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The Morality of Employing Remotely Piloted Weapon Systems in Combat

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Some question the morality of employing remotely piloted weapon systems in combat. This paper claims the use of these systems in combat is moral when appropriately designed and when used effectively, with restraint, and when prudent. To do so, the term remotely piloted weapon system is explained to ensure common understanding, and the perspectives of utilitarianism, Just War Theory, pacifism, and realism are evaluated to justify the claim. With the exception of pacifism, each of these perspectives shows justification for the employment of remotely piloted weapon systems. Finally, this paper presents five considerations for the fielding of new or future remotely piloted weapon systems. These include: (1) these systems should not evolve to become completely autonomous systems; (2) these systems will continue to require the ability to strike targets with increased accuracy; (3) accurate and timely intelligence support is integral to the use of these systems; (4) the public should be educated about these systems, and the term unmanned should not be used whenever a weapon system is actually controlled or piloted by people; and (5) since discretion and restraint are factors in using these systems, five filters are offered to guide one's thinking.

The Morality of Employing Remotely Piloted Weapon Systems in Combat

The technological overmatch of U.S. conventional forces assures the perpetuity of American dominance of global battlespace for the foreseeable future.

—G. K. Cunningham[1]

Even though the United States remains the only superpower able to dominate world affairs with exceptional diplomatic, informational, military, and economic instruments of power, the United States understands there are those who would like to see this status change. Who are they? They are both state and non-state actors who want to share in or change the current balance of power. These actors recognize that the United States—a country that spends more on its defense budget than the next 13 countries combined[2]—takes advantage of cutting-edge technology, world-renown design capability, and manufacturing prowess. This enables the United States to acquire and sustain a distinct advantage in the conduct of war by carrying out precision attacks with less perceived risk to the United States, its allies, or coalition partners. Clearly, the development of remotely piloted aircraft, low observable or stealth technologies, and sound tactics, techniques, and procedures for their employment have enabled the United States' military to effectively and efficiently put weapons on enemy targets. Furthermore, as this is being written, the military and the industrial complex continue to look into the feasibility of fielding even more remotely piloted weapon systems.

This paper examines the morality of employing remotely piloted weapon systems in combat and argues that their use is a moral means in which to fight when appropriately designed and when used effectively, with restraint, and when prudent. In doing so, the term remotely piloted weapon system is explained to ensure common

understanding. Then, this paper evaluates four perspectives to justify the claim that remotely piloted weapon systems are a moral means to employ in combat. Two perspectives from which to gauge the ethics of remotely piloted weapon systems involve utilitarianism and Just War Theory. Although the other two perspectives, pacifism and realism, do not contribute deeply to the dialogue, they will receive consideration as they are recognized traditions of thought on the ethics of war and peace. As one quickly determines, the use of remotely piloted weapon systems in combat is justifiable from three of the four viewpoints, thereby providing a wide base of moral support. Finally, this paper presents considerations for the fielding of new or future remotely piloted weapon systems.

Remotely Piloted Weapon Systems

If one were asked what a remotely piloted weapon system is, he or she would likely refer to a term such as drone, unmanned aerial vehicle (UAV), unmanned aircraft, unmanned aircraft system (UAS), and so on. Unfortunately, these terms can misrepresent what is actually meant when the general public and media are involved. In fact, the term "unmanned" is defined by *Dictionary.com* as "without the physical presence of people in control,"[3] which can lead some, especially those in the general public, to think the United States does not have people controlling UAVs and UASs. Likewise, in 2009, General Fraser, Vice Chief of Staff of the United States Air Force (USAF), said, "I think it's certainly worth emphasizing that unmanned systems are unmanned in name only."[4] Although Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, recognizes the term unmanned aircraft system and defines it as "that system whose components include the necessary equipment, network, and personnel to control an unmanned aircraft,"[5] the general public

and media do not have reason to refer to or know about this document. This misunderstanding of terms is one of the reasons the USAF now prefers the term remotely piloted aircraft (RPA). But, this term in not specific enough as it includes systems that employ weapons as well as those that do not employ weapons. Therefore, the term remotely piloted weapon system is used throughout this paper to represent the subset of present and future RPAs that have accurate weapons on board and whose weapons are used to conduct strikes in combat.

