen as providing protection for civilians without the loss of soldiers lives. Civilian deaths still occur during conflict; however, they are increasingly referred to as 'accidents'. This helps to deter criticism or blame as accidents occur without fault. While precision weaponry may be saving civilian lives during

the war in Afghanistan there is growing resentment from family and friends of those civilians who have lost their lives, causing them to resent and resist NATO forces. This increasing resentment contributes to the mounting necessity for discrimination and bringing the humanitarian goals of strategy, law and ethics closer together. The development of COIN warfare was, to a large extent, to combat this growing hatred towards the foreign forces within Afghanistan. COIN warfare is significant in regards to the discrimination norm as it acknowledges that civilian casualties must be avoided whenever possible. COIN warfare has made the discrimination norm increasingly important to military strategists who could have previously prioritised a decisive victory over the protection of civilians. Indeed, with the development of COIN warfare these two concepts are irrefutably linked as it is necessary not just to defeat the Taliban but also to win the 'hearts and minds' of the Afghan people.

New weapons technologies have had a significant impact on the discrimination norm. PGMs and UCAVs can now identify and destroy combatant targets, sparing civilian casualties and property. However, this has created the perception that the U.S. military is in control of the destruction caused in warfare and that a civilian casualty free war may be possible. This is an exaggeration as the precision capabilities of PGMs and UCAVs are, at times, overstated. While termed 'precision' they are not as accurate as would be presumed when fighting in an urban setting where a matter of metres could mean the difference between hitting a combatant stronghold or a civilian household. M. Schmitt argues that new weapons, especially PGMs, are paradoxically, a real threat to and the best hope for, the future of the discrimination norm (Beier 2003: 421). M. Schmitt identifies the increasing threat of terrorist acts on civilians for low tech forces to gain some advantage during an asymmetrical conflict as a significant threat to the discrimination norm. On the other hand, precision weaponry is argued as the best hope for the future of the discrimination norm due to its ability to identify and destroy combatant targets and allow closer adherence to IHL and ethical standards.

The developments of new weapons technology and COIN warfare have challenged the foundation of IHLs - the Geneva Conventions. As discussed in Chapter 4, a new standard of legitimate practice during warfare has been developed. Weapons now legally adhere to the principle of discrimination to an extent that no previous weapons could have achieved, but this may no longer be enough to avoid criticism. As weapons technology advances the standards of legitimate practice are raised. Beier (2003: 411) identifies PGMs as setting a new standard of legitimacy in war as indiscriminate warfare is no longer perceived as acceptable. The increasing acceptance of PGMs clearly demonstrates how new weapons technology has influenced, and has been influenced by, the discrimination norm and other legal and ethical standards. Blanket bombing was once a widely accepted tactic during warfare

and was deemed legal so long as there was a legitimate military target and the operation was deemed proportional and necessary. However, the development of PGMs means that blanket bombing is now seen as barbaric. The law has not changed but what is accepted as proportional and necessary has evolved to incorporate the capabilities of new weapons technology. While IHL is still vital for the protection of civilians during warfare, the legitimate standard being set by those adhering to the discrimination norm goes far beyond any legal guidelines. Weapons technology has allowed for a closer adherence to the letter of the law but there are still ethical objections. The ability of new weapons technology to adhere closely to the norm of discrimination makes it difficult for ethicists to criticise precision weaponry, as increasing discrimination in weaponry is often ethically motivated. Nevertheless, it is debatable if the continued development of such weaponry can be morally justified. Weapons are created to destroy, so in this regard are morally repugnant. On the other hand, continued development has allowed for the creation of weaponry that adheres to the norm of discrimination to an extent not previously possible, saving lives as a consequence.

The war in Afghanistan and the development of COIN warfare has shown that despite the promise of short wars with lessening risk to civilians, advancing weapons technology can lead to longer conflicts. Historically wars have been won by the force with access to the most resources. However, within COIN warfare advanced weapons technology is not enough to win a conflict; rather intelligence gathering and humanitarian actions are seen as the keys to victory. While it has not been suggested that humans will no longer have a place on the battlefield, the goal of bloodless war has been seen as an ideal to work towards by some. Such conflicts could be in danger of not addressing the underlying issues and therefore never definitively resolve the conflict (Enemark 2008: 203). The inability of technology to solve humanitarian issues was demonstrated in the war in Afghanistan by the need for COIN warfare. This shows that while technology will play a significant role in future conflicts, it is important that hi-tech states do not rely too heavily on this one aspect of warfare.

Conclusion

The three perspectives discussed within this thesis have allowed for discussion of debates that have arisen as a result of advancing weapons technology. The strategic perspective, discussed in chapter 3, focuses upon significant strategic benefits gained by implementing UCAV and PGM technology. While there are strategic arguments against using UCAV technology, such as the mistrust of new technology by some in the military, the finite amount of bandwidth over battlefields and the loss of cultural identity for fighter pilots, such arguments are not persuasive enough to slow down the

development or implementation of weapons technology. Like all aircraft there are, at times, mechanical malfunctions. However, the majority of errors reported have been caused by human error; such as through the misinterpretation of information or poor intelligence. UCAV technology provides manoeuvres that were previously not possible. Operators have the ability to provide long term surveillance on a target and strike without warning after waiting for the optimal moment. They can also hover and fly slowly over a battlefield providing 'real time' surveillance. Previously such manoeuvres would have put the pilot in danger and would not have been attempted. Both UCAV and PGM technology are cost effective compared to other available weapons systems of similar capabilities.

