

The Rise of the Machines

Why Increasingly “Perfect” Weapons Help Perpetuate our Wars and Endanger Our Nation

Lieutenant Colonel Douglas A. Poyer, U.S. Army

Sometimes, the more you protect your force, the less secure you may be.

— Field Manual 3-24, *Counterinsurgency*

The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom.

— Isaac Asimov

AT THE START of 2004, when I was the commander of a military intelligence company in Baghdad, my company received five of the first Raven unmanned aerial vehicles (UAVs) deployed to Iraq.¹ The Raven UAV is a small, hand-launched reconnaissance plane that has probably never figured prominently in any discussion about the ethics of waging war via remote-controlled robots. This drone is not armed, nor can it range more than a few miles from its controller. It looks more like a large toy plane than a weapon of war.

To my troops, I seemed quite enthused about this capability. Not all of this excitement was for show. I actually did find the technology and the fact that my troops were among the first to employ these drones in Iraq to be exciting. I had fully bought into the fantasy that such technology would make my country safe from terrorist attack and invincible in war.

I also felt, however, a sense of unease. One thing I worried about was so-called “collateral damage.” I knew that, because of the small, gray viewing screens that came with these drones as well as their limited loiter time, it might prove too easy to misinterpret the situation on the ground and relay false information to combat troops with big guns. I suspected that, if we did contribute to civilian deaths, my troops and I would not handle it well. But at the same time, I worried that we might cope quite well. Since we were physically removed from the action, maybe such an event would not affect us much. Would it look and feel, I wondered, like sitting at home, a can of Coke in hand, watching a war movie? Would we feel no more than a passing pang that the show that day had been a particularly hard one to watch? And, if that is how we felt, what would that say about us?

Lieutenant Colonel Douglas A. Poyer is a military intelligence officer who has served in various command and staff positions in Iraq, Kosovo, Germany, the United Kingdom, the United States, and, most recently, Afghanistan. He is the author of *The Fight for the High Ground: the U.S. Army and Interrogation During Operation Iraqi Freedom, May 2003-2004*, and is the winner of numerous military writing awards.

PHOTO: In this scene from *Terminator 3, The Rise of the Machines*, armed “terminator robots” and hovering drones fight humans. (Warner Brothers Handout)

It did not take long for a vivid nightmare to bring my fears to the surface. In this dream, I saw a little Iraqi girl and her family in a car, frightened, caught in the middle of a major U.S. military operation, trying to escape both insurgents and encircling U.S. forces. Believing the car to be filled with insurgents, my troops followed this car with one of our Ravens and alerted a checkpoint to the approaching threat. When a Bradley destroyed the car with a TOW missile, the officers in our command post cheered, clapping each other on the back.

I awoke filled with dread.

I now recognize this dream as a symptom of cognitive dissonance, the psychological result of holding two or more conflicting cognitions. In this instance, my identity as a U.S. Army officer and all this identity's attendant values (duty to follow legal orders, loyalty to my fellow soldiers, and so on) clashed with my fear of harming innocents. It also clashed with a growing feeling that there was something fundamentally troubling about how we were choosing to wage war.

In this essay, I will not argue that waging war remotely does not have ethical advantages, for it clearly does. For one, armed drones and other robots are incapable of running concentration camps and committing rape and other crimes that still require human troops on the ground. Indeed, removing combat operators from the stress of life-threatening danger reduces their potential to commit those crimes that they could still conceivably commit via drones. Neuroscientists are finding that the neural circuits responsible for conscious self-control are highly vulnerable to stress.² When these circuits shut down, primal impulses go unchecked.³ This means that soldiers under extreme physical duress can commit crimes that they would normally be unable to commit.

Another ethical advantage is that, compared to most other modern weapons systems, armed drones do a better job of helping combat operators to distinguish and target combatants instead of non-combatants. The New America Foundation, a non-profit, nonpartisan think-tank based in Washington, D.C., and *The Bureau of Investigative Journalism (TBIJ)*, a British nonprofit news organization, provide the best known, most comprehensive estimates of civilian casualties from America's armed drones. In Pakistan's Federally Administered Tribal Areas

(FATA), the New America Foundation estimates that the ratio of noncombatant to combatant deaths is about 1:5 (one noncombatant death for every five combatant deaths).⁴ The *TBIJ* estimates that this same ratio in the FATA is 1:4, a ratio their estimates hold roughly true for America's drone strikes in Yemen and Somalia as well.⁵ This kill ratio is not nearly as clean as proclaimed by some UAV enthusiasts, but it is much better than what is delivered by other modern weapons systems, which in total is something like a 1:1 ratio.⁶

As drone technology improves, this ratio of non-combatant to combatant deaths will only get better. The "U.S. Air Force Unmanned Aircraft Systems Flight Plan 2009-2047" envisions tiny nano-sized drones that enter buildings and, in pursuit of reconnaissance, sabotage, or lethal objectives, swarm autonomously like angry bees.⁷ Not far beyond this future, it is easy to imagine drones the size of an assassin's bullet flying into a building, conducting surveillance, and then—rather than exploding and taking out everything within 15 meters of this explosion—quietly and lethally entering the body of its intended target.

Most importantly, I do not argue in this essay that waging war via armed robot proxies is unethical. Instead, my thesis is that the way we use them is deeply unwise because it *seems* unethical to the very populations abroad we most need to approve of our actions—the populations our enemies hide among, the wider Muslim world, and the home populations of coalition allies. The negative moral blowback that armed drones generate when used as a transnational weapon, I contend, is helping to fuel perpetual war.⁸ That is, due to obstacles lying within the moral realm of human perception, the strategic disadvantages of drone strikes in any role other than close-air support to troops on the ground will almost always outweigh the fleeting tactical advantages of these strikes.