The possibilities for remotely piloted weapon systems are numerous. A couple that come to mind include remotely piloted bombers and tanks. A new bomber has been a topic of discussion by the USAF for a number of years. One of the possibilities could include a bomber that is capable of being either remotely piloted or piloted from onboard in the traditional sense. Now that remotely piloted weapon systems such as the MQ-1 Predator and MQ-9 Reaper have shown their worth in conflict, a remotely piloted bomber might make logical sense, especially for missions involving conventional payloads.

The British defense company, BAE Systems PLC, developed a remote controlled armored vehicle that is similar to a tank and is known as the Black Knight.[6] The Black Knight "can travel at the same speed as main battle tanks," has many of the same automotive parts found in a Bradley Fighting Vehicle, can be airlifted by a C-130 transport aircraft, and is armed by a 30 millimeter cannon and a 7.62 millimeter machine gun.[7] It is controlled from a command center or can "be operated by a Dismounted Control Device (DCD), which is essentially a large remote control."[8] Additionally, on July 14, 2010, Howe and Howe Technologies, Inc. exhibited a prototype remotely controlled

ground vehicle called the Ripsaw at Aberdeen Providing Grounds.[9] Touted as "the world's fastest dual tracked vehicle," the Ripsaw can serve as an "all-terrain weapons platform."[10] Although it does not fit into the definition of a remotely piloted weapon system presented earlier, the Defense Advanced Research Project Agency is developing the anti-submarine warfare continuous trail unmanned vessel.[11] This is an unmanned vessel to track quiet diesel electric submarines over thousands of kilometers of range and months of endurance.[12] As one can imagine, these are but a few of the potential applications for remotely piloted weapon systems.

<div align="center">Various Perspectives and Moral Considerations</div>

According to Brian Orend in *The Stanford Encyclopedia of Philosophy*, Just War Theory, pacifism, and realism are traditions of thought that dominate the ethics of war and peace.[13] Each should be considered in gauging the morality of employing remotely piloted weapon systems in combat. Additionally, even though Brian Orend thinks "very few theories on the ethics of war succeed in resisting ultimate classification into one of these traditions, he acknowledges there may be other perspectives.[14] Utilitarianism is another perspective worth consideration.

<u>Utilitarianism</u>

Utilitarianism is about providing the most happiness for the largest proportion of the population. Therefore, one could argue that employing remotely piloted weapon systems in combat ensures the majority of the United States' population remains happy because it puts fewer of their sons and daughters at direct risk of being killed or injured while still attaining political objectives through violence. Of course, this discussion extends to more than the happiness of the United States' population.

<div align="center">4</div>

When the United States uses remotely piloted weapon systems in combat, the noncombatants among and around our adversary benefit, too. How? The United States uses precise weapons on its remotely piloted weapon systems that restrict collateral damage by design and by how they are employed. For instance, the use of remotely piloted weapon systems with precision-guided munitions (PGM) means the target—perhaps key enemy command and control nodes or terrorist planning cells—is destroyed with less, if any, collateral damage than general purpose munitions. One would think this type of warfare would make the enemy's noncombatants happier since less people are killed or put in harm's way. Nevertheless, there is another perspective regarding the use of remotely piloted weapon systems.

Just War Theory

Just war teaching is based on tradition—a reasonable set of core principles—that has matured over time, that is still maturing in response to the dynamic circumstances and nature of war, and that provides "guidance to our thinking about war."[15] Furthermore, Just War Theory is "probably the most influential perspective on the ethics of war and peace," and it consists of three parts.[16] These parts include *jus ad bellum*, which concerns the justice of, or reasons for, going to war; *jus in bello*, which refers to just and fair conduct and means used in war; and *jus post bellum*, which deals with the justice of war terminations and peace agreements. Although each of these parts is important, this paper will only examine *jus in bello* because the use of remotely piloted weapon systems is a means of conducting combat operations during the course of war.

In accordance with Brian Orend in *The Stanford Encyclopedia of Philosophy*, military commanders, officers, and soldiers who plan and execute war are primarily responsible for complying with the *jus in bello* rules.[17] Certainly, *jus in bello* helps one to

distinguish right from wrong in fighting a war. As he espouses, if commanders, officers, and soldiers do not comply with *jus in bello* norms, these personnel may be held accountable and face trial for war crimes.[18] Although extremely important, one should not fear this tremendous responsibility as just war teachings are codified in several ways, to include the law of armed conflict (LOAC) as well as international humanitarian and customary laws and treaties, such as The Geneva Conventions. With this background, *jus in bello* is examined in more detail.

