Drone Wars: Armed Unmanned Aerial Vehicles

By Andrew Callam
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On August 5, 2009, two Hellfire missiles fired from an American Predator drone crashed through the roof of a house in northwest Pakistan. Lying on the roof of his father-in-law’s house was Baitullah Mehsud, the leader of the Pakistani Taliban. Along with Mehsud, the explosion killed his father-in-law, his mother-in-law, his wife, his uncle, a lieutenant and seven bodyguards.

It took three days for mainstream news sources to confirm rumors of the Taliban leader’s death as the Taliban moved to prevent the news from leaking out. While the Pakistani newspaper Dawn ran the headline “Good Riddance, Killer Baitullah” in celebration of the death of the man believed responsible for the assassination of former Prime Minister Benazir Bhutto, Pakistanis typically condemn similar drone strikes due to the civilian casualties they cause. In Mehsud’s case, it took sixteen strikes, fourteen months and between 307 and 321 additional deaths to finally kill him. In contrast, the American government views the drone program as one of its most effective weapons against al Qaeda and the Taliban, described by CIA director Leon Panetta as “the only game in town.”

The attack on Baitullah Mehsud highlights several questions about the effect of armed unmanned aerial vehicles (UAVs) on how the United States wages war. Are these strikes an effective counterterrorism tactic, even though they may cause significant civilian casualties? Furthermore, what is the effect of factors such as the lack of media coverage on the willingness of the United States to adopt these strikes as an effective strategy in war? This study seeks to address these questions by unearthing cases that armed UAVs bring to modern warfare. It will begin by offering a brief background of UAVs, their development into weaponized aircraft and their use in theater. The following section will evaluate the effect of UAVs on strategic capabilities and combat doctrine, focusing both on their use in early combat operations, counterinsurgency operations and hunter-killer missions.

In one instance, a Predator drone hovered above a house that was a suspected weapons cache, waited for civilians to leave, and then destroyed the building with a Hellfire missile. The Effect of Armed UAVs on Military Capabilities

The use of a remotely controlled, pilotless aerial vehicle emerged more than fifty years ago. However, the operational concept behind weaponized drones changed significantly over the years. This section will provide a brief background of the evolution of weaponized UAVs, including their early use in reconnaissance missions and their expanded role by the U.S. in Afghanistan, Iraq and the Global War on Terrorism.

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The use of a remotely controlled aircraft as a weapon first emerged in World War II. The first remotely piloted drone used as a weapon was the German FX-1400 or “Fritz”, which consisted of a 2,300 pound bomb, dropped from an airplane and steered by a pilot in the “mothership.” After the war, little development occurred in drone technology and most remotely piloted vehicles were used for target practice. The U.S. military’s first major expenditures on UAVs began after the Vietnam War, when the Air Force used small, long-range experimental drones called Fireflies in reconnaissance missions over Southeast Asia. However, in June 1991, programs quickly ran over budget and the government deemed small propeller-powered drones too expensive to pursue on a larger scale.

The Israeli Air Force’s use of their weaponized drone, the Pioneer, in the 1982 Lebanon War reinvigorated American interest in armed UAVs. Impressed with the Pioneer, the Navy purchased several and the Reagan administration began increasing UAV procurement and research in 1987. Powered by a 26 horsepower snowmobile engine and equipped with 16-inch guns, the Pioneer made its American debut during the Persian Gulf War. Iraqi soldiers grew to fear the ominous buzzing of the Pioneer and in one widely reported incident, a group of Republican guards became the first hummers to surrender to a drone. The success of the Pioneer in Desert Storm led to the Department of Defense spending over $3 billion on UAV programs during the 1990s.

By October 19th, 2009, the CIA had conducted 41 strikes under President Obama, compared with the same number over three years under former President Bush. In describing the utility of UAVs in OEF, CENTCOM commander General Tommy Franks said: “The Predator is my most capable sensor in hunting down and killing al Qaeda and Taliban leadership and is proving critical to our fight.” Following the consultation, the American government views the drone program as one of its most effective weapons against al Qaeda and the Taliban, described by CIA director Leon Panetta as “the only game in town.”