Armed UAVs and Moral Outrage

For the September 2012 report, "Living Under Drones," teams from Stanford Law School and the New York University School of Law interviewed more than 130 FATA residents regarding their experiences with U.S. drones.⁹ The result is a disturbing portrait of the lives of these civilians. The report describes a population in the grip of Posttraumatic

Stress Disorder (PTSD) on a massive scale. Residents frequently experience such PTSD symptoms as emotional breakdowns, hyper-startled reactions to loud noises, loss of appetite, and insomnia.¹⁰ Traditional communal patterns of behavior have been broken or altered.¹¹ Residents are afraid to gather in groups, such as at funerals and meetings of tribal leaders.¹²

It should thus come as no surprise to anyone that hatred for America is spiraling out of control among these people. The New America Foundation reports that, while “only one in ten of FATA residents thinks suicide attacks are often or sometimes justified against the Pakistani military and police, almost six in ten believe those attacks are justified against the U.S. military.”¹³ Consequently, as the United Nations reports, “many of the suicide attackers in Afghanistan hail from the Pakistani tribal regions.”¹⁴

Moral reprobation against U.S. drone strikes among other Pakistanis is just as strong. According to a 2012 Pew Research Center poll, only 17 percent

of Pakistanis support America’s drone strikes in the FATA. This low regard is probably the main reason that 74 percent of Pakistanis consider the United States to be their enemy.¹⁵ A solid majority of Pakistanis also believe U.S. drone strikes in the FATA to be acts of war against Pakistan.

Increasingly entrenched anti-Americanism among Pakistanis works against America’s short-term interests, such as the need of our military forces in Afghanistan for reliable resupply and over-flight routes via Pakistan. However, it is also working against America’s long-term interests by helping to destabilize this nuclear power. Anti-U.S. demonstrations, frequently violent and often spurred by drone attacks, have become routine in the major cities of Pakistan. The terrorist groups claiming the majority of suicide bomb attacks in Pakistan justify their actions and gain new recruits by condemning the Pakistani government as a “puppet” of the hated U.S. government.¹⁶ Pakistan’s foreign minister was almost certainly not exaggerating when she said last summer that U.S. drone attacks in the FATA are the



(AP Photo/Muhammed Muheisen)

Pakistani and American citizens hold banners and chant slogans against drone attacks in Pakistani tribal belt, in Islamabad, Pakistan, 5 October 2012.

“top cause” of anti-Americanism in her country.¹⁷ Dr. David Kilcullen, the noted counterinsurgency expert, stated what should be obvious: “The current path that we are on is leading to loss of Pakistani government control over its own population.”¹⁸

Anger over U.S. drone attacks has helped destabilize Yemen as well. When these attacks began in earnest in Yemen in December 2009, Al-Qaida had 200 to 300 members and controlled no territory.¹⁹ Now it has “more than 1,000 members” and “controls towns, administers courts, collects taxes, and generally, acts like the government.”²⁰ Said Mohammed al-Ahmadi, a Yemeni lawyer: “Every time the American attacks increase, they increase the rage of the Yemeni people, especially in Al-Qaeda-controlled areas. The drones are killing Al-Qaeda leaders, but they are also turning them into heroes.”²¹

Anger regarding U.S. drone attacks exists far beyond the locales in which armed Predators and Reapers hunt; it is stoking the fires of anti-Americanism throughout the Muslim world. The author Jefferson Morley wrote last summer:

The politics of drone war drains the proverbial sea of America’s ideological supporters and undermines the only basis for waging effective war: popular support of the people who feel threatened. In the Muslim world, it negates every other American message from democracy to rule of law, to women’s rights.²²

The Pew Research Center has described just how deep and widespread opposition to these attacks is. Their 2012 survey recorded, for example, that only nine percent of Turks and six percent of Egyptians and Jordanians approve of these attacks.²³ This intense disapproval has made anti-drone protests commonplace in the Muslim world. Such demonstrations, often violent, are destabilizing the fledgling Islamic democracies birthed last year during the Arab Spring. They also continue to fuel the anger that provides a seemingly endless supply of recruits and money to anti-American terrorist groups. As the *New York Times* reported, connecting an earlier symbol of moral failure in America’s “war on terror” with the one that persists today: “Drones have replaced Guantanamo as the recruiting tool of choice for militants.”²⁴

The reaction of the populations of America’s allies to our use of armed drones does not reflect much greater support. The Pew Research Center recently reported that the approval rating for drone strikes in seven European countries ranged from a high of 44 percent (United Kingdom) to a low of 21 percent (Spain).²⁵ Of course this disapproval works against U.S. strategic interests. Germany for example, has limited the amount of intelligence that it will provide America for fear that this intelligence may lead to politically unacceptable targeted killings of German citizens in U.S. drone-patrolled countries.²⁶ Of even greater import to America’s warfighters, it is no coincidence that those European populations with the lowest opinion of armed drones are most against their nations’ providing much assistance to the United States on the battlefields where they are employed, such as in Afghanistan.²⁷

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Now we arrive at what is wrong with the number one justification cited by UAV enthusiasts for the use of armed drones—the idea that fighting war remotely makes America and her service members safer.²⁸ This view is short-sighted. How many people have been killed in suicide bomb and other attacks fueled by the hatred of America that transnational drone strikes inspire? It is reasonable to assume that those deaths far exceed the number of civilians killed directly by America’s drones. It is also reasonable to assume that a significant number of American service members have been killed in such outrage-fueled attacks. When long-term effects are considered, the clear conclusion is that armed robots, when used in certain ways, cost American lives and make America less safe.