There are two types of *jus in bello*, internal and external. Internal *jus in bello* concerns "the rules that an agent [state] should follow in connection with its own soldiers and citizens" while fighting against an external enemy."[19] These internal rules basically stipulate that a state, even though involved in a war, must "still respect the human rights of its own citizens as best it can during the crises."[20] Several of the internal issues which surface include conscription, press censorship, curtailing traditional civil liberties, due process protections, cancelling or delaying elections, and questions about the consequences of disobedience in the military if individuals believe the war is unjust.[21] External *jus in bello* refers to the rules a state "should follow in connection with the opposition's soldiers and citizens."[22] Although internal *jus in bello* issues are important, they are outside the scope of this paper. Moreover, since the use of remotely piloted weapon systems entails how the United States fights its adversary and its armed forces, this paper will speak to external *jus in bello*. The next section describes the six external *jus in bello* rules.

Rule 1: Discrimination and Noncombatant Immunity

The requirement of discrimination and noncombatant immunity is the most important rule, and it is codified within the international LOAC.[23] In fact, the war

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convention, which establishes "the duties of belligerent states, of army commanders, and of individual soldiers with reference to the conduct of hostilities,"[24] consists of two principles that apply to this requirement. The first principle says "soldiers are subject to attack at any time (unless they are wounded or captured)" once war begins.[25] The second principle contends "that noncombatants cannot be attacked at any time," and "they can never be the objects or the targets of military activity."[26] Therefore, when combatants aim at a target, they must discriminate between noncombatants, which are "morally immune from direct and intentional attack, and those legitimate military, political, and industrial targets involved in rights-violating harm."[27] Furthermore, as exhibited in customary international humanitarian law, discrimination also applies to the sparing of cultural property. As a result, one must take precautions to avoid damaging "buildings related to religion, art, science, education or charitable purposes and historic monuments unless they are military objectives."[28] One's ability to comply with this rule is strengthened by using accurate weaponry and applying discrimination when targeting enemy personnel and facilities.

Rule 2: Proportionality

The rule of proportionality requires that the amount of destruction caused be proportionate to the military value of the target. In other words, one is required to ensure that the appropriate amount of force is used when striking a legitimate target. Clearly, there is no definitive way to determine what is proportional and what is not in the eyes of the belligerents and international observers. Nevertheless, Michael Walzer, author of *Just and Unjust Wars: A Moral Argument With Historical Illustrations,* notes that this rule intends to prevent "excessive harm" and "purposeless and wanton violence."[29] For example, "do not squash a squirrel with a tank, or swat a fly with a cannon."[30]

Rule 3: Prohibited Weapons

One cannot use weapons prohibited by international law. Indeed, many treaties forbid the use of chemical and biological weapons. Additionally, although not prohibited, nuclear weapons employment would attract much negative international attention[31] and possibly violate Rule 2. Of course, each of these weapons has something in common; their employment would almost certainly violate Rule 1.

Rule 4: Benevolent Quarantine for Prisoners of War (POW)

Enemy combatants who surrender and become captives cease being a lethal threat; are no longer engaged in combat; must not be killed, starved, raped, tortured, or experimented on; and are thereby authorized quarantine per The Geneva Conventions away from the front lines of the battlefield until the war ends.[32] The more controversial issue has to do with the detainment and aggressive questioning of unlawful enemy combatants,[33] such as terrorist suspects. In *The Morality of War*, Brian Orend says the issue is whether they deserve the same treatment as state captives.[34] He said, "If soldiers fighting for an unjust cause deserve this treatment, then surely do terrorists—whose method, if not the cause, is likewise unjust."[35]

Rule 5: Ban on Means Evil in Themselves

Combatants may not use weapons or methods considered "evil in themselves."[36] This includes genocide or ethnic cleansing, mass rape campaigns, employing poison or "treachery (like disguising soldiers to look like the Red Cross)," forcing captured combatants "to fight against their own side," and utilizing "weapons whose effects cannot be controlled."[37]

Rule 6: No Reprisals

Even though reprisals have occurred in the past and are often threatened during wartime, LOAC does not permit reprisals.[38] What are reprisals? "A reprisal is when country A violates *jus in bello* in war with country B. Country B then retaliates with its own violation of *jus in bello*, seeking to chasten A into obeying the rules."[39]

With the exception of the benevolent quarantine for POWs and no reprisals, all of the aforementioned rules relate to the use of remotely piloted weapon systems. Therefore, how does the United States employment of remotely piloted weapon systems adhere to the applicable *jus in bello* rules?