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The idea of using a remotely-controlled, pilotless aerial vehicle emerged more than fifty years ago. However, the operational concept behind weaponized drones changed significantly over the years. In February 2001, the first Hellfire missile was test-fired from a Predator UAV. The terrorist attacks of September 11, 2001, created a new demand for Hellfire-equipped Predators to hunt down terrorists in remote areas of Afghanistan and Pakistan. The Air Force put the weaponized Predator into immediate use in OEF and hit approximately 115 targets in Afghanistan during the first year of its combat operations. The CIA also began to use Predators to target al Qaeda operatives elsewhere in the Middle East. In November 2002, a Predator was credited with killing an al Qaeda operative in Iraq as part of Operation Southern Watch. Immediately prior to OIF, Predators destroyed several Iraq mobile radar units in preparation for the arrival of U.S. ground forces. Predators and other armed UAVs continue to carry out operations in Iraq and Afghanistan.

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The CIA’s program in Pakistan therefore contradicts many of the trends in weaponized UAV warfare. Additionally, while the Predator’s camera can provide remarkably clear images, it can be difficult for drone pilots to accurately identify individuals when staring at them directly from above. For example, during the Iraq War, pilots would often find it challenging to distinguish between a tactical vest and a suicide bomber’s suicide belt.

The lack of military presence on the ground also limits the capabilities of drones to assist in acquiring critical intelligence. In the urban counterinsurgency operations of Iraq, UAVs would use their persistent surveillance capabilities to observe combatants, then either eliminate or send in ground troops to arrest the combatant. The combatant might then go on to provide U.S. forces with valuable intelligence. In contrast, the use of UAVs in hunter-killer operations in the remote regions of Pakistan, where there are no ground forces, only eliminates the target. As Daniel Byman of Georgetown University argues, “It’s almost always better to arrest terrorists than to kill them. You get intelligence then. Dead men tell no tales.” Hunter-killer operations can only eliminate the target and thus forfeit potential intelligence that could be gained through capture.

The second and more crucial reason for the perception of a “costless war” is the fact that waging a war with drones quite literally comes at no human costs to the United States. This conflicting evidence makes the net effect of drone attacks difficult to judge.

Some argue that the use of such advanced technology will encourage further acts of terrorism. The Taliban carried out its March 2009 attack on the Lahore police academy “in retaliation for the continued drone strikes.” Hafizullah Mehsud, Baitullah Mehsud’s successor as leader of the Pakistani Taliban, said the Taliban “will continue to launch suicide attacks until U.S. drone attacks are stopped.” Like many innovations in military technology, one does not need to look far to find the enemy and local civilians perceive them as evil. Regarding Israel’s operations in Lebanon, a Lebanese man described the impression of Israel’s use of UAVs as that “of an evil, brutal enemy that will use any means to accomplish its goals.” In some regions, Pakistanis mothers use the Predator attacks as a type of boogy-man—“Obey or the buzz’ will come after you”—and in 2007, a popular song in Pakistan accused America of “killing people like insects.” Paradoxically, attacks that are aimed at eliminating terrorists may in some cases encourage terrorism.

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While thePredator succeeded in striking down some Iraqi radars, it quickly became a target for the Iraq Air Defense Forces, concentrating on the porous 1,500-mile border with Pakistan.” Vice President Biden had also reportedlyascopted to this view regarding strategy in Afghanistan. What began as a tactic to combat terrorism has gained credence as a strategy to extend American influence without committing troops.

There is also evidence that the persistent surveillance and attack capabilities of drones serve as a deterrent to potential combatants and sow paranoia and distrust among terrorist groups. Warzone theorists believe that the constant surveillance and persistent attack capabilities of drones have a striking effect on the enemy’s behavior. As a drone pilot in Iraq described it: “Anti-Iraqi forces know we are out there. They know they are constantly being watched. The fear of being caught in the act keeps a lot of would-be insurgents out of the game.” Journalist David Rohde, who spent seven months imprisoned by the Taliban, described the paranoia among his captors following a drone strike: “They believed that a network of local informants guided the missiles. Innocent civilians were rounded up, accused of working as American spies and then executed.” Some Pakistanis in FATA have even stopped drinking Lipton tea because they believe the CIA puts homing beacons for the drones in the tea bags. This demonstrates the psychological effect weaponized drones can have on both existing and potential enemy combatants.