Sometimes, Laws are Inadequate

Why do America's armed UAVs generate such negative moral blowback? Does the world believe that America is breaking just laws, and is it anger at America's hubris that is generating such condemnation? It is hard to see how this could be the main reason for such widespread censure, since it is unclear to most lawyers, let alone to legal laymen, that America actually is breaking any laws in its use of armed drones.

Nowhere in the canon of international law is it explicitly written that the use of armed robots in war is illegal, unless these robots use prohibited weapons like poison gas or exploding bullets. The legal debate, rather, is whether existing international law should be interpreted to mean that America's use of armed drones for a specific purpose—targeted killings—is unlawful. This debate revolves around two broad questions. One involves sovereign rights: can one state kill an individual in another state without the other state's permission? The other, more controversial question asks when a government has the right to kill an individual: when is a state-sponsored killing lawful, and when is it murder or assassination?

In 2010, Harold Koh, a Department of State lawyer, succinctly expressed the U.S. government's justification for drone strikes, which has been consistent for more than a decade. Drone strikes are legal, he said, because America is involved in an armed conflict with Al-Qaeda, the Taliban, and affiliate groups, and in accordance with international law, the United States may use force consistent with self-defense.²⁹

Some lawyers and legal scholars have countered this viewpoint by noting that, under the UN charter, America is prohibited from using force within another country without the consent of that country's government. Supporters of the U.S. government parry this criticism by pointing out that this charter contains an exception to this prohibition, namely, such force can be exercised for self-defense in the case of a country that is incapable or unwilling to help another country defend itself.

Other lawyers attack from a different vantage point, arguing that the killing of suspected terrorists should be treated as a law enforcement rather than a military action. One indicator that this is the case, they contend, is that the CIA—the agency that is

America's lead in the use of armed drones to hunt transnational terrorists—has historically operated outside of military laws and regulations and has not been governed by, or benefitted from, Geneva Convention protections. Since drone attacks are largely conducted by the CIA and thus governed by civil law and not military law, the argument goes, drone attacks are a type of political assassination, which is expressly forbidden by both international law and domestic executive order.

U.S. government supporters retort that, in terms of weaponry, capability, and actions, armed groups like Al-Qaeda and the Taliban are clearly military organizations, and thus the Laws of Armed Conflict appropriately apply to America's operations against them. The world has changed, they argue, and with it, the CIA's role.

From all this, one thing is clear: it is not clear at all that, by using armed drones for targeted killings, the United States is actually violating the letter of any law. The confusion is so great that this perception cannot possibly be what is fueling such widespread and sustained moral reprobation. This does not mean that people do not see America's use of armed drones as an affront to their sense of justice—quite the opposite. A great number of people are obviously outraged



A Yemeni protestor shouts slogans denouncing air strikes by U.S. drones during a demonstration in front of the residence of Yemen's president Abed Rabbo Mansour Hadi in Sanaa, Yemen, 28 January 2013. (AP Photo/Hani Mohammed)

by America's use of armed robots. Rather, what this means is that, sometimes, the laws on the books do not adequately address moral concerns.

To understand what is really fueling this moral reprobation, you must leave the realm of law and enter the realm of ethics. This is because, when it comes to moral matters, ethics is the deeper study. Plato's most famous allegory can be adopted to describe why this is so: in a cave (the human heart) lit by a fire (feeling), laws are the flickering shadows cast by objects (moral perceptions and judgments), while ethics is the study of the objects themselves.

Ethics begins with the judgment that all human beings have something in common—a human “essence,” if you will. The commonality of this essence means that principles of conduct can be formulated that guide anyone to live their life in the best possible way. Actions are “good actions” if they are based on principles that sufficiently account for this shared essence. Different ways of best accounting for what all humans want or need fall somewhere between the poles of utilitarianism (a purely outcome-based approach) and idealism (a purely act-based approach). These approaches in turn generate different sets of principles of conduct. At the core of all approaches, though, is a single ethic, what Christians know as “the Golden Rule” and philosophers call “the ethic of reciprocity.”

The ethic of reciprocity is not only the broad foundation for all ethics, but it also specifically supports Just War Theory. This theory, in turn, is the basis for the Laws of Armed Conflict. The degree to which the ethic of reciprocity supports Just War theory and the Laws of Armed Conflict is obvious on a very basic, broad level. When a nation defines the conditions under which it should choose to go to war, this nation is really asking: “Although we do not want someone to attack us, what would we have to do to someone else, in order for us to feel that they are justified in choosing to go to war with us? Once I know this, then and only then, will we know when we are justified in choosing to go to war.” Similarly, when determining how a war should be waged, a nation is really asking: “If we have so offended another nation that they must wage war with us, how must they wage war, in order for us to feel that the manner they are waging this war is justifiable? Once we know this, then and only then, will we know how we must wage war to wage war justly.”

One cause of the moral reprobation regarding America's current use of armed drones involves this usage's failure to meet the fundamental standard of reciprocity.

One cause of the moral reprobation regarding America's current use of armed drones involves this usage's failure to meet the fundamental standard of reciprocity. It is difficult to imagine how anyone could feel that their enemies were justified in waging war against them via remote-controlled machines, no matter how serious the offense, if there were no way they could reply in kind. When people are subject to death from the guns of another nation, and they have no means to fight back directly against those warriors who are harming them, the situation seems fundamentally unfair, unjust, or unreciprocal. Without the support of a fair, transparent judicial process, such killing seems wrong, more summary execution or assassination than war.