The United States adheres with *the jus in bello* rules while using remotely piloted weapon systems in many ways. First, the United States does not put weapons that violate international law on remotely piloted weapon systems or piloted weapon systems. Second, the United States is discriminate in its use of remotely piloted weapon systems because these systems involve the use of accurate weaponry such as PGMs, and people—in particular, military members—are operating and controlling the employment of these systems. In their employment, the United States is careful to ensure that the targets attacked fulfill the concept of militarily necessity, which will be explained in subsequent paragraphs. Third, although proportionality can be difficult to measure, particularly when people's lives are at risk, the United States does its best to ensure what is gained through the use of remotely piloted weapon systems is proportionate to the damage caused. Fourth, remotely piloted weapon systems are not "evil in themselves" because their effects are designed to be concentrated on the intended target with minimal, if any, collateral damage. As stated earlier, remotely piloted weapon systems employ precise weaponry. The following example is illustrative.

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"Since the U.S. drone [a remotely piloted weapon system] campaign in Pakistan began in 2004, 84-85 percent of those killed were reported to be militants, 6-8 percent were reported to be civilians, and 7-9 percent remain 'unknown.'"[40] Although this shows that the United States takes great care with the *jus in bello* rules while using remotely piloted weapon systems, one can explore further.

The ability to minimize collateral damage brings the use of remotely piloted weapon systems into compliance with the proportionality rule as long as combatants practice restraint by maintaining a proper concept of military necessity. Michael Schmitt in the *Virginia Journal of International Law* states, "no principle is more central to international humanitarian law (IHL), nor more misunderstood, than that of military necessity. It has been proffered both to justify horrendous abuses during armed conflicts and to impose impractical and dangerous restrictions on those who fight."[41] Nevertheless, even though one may suspect that military necessity is somewhat open to interpretation, there are some strong guidelines.

Nobuo Hayashi, a researcher with the International Peace Research Institute in Oslo, reasons that military necessity has four requirements.[42] First, the measure must primarily serve a specific military purpose.[43] Second, the measure must be necessary to the attainment of that military purpose.[44] Moreover, he says the measure cannot be considered required unless it meets the following criteria: the measure is "materially relevant to the attainment of the military purpose," the selected measure is the least injurious of those materially available, and the injury that the measure would cause is "not disproportionate to the gain that it would achieve."[45] Third, the military purpose must conform to IHL, which is a set of rules that "protects persons who are not or are no

longer participating in the hostilities and restricts the means and methods of warfare."[46] Fourth, the proposed measure must comply with IHL.[47] As one can see, Nobuo Hayashi provides clarity for military necessity. By reviewing another's view on military necessity, one gains an even better appreciation of its true meaning.

Asa Kasher and Amos Yadlin in "Military Ethics of Fighting Terror: Principles," explain the principle of military necessity in the fight against terrorism. They believe that military acts and activities against terror are appropriate only if conducted in accordance with five conditions.[48] First, the purpose condition says "the act or activity is taken in the fulfillment of the basic duty of the state to defend its citizens from terror acts and activities."[49] Second, the relative effectiveness condition maintains that "any alternative act or activity (including refraining from any act or activity, respectively) would expose the lives and well being of the citizens of the state, including its combatants, to greater danger."[50] Third, the minimizing collateral damage condition requires one to carry out the act or activity in a manner that "protects human life and dignity by minimizing collateral damage to individuals not directly involved in acts or activities of terror."[51] Fourth, the proportionality condition requires one to comply with the *jus in bello* rule of proportionality. Fifth, the fairness condition says the act or activity can be applied universally, meaning others could justify carrying out "parallel acts or parallel activities in all parallel situations."[52] Of these conditions, all apply to the use of remotely piloted weapon systems except for the purpose condition, which is again more closely tied to *jus ad bellum*. Furthermore, the requirements Nobuo Hayashi proposes correlate nicely with these. As a result, an examination of how the use of remotely piloted weapon

systems is consistent with all of Asa Kasher and Amos Yadlin's conditions regarding military necessity, except for the purpose condition, is in order.