The CIA’s drone program in Pakistan is unique and an important exception to many of the limitations governing UAVs. A primary benefit of using UAVs in these combat operations is the ability to limit civilian casualties, yet problems in using drones in “hunter-killer” missions. Whereas most UAVs operate in areas with a ground presence, CIA drones go where American troops cannot and can operate nearly autonomously. The CIA’s program in Pakistan therefore contradicts many of the trends in weaponized UAV warfare.

However, the CIA’s drone program can function only in very specific circumstances and is unlikely to represent a lasting trend in warfare. Few regions in the world are as remote as northwest Pakistan and the drone program capitalizes on the very distinctive characteristics of the region. The barriers to using drones in “hunter-killer” missions in other parts of the world including increased media coverage, violations of international
law, and the threat of the most basic air defenses, makes the drone program in most other countries impractical. Further, there is no end-game to using a hunter-killer strategy. Using drones without a manned ground presence to truly neutralize the enemy will lead to short-term gains but is not a substitute for a long-term strategy.

The effect that UAVs will have on future warfare will depend largely on technological capabilities of the next generation of drones. In the near future, armed drones will continue to serve as a compliment to manned systems, rather than a replacement. While the circumstances in northwest Pakistan are unique, the questions surrounding the CIA’s drone program in Pakistan raise important issues regarding how drone use should be governed in the future. As the capabilities of robotic systems continue to improve at a rapid rate, policymakers should begin answering these questions now in order to prevent the progress of technology from surpassing the moral and legal considerations governing their use.

To answer these questions, policymakers must first launch a review of international legal implications of the CIA’s drone program. As Jane Mayer of The New Yorker pointed out in her groundbreaking article on the drone program, the Predator strikes into Pakistan can easily be considered assassinations. While the United States policy officially abandoned assassinations during the Ford Administration, the legal justification of the drone program has gone largely unquestioned by the American public. If the United States seeks to be a cooperative member of the international community, it must be able to justify the drone program according to international legal standards.

The issue that has received far more attention than the legal implications, however, has been the civilian deaths caused by the drone program in Pakistan. While many suspect that the strikes do more harm than good, the fact remains that little evidence exists to support any argument. The intelligence community must therefore conduct a thorough study of the effect of these drone strikes on the population in Pakistan. This study must be able to accurately measure the amount of collateral damage caused per successful strike. The study must also seek to answer whether or not the strikes radicalize the Pakistani population. If the strikes in actuality undermine the stability of the Pakistani state, the CIA program must be either cancelled or its standards reevaluated.

While drones have improved the capabilities of the U.S. military, unmanned systems will never replace humans on the battlefield. Particularly in counterinsurgency warfare, UAVs can help protect soldiers and minimize civilian casualties, but the human element is still crucial to the success of low intensity conflict. The capabilities of UAVs must never be mistaken for a strategy or a way to wage a “costless war.” Viewing technological improvements as such will only lead to a militarization of foreign policy and unnecessary conflicts. Policymakers must therefore proceed cautiously when employing these technologies in the field and develop new standards for their use. Unmanned systems may lead to a safer type of warfare for U.S. soldiers, but they will be unable to eliminate the inherent brutality of war.
An unmanned combat aerial vehicle (UCAV), also known as a combat drone or simply a drone, is an unmanned aerial vehicle (UAV) that usually carries aircraft ordnance such as missiles and is used for drone strikes. Aircraft of this type have no onboard human pilot. These drones are usually under real-time human control, with varying levels of autonomy. Equipment necessary for a human pilot (such as the cockpit, armor, ejection seat, flight controls, and environmental controls for pressure and oxygen) should unmanned aerial vehicles (drones) be used for the hurricane hunter mission? What are some armed withdrawal tactics? What is pre-arm mode in drones? Are there any regulations concerning personal use of drones (unmanned aerial vehicles) in Washington State? How do multi-rotor aerial vehicles or drones compare to helicopters in terms of performance? What is an unmanned aerial vehicle (UAV), and what are some examples of UAVs currently in use in the US? How do people evaluate Unmanned vehicles? Can drones be armed with nuclear weapons? Would future conventional wars be mainly fought by drones and unmanned platforms instead of soldiers? How will drones change construction? Ask New Question.