It also looks more like summary execution than warfare when an enemy soldier, facing a superior force and imminent death, is given no opportunity to surrender. American soldiers do not go to war expecting no quarter from their enemies. Yes, we soldiers know that we will receive no quarter from some jihadist cells, but there is also the chance we will be held as a hostage and survive. That is why a short course on surviving, evading, resisting, and escaping enemy capture is required of every soldier who deploys to Afghanistan. Enemies who show us no quarter, we say, are inhuman, cruel, and violate the laws of war (which they do). Why would our enemies feel any differently about us, when we wage war in such a fashion that it offers them no quarter? Sadly, a barbaric medieval enemy prone to beheading captured prisoners actually holds a moral advantage over America in those places where America's drone strikes are not coordinated with ground forces who can receive surrenders.

The United States is the only country of 21 surveyed in which a majority of the population supports America's use of armed drones against designated terrorists.³⁰ If the way we are targeting and killing suspected enemy warriors in



(U.S. Air Force)

A MQ-9 Reaper unmanned aerial vehicle prepares to land after a mission in support of Operation Enduring Freedom in Afghanistan, 17 December 2007. The Reaper has the ability to carry both precision-guided bombs and air-to-ground missiles.

Pakistan, Yemen, and Somalia *seems* wrong to foreign populations, how is it that a majority of Americans do not perceive such wrongness? The obvious, short-term advantages of using armed drones have something to do with it. However, the deeper answer is one as old as philosophy itself: these Americans are allowing their passions (feelings of anger, fear, and self-righteousness) to cloud their reasoning and limit the scope of their vision.

This irrational cloud of self-deception takes two major forms. One form is the failure of some Americans to recognize their enemy as sharing something basic with themselves—a common humanity. As mentioned above, ethics starts with the judgment that human beings share something essential, and from this judgment, conclusions are reached as to how human beings should treat other human beings. However, if this core judgment is missing—if you hate or fear your enemy (“the other”) so much that they no longer appear fully human to you—the ethic of reciprocity no longer applies, and people feel free to treat this “other”

any way they want (or are ordered to) treat him. Their conscience now permits them anything. Thus, some Americans may reason that, by killing our enemies safely from afar, we are treating “evil terrorists” exactly as they should be treated—as a foe worthy of only the most sterile, let’s-not-get-our-hands-dirty kind of extermination.

Another way that some Americans are obscuring moral reality is via a failure of imagination. It is extremely difficult for these Americans to imagine the life of Pakistanis, Yemenis, or Somalis under the ever-watchful eyes of armed drones. If America’s skies were filled with armed drones that were hunting Americans and that were guided by pilots safely ensconced in battle stations on the other side of the planet, those Americans would no longer need their imaginations to feel the wrongness of such attacks. Even if they did not support the actions of the Americans who were being targeted, they might still riot, demonstrate, or join whatever forces America could field to fight their apparently inhuman enemies.

On the Importance of Appearing Human

Before my nightmare in which my soldiers used drones to help U.S. combat troops kill a little Iraqi girl and her family, I suffered from this same failure of moral imagination. I offer a simple thought experiment to save a few of my fellow service members from having similar bad dreams.³¹

The setting for this experiment is taken from the second of James Cameron's *Terminator* movies. The scene is a colorless, dead landscape strewn with human detritus—hunks of metal, human skulls and bones, discarded and misshapen children's playthings. Over this landscape stride tall, humanoid robots that hunt human beings with heavy weapons. These robots—remorseless, tireless, strong—are clearly inhuman, with metallic limbs and glowing orbs for eyes. Patrolling the skies above, large death-machines hover, seeking to shoot and kill any humans who might be hiding or fleeing in the wreckage below.

The robots appear unstoppable. A human paramilitary unit is in full retreat. Then, at last, hope appears in the form of John Connor, a strong, resolute, battle-scarred man. He is refreshingly, recognizably human. He is, importantly and fundamentally, “one of us.”

Connor, the apotheosis of the warrior as savior, strides to a position where his troops can see him. Inspired, they counterattack and destroy the attacking robots. A narrator tells us that the human race is saved and Skynet, the self-aware supercomputer that had made and launched these “terminator” robots, is ultimately destroyed.

Watching this scene, the viewer has no doubt about which side he wants to win. It is not important what kind of people these humans are, nor what their ideas may be. All that matters is that they are human and their foes are not. Identifying with the humans, the viewer is distressed when he sees the robots kill human beings and exultant when the humans destroy a “terminator” robot or flying drone.

The stage is now set for the conclusion of this thought experiment.

First, imagine that the terminator robots and killer drones in the scene above are not controlled remotely by a computer but by human beings sitting in battle stations on the other side of the planet. Also imagine that the humans being hunted are deemed “terrorists” by the nation controlling the robots and drones, and that they consider John Connor to be the evil leader of

a terrorist organization. Then, replay the battle scene described above in your mind.

Done? Good. Now, ask yourself this question: on this same junkyard battlefield pitting humans against machines, do you still want John Connor and his soldiers to win? Chances are, you do. Also ask yourself: do you feel that what the nation on the other side of the planet is doing, sending these terminator robots to kill these human “terrorists,” is fundamentally unjust? Again, chances are, you do.