The use of remotely piloted weapon systems satisfies the condition of relative effectiveness. As one may recall, with the use of remotely piloted weapon systems, the friendly combatant is normally at a significant distance from the enemy combatant, which usually implies increased safety for the friendly combatant. Additionally, if the advantage offered by distance was not used, it could mean increased danger for the friendly combatant and therefore inconsistent with relative effectiveness. Besides, one should take into account that fewer noncombatant casualties accompany the friendly combatant's safety since precise weaponry is employed. Now, how does the employment of remotely piloted weapon systems satisfy other conditions?

The use of remotely piloted weapon systems also satisfies the conditions of proportionality, minimizing collateral damage, and fairness. As discussed earlier, proportionality and minimization of collateral damage are elements of planning for the use of remotely piloted weapon systems, and the employment of PGMs assists in this effort. As for fairness, the use of remotely piloted weapon systems is discriminate when used properly—particularly with good, current, and accurate intelligence—and should be viewed as fair universally. Furthermore, if others have the technology and ambition to use remotely piloted weapon systems as the United States does, it should also be considered acceptable for them as long as they follow *jus in bello* rules and comply with international law, customs, and norms. As one can see, the use of remotely piloted weapon systems meets the conditions of military necessity as well. Nevertheless, one

can delve a little deeper into Just War Theory by looking at the principle of double effect.

Double effect is closely linked to the minimization of collateral damage and proportionality. This principle shows that it is acceptable to execute a military act that is likely to result in the deaths of noncombatants, provided four conditions are satisfied. First, "the intended action must be a legitimate act of war."[53] Second, "the direct, intended result of the action must be morally acceptable."[54] Third, "the foreseeable, regrettable result of the action must be intended; it must not be the means of achieving the intended result."[55] Fourth, "the intended result must be sufficiently important to outweigh the unintended, morally regrettable result."[56] While the first, second, and fourth conditions are easily understood, the third condition needs further examination.

Michael Walzer proposed that the third condition be reworded. He said it should read: "The intention of the actor is good, that is, he aims narrowly at the acceptable effect; the evil effect is not one of his ends, nor is it a means to his ends, and, aware of the evil involved, he seeks to minimize it, accepting costs to himself."[57] He suggests that the combatant should accept more personal risk to ensure the evil effect of civilian casualties is minimized.[58] Meanwhile, he acknowledges that there are limits to the risks that one can ask of combatants, that war puts civilians in danger, and that the "absolute rule against attacking civilians does not apply."[59] He contends that it is hard to figure out how far combatants must go in trying to prevent civilian casualties in pursuing legitimate military operations; that the permissible degree of risk will vary based on several factors, to include the value of the target, the urgency, and the available technology; and that it is best "to simply say that civilians have a right that 'due care' be taken."[60] Certainly, the

United States takes "due care" in the operations planning and execution process and the employment of remotely piloted weapon systems.[61] To not practice "due care" would go against most Americans' value of self, implying it would be viewed as reckless or against one's sense of what is right and wrong, and brings with it the great cost of lost support at home and within the international community, and perhaps among the enemy's civilian populace. Again, this does not imply that accidents do not happen. However, the use of remotely piloted weapon systems offers a way to fight in conflicts or war while adhering to the *jus in bello* rules.

As executed by the United States, the use of remotely piloted weapon systems aims to precisely strike the planned target with no or limited civilian casualties. In those cases where it is foreseeable that the use of remotely piloted weapon systems could result in some civilian casualties, one can look to the principle of double effect. Thus, when used under the proper circumstances and with military necessity, the use of remotely piloted weapon systems is consistent with all of the double effect conditions. Without a doubt, the United States military services' manuals regarding targeting and LOAC lend even more credibility to this discussion.

The United States Army, Navy, Marines, Coast Guard, and Air Force refer to the principle of humanity. For example, with regard to permissible objects of attack or bombardment, the Department of the Army Field Manual 27-10 says the "loss of life and damage to property incidental to attacks must not be excessive in relation to the concrete and direct military advantage expected to be gained."[62] *The Commander's Handbook on the Law of Naval Operations* states, "It is not unlawful to cause incidental injury to civilians, or collateral damage to civilian objects, during an attack upon a

legitimate military objective" and "the anticipated incidental injury or collateral damage must not, however, be excessive in light of the military advantage expected to be gained."[63] Furthermore, the Air Force Judge Advocate General School contends that the principle of humanity "requires all feasible precautions, taking into account military and humanitarian considerations, to keep civilian casualties and civilian property damage to a minimum consistent with mission accomplishment and aircrew safety."[64] Clearly, all of the services embrace the principle of humanity. Moreover, with proper strike planning, the use of remotely piloted weapon systems enables the United States to be more discriminate and therefore more compliant with the principle of humanity, too. As one can see, the United States' use of remotely piloted weapon systems is a morally acceptable means to fight in war based on Just War Theory. There are two other perspectives regarding the morality of using remotely piloted weapon systems in combat to address.