The loss of civilian life is understood by many to have negative strategic consequences. The development of precision technology can arguably decrease the risk to civilians during conflicts. This is strategically advantageous as resentment for civilian deaths has led to anger and frustration at foreign forces in Afghanistan. Such animosity makes it harder for the ISAF to reach its goal of a stable and democratic Afghanistan. However, it can also be argued that a high civilian body count is shocking and can force a swift resolution to conflict to avoid further tragedy (C. S. Gray 2005b: 163). Despite the development of precision technology, and attempts to limit the amount of force being used, anger and frustration from within Afghanistan is growing as civilian deaths continue.

New weapons technology has had a significant impact on the face of warfare, the most relevant of which are the increase of technological asymmetry and the development of COIN warfare. Conflicts have become increasingly asymmetrical as new weapons technology provides more strategic advantages to technological 'have' militaries. These advantages have not led to a swift victory as the war in Afghanistan was not a traditional war fought between two armies. The Taliban strategies made the development of COIN warfare vital to effectively combat the insurgency. Key factors of COIN warfare have been added by advancing weapons technology. Intelligence gathering is vital to carry out a successful COIN operation. Advancing weapons technology gives the U.S. and ISAF the ability to process and react to information quickly, while impeding their enemies' ability to do the same (M. Schmitt 2008: 8).

The legal perspective, discussed in chapter 4, focuses upon the effect of advancing weapons technology on IHL. The Geneva Conventions are still considered the basis of international law but are increasingly challenged by the new strategic capabilities of weapons technology and the changing face of warfare. Discussion of the key principles of proportionality, discrimination and necessity show

that advancing weapons technology is able to comply with these laws more definitively than any previous weapons. New standards of legitimate practice have caused U.S. commanders to go above and beyond the letter of the law to protect civilian lives. These standards are currently only enforced by normative restraint as there is not yet a governing body capable of holding states accountable. Despite this the ISAF and especially U.S. forces have been criticised for the use of UCAVs. This is due to the use of UCAVs within Pakistan, the lack of accountability and the CIA operating UCAVs rather than military personal. The U.N. has called for more transparency and accountability. There have been some calls for the Geneva Conventions to be put aside and new standards to be put in place; however, no significant proposals for how this would be achieved have been put forward.

Finally, as shown in chapter 5, there are many ethical debates that have become prominent due to the development of weapons technology. Aspects of humanitarian warfare have been questioned within the ethical perspective. The most controversial debate questions whether it is ethically acceptable to kill while not in danger. Moreover, intervening in a conflict without endangering soldiers but risking civilian lives demeans any claim of acting out of a moral duty. A UCAV operator is removed from the battlefield creating a mental and ethical distance between operator and victim. Further debates are centred on the capabilities of the weaponry. For example, should robots become more autonomous and be able to take human life without a human making the decision? While this is seen as morally repugnant by some it is also argued that robots can process information more effectively and could make decisions without emotion. What weapons technology is able to achieve depends upon weapons researchers and developers. While this can be perceived as an unethical endeavour it can also be argued as an ethical obligation. Further development of weapons technology could result in technology that will discriminate between combatants and civilians more accurately.

Taken as a whole these varied debates show that the renaissance of discrimination values has led to the need to incorporate legal and ethical consideration into military strategy. This is demonstrated in the development of COIN warfare which prioritises civilian life and the minimal use of force. New weapons technology has helped the U.S. military achieve a level of discrimination during the war in Afghanistan that was not previously possible. Discrimination is a principle that is supported by both legal and ethical arguments. The development of the discrimination norm is the most significant consequence of new weapons development within the fields of strategy, law and ethics.

As yet, there has been no objection to the use of new weapons technology that has had any significant traction. Criticism of military technology cannot keep up with developing technology due to the

secrecy of the military. There cannot be criticism of technology if it is not known to exist, it is also hard to criticise technology that has already been successfully implemented. Legal and ethical norms help to create accountability for weapons strategies that are implemented within conflict. However, with weapons development occurring so rapidly there is often no precedent for the use of a weapon nor the opportunity to discuss the impact of such technology before it is implemented. It would be increasingly difficult to stop the U.S. military usingUCAV technology. Since its implementation in the war in AfghanistanUCAV technology has had a significant influence on the conflict. It is unlikely the U.S. military would willingly forgo utilising such a valuable resource, even if more substantial objections came to light. Many of the objections that have been put forward are subjective or ambiguous; often criticisms are ignored as a minority voice or dismissed as one interpretation of what are complex issues. Such issues are often easier to understand in hindsight and we can only hope that it will not be future generations who will suffer from a lack of current understanding or forethought. Currently there seems to be few limitations to weapons development apart from the need for discrimination. At the minimum the incorporation of legal and ethical standards into military doctrine, as seen by the implementation of COIN warfare, needs to be maintained and pursued further to develop more humanitarian warfare.

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