Thus it is that the moral sympathies of onlookers naturally lie with the human side of any human-against-machines conflict. One of the most troubling things about armed robots is how they ignore this moral reality and promote dehumanization, the *sine qua non* condition of any act of genuine atrocity. It is upon the stage of dehumanization that man’s inhumanity to man has been performed, generation after generation.³² On this stage stood 20th century German Nazis, who generally treated captured Western soldiers humanely but dealt with Jews, Roma, Slavs, and others as diseased vermin in need of extermination. Also on this stage stood America’s forefathers, who set lofty new standards in war for the humane treatment of European prisoners, but who also tended to deal with Native Americans and black slaves imported from Africa as despicably as any group has ever treated fellow groups of human beings.

Some of us are not only dehumanizing others as “evil terrorists” in order to justify our use of these weapons, but all Americans are being dehumanized by drones. The face that America shows her enemies, foreign populations, and coalition allies in those countries the U.S. patrols exclusively with armed drones is a wholly inhuman face. Our enemy hides from, and occasionally fires at, machines. Our enemy, who is at war with America, is at war with machines. America—home to a proud, vibrant people—has effectively become inhuman.

Such willful self-dehumanization is tantamount to a kind of slow moral suicide, motivating our enemies to fight and prolonging our current wars. It is troubling just how financially, politically, and militarily committed our nation is to a course of action that encourages the very worst of human impulses—our species’ seemingly limitless capacity to dehumanize other members of our same species.

At the rate America is currently bleeding blood and treasure, China may become the world's great economic power in as soon as four years.³³ With its deeper pockets, slowly but surely, China's military preeminence will follow, probably most conspicuously in the form of the world's most technologically advanced killer robots. Other competitors (a revitalized, resource-rich Russia perhaps?) will follow suit.

It is distressing to think of life for Americans in a world in which wars are fought by killer robots stronger than our own and in which we have squandered much of our political support and moral influence abroad. What is certain (albeit very uncomfortable to imagine) is that Americans will feel nowhere near as secure and prosperous as we have felt since the end of the Cold War. Although our generation is making the bed, it is our children and grandchildren who will be forced to lie in it.

Isaac Asimov, the scientist and prolific writer once sagely observed, "The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom."³⁴ Jeffrey Sluka, an anthropologist, expressed this insight in terms a military strategist can understand: "The drive to technology often creates an inertia that works against developing sound strategy."³⁵ The truth of Asimov's and Sluka's words is nowhere clearer than with regard to America's use of armed robots.

The Rise of the Machines

Despite the short-sightedness of America's trans-national drone strikes, there are promising signs that our nation and military are beginning to recognize the primacy of moral concerns in human conflict. Most notably, the Obama administration has ended torture and "extraordinary renditions" as a matter of policy. Also, some American leaders (albeit too few active politicians) have publicly decried drone strikes. For example, Kurt Volker, the U.S. ambassador to NATO from July 2008 to May 2009, opined in a recent *Washington Post* editorial:

What do we want to be as a nation? A country with a permanent kill list? A country where people go to the office, launch a few kill shots and get home in time for dinner? A country that instructs workers in high-tech operations centers to kill human beings on the far side of the planet because some government agency determined that those individuals are

terrorists? There is a "Brave New World" grotesqueness to this posture that should concern all Americans.³⁶

Within the military, the 2006 counterinsurgency manual came loaded with morally-aware ideas. One such idea was the maxim that, "Sometimes, the more you protect your force, the less secure you may be"—a saying that explicitly recognizes the importance of long-term effects in determining how best to protect service members and a maxim with clear applications to drone warfare.³⁷ U.S. military journals increasingly publish essays that apply the moral dimension of warfare to U.S. operations and, often, authors' analyses find these operations lacking.³⁸ In May 2008, the Army established the Center for the Army Profession and Ethic for the purpose of studying, defining, and promulgating our professional ethic.³⁹ The Command and General Staff College has added the role of an "Ethics Chair" to its faculty and, since 2009, has run an annual Ethics Symposium—something not seen in our military since our Army's brief flirtation with such a conference at the end of the Vietnam War.⁴⁰ Also, promisingly, the School of Advanced Military Studies last year implemented a block of five lessons dedicated to the study of the moral domain of war.

In a better, wiser world, such positive seeds would take root and flower. A majority of our nation's voters and military leaders would recognize and accept what should be obvious: much of the rest of the world is outraged by the way we use our armed robots, and this outrage profoundly matters. Senior generals would steadfastly and strongly warn civilian leaders of the inherent flaws of these illusory "perfect weapons," to include the anti-Americanism they tend to generate and the counterproductive effects of this feeling; the utter lack of efficacy in the long run of any application of coercive air power unsupported by ground forces, as our military has gleaned from a century of experience in various wars; and the dangers of entrusting civilian agencies and contractors with the U.S. military's core mission—that of employing and managing violence in defense of the nation. America's civilian leaders would listen to voters and their military advisors, and our nation would steer a new, morally aware course.