Pacifism

Pacifism is one of the perspectives that dominate the ethics of war and peace,[65] but it really addresses *jus ad bellum* and not *jus in bello*. What exactly is pacifism, and does it apply to the use of remotely piloted weapon systems in war? According to *Merriam-Webster*, pacifism is "the doctrine that war and violence as a means of settling disputes is morally wrong," and it specifically involves a refusal to bear arms on a moral or religious basis.[66] In particular, pacifists object to killing and therefore believe "there are no moral grounds which can justify resorting to war."[67] Therefore, pacifism does not serve as a constructive perspective to determine if advanced technology might be utilized to take human life. As a result, one can see that those who strictly subscribe to

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pacifism would not support the use of remotely piloted weapon systems or any weapon system in war. There is at least one final view to consider.

<u>Realism</u>

Realists hold the view that war occurs because individuals are inherently aggressive, and therefore war—not peace—is the natural state among groups of individuals interacting in the international system. Accordingly, they tend to see the world in terms of competition and conflict and accept that combat or war is both an acceptable and sometimes necessary way to protect, preserve, and promote the state's interests.[68] Additionally, in realism there is no central authority for settling disputes among competing states in the international system, which leads states to compete with each other "within a loose system that includes some rules, norms, and patterns of behavior."[69] Furthermore, in *Morality and War* David Fisher contends that there are two types of realism. The first variant is "all-out realism, which maintains that moral considerations are irrelevant to all considerations of war—before, during, and after."[70] The second variant is a more modest one, which contends that "moral considerations may affect the decision to go to war," but "once the decision is made, morality is irrelevant."[71] Although the more modest variant claims moral considerations only affect the decision to go to war and are irrelevant afterwards, one can argue that adherence to LOAC, which is largely based on just war tradition, helps to ensure morality receives some consideration in the conduct of combat. Moreover, realism, in any of these forms, embraces the use of remotely piloted weapon systems as an acceptable means to achieve victory.

The use of remotely piloted weapon systems by the United States is enabled by technology and can be justified consistent with *jus in bello* rules, making it a moral

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means to utilize in war. Moreover, this technology permits United States' combatants to strike targets discriminately and precisely while lessening the amount of personal risk to its combatants and innocent civilians. Finally, when combined with appropriate planning and accurate, timely, and actionable intelligence, the use of remotely piloted weapon systems complies with the utilitarian and realism viewpoints. If the use of remotely piloted weapon systems can be morally employed and is supported by various perspectives, one should ascertain what this means for the development and fielding of new or future remotely piloted weapon systems.

Fielding of New or Future Remotely Piloted Weapon Systems

The development and fielding of remotely piloted weapon systems can and should continue as long as at least five considerations remain integral to their design, fielding, and use. First and most importantly, remotely piloted weapon systems should not evolve to become completely autonomous weapon systems. Why is this worth mentioning? John Canning and Gerhard Dabringer discussed the evolution of unmanned systems and the military, saying that three things can be drawn from them: (1) they save lives, (2) "the persistent stare" that they provide, "coupled with weapons," means better situational awareness of the battlespace and "the ability to strike time-critical targets," and (3) there is no reason to think that the desire to create more capable systems will wane anytime soon.[72] Overall, this sounds pretty positive. But, by more capable, they mean that one "can expect to see a push to develop higher-level autonomy for operations by these machines to include the autonomous use of weapons."[73] Why is this important, and why the urge for caution? This is important because there is an expectation that a human is in control, taking aim, and making timely strike decisions, especially when another person's life is threatened. Moreover,

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humans are concerned with morality and only humans understand the value of human life. Furthermore, a totally autonomous weapon system—a robot with artificial intelligence, equipped with weapons, and without a human-in-the-loop—has "no life to lose," no emotions,[74] and is without a human moral compass. Accordingly, the populace—friendly or adversary—is not likely to positively support humans being the potential target of an autonomous robot as described above.

Second, new and future remotely piloted weapon systems will continue to require the ability to strike targets with increased accuracy. This entails the use of precision weaponry like that of today's PGMs and the means to see or monitor the intended target in real time or very near real time—especially important when the target involves the intentional taking of human life. Again, this highlights the expectation that humans are in the loop and are making the time-critical decision to strike or not strike. As one can see, this capability supports the principle of humanity by enabling the user to be discriminate and by reducing the opportunity for collateral damage and noncombatant casualties. Of course, none of this is possible without accurate and timely intelligence support.

Third, accurate and timely intelligence support is not only essential to campaign planning and the employment of forces throughout all phases of war, it is also integral to the use of current and future remotely piloted weapon systems. As United States Army retired Lieutenant General James M. Dubik said, "Good intelligence—about one's opponent as well as about one's own forces—is essential for all operations."[75] In fact, he expanded upon it, saying that "intelligence support is not just a matter of platforms that collect information;" it also includes "an analytic capability that translates information into intelligence, a distribution system to move the intelligence to the variety of places it

is needed for making decisions and taking action, and a feedback methodology that supplies updated information to be analyzed."[76] Certainly, one of the most well-known examples of the criticality of intelligence remains a bombing that occurred on May 7, 1999. In this case a B-2 bomber dropped five 2000 pound global positioning system-guided bombs on the target designated as the Federal Directorate for Supply and Procurement "building but which was, in fact, the Chinese Embassy in Belgrade."[77] Per George Tenet, the Director of Central Intelligence, no one "knowingly targeted the Chinese Embassy" and "no one, at any stage in the process, realized that our bombs were aimed at the Chinese Embassy."[78] Moreover, he said three basic reasons contributed to the failure: (1) the technique utilized to locate the intended target was severely flawed, (2) "none of the military or intelligence databases used to validate targets contained the correct location of the Chinese Embassy," and (3) "nowhere in the target review process was either of the first two mistakes detected."[79] As one can see, accurate and timely intelligence support is crucial to the moral and effective use of all operations in war, to include weapon systems with pilots or operators on board as well as remotely piloted weapons systems.

Fourth, one should educate the public about current and future remotely piloted weapon systems and advocate that the term unmanned not be used whenever a weapon system is actually controlled or piloted by people. Why? The United States could gain increased public confidence, both domestic and abroad, by explaining that any system that deploys lethal weapons on humans is or will be controlled or piloted by humans and supported by accurate and timely intelligence. One should also explain that the United States' military respects each state's sovereignty and territorial integrity and

complies with international law regardless of the weapon system utilized to fight its wars.

Fifth, without a doubt, one's use of discretion and restraint are key factors in the use of current and new remotely piloted weapon systems. As such, one can use five common filters as a guide when thinking about using remotely piloted weapon systems. One, will this remotely piloted weapon system be used for a moral purpose and in a moral manner? Two, is the proposed use for the remotely piloted weapon system legal? Three, is the use of the remotely piloted weapon system diplomatically permissible? Fourth, is the use of the remotely piloted weapon system necessary or most appropriate for the operation? Fifth, is the use of the remotely piloted weapon system prudent? That is to say, will it do the job at an acceptable cost (lives, treasure, unintended consequences)? By developing, fielding, and using remotely piloted weapon systems with these considerations and filters in mind, the United States' use of remotely piloted weapon systems is more likely to be deemed legitimate and moral.

<div align="center">Conclusion</div>

Nations and people around the world understand that cutting-edge technology, combined with a relatively robust defense budget and design and manufacturing capability, make it possible for the United States to use remotely piloted weapon systems to precisely and discriminately strike targets in combat. Yet, some question the morality of the United States use of remotely piloted weapon systems, claiming that there is less risk for those who use them. Even though there may be less personal risk to the operator of the system in many cases, there is undoubtedly personal risk to on-the-ground controllers and observers and risk of loss of support at the state and international level if not used appropriately. However, the way the United States uses

remotely piloted weapon systems satisfies the utilitarian and realism viewpoints and the *jus in bello* rules of Just War Theory, making it a moral means to employ while fighting in America's wars. Moreover, like most technology, remotely piloted weapon systems will continue to evolve. Since the natural tendency is to automate as much as possible, the United States can maintain utmost world-wide support by ensuring systems used to target humans do not eventually become completely autonomous weapon systems, by ensuring that precise weaponry is supported with accurate and timely intelligence support, and by publicly stressing and advocating for the importance of the human-in-the-loop. Finally, the United States can retain the high moral ground and sustain a healthy domestic and international political environment by exercising discretion and restraint when deciding whether to use remotely piloted weapon systems in combat.

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