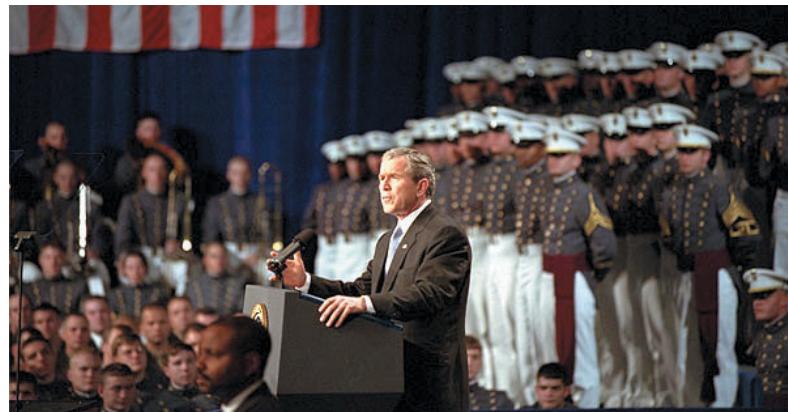
One such course might be for our nation to avoid the perception of unlawful, unethical executions by using armed drones to target suspected terrorists in

noncombat zones (such as Pakistan and Yemen) only if these suspects have been sentenced to death via a fair and transparent judiciary process. An even more radical, alternative course might be, after realizing the threat these tools will pose someday to our own nation's security and deciding that it is time to fully regain the moral high ground our nation lost soon after the 9/11 attacks, our leading the charge to put these weapons on the list of *malum in se* weapons prohibited by international law.

For whichever morally aware course we choose, we would replace the current deeply flawed, cookie-cutter solution to how we attack terrorists in noncombat zones with solutions precisely tailored to the problem at-hand. Rather than enflame anti-Americanism via unsupported coercive airpower in the FATA, for example, we might try a policy of containment instead, beefing up U.S. troop presence and cargo scanners at Afghanistan's major border crossing points while redirecting drones over the FATA to perform border surveillance missions.⁴¹ We would, in general, employ the "soft" weapons of diplomacy, money, and moral influence abroad to better effect, resulting in our actually subtracting from, rather than adding to, the total number of enemies our nation has in the world.

Sadly, there is little chance that America will temper, let alone end, her development and use of armed drones. In the last decade, America's passion for armed drones has become deeply entrenched, politically, economically, and militarily. Some Americans—their moral judgment clouded by passion—are dehumanizing others and suffering from a failure of empathy on a grand scale. When the world responds by becoming outraged, rather than listen, these Americans effectively put their hands over their moral ears and repeat, "Na na na, we can't hear you." Or, they become angry and essentially reply, "Be quiet! You are wrong to feel the way you do. Armed robots are just tools of war like any other tool, such as manned bombers or artillery. Besides, we're protecting you from the bad guys, too."

I wish I could be more hopeful that, in 50 years, America will look back upon her use of transnational drone strikes as a morally disastrous policy that our nation briefly toyed with at the turn of the century, before gaining wisdom from this folly. This hope, though, seems too polyannaish even for me, a U.S. military officer.



President George W. Bush speaks at The Citadel in Charleston, SC, 11 December 2001, saying, "Now it is clear the military does not have enough unmanned vehicles. We're entering an era in which unmanned vehicles of all kinds will take on greater importance—in space, on land, in the air, and at sea." (White House photo/Tina Hager)

Instead, it seems heart-breakingly obvious that future generations will someday look back upon the last decade as the start of the rise of the machines, and, as President George W. Bush said in a speech at the Citadel in 2001, they will see many more armed robots on patrol "in space, on land, in the air, and at sea"—robots so advanced that they make today's Predators and Reapers look positively impotent and antique. These killer robots, though, will share one thing in common with their primitive progenitors: with remorseless purpose, they will stalk and kill any human deemed "a legitimate target" by their controllers and programmers.

What will it take for some Americans to fully wake up and understand the disturbing precedent that America is setting with its transnational drone strikes today? Or, is it too late for them to wake up? Are they like the slumbering passengers on the *Titanic*, on a huge vessel too committed and going too fast to avoid the huge iceberg, now visible against the night sky, just starting to block the stars in their ship's path? Tragically, in a political climate still ruled by passion rather than morally aware reason, it may take the sounds of the crash itself to awaken these Americans. This crash, after the passage of a couple decades, would not be the sounds of ice scraping and tearing metal; it would be quiet humming noises (or, perhaps, supersonic booms) high in America's own skies, punctuated by intermittent explosions, as enemy armed drones hunt America's leaders and soldiers.

Of course, by then, it would be far too late for Americans to alter this fate. **MR**

NOTES

1. This is a greatly abridged version of a much longer essay presented at the Command and General Staff College's 2012 Ethics Symposium. This longer version is posted at <<http://www.leaveaworthethicsymposium.org/?page=2012Documents>>.
2. Amy Arnsten, Carolyn M. Mazure, and Rajita Sinha, "This Is Your Brain in Meltdown," *Scientific American* (April 2012): 48.
3. Ibid.
4. New America Foundation, "Counterterrorism Strategy Initiative," *The Year of the Drone*, 2012, <<http://webcache.googleusercontent.com/search?q=cache:MKVRnajpmJg:counterterrorism.newamerica.net/drones+&cd=1&l=en&ct=clnk&gl=us>> (11 November 2012). The New America Foundation calculates that from 1 January 2004, to 7 November 2012, between 1,908 and 3,225 people died in Pakistan as the result of 337 U.S. drone strikes. Of these deaths, the organization estimates that 1,618 to 2,769 were militants, with the remainder (roughly 15 percent) being civilians.
5. The Bureau of Investigative Journalism, "Covert Drone War," *The Bureau of Investigative Journalism*, 12 November 2012, <<http://www.thebureauinvestigates.com/category/projects/drones/>> (12 November 2012). *TBI* calculates that from 1 January 2004 to 7 November 2012, between 2,593 and 3,378 people died in Pakistan as the result of 340 strikes, slightly under one-quarter of whom were civilians. *TBI* also reports that 362 to 1,052 people have been killed by U.S. drones in Yemen, of whom 60 to 163 were civilians, and, in Somalia, 58-170 people have been killed by U.S. drones, of whom 11-57 were civilians.
6. Adam Roberts, "Lives and Statistics: Are 90% of War Victims Civilians?" *Survival* 52, no. 3 (June-July 2010): 115-36. The 1:1 ratio is a generalization deriving from this essay. Roberts describes the start of the myth that 90 percent of deaths in modern wars are civilians, then points out evidence refuting this myth. For example, a 2007 team concluded that 41 percent of deaths from the 1991-1995 war in Bosnia-Herzegovina were civilians and 59 percent were soldiers. The 1983-2009 civil war in Sri Lanka and the on-again, off-again civil war in Colombia from 1988-2003 almost certainly involved more combatant than noncombatant deaths. According to Roberts, it is only in wars involving state-sponsored genocide (such as in Cambodia from 1975-1979 and in Rwanda in 1994) that the percentage of violent civilian deaths has approached or exceeded 90 percent of the total number of violent deaths in the conflict.
7. United States Air Force Headquarters, *United States Air Force Unmanned Aircraft Systems Flight Plan 2009-2047*, Washington, DC: United States Air Force, 2009, 34; Nick Turse and Tom Engelhardt, *Terminator Planet: The First History of Drone Warfare, 2001-2050*, A TomDispatch Book, Kindle Edition, 18.
8. In "War is a Moral Force: Designing a More Viable Strategy for the Information Age," one of my co-writers, the ethicist Peter Fromm, explained what we meant by the use of the word "moral." "The term 'moral' here and elsewhere in this article," he wrote, "refers to both its ethical and psychological denotations, which experience and language inextricably connect. The reason for these two meanings is that perceived right action and consistency in word and deed are the psychological glue holding together a community, even the community of states. Shared perceptions of right action bind individuals to groups and groups to communities." My meaning of the word "moral" in "The Rise of the Machines" is consistent with its use in "War is a Moral Force," to include the inference that questions of good and bad (such as the question, "should I fight?") have significant psychological effects (such as the affirming answer, "yes, I am doing the right thing by fighting"). These psychological effects are the most critical planning considerations for both political leaders and the warfighter.
9. International Human Rights and Conflict Resolution Center at Stanford Law School and Global Justice Clinic at NYU School of Law, "Living Under Drones: Death, Injury, and Trauma to Civilians from US Drone Practices in Pakistan," 2012, v.
10. Ibid., 82
11. Ibid., vii.
12. Ibid.
13. New America Foundation, *FATA Inside Pakistan's Tribal Region*, 2012, <<http://pakistanstudy.org/>> (11 November 2012).
14. Ibid. The United Nations Assistance Mission to Afghanistan (UNAMA) has been systematically tracking and investigating civilian deaths from war in Afghanistan since 2007.
15. Pew Research Center, "Pakistani Public Opinion Ever More Critical of U.S.: 74% Call America an Enemy," PewResearchCenter Publications, 27 June 2012, <<http://pewresearch.org/pubs/2297/pakistan-united-states-extremeist-groups-barack-obama-economic-aid-military-aid-taliban-haqqani-kashmir-khyber-pakhtunkhwa-asi-ali-zardari-yousaf-raza-gilani-imran-khan-tehreek-e-insaf-india>> (11 November 2012). It is no coincidence that the percentage of Pakistanis saying that the U.S. is the enemy rose most sharply from 2009-2012, a period corresponding with increased U.S. drone strikes in the FATA.
16. Khuram Iqbal, "Anti-Americanism and Radicalization: A Case Study of Pakistan," Pak Institute for Peace Studies, 2010, <https://docs.google.com/viewer?a=v&q=cache:V98vEMBL2dgJ:san-pips.com/download.php?fb%3D42.pdf%22Mainland+Pakistan%22&hl=en&gl=au&pid=bl&srcid=ADGEESJS_1r6lPbDuKH-54QAFnrLhYDOygY9JJKRsLfIx-cru_aFQFlaNz5fR8njtrOrkG6t&sig=AHEtbTjm4hukrF9GgskGLnSykdS0Ue8A&pli=1>, 2.
17. Common Dreams, *Pakistan Foreign Minister: Drones Are Top Cause of Anti-Americanism*, 28 September 2012, <<https://www.commondreams.org/headline/2012/09/28-2>> (11 November 2012).
18. Jeffrey Sluka, "Death from Above: UAVs and Losing Hearts and Minds," *Military Review* (May-June 2011): 73.
19. Jefferson Morley, "Hated: What drones sow," *Salon*, 12 June 2012, http://www.salon.com/2012/06/12/hated_what_drones_sow/ (11 November 2012).
20. Ibid.
21. Ibid.
22. Ibid.
23. Pew Research Center, *Drone Strikes Widely Opposed: Global Opinion of Obama Slips, International Policies Faulted*, 13 June 2012, <<http://www.pewglobal.org/2012/06/13/global-opinion-of-obama-slips-international-policies-faulted/>> (13 November 2012). The Pew Research Center results listed in this essay can be corroborated by conducting Google Internet searches of various news media sources. For example, a search of the term "U.S. drones" on *al Jazeera*'s website brings up seven negative essays and one neutral essay on the subject from January-October 2012, further substantiating the center's claim of intense anti-drone feeling in the Muslim World.
24. Jo Becker and Scott Shane, "Secret 'Kill List' Proves a Test of Obama's Principles and Will," *The New York Times*, 29 May 2012, <http://www.nytimes.com/2012/05/29/world/obamas-leadership-in-war-on-al-qaeda.html?pagewanted=all&_r=0> (11 November 2012).
25. Pew Research Center, *62%-Majority of Americans Support U.S. Drone Campaign*, 2012, <<http://pewresearch.org/databank/dailynumber/?NumberID=1581>> (11 November 2012).
26. Holger Stark, "Germany Limits Information Exchange with US Intelligence," *Spiegel Online International*, 17 May 2011, <<http://www.spiegel.de/international/germany/drone-killing-debate-germany-limits-information-exchange-with-us-intelligence-a-762873.html>> (11 November 2012).
27. For example, in response to anti-war and anti-drone sentiment at home, Spain has rules of engagement designed to ensure their troops in Afghanistan face little danger (and can provide limited assistance). The 4,400 Spanish troops based in Herat are not allowed to move into southern or eastern Afghanistan or engage insurgents unless fired upon. Also, the country has declined leadership of ISAF three times.
28. During my recent year-long tour in Afghanistan, I frequently saw a version of this argument expressed as propaganda on the Armed Forces Network. After a series of images showing robots and UAVs doing the dirty work for U.S. service members, the commercial ends with the slogan, "Robots save lives." What this slogan is really saying is, "Robots save American lives while helping us kill our nation's enemies." Admittedly, even this sanguine slogan sounds good to an American soldier stationed in a place where there is an enemy actively trying to kill him. However, the notion that "armed robots save American lives" is often only valid when considering these robots' immediate impact.
29. Renee Dopplick, "ASIL Keynote Highlight: U.S. Legal Advisor Harold Koh Asserts Drone Warfare is Lawful Self-Defense Under International Law," *Inside Justice*, 26 March 2010, <http://insidejustice.com/law/index.php/intl/2010/03/26/asil_koh_drone_war_law> (14 November 2012).
30. Pew Research Center, *62%-Majority of Americans Support U.S. Drone Campaign*.
31. See P.W. Singer, *Wired for War: The Robotics Revolution and Conflict in the Twenty-first Century* (New York: The Penguin Press, 2009), 306. The idea for this thought experiment came to me after reading this comment, made by an unidentified Air Force officer: "It must be daunting to an Iraqi or an al-Qaeda member seeing all our machines. It makes me think of the human guys in the opening to the *Terminator* movies, hiding out in the bunkers and caves."
32. David Livingstone Smith, *Less Than Human: Why We Demean, Enslave, and Exterminate Others* (New York: St. Martin's Press, 2011). In this brilliant book, the psychologist and philosopher David Livingstone Smith distressingly explores the idea that dehumanization is the fundamental condition for all atrocity. He focuses on horrors perpetrated upon "Jews, sub-Saharan Africans, and Native Americans" due to their "immense historical significance" and because they are "richly documented." But the awful tales he relates come from across the world and date back to pre-history. What makes it possible for us to treat other members of our species so horrifically, Smith argues, is our unique mental ability to "essentialize" the world around us. We divide living things into species, and species into kinds. We then rank species and kinds from highest to lowest. According to Smith, there are very good evolutionary reasons we are built to view other living beings this way. Conceiving of animals and insects as inferior beings enabled our ancestors to eradicate them if they were perceived as threats or use them as sources of labor, food, or companionship if they were not seen as threats. Meanwhile, having the option of seeing other groups of homo sapiens as either human or inhuman gave our forebears a potent psychological prop for choosing either trade or war as a means to acquire resources.
33. Marketplace, *IMF Report: China will be the largest economy by 2016*, 25 April 2011, <<http://www.marketplace.org/topics/business/imf-report-china-will-be-largest-economy-2016>> (16 November 2012).
34. Singer, 94.
35. Sluka, 74.
36. Kurt Volker, "What the U.S. risks by relying on drones," *The Washington Post*, 27 October 2012, <http://www.washingtonpost.com/opinions/we-need-a-rule-book-for-drones/2012/10/26/957312ae-1f8d-11e2-9cd5-b55c38388962_story.html> (16 November 2012).
37. Department of the Army, Field Manual 3-24, *Counterinsurgency* (Washington, DC: U.S. Government Printing Office, December 2006), 1-27.
38. In my opinion, the U.S. Army's *Military Review* carries the torch in this regard, routinely featuring such essays. One notable recent example quoted earlier in this essay is a piece by Jeffrey Sluka, titled, "Death from Above: UAVs and Losing Hearts and Minds." "Tipping Sacred Cows" by Lieutenant Colonel (Retired) Timothy Challans is another excellent example.
39. "About the CAPE," U.S. Army Center for the Army Profession and Ethic (29 July 2010), at <<http://acpmc.army.mil/about.html>> (15 August 2010).
40. Thomas E. Ricks, *The Generals* (New York: The Penguin Press, 2012), 343-44.
348. CGSC ran an Ethics Symposium from 1974-1975. According to Ricks, the Symposium was highly successful but was cancelled due to the focus of General William DePuy, the TRADOC commander at the time, on tactical versus strategic training for officers.
41. This course of action is not as naive as it sounds. For instance, most Americans assume that the Taliban do not use major border crossing points to transport their supplies into Afghanistan, envisioning instead supplies crossing the border in backpacks, on pack animals, or in pick-up trucks on remote roads. This occurs, but the Taliban rely more heavily on major U.S. supply routes through Pakistan into Afghanistan. This is due to cargo rarely being searched by corrupt Afghan customs officials, if truck drivers pay the required bribe. With a few more U.S. troops and cargo scanners at major border crossing points and a greatly increased drone reconnaissance presence along the border, ISAF could dramatically impact the utility of the FATA to the Taliban as a safe haven.